



Province of KwaZulu-Natal

Provincial Treasury

IGR Unit

THE PROPOSED NATIONALIZATION OF MINES IN SOUTH AFRICA – A CRITICAL ASSESSMENT¹

Clive Coetzee

General Manager: IGR Unit

Economist

clive.coetzee@kzntreasury.gov.za

033 8974538

“The Brazilian state has assumed the role of an entrepreneur not for ideological reasons, but as a pragmatic means of speeding up the process of economic growth”

Trebat, Thomas J. (2007)

¹ The views expressed in this working paper are the views of the author and might not necessarily reflect the views of the Provincial Treasury. All rights reserved - 2010

TABLE OF CONTENTS

1. NATIONALISATION.....	5
1.1. Common reasons for nationalisation	5
1.2. Theoretical arguments for state ownership.....	6
2. OVERVIEW OF SOUTH AFRICAN MINING SECTOR.....	8
3. THE ECONOMICS OF MINING IN SOUTH AFRICA	20
4. LITERATURE REVIEW ON NATIONALIZATION	30
4.0.1. Fact 1: Nationalization and privatizations are repeated.....	31
4.0.2. Fact 2: Privatization –nationalization tend to occur.....	31
4.0.3. Fact 3: Nationalization on natural resource industry tends to occur.....	32
4.0.4. Fact 4: Contract for exploitation of natural resources	32
4.0.5. Fact 5: Nationalization is more likely when inequality is endemic.....	32
5. THREE REASONS WHY SOME NATIONS EMBARKED ON A POLICY OF NATIONALIZATION	33
6. SURVEY OF MINING COMPANIES	42
6.0.1 The survey found amongst other the following.....	42
7. SELECTED NATIONALIZATION CASE STUDIES.....	45
7.0.1. Copper Mining in Zambia.....	45
7.0.2. Venezuela’s Oil Industry.....	51
7.0.3. Diamonds in Botswana.	59
6. ASSESSMENT OF THE NATIONALIZATION OF MINES PROPOSAL	70
7. THE NATIONALIZATION OF MINES AND ITS ASSOCIATED RISKS TO THE NATIONAL ECONOMY	76
8. SUMMARY AND CONCLUSION	78

LIST OF TABLES AND FIGURES

TABLES

Table 1:	Turnover contribution per establishment type, 2008	8
Table 2:	Contribution per establishment size	9
Table 3:	Contribution per disaggregated industry	10
Table 4:	Mining Sector Turnover	12
Table 5:	Selected Financial Statistics on Mining Industry Consolidated Income Statement	14
Table 6:	Selected Financial Statistics on Mining Industry –Contribution to Turn Over	15
Table 7:	Selected Financial Statistics on Mining Industry –Risks	16
Table 8:	Selected Balance Sheet Statistics on Mining Industry	16
Table 9:	Selected Industry Ratio's	17
Table 10:	Physical Volume of Mining Production –Year –on Year % Change	18
Table 11:	Summary Statistics of Physical Volume of Mining Production	19
Table 12:	Employment and Gross Earnings in the Mining Industry	24
Table 13:	Export in Mining Industry	27
Table 14:	Mining Industry Policy Potential Index	43
Table 15:	Mining Industry Policy Potential Index-Disaggregated	43
Table 16:	Alexkor Balance Sheet	64
Table 17:	Alexkor Income Statement	65
Table 18:	Alexkor Net Profit or Net Loss	65
Table 19:	Alexkro Financial and Npn-Financial data	66

LIST OF GRAPHS

Graph 1:	Mining Sector Turnover- R' million	12
Graph 2:	Physical Volume of Mining Production	19
Graph 3:	Mining and quarrying GDP-R million	20
Graph 4:	Mining and Quarrying GDP- Year-on-Year % Change	21
Graph 5:	Mining and Quarrying GDP-Contribution to Total GDP %	22
Graph 6:	Employment in the Mining Industry-Index 1995=100	23

Graph 7:	Gross Fixed Formation in the Mining Industry –R million 2005 prices	25
Graph 8:	Fixed Capital Stock in the Mining industry –R million 2005 prices	25
Graph 9:	Gross Gold and other Foreign Reserves- R million	26
Graph10:	Balance of Payments –R million	26
Graph 11:	Provisional tax payments –R million	28
Graph 12:	Proportion of Mining Taxes to Total Company Taxes-%	28
Graph 13:	Copper Prices 1957 to 1997	47
Graph 14:	Copper Prices 1998 to 2010	47
Graph 15:	World Copper Usage, 1900-2008 Thousand metric tonnes	48
Graph 16:	Copper Mines Production 1900-2008 Thousand metric tonnes	48
Graph 17:	World Copper Production and Consumption, 1960-2008 Thousand	49
Graph 18:	Copper Production by Region - 1993-2008 Thousand metric tons	49
Graph 19:	Venezuela's Oil Production and Consumption	55
Graph 20:	Venezuela's Economic Growth Rate	56
Graph 21:	Venezuela's Inflation Rate	57
Graph 22:	Venezuela's Balance of Payments	57
Graph 23:	Venezuela's Unemployment Rate	58

NATIONALIZATION

Nationalization is the act of taking an industry or assets into the public ownership of a national government or state. It refers to the transfer of ownership from the private to the public. Nationalization is not a state owned enterprise or a public entity. For an asset or industry to be viewed as nationalized it must have been owned by the private sector i.e., the property right must have belonged to the private sector. Therefore entities as listed below cannot be viewed as being nationalized entities.

- Eskom
- Telkom
- Transnet
- Denel
- Alexkor
- SAA
- Aventura
- Safcol

The motives for nationalization are political as well as economic. It is a central theme of certain brands of 'state socialist' policy that the means of production, distribution and exchange, should be owned by the state on behalf of the people or working class to allow for rational allocation of output, consolidation of resources, and rational planning or control of the economy. Many socialists believe that public ownership enables people to exercise full democratic control over the means whereby they earn their living and provides an effective means of distributing output to benefit the public at large, and a means for providing public finance. Common reasons for nationalization include:

- Delivery of critical infrastructure i.e., the construction of roads, dams, or public buildings.
- Social and economic equality
- Resentment of foreign control of major industries
- Prevention of unfair exploitation and large-scale labour layoffs
- Control of natural monopolies

- Rescue or stabilise distressed or heavy subsidized companies
- To keep the means of generating wealth in public control
- Reduce the power of private capitalists
- To allow the profits of business to be shared by the state

Theoretical arguments for state ownership include the following:

- Arguments for state ownership
 - Weaknesses of the free market / private sector Free market price mechanism too volatile/uncertain
 - Efficiency gains in a private enterprise can come at expense of customer
- Public ownership to meet economic & social targets Not for profit businesses –social aims / public interest
 - Natural monopoly arguments - in the interests of consumers
 - Quality of service
- Employment protection
- Strategic justifications e.g. nuclear power, airlines
 - Public sector can be a vehicle for macro-control
 - Pay restraint
 - Employment at different stages of the economic cycle
- If the State could make healthy windfall profits

From a purist point of view the word nationalization should only be used to describe situations in which the government owns a company, the government runs the company and the government plans to keep on running the company. Nationalization should therefore be evaluated based on the following

- Ownership, Control and Long-term intent

The divestments of private property can be classified into the four categories: (i) formal expropriation, (ii) intervention, (iii) forced sale and contract renegotiation. The nationalization process is usually accompanied by the payment of compensation. However, the process can also occur without compensation or with partial compensation i.e., expropriation. Expropriation, according to Duncan (2005), means

any act by which a government seizes a greater share of an investment project than it was entitled to under the contract with the domestic or foreign investor. Duncan further suggests that expropriation includes the following:

- seizure of capital, including mining equipment, reserves of the mine or mining rights (a complete seizure of domestic assets of the domestic or foreign company is known as a “nationalization”);
- compelled sale of mining company shares to the government or domestic nationals; or
- raising taxes on company revenues or profits

Nationalized companies should be viewed in contrast to government owned companies or state owned enterprises (SOE's). The arguments for government or state owned companies are significantly different to the arguments for nationalization. Government or state owned companies in most cases are the providers of those essential goods and services in the economy that the private companies cannot or wouldn't supply. A government-owned corporation, state-owned enterprise, state enterprise, or government business enterprise is a legal entity created by a government to undertake commercial activities on behalf of an owner government. Their legal status varies from being a part of government into stock companies with a state as a regular stockholder. There is no standard definition of a government-owned corporation (GOC) or state-owned enterprise (SOE), although the two terms can be used interchangeably. The defining characteristics are that they have a distinct legal form and they are established to operate in commercial affairs (Wikipedia, http://en.wikipedia.org/wiki/Government-owned_corporation). These are not companies where the assets were privately owned.

Government or State Owned Companies are nothing new and should not be seen as being in competition with private companies. This is demonstrated by the fact that such companies operate very successfully in capitalist or free market economies. Government or State Owned companies are not the exception to the rule and play a critical role in a capitalist or free market economy. The function of such companies in general is to operate successfully as a business and as profitable as required by its shareholder.

OVERVIEW OF THE SOUTH AFRICAN MINING SECTOR

The South African mining industry primarily covers the area of activities from extraction of minerals like gold, platinum, chromium, diamonds, vanadium, manganese, uranium and iron ore to trading with foreign countries. The rich abundance of mineral resources enables South Africa as one of the leading mineral exporters in the world.

There seems to be only around 54 listed establishments in the mining industry whilst the exact number of private and other establishments is uncertain, unfortunately. The SA Revenue Service in their *Tax Statistics 2008* publication indicate that there were 836 taxpayers (66.8% assessed) compared to 828 taxpayers (58.0% assessed) in 2004, 770 (47.4% assessed) in 2005 and 320 (29.0% assessed) in 2006, respectively in the mining and quarrying industry. The number of mining and quarrying taxpayers only represents on average about 0.16 per cent of the total number of taxpaying companies in SA over the period. There also seems to be only one Public corporation in the mining industry. The table below indicates that almost 98 per cent of total industry turnover is generated by the public and private establishments. The SA Revenue Services *Tax Statistics 2008* publication indicates that 95 per cent of mining and quarrying taxpaying companies generates turnover of R10mil or greater.

Table 1: Turnover contribution per establishment type, 2008

Type	% of Total
Individual	0.08
Partnership	0.09
Public company	63.08
Private company	34.99
Public corporation	0.33
Close corporation	0.97
Cooperative society	0.00
Government enterprise	0.00
Non-profit institution	0.00
Other	0.47

Source: Stats SA, Own Calculations

The table below indicates that the mining industry is dominated by large scale establishments. This is not unsurprising given the finance requirements and risks associated with mining.

Table 2: Contribution per establishment size

Turnover Contribution %			
	<u>Small</u>	<u>Medium</u>	<u>Large</u>
2006	1.07	1.78	97.16
2007	1.42	1.51	97.07
2008	0.85	1.64	97.51
Total expenditure Contribution %			
	<u>Small</u>	<u>Medium</u>	<u>Large</u>
2006	1.71	2.42	95.87
2007	1.67	1.87	96.46
2008	1.14	2.02	96.84
Total assets Contribution %			
	<u>Small</u>	<u>Medium</u>	<u>Large</u>
2006	2.41	1.13	96.46
2007	1.06	1.00	97.94
2008	0.54	2.67	96.80
Carrying value of property, plant and equipment and intangible assets at the end of the financial year Contribution %			
	<u>Small</u>	<u>Medium</u>	<u>Large</u>
2006	0.86	0.88	98.26
2007	0.83	1.14	98.03
2008	0.43	0.89	98.68

Source: Stats SA, Own Calculations

Table 3 indicates that the mining industry is concentrated in the mining of gold, uranium ore, platinum and coal. The table also seems to suggest that almost all of the sub industries experienced fairly significant increases in turnover, total assets and carry value over the period.

Table 3: Contribution per disaggregated industry

<u>Values in R million</u>	Turnover 06	Turnover 07	Turnover 08	Average yearly Change	% of Total
Mining of coal and lignite	42,025	45,383	61,152	21.37	18.42
Extraction of crude petroleum oils and natural gas	7,751	9,712	12,107	24.98	3.64
Mining of gold and	37,076	35,505	39,802	3.93	14.32

uranium ore					
Mining of iron ore	4,047	11,753	14,835	108.32	3.54
Mining of Chrome	15,504	19,278	14,496	-0.23	6.32
Mining of Copper	2,346	4,048	4,808	45.66	1.35
Mining of Manganese	4,658	9,347	31,286	167.69	4.96
Mining of Platinum group metals	48,964	91,851	111,231	54.34	30.10
Other metal ore mining including mineral sands except gold and uranium	1,474	2,098	3,762	60.82	0.87
Quarrying of dimension stone (granite, marble, slate, and wonderstone)	784	938	836	4.38	0.32
Quarrying of Limestone and limeworks	663	526	651	1.55	0.24
Other stone quarrying, including stone crushing and clay and sandpits	2,917	3,467	3,550	10.62	1.25
Mining of diamonds (including alluvial and marine diamonds)	11,847	12,450	13,596	7.15	4.80
Mining of chemical and fertilizer minerals	3,470	3,716	5,149	22.83	1.53
Extraction and evaporation of salt	228	279	358	25.34	0.11
Other mining and quarrying	2,722	5,699	5,878	56.25	1.72
Service activities incidental to mining of minerals	15,555	18,038	18,160	8.32	6.53
Total	202,031	274,088	341,657	30.16	
Values in R million	Total Assets 06	Total Assets 07	Total Assets 08	Average yearly Change	% of Total
Mining of coal and lignite	43,389	44,202	88,713	51.29	13.59
Extraction of crude petroleum oils and natural gas	21,424	21,465	27,972	15.25	5.67
Mining of gold and uranium ore	110,414	96,520	126,501	9.24	26.91
Mining of iron ore	4,427	13,239	17,322	114.95	2.65
Mining of Chrome	32,291	33,552	18,222	-20.89	7.12
Mining of Copper	3,391	5,069	7,053	44.31	1.21
Mining of Manganese	5,682	12,131	28,779	125.37	3.41
Mining of Platinum group metals	65,710	108,889	133,758	44.28	24.07
Other metal ore mining including mineral sands except gold and uranium	11,260	11,694	13,651	10.29	2.95
Quarrying of dimension stone (granite, marble, slate, and wonderstone)	700	688	733	2.41	0.17
Quarrying of Limestone and limeworks	575	438	512	-3.47	0.13
Other stone quarrying, including stone crushing and clay and sandpits	3,264	2,948	3,911	11.49	0.81
Mining of diamonds	15,499	18,560	22,390	20.19	4.49

(including alluvial and marine diamonds)					
Mining of chemical and fertilizer minerals	5,038	5,290	6,647	15.33	1.36
Extraction and evaporation of salt	136	190	221	28.01	0.04
Other mining and quarrying	2,670	4,733	4,868	40.06	0.97
Service activities incidental to mining of minerals	17,432	17,053	20,635	9.42	4.44
Total	343,302	396,661	521,888	23.56	
Values in R million	Carrying value 06	Carrying value 07	Carrying value 08	Average yearly Change	% of Total
Mining of coal and lignite	24,244	26,927	45,832	40.64	14.42
Extraction of crude petroleum oils and natural gas	3,457	5,315	6,597	38.93	2.31
Mining of gold and uranium ore	69,293	57,530	78,150	9.43	31.36
Mining of iron ore	2,033	4,433	4,647	61.44	1.67
Mining of Chrome	18,902	20,514	8,256	-25.61	7.70
Mining of Copper	2,030	1,981	3,598	39.61	1.13
Mining of Manganese	3,127	6,240	9,602	76.72	2.78
Mining of Platinum group metals	39,265	48,994	71,061	34.91	23.85
Other metal ore mining including mineral sands except gold and uranium	420	539	1,787	129.94	0.39
Quarrying of dimension stone (granite, marble, slate, and wonderstone)	186	231	225	10.80	0.10
Quarrying of Limestone and limeworks	366	245	301	-5.10	0.14
Other stone quarrying, including stone crushing and clay and sandpits	2,084	1,566	1,870	-2.72	0.86
Mining of diamonds (including alluvial and marine diamonds)	12,003	14,258	15,190	12.66	6.35
Mining of chemical and fertilizer minerals	2,731	1,938	2,477	-0.61	1.11
Extraction and evaporation of salt	45	77	107	55.04	0.03
Other mining and quarrying	1,514	2,257	2,903	38.85	1.00
Service activities incidental to mining of minerals	10,392	9,583	11,403	5.60	4.82
Total	192,092	202,628	264,006	17.89	

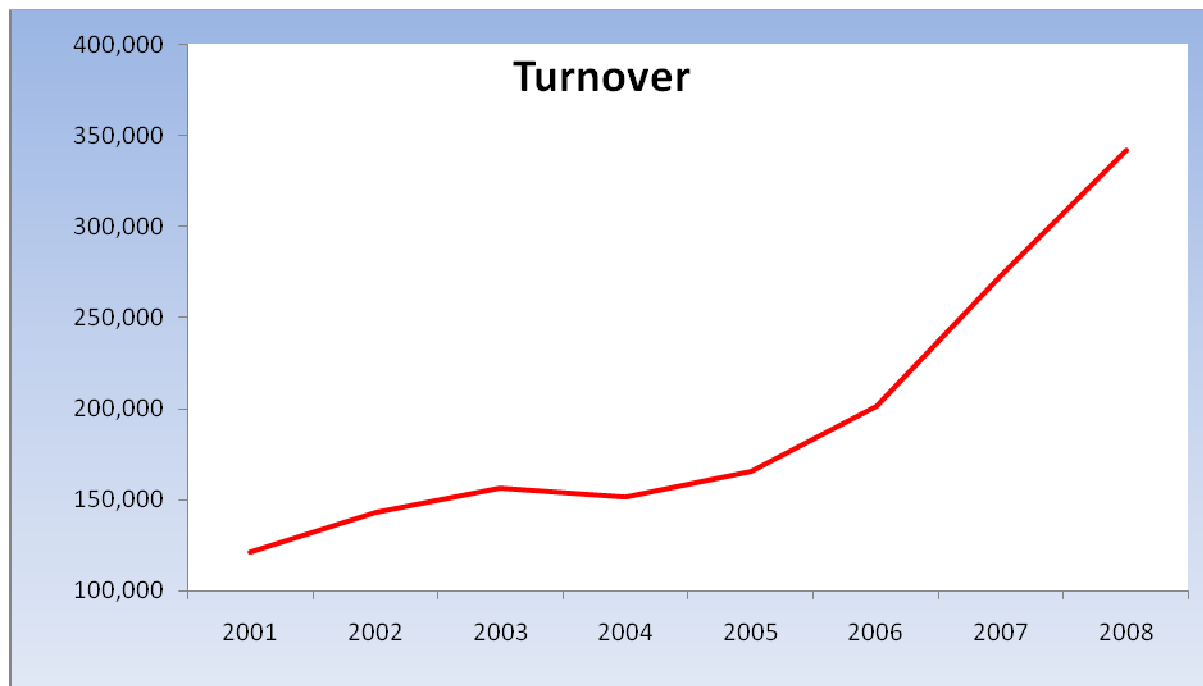
Source: Stats SA, Own Calculations

From the above statistics (tables 1, 2 and 3) it is possible to derive the following conclusions with regard to the mining industry in SA:

- The industry is significantly concentrated domestically
- The industry faces significant barriers to entry
- Economies of scale are a prerequisite
- Mining output is internationally traded
- Mining establishments are price takers
- The mining industry is a high risks industry
- Efficiency and productivity are of paramount importance for the mining industry

Turnover in the mining industry in SA is dependent on three aspects. One being the international price of the commodity; two being the rand/dollar exchange rate and three, the volume of output. The South African denominated price is derived as the multiplication of the dollar price and the rand dollar exchange rate. Total turnover is the SA denominated price of gold multiplied by the volume of output. Graph 1 and table 5 indicate that mining turnover increased from R121bn in 2001 to R342bn in 2008. Except for the 2003 to 2004 period turnover increased fairly rapidly in the mining industry since 2001.

Graph 1: Mining Sector Turnover – R'million



Source: Stats SA, Own Calculations

It is however important that the increase in turnover further be analysed because of the multiple potential reasons for the increases. For example the dollar price of gold increased by 24.71% during 2008, whilst the rand depreciated against the dollar by 17.29%. This implies that the rand price of gold increased by 46.06%, which is much greater than the production price increase for 2008 (by 31.73%). The total increase in turnover will now depend on the change in the volume of output. If output also increased then turnover would increase by more than 46.06%. If output stays constant then turnover would increase by 46.06% and if output decreased then turnover would increase by less than 46.06%.

It is also possible to conclude that the 2003 and 2004 turnover slowdown were primarily because of the appreciation of the rand.

Table 4: Mining Sector Turnover

	Gold NY	Rand Dollar	Gold R	PPI
2002	15.22	18.58	36.20	13.45
2003	17.17	-28.54	-16.07	2.25
2004	11.64	-13.72	-3.58	2.35
2005	9.81	-0.32	9.28	3.63
2006	35.92	6.98	46.20	7.73
2007	15.40	3.13	18.07	10.94
2008	24.71	17.29	46.06	14.33

Source: Sharenet, Own Calculations

What is very evident is that in the majority of years the increases in turnover were because of the increase in world prices and the depreciation of the rand and not because of the volume of output. This could create a false sense of security and optimism about the profitability of the mining sector.

