

THE EFFECTS OF WORLD RECESSION AND CRISIS UPON
MINING IN THE SADCC

BY PAUL JOURDAN

REPORT NO. 79

SEPTEMBER 1984

* SOUTHERN AFRICAN DEVELOPMENT COORDINATION CONFERENCE

TABLE 1

SADCC — ECONOMIC BREAKDOWN

AREA	POP'N Km x 10 ³ x 10 ⁶	GDP US\$ x 10 ⁹	GNP/cap US\$	PUBLIC FOREIGN DEBT US\$ x 10 ⁹	ORIGIN OF G.D.P. (%)					DISTRIBUTION (TRANSPORT SERVICES*)	PRINCIPAL EXPORTS (% TOTAL EXPORTS)	MINERAL EXPORTS 1981 %	VALUE OF MINERAL PRODUCTION 1981 \$US x 10 ⁶	% IMPORTS FROM R.S.A.	
					MANUFACTURING	CONSTRUCTION	MINING: QUARRYING	AGRICULTURE FORESTRY FISHING							
ANGOLA	1,247	7.3 (82)	3.6 (80)	495 (80)	2.26 (81)	4 (80)	NA	NA	48 (80)	NA	Oil Diamonds Coffee	84 (83) 8 5	90	2000	Neg.
BOTSWANA	600	0.9 (82)	0.72 (82)	1010 (81)	0.21 (82)	5 (80/1)	NA	37 (80/1)	9 (80/1)	16 (80/1)	Diamonds Meat Cu-Ni mate	66 (83) 13 8	65	260	91 (82)
LESOTHO	30	1.4 (81)	0.35 (82)	540 (81)	0.14 (82)	5 (80/1)	10 (80/1)	9 (80/1)	27 (80/1)	47 (80/1)	Diamonds Wool-Mohair	40 (81) 18	40	19	97 (79)
MALAWI	119	6.3 (82)	1.43 (82)	200 (81)	0.75 (82)	8 (82)	NA	11A	40 (82)	13 (82)	Tobacco Sugar Tea	57 (82) 14 18	Neg	7	36 (82)
MOZAMBIQUE	802	13.3 (81)	2.40 (79)	270 (81)	1.66 (83)	(35% "in- dustry")	6 (79)	(35% "in- dustry")	42 (79)	11 (79)	Prawns Oil products Cashew+oil Tea Cotton fibre	24 (83) 18 15 14 7	~ 5	~ 15	NA (high)
SWAZILAND	17	0.6 (82)	0.42 (82)	747 (81)	0.18 (82)	20 (81)	5 (81)	3 (81)	25 (81)	24 (81)	Sugar Chemicals Wood pulp Fruit Electronic	33 (82) 17 15 10 5	~ 5	~ 23	>90 (82)
TANZANIA	945	19.8 (83)	4.75 (82)	249 (82)	2.5 (83)	9 (82)	NA	NA	49 (82)	NA	Coffee Cloves Cotton Cashew Sisal	30 (82) 18 112 6 6	~ 8	~ 35	Neg
ZAMBIA	753	6.2 (82)	3.46 (82)	560 (82)	2.2 (82)	10 (82)	NA	30 (82)	11 (82)	NA	Copper Cobalt	83 (82)	96	850	16 (80)
ZIMBABWE	391	7.5 (82)	5.92 (81)	870 (81)	1.12 (82)	26.5 (81)	3.0 (81)	5.2 (81)	17.8 (81)	21.3 (81)	Tobacco Gold Ferro Alloys Asbestos	20 (82) 15 8 6	40	547	22 (82)
(NAMIBIA)	824	1.0 (81)	1.65 (81)	1,960 (81)	0.50 (83)	4.6 (81)	NA	30.9 (81)	10.2 (81)	22 (81)	Uranium Diamonds Other mining Meat	32 (81) 23 13 7	62	700	>90 (81)
TOTAL S.A.D.C.C. (excl. Namibia)	4904	63 (82)	24 (81)	40% 330 (81)	~ 11 (82)	~ 13% % * GDP % GDP			~ 31% % * GDP % GDP		* est. ~ approximately Neg. Negligible N.A. Not Available	~ 58% % * Exp % Exp	3757 % * 10 ⁶ % * 10 ⁶	~ 31% (82) % * IMP % IMP	

SOURCES: THE ECONOMIST INTELLIGENCE UNIT, 1984; U.S. DEPT. OF THE INTERIOR, 1983 AND 1984; WORLD BANK, 1983 AND 1984.

