



# **Diamonds and All That**

## **The Contribution of Mining to South Africa**

**JOHN KANE-BERMAN**



**February 2017**

Published by the South African Institute of Race Relations  
2 Clamart Road, Richmond  
Johannesburg, 2092 South Africa  
P O Box 291722, Melville, Johannesburg, 2109 South Africa  
Telephone: (011) 482-7221  
© South African Institute of Race Relations 2017

ISSN: 2311-7591

Members of the Media are free to reprint or report information, either in whole or in part, contained in this publication on the strict understanding that the South African Institute of Race Relations is acknowledged. Otherwise no part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronical, mechanical, photocopy, recording, or otherwise, without the prior permission of the publisher.

While the IRR makes all reasonable efforts to publish accurate information and bona fide expression of opinion, it does not give any warranties as to the accuracy and completeness of the information provided. The use of such information by any party shall be entirely at such party's own risk and the IRR accepts no liability arising out of such use.

Cover design by InkDesign

Typesetter: Martin Matsokotere

---

# TABLE OF CONTENTS

<b>INTRODUCTION</b> .....	<b>5</b>
<b>PART ONE: THE PAST</b> .....	<b>6</b>
<b>SYNOPSIS</b> .....	<b>6</b>
Economic issues .....	6
Political factors .....	8
The matter of labour .....	9
Health concerns .....	11
Safety considerations .....	12
Problems of pollution .....	13
Assessing the past .....	14
<b>PART TWO: THE PRESENT — CRITICISMS AND CHALLENGES</b> .....	<b>15</b>
<b>SYNOPSIS</b> .....	<b>15</b>
General .....	15
Allegations of smuggling .....	17
Environment .....	18
Corporate social responsibility .....	20
Wages .....	21
Productivity .....	23
Migratory labour .....	23
Housing and living-out allowances .....	25
Shack settlements .....	25
Communities .....	26
Safety .....	26
Legacy issues .....	28
<b>PART THREE: THE BIGGER PICTURE</b> .....	<b>29</b>
<b>SYNOPSIS</b> .....	<b>29</b>
Basic statistics .....	29
Contribution to national, provincial, and local economic output .....	30
Purchases .....	32
Mining, metals, engineering, construction, and motors .....	32
Skills and technology .....	33
By-products .....	34
Investment .....	34

---

Employment.....	35
Railways.....	35
Mineral sales.....	36
Mineral exports.....	36
Royalties and taxes.....	37
Distributions to shareholders.....	37
Mine ownership.....	38
The case of coal.....	38
<b>PART FOUR: THE FUTURE.....</b>	<b>41</b>
<b>SYNOPSIS.....</b>	<b>41</b>
<b>Prices and potential.....</b>	<b>41</b>
<b>Challenges and policy.....</b>	<b>44</b>
<b>Conclusion.....</b>	<b>45</b>
<b>SOURCES.....</b>	<b>46</b>

---

# INTRODUCTION

---

This year, 2017, is the 150th anniversary of the discovery of diamonds in South Africa. Actually, that is probably not strictly true, as diamonds might have been discovered earlier by people who never put them to commercial use. But the discovery of the first diamond on the banks of the Orange River near Hope-town in 1867 sparked off the development of mining in the country. It also sparked off a great many other things, including the establishment of the first stock exchange in Africa in nearby Kimberley in 1881. Other by-products of the discovery of diamonds were two universities, those of the Witwatersrand and Pretoria, which had their origins in a school of mines set up in Kimberley in 1896.

The man who consolidated thousands of small diggings in Kimberley to found De Beers Consolidated Mines was Cecil Rhodes, who then used the profits to extend into gold mining in and around Johannesburg. Railways from the coast to the interior had to be built to serve the needs of mining. Factories to manufacture everything from steel to dynamite to boots had to be erected. The Rand Water Board was established in the early part of the century. And so on. Today South Africa is the 42nd largest economy in the world out of 190 in nominal GDP (and 32nd largest in purchasing power parity terms), thanks to the growth and industrialisation triggered by the commercial development of its mineral resources.

Vast quantities have been extracted. South African diamonds adorn the heads of British monarchs when they are crowned. South African coal keeps houses warm and industry turning both in this country and elsewhere. Cars around the world use South African platinum to reduce pollution. South African gold is to be found in the vaults of central banks and perhaps also under mattresses all over the world. The ground below the South African veld nevertheless still holds the world's largest reserves of mineral resources if the even richer reserves of oil in other countries are not taken into account. Some years ago the value of our minerals was put at \$2.5 trillion.

*South African diamonds adorn the heads of British monarchs when they are crowned. South African coal keeps houses warm and industry turning both in this country and elsewhere. Cars around the world use South African platinum to reduce pollution. South African gold is to be found in the vaults of central banks and perhaps also under mattresses all over the world. The ground below the South African veld nevertheless still holds the world's largest reserves of mineral resources if the even richer reserves of oil in other countries are not taken into account. Some years ago the value of our minerals was put at \$2.5 trillion.*

But our mining industry is in danger. Mining all over the world is subject to the extreme volatility of commodity prices. Governments in many countries seek to tax “windfall profits” made by mining companies. The South African industry, however, faces particular challenges arising in part from the particular history of its development under the apartheid system. These challenges are compounded by the government’s “empowerment” and other requirements in a “Mining Charter” introduced in 2004, and also by increasingly vocal environmental lobbyists. Following a violent strike and clashes in which 10 people were murdered and the lethal shooting of 34 miners at Lonmin’s platinum mine at Marikana near Rustenburg in August 2012, the wages and housing conditions of black miners were subjected to renewed critical scrutiny, both in South Africa and abroad.

The main focus of this paper will be the current contribution that mining makes, but it will start with a historical perspective and end with some remarks about the future.

---

# PART ONE: THE PAST

---

## SYNOPSIS

*Mining quickly extended beyond diamonds to gold, coal, platinum, and other minerals. It opened up the interior of the country. Longer and longer railways had to be built. Eskom, Iscor, and Sasol were established. Factories were built to supply the needs of the mining industry and of the new towns to which it gave rise as more and more people moved off the land. A vast array of service industries had also to be set up to service the mines, the people who worked in them, and everyone else in the towns.*

*Military escapades, war, and politics intervened. Various new racial laws were put on to the Statute Book. The migratory labour system was firmly established. So were many years of low wages for black miners, a large proportion of whom came from neighbouring states. Many miners succumbed to lung diseases, one result of which is a major action for damages dating back to 1965 recently launched in the courts. The industry had to cope with HIV/AIDS. It also had to cope with safety problems. Although mining is very much safer now than it was, the government and the industry are now confronting one another in the courts. Part of the legacy of mining is pollution, both of the air and of the water in mining areas. Mining and apartheid had a symbiotic relationship, but in the end industrialisation wrought by mining helped to destroy the apartheid system.*

## Economic issues

Prior to the development of mining, South Africa was a largely farming country whose main exports were wool, wine, and other agricultural products. Ships en route to India and elsewhere called at the Cape to replenish their supplies, but the country was without a rail network or any major industries. As D Hobart Houghton pointed out in 1971 in the *Oxford History of South Africa*, the country was too poor to advance by domestic capital formation and apparently without exploitable resources to attract foreign capital. Minerals had been worked for a long time by the indigenous population, but operations were on a very small scale. Gold and coal had been discovered at various places in the 1850s and 1860s, but the first mineral discovery of real commercial value was that of diamonds.

*Prior to the development of mining, South Africa was a largely farming country whose main exports were wool, wine, and other agricultural products. The country also lacked a rail network and any major industries.*

After the discovery at Hopetown diggers poured in to Griqua territory and alluvial workings sprang up along the Orange and Vaal rivers. The British colonial secretary laid one of the earliest diamonds on the table in the Cape House of Assembly and declared, "Gentlemen, this is the rock on which the future success of South Africa will be built." Three years after the 1867 discovery, diamonds were found where Kimberley now stands and diggers and others flocked in by the thousand. Griqualand was annexed by the British in 1871 and in 1880 it was incorporated into the Cape Colony.

The consolidation of numerous small diggings into the giant De Beers company served as the prototype for the structure of the gold-mining industry established after the discovery of gold in 1886 at Langlaagte in what is now Johannesburg. Large mining finance houses were able to mobilise the vast quantities of capital (mostly British) required to open up mines along the Witwatersrand and keep the companies in operation during the long gestation periods before they could actually start production and produce revenues. The

---

“mining house”, or group, system also allowed economies of scale to be achieved as individual mines in each group were able to draw on a common pool of scientific and technical expertise. This was of vital importance. In Hobart Houghton’s words it was “an epic of applied science”. As he wrote in 1967 in another work, *The South African Economy*, “Difficulties of water disposal, of heat, of dust, of ventilation, of faulting of the rock formation, of gold recovery, and of the supply of power for such a vast industry, were progressively solved by the application of the most modern scientific techniques to each problem as it arose.”

Diamonds begat gold, and gold mining begat coal mining. Coal had been found in Natal in the 1840s, but there was no means of transporting it and therefore no commercial exploitation. But the new gold mines on the Witwatersrand needed power, and coal transported by rail supplied it, although coal soon developed into an industry in its own right, supplying fuel not only to power stations but also to the railways and a range of other industries. The Electricity Supply Commission (Eskom) was established in 1922. By that time diamonds, gold, and coal had become major industries and they accounted for three quarters of South African exports. By the 1980s South Africa had become one of the world’s largest exporters of coal, mainly steam coal for electricity generation.

This was made possible by the expansion of the country’s railways, which of course rendered the ox wagon obsolete. The first railway in South Africa was a two-mile stretch in Durban opened in 1860. The Namaqualand Railway, which connected a copper mine at O’kiep in the Northern Cape to Port Nolloth on the Atlantic coast, started operating in 1876. A link from Cape Town to Kimberley was established in 1885, and shortly thereafter extended to the Witwatersrand, where coal as well as gold had been discovered. As South African Railways (now Transnet) pointed out in an album to mark its centenary in 1960, the opening of the coalfields in the Transvaal and Natal was made possible only by extending railways from the coastal towns to the interior. “The total absence of navigable waterways, coupled with the fact that the greater part of the country’s mineral wealth is located deep in the interior, created special transport problems”, with the result that South African Railways (SAR) had to undertake “all heavy long-distance haulage”. In 1989 SAR set what it described as a world record by moving a train from Sishen in the Northern Cape to Saldanha Bay in the Western Cape comprising 660 wagons full of iron ore. Pulled by 16 locomotives, it was 7.3 kilometres long.

*Diamonds begat gold, and gold mining begat coal mining. Coal had been found in Natal in the 1840s, but there was no means of transporting it and therefore no commercial exploitation. But the new gold mines on the Witwatersrand needed power, and coal transported by rail supplied it.*

Coal also provided the feedstock for the production of liquid fuel by the South African Coal, Oil, and Gas Corporation (Sasol), which was established by the government in 1950. Now a multinational corporation with operations in 33 countries and a listing in New York as well as on the Johannesburg Stock Exchange (JSE), Sasol built the first factory in the world to turn coal into liquid fuel on a major commercial scale.

Large deposits of coal as well as of limestone, manganese, and iron ore made it possible to establish the state-owned Iron and Steel Corporation of South Africa (IsCOR) in 1928. Like Sasol, IsCOR was privatised and now trades as ArcelorMittal South Africa, the largest steel manufacturing company in the country.

Apart from the extension of the country’s rail network, the establishment by the government of Eskom, IsCOR, and Sasol were major milestones in South Africa’s industrial development. But so were companies such as African Explosives and Chemical Industries (AECI), at one stage jointly owned by De Beers and the British company Imperial Chemical Industries (ICI). AECI’s plant at Modderfontein outside Johannesburg was thought at one time to be the largest explosives factory in the world. Another of the many major offshoots of mining was Haggie Rand, which has supplied the industry with steel wire ropes since 1921 and made the world’s longest shaft-sinking rope.

---

South Africa's manufacturing sector owes its origins to the needs of the mining industry, which it soon overtook as a contributor to national income. Whereas private manufacturing accounted for only 6.7% of such income shortly after the Union of South Africa was established in 1910, by the early 1960s it accounted for 27.8%, which was the largest single slice of the national cake. Mining, by contrast, saw its relative contribution shrink from 27% to 13% over the same period.

But the impact of mining was greater than the stimulation of the manufacturing sector. It pulled people of all races out of agriculture into the modern sector of the economy, so introducing them to commerce and industry. Mining also necessitated both the local production and the importation of the skills necessary to extract tiny amounts of gold from ore bodies which today are at depths of up to nearly 4 kilometres or nearly 2.5 miles. And it stimulated the establishment and expansion of towns, so providing new and easier markets for agricultural products and necessitating the construction of roads as well as railways.

Improved transport and concentration of populations made it economical to establish factories of all kinds, along with banking and numerous other services. Wholesale and retail suppliers also had to be set up, not to mention schools, churches, theatres, libraries, golf courses, hospitals, and a great deal else besides. Mining in other words stimulated not only agriculture but also the secondary and tertiary sectors of the economy. It further sparked the building not only of Kimberley and Johannesburg, but also that of other towns all over the country where, in addition to coal, iron ore, and manganese, minerals including platinum and copper were discovered.

*Mining stimulated not only agriculture but also the secondary and tertiary sectors of the economy. It sparked the building not only of Kimberley and Johannesburg, but also of other towns all over the country.*

Following the opening up of the Witwatersrand, profits from gold and diamonds were ploughed into the opening up of the Orange Free State (OFS) goldfields in the mid-1950s when Sir Ernest Oppenheimer of Anglo American and De Beers "bet the farm" in a colossal feat of risk-taking entrepreneurship that few companies would undertake today. The population of Welkom grew almost tenfold in as many years to make it South Africa's seventh-largest city. According to Ralph Horwitz in *The Political Economy of South Africa*, published in 1967, OFS gold output increased from 430 000 ounces in 1953 to almost 5 590 000 in 1959.

### **Political factors**

The riches of the Transvaal, where the gold mines were located, soon became a source of political conflict. The abortive Jameson Raid of 1895 was an attempt by Cecil Rhodes and others supposedly representing the British imperial interest to seize power from President Paul Kruger and the Afrikaners. Soon afterwards the Boer War broke out between the British and the Afrikaners. Although the latter were in the end defeated, the British then handed South Africa back to them in 1910, when the two former Boer republics of the Transvaal and the Orange Free State joined with the two former British colonies of the Cape and Natal to form the Union of South Africa.

The British gave South Africa back to the whites, among whom the Afrikaners were politically dominant, under a system of white minority rule. Attempts by black South African leaders to prevent this came to naught. It was not long before the new Union parliament had enacted legislation that would have a lasting impact on mining, agriculture, and other industries. In particular, the Mines and Works Act of 1911 sought to bar Africans from obtaining blasting certificates and performing other skilled jobs on the mines. Two years later, the first Land Act prohibited inter-racial transfers of land. One of its purposes was to prevent Africans from buying up the farms of whites who had been ruined by the Boer War, not least by the British policy of setting fire to Boer farms and homesteads to deny sanctuary to Boer commandos and to drive their families into concentration camps, where many died (as also did many blacks).

The mining industry at this time was seen by many Afrikaners as run only in the interests of British and



---

Jewish capitalists, some of them foreign. However, the Afrikaners had a franchise which they could, and did, use to promote their interests and protect themselves, especially against competition from blacks for their jobs. Blacks had no such weapon.

### **The matter of labour**

A key aspect of South African mining, one which continues to this day albeit on a very much smaller scale, is the compound system. It grew up with the industry, as did the related migratory labour system. Right from the start, black workers on the diamond mines in Kimberley were housed in compounds, the rationale being that this would prevent desertion, combat drunkenness, and reduce the risk of theft. Blacks were employed only on short-term contracts, at the end of which they would return to their homes in rural areas. Rural poverty drove many people off the land. The mines also offered higher wages, although not high enough to attract sufficient black workers, so that at one stage workers were imported from China.

One result of the migratory labour system was that black miners did not move permanently off the land and into town. Another was that the supposed existence of additional sources of income in the rural areas – later designated as “homelands” – was used to justify low mine wages. A third was that black miners were seen as “target workers” who worked only for as long as necessary to earn a particular income, after which they would return to their rural homesteads. It was accordingly argued that putting up wages would have the perverse consequence of discouraging blacks from remaining on the mines for as long as they were required.