This is further illustrated in the table below in that purchases or costs of sales increased from R33bn to R103bn in a fairly short period of time indicating the mining industry faces increasing cost of production. It is also interesting to note that taxes paid to the government were in fact more than the dividends paid to the shareholders in 2008. The R32bn excludes a further R1.5bn of property taxes, mineral rights leases, excise and customs duties and royalties. Dividends paid increased from R15bn in 2001 to R25bn in 2008.

Table 5: Selected Financial Statistics on the Mining Industry – Consolidated Income Statement

R million	2001	2002	2003	2004	2005	2006	2007	2008
Turnover	120,758	142,502	155,652	151,001	164,988	200,748	272,431	341,657
Total expenditure	92,636	111,902	146,811	154,822	161,756	178,314	219,787	260,925
Purchases	33,307	33,995	41,929	47,062	50,047	53,926	74,886	102,562
Salaries and wages	26,829	29,996	33,562	39,755	39,839	45,550	52,382	58,609
Net profit before providing for company tax and dividends	39,262	59,110	31,567	16,023	17,829	41,184	85,972	108,938
Company tax paid or provided for during the financial year	11,105	15,693	11,681	6,281	6,367	10,546	21,404	32,157
Net profit after tax	28,157	43,417	19,886	9,742	11,462	30,638	64,568	76,781
Dividends paid or provided for during the financial year	14,865	36,317	19,169	10,179	9,705	9,928	38,843	25,028

Source: Stats SA, Own Calculations

The table below indicates that total expenditure accounts for about 80% of total turnover. This suggests fairly low profit margins in the mining industry. It is also evident that purchases have increased in relative terms. Even more interesting and somewhat concerning is the relative instability of the proportions, especially dividends, for the period. Such a degree of volatility creates significant risks to the industry and shareholders.

Table 6: Selected Financial Statistics on the Mining Industry – Contribution to Turnover

% of Turnover	2001	2002	2003	2004	2005	2006	2007	2008
Turnover								
Total expenditure	76.71	78.53	94.32	102.53	98.04	88.82	80.68	76.37
Purchases	27.58	23.86	26.94	31.17	30.33	26.86	27.49	30.02
Salaries and wages	22.22	21.05	21.56	26.33	24.15	22.69	19.23	17.15
Net profit before providing for company tax and dividends	32.51	41.48	20.28	10.61	10.81	20.52	31.56	31.89
Company tax paid or provided	9.20	11.01	7.50	4.16	3.86	5.25	7.86	9.41

for during the financial year								
Net profit after tax	23.32	30.47	12.78	6.45	6.95	15.26	23.70	22.47
Dividends paid or provided for during the financial year	12.31	25.49	12.32	6.74	5.88	4.95	14.26	7.33

Source: Stats SA, Own Calculations

The table below further elaborates the instability or volatility issue. The table shows that taxes increased on average by about 27% per annum over the period whilst dividends increased on average by about 43% per annum. However the standard deviation associated with the taxes is much less than the standard deviation associated with dividends. The instability or volatility associated with dividends suggests significant risk to the shareholders.

Table 6: Selected Financial Statistics on the Mining Industry – Risks

Year-on-Year	Average	Std dev	Max - Min	CV
Turnover	16.61	12.66	38.70	0.76
Total expenditure	16.31	9.92	26.72	0.61
Purchases	18.22	15.01	36.80	0.82
Salaries and wages	11.94	5.70	18.24	0.48
Net profit before providing for company tax and dividends	33.21	69.83	180.24	2.10
Company tax paid or provided for during the financial year	27.10	52.90	149.19	1.95
Net profit after tax	37.66	81.11	221.50	2.15
Dividends paid or provided for during the financial year	43.36	127.94	338.46	2.95

Source: Stats SA, Own Calculations

The table below shows important statistics relevant to the Balance Sheet of the mining industry over the period. Total mining assets increased from just less than R300bn in 2005 to R522bn in 2008. Total expenditure on new assets increased from R27bn in 2005 to R51bn in 2008. The table also indicates that the majority of finance requirements are funded by the shareholders. The table suggests that the majority of balance sheet entries increased fairly substantially over the period. What is also very evident is the relative stability in the balance sheet of the mining industry, especially given the instability in the income statements.

Table 8 gives selected industry ratios for the 2006 to 2008 period.

Table 7: Selected Balance Sheet Statistics on the Mining Industry

R million	2005	2006	2007	2008
Total Assets	298,068	322,249	424,547	521,888
Current Assets	83,711	80,528	111,280	150,432
Fixed Assets	214,357	241,721	313,267	371,456
Owners' equity	121,115	133,272	183,987	234,114
Non-current liabilities	111,977	116,751	134,577	147,921
Current liabilities	64,976	72,226	105,983	139,853
Total equity and liabilities	298,068	322,249	424,547	521,888
Capital expenditure on new assets	27,046	22,690	33,938	50,572
Capital expenditure on land and existing assets	8,070	11,452	18,659	14,362
%		year-on-year 2006	year-on-year 2007	year-on-year 2008
Total Assets		8.11	31.75	22.93
Current Assets		-3.80	38.19	35.18
Fixed Assets		12.77	29.60	18.57
Owners' equity		10.04	38.05	27.24
Non-current liabilities		4.26	15.27	9.92
Current liabilities		11.16	46.74	31.96
Total equity and liabilities		8.11	31.75	22.93
Capital expenditure on new assets		-16.11	49.57	49.01
Capital expenditure on land and existing assets		41.91	62.93	-23.03
% of Total Assets	2005	2006	2007	2008
Current Assets	28.08	24.99	26.21	28.82
Fixed Assets	71.92	75.01	73.79	71.18
Owners' equity	40.63	41.36	43.34	44.86
Non-current liabilities	37.57	36.23	31.70	28.34
Current liabilities	21.80	22.41	24.96	26.80
Total equity and liabilities	100.00	100.00	100.00	100.00
Capital expenditure on new assets	9.07	7.04	7.99	9.69
Capital expenditure on land and existing assets	2.71	3.55	4.40	2.75

Source: Stats SA, Own Calculations

Table 8: Selected Industry Ratio's

Industry	Turnover / Fixed Assets	Profit / turnover	Profitability ratio	Dividends paid / Net profit after tax	Turnover / Closing inventories
Mining and quarrying industry 2006	1.06	0.21	0.15	0.31	9.16
Mining and quarrying industry 2007	1.35	0.32	0.24	0.62	11.08
Mining and quarrying industry 2008	1.29	0.32	0.22	0.33	10.99

Industry	Net Profit before tax / Fixed Assets	Net profit after tax / Fixed Assets	Company tax / Net profit	Total capital expenditure / Fixed assets	Capital expenditure on new assets / Fixed assets
Mining and quarrying industry 2006	0.22	0.16	0.26	0.19	0.14
Mining and quarrying industry 2007	0.43	0.32	0.25	0.28	0.16
Mining and quarrying industry 2008	0.41	0.29	0.30	0.25	0.19
Industry	Return on equity (ROE)	Current ratio	Quick ratio	Net working capital ratio	Debt to equity ratio
Mining and quarrying industry 2006	1.48	1.19	0.87	0.07	1.31
Mining and quarrying industry 2007	1.68	1.22	0.93	0.09	1.19
Mining and quarrying industry 2008	1.56	1.08	0.85	0.04	1.23

Source: Stats SA, Own Calculations

It is possible to make the following observations given the selected industry ratios:

- To produce R1's worth of turnover the mining industry requires R1.09's worth of fixed assets and the requirement has increased over time. The mining industry is capital intensive.
- Profitability levels are fairly marginal, but reasonable stable
- The mining industry has on average a 33% dividend payout ratio
- The mining industry had a 30% tax rate during 2008
- The mining industry has a assets replacement and expansion rate of about 28%
- The mining industry generates R1.56 worth of total income for every R1's worth of share capital
- The mining industry is not a very liquid industry
- The mining industry uses marginally more debt to finance their operations than equity

In general it seems that the ratios are in most cases not very attractive but rather indicative of a highly complex and competitive industry faced by numerous externalities. The below graph (graph 2) and table (table 9) indicate that the volume of output in the mining industry decreased over the last 5 years. This is also a

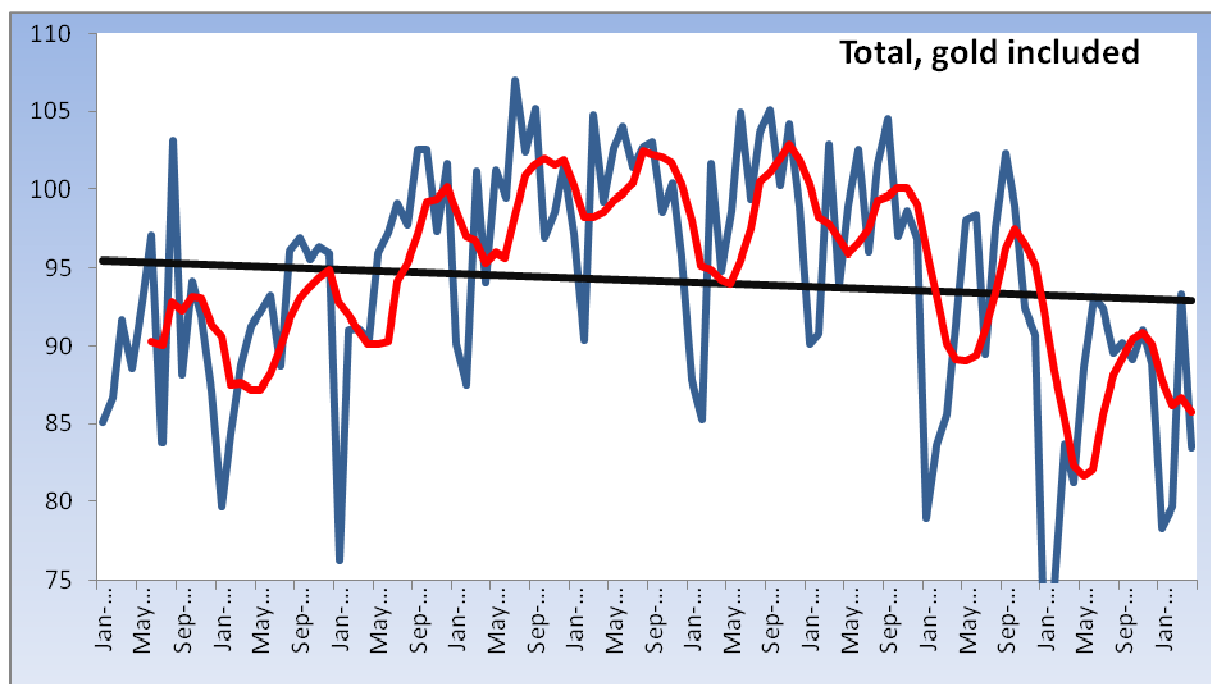
general decrease and not just relevant to a couple of sub industries. There are however some sub industries that experienced an increase in output for example iron ore.

Table 9: Physical volume of mining production – year-on-year % change

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Total, gold included	0.80	4.03	3.69	1.26	-1.30	-0.91	-5.65	-6.65	-2.84
Total, gold excluded	0.79	7.17	7.14	4.42	0.11	0.13	-3.77	-6.57	-1.17
Coal	-0.47	6.72	3.77	-0.45	-0.10	1.19	1.98	-0.80	-4.42
Iron ore	5.20	4.95	2.41	0.52	4.64	1.72	16.40	12.92	8.14
Chromium	16.91	15.08	3.66	-2.13	-1.08	30.26	0.28	-29.17	18.63
Copper	-8.77	-6.69	-16.15	3.54	5.53	6.69	-16.88	-4.43	-18.76
Manganese ore	3.05	1.12	23.42	9.92	13.04	15.02	13.52	-32.77	34.61
PGMs	4.79	10.78	7.74	6.27	1.72	-1.74	-9.30	-1.59	-10.51
Nickel	5.72	5.95	-2.39	6.35	-1.51	-10.18	-15.54	9.25	17.69
Other metallic minerals	1.98	-15.60	-0.91	11.32	-2.50	-8.03	1.22	-6.00	9.66
Gold	0.95	-6.27	-9.49	-12.86	-8.08	-6.33	-16.15	-7.11	-13.79
Diamonds	-6.56	16.48	15.91	5.44	-3.86	0.56	-15.45	-51.91	39.28

(Stats SA, Own Calculations)

Graph 2: Physical volume of mining production – 1995 = 100



Source: Stats SA, Own Calculations - Linear and 6 period Moving Average Trend lines

The below table indicates that gold and copper mining decreased significantly in output over the period. The volume of output also seems fairly volatile as per the standard deviation and coefficient of variation.

Table 10: Summary Statistics of Physical volume of mining production

	Average pa Change	St dev	Range	CV
Total, gold included	-0.84	3.75	10.68	-4.46
Total, gold excluded	0.92	4.66	13.75	5.09
Coal	0.82	3.15	11.15	3.82
Iron ore	6.32	5.30	15.87	0.84
Chromium	5.83	17.10	59.42	2.94
Copper	-6.21	9.87	25.45	-1.59
Manganese ore	8.99	18.64	67.38	2.07
PGMs	0.91	7.39	21.29	8.14
Nickel	1.70	10.21	33.23	5.99
Other metallic minerals	-0.98	8.43	26.92	-8.56
Gold	-8.79	5.08	17.10	-0.58
Diamonds	-0.01	25.22	91.19	-2387.83

Source: Stats SA, Own Calculations

The volume of output statistics seems to suggest the following:

- Mining output in SA is under severe pressure
- Mining output is fairly volatile

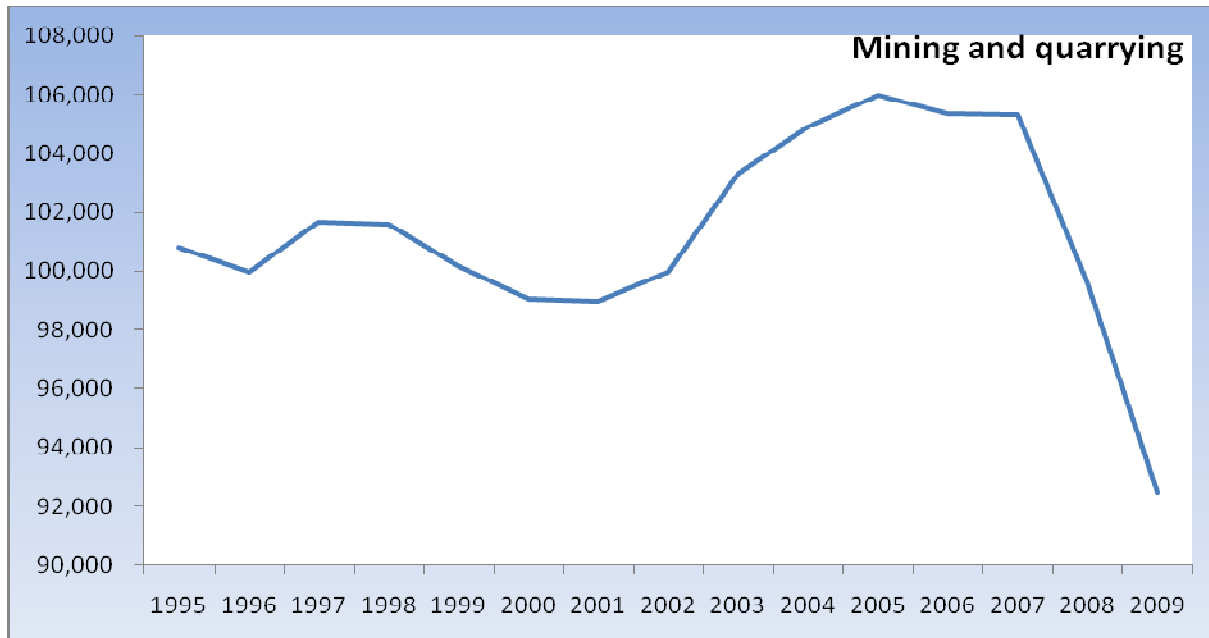
The decreasing trend in the volume of output is very significant because of the possible reasons thereof. The fall in output could be because of scarcity, falling ore grades and lack of investment, lower mill throughput or increases in operating costs.

THE ECONOMICS OF MINING IN SOUTH AFRICA

The gross domestic product (GDP) or value added in the mining and quarrying industry increased from about R100bn in 1995 to a high of R105bn in 2007 decreasing thereafter to R92bn in 2009 at constant 2005 prices as evident in the below graph. Graph 4 indicates the massive decrease in the GDP of the industry

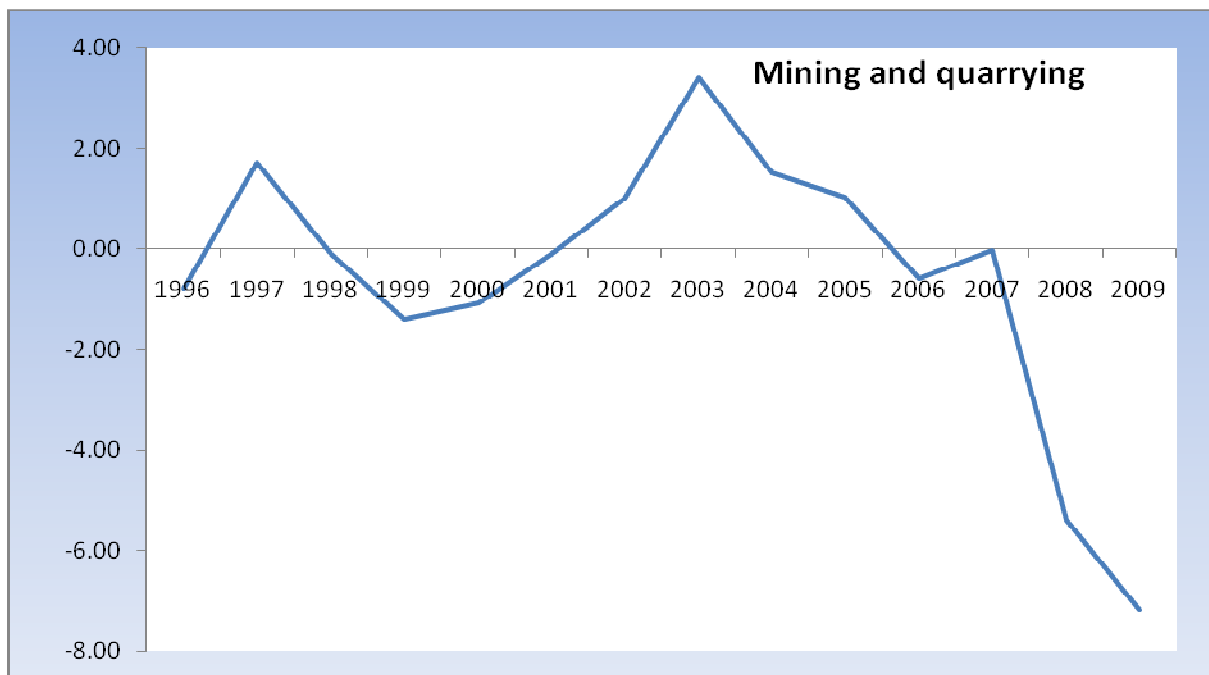
over the 2008 and 2009 years. However, it is clear that the industry never actually increased consistently at fairly high levels over the period.

Graph 3: Mining and Quarrying GDP - Rmillion



Source: SARB, Own Calculations

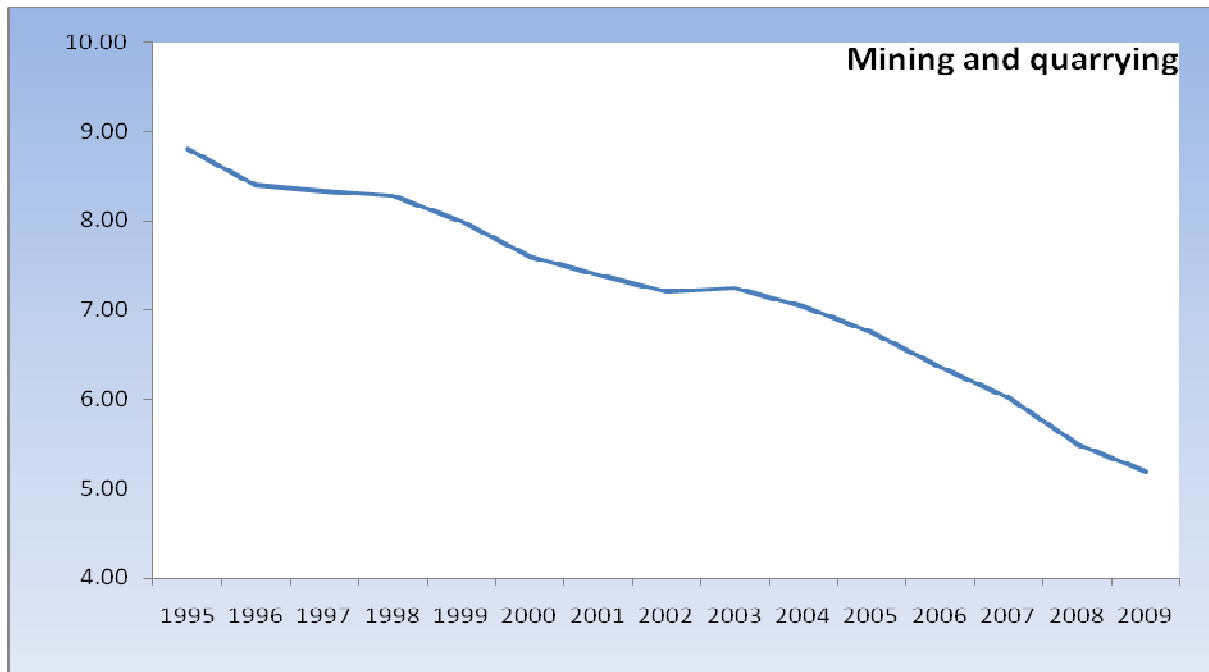
Graph 4: Mining and Quarrying GDP – Year-on-Year % Change



Source: SARB, Own Calculations

The graph below indicates alarmingly that the contribution of the mining and quarrying industry to the total SA GDP has significantly and continuously decreased since 1995.