THE EFFECTS OF WORLD RECESSION AND CRISIS UPON MINING IN THE SADCC.

INTRODUCTION.

This paper concerns mining in the SADCC in the context of the present world crisis. As such it concentrates on the bulk of mineral-metal extraction in the region which is for export onto the world market, primarily to the industrialized OECD countries. The potentially important area of intra-regional mineral-metal trade is not considered.

THE CONFERENCE AND MINING

The 1980 SADCC Lusaka declaration emphasized as a founding concept, the reduction of dependence, particularly, but not only on South Africa (RSA). The states of the SADCC are especially dependent on the West and the RSA for mineral exploitation and mineral markets. Minerals contribute over 50% of their joint export earnings and the mining sector is the second largest contributor to their overall G.D.P. after agriculture (see Table 1).

In 1981 Zimbabwe presented the SADCC Council of Ministers with a report on REGIONAL COOPERATION IN THE MINING INDUSTRY (SADCC, 1981), which outlined areas of possible regional cooperation, such as: mineral beneficiation, manpower training, mineral marketing and mining financing and technology. Subsequently Zambia was given the portfolio for coordinating the mining sector.

A programme of action on the mining sector was approved by the SADCC

Council of Ministers in May 1984. The projects include: a skilled manpower survey, an inventory of mineral resources, a study on small scale mining, processing and marketing, a study on the manufacture of mining machinery and chemicals, and the manufacture of fertilizers, a study on the rationalisation of mineral processing and a study on the development of an iron and steel industry (SADCC 1984). As yet these studies have no funding.

The striking aspect of this programme is not what it includes but rather what it excludes. The crucial and controversial area of minerals marketing has been dropped from the original Zimbabwean proposal and no mention has been made of a possible regional approach to mining legislation, particularly policy on the mining TNCs. But it is too early to assume that these two vital areas are not on the agenda for a later date. The SADCC as a body has generally been somewhat cautious and it could be that the areas of minerals marketing and mining legislation are considered to be too contentious at this time especially as foreign private investment is being sought at the moment.

AN OVERVIEW OF MINING IN THE STATES OF THE SADCC.

Tables 1 and 2 provide a summary of the economic, trade and mining situation in the SADCC region. Of the nine SADCC economies, in no less than five, mineral exports accounted for greater than 40% of total export receipts in 1981 (since then Lesotho's only, diamond, mine has closed). As a group, in the same year, the total value of mineral production was about 3.8 billion \$US and mineral exports contributed roughly 58% of total export receipts.

Three of the SADCC states have virtual mono-mineral economies,

TABLE 2.

SADCC—PRODUCTION OF MAJOR MINERALS — 1982 (with Namibia, Zaire and R.S.A. for comparison)															
MINERAL/ METAL	ANGOLA	BOTSWANA	MOZAMBIQUE	TANZANIA	ZAMBIA	ZIMBABWE	TOTAL SADCC	% WESTERN WORLD	NAMIBIA	ZAIRE	TOTAL SADCC + NAMIBIA + ZAIRE	% WESTERN WORLD	R.S.A.	TOTAL SOUTHERN AFRICA (SADCC + NAMIBIA + ZAIRE + R.S.A.)	% WESTERN WORLD
GOLD t	—	—	—	(0.01)	0.4	13.4	13.8	1.4%	—	4.2	18.0	2%	664.3	682.3	70%
NICKEL t × 10 ³	—	17.8	—	—	—	13.4	31.2	8%	—	—	31.2	8%	20.5	51.7	13%
COPPER t × 10 ³	—	18	—	—	530	25	573	9%	49	503	1125	18%	207	1332	21%
COBALT t	—	254	—	—	2300	98	2652	18%	—	5,608	8260	57%	—	8260	57%
CHROME t × 10 ³	—	—	—	—	—	432	432	9%	—	—	432	9%	2,162	2594	53%
HIGH CARBON FERROCHROME t × 10 ³	—	—	—	—	—	200	200	12%	—	—	200	12%	570	770	47%
COAL (Bit) t × 10 ³	—	415	500	(1)	604	2969	4490	Neg.	—	—	4490	Neg.	140,137	144,627	5%
DIAMONDS ct × 10 ³	1,400	7,770	—	300	—	—	9,470	28%	1,010	10,000	20,480	61%	8,850	29,330	86%
P.G.M.'s kg	—	—	—	—	—	145	145	1.3%	—	—	145	1.3%	94,94	94,340	87%