Although this system started in Kimberley, it was copied on the gold mines and later extended throughout the mining industry, as well as into other industries. There were enormous variations in the quality of the compounds. In his study *Migrant Labour in South Africa*, Francis Wilson reported that as late as 1972 compounds varied from “very old pre-World War I buildings with rooms housing 50 or more men living like sardines in double-decker concrete bunks to modern hostels housing between 12 and 20 men in dormitories that compare not unfavourably with those of a white boarding school”.

*Right from the start, black workers on the diamond mines in Kimberley were housed in compounds to prevent desertion, combat drunkenness, and reduce the risk of theft. The migratory labour system was also used to justify low mine wages. It was then copied on the gold mines and later extended throughout the mining industry, as well as into other industries.*

The system was widely criticised on various grounds, one of which was that it separated men from their wives and children for almost their entire working lives. But it fitted in with the government’s overall apartheid policy of preventing blacks from establishing themselves permanently in the supposedly “white” cities and towns. Pleas by the mining industry in later years, notably when the Free State goldfields were opened up, for relaxations to enable miners to bring their families with them were rejected by the government.

The proportion of the black mine workforce that could be accommodated in family housing on the mines was limited to 3%. In practice this meant only 1%, because only South Africans were eligible, whereas by the 1970s some 70% of black miners in gold were foreigners from Mozambique, Malawi, Lesotho, and other neighbouring states. It was not until the gold price, which President Franklin D Roosevelt had pegged in 1934 at \$35 an ounce, began to rise in the 1970s that the mines offered wages able to attract more South Africans. The urge to attract more South Africans was also partly prompted by the Malawian government’s unilateral cancellation of recruiting in 1974, which forced the mining industry to reduce its dependence on foreign labour. By 1976 the foreign component of the black labour force had dropped to 44%.

Down the years the mining industry, and gold mining in particular, has been criticised not only for the colour bar and the compound system, but also for its low black wages and its hostility to black trade unions. The industry was essentially built upon a labour force consisting of a minority of highly-skilled and

---

highly-paid whites and a majority of unskilled Africans earning very much lower wages. Writing in *A History of South Africa: Social and Economic*, published in 1941, CW de Kiewiet pointed out that gold mining in South Africa was very expensive because of the small amount of gold in vast tonnages of rock: “The concept of an industry that was colossally wealthy only on condition that it jealously watched each penny of its expenditure is invaluable for any understanding of the history of South African gold mining.”

As early as 1900, the Chamber of Mines (the Chamber) adopted a maximum wage policy which operated well into the 1970s and which was designed to prevent member companies from bidding up African wages by competing with one another. The policy was the result of the chronic shortage of labour faced by the mines, even though cash taxes were imposed in subsistence farming areas to increase the supply of African labour. Wages and salaries were the greatest single cost, so that holding down the wages of the largest component of the workforce was seen as essential to the survival of the mines. Attempts by the mining industry to cut costs by replacing relatively highly paid whites with cheaper blacks resulted in the so-called Rand Rebellion in 1922, which was forcibly put down by the Smuts government.

Two years later, however, Prime Minister JC Smuts was defeated in a general election which brought the Hertzog government to power and led to the adoption of a policy of “civilised labour”. The Hertzog government arose out of a pact between the white Labour Party and Afrikaner nationalism. This was essentially designed to protect white workers on the mines and elsewhere, as well as to restrict black urbanisation. More and more racial legislation was subsequently enacted, entrenching the structure of most of South Africa’s workforce: skilled whites at the top, semi-skilled and unskilled whites in the middle, unskilled blacks at the bottom. Unskilled whites were among the beneficiaries of legislation reserving jobs for them, while blacks were barred by custom and often also by law from performing many skilled jobs. Education policy, and racial discrimination in the way the apprenticeship system worked, also denied them the opportunity to gain adequate skills.

*Gold mining in South Africa was very expensive because of the small amount of gold in vast tonnages of rock. Wages and salaries were the greatest single cost, so holding down the wages of the largest component of the workforce was seen as essential to the survival of the mines.*

Before black wages on the mines began to rise substantially in real terms in the 1970s, the average white cash wage was 16 times that of the average black wage (although this figure does not take account of the value of food and accommodation in mine compounds). This wide gap of course reflected different levels of skill. But these differences were themselves in part the result of the industrial colour bar and of the education system. The wide gap was also a function of the industry’s and the government’s hostility towards unionisation among black miners, whereas whites were well unionised. It was further a function of the monopsonistic policy of eliminating competition among the various mining houses for black labour lest the operation of market forces push up the black wage rate.

All of this began to change after President Richard Nixon abandoned the convertibility of dollars into gold in 1971. The 1970s opened with an average annual gold price of \$36 an ounce, and ended with the price at \$613. In local currency terms, the price rose from R26 to R477, enabling the mines to push up black wages, which had been stagnant for so long. Thereafter – testifying to its unpredictability – the gold price went into a decline and did not return to its 1980 level until 2007. However – testifying to the importance of exchange rates –the impact of the decline upon the revenues of South African mining companies was significantly counteracted by a decline in the value of the rand, which kept up the local price of gold.

Shortages of skilled white labour led to the erosion of the colour bar on the mines and elsewhere, and black workers were employed in growing numbers in semi-skilled and skilled jobs. Black trade unions were accorded statutory rights, including collective bargaining rights, from 1979 onwards. In the early 1980s

---

black trade unions, which had earlier been suppressed, were re-established on the mines and granted recognition by the mining companies. For the first time black wages were the result of negotiation between the Chamber and black trade unions, instead of being determined unilaterally by employers.

Restrictions imposed by the pass and influx control laws on the movement of blacks into the “white” cities and towns were lifted by the PW Botha government in 1986. This process of economic liberalisation was well under way before the release of Nelson Mandela from prison in 1990. Remaining racial laws were outlawed by the new constitution adopted when the National Party (NP) handed over power to the African National Congress (ANC) in 1994. And, of course, South Africa embarked upon majority rule.

### Health concerns

According to a judgment handed down by the South Gauteng High Court in May 2016, South Africa’s gold mining industry “left in its trail tens of thousands, if not hundreds of thousands, of current and former underground mineworkers who suffered from debilitating and incurable silicosis and pulmonary tuberculosis”. Many mineworkers had died from the disease. The judgement gave the go-ahead for a major class-action lawsuit for damages against 32 gold mining companies in respect of 82 gold mines under their control. Those eligible to join the action included current employees; former employees dating back to 1965; and dependants of any who had died. The court accordingly ordered that the class action which it had authorised should be extensively advertised on radio and in newspapers in numerous different languages in South Africa and neighbouring states which had supplied labour to the mines.

*According to a judgment of the South Gauteng High Court in May 2016, South Africa’s gold mining industry “left in its trail tens of thousands, if not hundreds of thousands, of current and former underground mineworkers who suffered from debilitating and incurable silicosis and pulmonary tuberculosis”.*

Although the case seeking leave to bring the class action had been mounted by only 69 mineworkers, the court said that the number of potential members of the class on behalf of whom the action would be brought could range from 17 000 to 500 000. Silicosis, it observed, was an occupational lung disease contracted by mineworkers underground from the inhalation of crystalline silica dust. It was “irreversible, incurable, and painful”, but symptoms could appear only several years after exposure, with the result that a person might be diagnosed only long after he had worked on the mines. Pulmonary TB was not caused by silica dust, but exposure to this dust posed a lifelong risk of developing TB.

The court said that the mineworkers intended to bring evidence proving that the mining companies knew, or should have known, as far back as the early 1900s that silicosis and other dust-related occupational diseases were preventable, but that they had failed to introduce appropriate preventive measures.

A working group representing some of the defendant companies has been in discussions for almost two years with lawyers, including those involved in the class action on behalf of miners. A spokesman for the group said that it hoped to establish a legacy fund to pay compensation. Even though this could not make up for the loss of health, it could ease the hardship of claimants and their families. A reasonable settlement on these terms, he said, “would be preferable to a lengthy court engagement that would benefit only the lawyers”. He also said that the companies in the working group were seeking to eliminate silicosis entirely, and that major progress had been made in recent years.

Richard Spoor, one of the most prominent of the lawyers acting for the mineworkers, said that South Africa needed fundamental legislative reform to ensure accountability. “If there was greater accountability, we would see a dramatic decrease in the incidence of these diseases.” Legislation did not accord with international best practice. Statutory compensation schemes were also collapsing under the weight of growing administrative incapacity, “leaving thousands of sick and injured workers in the lurch”.

---

HIV/AIDS has taken its toll on miners and the mining industry. As Anglo American pointed out, pulmonary TB and AIDS are “inextricably linked”. It is also likely that many miners, away from their own families, established extramarital sexual relationships, helping to spread these diseases. Although the number of new HIV infections in South Africa has halved in the past 15 years, the TB prevalence rate has increased substantially.

In 2002, thanks in large part to the persistence of its chief medical officer, Brian Brink, Anglo American became one of the first companies in South Africa to provide free antiretrovirals to its employees and later to their dependants. It did so, moreover, at a time when Dr Manto Tshabalala-Msimang, minister of health in President Thabo Mbeki’s government, was hostile to the provision of such medication, as was Mr Mbeki himself. However, in 2015 Anglo was able to report that “investing in HIV prevention, treatment, and care has a measurable and positive impact on business performance”. Dr Brink had long argued that providing antiretrovirals would ultimately cost less than not doing so. Anglo is acknowledged to have made a major contribution to the combating of AIDS in South Africa. In a citation for an honorary degree Dr Brink later received, Anglo and AngloGold were credited for having “set an example for the state health service to follow once the resistance of government leadership to antiretroviral treatment had been overcome”.

### Safety considerations

Mining is probably one of the most hazardous peacetime occupations. The world’s worst mining disaster is thought to have taken place at a coal mine in China in 1942, when 1 549 miners died as a result of a fire. According to one study, China in 2003 accounted for 80% of coal-mining fatalities even though it produced only 35% of the world’s coal. The worst disaster in South Africa occurred in 1960, when 437 miners died at the Coalbrook colliery near Sasolburg in a massive ground collapse. The two worst tragedies on gold mines killed 177 people at the Kinross mine in 1986, and 104 at Vaal Reefs in 1995, when a locomotive fell down a lift shaft and landed on a cage, causing it to plunge to the bottom of the shaft.

*Mining is probably one of the most hazardous peacetime occupations. The worst disaster in South Africa occurred in 1960, when 437 miners died at the Coalbrook colliery near Sasolburg in a massive ground collapse.*

According to *Death in South African Mines*, an undated study published in the early 1960s by HJ Simons, professor of native law and administration at the University of Cape Town (UCT), 36 000 men had been killed in accidents on South Africa’s gold mines since the beginning of the century. He said that the annual death toll on all mines fluctuated at around 800, four times that in Britain. In 1956, for example, the number of deaths in accidents was 816. Some 30 years later, in 1983, the figure was still a high 831, according to government figures. Twenty years after that, according to the Chamber, it had dropped to 246.

In the last 10 years it has been below 200, dropping in the last few years to below 100, most deaths occurring on gold mines, followed by platinum and then by coal mines. According to the Chamber, the 77 fatalities in 2015 were the lowest in the industry’s history. The following year, according to the minister of mineral resources, Mosebenzi Zwane, they dropped to 73 (excluding fatalities among illegal miners). Mike Teke, president of the Chamber, said that safety performance on the mines compared favourably with sectors such as construction in South Africa, and with similar mines in the US, Australia, and Canada. The decline in fatalities has been achieved despite the ever-increasing depths at which gold mining in particular takes place.

The three main causes of fatalities, according to the Chamber, are rockfalls, transport accidents, and accidents which include inhaling of dangerous fumes. Professor Simons noted that rockfalls, explosions, and transport and other accidents were the major causes of fatalities dating back to the early years of the last century. But he also pointed out that such statistics did not reveal the “human factors involved”, especially “the employment of inexperienced and untrained men on dangerous operations”. Managements, he said,

---

failed to ensure that the “quality of safety work [kept] pace with the degree of risk involved”.

Pressures to increase monthly production had led to inadequate supervision and attention to safety. Penalties for breaking safety rules often appeared slight, while blacks were often made to do dangerous work despite regulations. In more recent years, he said, mine managements had made a substantial effort to reduce accident and fatality rates. One improvement was to provide acclimatisation courses on the surface before exposing men to the rigours of work at great depths, so reducing the risk of heatstroke.

Measured per hundred thousand employees in service, the fatality rate on gold mines dropped from 4.67 in 1905 to 1.27 in 1995. On coal mines it dropped from 6.38 to 0.53, and on other mines from 2.60 to 0.26. In more recent years, according to the Chamber, some of the successes in reducing fatalities are the result of the Mine Health and Safety Act of 1996, which requires mining companies, trade unions, and the government to act in concert to promote safe and healthy workplaces. The National Union of Mineworkers blamed fatalities on the pursuit of profits by mining companies that neglected the safety of workers, but it also said that the significant decline in fatalities and injuries in recent years could be attributed to the application of the law.

Christo de Klerk, chief executive of Mine Rescue Services, a non-profit company financed by the mining industry, says that mine managements have been going all-out to improve safety. He said that rescue teams, all of whose 900 members are volunteers, had previously had to deal with 60 underground fires a year, but that this number had dropped in 2015 to 13. Mine Rescue Services is reported to spend about half its time on accidents involving illegal miners, and on recovering bodies from abandoned mines, of which there are now several thousand. Hilary Joffe, editor at large of *Business Day*, described mine rescue work as “horrible, high-risk, and heroic”.

*Measured per hundred thousand employees in service, the fatality rate on gold mines dropped from 4.67 in 1905 to 1.27 in 1995. On coal mines it dropped from 6.38 to 0.53, and on other mines from 2.60 to 0.26. Mine Rescue Services, a non-profit company, says that mine managements have been going all-out to improve safety.*

According to Sibanye, one of South Africa’s newest and largest mining companies, with major interests in both gold and platinum, deaths still occur as a result of non-compliance by employees and management as people try to take short cuts. Solidarity, a union with members in the mining industry, says pressure to reach production targets is “huge”, even though this sometimes means that miners remain in unsafe workplaces. The Chamber wrote to all its members urging heightened attention to safety and health. As we shall see below, the Department of Mineral Resources (DMR) has been closing mine shafts following accidents. Mr Zwane said in January 2017 that his department wanted to prosecute “negligent” companies.

### **Problems of pollution**

Mine dumps, also known as tailings or slimes dams, were once a major distinguishing feature of Johannesburg and adjoining towns. They have also been a major source of pollution for decades. After the gold had been extracted from it, the crushed rock brought to the surface was deposited on to these dumps. There it combined with rainwater to form sulphuric acid which then dissolved uranium and other metals as it flowed or seeped into the local groundwater. The dumps also produce airborne radioactive material, although very often people living near them are unaware of the resulting health risks.

In more recent years, as gold mines have been worked out, they have often been abandoned, filling up with rainwater. This has then become acidic and enriched in heavy metals, thereafter finding its way into the underground water supply as well as into rivers and dams. Once abandoned, coal mines have also contributed to pollution of the water supply. The Vaal, Crocodile, and Olifants rivers and their tributaries, along with the Middelburg and Witbank dams in Mpumalanga province, are among the major water sources in the

---

country that have become polluted via this process, commonly known as “acid mine drainage”. The resulting contamination is harmful to aquatic life and dangerous to anyone reliant on the water for agriculture or household use.

According to a study produced for the Gauteng city region in 2015, the province contains 374 “mine residue areas”, which include tailings dams as well as other sites of localised mine waste. Along with 6 152 “ownerless and derelict mines”, they “continue to pollute the soil, air, and water”. Rehabilitation costs have been estimated by the auditor general at R30 billion or more. Partly as a result of poor regulation or the absence thereof, the mining industry was able to “externalise” the environmental costs of mining, the Gauteng study said. Consequently the financial liabilities of the ownerless and derelict mines “now sit as a tax burden on the broader economy”. Lawyers for Human Rights, a public-interest law firm, has complained that mining companies sometimes use liquidation as a way of avoiding the full expense of closure and rehabilitation.