Graph 5: Mining and Quarrying GDP – Contribution to Total GDP %



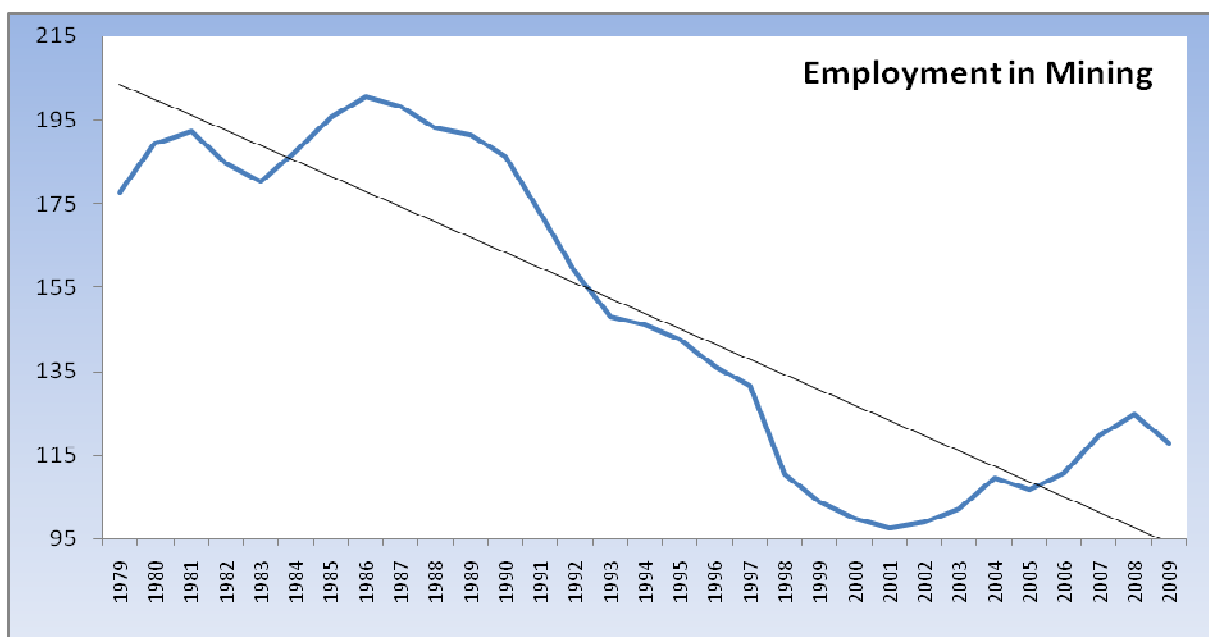
Source: SARB, Own Calculations

The below graphs and tables (graphs 6 to 10 and tables 11 and 12) indicate the following:

- Employment in the Mining Industry decreased consistently up to 2001 where after it increased but only marginally.
- Employment in the mining industry increased up to September 2008 where after it decreased to about 491 000 in March 2010
- Gross Earnings continued to increase throughout the study period increasing on average by 18 per cent per year
- The increase in gross earnings slowed down considerably since June 2009
- Gross earnings per employee increased substantially in real terms increasing by almost 17 per cent per year
- Labour costs in the mining industry increased significantly

- Gross capital formation increased robustly since 2005. However, it does appear that investments are sensitive to political and economic instability. Investment into the mining sector increased on a yearly average by 4.4 per cent in real terms over the period
- Fixed capital stock increased from R112bn in 1979 to R267bn in 2009 at constant 2005 prices or on a yearly average by 2.9 per cent
- Gross capital formation and fixed capital stock in the mining industry on average contributes about 10.4 per cent and 7.8 per cent to the SA totals, respectively but the contributions have been marginally decreasing since 1992.
- SA gold and foreign reserves increased significantly since 2003 partly because of the increase in the price of gold
- The increase of reserves and improvement in the balance of payments can be large contributed to portfolio flows i.e., because of the attractiveness of SA equity including mining equity
- Mining Exports increased from R37bn in 1992 to R214bn in 2008
- Mining Exports as a percentage of total exports decreased from 54 per cent in 1992 to about 32 percent in 2008
- Mining exports contribute significantly to the overall trade balance

Graph 6: Employment in the Mining Industry – Index 1995 = 100



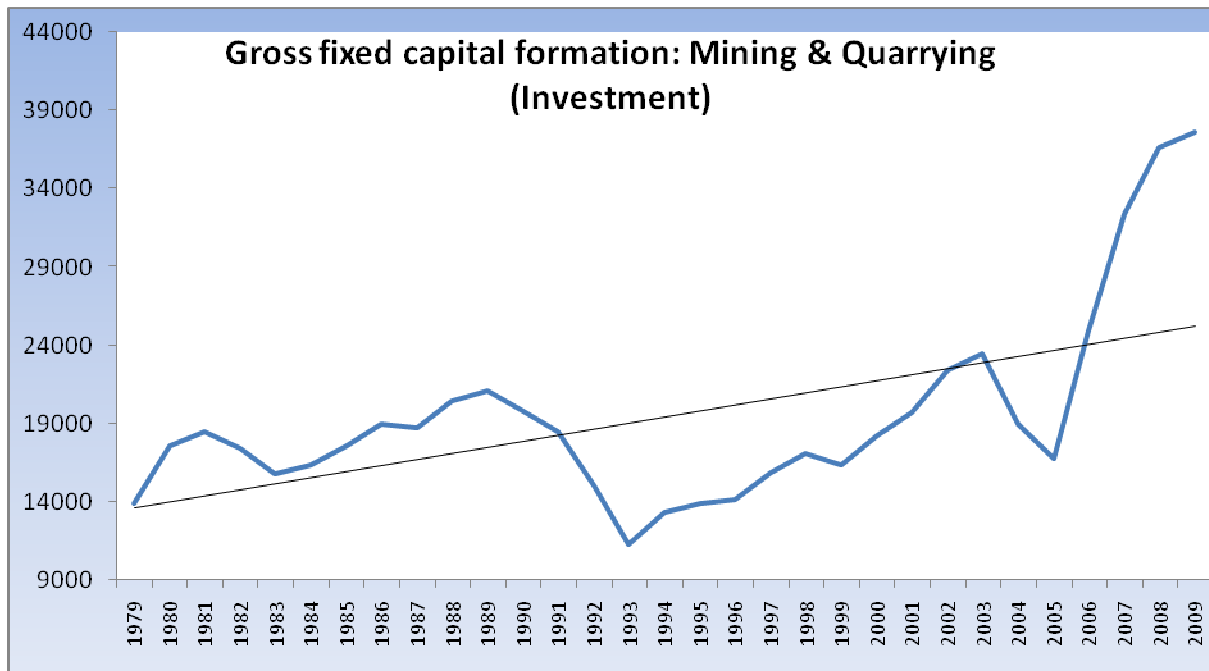
Source: SARB, Own Calculations

Table 11: Employment and Gross Earnings in the Mining Industry

	Number of Employees	Gross Earnings	Gross Earnings per Employee
2006 Jun	459,000	9,497,000	20,690.63
Sep	463,000	10,049,000	21,704.10
Dec	475,000	10,505,000	22,115.79
2007 Mar	484,000	10,515,000	21,725.21
Jun	497,000	10,977,000	22,086.52
Sep	505,000	11,785,000	23,336.63
Dec	505,000	12,334,000	24,423.76
2008 Mar	508,000	13,554,000	26,681.10
Jun	520,000	14,602,000	28,080.77
Sep	532,000	15,622,000	29,364.66
Dec	518,000	16,519,000	31,889.96
2009 Mar	500,000	15,605,000	31,210.00
Jun	492,000	15,692,000	31,894.31
Sep	487,000	16,448,000	33,774.13
Dec	488,000	17,511,000	35,883.20
2010 Mar	491,000	17,104,000	34,835.03
Year-on-Year % Change			
2007 Jun	8.28	15.58	6.75
Sep	9.07	17.28	7.52
Dec	6.32	17.41	10.44
2008 Mar	4.96	28.90	22.81
Jun	4.63	33.02	27.14
Sep	5.35	32.56	25.83
Dec	2.57	33.93	30.57
2009 Mar	-1.57	15.13	16.97
Jun	-5.38	7.46	13.58
Sep	-8.46	5.29	15.02
Dec	-5.79	6.01	12.52
2010 Mar	-1.80	9.61	11.61
Descriptive Statistics			
Average	1.51	18.51	16.73
St Dev	5.91	10.91	7.98
Range	17.53	28.64	23.82
CV	3.90	0.59	0.48

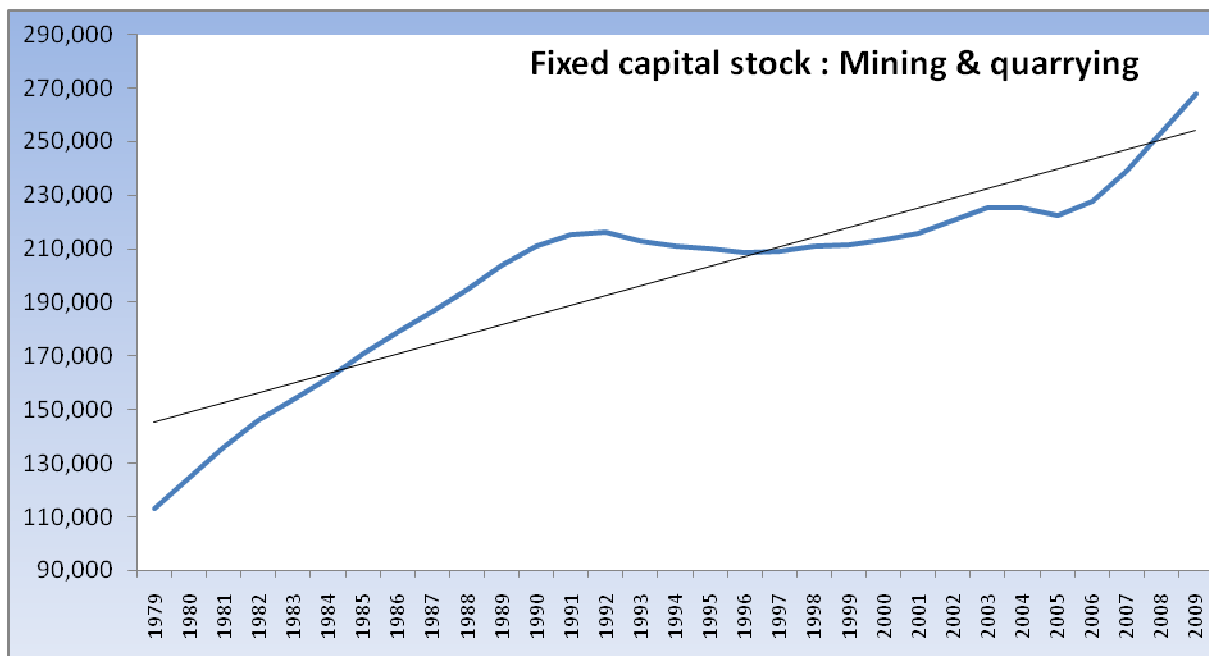
Source: Stats SA, Own Calculations

Graph 7: Gross Fixed Capital Formation in the Mining Industry – Rmillion 2005 prices



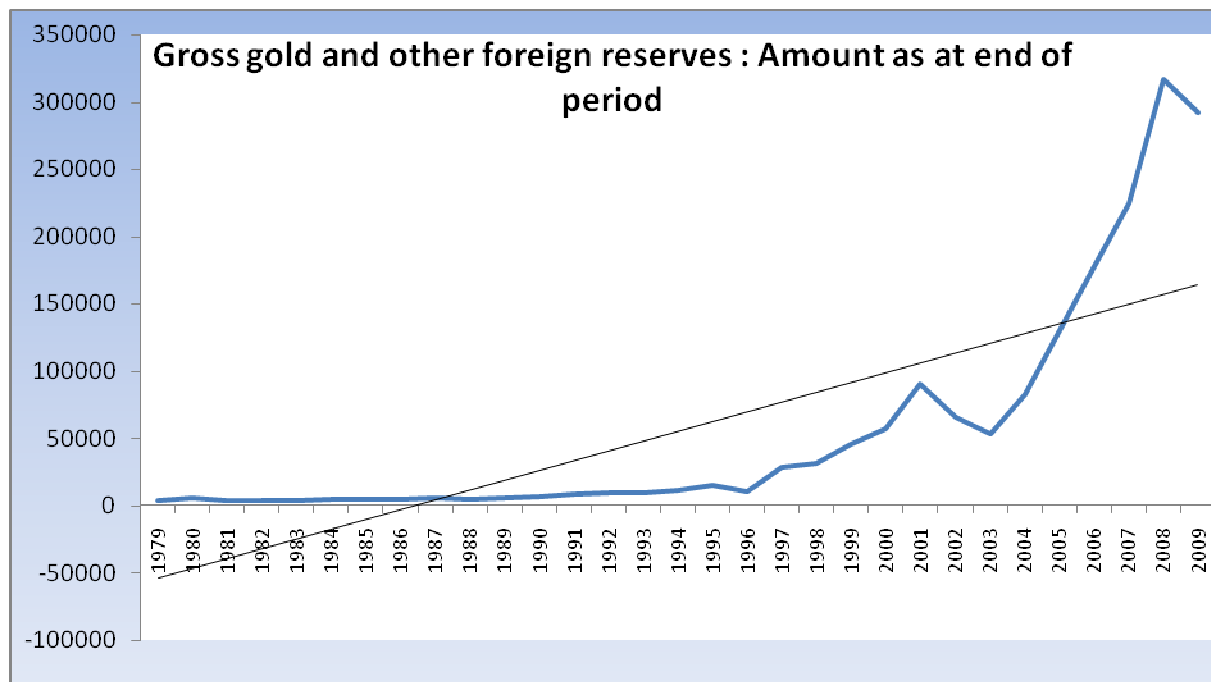
Source: SARB, Own Calculations

Graph 8: Fixed Capital Stock in the Mining Industry – Rmillion 2005 prices



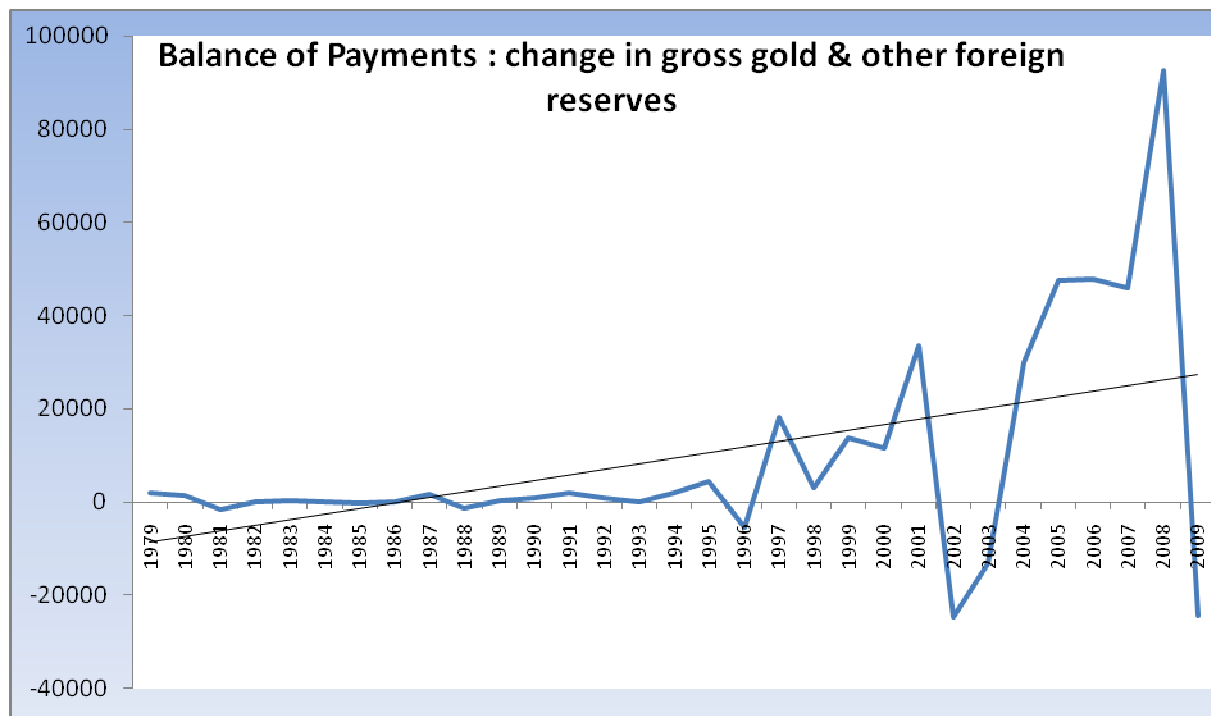
Source: SARB, Own Calculations

Graph 9: Gross Gold and other Foreign Reserves – Rmillion



Source: SARB, Own Calculations

Graph 10: Balance of Payments – Rmillion



Source: SARB, Own Calculations

Table 12: Exports in the Mining Industry

	Exports Rand million			Trade Balance Rand million		
	Total	Mining	As a % of Total	Total	Mining	As a % of Total
1992	68,880	37,200	54.01	22,321	33,615	150.60
1993	74,500	40,507	54.37	14,536	33,529	230.66
1994	90,234	45,261	50.16	13,411	38,872	289.85
1995	102,124	45,006	44.07	3,069	35,410	1153.80
1996	115,403	47,301	40.99	1,761	35,815	2033.79
1997	131,537	52,102	39.61	3,596	34,595	962.04
1998	144,953	57,870	39.92	782	45,063	5762.53
1999	165,555	62,749	37.90	18,199	46,085	253.23
2000	210,373	79,905	37.98	22,765	49,247	216.33
2001	251,330	95,251	37.90	35,297	62,808	177.94
2002	314,102	115,798	36.87	38,674	79,337	205.14
2003	275,581	91,334	33.14	16,742	57,177	341.52
2004	296,246	94,645	31.95	-10,681	48,897	-457.79
2005	331,405	103,186	31.14	-20,260	52,235	-257.82
2006	396,529	129,310	32.61	-68,511	54,067	-78.92
2007	494,356	159,926	32.35	-69,091	68,982	-99.84
2008	661,741	214,810	32.46	-87,678	46,892	-53.48

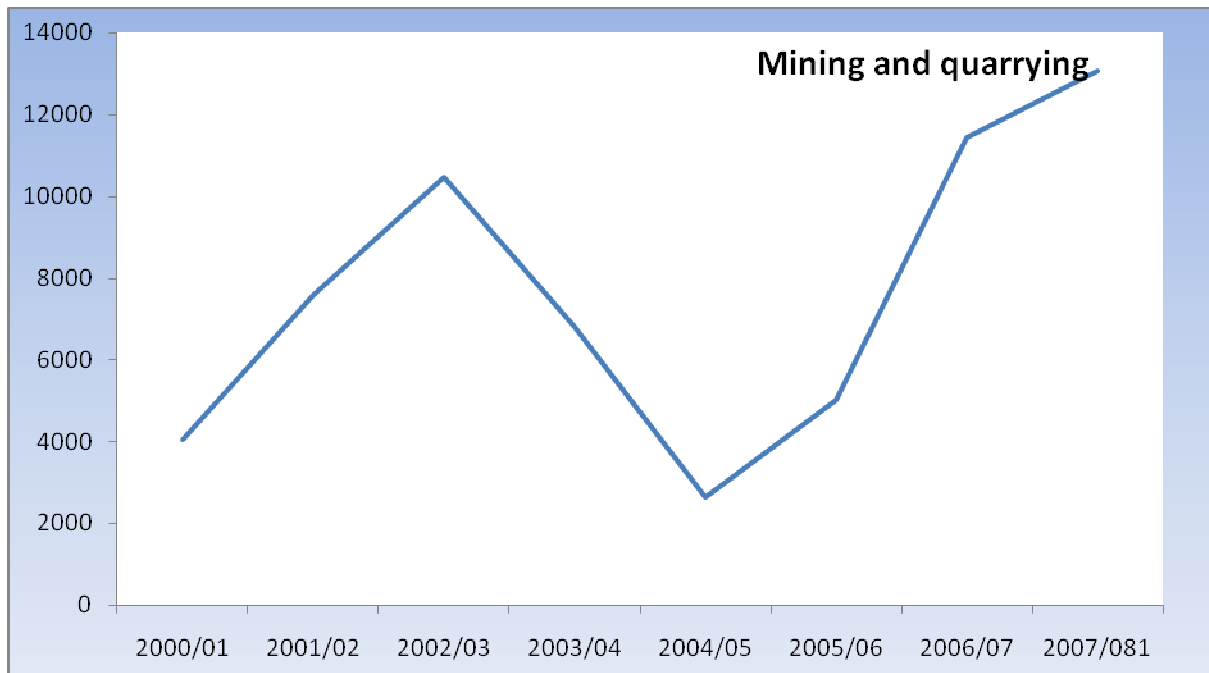
Source: Department of Trade and Industry, Own Calculations

The below graphs (graphs 11 and 12) indicate the provisional tax payments by the mining and quarrying sector and its contribution to the total company tax payments. Mining tax payments increased from about R4bn in 2001 to R13bn in 2008. However tax payments decreased significantly during the 2001 to 2004 period particularly because of the appreciation of the Rand. Tax payments increased on average by about 37 per cent per annum over the period.