⊕ FIGURES FOR 1981, t = metric tons, Bit = bituminous

SOURCES: ENGINEERING AND MINING JOURNAL, MAR. 1984

MINING ANNUAL REVIEW, 1983 AND, 1984

U.S. BUREAU OF MINES, 1983 AND, 1984

HALL, J., 1983

METALLGESSELLSCHAFT, 1983

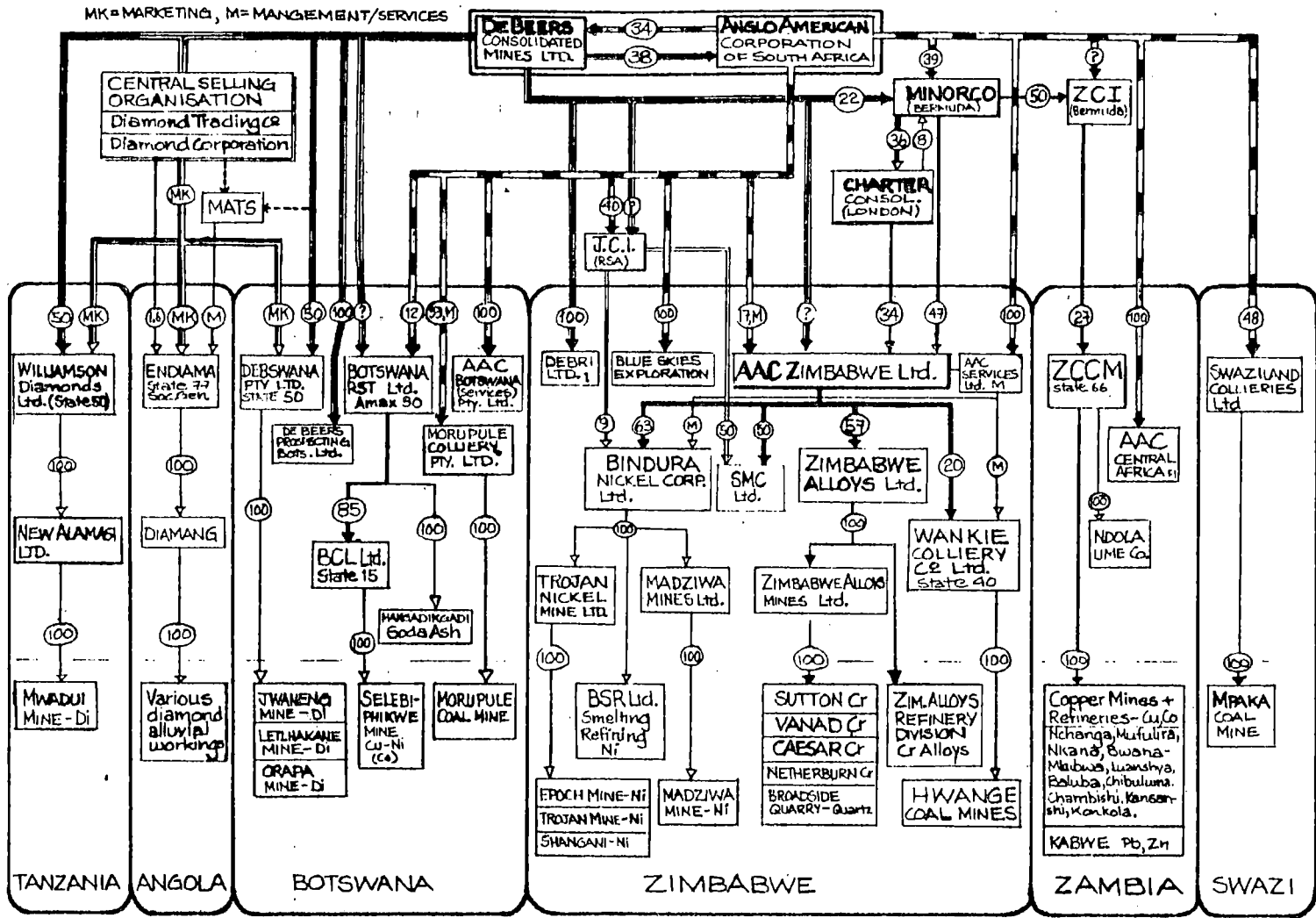
notably Angola with oil, Zambia with copper and Botswana with diamonds. At the other extreme three have only small or underdeveloped mineral sectors, namely Tanzania, Malawi and Mozambique. Two countries, Lesotho and Swaziland, formerly exploited important mineral resources but these are currently exhausted, depleted or uneconomic. Lesotho had diamonds and Swaziland had iron ore while its asbestos reserves are almost exhausted. The final country in the SADCC grouping, Zimbabwe, has a mineral sector of moderate size in relation to the overall economy which represented 5.2% of G.D.P. and 40% of export receipts in 1981. Zimbabwe produces a wide variety of minerals, many for internal consumption. No single mineral is dominant. In 1982, for example, gold represented 15%, ferro-alloys 8% and asbestos 6% of export receipts.