### Assessing the past

South African mining is a story of both triumph and tragedy: the latter especially for those whose health was fatally compromised or who lost their lives in accidents. The former head of a major mining company told the writer that companies had neglected both silicosis and acid mine drainage, although he said that fatalities in accidents were an unavoidable risk.

*South African mining is a story of both triumph and tragedy. Although mining triggered South Africa’s industrial revolution, it also helped to establish key aspects of the apartheid system. However, the more urbanised and industrialised South Africa became, the more difficult it was to maintain political apartheid. So mining was all along helping to generate the forces that helped to destroy that system.*

Although mining triggered South Africa’s industrial revolution, it also helped to establish key aspects of the apartheid system even before these were enacted into law. This helps to explain some of the hostility the industry faces today. Hostility also has an ideological component, however, in that the mining industry is regarded by the ANC and its allies in the labour movement and in the South African Communist Party as a manifestation of “white monopoly capital”, which is in turn seen as the offspring of British imperialism. Moreover, like previous governments dating back to that of President Kruger, the ANC government is determined to exploit the industry in what it sees as the national interest.

Paradoxically, however, although the mining industry and the apartheid system grew up together, in the end the forces unleashed by industrialisation helped to undermine that system, as the present writer pointed out in *South Africa’s Silent Revolution*, a booklet published in 1990. The more urbanised and industrialised South Africa became, the more desegregated mine and other workplaces became, the more difficult did it become to keep managing the society under a system of political apartheid. So mining, having played a role in the establishment of aspects of the apartheid system, was all along helping to generate the forces that helped to destroy that system.

---

# PART TWO: THE PRESENT — CRITICISMS AND CHALLENGES

---

## SYNOPSIS

*The mining industry is the subject of constant criticism by a variety of people and institutions. But various analysts, as well as mining executives, have also been highly critical of the policy and legislative environment in which mining has to operate. The gold mines have been accused of smuggling gold out of the country, allegations which have been challenged. Coal mines have been accused of causing environmental degradation, while the government has been accused of failing to enforce environmental legislation. Coal plays a major part in the generation of electricity for households as well as for industry.*

*Mining companies are expected to spend large sums on corporate social investment, although most of their spending goes on wages. These were once among the lowest in the country, but mine wages are now among the highest. Productivity gains have lagged. Getting rid of the migratory labour system, the focus of renewed criticism after the massacre at Marikana in August 2012, will be easier said than done. The same applies to getting rid of shack settlements, which are also to be found in places where there is no mining anyway. The minister of mineral resources accuses the mines of ignoring safety laws, but mining companies are fighting back on the grounds that orders to shut down operations are unnecessarily wide. Some mining executives believe some sort of apology for apartheid is necessary. Others warn that present investors do not want to pay for the sins of the past.*

## General

For reasons earlier noted, the South African mining industry faces an extraordinarily difficult political climate, surpassing that facing the agricultural sector, where white farmers are routinely accused of having stolen the land from blacks. The political climate surrounding mining in South Africa presents the industry with challenges over and above those facing commodity producers elsewhere. These challenges are also over and above the enormous difficulties of extracting minerals from far below the surface of the earth and at a time when a special focus is needed to arrest declining productivity at ageing mines.

*The South African mining industry faces an extraordinarily difficult political climate. This presents the industry with challenges over and above those facing commodity producers elsewhere. These challenges are also over and above the enormous difficulties of extracting minerals from far below the surface of the earth.*

These additional challenges run the full gamut from hostile attitudes to orders to shut down mines. They include regulatory demands, long delays in issuing licences, threats to withdraw such licences, zealous enforcement of safety measures, and proposals to regulate both exports and mineral prices. They also include escalating black economic empowerment requirements first set out in the 2004 Mining Charter, a third version of which was due shortly to be published by the DMR as this paper was being written.

One of the most outspoken critics of policy is Peter Major, head of mining at Cadiz Corporate Solutions. He said last year that the government did not have a clue as to how difficult mining and job creation were.

---

The government constantly complained and “nit-picked” about the industry, and “demonised” it at every opportunity. The result was that its actions over the past 20 years had made mining in South Africa a “horrible place” for investment and career opportunity.

On another occasion Mr Major said that the industry was being killed not by weak commodity prices but by a “toxic” environment which included regulatory delays, low productivity, labour challenges, and legislative uncertainty. No investor in the world saw South Africa as an attractive prospect, and it was probably too late for the government to fix the “catastrophic” decline in the mining sector caused by itself and the unions. Highly risk-averse investors had voted with their feet and many South African mining companies had gone global and spun off their local operations to reduce risk.

Among these are the 100-year-old Anglo American Corporation, once South Africa’s global mining giant, which shifted its primary listing to London in 1999. Its South African gold mines are now housed in a separate company, AngloGold Ashanti. BHP Billiton, a newer mining giant with roots in another major South African company, Gencor, is now headquartered in Melbourne after having spun off its South African assets in 2015 into South 32, a company headquartered in Perth. Gold Fields, which was founded in 1887 by Cecil Rhodes and Charles Rudd, hived off its ageing local mines into Sibanye Gold, which was listed in 2013.

Referring to pressures for protection of the steel manufacturing industry against cheaper imports, Mr Major noted that the mining industry had created hundreds of thousands of jobs without government assistance, but that the government seemed keen to destroy these industries in which South Africa had a real competitive edge, while subsidising those in which we were not competitive.

*Mining expert Peter Major says the industry is being killed not by weak commodity prices but by a “toxic” environment which includes regulatory delays, low productivity, labour challenges, and legislative uncertainty.*

Mining executives have themselves also been speaking out, even though Tony Trahar, at the time chief executive of Anglo American, was lambasted in 2004 by President Mbeki for making the rather mild statement that although political risk in South Africa was starting to diminish, it had still not gone.

Mr Trahar was over-optimistic. The present chief executive of Anglo, Mark Cutifani, said in 2014 that South Africa had experienced a “lost decade” in mining, and that some of the government’s demands “scared the hell” out of investors. Also in 2014, Steve Phiri, chief executive of Royal Bafokeng Platinum, said, “You cannot attack the industry consistently and expect the providers of capital to continue putting money into the same industry that is under attack. This industry is crying out to be loved and trusted. We are not seeing that.” Mark Bristow, chief executive of Randgold Resources, said that “increasingly aggressive legislation” was forcing people “to focus on harvesting rather than reinvesting” in the mining industry.

Bernard Swanepoel, one-time chief executive of Harmony Gold, South Africa’s third-largest gold mining company after AngloGold Ashanti and Sibanye, said in 2015 that although South Africa had the richest and most diverse mineral deposits in the world, most of these assets would stay in the ground because there was no new money coming into the mining industry. Local and foreign investors had been kept away by government policies, regulatory uncertainty, and a hostile labour regime. There were a lot of politicians who “wouldn’t mind if the industry ceased to exist”. However, the industry was itself responsible for its own bad image, one problem being inexcusably high and “vulgar” remuneration for executives.

Graham Briggs, who succeeded Mr Swanepoel as chief executive of Harmony before his own retirement, said in 2015 that the government had treated the mining industry with barely concealed contempt for 20 years. The industry had been a great supporter of apartheid, but was also key to the development of the country. The demonisation to which it was being subjected was “unfair” and also extremely damaging to the country.

Neal Froneman, chief executive of Sibanye, said in 2015 that “the sooner the government understands



---

the realities of running a business, the sooner it will do the right thing". The reason why mining executives were speaking out so vigorously when in the past they had been more diplomatic or silent, was that "the situation is so bad that the fear of being singled out or victimised is of small consequence". Appeasement was a luxury that neither the industry nor the country could afford any longer.

Referring to additional demands likely to be imposed upon the industry in the third version of the Mining Charter, Roger Baxter, chief executive of the Chamber, said at the end of 2016, "The cumulative effect of all the department's proposals, combined with existing corporate taxes and royalties, skills development levies and more, will materially affect the viability of an industry already in crisis." When it appears within the next few months, the charter may be challenged by the Chamber. The existing charter also faces legal challenge by Malan Scholes, a law firm, which says some of its requirements are unconstitutional. Also likely to be challenged are amendments to the Mineral and Petroleum Resources Development Act of 2002 which were adopted by the National Assembly last year but are still to be endorsed by the National Council of Provinces.

Commenting in 2015, Azar Jammine of Econometrix, a private economic research house, said that mining was one of the few sectors of the economy with the potential to absorb unskilled people in large numbers. "The problem in killing off the mining industry is that it is making it more difficult for people without skills to find jobs in the country."

*Azar Jammine of Econometrix notes that mining is one of the few sectors with the potential to absorb unskilled people in large numbers. "The problem in killing off the mining industry is that it is making it more difficult for people without skills to find jobs in the country."*

Jim Rutherford, a non-executive director of Anglo American, said in 2015 that South Africa until 25 years ago had accounted for 40% of the world's gold mining industry, but that this proportion had dropped to 4%. South Africa would find it difficult to attract investment capital. According to the Fraser Institute, a Canadian research house headquartered in Vancouver which monitors mining jurisdictions around the world for their attractiveness to investment, South Africa has dropped from 53rd out of 64 countries in 2004/05 to 66th out of 109 in 2015/2016.

### **Allegations of smuggling**

In July 2016 the United Nations Conference on Trade and Development (Unctad) produced a report in which it accused South African mining companies of systematically underinvoicing gold exports to the value of more than \$78.2 billion between 2000 and 2014. The accusation was based on a discrepancy between South African gold export figures and the import figures of other countries. Unctad suggested that this was "a case of pure smuggling of gold out of the country". One result was massive revenue losses to the state.

The Chamber commissioned an independent research agency, Eunomix, to evaluate the Unctad report. Eunomix said that the discrepancy in the trade figures was at most \$19.5 billion, and that it was probably mainly the result of the fact that the South African authorities and the UN classified commodity trade data differently. It further said that the total value of gold exports was known to the South African tax and customs and exercise authorities, as well as to the South African Reserve Bank and Statistics South Africa (Stats SA).

One of those who worked on the Eunomix report was Gavin Keeton, associate professor of economics at Rhodes University and former chief economist at Anglo American. He said that South Africa's official trade statistics captured most gold exports under the general category "unallocated" rather than by destination. This was because of gold's previous monetary role.

Eunomix further stated that most major South African gold producers were listed on the JSE and had

---

to apply International Financial Reporting Standards as well as the requirements of the local Companies Act. Professor Keeton said that few companies were more transparent about production than producers of commodities, whose prices were public knowledge. The Chamber said that mining companies' financial reports faced scrutiny by shareholders, financial analysts, journalists, and many others. All this, Professor Keeton argued, meant that fraud on the scale suggested by Unctad would be quickly exposed.

The Chamber said that it had sent the Eunomix report to Unctad, and was hoping that an updated version of Unctad's report would correct the "misconceptions" of its original report. At the time of writing the present document, no subsequent report had been published by Unctad, although Professor Keeton said that the authors of the Unctad report were aware of their mistakes and were blaming South Africa and commodity traders for publishing opaque statistics. According to the Chamber, Unctad "basically retracted their accusation of smuggling" but did not accept that their methodology was flawed. In the meantime, said the Chamber, it would be commissioning further research to ascertain the reason for the \$19.5 billion discrepancy. It would also possibly commission research into the reasons for other discrepancies identified by Unctad, including supposed underinvoicing of \$24 billion in silver and platinum exports.

## Environment

Mining faces growing challenges arising out of its impact on the environment. As we have seen above, acid mine drainage is a major problem, whose rectification will require major expenditure.

*According to Agri SA, mining "has had a significant negative impact on agriculture". GroundWork, an NGO, adds that coal mining has ruined land "on an immense scale" and also water systems. It further asserts that mining companies are indifferent to their impacts on the environment and on people.*

In addition to these problems, according to Agri SA, a large organisation representing farmers, mining "has had a significant negative impact on agriculture". Conflict between the two sectors occurred when, for example, crop yields were limited or impeded by pollution. Other problems included the deterioration of roads and other infrastructure, and more crime in mining areas. Sometimes there was "a total lack of rehabilitation of mined land after closures". The Transvaal Agricultural Union added that rehabilitation of soils was often never fully achieved; there were cases where the quantity of maize harvested dropped from between 6 and 8 tonnes per hectare before mining to between 1 and 1.2 tonnes afterwards.

Apart from degradation of the landscape arising from mining, the burning of coal in power stations causes pollution in the form of oxides of nitrogen and sulphur. These problems are particularly acute on the Mpumalanga Highveld, home to 12 of Eskom's 16 coal-fired power stations and the numerous mines feeding them. This part of the country also hosts the coal mines supplying Sasol's coal-to-liquids (CTL) plant at Secunda.

A report entitled *The Destruction of the Highveld* issued in November last year by groundWork, a non-governmental organisation, said that coal mining had ruined both the land "on an immense scale" and also water systems. It had further polluted the air, and it damaged all body systems. "It chokes the lungs, poisons the blood, interrupts the heart beat, and disables the mind and nervous systems". People also died of heatstroke, while their houses were "repeatedly shaken by mine blasting".

The report said that mining companies were indifferent to their impacts on the environment and on people. They had also enjoyed impunity for a century with the active collaboration of government, in particular the DMR and the Department of Energy. Once the DMR had issued a mining right, companies started digging and "let the devil take the environment". Labelling all this a form of "environmental injustice", the report said that mining was a "doomed venture" and that "the end of coal is nigh". Saying no to mining meant standing "in solidarity with the planet".

---

According to other reports, local authorities on the Mpumalanga coalfields have moved some 6000 families out of 12 500 targeted for relocation to cleaner areas, but some families resist as they wish to remain as close to their jobs as possible. The Department of Environmental Affairs says that impact assessments and licensing authorisation processes are now stricter. Under the National Environmental Management Act of 1998, mining companies are required to deal with “ongoing rehabilitation” of mining areas during the operational life of the mine. They are also required to manage its final rehabilitation when it closes. They are further required to provide for latent environmental damage that may come to light after closure. Contraventions may result in fines or imprisonment – threats which are often ignored.

The problem is effective enforcement. According to a report by the Department of Planning, Monitoring, and Evaluation, the DMR does not adequately police mine rehabilitation funds. Nearly half of South African mines did not set aside enough money to clean up their mess, and the DMR lacked the necessary capacity, staff, and legal expertise to do its job. Agri SA said that “state governance of mining is poor”. Among other problems, the application of legislation affecting mining and the environment was taking place “in a haphazard manner”. Mariette Lieferrink of the Federation for a Sustainable Environment said that her organisation recognised that mining contributed significantly to GDP, but that there was a systematic failure by government to implement legislation. Melissa Fourie of the Centre for Environmental Rights said that acid mine drainage was not unique to South Africa, but that “government officials are paralysed by the enormity of the problem”.

The problem does not stop with inadequate environmental controls by the state and/or failure by companies to comply with the law. Various groups are opposed to coal mining per se on the grounds that it contributes to “climate change”, and they would prefer to see a faster shift to the use of wind and solar power. Plans for Eskom to build additional coal-fired power stations are already being challenged in the courts. According to a researcher at an energy unit at UCT, South Africa cannot build any more coal-fired power stations if it is to meet its commitments under an international agreement to help combat “climate change” signed in Paris in 2015.

*According to a report by the Department of Planning, Monitoring, and Evaluation, the DMR does not adequately police mine rehabilitation funds. Nearly half of South African mines do not set aside enough money to clean up their mess, and the DMR lacks the necessary capacity, staff, and legal expertise to do its job.*

It should, however, be borne in mind that although more than 90% of households in South Africa use electricity for lighting, only 81% use it for cooking and only 37% for heating. Nearly two million households burn wood or coal in their own homes, while nearly 1.5 million use gas or paraffin. They too suffer from pollution, and also face risks of fire. More than 6.6 million households have no source of fuel for heating. According to a study published by the IRR in 2016, indoor pollution rather than outdoor pollution is South Africa’s “most serious air-quality problem”. Indoor pollution accounted for the deaths of 1 400 South African children a year, the study reported.

The provision of electricity as cheaply and speedily as possible to all of the households who suffer from indoor pollution as a result of the fact that they do not have, or cannot afford, electricity for heating and cooking, needs to be a key component of energy policy. This includes additional coal-fired power stations.