Tax payments by the mining industry account on average for about 11.2 per cent of the total company tax payments. However and most significantly it is the second biggest individual contributor to total company tax payments. Mining tax payments accounts for about 3 per cent of the total government tax revenue.

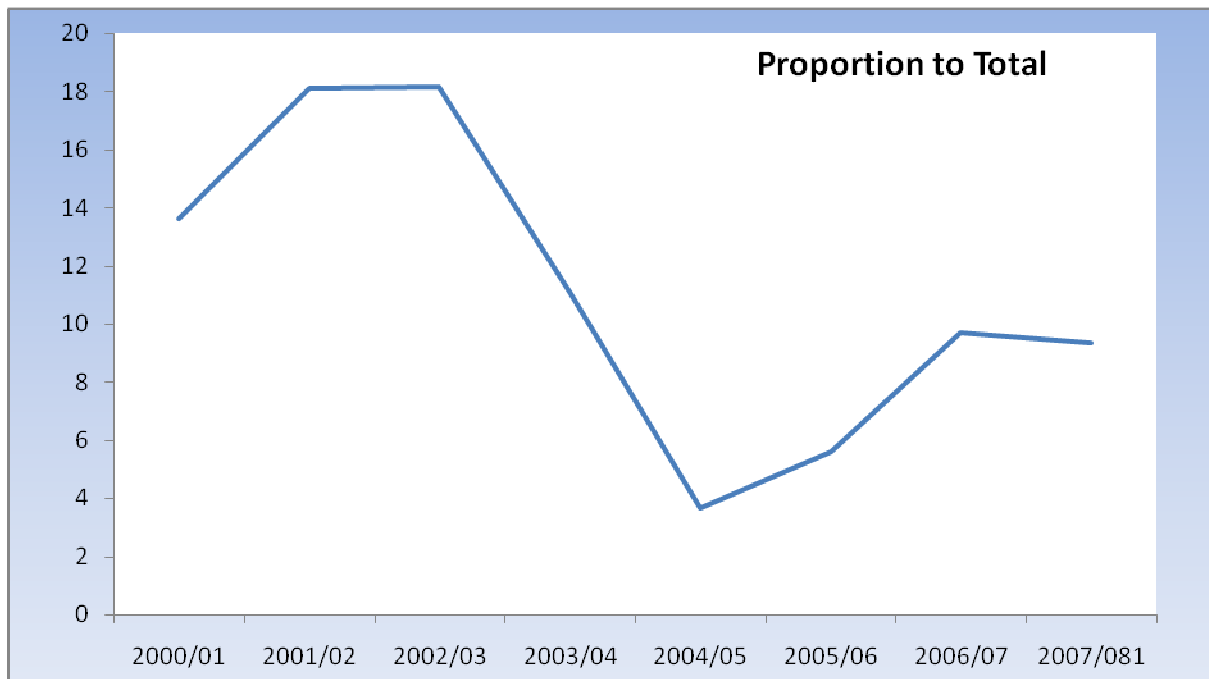
It is also noteworthy that the contribution of the mining sector to the total company tax payments has been decreasing over the period. It has recovered over the last couple of years but not to levels as before. The mining industry simply did not experience or share in the economic boom period as most other sectors did.

Graph 11: Provisional tax payments – R million



Source: SARS, Own Calculations

Graph 12: Proportion of Mining Taxes to Total Company Taxes - %



Source: SARS, Own Calculations

The economics of the mining industry indicate that the mining industry is a significant and important industry contributing significantly to the health and performance of the national economy. There can be no argument that the impact of the mining industry on the national economy is not significant. Not just in one or two ways but in many ways. A sound and prosperous mining industry is a non-negotiable for the SA economy achieving its development goals. It is both a sufficient and necessary condition for the development and growth of the national economy.

However and/or unfortunately the mining sector in SA has not been performing optimally or close to potential. In fact it seems like a very uncertain and very risky industry. The mining industry seems beset with significant challenges including environmental, political and labour challenges. The mining industry because of its complexities is very much dependent on favourable external factors to compensate it for the risks and instabilities associated with mining. The mining industry is definitely not the “pudding industry” it seems, given the level of international resource prices.

The economics of the mining industry allows us to make the following conclusions:

- The output and contribution of the mining industry to the national economy has been decreasing significantly since 1995
- The mining industry has been a net jobs shedder for almost two decades
- The mining industry used to be an economic role player of significance
- Maintaining mining output is becoming more difficult and more expensive
- Mining seems to be facing decreasing returns to scale
- Investment into the mining sector accelerated over the past years most probably because of the higher prices of resources
- The investment however seems to be insufficient to support higher output and value added
- The gross value added at basic prices of mining and quarrying per fix capital stock decreased from 0.98 in 1979 to 0.35 in 2009
- The gross value added at basic prices of mining and quarrying per investment decreased from 7.8 in 1979 to 2.5 in 2009
- The mining industry has a long and illustrious relationship with SA

- The mining industry is a very important export industry and it is an internationally recognised industry
- The mining industry mitigates the deficit on the current account and supports the capital account via portfolio flows
- The mining industry contributes to the overall net positive balance on the Balance of Payments
- The mining industry accounts for large inflows of foreign currency into SA
- These inflows support the domestic currency which in turn is supportive of a lower inflation rate
- The mining industry contributes significantly to the national government fiscus

The mining industry therefore supports to a lesser and greater degree the four macroeconomic objectives i.e., economic growth, employment, low inflation rate and balance of payments surplus.

An element that has not been discussed in this section is the impact of the mining industry on the national financial system and domestic savings rate. This will be discussed later in this paper.

LITERATURE REVIEW ON NATIONALIZATION

Nationalization became very prominent during the post-WWII period until the late 1970's. In 1984 about 35% of the world's mines were under state control. This period was followed by a privatization wave from the 1980s to 2007. By 2000 the proportion of nationalized mines had fallen to almost 15%. The privatization movement has dramatically slowed down since the beginning of 2008, and the trend has even reversed again with the beginning of the financial crisis in September 2008 (Professor Magnus Ericsson of the Raw Minerals Group consultancy).

It seems that many of the world's mines are still in government hands, even after the period of privatisation in the nineties. Practically all Chinese mining groups are state controlled – which significantly boosts state control globally. About 60% of the world's tin, for example, is mined by state mining companies, and more than 50% of the coal and 40% of the alumina is extracted from the ground by state controlled businesses (Professor Magnus Ericsson of the Raw Minerals Group consultancy).

In 2006 governments processed almost 50% of all alumina and more than 30% of all copper and zinc. China has the largest government mining sector, followed by Chile, Poland, India and Iran – excluding oil. International companies are responsible for almost all mining in Gabon and Argentina. In China, Russia and India almost all mining is undertaken by local companies, many of which are owned by the state.

Government mines are a counter to domination by a reducing number of mining giants which generally mine and do business across borders. Control over mining activities has economic and political consequences, and Ericsson contends that companies can influence governments. However, certain conditions are necessary for successful state mines, says Ericsson. A company must look to its own future and not simply feed government coffers. Secondly, it must be well managed and political motives should not form its *raison d'être*. Mexico's 1938 nationalization of its petroleum industry, on the other hand, set the standard with regard to the problems associated with nationalization. Its state-run oil company Pemex has long served as both the government's cash cow and a model of inefficiency and patronage.

Chang, et al (2010) studied the cycles of nationalization and privatization in resource-rich economies. Their literature review found the following facts:

Fact 1 - Nationalizations and privatizations are repeated, cyclical phenomena, which often come in waves common to several countries. Kobrin (1984) analyzed expropriations in 79 developing countries over the period 1960-79. He found that expropriations grew in the 1960s, peaked in the early 1970s and declined afterwards. Minor (1994) and Sak (1996) extended Kobrin's study to include the period up to 1993. They found that in the late 1980s and early 1990s, as many as 95 countries around the world experienced extensive privatization processes. Most recently, however, Manzano and Monaldi (2008) report the opposite trend in the last few years, albeit in a smaller group of countries, mostly in Latin America. For them, the current wave of nationalization is only the latest chapter of a repeating cycle, as they had previously experienced the nationalizations of the 1970s and the privatizations of the 1990s.

Fact 2: Privatization - nationalization cycles tend to occur more often in the natural resources and utilities sectors. Kobrin (1984) documents that in the last five

decades expropriations encompassing large portions of the economy do occur, but they are less frequent than selective expropriations and have been mostly concentrated in a dozen of countries. In her historical account, Chua (1995) also finds that in the majority of countries under analysis, utility and natural resource companies are significantly more prone to undergo the nationalization and privatization recurring cycle. Her account of the ownership swings of oil exploitation companies in Latin America is particularly revealing.

Fact 3: Nationalization of natural resource industries tends to occur when the price of the corresponding commodity is high. Duncan (2006) investigated the causes of expropriation in the minerals sectors of developing country exporters. In this study, expropriation is deemed as any act by which a government gains a greater income share than it was entitled to under the original contract with the foreign investor. The sample analyzed consists of the eight largest developing country exporters for seven major minerals (bauxite, copper, lead, nickel, silver, tin and zinc). Covering the period 1960-2002, Duncan used probit regressions to estimate the effects of price booms and political and economic crises on the probability of expropriation. The results indicated that price booms are significantly positively correlated with the instances of expropriation.

Fact 4: Contracts for the exploitation of natural resources between governments and private companies are such that commodity price windfalls are mostly appropriated by private firms. This may explain why nationalizations tend to occur during commodity price booms. Manzano and Monaldi (2008) analyzed the recent trend of nationalization in the Latin American oil sector, pointing out to issues in the taxation system and political economy of this sector. The oil industry is in general characterized by considerable rents and sunk costs. This makes the industry very attractive for government expropriation when oil prices rise and the tax system is inadequate, in the sense of being regressive and lacking consideration for price contingencies. Accordingly, the authors argue that the new wave of nationalizations is induced largely by the increase in the international oil price

Fact 5: Nationalization is more likely when inequality is endemic or worsens in the country, and especially when the rents from natural resource or utility companies are

perceived as benefitting only a minority. Chua (1995) concluded that nationalization in Latin America and Southeast Asia was promoted against not only foreigners but also domestic residents who were perceived as unfairly privileged. The private ownership and management of utility and natural resource companies was deemed to have worsened the inequality already present in these societies. Accordingly, differences across ethnic lines were a key factor to induce the ownership shifts in Southeast Asia, while an anti-elitist movement played a significant role in Latin America. Their study also found the following based on a mathematical model:

- Positive effort under private ownership implies that effective labour and production is greater than under state ownership. In this sense, the model is consistent with the stylized facts that privatized firms are generally more efficient than state ones. This also means that workers can have higher average consumption in a privatized regime. However, profits are partially appropriated by private owners and there is costly consumption inequality.
- In the model, the choice between state versus private ownership reflects an underlying equity-efficiency trade-off, which is affected in a natural way by the price of the national resource.
- Privatizations occur in their model when prices fall below a threshold value. If prices subsequently increase, the resulting windfalls are appropriated, partly or wholly, by the private buyers, until the price increase triggers nationalization.

Gary Hufbauer of the non-partisan Institute for International Economics in Washington, D.C, cited three reasons why some nations embarked on a policy of nationalization:

- The ruling party wants the revenues, and this pertains mostly to oil and mineral enterprises.
- They're a way to deliver patronage through bloated work forces.
- The populace wants cheap or free services.

He argues that none of the above provides a recipe for efficiency and thus the failure of nationalization as an economic policy.

A 2004 World Bank study, according to Hufbauer, that looked at 181 state-run utilities in 15 Latin American and Caribbean countries that were privatized in the 1990s -- in fixed telecommunications, electricity and water distribution and sewers -- found that on the whole, labour productivity, efficiency and quality of service improved, especially in telecoms. Water and sewers tended to be problematic, however.

For that reason, Hufbauer says he'd be surprised if Latin America's nationalization wave extends much beyond Bolivia and Venezuela -- where Chavez allies say such strategic sectors as the steel industry could also become state-run. "Only Venezuela has the cash to support the padded payrolls and financial losses that sweeping nationalization portends," Hufbauer said. "So my guess is that even Bolivia will slow down after the obvious oil and gas takeovers, and perhaps water and power."

In his paper, Sutiyono (2007) compares the management of human resources (HRM) in two large, modern sector business organisations, one state-owned and the other privately owned, in the context of the rapidly deregulated Indonesian economy of the mid-1990s. The two organisations differed greatly in the extent to which HRM was able to underpin the efficient management of the organisation. Owing to fundamentally different approaches to recruitment, training and development, employee performance management and remuneration, the state-owned enterprise had far less effective HRM than its private sector counterpart according to the author, and could learn a great deal from how the privately owned organisation responded to the challenges presented by deregulation. The findings suggest that firm effectiveness depends significantly on the HRM function, and that the performance of state-owned enterprises tends to suffer as a result of interference in HRM processes by their government owners (<http://ideas.repec.org/a/taf/bindes/v43y2007i3p377-394.html>).

Guriev, et al (2008) in their paper studied the nationalizations in the oil industry around the world in 1960-2002. Their study found, amongst others, the following to be likely:

- Expropriations are more likely to happen when oil price shock is high, and in countries and country-years with weaker institutions.
- Expropriations are more likely in countries and country-years with lower human capital
- Change of ruler and oil abundance are positively correlated with expropriation. GDP growth is negatively correlated with expropriation, while the initial level of GDP per capita is positively correlated with expropriation.

Duncan (date unknown) in his paper takes up the question of the future consequences of expropriation in the mineral sectors of developing countries. What price does a country pay for expropriating a foreign direct investment? Duncan further argues that the full costs of expropriation are determined by the following factors:

- The relative efficiency of government operation of mine versus private operation (if the government takes over operation of the mine)
- The reinvestment response of the investor (if the investor keeps operation of the mine but has a lower equity share in the mine);
- Any punishment exacted by outside parties, such as countries of origin of the investors; and
- Any compensation for the lost capital paid by the host government to the investors.

The results of the model indicate that the estimated effect of past expropriations is to reduce mining output by about 9 percent each year. This coefficient is stable and statistically significant at the 1 percent level across all of the regressions. The estimated effect of a past de-expropriation is to increase mining output by about 6 percent per year. The occurrence of a political crisis is estimated to lower mining output by 10 percent in the same year for the second regression, but by only 4 percent in the third regression (Duncan).

The model by Duncan also shows that countries with prior expropriations could regain their reputation partly by de-expropriating. On net those countries that de-expropriated grew about 3 percent less than those countries that never expropriated, but 6 percent faster than those countries that did not de-expropriate. The results

further show that past expropriations have a significant cost in terms of foregone future output. The coefficient of past expropriation was large, negative and strongly significant across all the formulations of this model. The results suggest that countries with past expropriations can expect to have mining output growth of almost 10 percent less than countries with no history of expropriations. The article concludes that expropriations should be handled leniently and do not seem to be the accepted view of investors (Duncan).

Crivelli and Staal (2009) in their paper focus on two efficiency arguments commonly used in transition economics. The first one, productive efficiency, claims that production is more efficient in a private firm because better incentives can be given to managers and employees. The intuition is that private firms face a larger risk of liquidation than public firms, and managers thus face a larger risk of losing their job when choosing an effort level that is not high enough. The second argument, allocative efficiency, claims that public firms are socially more efficient because the government cares about social welfare and internalizes externalities, whereas the private owners just maximize their pay-off.

The World Bank Policy Research Report *Bureaucrats in Business – the economics and politics of Government ownership* (1995) indicates that bureaucrats are still in business, despite a growing consensus that governments perform less well than the private sector in a host of activities. The report indicates that requiring bureaucrats to oversee businesses better handled by private entrepreneurs' places a heavy toll on developing-country bureaucracies, diverting attention from problems that only governments can address. Bureaucrats typically perform poorly in business not because they are incompetent (they aren't) but because they face contradictory goals and perverse incentives that can distract and discourage even very able and dedicated public servants. The problem is not the people but the system, not bureaucrats per se but the situations they find themselves in as bureaucrats in business.

The World Bank report in the section that deals with economic performance and government ownership considers the following examples:

- In Turkey, Turkiye Taskorumu Kurmu, a state-owned coal mining company, lost the equivalent of about \$6.4 billion between 1986 and 1990. Losses in 1992 worked out to about \$12,000 per worker, six times the average national income. Yet health and safety conditions in the mine were so poor that a miners' life expectancy was forty-six years, eleven years below the national average. In short, the miners and the government would have been better off if the government had imported coal and paid the miners to stay home.
- In the Philippines, the performance of the National Power Corporation steadily deteriorated from 1985 until the early 1990s. In 1990 the capital region alone lost an estimated \$2.4 billion in economic output due to power outages. By 1992-93, electricity was shut off about seven hours a day in many parts of the country.
- In Bangladesh in 1992, the state sugar milling monopoly had twice as many office workers as it needed, or about 8,000 extra employees. Farmers near the outmoded state mills were required to sell their sugar cane to the government at below market prices, with the result that many planted other crops, causing a shortage of cane. Meanwhile sugar cost twice as much in Bangladesh as it did internationally.
- In Tanzania, the state-owned Morogoro shoe factory, built in the 1970s with a World Bank loan, never manufactured more than about 4 percent of its supposed annual capacity. Designed to turn out four million pairs of shoes a year, four times the international norm, the factory planned to export three-quarters of its production to Europe, even though Tanzania lacked high quality leather, experienced designers, and shoe assembly-line workers. Ill-suited to Tanzania's tropical heat, with steel pillars, aluminium walls, and no ventilation system, the plant deteriorated quickly after it was commissioned. Production ceased in 1990.

The report correctly states that such anecdotal evidence, no matter how disturbing, does not constitute a convincing argument for or against state ownership, nor does it enable us to quantify the impact on the economy and welfare of large SOE sectors. The report however does find significant evidence on the following:

- Government owned business entities are often unable to generate the resources to finance their operation and expansion and service their debt
- The generally poor performance of Government owned business entities at the microeconomic level described in the report and the Savings-Investment deficit at the aggregate level suggests that a large Government owned business sector is likely to have a negative impact on growth in a variety of ways
- The data strongly supports the premise that the larger the Government owned business sector's overall deficit, the larger the fiscal and current account deficits.

Thornton (2008) in his article *Nationalization of Energy Assets and Regional Welfare; Sakhalin 2007* indicates that if a massive commitment of investment into the energy sector on Sakhalin has helped fuel and expansion of construction and employment in the region, how will the shift of control from Western firms to Russian state-owned Gasprom and Rosneft impact regional welfare? One piece of information is a brief glance at what is happening to income in the Yamal-Nenets region, the source of most of Gasprom's existing production. A look at developments in that region is not encouraging. Although Russian natural gas currently accounts for about one-third of export earnings and 8.5% of GDP, Gasprom has invested little in maintaining existing resource capacity or in developing new reserves. In the region which has a population very similar in size to Sakhalin's, real income dropped precipitously in 1998.

Thornton (2008) further states that the citizens of Sakhalin can look ahead to a strong positive impact of private energy investment into six or more projects for decades. This economic activity should bolster construction, employment, and infrastructure in the region. However, most of the fiscal revenues from energy are likely to be centralized in the national accounts of Gazprom and Rosneft (government controlled energy companies) or delivered on subsidized terms to government authorities elsewhere in the region. As in the past, the division of benefits at the centre between the state-owned monopolies and the Treasury is likely to be the subject of administrative negotiation, according to the article. The author

argues that as in the past there will continue to be numerous interest groups lobbying for domestic access to energy on subsidized terms. Returning to the questions that Thornton raised in this essay, it appears that Western investors have been disappointed in their expectations about the imagined security offered by production sharing laws in Russia. They now must seek to find a way of participating as junior partners in energy projects that will be under Russian government control. The lesson for international capital markets is that the Russian government is willing to sustain a reputational loss and pay a high risk premium in order to capture control of energy assets. Loss of access to foreign direct investment on pre-existing terms is unimportant to a host government that accounts for 11% of world oil exports and 27% of exports of natural gas. However, the Russian state-owned monopolies lack the technical expertise to develop their resources safely in difficult, earthquake prone, Arctic regions.

