

# South African gold mines and nationalisation†

## 1. Introduction

The economic debate, which will probably form an integral part of the forthcoming political negotiation process in South Africa, will no doubt seek to bridge the gap between nationalisation on the one extreme and a free market economy on the other side of the spectrum. The outcome will probably be an agreement on a 'mixed' economic system, with significant emphasis being placed on income distribution and job creation, ie a so-called 'national interest' or 'social market' economy. In the great drive to spread wealth and services to South Africa's growing population in the 1990s, competition for scarce capital resources is bound to intensify and the gold mining industry will have to face the prospect of re-establishing its case for a significant share of the nation's capital resources.

It is also probable that the matters of State ownership and the exploitation of South Africa's natural resources, including gold, will form an important part of the debate on future economic strategy.

Accordingly, this paper seeks to investigate:

**Firstly**, the gold mining industry's case for utilisation of the nation's scarce capital resources in the development and maintenance of gold mines; and

**Secondly**, the pro's and con's of the nationalisation of gold mines.

### Mining's claim on economic resources

What is the **economic case** for mining industry expansion?

*Minerals make up a major portion of South Africa's natural endowment and should be exploited optimally for the benefit of the country.*

It could be argued that the fortunate occurrence of a substantial portion of the world's reserves of many minerals in South Africa requires an economic framework tilted towards profitable development of these resources. Indeed, in the past, official development planning, exchange rate policy and fiscal strategy has often showed such a bias. To argue that South Africa is 'mining country' and therefore requires a suitable distribution of economic resources attesting to this fact might be valid, but such an economic orientation might ignore the claims of other sectors of the economy.

*Given the limited domestic consumption of our minerals, it is clear that the export markets do and will provide the main source of demand for our mineral products. Tapping foreign purchasing power, rather than more limited domestic purchasing capabilities, substantially enhances overall wealth creation in the country.*

World market demand for our, in many cases, unique mineral products provides a source of foreign capital not otherwise available to the country in the current sanctions environment. The fact that South Africa's exports have tripled since late 1984, ie prior to the introduction of first sanctions measures, which even in real terms constitutes a rise of some 140%, is to a large extent attributable to mining products. In both their raw and

beneficiated forms, these make up about 75% of total export earnings.

In large measure mineral exports have been an important 'life-line' to the sanctions constrained economy over the past five years. Hopefully, in a nonsanctions environment, this conduit to international markets could be substantially pursued and expanded. Our record of being a reliable, efficient and competitive supplier of export products in a scenario of international censure and boycott might provide us with a racing start on alternative sources of such products in more normal times.

Export earnings help finance the import of both consumer and capital goods, finance and service debt and, to the extent that an 'export surplus' is generated, contribute to domestic capital formation. Also, in normal circumstances, an export surplus would enhance the nations' borrowing capabilities. For instance, foreign investment is more readily attracted to successful exporting nations.

Given South Africa's abysmally low level of savings, ie a personal savings ratio of 1,5% and the poor level of domestic capital formation, any contribution to capital accumulation from foreign sources is welcome. Mining has traditionally attracted the largest share of foreign investment in South Africa due to its ability to meet international market needs for raw material resources.

*Existing and new mines provide substantial employment opportunities, both directly on the mines themselves and through the 'ripple-effects' of infrastructural creation, services and raw materials consumed, etc.*

According to the Chamber of Mines, gold mines in 1989 employed an average of 420 000 workers in the semi-skilled and unskilled categories, together with a further 50 000 skilled employees. A Chamber survey indicates that each unskilled worker supports between 7 to 10 people, suggesting that 4 million people are directly benefitting from employment on the mines.

Some 60% of the unskilled labour force comes from South Africa and its internal states, with the other 40% originating from a number of neighbouring territories. Much of this labour is migrant. Notwithstanding the social inequities of such migrant labour systems, there are some valuable 'external economy' effects generated through the mines' labour system.

One of them is the export of savings to rural areas. Again according to the Chamber of Mines, mine worker savings channelled through the TEBA payments system amounted to R2,2bn in 1989, of which some R708m was paid out in rural areas. This income provides a significant pool of funds in such regions, channelled, for instance, through the pockets of local businessmen, such as traders, farmers and builders.

Furthermore, the trades learned on the mines, such as welding, bricklaying, wiring, pipe laying and mechanical skills become part of the pool of self-help resources and trained labour competency in communities where they are often in short supply.