According to the *South African Coal Roadmap* (published in 2013 following an initiative of the Fossil Fuel Foundation, Eskom, coal producers, Sasol, and the DMR), all future coal-fired power stations, including those already under construction, are anticipated to have flue gas desulphurisation to mitigate the emissions of toxic gases, even though these requirements will also necessitate the use of more water. The roadmap report also said that mining caused “surface disruption” for a certain length of time. However, “if planned and managed properly, mining pits will be backfilled as mining progresses and should be closed

---

and rehabilitated by the end of the mine's life". The report added, "Very careful planning is required if rehabilitation is to be achieved with minimal possible loss of biodiversity."

### Corporate social responsibility

Applicants for mining rights issued by the DMR are required to submit a social and labour plan (SLP) to the department for approval before the rights will be granted. These plans outline the company's contribution to local community development. Typically, says the Centre for Applied Legal Studies at the University of the Witwatersrand, they contain commitments to housing schemes, building of schools and clinics, contribution to infrastructure upgrading, and adult literacy programmes.

According to Tebello Chabana, senior executive of the Chamber, the industry spends approximately R2 billion a year on "mine community development" through SLPs in host communities and labour sending areas. In 2015, although the industry had an aggregate loss of R37 billion, it spent more than R5 billion on skills development, while between 2011 and 2015 it funded more than 12 500 students in tertiary education. It also spent some R180 million supporting lecturers in university faculties teaching mining engineering.

As will appear below, local communities receive about 1% of the expenditure of mining companies, in contrast to employees, who receive almost 40%. The 1% is probably an underestimate, however, in that some companies have policies of local procurement, with the result that the actual amount going into local communities (in addition to wages) is higher than the 1% but is reflected in procurement rather than social expenditure.

*The managing director of Eunomix, Claude Baissac, says that mining companies are apparently expected to compensate for the government's social spending shortfall. They must also shoulder more onerous social spending budgets than other industries, such as manufacturing.*

The Benchmarks Foundation, a non-profit lobby group owned by various churches, reports that it works in some 40 mining communities but that none feel they benefit from the nearby mine. Jo Seoka, chairman of the foundation, said in October 2016 that "new models of socialisation of mining" were needed so as to "remove profit from the equation". He suggested that "communities in which mining took place should take ownership and distribute the profits evenly". If this were to happen, there would be no further capital available for the mines in question, which would soon become derelict. This is what has happened to many farms taken into communal ownership after redistribution or restitution under the government's land reform programme.

The Eunomix research agency said that most of the population of Rustenburg had failed to benefit from the platinum boom. However, it said, spending by Rustenburg mining companies on education, health, housing, and infrastructure was much higher than that of local government. The managing director of Eunomix, Claude Baissac, said that mining companies were apparently expected to compensate for the government's social spending shortfall and to shoulder more onerous social spending budgets than other industries, such as retail and manufacturing. Possibly this was because physical and social infrastructure in most mining communities was poor, while other industries tended to be in better developed urban centres. But it could also reflect a view that mining benefited most from apartheid and had to make amends.

Some companies have local procurement policies, local in this sense meaning not South African but from the surrounding "host community". One such company is Gold Fields, whose single asset in South Africa is the highly-mechanised South Deep gold mine in Westonaria, south west of Johannesburg. Currently about 15% of procurement spending goes to local suppliers, but the company aims to push this up to 25% by the end of 2018. Paddy Govender, who is driving the project, said that the company had done a detailed analysis to determine which goods and services being procured elsewhere could be "relocated" to the host community. Between 2012 and 2016 some 490 host community suppliers registered with the mine, which is now purchasing from 84 of them. More than 1 000 host community residents are currently employed by

---

South Deep suppliers providing services that include gardening, catering, cleaning, oil recycling, building, specialised labour, repairs and maintenance, and security.

Suppliers outside the area are asked to contribute in monetary or non-monetary terms to the upliftment of the local community. One such supplier has upgraded a local nursery school and will offer training to local suppliers involved in building houses for the mine. South Deep is also arranging discussions with a local supplier and a large transport company to come together in a special purpose vehicle to offer the mine bus transport services.

Lonmin, one of South Africa's largest platinum producers, hosted a local procurement day at Moinooi near Rustenburg in October 2016. The objective was to encourage small businesses to come forward and do business with the mine. The company said it was spending R8.4 billion on procuring services from companies, including R500 million from local businesses. The objective was that communities would not only get jobs from Lonmin, but also have opportunities to supply services to the company. In partnership with Shanduka Black Umbrella, Lonmin runs an incubation centre to train small, medium, and micro-businesses to enable them to do business with the mining company.

Although the term "social and labour plan" is new, the concepts of corporate social investment and corporate social responsibility are not, certainly not in South Africa. Mining and other companies have been ploughing money into education, housing, and other areas since long before the ANC came to power. Many examples could be cited. One will suffice. One enterprise development project at whose launch by Anglo American the present writer was present is Zimele, which between 1989 and 2015 has provided R1.6 billion in funding for 2 206 businesses that collectively employed nearly 47 000 people and generated turnover of nearly R9 billion.

*Mining and other companies have been ploughing money into education, housing, and other areas since long before the ANC came to power. Anglo's Zimele, for example, has provided R1.6 billion in funding for 2 206 businesses that collectively employed nearly 47 000 people.*

The largest corporate donor in the country is probably the Anglo American Chairman's Fund, which dates back to the late 1950s. Its current funding priorities go far beyond mining communities, and include early childhood development; maths, science, and language development at school level; strengthening the public health care system; and capacity building for community-based and other non-governmental organisations. For many years the fund has also financed liberal organisations, among them the IRR, as a matter of deliberate policy. The same applies to the Oppenheimer Memorial Trust.

Although its Chairman's Fund was not the vehicle, Anglo American financed a trust set up in 1975 which successfully thwarted attempts by interests sympathetic to the NP government to take control of South African Associated Newspapers (SAAN), owners of several opposition newspapers, among them the celebrated liberal Rand Daily Mail, a strong critic of that government. In the end, however, the company closed the paper ten years later as it had become commercially unviable and its losses were threatening the larger SAAN group.

In August 2015 Mr Froneman of Sibanye said that although he was conscious of his social responsibilities, mines were not charities. Mining companies in South Africa had a higher social burden than those in developed countries, but it was not smart to keep on loading the back of the camel until it broke because there would then be no upliftment. "I would argue that the mining companies have done a hell of a lot more than is acknowledged. We do more than just comply. But when we are put under pressure to do something that does not make commercial sense, that is when we dig our heels in."

## Wages

Like agriculture and domestic service, mining was for a long time one of the lowest paying sectors of the economy. In 1972, for example, the average monthly wage of black miners was R22, against R49 in the

---

retail trade and R60 in manufacturing and construction. By 1985, however, the black wage in mining had risen to R360, overtaking the average black construction wage of R351. Black mine wages had also overtaken those in clothing manufacture and were beginning to catch up with other parts of the manufacturing sector.

Comparative racial breakdowns of wages by sector in more recent years are difficult to come by, but in 1997 average mine wages of all races had almost caught up with those in the wholesale and retail trade and catering and accommodation sector. They were also beginning to catch up with those in manufacturing as a whole. By 2016 wages in mining and quarrying had comfortably overtaken both of these sectors as well as the finance, real estate, and business services sector, with construction lagging far behind. Only government; transport, storage, and communication; and electricity, gas, and water now pay higher average wages than those in mining. Mr Swanepoel of Harmony said in January 2017 that to unskilled and unemployed people, jobs in mining were more attractive than those in other sectors.

According to the Chamber, the average wage on gold mines in 2015 was R28 076 a month. Wages in mining and quarrying as a whole are lower than this, however. According to Stats SA the average in February 2016 (including bonuses and overtime) was R20 346 (against R15 492 in manufacturing).

*The average wage on gold mines in 2015 was R28 076 a month. In mining and quarrying as a whole, the average in 2016 was R20 346 (against R15 492 in manufacturing). Prompted by the Marikana shootings in 2012 and a five-month strike in 2014, average mine wages in the last two years have risen by 21% in real terms, a far greater increase than in any other sector.*

Prompted by massive adverse publicity for the mining industry subsequent to the shootings at Marikana in 2012, and a five-month strike in 2014, average mine wages in the last two years have risen by 21% in real terms, a far greater increase than was paid in any other sectors. If mine wages continue to rise more rapidly than those of other sectors, mining is likely to overtake the transport, storage, and communication sector, and may even overtake government, to become the best-paying sector in the economy after electricity, gas, and water. At the same time, of course, the mining industry will continue to shrink as a source of employment, the number of jobs in mining having dropped from 693 000 in 1990 to 490 000 in 2015, a decrease of almost 30%.

According to a report cited last year by PricewaterhouseCoopers (PWC), an accounting firm, South Africa has the highest cost of labour as a percentage of total costs among the major mining producers. It averages around 60%, whereas the costs in the United States and Australia average around 30% to 40%. The higher labour costs in South Africa are said to be the result of the labour-intensive deep-level mining prevalent in South Africa.

Shortly after Marikana, it was widely reported both in South Africa and abroad that rock drillers at Lonmin earned only R4 000 a month. However, according to the Solidarity trade union the total cost package was approximately R10 500 a month, excluding bonuses. Lonmin said in January 2017 that miners who had had been striking for a minimum wage of R12 500 would be earning a basic R12 296 by 2019, excluding allowances for rock drillers.

At the time of writing this report, the government was planning to introduce a national minimum wage of R20 an hour from May 2018. This would translate into between R3 500 and R3 900 a month depending on the length of the working day. Minimum wages on many mines are already about double this. Sibanye Gold, for example, introduced an entry-level wage for surface workers in July 2016 of R7 200 a month, the entry level underground being R7 700. The living-out allowance is R2 100, while the value of food and accommodation varies from R2 500 to R4 000 a month, depending on the operation.

According to the Chamber, the entry-level wage in the platinum industry is about R6 500. However, fol-

---

lowing negotiations with some of the mining unions, lowest basic wages for underground workers on some of South Africa's major platinum and gold mines will rise from R8 000 to R11 000 by 2018. The minimum at Lonmin will rise to R11 700.

## Productivity

According to Mr Major of Cadiz, the productivity of South Africa's gold mines measured in ounces of gold per employee is the same now as it was 100 years ago. South Africa was at one stage not only the lowest cost producer but also the greatest innovator. He also said that one of the reasons for the very high costs on the country's platinum mines is that wages had increased at around 12% per annum for 12 years but that there had been no corresponding productivity increases. Terence Goodlace, departing chief executive of Impala Platinum, another major producer, said in October 2016 that the extraneous and regulatory matters with which mining executives had to deal had become infinitely more complicated at a time when they needed special focus on the problem of arresting declining productivity at ageing mines.

Figures compiled by the Chamber for mining and quarrying as a whole showed that real remuneration per employee increased by a total of almost 12% between 2010 and 2015. Over the same period, unit labour costs increased by 61%. Fixed capital productivity declined by almost 18%.

*Getting rid of the migratory labour system is far easier said than done. Nor would it necessarily be desirable, let alone fair to people in rural areas working or seeking work on the mines. Teba, a recruitment agency set up by the mining industry more than 100 years ago to recruit black labour for the mines, still has some 281 000 miners on its books.*

Labour productivity, on the other hand, increased by almost 30%. This substantial increase occurred in 2015, after several years of decline. Asked to explain the large jump, the Chamber said that "a lot of cost-cutting and rightsizing have happened and might have had the desired results".

## Migratory labour

The Marikana shootings attracted more public attention to the migratory labour system on South Africa's mines than it has received for many years. Some critics blamed the incident on that system. There were renewed calls for it to be phased out. Mining companies were lambasted for not providing much better housing for their employees in surrounding townships. Some of the criticism was based on televised footage of shacks in which some of the miners lived after they had moved out of hostels on the mine and used their living-out allowances provided by the mine to obtain accommodation in nearby townships. Some brought their families with them. Others spent minimal amounts on their own accommodation, preferring to send more money to families back home in rural areas, some of which are not in South Africa.

Whether they live in hostels on mine property, or in surrounding areas, the fact that migrant workers spend much of their working lives away from their families has long been a major source of criticism of the migratory labour system, as noted earlier in this paper. Even though the previous government's laws entrenching it no longer apply, getting rid of the migratory labour system is far easier said than done, however. Nor would it necessarily be desirable, let alone fair to people in rural areas working or seeking work on the mines.

Teba, an agency set up by the mining industry at the beginning of the last century to recruit black labour for the mines, still has some 281 000 miners on its books, most of them from South Africa but 57 000 of them (20% of the total) from Mozambique, Lesotho, Swaziland, and Botswana. Apart from depriving sending areas of income, replacing these miners by urban-based labour would be problematic from various practical points of view. Sibanye said that it tried to employ local people (from communities within 50 kilometres of operations) "as far as possible". Even so, only 33% of its 46 269 employees at the end of 2015

---

could be defined as local. “A large percentage with core skills, experience, and many years of loyal service were drawn from labour-sending areas in rural provinces of South Africa and neighbouring countries.”

A detailed discussion of the future of the migratory system is beyond the scope of this paper, except that it is necessary to emphasise the importance of both flexibility and choice, especially choice on the part of mineworkers as to whether to live in hostels without their families, make use of family accommodation built by the mines, or live with or without their families in rudimentary shack accommodation in nearby townships. A flexible policy would also involve the upgrading of hostels rather than phasing them out. It would further avoid “one-size-fits-all” policies imposed by the state. Shorter contracts enabling migrant miners to return home more frequently and for longer would make for a more flexible and humane system.

Some of these issues were explored in greater detail in a paper entitled *Digging for Development: The Mining Industry in South Africa and its Role in Socio-economic Development* published by the IRR in 2014. It should also be borne in mind that miners who live in shacks surrounding the mines may have better houses in rural areas that they regard as their real homes. The president of the Association of Mineworkers and Construction Union, Joseph Mathunjwa, queried why people would want to buy a house in Rustenburg “when they already have a house in KwaZulu-Natal, for example”. He said that if people rented accommodation on the mine, the mining company should arrange transport to their homes because that was where they had built their houses.

*Whatever its deficiencies, one of the advantages of the migratory labour system is that the earnings of miners are spread into some of the more impoverished parts of South and southern Africa. This supports families and local economies, and reduces the incidence of poverty.*

A number of mining companies pay commuting allowances. For example, according to an agreement signed by the Chamber and four major mining unions in October 2015, Anglo American’s coal mines pay R4 313 a month to employees residing between 100 and 150 kilometres from their places of work.

Whatever its deficiencies, one of the advantages of the migratory labour system is that the earnings of miners are spread into some of the more impoverished parts of South and southern Africa, supporting families and local economies, and reducing the incidence of poverty. Without jobs in mining, unemployment in these areas would be even higher than it already is: in the Eastern Cape, for example, unemployment in 2015 was running at 42.5%, against the national figure of 34.9%. Teba said in 2014 that “if you go on radio and say we are recruiting in Lusikisiki, you will get people from 600 kilometres away coming to that office”. It should also be remembered that there are many more migrant workers in South Africa than those in mining.

Moreover, given that neighbouring countries supplied labour to the South African mines for decades when South Africans were reluctant to work for the low wages on offer, South Africa has a moral obligation not to cut these poorer countries off from a source of employment in an industry to whose development they contributed so much, in the process losing lives to accidents and silicosis.

Various companies have made commitments to provide more housing. Some, among them Anglo American Platinum, scaled these down as they cut their workforces. Lonmin, which has been the focus of continuing media attention ever since the Marikana shootings, has been strongly criticised for failing to meet its housing commitments, for which it has budgeted R500 million. The Bench Marks Foundation said in January 2017 that if the company failed to meet its demands by August 2017 it would campaign internationally for Lonmin’s mining licence to be revoked. Apart from a living wage of R12 500 a month, the foundation’s demands included “comprehensively addressing the housing needs of workers, 33 000 of whom lived in informal housing without access to electricity, basic sanitation services, or running water”. Mr Zuma also threatened to revoke the licence if the company failed to meet its own housing targets. Mike



---

Schussler, an independent economist, said that if Lonmin were to shut up shop, families would be robbed of their breadwinners “from managers to cleaners”.