Feils and Sabac (date unknown) using a capital budgeting framework, examine the impact of political risk on the foreign direct investment decision. Political risk may alter operating cash flows via discriminatory regulations as well as the investment via expropriation. They draw a reference to Rafts model (Raff, 1992) that suggests that the expropriation decision by the host country is based on asymmetric information about the profitability of the expropriation. Namely, the host country has less information than the multinational enterprise (MNE). Raff shows in the context of signalling games that if the host country thinks it is sufficiently likely that the foreign investment is costly to expropriate, a pooling equilibrium arises. In a pooling equilibrium, all parties involved will act in the same manner in all cases for which the equilibrium applies. MNEs undertake the foreign direct investment (FDI) and no expropriation occurs. However, if the country is optimistic about its ability to expropriate the MNE's foreign investment without major costs, a semi-separating equilibrium is obtained. In a semi-separating equilibrium, there are cases in which one of the parties involved in the decision may act differently in some circumstances. Expropriation occurs with some positive probability. In that case, the host country would benefit from committing itself to a policy of no expropriation and thus building a positive reputation.

Feils and Sabac indicate that empirical studies provide evidence that expropriation, as an extreme form of political risk, has a positive probability of occurring. Williams (1975) estimates that 11 percent of FDI made between 1956 and 1972 were expropriated without compensation. Kobrin (1982) reports 1705 firms were subject to forced divestitures in 79 non-European less developed countries between 1960 and 1979. West (1983) reports that of all the claims settled by the Overseas Private Investment Corporation (OPIC) from 1972 to 1982, expropriation related settlements were 29.2% in number but 87.9 % in value. Feils and Sabac argue that the benefits of expropriation to the host country are the ownership of new productive assets. Any cash flow generated from these assets will benefit residents of the host country. The costs to the host country include foregone future investments by foreign firms, loss of skilled labour supplied by the foreign investor, and loss of export markets.

Lustig and McLeod (2009) state that based on the descriptive analysis presented in Lustig (2009), leftist governments seem to have greater success in reducing poverty and inequality than governments of other political orientations. In fact, left populist governments appear to have reduced inequality faster than the social democratic left regimes. However, an analysis based on descriptive statistics does not control for other factors that may also have affected the rate of inequality and poverty reduction. For example, Argentina and Venezuela were recovering from economic crises and benefited from sharp increases in the price of oil and other commodities during the 2002-2008 years. That is to say, one cannot conclude that it was the initiatives and policies of leftist governments (particularly, populist left governments) that caused a reduction in poverty and inequality unless one can control for other factors impacting inequality during this period. They summarize their findings by stating that, these results for a panel of 17 countries with adequate data for the period 1988 to 2006 suggest political regimes do matter for inequality outcomes. However, the results for populist and social democratic regimes are quite different: even controlling for the commodity price boom, inequality fell faster under social democratic regimes in Brazil, Chile and Uruguay. However, the inequality-reducing impact of public spending in the populist regimes of Argentina and Venezuela vanishes as the coefficient becomes statistically insignificant once one controls for unobserved effects and the commodity price boom that started in 2002. Historically, Argentina

and Venezuela had lower levels of inequality than other Latin American countries, so a return to “normal” levels of inequality also helps explain part of the sharp post-2003 fall in inequality in both countries (as measured by the Gini coefficient).

Fourie (date unknown) in his article *The Restructuring of State-Owned Enterprises: South African Initiatives* indicates that South Africa has a long history of using state owned enterprises (SOEs) as instruments of socio-economic advancement. There are more than 300 SOEs involved in a wide range of activities, some of which extend across the country's borders. Their contribution to the development of the country has been significant, but has been plagued by structural and operational problems, resulting in irregular and unequal patterns of development and an uneven delivery of services and infrastructure. These problems, stemming from traditional modes of operation and out-dated management practices, coupled with a limited human resource base and quite narrowly targeted constituencies, have given rise to considerable discussion about the place and role of SOEs in the country's mixed economy and evolving system of democracy. The study by Fourie suggests that the objective of many SOE restructuring exercises is to increase the market incentives and profitability of the enterprises concerned. The impact on the broader economy of a financially feasible and viable SOE sector is generally that a government's borrowing requirement will reduce and that this will impact on interest rates, which will contribute to the overall stimulation of the economy. Another reason for expecting lower interest rates arises from a reduction in the risk premium demanded for domestic debt. In this regard, however, many South African SOEs have high levels of borrowing, which raise the overall level of the borrowing requirement in the public sector. This results directly in high interest payments that affect the profitability of SOEs and their capacity to grasp development opportunities

It is possible to make the following conclusions from the above literature review:

- There don't seem to be any evidence, both theoretically and empirically, that nationalization contributes to the economic well being of a country in the long run
- Nationalization does not contribute to operational efficiencies
- Nationalization does not necessarily improve the inequalities in an economy

- Nationalization is not unsuccessful because of ownership but rather because of management inefficiencies
- Unsuccessful nationalization programmes have significant long term costs to a country
- Ill conceived and ill motive nationalization programmes have a very high probability of failure with disastrous economic effects

SURVEY OF MINING COMPANIES

According to the Fraser Institute (2010) the Fraser Institute Annual Survey of Mining Companies was sent to approximately 3,000 exploration, development, and other mining related companies around the world. Several mining publications and associations also helped publicize the survey. The survey, conducted from September 1 to December 20 2009, represents responses from 670 of those companies. The companies participating in the survey reported exploration spending of US\$2.9 billion in 2009 and of US\$3.6 billion in 2008, according to the Institute. Thus, survey respondents represent 38 per cent of total global non ferrous exploration of US\$7.7 billion in 2009 and 27 per cent of US\$13.2 billion in 2008 as reported by the Metals Economics Group.

The survey found amongst other, the following:

- Almost twice as many mining companies (333) say they will increase exploration budgets as those who say budgets will remain the same or decrease (170)
- Miners also expect mineral prices will increase over the next two years: 64 per cent expect mineral prices will rise moderately, while nearly 20 per cent expect substantial increases
- 20 per cent or more expect price peaks for copper and gold
- Approximately 10 per cent expect new price peaks for silver, nickel, platinum, zinc, and coal;
- Only 3 per cent predict new price peaks for diamonds.

The Policy Potential Index (PPI) is a composite index that measures the overall policy attractiveness of the 72 jurisdictions in the survey. The PPI is normalized to a maximum score of 100. A jurisdiction that ranks first under the “Encourages Investment” response in every policy area would have a score of 100; one that scored last in every category would have a score of 0 (Fraser Institute).

The PPI for the SA mining industry suggests the current mining environment does not encourage investment but rather uncertainty and confusion. The PPI also indicates that the situation has deteriorated over the last year. It should be noted that the survey indicates that assuming international best practice and no regulations the mining industry in SA holds significant potential. It is also very disheartening that only Zimbabwe ranks lower than SA amongst the other African countries in the survey.

Table 13: Mining Industry Policy Potential Index

	Score~				Rank			
	2009/ 2010	2008/ 2009	2007/ 2008	2006/ 2007	2009/ 2010	2008/ 2009	2007/ 2008	2006/ 2007
Policy Potential Index^	26.2	40.4	34.6	29.0	61/72	49/71	50/68	53/65
Current Mineral potential assuming current regulations and land use restrictions#	0.39	0.45	0.31	0.16	45/72	44/71	45/68	57/65
Policy/mineral potential assuming no regulations in place and assuming industry best practices*	0.66	0.70	0.66	0.57	48/72	42/71	43/68	44/65

Source: Fraser Institute

Notes

^ The Current Mineral Potential Index is based on respondents’ answers to the question about whether or not a jurisdiction’s mineral potential under the current policy environment encourages or discourages exploration.

Shows the respondents' answers to the question about whether or not a jurisdiction's mineral potential under the current policy environment encourages or discourages exploration

* Shows the mineral potential of jurisdictions, assuming their policies are based on "best practices"

~ The figures in this table and the accompanying figure count 100% of all "encourages" answers, but only 50 per cent of the "not a deterrent" answers.

The table below gives a disaggregated view of the survey. The scale to the responses is as follows:

- 1: Encourages Investment
- 2: Not a Deterrent to investment
- 3: Mild Deterrent
- 4: Strong Deterrent
- 5: Would not pursue investment due to this factor

Table 14: Mining Industry Policy Potential Index - Disaggregated

	1	2	3	4	5
Mineral potential, assuming current regulation/land use	16%	47%	29%	8%	0%
Policy/mineral potential, assuming no land use restrictions in place and assuming industry "best practices"	46%	39%	14%	0%	1%
Uncertainty concerning the administration, interpretation, and enforcement of existing regulations	14%	22%	34%	21%	8%
Environmental regulations	10%	67%	20%	2%	1%
Regulatory duplication and inconsistencies	8%	40%	32%	18%	3%
Taxation regime (includes personal, corporate, payroll, capital, and other taxes, and complexity of tax compliance)	5%	40%	37%	13%	4%
Uncertainty concerning native/aboriginal land claims	6%	24%	36%	29%	6%

Uncertainty over which areas will be protected as wilderness or parks	6%	63%	31%	1%	0%
Quality of infrastructure	9%	51%	27%	13%	0%
Socio economic agreements/community development conditions (includes local purchasing, processing requirements, or supplying social infrastructure such as schools or hospitals, etc.)	3%	32%	38%	24%	3%
Political stability	4%	30%	43%	18%	4%
Labour regulations/employment agreements	3%	20%	54%	20%	4%
Quality of geological database (includes quality and scale of maps, ease of access to information, etc.)	21%	54%	17%	6%	1%
Security situation (includes physical security due to the threat of attack by terrorists, criminals, guerrilla groups, etc.)	4%	17%	55%	17%	7%
Availability of labour and skills	11%	58%	25%	7%	0%
		Most favourable	Least favourable	Difference	
Number of respondents indicating a jurisdiction has the most/least favourable policies towards mining		21	9	12	

Source: Fraser Institute

The survey seems to highlight the following:

- The SA mining industry has significant potential
- The current policy environment creates significant uncertainty
- The uncertainty is discouraging investment into the industry
- It is especially the current regulations, land claims, socio-economic agreements, political stability, labour regulations and the security situation that are discouraging investment

SELECTED NATIONALIZATION CASE STUDIES

Copper Mining in Zambia

Copper mineralization was first discovered at the turn of the century but large scale production only commenced in the 1930's with the start-up of Roan Antelope (Luanshya - 1931), followed rapidly by Nkana (1932), Mufulira (1933) and then Nchanga in 1939. Copper production exceeded 400,000t.pa in the late 1950's. In 1964, when Zambia became independent from Britain, it was one of the richest countries in sub-Saharan Africa. It had good farmland and a lot of natural resources i.e., copper. 66% of Zambia's income from exports came from copper mining. Peak production of copper occurred in 1969, when 720 000 tons of copper was produced, making Zambia the world's 4th largest copper producer (MBendi, <http://www.mbendi.com/indy/ming/cpnr/af/za/p0005.htm>).

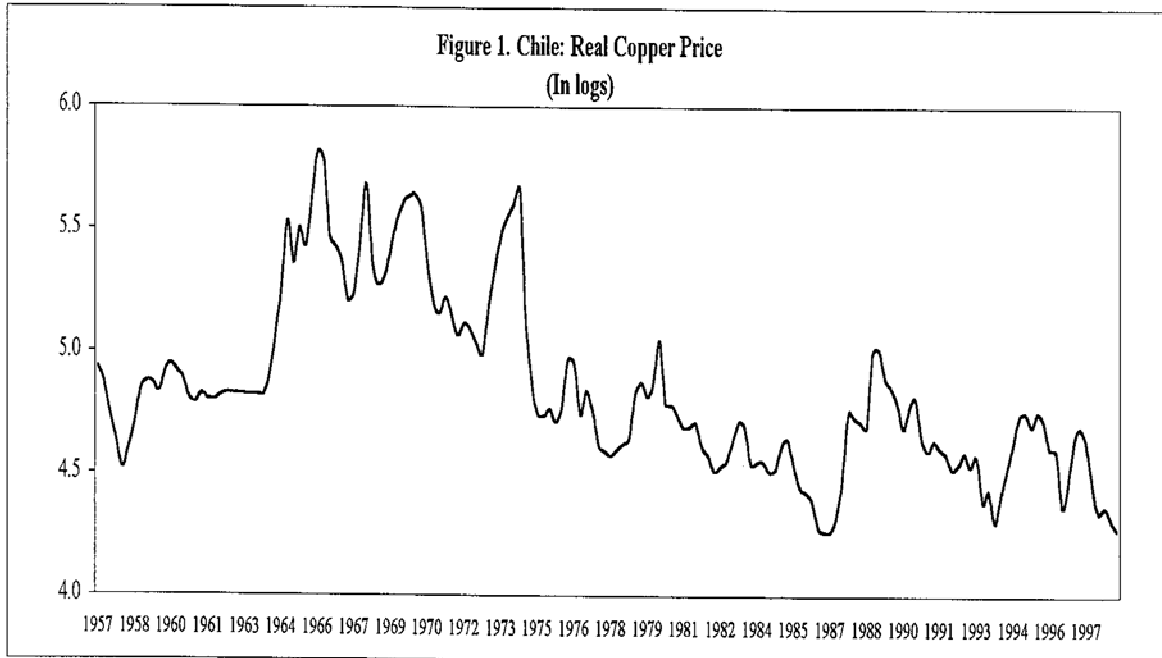
A major switch in the structure of Zambia's economy came with the Mulungushi Reforms of April 1968: the government declared its intention to acquire equity holdings (usually 51% or more) in a number of key foreign-owned firms, to be controlled by a parastatal conglomerate. The company, Zambia Consolidated Copper Mines Ltd (ZCCM), was formed by a gradual process of nationalization and corporate concatenation which began in January 1970. ZCCM was a principal operator of copper mines in Zambia. The government of Zambia owned over 85% of the company's stock.

Since reaching a peak of 700,00t.pa in 1969-1976, production began a progressive decline, sinking to a 1995 low of 307,000t.p.a. The decline in production since the mid 70's can be contributed to low copper prices and lack of investment (MBendi, <http://www.mbendi.com/indy/ming/cpnr/af/za/p0005.htm>). Production declined further reaching a new low of 260,000t.p.a. in 1999.

Graph 13 shows the evolution of the (log) real price of copper in the last 40 years. Copper prices show a negative trend that started in the mid-1960's and lasted until the mid 1980's. Graph 14 shows that prices stayed fairly flat during the 1980's and 1990's where after prices increased robustly since 2003. Graph 15 shows a continuous increase in demand for copper since 1900. Graph 16 shows a similar

trend by marginally lower levels. There are definite periods where either supply exceeded demand or visa versa. These periods are also evident in graph 17.