In providing this external economy effect in a controlled system of migrant labour, the mines provide a rather unique service and probably play a major role in promoting regional development in South Africa. Accordingly, and notwithstanding the social dislocation impact of labour migrancy, in the current stage of Southern Africa's economic development, the gold mines' role as a development agency should not be underestimated.

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In many cases mines are located in previously underdeveloped areas and, thereby provide a 'core' for the economic development of these regions with trickle-down effects penetrating through much of the regional economy.

In this way, the mines provide a further economic development service, particularly important in view of the need to improve income distribution.

The beneficiation of mineral products has provided the foundation for a significant portion of South Africa's industrial base and good potential exists for further progress in adding value to our minerals.

In the course of such value added functions, valuable employment and other spin-off opportunities are generated for the rest of the economy.

The main negative case for mining claims on scarce capital resources is the apparent high cost of direct job creation on the mines. This argument suggests that an expenditure of about R2bn (the cost of developing a new gold mine) would add more to employment than, in the end, operates with a in secondary industry than in mining where about 20 000 new jobs could be expected to be created. Although this is the common wisdom, it may not necessarily be true. Reserve Bank figures (December 1989 Quarterly Journal) show that the mining industry accounts for 8,5% of the nations total fixed capital stock, but employs some 13% of the economically active population. This suggests that the mining industry's capital/labour ratios are not out of kilter with many areas in the rest of the economy.

Chart 1 provides a simple capital labour comparison for certain sectors of the economy. The evidence is that the capital cost of providing jobs in mining, whilst higher than for manufacturing and construction, is somewhat lower than job creation costs for commerce and services.

**Chart 1**  
Capital/Labour Ratios  
(December 1988)

Mining	47,6
Manufacturing	30,8
Construction	3,1
Commerce	93,2
Tertiary sector	124,6

Sources: SA Reserve Bank Quarterly Bulletin  
Central Statistical Services  
Selected Economic Indicators

Any new economic dispensation in South Africa will no doubt be influenced by the political ideologies of the nation's new leaders or any of the major participants in the power sharing process. In the event of major changes in the political structure, it will be all too easy to allow political demagoguery to overshadow economic good sense. However, the key goal must not be forgotten and that is to encourage the maximum rate of capital formation in order to provide an optimal number of new job opportunities. The gold mining industry has a strong case for continuing to play its, by now traditional role, as a prime promoter of new capital formation and job creation.

### Nationalisation of gold mines?

The debate concerning the future course of economic strategy does, of course, involve an assessment of the pro's and con's of nationalisation. Many Black leaders have singled out the gold mines as a potential target for State control.

Undoubtedly behind the desire for a State owned gold mining industry is the socialist doctrine that natural resources belong to the people and that the Government, as the representative of the people, should undertake the exploitation of such resources. Also, of course, the key role that gold mining plays in the economy as an employer of labour and provider of foreign exchange, plus its well known historical role as a core development industry, make it an ideal target for nationalisation. Any new Government wishing to emphasize a change in economic focus must look on the gold mines as a high profile flagship of any economic policy reorientation.

Understanding some of the apparent motives for greater State involvement in gold mining is one thing. Of more pertinence for this paper is an analysis of the economic argument for gold mining nationalisation. Accordingly, the main aspects examined are:

the benefits to the Government that could ensue from the ownership of gold mines and whether the gold mines would prove an asset or a burden to the State?

### Economic rationale of gold mine nationalisation

The gold mining industry, on close examination, does not appear to be a prime candidate for State ownership.

### Contribution to the economy

The gold mines now only account for some 7% of GNP, a somewhat smaller stake than that of the comparatively recent past (see chart 2). Furthermore, the declining level of physical production on the gold mines (down from 1 000 tons per annum in 1970 to just over 600 tons last year) has meant a negative contribution to the growth in national output for much of the past two decades.

**Chart 2**  
Gold Mining – Contribution to  
Gross Domestic Product

	% of Total
1915	25,2
1925	15,2
1935	22,2
1945	13,9
1955	9,6
1965	10,1
1975	9,9
1985	11,1
1989	7,3

Source: Central Statistical Services

Obviously it could prove embarrassing for the State to become the owners of an industry seemingly in a secular decline and playing an increasingly less prominent role in overall economic activity.