The renewed criticism of Lonmin followed a report in August 2016 in which the company was lambasted by Amnesty International for having built only three showhouses after it had pledged to build an additional 5 500. The company said that one of the reasons it had not built the houses was that “our employees do not want houses. They want to go back to their home countries and provinces. They choose to live in informal settlements.” The mine provided hostels for some miners, while others were given living-out allowances. “They have a choice as to whether to live in a hostel or rent a room.” Referring also to the mine’s financial difficulties, the company said it had submitted a revised social and labour plan to the DMR.

Lonmin, which is a high-cost producer and has been struggling with low platinum prices, has had three rights issues in as many years to raise additional capital from its shareholders in its quest for survival. It has also shed almost 5 500 jobs. At the end of 2016 Lonmin reported a profit for the first time in years. Its chief executive, Ben Magara, said that the long-term sustainability of the company was more important than paying dividends, however.

*Miners at Marikana and elsewhere are not the only people in South Africa living in shacks or “informal dwellings”. In 2016, there were a total of 2 225 informal settlements in the country. These usually appear unsightly, ramshackle and “squalid”, but they also provide a form of affordable housing for poor people.*

Although the government is finally to lay charges against police generals who led the operations which led to the lethal shooting of the 34 miners at Marikana, the Bench Marks Foundation is demanding that the company should compensate their widows and orphans by paying them “in the region of 20 years’ wages”.

### **Housing and living-out allowances**

The housing allowances paid by various companies are set out in the October 2015 agreement between the Chamber and various trade unions. Glencore’s lowest living-out allowance from July 2017 was to be R4 328. Exxaro was committed to pay R6 600 from that date. Anglo American’s coal mines committed themselves to pay R8 791 from January 2018.

### **Shack settlements**

Miners at Marikana and elsewhere are not the only people in South Africa living in shacks or “informal dwellings”, as they are officially called. Any visitor to Cape Town, where there is next to no mining activity, would have noticed the vast shack settlements adjoining the airport. Elsewhere, even in much smaller urban areas, people who have nothing to do with mining live in shacks. Shack settlements have also sprung up near Eskom’s power stations and the mines supplying them. Near the Duvha power station outside Witbank, for example, is the Masakhane settlement, which has grown to 3 400 homesteads in the last few years as people have moved to the Highveld looking for work.

Indeed in 2016, according to Stats SA, more than two million households lived in informal dwellings in backyards, on farms, or in “informal settlements” (which are sometimes referred to as “squatter camps”). There were a total of 2 225 informal settlements in the country. They usually appear unsightly and ramshackle and are sometimes referred to as “squalid”. Shacks, invariably built very close to one another, are also susceptible to fires that destroy hundreds of homes and extinguish lives. But they are a form of affordable housing for poor people. Any attempt to eliminate shack settlements in one area would simply lead to the erection of shacks elsewhere by the people displaced. Providing shack settlements with adequate services, including water, sanitation, electricity, and refuse removal, is arguably the responsibility of local government, with the support of national and provincial government, rather than of particular industries.

---

However, many local authorities are so badly run, and sometimes so corrupt as well, that they are unable to provide services and/or collect payments for those that they do provide.

Mr Phiri of Royal Bafokeng said that a line had to be drawn in the sand as to who was ultimately responsible for mining communities: the private sector or the government. He said that although his company had ploughed R2.8 million into housing in Rustenburg, it was still required to pay for the infrastructure.

The proportion of South African households living in “informal” dwellings dropped from 16% in 1996 to 13% in 2016. The number, however, rose from 1.45 million to 2.19 million. Although the number of households living in so-called “formal” dwellings rose from 5.79 million to 13.40 million, provision of formal housing was not fast enough to cope with additional demand arising from such factors as urbanisation and diminishing average household size. Hence the growth in shack dwellings, many of them erected by people who could not afford brick-and-mortar structures anyway.

## Communities

Several legal practitioners attempting to help local communities in former homeland areas have complained that mining rights are sometimes granted without their consent or even without consulting them. Many of these complaints were discussed at an “alternative mining indaba” in Cape Town in February 2016. Some of the legal practitioners conducting the research said that they were the tip of an iceberg.

*Although the accident rate has dropped substantially, safety remains an issue on the mines. However, several times in the past few years mining companies have complained that the DMR has ordered shutdowns of entire mines when safety issues could be addressed without stopping all operations.*

Apart from corruption, a key part of the problem is that land occupants in former homeland areas have weak tenure rights but are subject to the jurisdiction of traditional leaders, some of whom have been accused of trading the rights of communities for personal shares in mining companies. Although social and labour plans are designed to benefit local communities, several communities have complained that they are denied the right to say yes or no to mining where they live. They also complain that the plans are agreed to without their involvement, and that they are kept in the dark about deals made between traditional leaders and/or politicians as to who benefits from the mining.

According to the Land and Accountability Research Centre at UCT, proposals to augment the powers of traditional leaders risk exacerbating the problem by giving them authority to represent rural communities in investment deals on communal land. The Legal Resources Centre said that it was “inexplicable” why the DMR “is now proposing the removal of community participation conditions and is refusing to heed the call for community consent as a requirement for mining on communal land”. In September last year, a community in the Eastern Cape approached the High Court for an order that mining rights could not be granted without their consent.

## Safety

Although the accident rate has dropped substantially, as shown above, safety remains an issue on the mines. However, several times in the past few years mining companies have complained that the DMR has ordered shutdowns of entire mines when safety issues could be addressed without stopping all operations. Mining executives have complained that the DMR has a “trigger-happy” approach, ordering complete shutdowns when partial shutdowns limited to the area of the accident would suffice. One executive said in 2015 that if stoppage notices, issued under Section 54 of the Mine Health and Safety Act, were challenged, “you get bullied, audited, and stopped to death”.

The Chamber said it supported the justified application of stoppage notices, but that in some cases they

---

were applied inconsistently and unfairly, and often involved the shutting down of unaffected areas. It said that the cost of safety stoppages in lost revenue between 2012 and 2015 was R13.6 billion, excluding the losses incurred in restarting mines. Although the DMR said it did not issue stoppage notices to victimise mining companies but as a corrective measure to protect the lives of mineworkers, an attorney with a large law firm said that “enforcement issues are all too frequently approached in an aggressive, heavy-handed, and ill-considered manner”. Mr Phiri of Royal Bafokeng said last year that lack of experience among inspectors was part of the problem. He added that the increasing frequency and severity of stoppage orders did not appear to be aimed at addressing compliance with safety standards.

AngloGold Ashanti, which operates five deep mines in South Africa, complained in August 2016 that only six of the 77 stoppage notices issued to it in the first half of the year related to fatal accidents; the rest were the result of audits and inspections and on technicalities.

In November 2016 the Labour Court overturned an order shutting down AngloGold Ashanti’s Kopanang mine near Orkney in North West province. In his judgment, André van Niekerk said that the order, which was causing losses to the company of R9.5 million a day, had been “out of all proportion” to the problems identified. This was because it prohibited various operations “across the entire mine”, even though no reasonable person would believe that “infractions” on a “minute” part of it endangered the health and safety of anyone on the rest of the mine.

Judge van Niekerk said that the Mine Health and Safety Act had “as its commendable purpose the protection of the health and safety of employees in mining”, but that this did not “entitle those responsible for enforcing the Act to act outside the bounds of rationality”. He added that if the company had sought an order that the mine inspectors concerned should bear the costs of the legal action in their personal capacities, he would have given “serious consideration to such an order”. Allan Seccombe, resources writer on *Business Day*, wrote after the Kopanang case that some companies were contemplating suing “incompetent and malicious” inspectors in their personal capacities when they acted in bad faith. They were thinking of doing this because there were no consequences for DMR officials arising from adverse judgements. Mr Baxter of the Chamber said “mining companies are going to increasingly make sure that they protect their rights”.

*In November 2016 the Labour Court overturned an order shutting down AngloGold Ashanti’s Kopanang mine in North West province. It said that the order, which was causing losses to the company of R9.5 million a day, was “out of all proportion” to the “infractions” in a “minute” part of the mine.*

Towards the end of January 2017, Sibanye served summonses on the minister and three of his officials claiming R26.8 million from them in their personal capacities. The company said the three inspectors had acted in a “draconian” way at its Kroondal platinum mine in North West by closing down all five of the mine’s shafts after a miner had died in one of them in August 2016. At least nine stoppages had been ordered over the preceding 18 months. These had cost the mine, which employed 9 500 people, R180 million and rendered it marginal. The company said that the actions of the inspectors had been “irrational, arbitrary, and capricious” and taken for an “improper purpose” not permitted by the Act.

The minister accused AngloGold and Sibanye of “refusing to comply with the mining laws of the country”. He said that the two companies had been responsible for the deaths of 19 mineworkers in 2016. “If companies cannot mine safely, they should not be mining at all, and should allow other potential holders who will respect the laws of our country to continue mining.” AngloGold said it had reduced its operating fatalities rate by more than 80%. Mr Froneman said that the view of some officials that “we do not take safety seriously” is “absolute crap”. Their heavy-handed decisions could tip the mine from being viable into

---

the red. “Who loses? The workers, who’ll get laid off if those mines become unviable.” He added that the most dangerous part of a miner’s job today was travelling on the road to work.

### Legacy issues

Speaking in Johannesburg in October 2016, Mr Froneman said that the “negative consequences” of mining, including migrant labour and job reservation, would be felt for “generations to come”. The industry had not acted “humanely and morally”. “Acknowledging our past” was the first step to developing a vision of what a sustainable mining industry would look like. The second step would be to agree on a vision for the industry. The third would be to forge a social and economic compact.

Later that same month Mr Froneman said that all chamber members acknowledged the “debilitating trust deficit” that existed, one consequence of which was a perception that the industry continued to abuse people. A process such as another truth and reconciliation commission was envisaged as a means of talking about the things that caused so much pain and making a commitment not to let them happen again. Subsequently Mr Froneman told the writer of this paper, “We have never said strongly enough that the past was unacceptable. We must do so in a more robust way.”

*Bernard Swanepoel of Harmony Gold says that 100 years of exploitative labour practices are part of the industry’s problem, along with acid mine drainage and “inexcusably high remuneration for executives”. But he also says: “If we are going to continuously look at the past, at what went wrong, we’ll kill the industry. Because if you want today’s investors to pay for all the sins of the past, they are not going to do that. They are going to run away. And you are going to have no funding and you are not going to build the next generation of mines.”*

Mr Swanepoel said that 100 years of exploitative labour practices were part of the industry’s problem, along with acid mine drainage (and the “inexcusably high remuneration for executives” referred to above). However, he said, “if we are going to continuously look at the past, at what went wrong, we’ll kill the industry. Because if you want today’s investors to pay for all the sins of the past, they are not going to do that. They are going to run away. And you are going to have no funding and you are not going to build the next generation of mines.”

---

# PART THREE: THE BIGGER PICTURE

---

## SYNOPSIS

*Although the relative contribution of mining to GDP has shrunk, it is still the backbone of the economy. Mining is also the single largest component of the output of four of the nine provinces, while 16 of our largest towns are heavily dependent on mining. So are two ports. Mining accounts for about a third of South Africa's commodity exports. While coal, most of which Eskom buys, accounts for most mineral sales, platinum is the biggest export earner. The mines are also major purchasers of numerous different goods and services from other sectors of the economy, especially the transport sector. So although mining accounts for fewer than half a million direct jobs, double that number of people are employed indirectly in other sectors as a result of mining.*

*Mining has always required very high levels of skills, technology, and human ingenuity. The world's deepest mine, which is in South Africa, is five times as deep as the world's tallest building, in Dubai, is tall. Science and technology will continue to be applied to improve safety as well as to reduce pollution. Blasting will in due course have to be replaced with technology that reduces risks of accidents.*

*Mining pays royalties as well as income taxes, the quantity of which varies enormously depending on commodity prices. While the people who do the work account for the largest slice of mining costs, large sums are reinvested to keep the mines in operation or on expansion. Shareholders sometimes do very well, but sometimes they miss out. Most shares are held by large financial institutions, including pension funds. Mines have also spent more than R200 billion on "empowerment" deals.*

*Although various environmental lobbies would like to put a stop to coal mining altogether, a third of South Africa's liquid fuels are made from coal. Numerous plastics, some of which we export, are by-products of the coal-to-liquid process. Coal is also the feedstock for 91% of the electricity generated by Eskom. Some of the mines supplying Eskom are getting old, but there is not enough investment taking place in new mines to replace them. The numerous coal-fired power stations being built around the world represent a possible alternative market for some of South Africa's coal-mining companies.*

## Basic statistics

Although once dominant, mining and quarrying now account for only 8% of South African gross domestic product (GDP). Since the middle of the last century the relative contributions of agriculture and manufacturing have also shrunk, while those of other sectors have grown. Finance at 21% is now the biggest sector, followed by government at 17%.

*Mining and quarrying now account for some 8% of GDP. In addition, mining accounts for 11% of gross fixed capital formation, and also for almost a quarter of all foreign direct investment in South Africa.*

Mining accounts for 11% of gross fixed capital formation, but also for almost a quarter of all foreign direct investment in South Africa. The industry accounts for only 0.3% of corporate taxpayers, but they were responsible for almost 7% of tax assessed in 2014. Although mining employs almost half a million people, this is less than 3% of the country's workforce. As we shall see later in this paper, however, some of these relatively low figures understate the sector's contribution to the economy. For example, mining currently accounts for a third of all merchandise exports.

---

It was not without good reason that President Jacob Zuma stated in January 2015 that the mining sector was the backbone of the economy. The industry spends almost as much on the purchase of goods and services from other sectors of the economy as it generates in output. The transportation of coal accounts for more than half of the business of Transnet Freight Rail. The fortunes of a number of larger towns are heavily dependent on those of platinum and coal mines. Rustenburg in North West province thus depends heavily on the platinum mines in the vicinity, while coal mines in Mpumalanga export through the huge bulk terminal at Richards Bay in the province of KwaZulu-Natal (KZN). Most of South Africa's power stations are also dependent on coal, the source of 91% of the electricity generated by Eskom. This means that most businesses in the country and around 90% of all households are in turn dependent on coal. Without the oil produced by Sasol from coal mined in both Mpumalanga and the Free State, the country's fuel import bill would be higher.

According to the government, there are 35 large-scale gold mines operating in South Africa, while the country accounts for 11% of the world's gold reserves. South Africa also accounts for 96% of known global reserves of platinum group metals, and is the second-largest palladium producer. South Africa is further the biggest producer of chromium and vanadium ores, and a leading supplier of their alloys. It is, in addition, a significant producer of iron and manganese ores. Ferrous metals are produced from 32 mines and 23 ferroalloys smelters. Altogether, according to Mr Zwane, South Africa produces 53 different minerals from 1 700 mines and quarries.

*As President Jacob Zuma said in 2015, the mining sector is the backbone of the economy. The industry spends almost as much on the purchase of goods and services from other sectors of the economy as it generates in output.*

There is only one significant copper producer, but there are 680 producers of industrial minerals, among them 153 producers of clays used in brick-making, along with salt and silica producers. Other minerals found in the country include uranium, silver, titanium, and zirconium. As noted above, South Africa is also one of the world's largest coal miners. However, the country is no longer a major producer of diamonds, although De Beers, which is 85% owned by Anglo American, launched an underground extension of its Venetia mine in the far north of Limpopo a few years ago. Speaking at the opening, President Zuma said this was the biggest single investment in the local diamond industry in decades and "shows that our mining sector is poised for growth and has a proud future".

### **Contribution to national, provincial, and local economic output**

As we saw above, the relative contribution of mining and quarrying to national output as measured by GDP has dropped to only 8%. Although falls in commodity prices, damaging policies, and strikes have caused the mining industry to be smaller than it might otherwise have been, the decline in its relative contribution over time is largely explained by the growth of other sectors as the economy has matured with the expansion of the manufacturing and services sectors. Initially triggered by the needs of the mining industry, these other sectors have developed momentum of their own. In real terms, however, the output of the mining industry has shrunk 7.3% since its peak in 2005. This can be directly measured. What cannot be directly measured is the extent to which the decline of mining has resulted in lower growth than might otherwise have been the case in other sectors of the economy, and therefore in the economy as a whole.

Despite its relatively small contribution to national output, mining accounts for the single largest proportion of the output of four of the nine provinces. Thanks in large part to iron ore, more than a fifth of the output of the Northern Cape comes from mining, while the dominance of coal in Mpumalanga ensures that more than a fifth of that province's output also comes from mining, although copper also makes a contribution.