Graph 13: Copper Prices 1957 to 1997



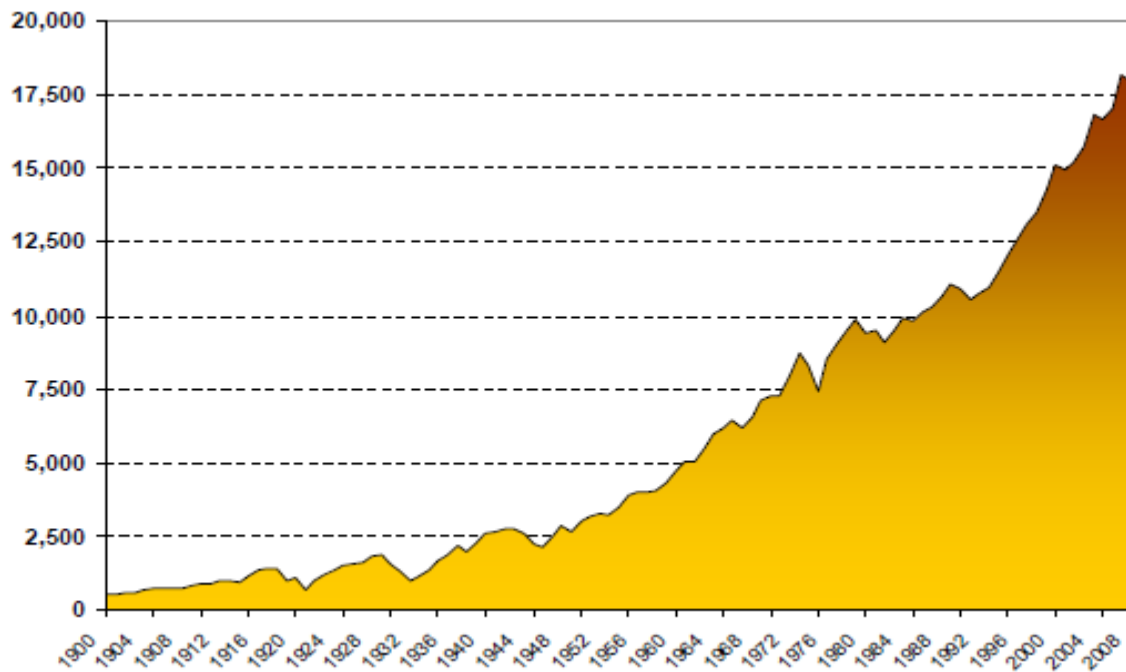
Source: IMF

Graph 14: Copper Prices 1998 to 2010



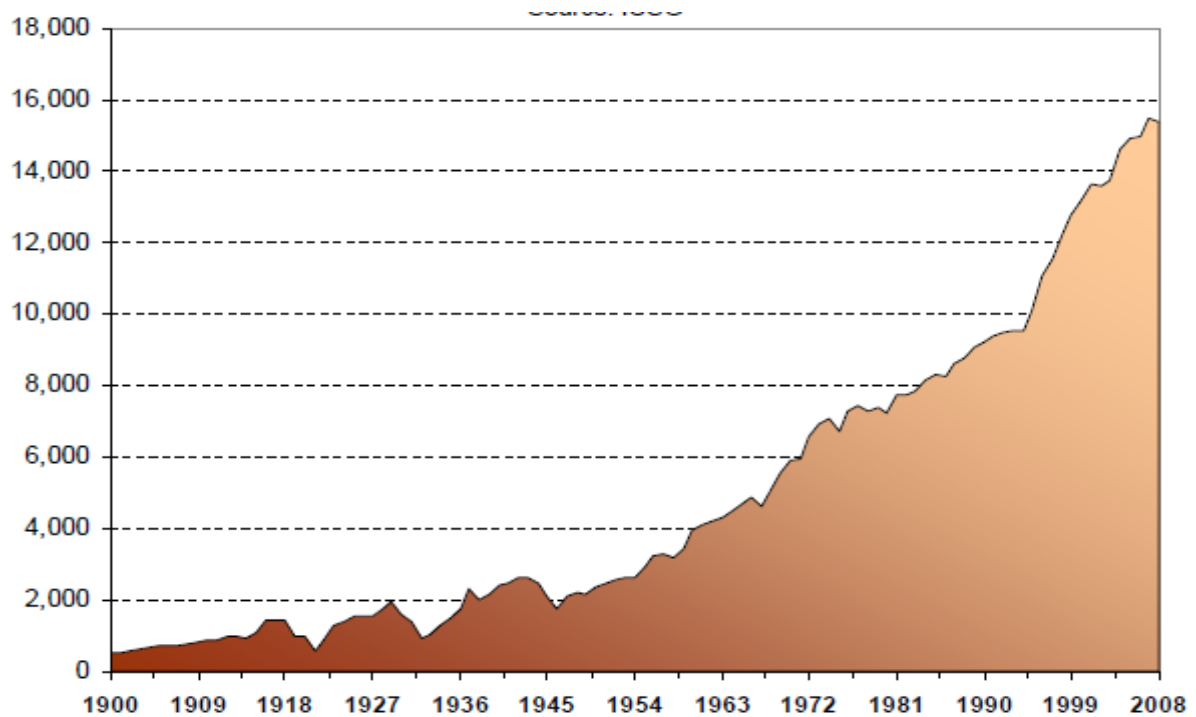
Source: Londen Metal Exchange

Graph 15: World Copper Usage, 1900-2008 Thousand metric tonnes



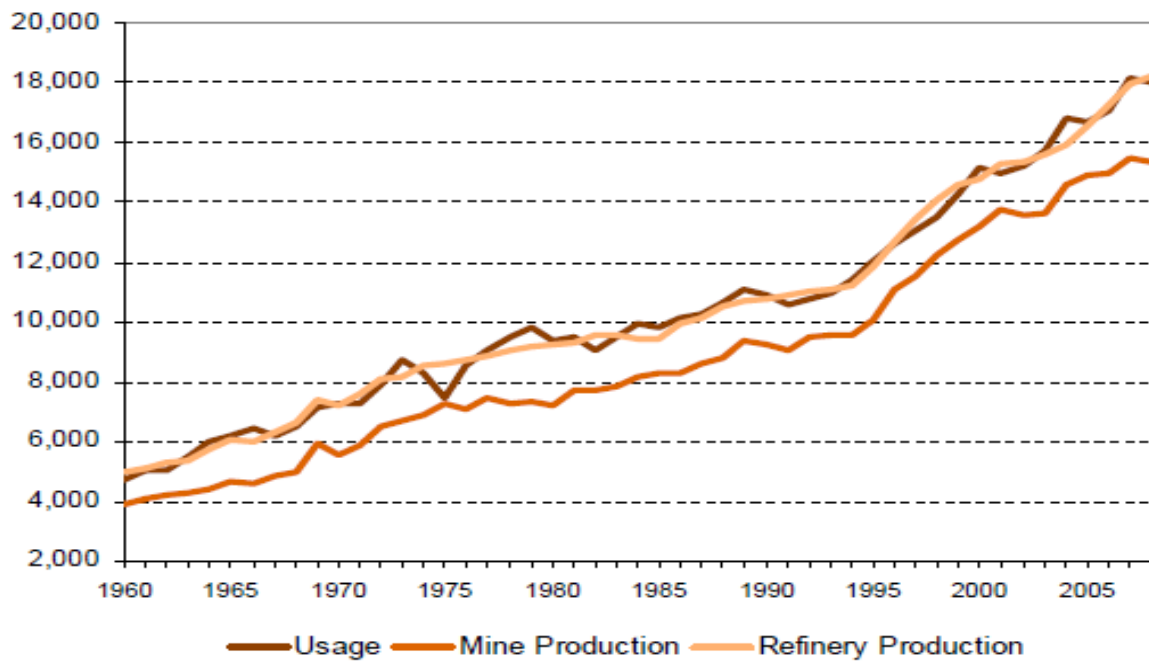
Source: ICSG

Graph 16: Copper Mine Production, 1900-2008 Thousand metric tonnes



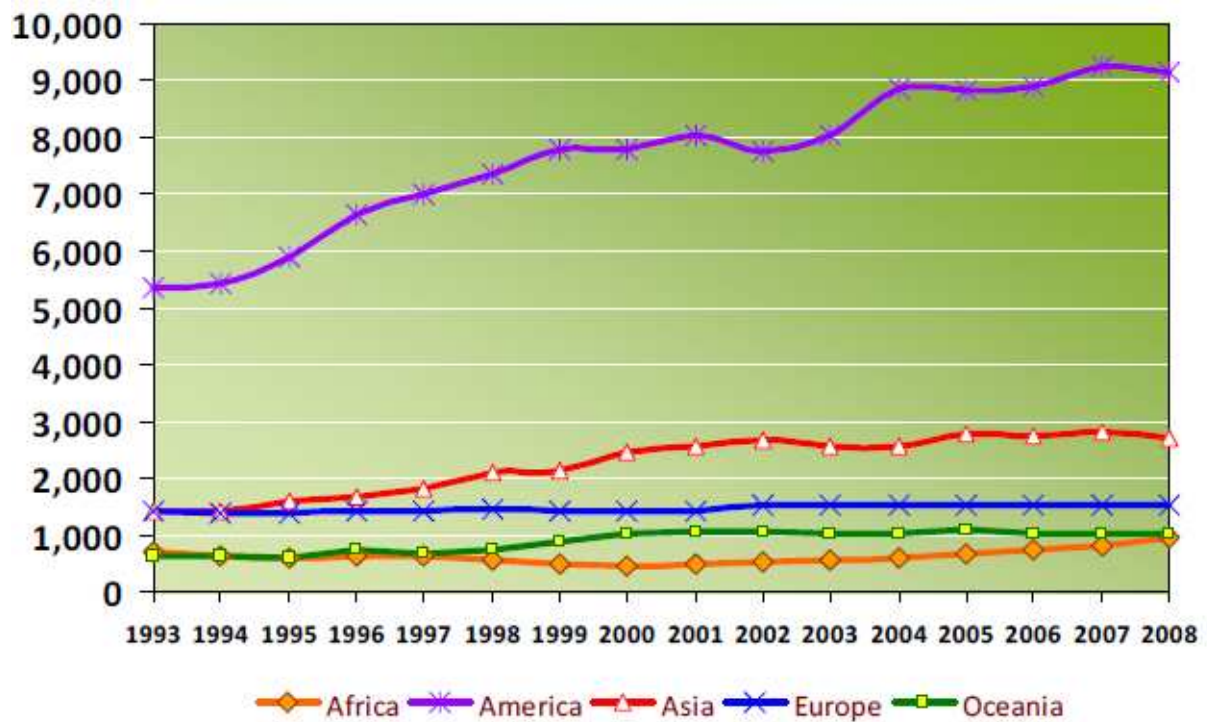
Source: ICSG

Graph 17: World Copper Production and Consumption, 1960-2008 Thousand metric tons



Source: ICSG

Graph 18: Copper Production by Region - 1993-2008 Thousand metric tons



Source: ICSG

One of the most significant consequences of the losses in the copper mining industry in Zambia was that the government had to borrow a great deal of money from other countries to finance the financial losses in the hope the price of copper would rise again and Zambia would be able to repay its debts. However, the price of copper stayed low and Zambia's debts have grown larger and larger. In 1980, Zambia's external debt was \$3.2 billion; in 1992 the debt had risen to \$7.2 billion. Zambia at present has one of the largest external debts in the world. The collapse of the copper industry in Zambia had significant negative consequences for its economy in that hundreds of thousands of people lost their jobs, etc. Zambia is currently the world's 11th largest copper producer (Nation Master <http://www.nationmaster.com/country/za-zambia/eco-economy>).

Graphs 16, 17 and 18 seem to suggest that the downturn in the Zambian copper mining industry cannot just be attributed to the collapse of the copper price since world production of copper continued to increase over the period. Thus Zambia lost significant market share not solely because of the price declines but rather because of the lack of investment by the government in the industry. The government simply could not provide the needed investment in the copper mines because of its deteriorating fiscal position. Daniel (1979), states that almost 50 per cent of government revenue came directly from the copper industry until 1970.

Between 1997 and late 1999, the Zambian Privatization Agency (ZPA) had been successful in privatizing most of its state-owned mining assets. It is hoped that the privatization of Zambia Consolidated Copper Mines (ZCCM) will activate the remaining industry and halt the decline in mining output. With a total mineral resource of at least two billion tonnes on the Copper belt alone, there is no doubt that copper and cobalt production will soon begin a significant upward trend (Zambia Ministry of Mines and Minerals Development). The privatization of many state-owned companies and especially the copper mining industry, formally managed under the parastatal umbrella of Zambia Consolidated Copper Mines Ltd (ZCCM), is a clear demonstration of the Government's intent. Enactment of this policy is being promoted by the Ministry of Mines and Minerals Development

Key objectives of the government's Mining Policy include amongst others:

- To make the private sector the principle producer and exporter of mineral products through putting in place a private sector initiative in the development of new mines in order to increase and diversify mineral and mineral based products and exports. This will maximize long term economic benefits to the country.

Privatization of government-owned copper mines in the 1990s relieved the government from covering mammoth losses generated by the industry and greatly improved the chances for copper mining to return to profitability and spur economic growth. Copper output has increased steadily since 2004, due to higher copper prices and foreign investment reaching just below 700,000 tonnes in 2009 compared to about 600,000 tonnes in 2008. Zambia also plans to up copper production to 1,000,000 in the next 4 years as investment in the mining and copper industry, spurred by good policies, flourishishes. Mr Maxwell Mwale, Mines and Minerals Minister of Zambia, noted that the investment policies have managed to lure reputable global leading mining companies to the Southern African nation, Africa's largest copper producer. He said that this has raised our hopes of developing the industry because we have been getting favourable support from the international community.

A noticeable difference has been the fact that the departure of the western investors saw Chinese investors taking up the abandoned positions.

Venezuela's Oil Industry

Venezuela remains highly dependent on oil revenues, which account for roughly 90% of export earnings, more than 50% of the federal budget revenues, and around 30% of GDP (Nation Master, <http://www.nationmaster.com/red/country/ve-venezuela/economy&all=1>). The Council of Foreign Relations indicates that oil generates about 80 percent of the country's total export revenue, contributes about half of the central government's income, and is responsible for about one-third of the country's gross domestic product (GDP) (http://www.cfr.org/publication/12089/venezuelas_oilbased_economy.html).

In 2005 Venezuela's President Chavez declared that "We are recovering property and management in these strategic areas. The privatization of oil is over in Venezuela. This was the last area that we hadn't recovered. This is the true nationalization of the oil. The oil belongs to all Venezuelans." Venezuela's oil industry had been under private control until 1974, when Venezuela nationalized it. In the 1990's, though, PDVSA engaged in a so-called "oil opening," where it allowed more and more private companies to extract oil, via majority shares in joint ventures and the operating agreements. The Chavez government says it wants to nationalize these industries because they are "strategic" for the country's development and that leaving these to foreign investors alone is not sufficient to assure the country's economic growth (Venezuelanalysis.com, <http://venezuelanalysis.com/news/2245>)

Opinion is divided over the effect of Chavez's policies on Venezuela's economy. Some economists say the tremendous rise in social spending under Chavez has greatly reduced poverty and pushed unemployment below 10 percent, its lowest level in more than a decade. According to a February 2008 report from the Washington-based Centre for Economic and Policy Research, not only has unemployment dropped, formal employment has increased significantly since Chavez took office. But other economists express concerns about the country's high inflation levels. The IMF has forecast inflation of 25.7 percent in 2008 and 31.0 percent in 2009—among the highest rates for any country in the world—and according to news reports, the country is already experiencing food shortages of goods such as sugar and milk. Francisco Rodriguez, former chief economist of the Venezuelan National Assembly, writes in a 2008 *Foreign Affairs* article that income inequality has increased during Chavez's tenure, and further, Chavez's social programs have not had a significant impact on infant mortality rate or literacy rates among Venezuelans (Council of Foreign Relations http://www.cfr.org/publication/12089/venezuelas_oilbased_economy.html)

There are new signs that all isn't rosy at PDVSA. In 2008, Venezuela's energy ministry released unaudited results documenting a 35 percent fall in profits by PDVSA the previous year. A few months later, audited figures were released that indicated profits increased 15 percent in 2007. The International Energy Agency,

however, shows a \$7.9 billion loss in 2007. Oil prices, which were extraordinarily high through much of 2008, helped mask some of the company's financial woes. Since they began to drop dramatically PDVSA has struggled to keep up with its financial obligations, especially once it lost a \$5 billion line of credit (CNBC) with the Royal Bank of Scotland in October 2008. The company had about \$7.9 billion in unsettled accounts (*Latin Business Chronicle*) between January and September 2008, up from \$5.7 billion during all of 2007, but analysts say so far the company is unlikely to default on its creditors. However, the company may need to make serious cutbacks or possibly even sell assets, analysts say (Council of Foreign Relations http://www.cfr.org/publication/12089/venezuelas_oilbased_economy.html)

According to James (2010) there are a number of glaring examples of the problems and delays that regularly plague Venezuela's government-run operations. In a review of 15 state-run companies, economist Richard Obuchi found that all "were producing well below goals or production capacity." The vast majority — some of which were nationalized by Chavez — now rely on government subsidies, said Obuchi, a professor at the Institute of Higher Administration Studies, or IESA, in Caracas. One of the expropriated companies, industrial valve maker Industria Venezolana Endogena de Valvulas SA, or INVEVAL, has been limited to refurbishing old oil industry and water valves for years — instead of producing them as it once did. Port workers in Puerto Cabello, where much of the rotten food was found, say six of the port's eight cranes are out of order and the pace of importing cargo has slowed since the government took over management last year. The country's food imports have grown as the government has seized farmland, and periodic shortages of foods such as milk, beef and sugar have emerged in recent years. People at a state-supported farming commune on the outskirts of Caracas say they have been waiting for a new well to water crops for more than a year since the first one went dry (The Associated Press, http://www.msnbc.msn.com/id/38302236/ns/world_news-venezuela/).

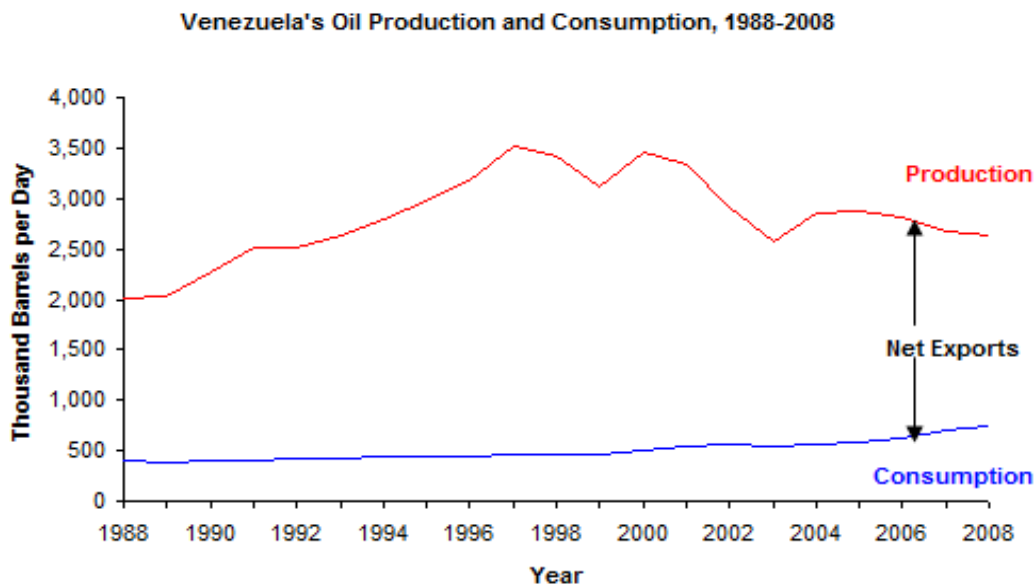
While production has declined, the public sector has swelled from about 1.4 million workers in 1999 to about 2.4 million in 2010, according to government figures. "They don't have the capacity to manage any company," said Rafael Davila Guaricuco, a 34-year-old port crane operator. "They're destroying everything." (The Associated Press, http://www.msnbc.msn.com/id/38302236/ns/world_news-venezuela/).

Graph 19 shows that oil production in Venezuela increased from just over 2 million barrels per day in 1988 to almost 3.5 million barrels a day during the 1997 to 2000 period, a period of the so called "oil opening". However oil producing decreased steadily since 2001 achieving oil production of about 2.5 million barrels per day (bbl/d) in 2008. During this period, crude oil production in the country has fallen, while domestic consumption has risen, causing a decline in net oil exports.

EIA estimates that Venezuela's crude oil production (excluding other oil liquids) averaged 2.2 million bbl/d in 2009 about 190,000 bbl/d lower than 2008 levels. Numerous causes were responsible for the lower level of production, including natural decline at older fields, maintenance at some of the strategic associations, and compliance with production cuts announced by OPEC. As of January 2010, Venezuela's OPEC production target was 1.99 million bbl/d of crude oil (EIA, <http://www.eia.doe.gov/cabs/venezuela/oil.html>). McDermott (2008) argues that after a decade (from 1998) of rising corruption and inefficiency, daily output has now fallen substantially, according to OPEC figures. McDermott states that about half of this oil is now delivered at a discount to Mr Chavez's friends around Latin America. The 18 nations in his "Petrocaribe" club, founded in 2005, pay Venezuela only 30 per cent of the market price within 90 days, with the rest in instalments spread over 25 years. Meanwhile, Mr Chavez has given PDVSA countless new tasks. "The new PDVSA is central to the social battle for the advance of our country," said Rafael Ramirez, the company's president and the minister for petroleum. "We have worked to convert PDVSA into a key element for the social battle" (Telegraph, <http://www.telegraph.co.uk/news/worldnews/southamerica/venezuela/3183417/Venezuelas-oil-output-slumps-under-Hugo-Chavez.html>).

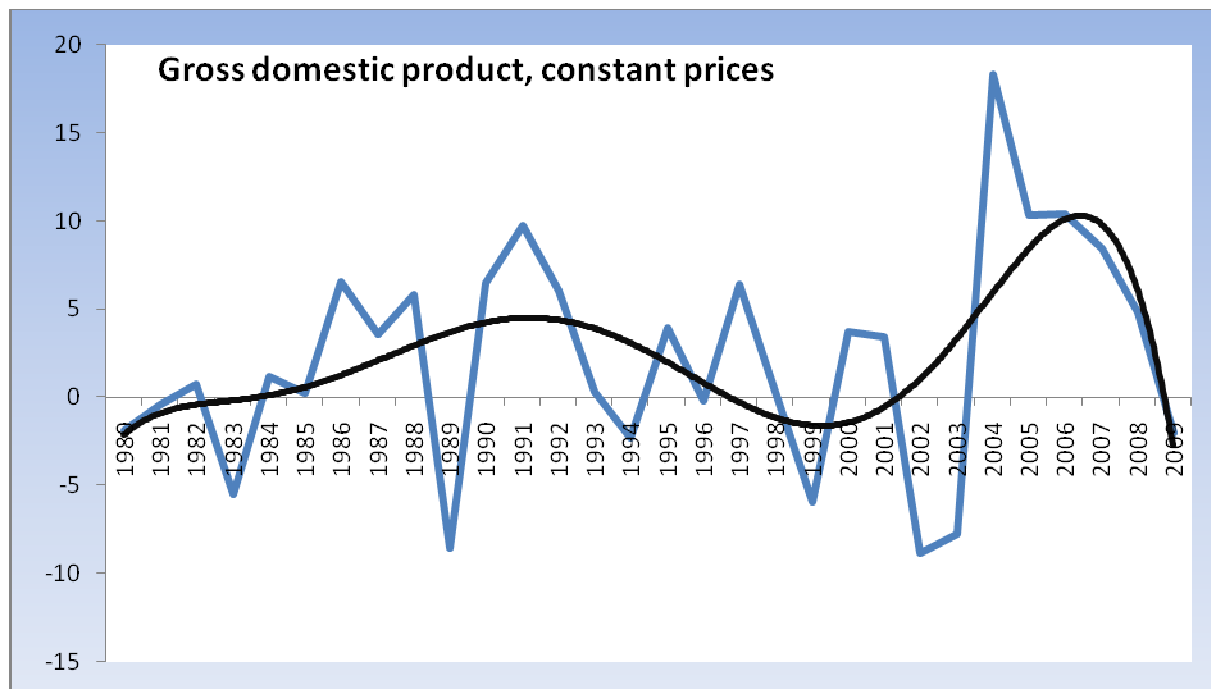
"The outlook for increases in the future is starting to go up in smoke and we see a petroleum industry in contraction," said Luis Giusti, the former president of Petroleos de Venezuela (PDVSA), in an interview earlier this month with Venezuela's Union Radio. "The day the prices change, the situation is going to be evident once and for all," he said (Christian Science Monitor, <http://www.csmonitor.com/2006/0531/p04s01-woam.html/%28page%29/2>).

Graph 19: Venezuela's Oil Production and Consumption



Source: EIA *International Energy Statistics*

Graph 20: Venezuela's Economic Growth Rate



Source: Trade Economics

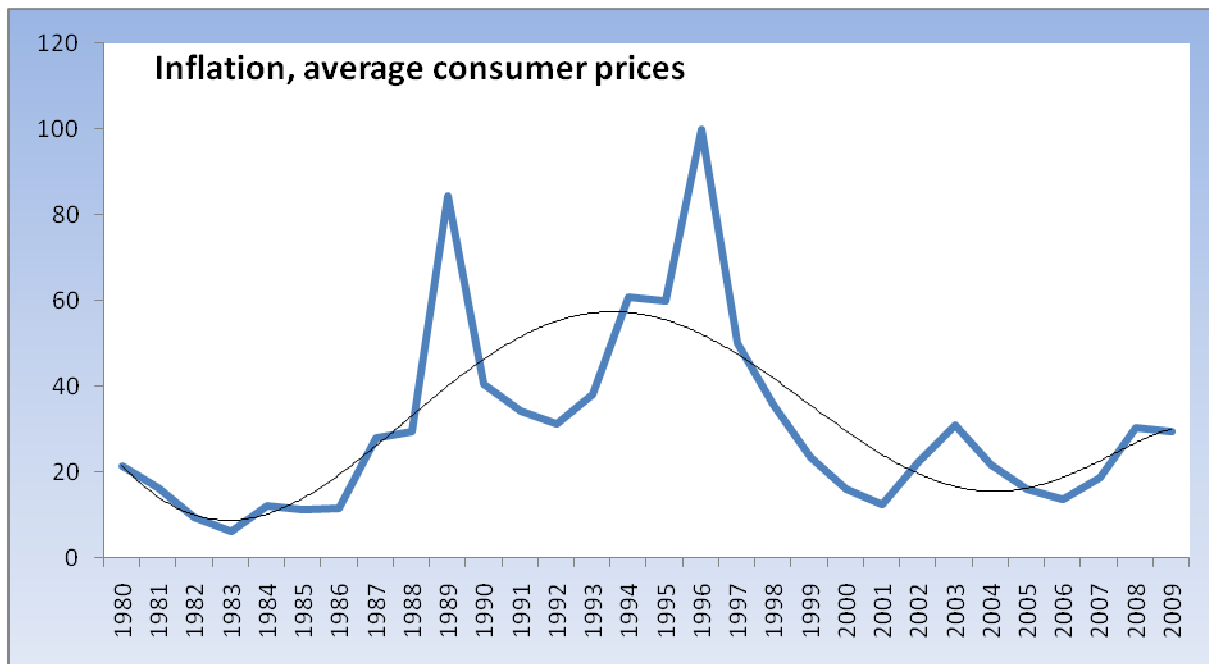
The above and below graphs (graphs 20 to 23) show the performance of the Venezuela economy since 1980. The economy experienced fairly robust growth during the latter years and early years of the 1980's and 1990's. However the

economy slowed down significantly from 1996 to 2003. The economy recorded a massive 18% growth rate during 2004, but has slowed down significant thereafter. The national economy recorded a negative growth rate of about 2 per cent during 2009 and is estimated to record a negative growth rate of about 3.5 per cent during 2010. The recession is primarily driven down by export receipts and domestic private demand

One of the primary weaknesses or limitations of the national economy is the very high consumer price increases and associated interest rates (graph 21). It is argued that the shortages of food for example and high social expenditures are to blame for the high inflation rate. The high inflation rate is also a consequence of the devaluing of the national currency because of the deteriorating balance of payments (graph 22).