THE MINING TNCs AND THE SADCC.

Throughout the SADCC region, control of the mining industry is generally in the hands of the large mining TNCs. This control is not only exerted directly through ownership (equity) but also indirectly at various points in the mineral-metal cycle going from inputs (equipment/technology) to the extractive phase, through mineral processing and metals refining, to the marketing of the final product. The mining TNCs frequently also have indirect control via management or technical services contracts, an example of which is Wankie Collieries, where the Zimbabwean state has 40% of the equity and the Anglo American Corporation of South Africa (AAC of SA) has 20%, but the AAC are still the "Administrative and Technical Advisors" (Wankie Colliery Co. Ltd., 1983), through their subsidiary AAC Services Ltd.

Of the mining TNCs the Anglo-De Beers group is by far the largest in the region (see Figure 1) if not the world. This mining and finance

ANGLO AMERICAN - DE BEERS, MINING INTERESTS IN THE SADCC FIGURE 1



SOURCES: DE BEERS, 1983 AND 1984; ANGLO AMERICAN, 1983 AND 1984; CHARTER, 1983 AND 1984; MINORCO, 1983; MINING ANNUAL REVIEW, 1983 AND 1984

colossus consists of the Anglo American Corporation of South Africa, De Beers Consolidated Mines and the Johannesburg Consolidated Investment Company (JCI) in South Africa, Minerals and Resources Corporation (MINORCO) in Bermuda and Charter Consolidated in London plus a myriad of subsidiaries spread across the globe.

The AAC-DeBeers mining interests in the SADCC region are given in Figure 1. Briefly, they stretch from: diamonds in Tanzania, Angola and Botswana, now the world's largest producer (1983=10.7 million carats), copper in Zambia and Botswana, nickel in Zimbabwe and Botswana, coal in Botswana, Zimbabwe and Swaziland, to chrome and ferrochrome alloys in Zimbabwe.

Other major TNCs involved in mineral extraction in the SADCC include Gulf Oil and Texaco in Angola (petroleum) and Amax in Botswana (copper and nickel). Amax appears to be in the process of shedding its southern african interests: in 1982 it sold its 30% share in Tsumeb Corp. Ltd. in Namibia and in 1984 it sold its 7% share in Zambia Consolidated Copper Mines (African Business, 09.84).

Union Carbide, Rio Tinto Zinc (RTZ), Lonrho and Falconbridge all have mining interests in Zimbabwe. These and several other TNCs such as Shell, Esso and BP are also involved in mineral exploration in the SADCC region.

Anglo and Lonrho also have significant interests in other sectors of the SADCC economies. For example, in Zimbabwe, Anglo holds 53% of Border Timbers Ltd., 30% of Hippo Valley Estates Ltd., 18% of National Foods Holdings Ltd., and 39% of RAL Holdings Ltd. (Anglo American Corporation of South Africa, 1983, p.67), in addition to its holdings in the mining sector. Lonrho in Malawi holds 32% of Dwangwa Sugar Corp. Ltd., 10% of Chibuku Products Ltd. (maize beer)

and 51% of David Whitehead & Sons Ltd. (textiles). In Zimbabwe, Lonrho holds 100% of the Wattle Co. Ltd., 60% of W. Dahmer & Co. Ltd. (vehicle builders), 100% of Zambesi Coachworks Ltd. (coachbuilders) and 100% of Zimoco Ltd. (vehicle distributors). It also has wide ranging non-mining interests in Zambia and Swaziland (Lonrho, 1982, p.51).