---

Limpopo, which contains diamonds, iron ore, and various other minerals, relies on mining for 25% of its output. Largely because of platinum, the North West province relies on mining for almost 30% of its output.

Excluding Johannesburg, which long ago diversified far beyond mining, six of South Africa's 16 largest towns measured by contribution to GDP are substantially dependent on mining. This includes not only platinum but also the mining of coal for the production of liquid fuel and electricity and the manufacture of various types of steel from iron ore mined in South Africa. These towns are: Rustenburg, Middelburg, Witbank, Secunda, Sasolburg, and Thabazimbi. They have some of the highest figures for GDP per head in the country.

Several harbour towns outside the main mining provinces are also dependent on mineral exports. Apart from the coal railed from Mpumalanga, Richards Bay exports phosphate products, including fertiliser and phosphoric acid, produced either there or at Phalaborwa in Mpumalanga, on the western border of the Kruger National Park. The port, by far the largest in the country in terms of tonnage handled, ships around 30 different commodities right around the world. In addition, it is home to Richards Bay Minerals, an RTZ subsidiary which produces the titanium dioxide that is used in white pigments and which accounts for half the mining output of KZN.

Saldanha Bay in the Western Cape depends heavily on the export of iron ore produced mainly by Kumba (70% of which is owned by Anglo American), and railed 861 kilometres from Sishen in the Northern Cape. In the Eastern Cape, the new port of Ngqura near Port Elizabeth is being extended to handle the export of manganese from the Kalahari field north of Hotazel in the Northern Cape, home to 80% of the world's known manganese ore reserves. Exports from the Kalahari field also necessitate extension of the railway from there to Ngqura, a distance of more than 1 000 kilometres. The bulk terminal at Matola in the harbour at Maputo in Mozambique also benefits from South African mineral exports, among them phosphate products and coal.

*Excluding Johannesburg, which long ago diversified far beyond mining, six of South Africa's 16 largest towns are substantially dependent on mining. Several harbour towns outside the main mining provinces are also dependent on mineral exports.*

As noted above, the authors of a report entitled *Destruction of the Highveld* last year called for an end to coal mining in South Africa. If they were to have their way the damage would go far beyond the direct jobs lost on coal mines and in coal-fired power stations in that part of the country. The ripple effects of these job losses would spread far beyond Eskom and the mining industry. The economies of Middelburg and Witbank would be dealt a severe blow as they would lose all the expenditure both of the mines and of the mineworkers on a vast array of goods and services. The same would apply to smaller towns on the Highveld. Transnet would lay off workers in Ermelo and at all its railway sidings on the mines. No longer able to rely on coal mines, Sasol would stop producing liquid fuels and all its by-products. This global company would probably have very little reason to keep any operations in South Africa. The town of Secunda and nearly all its residents would be seriously damaged.

But the ripple effects would spread beyond the province of Mpumalanga. Sasolburg in the Free State, the site of the country's first oil-from-coal plant, would suffer economic damage. Richards Bay would lose jobs across a wide range of industries. These would include all the employees at its coal terminal. But the ripple effects would go beyond the coal export harbour. There would, for example, be a drop in demand for air travel to Richards Bay, so some of the ground crew at its airport would also lose their jobs. The same would apply to chambermaids in the town's bed-and-breakfast establishments, along with jobs and businesses of all shapes and sizes. The whole town would be dealt a severe blow, which would in due course reduce it to not much more than a fishing village. The livelihood and living standards of many of its residents would be severely damaged. The same would apply to residents of surrounding townships.

---

## Purchases

The figures earlier cited understate the importance of mining to the South African economy. Last year, for example, according to the Chamber, mining contributed R291 billion to GDP directly, but spent R245 billion on purchases of goods and services from the other sectors of the economy. These purchases ranged from footwear through construction to business services. The largest single component was transport and storage; the second largest was petroleum chemicals, rubber, and plastic; the third largest was metals, machinery, and equipment; and the fourth largest was electricity, gas, and water. Of the total of R245 billion, R89 billion was for capital expenditure, leaving R156 for current spending.

While 52% of the expenditure of the mining industry went on transport, storage, and communication, this expenditure by the mines accounted for almost a third of all expenditure in that sector. A quarter of expenditure by mining was on manufacturing, but this expenditure accounted for nearly 13% of all expenditure on manufacturing. Electricity, gas, and water accounted for 7% of mining expenditure, but this expenditure by mining accounted for more than 12% of all expenditure on electricity, gas, and water.

All other sectors buy goods and services necessary for their own generation of output. But given the nature of the industry, mining arguably purchases a far wider range than other sectors. The very process of digging minerals out of the ground requires enormous expenditure on goods and services of a kind not required in other sectors. An idea of the vast array of goods and services required by mining emerges from the fact that Anglo American has 30 000 suppliers around the world.

*The very process of digging minerals out of the ground requires enormous expenditure on goods and services of a kind not required in other sectors. That Anglo American has 30 000 suppliers around the world provides some idea of the vast array of goods and services required by mining.*

To give an idea of how large the sum of R245 billion is, it is worth comparing it with the government's own expenditure. The budget for current spending by central government on goods and services in 2015/2016 was R188 billion (against the mining industry's figure of R156 billion). Total comparable expenditure by all the municipalities in the country in 2015/2016 was R169 billion. Total public infrastructure spending by all three levels of government and state-owned companies was budgeted in that same year at R290 billion (against the R89 billion in capital expenditure by the mining industry alone).

## Mining, metals, engineering, construction, and motors

According to a paper produced in 2015 by Henk Langenhoven, then chief economist of the Steel and Engineering Industries Federation of Southern Africa (Seifsa) and now chief economist of the Chamber of Mines, the metals and engineering sector is "intimately linked" to the fortunes of mining, construction, and the auto sector. All four were driven by factors that included global growth, commodity prices, and "policy certainty".

The "commodity super cycle" had come to an end in 2011 after twelve years of price increases. Partly as a result, the metals and engineering sector had been in decline for three consecutive years, although loss of competitiveness and "a deluge of imports" had also contributed. A recovery in demand from the mining sector was now necessary to help recovery in the metals sector: "Without the mining sector set on a course for future growth, a large proportion of the metal and engineering sector's market will remain in the doldrums." This was because the domestic market for metals and engineering depended largely on products supplied to mining, construction, machinery and equipment manufacturers, and the auto sector. Between them these sectors contributed nearly 17% to national GDP, employed some 1.7 million people, and accounted for more than 60% of foreign exchange earnings.

Although the government said that the violence at Marikana in 2012 had not had a negative impact on the country's ability to attract investors, the manufacturing industry reported that weak mining production over the preceding 18 months had already eroded demand for locally manufactured goods. A spokesman



---

for the Manufacturing Circle said that “South African manufacturing operates on the back of the mining sector”. A few years later heavy construction was reported to be in a “deep funk” as a result of the absence of new projects in mining and public infrastructure.

Numerous companies across the country depend heavily on business in mining. To name but a few examples: Cummins Southern Africa, part of a global engine manufacturing company, said the mining industry was probably its most important market. Bell Equipment, one of the African continent’s largest makers and distributors of heavy yellow metal vehicles, was reported in 2015 to have been “hard hit” by the slowdown in mining activity across the continent. AECL, the company founded to make dynamite for the South African mining industry, said in 2014 that it was planning to start producing in Australia in order to “de-risk our business from relying on the South African economy”, where the domestic mining and manufacturing sectors remained stagnant. Many major South African construction companies have similarly looked for opportunities elsewhere in the world in order to reduce their dependence on South Africa, where many of them were major contractors to the mining industry for decades.

### Skills and technology

Mining in South Africa has always required extremely high levels of skill in numerous different fields, ranging from metallurgy to shaft sinking, from work that can be done by men and women in laboratories wearing white coats to more perilous work by men and women in overalls deep underground.

*Numerous challenges have been overcome down the years. Among them were how to cool workplaces far below the surface of the earth and how to extract minerals from low-grade ore by chemical processes. Another great feat was taking only 31 days to sink a shaft as far below the surface as the Empire State Building rises above it (381 metres).*

These demands from the industry not only necessitated the establishment of new universities, but also helped to maintain high levels of intellectual expertise in higher education, as well as high levels of technical expertise in a range of other educational institutions. As Hobart Houghton noted in the passage quoted above, South African mining has always been an epic of applied science. Professor Chris Barnard put South African surgery on the global map with the world’s first heart transplant in 1967, but South African mining engineering had long since already been on that map.

Numerous challenges have been overcome down the years. Among them were how to cool workplaces far below the surface of the earth, and, above ground, how to extract minerals from low-grade ore by chemical processes. Another great feat was taking only 31 days to sink a shaft as far below the surface as the Empire State Building rises above it (381 metres).

People think nothing of stepping into a lift and pressing a button that will take them within a minute or two to the top of the tallest buildings in the world. Yet the world’s deepest gold mine, Mponeng (part of what was formerly Western Deep Levels) outside Carletonville in North West, is almost five times as deep as the world’s tallest skyscraper, Burj Khalifa in Dubai, is tall. Finding gold at these levels in the first place, sinking shafts, cooling rock faces, lowering thousands of men below the surface and then bringing them safely back up again, and hauling thousands of tonnes of rock to the surface as a routine daily activity is a feat of enormous human ingenuity.

Plenty of challenges remain. The application of intellectual and technical expertise to improving health, safety, and efficiency is essential. Nick Holland, CEO of Gold Fields, which runs the South Deep mine, said in 2015 that “the potential of driverless trucks underground is two to three years away”. The Chamber told the writer last year that South African mining had a technological lead in the use of “proximity detection systems” on trackless mobile machinery underground to avoid collisions and other accidents.

---

Geoff Campbell of DRD Gold, which mines gold dumps, said in 2016 that the company was applying its collective intellectual knowhow to eke out the most minuscule fractions of gold. The extraordinarily low and declining grade of the materials the company was processing presented both a challenge and an opportunity. According to Allan Seccombe, the mining journalist quoted above, mining companies are spending about R1 billion a year on modernisation and research. This is partly designed to enable them to extract declining quantities of gold from greater and greater depths both successfully and safely. Peter Turner of Sibanye said in 2015 that there were still large quantities of gold that could never be mined using conventional labour-intensive methods.

Neal Froneman of Sibanye told the writer in 2016 that it was necessary to move away from blasting. Master Drilling, a company established in South Africa in 1986 which now has operations across the world, offers the mines increased safety and speed and lower costs through “raise boring” technology that enables mining to be carried out without the use of explosives. Raise boring also makes round tunnels, which are more stable than those created by the blasting of stone. This reduces the risk of rockfalls.

According to the Chamber, raise boring is being tested on a number of gold mines in order to “remove people from the mining rock face”. Techniques are being used in coal mines so that workers do not have to enter so far into tunnels; this will reduce the risk to miners from rockfalls. Speaking at a “mining indaba” in Cape Town at the beginning of February 2017, Mr Cutifani of Anglo American said that his company was building a “modern mine” in which “continuous rock-cutting machines safely extract the targeted ore – deep underground – without the need for explosive blasting”. Master Drilling announced at the same indaba that it would soon complete a pilot project at the Cullinan mine, east of Pretoria, which produced the Cullinan Diamond and other famous gems. Previously known as the Premier Mine, the Cullinan mine was acquired by Petra Diamonds from De Beers in 2008. Master Drilling said that raise boring would not only eliminate the need for drill- and-blast mining, but also increase mining productivity thanks to its continuous process. There would be significant safety benefits as well.

*Speaking at the 2017 “mining indaba”, Mark Cutifani of Anglo American said his company is building a “modern mine” in which “continuous rock-cutting machines safely extract the targeted ore – deep underground – without the need for explosive blasting”.*

In response to increasing demands by environmental lobbies and surrounding communities, some of them backed by public interest law firms willing to go to court, the coal mining industry will need to apply science and technology to an ever-escalating list of challenges, including mitigating environmental damage and reducing water consumption.

Since there are usually spin-offs from scientific advances in one field to other fields, South African mining companies will thus continue to make a major contribution to continued development of the country’s intellectual capital.

## **By-products**

Apart from generating demand for innumerable other goods and services, mining produces numerous by-products. One of course is uranium, a by-product of gold production. Among others are a whole range of plastics, including numerous plastics produced by Sasol as by-products of the manufacture of oil from coal. Prominent among these is polypropylene, one of the world’s most commonly used plastics in both commercial and household applications. Sasol, which exports polypropylene to markets that include China, South America, Europe, the US, and the rest of Africa, commissioned a R1 billion polypropylene expansion project at Secunda in November last year.

## **Investment**

The figure of 8% direct contribution to GDP also understates the importance of mining in other respects. Al-

---

though mining itself accounts for only 11% of all gross fixed capital formation (GFCF), the mining industry's demand for other goods has an impact on levels of investment by other sectors, especially manufacturing, whose own contribution to gross fixed capital formation is nearly 14%. Transnet, which depends on mining for a large part of its business, accounts for more than 7% of all fixed capital formation. The fortunes of mining also help determine levels of investment in the electricity sector. At the same time, of course, the capacity of the transport sector and the availability of electricity have an impact on investment decisions by the mining sector.

## Employment

As is the case with manufacturing, the number of people employed in the mining industry has dropped steadily. According to the Chamber, the industry employed more than 832 000 people in 1986, a figure which had last year dropped to 485 000. This represents barely 3% of total employment in South Africa. The Chamber says, however, that “for every direct mining job, a further two indirect jobs are created in downstream and support industries”. In addition, says the Chamber, one worker's income feeds ten other people, some of them staying with the miner, others surviving on his or her remittances. In effect, said the Chamber, the industry accounted for altogether 1.5 million jobs and supported - directly and indirectly - 15 million people.

Asked for more precise figures, the Chamber said that last year the number of indirect jobs accounted for by mining was 954 089, of which three quarters were in the tertiary sector, and the remainder in the secondary sector, with a handful in agriculture. On these figures, mining would account for employment of 1.44 million altogether in 2015.

*The Chamber says that “for every direct mining job, a further two indirect jobs are created in downstream and support industries”. In addition, one worker's income feeds ten other people, some of them staying with the miner, others surviving on his or her remittances.*

Many communities, the Chamber argues, owe their existence to mining. As we have seen, four of the five provinces are directly dependent on mining for the largest single slice of their economic output. Although mining accounts for only 0.2% of the output of the Eastern Cape, which has no mining activity, the incomes of people in the Eastern Cape depend to a greater extent on mining than this low figure suggests. This is because migrant workers resident in that province have always contributed a large proportion of the mining industry's workforce. Although the incidence of migratory labour has dropped substantially, 20% of African households in South Africa receive remittances from mining and other sectors. It may be assumed that many of these households are in the Eastern Cape and other former homelands. Neighbouring countries, in particular Lesotho, rely heavily on income earned by migrant workers on South African mines.

According to Mike Teke, president of the Chamber, “historically disadvantaged South Africans” now occupy more than 40% of senior management positions and more than 50% in other management categories in the mining industry. They also occupy 75% of core skilled jobs.

Despite the antipathy towards mining frequently voiced in the ruling party, ANC officials sometimes seem to regret job losses, especially, it appears, when these might arise from disinvestment by mining companies. Following an announcement in 2014 by Anglo Platinum that it was considering reducing its dependence on that metal (which it did by selling its Rustenburg mines to Sibanye), Jessie Duarte, deputy secretary general of the ANC, said, “Lost employment in the mining industry, considering the low skills base of labour it employs, translates into a further burden on the country's social wage. It adds to the depression in the labour-sending areas that are already destitute.”

## Railways

The service industry most heavily dependent on mining is rail freight, in South Africa a monopoly in the form

---

of Transnet Freight Rail (TFR), a division of the state-owned company Transnet (previously South African Transport Services and before that South African Railways and Harbours). TFR employs more than 31 000 people across the country. Apart from containers, motor vehicles, bulk agricultural commodities, and timber, TFR's trains convey the products of the country's mines either internally from mine to manufacturer or for export, not only abroad but also to neighbouring countries. Apart from coal, these include petroleum products; iron ore and manganese; steel, lime, and cement; non-ferrous metals, chrome and ferrochrome, rock phosphate, granite, magnetite, and hematite.