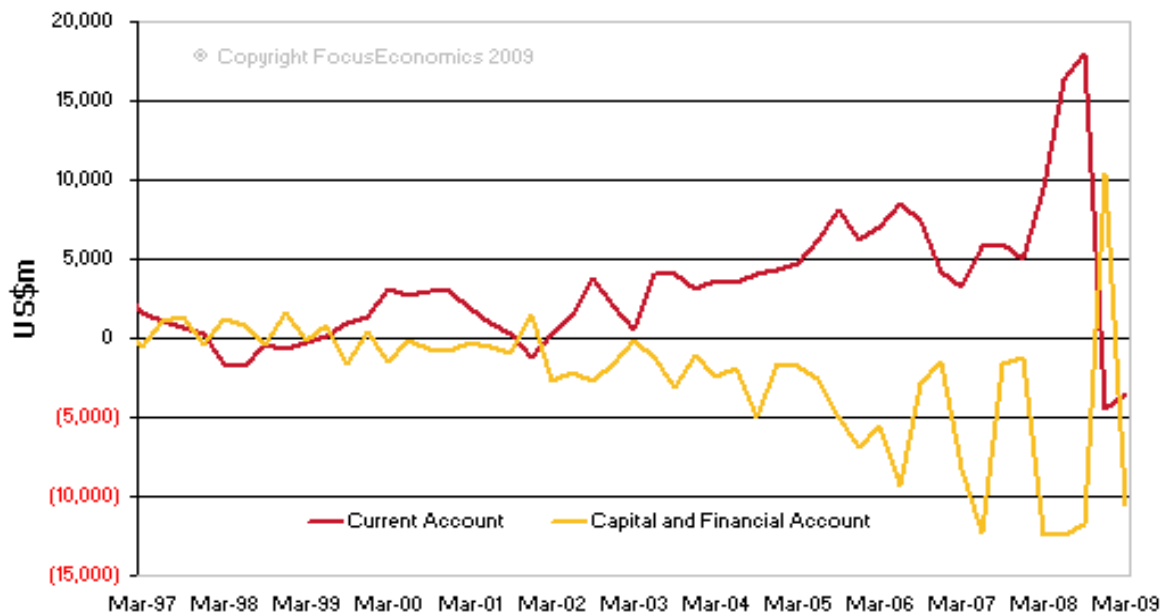
Graph 23 shows that unemployment increased from a low of 6.67 per cent in 1993 to a high of 18 per cent in 2004. Unemployment decreased significantly thereafter reaching a low of 7.4 per cent in 2009. Unemployment is at present on the rise because of the economic recession and fiscal limitations.

Graph 21: Venezuela’s Inflation Rate



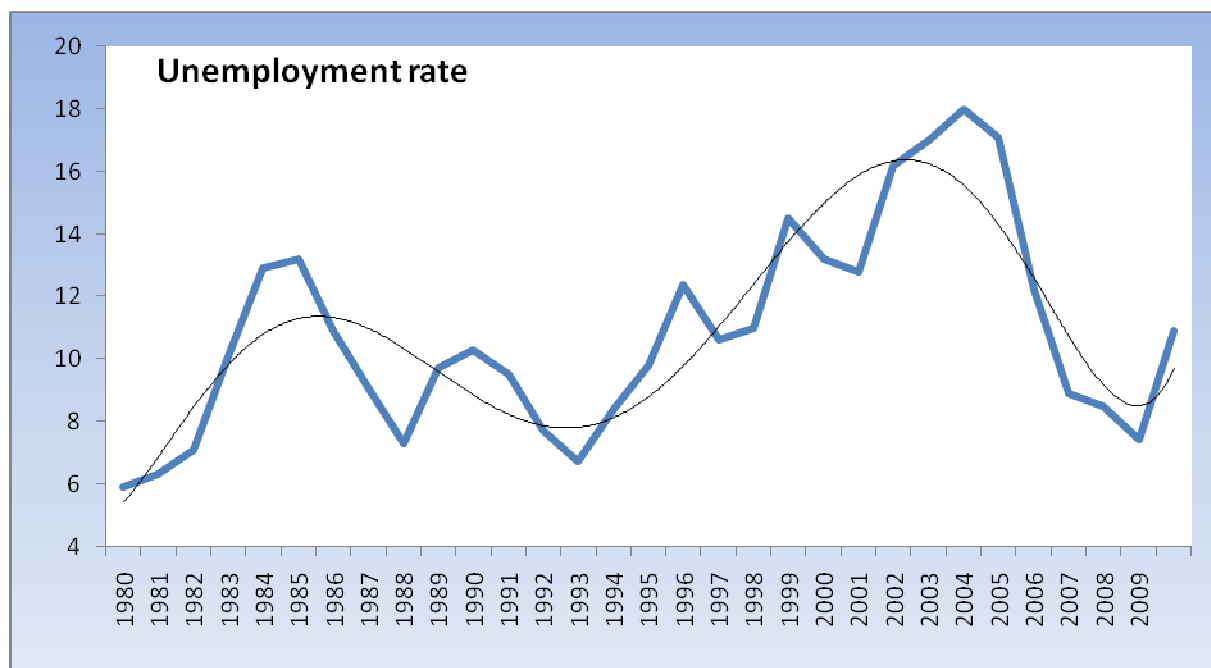
Source: Trade Economics

Graph 22: Venezuela's Balance of Payments



Source: LatinFocus

Graph 23: Venezuela's Unemployment Rate



Source: World Bank

From a social point of view there seems to some evidence that poverty and inequality have decreased over the last couple of years. The Poverty gap coefficient

for example decreased from 22.73 per cent in 1999 to 10.14 per cent in 2007. The percentage of poor persons decreased from 49.4 per cent in 1999 to 27.6 per cent in 2007 and the Gini Coefficient improved from 0.498 in 1999 to 0.412 in 2007. The growth rate of GDP per person increased from -6 per cent in 1999 to 2.6 per cent in 2007. It is not sure if this is at nominal or real rates, unfortunately. The primary reason for the social improvement is the fact that government current expenditure increased from 21.86 per cent of GDP in 1999 to 25.85 per cent in 2007. However the overall fiscal balance has started deteriorating since 2003 moving from a surplus of 1.68 per cent of GDP to a deficit of 1.19 per cent of GDP (Economic Commission for Latin America and the Caribbean, 2010).

Neumann (2009) on the other hand states that the celebration of Latin American socialism is misguided. She states that none of Chávez's health and human development indicators are beyond that which is normal in the midst of the sort of oil boom which Venezuela recently enjoyed. And the average share of the budget devoted to health, education and housing under Chávez (25%) is identical to that in the last eight years before his election, and even lower than under Carlos Andrés Pérez, the "neoliberal" president against whom Chávez attempted a coup in 1992. Chávez has crippled the economy, squandering the proceeds of the largest oil boom since the 1970s. And oil production itself has been steadily declining since 2004, when Chávez consolidated his control over PDVSA, an oil company owned by the state (not the elites) since 1976.

Diamonds in Botswana

The Botswana Gazette (http://www.gazettebw.com/index.php?option=com_content&view=article&id=5396:bifm-and-botswana-history-synonymous-&catid=13:business&Itemid=2) states that after gaining independence in September 1966, Botswana was one of the poorest countries in the world. With the discovery of diamonds however, it was an advent of a new era of economic emancipation. However it is not just the discovery and subsequent mining of diamonds that brought prosperity to Botswana. Four decades of uninterrupted civilian leadership, progressive social policies, and significant capital investment have created one of the most dynamic economies in Africa.

Parsons (1999) argues that the strategy of national development has been based on the opening up of mining by private multinational capital, with government equity participation to increase state revenues, and on the encouragement of local private enterprise through livestock exports and the licensing of smaller scale commerce and manufacturing. The result has been an economy that grew thirty-fold between the 1960s and the 1980s, with a gross domestic product estimate to have grown from less than \$80 per capita to more than \$1,000 per capita in that period.

Acemoglu,, et al (2002) in their paper “An African Success Story: Botswana” indicates that Botswana has had the highest rate of per capita growth of any country in the world in the last 35 years. This occurred despite adverse initial conditions, including minimal investment during the colonial period and high inequality. Botswana achieved this rapid development by following orthodox economic policies. How Botswana sustained these policies is a puzzle because typically in Africa, ‘good economics’ has proved not to be politically feasible, according to the paper. The authors suggest that good policies were chosen in Botswana because good institutions, which they refer to as institutions of private property, were in place. The authors also conjecture that the following factors were important. First, Botswana possessed relatively inclusive pre-colonial institutions, placing constraints on political elites. Second, the effect of British colonialism on Botswana was minimal, and did not destroy these institutions. Third, following independence, maintaining and strengthening institutions of private property were in the economic interests of the elite. Fourth, Botswana is very rich in diamonds, which created enough rents that no group wanted to challenge the status quo at the expense of ‘rocking the boat’.

The Encyclopaedia of Nations (<http://www.nationsencyclopedia.com/Africa/Botswana-ECONOMY.html>) states that Botswana is regarded by most economists as one of Africa's major success stories. The country's economy was dependent almost entirely on livestock production until the 1970s, when it became an important exporter of diamonds and other minerals. Then, the Botswana Development Corporation, adopting a conservative investment policy, actively sought foreign capital for investments in crop agriculture, tourism, and secondary industries. The rapid growth in diamond production helped Botswana achieve average high economic growth from independence through the early 2000s. The diamond

industry developed in 1971 in cooperation with De Beers Consolidated Mines. Botswana is the world's largest producer of gem diamonds in value terms. It is also the world's most diamond-dependent economy

Debswana Diamond Company Ltd was, it seem, a key partner and factor in the economic development of Botswana. Debswana is the world's leading producer of diamonds by value. Debswana is a joint venture between the government of Botswana and the South African diamond company De Beers; each party owns 50 percent of the company. The following is quoted directly from the DeBeers website:

“The search of diamonds in Botswana began in the Tuli Block in 1955. Three small alluvial diamonds were found along the Motloutse river. In 1967, between the village of Letlhakane and Mopipi Pan, a team of De Beers Geologists found abundant quantities of elmenite and garnet – the two chief indicators of diamondiferous kimberlite. In April 1967, the pipe at Orapa was found. This was to be the largest (117 hectares) of all the kimberlite pipes which were eventually located in this area. Because of the size of the pipe and the variable grade, sampling and evaluation took two years. But the results were exciting. The Orapa pipe showed considerable potential and the development of the mine was affirmed by the shareholders. Meanwhile, in 1968, two smaller pipes were discovered some 40 kilometres south-east of Orapa, near Letlhakane village. In 1969 De Beers geologists began prospecting in the southern district of Botswana. The rock formations in the southern district are generally covered by a layer of sand 20 - 50 metres thick. Prospecting operations using systematic solid sampling techniques covered the area... In May 1978 De Beers Consolidated Mines Ltd and the Government of Botswana signed an agreement to establish Jwaneng Mine. Debswana is a company in which the Botswana Government and the De Beers Consolidated Mines Ltd each hold a 50% share... In August 1996, representatives of Botswana Government, De Beers Centenary AG and Debswana Diamond Company signed an agreement to double production at the Orapa Mine. The expansion increased Orapa Mine’s annual production of 6 million carats to 12 million carats...”

The following is quoted directly from MBendi Information Services (<http://www.mbendi.com/indy/ming/af/bo/p0005.htm>) as cross referenced with Botswana

Mineral Investment Promotion document as published by the Ministry of Minerals, Energy and Water Resources (<http://www.mines.gov.bw/Botswana%20Mineral%20Investment%20Promotion.pdf>).

“Because the Government’s partnership with De Beers in the diamond industry has proved so mutually beneficial, it has approached the perceived need to update existing mineral legislation pragmatically. The Mines and Minerals Act of 1977 has been revised to incorporate changes designed to facilitate the issuing of exploration and mining licences and to make Government participation in new developments more attractive to investors. The new Mines and Minerals Act was passed in July 1999.

The key feature of the revised licensing regime is that the whole process from prospecting to mining will be automatic and predictable, removing some of the uncertainty and stages of negotiation which previously existed. Concession types which had become irrelevant to the industry (such as the non-exclusive reconnaissance permit, and the restricted prospecting and mining leases) have been done away with. The main innovation is the introduction of the retention licence, designed to accommodate explorers who, on making a discovery, may find it cannot immediately be mined economically.

Previously, prospective mining investors would have lost their entitlement if not able to bring a resource into production, but will now be able to defer development for two successive three-year periods. In the first, their rights will remain exclusive subject to confirmation that viable development remains impracticable, while in the second, with an escalating licence fee, limited rights of access to third parties to reassess the prospect will be allowed.

While the Government will retain the right to acquire a minority interest in new mines, this will now generally be up to a maximum of 15%, and will be on commercial terms with the Government paying its pro-rata share of costs incurred. Taxation of mining companies outside the diamond industry has also been revised with a new variable rate income tax replacing project-specific rates. The new rate will normally be 25%,

increasing on a sliding scale for very profitable projects up to a theoretical maximum of 50%, determined annually by reference to the mining company's profit ratio.

Procedures for small-scale mining are also being simplified and some royalty rates will be reduced. For diamonds, the new act will apply only as far as the discovery stage, and thereafter the process of individual negotiations will remain applicable to the development of new mines. Royalty rates, calculated as a percentage of the gross market value of the mineral, are currently 10% for precious stones (including diamonds), 5% for radioactive minerals, precious metals, semi-precious stones and coal, 3% for all other minerals, including building and industrial mineral products.

Botswana's general mining policy aims at maximising the national economic benefit from development of mineral resources. This is to be achieved through:

- Encouraging prospecting and new mine development.
- Negotiating mining agreements which maximise the net national economic benefits resulting from mine operations.
- Generating linkages with the rest of the economy and increasing local value added.
- Creating employment and training opportunities for Botswana.
- All the mineral rights are vested in the Republic. The Mines and Minerals Act regulates mining activities in Botswana.”

The success of Botswana and its mining industry seems to be associated with private ownership and investment. Nationalization or the desire to own or manage mines has never been part of the Botswana policy or strategy. However, active equity participation by the government is the norm and important from a government revenue point of view. The participation of government is however done in such a manner that it does not discourage private sector ownership and investment.

State-Owned Diamond Miner Alexkor

Alexkor, according to their company website, was established in 1989, when the State alluvial diggings was taken over from the Government and transformed into the Alexander Bay Development Corporation. Since November 1992 Alexkor Limited

has been run as a public company with the state as sole shareholder. While Alexkor, as a commercialized state asset, is not perceived as a strategic asset in the national sense, it has significant strategic importance for the Namaqualand region (Alexkor http://www.alexkor.co.za/AboutUs_history.asp).

The core business of Alexkor is the mining of diamonds on land, along rivers, on beaches and in the sea along the north-west coast of South Africa. These activities are complemented by geology, exploration, ore reserve planning, rehabilitation and environmental management. The non-core business activities comprises of residential services, community services, outside engineering services, external transport services, guest houses, fuel station and an airport (Alexkor http://www.alexkor.co.za/AboutUs_history.asp).

The management of considerable investment funds, together with the traditional supporting services (information system, human resources, etc.), constitutes additional non-core business activities. Alexkor's distinctive competencies are its quality of diamonds and its unique land and mineral resources. Over the life of the mine approximately 10,000,000 cts of gemstone quality diamonds have been recovered (Alexkor http://www.alexkor.co.za/AboutUs_history.asp).

Alexkor is South African's only state owned mining company. It is operated as a State Owned Company. Alexkor is not a nationalized company since it has never been a privately owned company. The following tables, (table 15 to table 18) display the financial performance of the company over the 2001 to 2009 period. The data is obtained from the various yearly annual reports as per published on the company website. Unfortunately there are some problems (different values for the same year) with some of the data because of yearly revisions and changes in reporting structures.

Table 15: Alexkor Balance Sheet

	Fix Assets	Cash on Hand	Accumulated Profits or Loss	Creditors
2000	51,740,462	53,664,048	-11,528,742	26,782,274
2001	44,931,912	48,446,131	-53,495,973	63,796,215
2002	45,375,410	26,763,110	-51,726,320	22,086,020

2003	46,601,598	67,377,913	-45,457,766	22,789,778
2004	64,102,068	71,418,969	-9,723,783	23,205,317
2005	470,762,166	51,549,895	-14,500,446	19 680 309
2006	473,812,613	35,579,749	-234,699,484	13,344,283
2007	223,579,627	78,010,434	-253,793,676	82,615,072
2008	45,159,915	177 646 999	-258,559,885	133,290,237
2009	47,898,919	276 856 274	-324,268,246	248,415,221

The Balance Sheet indicates that the value of fixed assets decreased steadily over the period. The increase in the 2005, 2006 and 2007 periods were because of the revaluation of the fixed assets. The increase in cash on hand was primary because of the provisions for litigation matters, government funded projects and for environmental rehabilitation. Significantly the accumulated loss at the end of 2009 stood at about R324 million. Also very significantly the value of trade and other payables increased rapidly from R26.8 million in 2000 to R248 million in 2009.

Table 16: Alexkor Income Statement

	Revenue	Operating Expenses	Contract of Profit Sharing	Salaries and Wages
2000	219,881,209	256,711,159	52,796,684	83,483,252
2001	269,278,188	301,017,013	104,832,669	63,378,714
2002	287,905,645	271,950,758	110,914,185	61,021,826
2003	292,241,936	233,399,274	100,288,537	54,168,307
2004	264,732,732	238,461,182	100,426,681	50,908,025
2005	152,412,821	151,781,046		48,788,087
2006	154,758,244	227,263,396		46,164,725
2007	109,302,291	209,209,878		47,905,679
2008	139,824,507	174,155,316	77,817,315	40,584,215
2009	127,517,726	166,463,412	75,348,850	32,353,873

Company revenue decreased from R220 million in 2000 to R127 million in 2009. Some of the reasons for the deteriorating state of affairs include:

- Manager-walkout
- Lack of investment
- Increase in non-core expenses
- Decrease in output

- Price volatility of diamonds

Table 17 indicates the yearly profits or losses over the period. It is evident that the company suffered some major losses. The company's contribution to the government revenue and cash flow has been very minimal.

Table 17: Alexkor Net profit or Net Loss

	Net profit/Loss before Tax	Tax	Net Profit/Loss
2000	-45,783,749	0	-45,783,749
2001	-45,447,231	0	-45,447,231
2002	2,172,248	402,595	1,769,653
2003	6,268,553	0	6,268,553
2004	37,830,347	2,096,364	35,733,983
2005	-5,959,654	0	-5,959,654
2006	-205,534,872	0	-205,534,872
2007	-5,362,296	3,778,784	-19,094,189
2008	9,843,900	-231,786	-4,766,209
2009	-64,255,164	0	-65,708,361

Table 18 indicates the decrease in the number of company employees, the zero dividends to the government and the significant loans received from the government and the relative investments over the period. None of the statistics are indicative of a thriving and sustainable company that contributes to the national economy.

Table 18: Alexkor Financial and Non-Financial Data

	Employees	Dividends	Loans	Investment
2000	684	0	25,401,485	6,500,000
2001	691	0	0	3,600,000
2002	568	0	0	7,100,000
2003	364	0	0	15,000,000
2004	421	0	0	8,000,000
2005	430	0	0	17,610,876
2006	401	0	0	5,843,126
2007	360	0	0	1,253,853
2008	283	0	44,000,000	251,257
2009	112	0	3,426,219	1,039,168

In 2002 there was a proposal to privatize Alexkor. Business Day indicates that the privatisation of Alexkor was first proposed in 1998, and it was only in 2002 that the government, through the public enterprise department, made it clear that it was prepared to sell a controlling stake in what is the country's second-largest alluvial diamond mining operation. It was estimated that the sale was likely to raise R130m to R150m for the government (Alexkor, http://www.alexkor.co.za/NewsBusinessDay1112002_150m.asp).

In June 2003 the Mining Weekly Online (Alexkor, http://www.alexkor.co.za/NewsMiningWeekly01062003_Priv.asp) reported that as the South African government pushes on with the restructuring of Alexkor, the roller coaster ride is far from over for the State-owned Northern Cape gem-miner. No stranger to controversy and upheaval, according to the article, Alexkor is currently in the throes of a long and painful transition, making it perhaps one of the most difficult privatisations undertaken by government. The decision to find a strategic equity partner (SEP) for the ailing mine was taken in 1998, but today – despite much work – the end of this journey seems as far away as ever. According to the article the decision to privatize was based on an underlying need to create sustainability in the Namaqualand area. The article further also makes reference to the slump in the performance of the mine between 1995 and 1996 because of a wage dispute and its inability to maintain and reinvest in capital equipment. In an attempt to bring the mine back to profitability, government handed over management duties of the mine to the Nabera consortium for a two-year period starting in May 1999. In terms of the management contract, Nabera was entitled to a third of any value added to the operation during its management contract. The article also states that while Alexkor has both marine and alluvial land operations, the main reason for its recent turnaround has been revenue generated from its shallow-water marine operations. The success of the shallow-water mining is largely due to the incentive-driven mining being carried out by contractors on a profit-share basis (Alexkor, http://www.alexkor.co.za/NewsMiningWeekly01062003_Priv.asp).