WORLD CRISIS AND MINERALS-METALS

The most obvious effect of the recent world crisis on minerals-metals has been their dramatic fall in price. This is adequately demonstrated in Table 3.

Metals and minerals dropped 12% in export price in 1981, 8% in 1982 and 2.2% in 1983. This is equivalent to a 26% drop from 1980 to 1983.

The export volumes of metals and minerals from developing countries have also undergone a marked fall. Table 4 indicates a drop of 2.1% in 1982 and 1.9% in 1983 which is equivalent to a total fall of 4% over these two years.

Table 4 also gives the change in value of mineral and metal exports of developing countries between 1965 and 1981. This seems to indicate a 600% increase of this period but the increase is in CURRENT \$US. Table 5 gives real metal prices indexed back to 1970.

It is apparent from these Tables that the response to the crisis has not been the same for all minerals-metals. Though similar, the behaviour of fuels, precious metals and "other" minerals-metals have all been markedly different. Fuels and precious metals have held their value over the longer term (from 1970) but joined the general decline in both value and volume from 1980. The only base metal to

TABLE 3

CHANGE IN EXPORT PRICES (Average annual % change)					
Developing Countries	1965-73	1973-80	1981	1982	1983
Metals + Minerals	1.6%	5.6%	-12%	-8%	-2.2%
Fuels	6.7%	24.7%	10.5%	-2.6%	-14.5%

Source: WORLD BANK, 1984

Table 2.7

TABLE 4

CHANGE IN EXPORT VOLUMES AND VALUE OF EXPORTS, 1965-83							
Developing Countries	CHANGE IN EXPORT VOLUMES (average annual % change)					VALUE OF EXPORTS (billions of current \$)	
	65-73	73-80	1981	1982	1983	1985	1981
	Metals + Minerals	6.3%	5.9%	2.6%	-2.1%	-1.9%	4.5
Fuels	6.4%	-1.3%	-21.9%	5.1%	6.1%	7.3	165.1

Source: World Bank, 1984, Table 2.9

TABLE 5.

METAL PRICES 1970-83 (indexed back to 1970=100)													
Metal	'71	'72	'73	'74	'75	'76	'77	'78	'79	'80	'81	'82	'83
Copper	74	71	110	115	63	68	60	58	75	73	53	42	46
Aluminium	99	89	85	98	102	100	119	128	140	137	88	65	91
Tin	92	96	115	176	136	143	189	209	225	216	165	140	137
Lead	80	92	123	153	98	102	130	129	212	140	102	71	54
Zinc	101	119	251	153	182	165	128	120	135	121	122	101	101
Nickel	53	50	57	69	58	61	56	49	60	61	50	38	36
Gold	109	149	235	348	323	237	263	319	456	800	545	419	456
Silver	83	88	126	208	181	168	168	181	335	549	253	181	249
Platinum	88	88	92	109	92	86	76	117	177	242	143	99	123

Source: Shearson, American Express, 1984, Table E.4.

WESTERN WORLD CONSUMPTION (PRODUCTION) 1976-1982

METAL	1976	1977	1978	1979	1980	1981	1982
ALUMINIUM (mil.t.)	14.0	14.5	15.3	16.2	15.6	15.1	14.7
LEAD (mil.t.)	3.9	4.2	4.1	4.2	3.9	3.8	3.8
COPPER (mil.t.)	6.4	6.8	7.3	7.5	7.2	7.3	6.8
ZINC (mil.t.)	4.2	4.2	4.6	4.7	4.5	4.4	4.2
TIN (th.t.)	184	174	178	178	167	156	146
NICKEL (th.t.)	488	459	514	584	527	474	439
GOLD (t) *	369	972	980	961	946	962	971
SILVER (t) *	7769	8357	8381	8431	8157	8721	9054