Coal alone accounts for 60% of the organisation's revenue. Eskom and companies supplying coal to its 16 coal-fired power stations are major customers, but so are companies exporting coal through Richards Bay, Maputo, and Durban. Lobbyists seeking to stop coal mining in South Africa seem to overlook the likelihood that, if they were to succeed, half of TFR's employees would be among the many people who would lose their jobs.

Towns such as Ermelo in Mpumalanga play a key role in the coal export business. According to Transnet Freight Rail, Ermelo is its biggest marshalling yard, for it is there that trains from nearly 50 coal sidings at mines in the surrounding area are combined into 200-wagon trains for dispatch along the 580-kilometre railway line to the Richards Bay Coal Terminal for the export market.

*Although mining per se accounts for only a third of merchandise exports, if secondary beneficiated products are taken into account, then 60% of export revenue is derived from this broader category, according to the government's National Development Plan (NDP). Mining exports in 2015 amounted to R320 billion.*

The transport sector accounts for 10% of GDP, slightly more than the 8.4% accounted for by mining. Transport and logistics account for a third of the R1 156 billion envisaged in public sector infrastructure spending between 2015/2016 and 2017/2018. A large part of this is expenditure necessitated by the upgrading and extension of South Africa's rail and port services, necessitated in turn particularly by the needs of the mineral export industries.

### **Mineral sales**

According to Stats SA, local and foreign mineral sales in 2015 totalled almost R387 billion. Coal at 27% accounted for the largest single proportion of the total, followed by platinum group metals at almost 25%, gold at 16%, iron ore at 10%, diamonds and other non-metallic minerals at 6%, chromium ore at 4.2%, and manganese ore at 3.5%. The balance was accounted for mainly by copper, nickel, other metallic minerals, and building materials.

### **Mineral exports**

In the last 20 years, the contribution of mining to commodity exports has varied from a high point of 44% in both 1996 and 2010, to a low of just above 31% in 2003, to 34% in 2015. The fluctuations are partly the result of fluctuations in commodity prices. Even when down to only a third of merchandise exports, mining exports are major earners of foreign exchange, so helping to finance a large proportion of the country's imports. Among South Africa's top ten commodity exports, minerals outstrip motor vehicles by a factor of 2.7 to 1.

Although mining per se accounts for only a third of merchandise exports, if secondary beneficiated products are taken into account, then 60% of export revenue is derived from this broader category, according to the government's National Development Plan (NDP), which was adopted in 2012.

According to the Chamber, mining exports in 2015 amounted to R320 billion. Of this total, 27% was accounted for by platinum, and 21% by gold, while iron ores and coal accounted for 16% each. Oil products

---

accounted for 10%, chromium and manganese ores and concentrates about 5% each, the balance being taken up by titanium, precious metals, vanadium, copper and a few others. Eastern Asia took almost a third of all exports, the European Union nearly 16%, South Asia and Western Asia 13%, Africa 10%, and North America almost 7%. An “unallocated” destination accounted for 26%, which are presumably mainly gold exports as suggested in the section above dealing with allegations of smuggling.

### Royalties and taxes

Figures produced by the minister of finance show that commodity prices have a major impact on mining corporate tax. In the 2008 tax year, for example, 574 mining companies were assessed between them for R26.3 billion in income tax. In the 2012 year, by contrast, 437 companies were assessed for a total of almost R13.0 billion in such tax. The figures for the following year show that R15.8 billion was assessed in mining company tax. Mining companies accounted for only 0.3% of corporate taxpayers but 9.7% of all tax assessed, although the latter proportion dropped to 6.8% in 2014 – no doubt partly the result of the major strike that year. The taxable income of mining companies dropped from R93.2 billion in 2008 to R21.3 billion in 2013. By 2015, as we shall see below, a large proportion of mining companies were running at a loss – a situation which President Zuma described as “alarming”.

*In 2013, R15.8 billion was assessed in mining company tax. The mining industry pays royalties too, and contributes significantly to personal income tax, VAT, and other taxes. But the taxable income of mining companies dropped from R93.2bn in 2008 to R21.3bn in 2013. By 2015, many mining companies were running at a loss – a situation Mr Zuma described as “alarming”.*

The mining industry pays royalties as well as income taxes. Royalty payments in the last three tax years totalled R15.57 million. The minister of finance has pointed out that mining also contributes significantly to personal income tax, in that R15.2 billion was collected from mine employees in pay-as-you-earn (PAYE) tax in 2013/14. Mining of course also contributes to VAT and other taxes, the minister said.

### Distributions to stakeholders

According to the PWC study already cited, which covered 31 mining companies between 2010 and 2016, employees and “funds reinvested in capital additions and acquisitions” accounted for the two biggest components of “value distributed”. In the last three years, employees have accounted for the largest single share of distributed value at 37% to 38%. In the preceding four years, funds reinvested accounted for the largest slice, the highest figure being 43% in 2010. Shareholder dividends were at a high of 20% in 2012, since declining to 3% in 2016. The share taken by government in the form of royalties and taxes paid by the mining companies and their employees was usually between 19% and 20%, dropping to 15% in 2016. “Borrowings” varied from 1% to 5%. The amount spent on community investments by the 31 companies, with an aggregate market capitalisation of R560 billion, was 1%, and sometimes less.

Figures for the three-year period 2013 to 2015 supplied by Sibanye showed that employees, organised labour, and contractors accounted for 47% of how “value created has been shared”. Suppliers, including suppliers of water and utilities, accounted for 32%. “Debt providers” accounted for 6%, while government’s take in tax and royalties was 6% and the share of local government 2%. Some 4% was reinvested by the company, while shareholders received some 3.3%. Distribution to “communities” was 1%. A senior Sibanye executive said that it was ironic that government and labour took the most out of the mines, yet also disturbed them the most.

Companies are not always able to pay dividends, of course. Harmony, for example, has paid shareholders only six times since 2004, while Cynthia Carroll, when she was chief executive of Anglo American, made herself very unpopular when in the midst of the global financial crisis she stopped paying dividends

---

for the first time since the Second World War. As already noted, Lonmin has not only failed to pay dividends in the last few years, but has had to go on its knees to shareholders three times for additional capital. According to the Chamber in its 125th report in 2015, 31% of gold mines and 40% of platinum mines were loss-making and would need further restructuring.

### **Mine ownership**

According to Mike Teke, president of the Chamber, “the great bulk of mining shares are owned not by individuals or their companies, but by huge financial institutions, including pension funds both local and foreign. These include the retirement and other savings of local people, black and white, and of others living all over the world. The vast bulk of shareholdings – probably more than 95%, particularly in respect of larger companies – are held by these institutions. The only significant exceptions are the entrepreneurs, employees and community trusts that have been participants in black economic empowerment transactions.”

Mr Teke said that South African mining companies had put together more than R200 billion in “empowerment schemes, which have at this point delivered R159 billion in value to recipients – entrepreneurs, employees, and community trusts”. Chamber figures show that R47 billion in dividends has been paid out to 7.1 million “historically disadvantaged South Africans”.

*According to the Chamber, “the great bulk of mining shares (more than 95%) are owned not by individuals, but by huge financial institutions, including pension funds both local and foreign. These include the retirement and other savings of local people, black and white, and of others living all over the world.”*

The chamber also disputed allegations in 2015 by the then minister of mineral resources, Ngoako Ramatlhodi, that black ownership of mining companies had fallen short of the requirements of the Mining Charter. Although the charter stipulated a target of 26% black ownership, the industry said its members had reached an average empowerment level of 38%.

According to Mr Cutifani of Anglo American, black South Africans own more than 45% of the company’s operating assets in the country if participation in pension funds and direct ownership are both taken into account.

### **The case of coal**

According to the World Coal Association, coal supplies the world with about 30% of its main energy needs and more than 40% of its electricity. In South Africa in the 2015/2016 financial year, Eskom consumed about 119 million tonnes of coal, while some 75 million tonnes were exported. Although mining in general consumes only 14% of the electricity generated in South Africa, coal is the feedstock for 91% of our electricity. Via Sasol, it is also the feedstock for a third of our liquid fuels, mainly petrol and diesel. Apart from those feeding Sasol, coal mines employ nearly 90 000 people.

As we have seen, however, the contribution of coal mining and coal burning to the degradation of the landscape, to water, soil, and air pollution, and to “climate change” means that the coal sector faces challenges over and above those confronting mining companies in general.

Thanks in part to slow economic growth, Eskom at present has excess capacity. The slower growth, however, is itself partly the result of shortages of electricity when Eskom ran out of generating capacity and imposed periodic blackouts over nearly seven years between 2008 and 2015. Even though it had earlier warned that it would face a coal shortfall from 2018, Eskom’s chief executive said in May 2016 that the utility had secured coal for the next five years. Most of its coal is supplied by three foreign-owned companies, Anglo American, Glencore, and South 32. The fourth major supplier is a South African company, Exxaro. Together they supply Eskom with between 70% and 80% of its coal requirements.

---

Given that Eskom runs 14 coal-fired power stations, with two big new plants, Medupi and Kusile, due to come into full operation in the next few years, South Africa for the foreseeable future is locked into coal, of which it has enormous reserves. However, supply from the large collieries is drying up, so that substantial new investment in coal mining is needed for future supplies. A few years ago Eskom said that it needed ten new coal mines at a cost of R100 billion. But although several large local companies, among them Exxaro, have been making big investments in coal for both Eskom and the export market, this investment is not happening on the scale required.

One reason is that the government has proposed (though not yet imposed) price controls on coal supplied to Eskom. A second is the preference of both the government and Eskom for much more nuclear energy. A third is that coal suppliers are now required by Eskom to have at least 51% black ownership. Exxaro has indeed been severely criticised for planning to dilute its black economic empowerment shareholding from 51% to 30%. The Chamber has questioned the legality of imposing a majority black ownership requirement. However, Eskom apparently ranks the wielding of its weight to promote black economic empowerment above its responsibility to generate electricity.

These and other uncertainties have caused a number of major mining companies, including BHP Billiton, to reduce their exposure to South Africa even more than has already happened over the last two decades. Given South Africa's low savings rate, most new investment in coal would have to come from abroad. However, it may be deterred by South Africa's recent replacement of bilateral investment treaties with local legislation that offers foreign investors less protection against expropriation. It may also be deterred by Eskom's increasingly demanding requirements. Another deterrent may be suspicion that Eskom, with the acquiescence of the government, wishes to swing coal purchase contracts in favour of companies with political influence.

*Eskom runs 14 coal-fired power stations and has two big new plants, Medupi and Kusile, due to come into full operation in the next few years. However, supply from the large collieries is drying up. Substantial new investment in coal mining is thus needed for future supplies.*

Whether smaller companies would be able to find the capital either inside or outside the country to establish new mines is doubtful. This raises the possibility that South Africa may once again face electricity shortages as coal supplies to Eskom fall short of demand. The inability of smaller black-owned companies to get coal to Eskom on time and in sufficient quantities was among the reasons for the years of ruinous power failures. This coal is also more expensive than that supplied by large mines purpose-built to supply nearby Eskom's power stations.

Although the export terminal at Richards Bay has enlarged its capacity, increases in coal exports depend critically on expanded rail capacity to accommodate more than the current two dozen trains running loads on behalf of three dozen customers every day. Most coal is exported from the mines in Mpumalanga. Export from the huge new coalfield in the Waterberg, which is further to the north west in Limpopo, will depend on major extensions of the railway and other investment in that area. While the urban and industrial infrastructure for coal mining in Mpumalanga is largely in place, this is not so for the Waterberg, so the expansion of coal mining there would necessitate substantial industrial and other development, boosting living standards in that area.

Despite lobbies both in South Africa and elsewhere that wish to replace coal with wind and solar energy, and despite whatever commitments various governments have supposedly made to the contrary in the 2015 Paris agreement, a great many countries are planning additional coal-fired power stations. A report published in April 2016 by a group hostile to coal-fired energy said that \$981 billion was being, or was to be, invested in coal capacity around the world. *The Times* of London reported in January 2017 that more than 2 400 coal-fired power stations were under construction or being planned.

---

South Africa should be able to attract investment from at least some companies in countries seeking to augment their coal imports for electricity generation purposes. South African companies should also be able to tap into export markets – subject to having sufficient additional rail capacity to get more tonnage to Richards Bay. Exxaro, for example, was reported last year to be looking for new markets in Pakistan, the Philippines, Vietnam, Malaysia, and Egypt, while continuing to grow its Indian market.

Rodrigo Echeverri, a coal analyst, said at a coal export conference in Cape Town in February 2017 that South Africa should be able to export increasing quantities of coal to both Africa and the Middle East. Exports to Africa should increase from the current level of 4 million tonnes to 38 million by 2030. Mr Echeverri predicted that global demand for coal would rise from its current level of 900 million tonnes to 1 200 million by 2030.

Glencore, a major multinational mining company and commodity trader, said that “coal remains the prime source to fuel economic growth in Asia” and “the lowest-cost fuel source for industrialising economies”. Glencore is one of the few multinational companies still investing in coal in South Africa, contrary to what the major global mining companies have been doing.

*Given Eskom’s demands on black ownership, coal mining companies are likely to attach growing importance to the export market. Concerned that the country may then run short of coal, Eskom has said it wants coal to be declared a “strategic mineral” so that the coal it needs for itself cannot be exported.*

Given Eskom’s demands on black ownership, coal mining companies are likely to attach growing importance to the export market. Concerned that the country may then run short of coal, the DMR has introduced (though Parliament has not yet enacted) legislation empowering the minister to designate specified proportions of coal (and other) minerals so that exports will be permitted only once local demand has been met. Eskom has itself said it wants coal to be declared a “strategic mineral” so that coal it needs for itself cannot be exported.



---

# PART FOUR: THE FUTURE

---

## SYNOPSIS

*Despite 150 years of mining, South Africa's still has the world's largest non-oil mineral reserves. Thanks to political interventions, we failed to capitalise on the recent commodity boom, unlike most of the other big mining countries. But another boom may be in the offing. Our mining industry has been substantially restructured in recent years, so it should be poised to ride the next boom. A number of new mining companies are among those ready to do so. But will they? Will they be allowed to? Will political factors undermine their chances? A whole new industry could be established to extract shale gas from the Karoo. Will environmental lobbies and/or political factors stop this?*

## Prices and potential

Despite the huge quantities extracted in the last 150 years, South Africa's mineral deposits, according to a report by Citigroup, are still the richest in the world if oil is left out of the equation. Some years ago Citigroup put their value at \$2.5 trillion. This is way ahead of the next three countries on the list, Russia, Australia, and Canada. To what extent South Africa's enormous treasure will be exploited is a huge unknown.

According to the official NDP adopted in September 2012, the South African mining industry shrunk between 2001 and 2008 by 1% a year, whereas the top 20 mining exporting countries averaged growth of 5% a year. The mining industry, said the NDP, was smaller now than in 1994. Roger Baxter of the Chamber said the industry's real GDP had shrunk by 2.9% between that year and 2015. This represents a colossal loss of wealth.

*Despite the huge quantities extracted in the last 150 years, South Africa's mineral deposits, according to a report by Citigroup, are still the richest in the world if oil is left out of the equation. However, to what extent South Africa's enormous treasure will be exploited is a huge unknown.*

This period – it should be remembered – largely coincided with one of the greatest bull runs in commodities, starting in 2002 and ending in 2012, that the world had ever seen. Prices broadly tripled. Some analysts even believed that the boom was part of a new “supercycle” in which commodity prices would keep on rising for decades, thanks largely to demand from China and India. It was not to be. The boom peaked in 2012, forcing some of the world's biggest mining and commodities companies to cut spending and sell assets to bolster earnings. By 2015 the market capitalisation of the world's 40 biggest mining companies had halved in just four years. Some analysts began suggesting that the world was entering a long period of falling commodity prices which could last for two decades.

A South African market analyst and investor, David Shapiro, wrote at the beginning of 2017 that January 2016 had “marked a low point for the JSE, and, globally, for commodity prices. There were, he said, “deep concerns about the outlook for resource shares”. But by the end of 2016, “the picture had reversed dramatically”. The shares of mining companies which had tumbled had started to recover. Analysts now began to ask whether this was the end of the three- to four-year bear run in commodities. “We are certainly in a sweet spot for commodity prices at present and it is a good time to be a resource producer,” wrote one research house, crediting a “China-led recovery”.