Mining Weekly Online on 25 August 2003 reports that Alexkor had consistently made losses between 1996 and 2001, leading to cumulative loss of R197-million (Alexkor, http://www.alexkor.co.za/NewsMiningWeekly25082003_ContinuedRecovery.asp). Nonetheless

the privatization of Alexkor was high on the priority list of the government and most of 2003 was spent on the process. However the privatization of Alexkor was beset with significant issues and challenges. Foremost was the land claim brought against the company by the Richtersveld community. It is clear that the privatization process was significantly delayed and derailed because of the claim.

The battle between the government and the Richtersveld community heated up in 2004 with the Richtersveld community winning significant court battles. The community amongst others made a request for a 90% equity stake in Alexkor which the government rejected. However and more significantly, the protracted land claim brought doubt in the privatization process. In April 2005 the South African government conceded that it does not expect to reach an out-of-court settlement with the Richtersveld community in a protracted land claim against Alexkor. During the land claim court hearings an expert witness stated that Alexkor's land-based diamond mining operations have "collapsed". In October 2006 an agreement was reached between the Richtersveld community, the Department of Public Enterprises (DPE) and Alexkor. By this time the privatization of Alexkor was well and truly off the table. In August 2007 the South African Cabinet approved the settlement reached with Richtersveld Community regarding the land claim against Alexkor and the government for land in the Northern Cape (various issues of Mining Weekly dot Com). The deal includes amongst others that Alexkor and the community would enter into a joint mining venture, in which Alexkor would hold a 51 percent interest and to which the state would contribute R200-million in capitalisation.

Hill (2007) in Mining Weekly dot Com states that the marriage between the West Coast Richtersveld community and State-owned diamond-miner Alexkor has been consummated with a R440-million gift from government, after nearly ten troubled years of legal confrontation and negotiations. The impoverished community, which government dispossessed of its land in the 1920s, now has a 49% stake in Alexkor's Alexander Bay operations, just south of the Namibian border, and will welcome development grants of R240-million over the next three years. Alexkor will also now have the confidence to embark on a life-breathing, up-to-R200-billion, recapitalisation programme (<http://www.miningweekly.com/article/richtersveld-community-reaps-alexkor-riches-2007-12-07>).

It seems clear that Alexkor has been plagued by massive insecurities and uncertainties since its establishment. There can be no doubt that the insecurities and uncertainties negatively affected the financial performance and viability of the company over the years. However it seems that there were many other reasons also at play and that the land claim issue cannot be singled out. Indeed management inefficiency and the financing of non-core activities can also be singled out as significant contributing factors.

Ryan (2008) in his article in Mining states that the top management team at state-owned Northern Cape diamond company Alexkor has quit and mining operations appear at a standstill pending the investment of R200m by the state. That's the initial amount due to be injected in terms of a deed of settlement reached last year between the South African government and the Richtersveld community after it won its land claim over the area. Sources, according to Ryan, say Alexkor's assets and operations have run down badly due to the South African government's failure to follow through on its initial privatisation plans, which were to sell 51% of Alexkor to a company that would invest heavily in further development (<http://www.miningmx.com/diamonds/793504.htm>).

Cohen (2010) in an article in The Daily Maverick argues that starved of access to capital, presumably partly because of its government-owned status, the company has not been able to develop the business; consequently, the Richtersveld community's grand court victory has proved Pyrrhic. Alexkor constitutes a forgotten corner of government's parastatal empire, just keeping its head above water but on a distinct downward trajectory. The article quotes what the board had to say about the company's prospects in 2007 in its annual report of that year: "Alexkor experienced a further deterioration in financial performance during the 2007 financial year where the company continued to operate at a loss. The continuous losses reported in the previous financial years are mainly attributed to a lack of capital investment in prior years to address the operational challenges related to mining on an inferred resource, continued use of ageing plant and earth-moving equipment and poor sea conditions. This situation has been worsened by the ongoing subsidisation, using income from mining operations, of the company's non-core assets comprising ABT, Alexander Bay Town, the airport and the hospital."

It seems fairly obvious that Alexkor has not been a success story for a number of reasons. It also seems that most of the reasons can be associated or linked with its government ownership. In Alexkor's case being owned by the government has been a major limitation to its financial performance and growth. Output has decreased dramatically because of the lack of investment by its sole shareholder. The ownership and management inefficiencies have also contributed to the current state of affairs at the state owned miner.

It is debatable if Alexkor has contributed to the revenues and cash flows of the government in any meaningful way or whether it has actually drained revenues and cash flows from the government. It is also debatable whether it has contributed to poverty reduction and equality. The financial performance seems to support the view that Alexkor has not contributed to the revenue and cash flow of government and had no or very little impact on poverty and inequality. In fact the opposite seems to be true. The environmental degradation and costs have not been included.

ASSESSMENT OF THE NATIONALISATION OF MINES PROPOSAL

The proposal has the following heading:

“Towards the Transfer of Mineral Wealth to the Ownership of the People as a Whole: A Perspective on Nationalisation of Mines”

The proposal is dated February 2010 and covers 22 pages.

The proposal is first and foremost argued and motivated based on ideological grounds. The ideology of socialism is of particular reference in that Socialism is an economic and political theory based on public or common ownership and cooperative management of the means of production and allocation of resources. Socialism has many supporters in the world and some countries have followed the ideology fairly vigorously. However the success of socialism compared to mix economic, free market and capitalists systems is highly questionable. Many ex socialist's countries have converted towards the more free market systems because of the challenges that many socialist governments faced. The budget constraints and economic uncompetitiveness of the socialist countries were paramount to the shift. Another major reason for the demise of socialism has been the rise in democracy

and liberty. Therefore to adopt a socialist ideology in the current globalized world economy seems counter initiative and against all logic.

The proposal makes numerous references to the notion that the transfer of ownership of the mineral wealth beneath the soil will benefit the people as a whole. This is a significant statement because the real issue at hand here is the inequality or equity issue and challenges in SA. It is difficult to see how the transfer of the mineral wealth beneath the soil to the government benefits the people as a whole. Un-mined minerals benefit nobody. This only represents potential wealth and not actual wealth. It is only when it is actually mined that the process of beneficiation starts. Therefore and intuitively the process of mining creates wealth and not simply the fact that a country has minerals. Having minerals is not creating wealth just like having money is not creating wealth. Nor is the act of the transfer of ownership automatically improving equity, creating and distributing wealth.

The notion that natural resources belong to all the people of SA is ideologically sound, but practically and logically out of date and unattainable simply because it's a no gain situation. Nobody benefits because there is no incentive or system of incentives to actually "exploit" the natural resource. A system without incentives creates a system of entitlements where nobody wants to take the risk because there are significant risks associated in the "exploitation" of natural resources. Therefore a non-incentive system that does not sufficiently compensate for risk suggests that there will be no exploitation of the natural resources and therefore nobody benefits.

It must be clearly understood that a political or ideological sound policy is not necessarily an economically sound policy. The implementation of an ill-conceived or ill-motive policy that on first glance seems politically or ideologically sound and popular might have severe and disastrous economic consequences. This is the most crucial shortcoming or limitation of the nationalization proposal document in that it is not based on any economic theory or principles. It does not take the economic realities of the modern globalized economy into account. The economics of nationalization is simple ignored for whatever reason.

The nationalization proposal states that the nationalization of mines means the democratic government's ownership and control of mining activities. This again is

not an entirely true statement in that the majority of nationalisation programmes occurred in non-democratic countries. Democracy and nationalization in most cases are not synonymous. Nationalization has in a significant number of countries occurred whilst within a one party or dictatorship system.

The argument related to the issue of the use of the wealth to benefit the people is again without any substance. The proposal in no way indicates how this will be achieved. What is clear is that the government already receives significant benefit from the mining industry through the company taxes and in some cases the taxes paid are more than the dividends paid. The government therefore is already a major owner and shareholder in the mining industry. Therefore to say that only a few benefit is a myth and without any merit. Also and very significantly a large portion of the dividends accrue to pension funds, provident funds, unit trust funds, etc. Millions of people therefore already benefit either directly or indirectly from the revenues generated by the mining industry.

What is also very important to note is that the government at present is a shareholder without any risks. The government receives large portions of revenues from the mining industry without carrying any risk. The nationalization of the mining industry could potentially increase the revenues to government by between R20bn and R40bn per annum if prices stay at these high levels, etc. However the government will now be fully liable for and bear all the risks. One therefore has to ask the question: do the rewards justify the risk? Initiatively it appears not to be the case.

The argument that nationalization is not a panacea for SA developmental challenges is absolutely correct. In fact nationalization has much more downside risk than upside risk. The probability of success of nationalization is much lower than the probability of failure. This is very evident from the case studies and literature review. We therefore need to ask ourselves a very important question:

- Are we prepared to accept the risk of failure and the associated consequences in totality?

This is especially relevant understanding that to unwind or undo the consequences of “bad” economic policy takes years. Once the nationalization of mines starts there is no turning back. If it fails it will take many, many years to recover.

Another very important issue that is not factually covered is the issue of how. How will the nationalization of mines occur? Nationalization can either take place with adequate compensation, some compensation or no compensation. It must also be understood that many shareholders are non-resident, pension funds, etc. In many instances other companies are also shareholders. Full compensation will be the least damaging and controversial option. However it is very difficult to see how the government could finance such an option. The market capitalization of the listed mining companies on 19 July 2010 was about R2trillion. This is significantly more than the national budget and excludes all the non-listed companies. An option that could be considered is to issue government debt or bonds to the shareholders. This would have no immediate cost to the government but does imply a long term interest rate liability that needs to be financed. This interest should be financed by the revenue received from the mines, however if not then the tax payer will have to foot the bill. Using a very conservative R1bn market capitalization and a 6 per cent bond yield implies a R113bn per annum interest bill in comparison with the current R108bn total profit before tax generated in the mining industry.

The fact of the matter is that full compensation although desirable is not financially possible or feasible. Thus the nationalization will have to occur with partial or full expropriation. Expropriation of shareholders or the forced change of ownership is a possibility. It is however a possibility that should be seen in context of the associated risks and consequences. The expropriation of mines (partial or full) has never been an internationally accepted method of nationalization. The international ramifications need to be clearly understood and debated. This is not an action or option that should be lightly considered.

The proposal suffers from the inability to relate the nationalization of mines to the emancipation of the black majority. Fact of the matter is that the nationalization of mines cannot be accompanied by a significant increase in jobs in the mining industry. The mines simply cannot afford a larger workforce because their profit

margins are very small. The SA mining industry is also required to successfully compete internationally. Increasing the labour force will make SA mines uncompetitive and unprofitable. Therefore it is extremely difficult to see how the nationalization of mines will contribute to the ideals and views as stated in the proposal document.

The proposal gives 5 reasons why to nationalize on page 12.

- Nationalization to increase the state's fiscal capacity and better working conditions
- Nationalization as a basis for industrialization
- Nationalization as a means to safeguard sovereignty
- Nationalization as a basis to transform accumulation path in the SA economy
- Nationalization to transform SA unequal spatial development patterns

However it is difficult to see how nationalization would actually achieve the above. There seems to be no or very little theoretical and empirical evidence that supports the above. Also the case studies seem to prove just the opposite. Alexkor is a perfect example of how a state owned mining company actually drains the state's resources and has actually induced poverty in the region, amongst others. There is no automatic transmission mechanism from nationalization to wealth creation.

The evidence of SA state owned enterprises over the last number of years suggests that they are not supporting and generating revenue for the government but actually are consuming the scarce government revenues. Thus these companies actually are in competition with the schools, hospitals and housing for scarce government budgets and allocations. The argument that they in fact should be financially self sufficient is the ideal. Unfortunately they are badly managed and rife with inefficiencies costing the tax payers millions of Rands. It seems hard to find any state owned company that is not beset with management inefficiencies and financial mismanagement. It is difficult to see how these companies have contributed to poverty reduction and equality.

The proposal highlights the Botswana case study on why nationalization of strategic minerals can benefit the SA state. However the discussion on the diamond mining in

Botswana in this paper proves the opposite. It is in fact the privatization and partnership system that is given as the reason for the successes.

What is abundantly obvious is that the government cannot be better at mining than the private sector because:

- The private sector has an incentive. i.e., bankruptcy
- The private sector faces competition, i.e., international
- The private sector has built up a significant human resource capacity
- The private sector has built up intellectual capital

The government can at best be as good or as efficient as the private sector but cannot be better or more efficient. It is just not possible because nationalization and state owned enterprises would have been the norm and not the exception. Therefore the performance of the government owned mining industry can at best be only as good and not better as the privately owned mining industry. On the other hand the government can be much worse or much less efficient than the private sector in that the government won't face bankruptcy, etc. The government can therefore at best be as good or as efficient but in all probability be worse or less efficient than the private sector.

One of the major reasons or causes for the inefficiencies associated with government owned or managed companies is that the government owned or managed companies employee's de facto are government employees. The ability to be remunerated according to productivity is much greater in the private sector than in the public sector and therefore given the government remuneration system productivity levels in government owned and managed companies are dramatically lower than in the private sector. Given that the mining industry is highly complex, very competitive with significant risks any management inefficiencies will be significantly magnified.

I think the bottom line is that it is only possible to distribute and redistribute if there in fact is anything to distribute and redistribute. Un-mined minerals can indeed be distributed or redistributed. However this will have absolutely no impact on inequality. Mined minerals on the other hand can also be distributed or redistributed

and do have an impact on equality. In theory and in practice it can be argued that the government distributes and redistributes the proceeds from mining more equally. This seems intuitively logic and achievable. However this is based on the premise that there is indeed something to distribute and redistribute. It is, on the other hand, fact that the private sector is much more productive in mining implying that there is more proceeds to distribute and redistribute although it might not be as equal.

The choice therefore seems fairly straight forward:

- Have less to distribute and redistribute but more equally ;or
- Have more to distribute and redistribute but with less equality

Under a government ownership system, there is no profit-and-loss system of accounting to accurately measure the success or failure of various establishments or projects. Without profits, there is no way to discipline companies that fail to serve the public interest and no way to reward companies that do. There is no efficient way to determine which establishments or projects should be expanded and which ones should be contracted or terminated. Without a system of incentives or threats the results are a spiralling cycle of company failures resulting in poverty and misery. Instead of continually reallocating resources towards greater efficiency, government ownership falls into a vortex of inefficiency and failure.

THE NATIONALIZATION OF MINES AND ITS ASSOCIATED RISKS TO THE NATIONAL ECONOMY

A central theme throughout the paper is that there is a real risk that the nationalization of the mining industry will not be successful. Unsuccessful in the sense that output in the mining industry will collapse over a fairly short period of time. The collapse of output will occur because of the management inefficiencies and lack of sufficient investment by the government in the mining industry. Nationalization will also cause SA to lose all credibility and status in the world. The way the world view SA will change dramatically and the international risk profile of SA will increase substantially. The ability to borrow money internationally and to do business internationally for example will be severely limited. Foreign capital flows to SA will

disappear or will become very expensive because of the downward trends in the countries credit ratings.

The collapse of the SA mining industry and the associated loss of international confidence and standing will have far reaching and severe consequences for the national economy and therefore on equality and poverty. I further assume that the nationalization will be based on expropriation.

The balance of payments will be the first casualty during the expropriation of the mines. The country will experience a significant outflow of portfolio capital almost immediately. The capital account of the balance of payments will within a month or two move from a positive balance to a negative balance. The negative balance will also be very sizeable. This together with the deteriorating current account will put massive pressure on the gold and foreign reserve position of the country. The current account will slowly deteriorate because of the decrease in mineral exports associated with the fall in mining output.

The depletion of the country's gold and foreign reserves will force the domestic currency to weaken significantly. The domestic currency will depreciate significantly and very quickly, very similar to a run on the currency. Price pressures in the economy will build up forcing the inflation rate to increase reaching very high rates over a short period of time. The inflation rate will breach the 6 per cent upper target of the SA Reserve Bank forcing interest rates to increase.

Rising interest rates will significantly slow down domestic consumption expenditure and private sector investment. The domestic economy will slow down dramatically achieving economic growth rates far below what is required or deemed sufficient for job creation and poverty reduction to occur.

The government will be required to react from a fiscal point of view to the low economic growth rate by implementing expansionary fiscal policy. However the diminishing mining revenues and other company taxes to the government will severely limit the ability of fiscal policy to stimulate the domestic economy. The government will also find it more and more difficult to keep up investment

expenditure in the mining industry. The government's borrowing requirement will increase increasing the government deficit as a percentage of GDP. The high government deficit further detracts from the economy's ability to recover and grow as is evident in Europe at the present.

The balance of payments constraints will further add to the woes of the domestic economy. The ability to import will be severely affected causing shortages of intermediate and final imported goods. The ability of the government or the private sector to borrow offshore will also become more difficult and more expensive. It is almost certain that SA positive international ratings will be downgraded. The SA economy will not be able to attract foreign investment into the country which is crucial for the economy because of the very low domestic savings rate. The SA economy will also become less and less competitive internationally losing markets continuously.

Therefore the SA economy will be attacked from a number of corners. It is simply impossible for the domestic economy to effectively absorb all of these shocks over a prolonged period of time. The domestic economy will simply collapse. Unemployment will increase, poverty levels will increase, inequality will increase and the government would not be able to react at all to the free falling domestic economy.

The nationalization of the mines will also have a devastating effect on the already low domestic savings rate. It is well understood that a high savings rate is a necessary condition for sustained high levels of economic growth. SA suffers from a very low savings rate. Government is dis-saving at present whereas the private sector is also not saving. Savings in SA is a problem and simply not sufficient and the primary reason why the domestic economy is reliable on foreign investment. Sustained economic growth is dependent on savings. Without domestic savings or foreign savings it will be very difficult for the domestic economy to achieve sustainable growth rates.

The Johannesburg Stock Exchange (JSE) is very attractive from a savings and investment point of view partly because of the listed mining companies. These

companies significantly contribute to the liquidity and turnover of the JSE and attract significant domestic and foreign savings to the JSE. The majority of investors at the JSE are institutional investors meaning pension funds, unit trust funds, etc. A larger number of these funds have significant exposure to the listed mining companies.

Domestic and Foreign savings in SA are therefore linked to the listed mining companies. The listed mining companies stimulate savings in the domestic economy through the dividends it generates, etc. Initiatively it seems that the nationalization of the mining industry will be very bad news for the ability of the domestic economy to generate savings, both local and foreign and thus for the JSE as a financial institution. Therefore the nationalization of mines does not make sense from a macro savings point of view and will severely damage the attractiveness of the JSE as a savings and investment institution.

However it just does not make sense from a macro savings point of view but also from a personal savings point of view. South African's save via pension funds, provident funds, unit trusts etc., for their future expenditure (retirement, etc). The ability to be financially in a position to sustain future expenditure is dependent on the risk and return profile of the savings. The lower the risk and higher the return the greater the probability to sustain future expenditure and visa versa. One of the key savings instruments in SA is the mining shares or equity. The listed mining companies contribute to the risk diversification and higher than average returns of savings. Nationalizing the mining industry will make savings in SA inherently more risky. It will also take billions of Rands of dividends out of the savings market. The ability to save for future expenditures will therefore become much more difficult and risky.

The unintended consequences of the nationalization of the mining industry are potentially unimaginable and devastating. This is demonstrated by the consequences of such a policy on both macro savings and personal savings. Domestic and foreign savings in SA simply will not be sufficient to sustain an economic growth rate where jobs are created and poverty reduced. Nor will it enable South African's to, for example, retire financially independent.

SUMMARY AND CONCLUSION

The central idea or ideology of socialism is that everyone in a society thrives, and that poverty becomes a thing of the past through collective hard work and compassion. The reason that the theory of Socialism does not work is complex but in short it is just a theory. The problem with a theory, or a concept, or an idea for that matter, is that they all look great on paper but when you try to enact them in the real world, the ugly truth about most theories begins to show. For Socialism to work, every member of a society must pull their own weight and accept some risk. Does that seem possible?

The truth is that Socialists are idealistic, and if they truly believe that Socialism will work in a real society, they are also naive. It has been proven that water will follow the path of least resistance, and in many ways, humans are like water. If you constantly give a person sustenance without requiring them to work for that sustenance, they will never work or take risks. Socialism will never work for the same reason that capitalism makes some people rich. In a capitalist market, those who work the hardest and take the most risks gain the most spoils. Removing the incentive for these hard workers to work or to be compensated for the risk, by redistributing their spoils, does nothing more than create mass poverty and entitlement, it does not eliminate poverty. Socialism, simply put, has never been successful.

PricewaterhouseCoopers (<http://www.pwc.com/gx/en/mining>) states that the challenges that mining companies face in SA today includes the following:

- Financing and managing capital projects
- Mining transactions and industry consolidation
- Improving performance and operational effectiveness
- Managing risk
- Complying with regulatory & reporting requirements
- Addressing sustainability issues
- Recruiting and retaining a skilled workforce

Which of the government or the private sector will be in a better position or the preferred option to confront the challenges and to ensure the continued financial viability of growth of the mining industry in SA? The theory, literature, case studies and logic suggests that the private sector has the required skills, experience, capacity, desire and incentives to make it work.

Attachment 1

Graph 24: South Africa and Australia Mining GDP – Year-on-Year rate