### Return on capital

Part of the rationale for State ownership of productive assets would appear to be the desire to direct the redistribution of income and profits from such industries to other nationally important areas. Does the gold mining industry actually provide a substantial *redistributable reserve*?

Chart 3  
Analysis of Mine Working Results – 1989 (for selected mines) (% of Total Revenue)

	LOW COST		MEDIUM COST		HIGH COST	
	Driefontein	Harties	Western Deep Levels	Buffelsfontein	Harmony	Loraine
Working costs	46,0	56,8	62,8	82,5	95,7	96,2
Taxation	28,7	25,0	6,8	10,2	0,8	4,0
Capital expenditure	12,5	4,8	22,5	2,2	3,6	(4,4)
Dividends	12,8	13,4	7,9	5,1	(1,7)	—
Working revenue	100,0	100,0	100,0	100,0	100,0	100,0

Source: Chamber of Mines – Analysis of Working Results  
( ) debt financed

The *return on capital* is particularly low on the gold mines. Chart 3 illustrates that, for gold mines with different mining cost structures, the percentage of working revenue accruing to shareholders is relatively low in general, and non-existent for high cost mines.

The reason for the low return to shareholders is that the major portion of mine working revenues is swallowed up by working costs. Even in low cost mines, working cost expenditures take up 50% or more of total revenues; it is considerably more in the case of higher cost producers. Typically, labour costs account for some 50%-60% of total working expenditures. In addition to such ongoing production costs, mines must devote a considerable portion of their revenues to capital expenditure on mine development. Mining is a wasting asset industry. As reefs are mined-out, additional capital spending must be incurred in opening of new working areas, including tunnels, stopes, ore clearing passages and the additional transport, ventilation, power and other services required for such working faces. Without such ongoing spending of capital on development the working life of the mine would be reduced drastically and the mine would soon die. Such spending is an essential part of the mine's production process and cannot be foregone.

Any prospective mine owners should be aware of the fact that the industry requires constant injections of capital, which severely erodes the capital redistribution attributes of the gold mining industry. Normally, and the past two years are cases in point, capital expenditure by gold mines exceeds the dividends paid out to shareholders. Furthermore, the 'ring fencing' requirements of the authorities ensure that any gold mine's capital expenditure is confined to the mine's existing lease area. Accordingly, the redistributive capabilities of the mines are purely confined to the dividends they pay out in dividends.

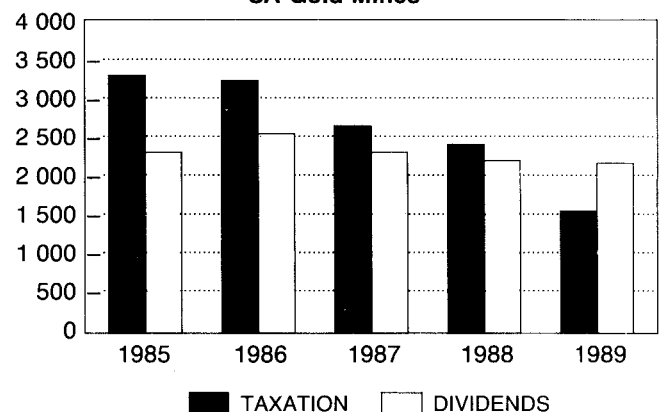
The total capital stock of the gold mines, on historical cost terms, probably exceeds R50bn. In both 1988 and 1989, total dividend payments amounted to just over R2bn. The overall return on capital of some 4% is dismal. Clearly any prospective take-over of the gold mines must be deterred by the poor rates of return and by the way that the cost and capital hungry nature of the mines eats away at the proceeds available for redistribution.

Gold mining profitability

The *after tax profit* of the gold mines in 1988, i.e. before dividend payments, amounted to R2,2bn. The equivalent figure for other private business enterprises was R26,76bn, i.e. gold mining profits accounted for only some 8,2% of total private business returns.

A State take-over of gold mining profits would only provide it with a very marginal access to private sector capital generation.

Graph A  
Tax & Dividend Payments  
SA Gold Mines



Source: Chamber of Mines

Furthermore, nationalising the mines to gain control of *dividend income* has few positive attractions:

- Total dividends paid by gold mines in 1989 amounted to only R2,1bn (i.e. only 2,7% of current State expenditure). Seizing such a small income stream would scarcely seem worthwhile because it would only produce a minor increment in State expenditure.
- *Taxation payments* by gold mines normally exceed dividend payments (see graph A). Nationalising the industry might prove a double edged sword. The lower efficiencies associated with nationalised industries seldom result in them creating profits and, of course, they do not pay tax. A Government bent on nationalising the mines might well jeopardize its income flow from gold mining taxation, which usually exceeds the flow of dividends.