---

The World Bank reported in January 2017 that it expected industrial commodity prices to surge this year on the back of tighter supply and stronger demand from China and elsewhere. At more or less the same time Goldman Sachs said it expected a global rebound spanning the US, Europe, and China. At the end of the month analysts at Standard Bank said the global commodity industry was in a far stronger position than a year ago. The resources index of the JSE, having lost nearly 40% in 2015, had gained 26% in 2016, and almost 10% in the first month of 2017. Another analyst said that President Donald Trump's ambitious infrastructure building plans would help boost South Africa's mining sector.

Recalling that commodity prices at the beginning of 2016 had sunk to their lowest level in a quarter of a century, forcing companies to shut operations, the Bloomberg financial news agency reported at the end of the year that mine owners across the world were making plans to ramp up production, since everything from coal to iron ore to zinc had soared during the year. Economists at Nedbank said mining production in South Africa should improve with the anticipated lift in commodity prices – although some analysts did not expect the rise in iron ore and coking coal prices to be sustained, while the platinum price was not expected to recover until the supply of above-ground stocks had been exhausted.

All mining companies face the challenge of predicting what will happen to the prices of their products on world markets in both dollar and local currency terms. But companies operating in South Africa, as we have seen, face additional challenges arising from history, labour relations, and prevailing policies.

*Very few of the mineral rights awarded in recent years to junior mining companies are being used by their recipients. There is next to no exploration happening. There is also a risk that most assets will remain in the ground because investors have been kept away by government policies, regulatory uncertainty, and a hostile labour regime.*

Bernard Swanepoel of Harmony Gold warned in July 2015 that if South Africa failed to convert its mineral rights into successful discoveries, we would probably not have a mining industry 20 years from now. Very few of the mineral rights awarded in recent years to junior mining companies were being utilised by their recipients. There was next to no exploration happening. There was also a risk that most of the assets would remain in the ground because there was no funding, investors having been kept away by government policies, regulatory uncertainty, and a hostile labour regime.

However, Mr Swanepoel said, there were very few minerals in which South Africa was not a potential world player. He knew few geologists who did not get excited about the Bushveld complex (which contains not only most of the world's reserves of platinum group metals, but also plenty of iron, tin, chromium, titanium, and vanadium). The iron ore deposits were the best in the world. "The good news is that the resources are still in the ground. We have lost out on the last boom cycle, but there will be another one."

Will South Africa be able to benefit? Our mining industry has been substantially restructured in the last two decades. Painful retrenchments, along with other forms of cost-cutting, have taken place. Anglo American – whose shares rallied by almost 300% in 2016 – plans to shed more of its South African operations, notably iron ore and coal, though retaining its richer platinum mines and De Beers. Further restructuring of the industry is likely, for both commercial and political reasons. Even more divestment from South Africa seems inevitable as companies seek to reduce their exposure to this country, or avoid it altogether. Sceptics hoping for signs of a less hostile attitude by government to mining will not have been encouraged by Minister Zwane's remarks at the mining indaba in Cape Town scolding mining companies for taking the government to court. Nor will they be encouraged by the statement at the same indaba by the deputy minister of mineral resources, Godfrey Oliphant, that coal and uranium would definitely be on the list of strategic minerals designated for local beneficiation.

At the same time, thanks to the rise in commodity prices, many mining companies are now in a better

---

financial position than they have been for years. An analyst at Rand Merchant Bank (RMB) reported in the first week of February 2017 that several major mining companies were now producing larger cash flows than when prices were even higher during the previous commodities boom. This was the result of “years of cost-cutting, operational optimising, selling of marginal assets, and capex curtailment”. Other analysts noted that companies had started paying dividends again and that more funding was becoming available for new mining projects. Another RMB analyst said that mining companies were now “very well positioned” to move forward positively, although junior mining companies would not find it as easy to obtain finance as the bigger ones.

Not least, new players and new entrepreneurs are emerging. The most prominent is Sibanye. Its listing in 2013 was greeted with scepticism, but Sibanye is now a major producer of both gold and platinum. It bought ageing gold mines from Gold Fields and the Rustenburg platinum mines from Anglo American, along with Aquarius Platinum. Its chief executive, Neal Froneman, said in September 2015, “We have put up our hand and said we want to be the new South Africa’s mining champion.”

Sibanye has recently put in a \$2.2 billion offer for a major American platinum and palladium producer, but has also said that it is looking for opportunities to buy coal mines in South Africa, partly to reduce its dependence on Eskom. In May 2016 Mr Froneman noted that erstwhile South African mining champions were “stressed and leaving”. His company was buying their assets cheaply. “We see opportunity in South Africa. There are still lots of resources here – lots of gold that has not been mined, platinum reserves still considered the largest in the world, a high quality of skills and infrastructure.”

Worried about stagnant platinum prices, several junior mining companies are waking up to opportunities in chrome ore. A new phosphate mine is awaiting permits to open up operations at Saldanha Bay. The Limpopo Economic Development Agency foresees the establishment of an energy and metallurgical industrial park in the Musina-Makhado special economic zone to be completed over the next five years, generating 21 000 jobs in the process, and producing various metals and minerals. This will require huge investment not only in infrastructure but also in the training of artisans and engineers. So too will the further development of the Waterberg coalfield to supply both Eskom and the export market.

*Neil Froneman of Sibanye says that erstwhile South African mining champions are “stressed and leaving”. His company is buying their assets cheaply. “We see opportunity in South Africa. There are still lots of resources here – lots of gold that has not been mined, platinum reserves still considered the largest in the world, a high quality of skills and infrastructure.”*

The uptick in commodity prices presents opportunities beyond mining. Jac Laubscher, economic adviser to the Sanlam assurance company, wrote in May 2015 that fixed investment in the mining sector had held up well so far despite policy uncertainty. This was because “existing projects naturally have to continue and ongoing investment is needed to keep up production”. However, he said, there had been a “sharp decline in mineral exploration, now standing at a quarter of its level in 2007”. This is as much an opportunity as it is a problem.

Moody’s, one of the international ratings agencies monitoring South Africa, said towards the end of last year that after years of underinvestment it was time for the gold industry to start spending again now that it was generating cash. According to the PWC report referred to above, mining companies had reduced their capital expenditure by 31% or R22 billion over the past three years to the lowest level since 2007. However, the lack of expenditure at the bottom of the commodity price cycle could create significant opportunities for the construction sector as mining companies would have to catch up to increase production.

Also in November 2016, Barloworld, a major supplier of Caterpillar and other mining and construction equipment, said that mining trucks normally lasted ten years, but that the average age of such fleets in

---

southern Africa was “nudging eight years”. Mining companies would not be able to run their fleets of trucks much longer. Barloworld was for the first time in four years seeing “green shoots” in the mining sector. Cummins said in December 2016 that the mining industry had hit “rock bottom” and would recover, the implication being that the engine manufacturer would benefit, as mining was probably its most important market.

Apart from its minerals, South Africa is endowed with limited quantities of off-shore oil and natural gas. Much larger is the country’s endowment of shale gas in the Karoo, estimated at between 40 and 390 trillion cubic feet. Mr Zuma has said that hydraulic fracturing, or “fracking”, of shale gas could be a “game changer” for the economy. However, for various reasons, including environmental objections and a lack of security for private investment, exploration and exploitation of these resources has hardly begun.

## Challenges and policy

In June 2015 the IRR published a paper recommending reforms to bring greater stability and equity to South Africa’s industrial relations system under the title *Give the Poor Back Their Right to Work: A 10-point Plan for Jobs*. In August and October 2016 we published further policy papers listing reforms necessary to improve the policy environment governing South African mining. Additional suggestions for policy reform will be published by the IRR in due course and will therefore not be dealt with in this paper, whose focus anyway is not on the policy environment but on the contribution that mining makes to South Africa. Quite obviously, the better the policy environment the greater the contribution that mining can make. As this paper has shown, this contribution extends far beyond the mining industry per se. This aspect of mining is not as widely appreciated as it should be. Nor does the mining industry speak about this contribution – these “linkages” – as loudly and often as it could.

*Quite obviously, the better the policy environment the greater the contribution that mining can make. This contribution extends far beyond the mining industry per se. This aspect of mining is not as widely appreciated as it should be. Nor does the mining industry speak about this contribution as loudly and often as it could.*

Mining inevitably has detrimental effects on the environment. Some lobbyists argue that coal mining should be stopped altogether. But this is to throw out the baby with the bathwater. Adverse environmental consequences should rather be dealt with by proper enforcement of reasonable legislation. The same goes for safety. As for the health of people working underground, the risks need to be dealt with much more humanely than has been the case in the past. This too is a matter for proper application of the law. In all three of these areas – the environment, safety, and health – effective co-operation between employers, unions, and government is self-evidently essential. So is continued scientific and technical research across a range of disciplines, among them various types of engineering and specialised medicine.

Handling “legacy” issues is a further challenge. It may be seen as a means of making the past go away. But few of the current executives or managers of mining companies are responsible for previous policies. Current shareholders, many of them pensioners, may be unwilling to forgo earnings as a result of policies implemented before they became shareholders. Many shareholders have indeed already forgone earnings in order to finance black economic empowerment requirements. Although these have cost a vast amount of money, they have not satisfied the government, which has responded by escalating its demands. This is a warning that further concessions to this kind of demand risk setting in motion a process of escalating demands for “reparations”. However, what is really needed is a policy environment that will enable the industry not only to survive but also to grow from strength to strength, spreading the benefits far and wide.

Nor should it be forgotten that whatever the “legacy” of the past might be, there is now also a post-1994 “legacy” of political factors that have caused immense damage to the mining industry and therefore to the country as a whole.

---

The mining industry is at a crossroads. It has spent considerable sums on social and labour plans and also on empowerment, but this has not satisfied the government. There are even suspicions in the industry that some of the government's demands are designed to make life so difficult for mining companies that they will sell out to chosen political favourites.

One former executive of a major company told the writer of this paper that he and some of his colleagues believed from the early days of the Mining Charter that they should take a tougher stance towards government demands. However, he said, theirs was a minority view. Now, however, some mining executives believe the time for appeasement is over. Referring to some of the court cases brought against various stoppage orders, a leading mining lawyer, Peter Leon, said in February 2017, "I think this kind of response from the industry is quite unprecedented. Previously, the philosophy was by and large 'go along to get along', but I think that has changed. The Section 54, Mining Charter, and regulatory issues – combined with pressure from shareholders and difficult market conditions – have all had an effect and I think there is now a view within the industry that enough is enough."

## Conclusion

Commenting on the recent recovery in commodity prices, a financial analyst wrote: "If the markets are improving, it would be a crying shame [if] South African mining missed out on the opportunities owing to regulatory uncertainty. It may happen."

It may already have happened. No new gold mine shafts are being sunk. Mr Zuma noted in September last year that "investment in exploration and extraction has dropped significantly". Many of the mining analysts and mining executives quoted earlier in this paper expressed doubts as to whether the mining industry could recover from the damage inflicted upon it by the hostile policy environment. This has been far more damaging than the volatility of commodity prices, from which all mining countries have suffered. Mr Major said there was a very real chance that "we are going to do further damage to our mining industry simply because South Africa does not seem to have got its head round what it wants from the industry".

*The mining industry is at a crossroads. It has spent considerable sums on social and labour plans and also on empowerment, but this has not satisfied the government. There are even suspicions in the industry that some of the government's demands are designed to make life so difficult for mining companies that they will sell out to chosen political favourites.*

Mr Froneman warned at the end of January 2017 that "we may miss this next boom too" – a fear echoed by Srinivasan Venkatakrisnan, chief executive of AngloGold Ashanti. The following month Mr Froneman announced that some of Sibanye's projects might be delayed because of the risk that big cost increases could arise from the latest version of the Mining Charter. "It is becoming very difficult to get shareholder support for growth projects in South Africa. Shareholders were saying, 'Hold on, give us clarity'.". The former head of a major mining company told the writer that it would be 20 years before mining once again became a good investment in South Africa.

If the South African mining industry had not shrunk by 1% a year, but grown by 5% a year, as was the case with other major mining countries, South Africa as a whole would be very much richer than it now is. There would have been more jobs not only in mining but in almost every other economic sector. There would be less poverty in communities in which mining takes place. There would also be less poverty in rural sending areas, including neighbouring states. The government would have collected more in taxes. The country would have earned more in foreign exchange. More foreign investment would have flowed in. Pension funds invested in the mining industry would have been richer.

A former finance minister, Trevor Manuel, said in February 2017 that South Africans were bound together and defined by mining. Investors needed to defend the sector from being seen as a "sunset industry".

---

Indeed. But essentially that means defending it from the government. South Africa should not allow itself to forgo the benefits of participating in the next commodities boom, whether that materialises now or later. To do so would be to inflict both harm upon the country and injustice upon a great number of those who live here, irrespective of whether they work in mining or elsewhere. This would be a tragic and unconscionable waste not only of the country's rich resources but also of its human potential.

**\* John Kane-Berman is a policy fellow at the Institute of Race Relations.  
He acknowledges the help of Alfred Nkungu in the preparation of the paper.**

### Sources

- = C W de Kiewiet: *A History of South Africa – Social and Economic*, Oxford University Press, London, 1941
- = ES Sachs: *The Anatomy of Apartheid*, Collet's, London, 1965
- = Ralph Horwitz: *The Political Economy of South Africa*, Weidenfeld and Nicolson, London, 1967
- = D Hobart Houghton: *The South African Economy*, second edition, Oxford University Press, Cape Town, 1967
- = Monica Wilson and Leonard Thompson (editors): *The Oxford History of South Africa, Volume 2, 1970 to 1966*, Oxford University Press, London, 1971
- = Francis Wilson: *Migrant Labour in South Africa*, South African Council of Churches and Study Project on Christianity in Apartheid Society, Johannesburg, 1972
- = South African Railways: *Centenary of the South African Railways (1860 to 1960)*, 1959
- = Department of Minerals and Energy: *An Overview of the South African Iron, Manganese, and Steel Industry During the Period 1984-2003*, R45/2205, April 2005
- = National Planning Commission: *National Development Plan*, 11 November 2011
- = *The South African Coal Roadmap 2013*
- = Gauteng City-Region Observatory: *Acid Mine Drainage and its Governance in the Gauteng City-Region*, May 2015
- = Steel and Engineering Industries Federation of South Africa: *State of the Metals and Engineering Sector, 2016 to 2017*, Johannesburg, September 2015
- = Anglo American: *Driving Change, Defining our Future – Sustainability Report 2015*
- = Peter Major: *South Africa's Mining Industry — An Insider's Historical Perspective*, 3 May 2016.
- = Chamber of Mines of South Africa: *Presentation to the South African Human Rights Commission*, September 2016
- = PWC: *SA Mine – Highlighting Trends in the South African Mining Industry*, 8th edition, September 2016
- = Groundwork: *The Destruction of the Highveld*, 2016
- = *Bongani Nkala et al v Harmony Gold Mining Company Ltd et al*, High Court of South Africa, Gauteng Local Division, consolidated case number 48226/12, undated
- = *AngloGoldAshanti Ltd v Xolile Mbonambi et al*, Labour Court of South Africa, Johannesburg, case number J2459/16, 4 November 2016
- = Eunomix Research: *A Review of the Unctad Report on Trade Misinvoicing, with a Focus on South Africa's Gold Export*, Johannesburg, 7 November 2016
- = IRR: *Digging for Development — The Mining Industry in South Africa and its Role in Socio-economic Development*, IRR, Johannesburg, 2014
- = IRR: *Air Quality: Missing the Wood for the Trees — Indoor Pollution is South Africa's Most Serious Air-quality Problem*, IRR, Johannesburg, 1 September 2016
- = Terence McCarthy: "The Impact of Acid Mine Drainage in South Africa", *South African Journal of Science*, 2011
- = Virginia van der Vliet: "Healthy Profits", *Optima*, April 2011
- = Brian Anthony Brink, undated
- = HJ Simons: "Death in South African Mines", *Africa South*, undated
- = Various issues of the *South Africa Survey* published by the IRR
- = Various newspapers and websites
- = Interviews with former and current mining executives
- = Interviews with the Chamber of Mines
- = Information supplied by the Chamber of Mines, Gold Fields, and Sibanye

@Liberty is a free publication of the IRR which readers are welcome to distribute as widely as they choose.