The costs of nationalisation

There is a cost associated with gold mining nationalisation. If the mines are taken over *without* any form of *compensation*, the State could suffer through loss of face and credibility and would surely pass on the incorrect signals to the private sector, i.e. if gold mines are nationalised, what other sectors of the economy would be next?

In particular, the impact on *foreign investors* must be considered. Some 20% of all South African gold mining shares are still in the hands of non-resident investors. Seizing their shares without compensation would merely invite retaliation and would undoubtedly terminate the chances of any fresh foreign investment. The example of Zimbabwe, just north of our borders, pinpoints the pitfalls of confiscation or freezing of foreign assets.

The South African gold mines have traditionally been the focus of both direct and indirect foreign investment in this country. They remain the overwhelming receptacle for much of the foreign investment that remains. The nation's considerable need for capital in the future will require foreign investment on a large scale and this would not be forthcoming should present assets in the country be subject to confiscation.

Should the gold mines be taken over *with compensation*, the costs would be considerable. The market capitalisation of South African gold shares is approximately R55bn. This amounts to 85% of total State expenditure incurred over the fiscal year that ended last February. Obviously, this would impose an impossible current burden on the State and so paper rather than cash would need to be issued to pay for the mines.

Total public debt, at the end of 1989, amounted to R81bn. An additional R55bn debt incurred for gold mining nationalisation would wreck any attempts at disciplined public debt management and would severely impair the Government's borrowing capabilities.

The amount of approximately R10bn owned in South African gold shares by foreigners would need to be added to South Africa's foreign debt, contributing further to the debt servicing burden that is severely constricting South Africa's growth potential.

### *Loss-making gold mines*

South Africa currently has 48 gold mines, each producing at least 1 ton of gold or more per year. Of these, only 21 mines are currently operating at a profit, if normal capital expenditure is taken into account. Even if capital expenditure is not considered, and, as shown earlier, such development capex is a necessity to preserve mine working life, then 22 of the industry's mines are currently in a loss-making situation.

The mines with working costs above current gold prices account for some 30% of South Africa's gold production and for close to 40% of the total jobs in the gold mining industry.

Should the industry be nationalised, these mines would fall under State support and could probably be expected to incur even greater losses because the necessity of curbing red ink would fall away. Accordingly, under present gold price/working cost conditions, at least half the gold mining industry would become a burden of the State. Ultimately, the onus of subsidisation would fall back on the taxpayer and this is not a burden that the State should readily bequeath on its citizens, particularly if it requires their votes and support.

### *Financing of new gold mines*

The high costs, falling grades and declining working lives characterising a substantial portion of South Africa's gold mining industry render it imperative that a new generation of gold mines be developed in the near future. Unfortunately, as is well accepted, the current 'mix' of gold prices, taxation structure, high working costs and the uncertain nature of future development in these areas clearly clouds the outlook for go-ahead on new projects.

A further obstacle is the availability of capital. New gold mines, of any reasonable depth and size, require initial capital funding of some R2bn to get into a self-funding stage. In certain cases, capital expenditure requirements might exceed this figure. Normally, a period of between 5-10 years is required to bring new mines to the production stage.

Furthermore, despite the long lead-in times and high capital cost involved in new mine development, there is no guaran-

tee that the gold bearing reefs will prove to be as rich or constant in nature as promised by drilling programmes.

In short, the risks associated with new gold mines are considerable. Pay-backs only take place over a number of years and, combined with long lead times, valuable capital resources can be locked up for considerable periods. Clearly, it can be argued that the State should tread cautiously in involving the public at large, i.e. the taxpayer, in such high risk ventures.

Pouring money into a hole in the ground that will probably only yield returns in terms of jobs provided and dividends in a decade or more might also prove to have limited attractions for the State with its more pressing near-term social and economic obligations and objectives. Voters and the unemployed are unlikely to be as enthusiastic about the promise of jobs and other economic returns at the turn of the century flowing from a new gold mine than they would be about more instant gratification.

The high risk profile of new gold mine development normally finds some relief in the concept of 'spreading the risk'. Gold mine developers usually lay-off the investment risk by spreading it amongst other mining houses, financial institutions and general equity investors, both here and abroad. The unique South African mining finance house structure and, in many respects, the Johannesburg Stock Exchange originated and grew purely for the purpose of developing new mines. However, should the Government of the day nationalise the industry, it would appear most unlikely that equity investors or finance houses would be prepared to, or be in a position to, assume some of the risk of developing new gold mines. The State would need to assume the entire risk of such ventures which would appear to be an unnecessary burden for taxpayers to bear.

### *Taxation of gold mines*

The State participates in gold mining ventures through the tax system. Gold mines can write off all capital expenditure incurred, including new projects, before any tax liability occurs. In this way the State participates as the 'silent partner' in gold mining expansion. No direct Government capital investment is involved, thereby alleviating the need for incurring public debt. The formula tax system does, however, mean that the State can obtain around 70% of gold mining profits, once the gold mine is fully operational.

Accordingly, the State does operate as a substantial partner with the gold mining industry, through the mining lease and formula tax system. Any 'windfall profits' obtained by a rising trend in the gold price are fully enjoyed by the Fiscus as the tax system ensures a more than proportionate share of profits is channelled in that direction.

### *Employment on gold mines*

Could a nationalised gold mining industry contribute to job creation, particularly black jobs, in South Africa?

Present gold mining methods are notably labour intensive and it would appear difficult to envisage much change in the labour/capital mix for the majority of existing mines. In other words, little further could be done to promote the labour intensity of the industry.

Current pressures on costs also indicate that little improvement in labour remuneration is possible without productivity improvement. As progress is made up the skill curve, the number of job opportunities in the normal course of events is reduced.

The steady progress of gold mines towards greater depths and often lower grades tends to promote mechanization. Unfavourable working conditions at great depth and often res-

stricted margins are and will increasingly favour mechanical mining methods. New gold mines will probably lean in favour of mechanised mining, not only to promote the necessary efficiencies but also because of the discomfort, dangers and low productivity associated with manual mining methods at great depths.

The gold mine's labour force is predominantly obtained from rural areas and some 40% of the labour force comes from outside South Africa's borders. The future challenges for South Africa, with its massive population swing to urbanisation, is to provide jobs in the cities. Gold mines, both through their location and the unpopular nature of mining as a vocation, are unlikely to contribute significantly to urban job creation.

### *Competition strategy in gold mines*

The gold mining industry, in common with most other mining producers, is a *price-taker* with both the price and demand for its product established abroad. The exogenous nature of market determination, which means that the gold mines are unable to control the final price of their product, requires significant discipline in the mines' cost control, particularly in periods of relatively depressed prices, such as at present.

The profit motive and the fear of losses are a powerful disciplinary force, which is often necessary in price-taking industries. Unfortunately, nationalised industries often lack the discipline in cost control and efficiencies required to operate in market environments where price determination is beyond their control.

Most successful nationalised industries enjoy some form of monopolistic power to control the price and supply/demand forces for their products. In other words they are favoured by conditions wherein they enjoy *price-making* circumstances.

Gold mining is now a highly competitive international industry. Gold mines operate in many other areas of the world, nor-

mally under conditions more favourable than those of South African mines. Mining depths are considerably shallower, often allowing open-pit or surface operations, with concomitantly lower operating cost and initial capital requirements than deeper South African mines. Taxation rates are normally lower than in South Africa and in some cases, i.e. Australia, no gold mine tax is paid at all. The general inflation rates, under which gold mine cost structures are established, are usually lower than in South Africa.

South African gold mines labour with some considerable comparative disadvantages compared with their international competitors. Accordingly, there is a strong chance that a less efficient nationalised industry might lose further valuable ground in international competitiveness.

### **Conclusion**

In conclusion, the gold mining industry in its present state holds limited attractions for nationalisation. The economic gains of redistributing the poor current capital returns of the gold mines do not seem to offset the negative consequences of making the industry a burden of the State.

South African mineral exports have to survive in highly competitive world markets, where competitors are predominantly market orientated. The developing world is littered with curtailed and defunct nationalised mining operations that could not meet the challenges of the market place. Obviously, private enterprise mine developers would be best placed to compete on an international basis. If mines did not meet the required returns, they would ultimately be closed and new developments would not be started unless they provided returns commensurate with those available elsewhere in the economy. In this way the scarce capital resources of the country would be harnessed to the best effect.