* Mine Production. mil. - million, th. - thousand, t. - metric ton

SOURCES: Metallgesellschaft, 1983, p.16-62

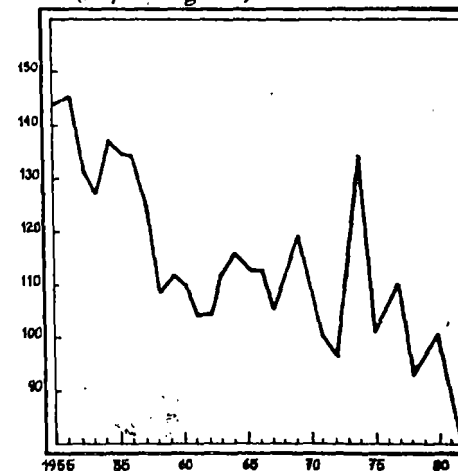
Shearson, American Express, 1984, Table 3.3

TABLE 7.

TOTAL REAL VALUE OF CONSUMPTION (1970=100 for unit value)							
METAL	1972 INDEXED VALUE	1982 INDEXED VALUE	1972 CONSUMPTION (th.t.)	1982 CONSUMPTION (th.t.)	TOTAL INDEXED VALUE 1972	TOTAL INDEXED VALUE 1982	% CHANGE IN VALUE 1972-82
TIN	92	137	232	200	21,344	27,400	+28%
COPPER	74	46	7,942	9,063	587,708	416,898	-29%
NICKEL	53	36	580	633	30,740	22,788	-26%

SOURCES: TABLE 5 for indexed values

Metallgesellschaft, 1983, for consumption data.

FIGURE 2.
COMPOSITE COMMODITY PRICE INDEX
(1977/79 average=100)

Prices of commodities (excluding oil) produced by Third World Countries, measured by the prices of manufactures they import.

Source OPTIMA, NEW YORK, p.80

perform well in terms of value has been tin, but it has had dramatic drops in volume. World smelter production of tin has dropped from 245,000t in 1979 to 220,000t in 1982 (Metallgesellschaft, 1983, p.67), and shows no increase on 1941 (219,000t), whilst at the same time tin stocks in 1983 stood at 108,000t or 67% of annual world consumption (Shearson, American Express, 1984, p.2). Tin's atypical behaviour is most probably due to it being the only metal with an active producer organization, the International Tin Council (ITC), with effective market intervention to protect value.

SADCC MINERALS-METALS AND WORLD CRISIS

With the exception of petroleum in Angola, diamonds in Botswana, Angola and Tanzania, and gold in Zimbabwe the SADCC minerals-metals fall into the worst hit, non-fuel and non-precious group (see Tables 1 and 2). Most SADCC metals-minerals have declined in real value over the last 15 years and dramatically declined in both export value and volume since the onset of the present world crisis. The causes for this are manifold but the most important are the following three. Unlike petroleum and tin which have strong producer organizations (OPEC and the ITC) with which to combat attempts by the developed countries to export their crisis to the periphery, in the form of declining terms of trade (manufactures vs commodities) the SADCC minerals (see Tables 1 and 2) are "unprotected". The worst cases are copper and nickel which in 1983 were worth 46% and 36% respectively of their 1970 unit value (see Table 5). In addition, western world consumption dropped 9% for copper and 25% for nickel between 1979 and 1982 (see Table 6). The SADCC region accounted for 9% of copper and 8% of nickel production in the western world in 1982 (see Table 2).

Diamonds, on the other hand, have a TNC marketing monopoly, the De

De Beers' Central Selling Organisation (CSO), which has managed to maintain the real value of diamonds except for the diamond crisis of 1980/1 when the CSO temporarily lost control of the price due to excessive speculation by diamond buyers. Diamond production increased in volume from 41 million carats in 1977 to 57 million carats in 1983 (Engineering and Mining Journal, March 1984, p.90) and the CSO sales increased by 27% from 1257 million US\$ to 1599 million US\$ from 1982 to 1983 (De Beers, 1983 and 1984). From the end of 1968 to the end of 1983 the REAL value of rough diamonds increased by 57% (Ousey, B., 1984).

The second reason is that precious metals-minerals benefit from speculation provoked by the economic uncertainty prevalent at the onset of crises, which does not apply to the non-precious metals-minerals whose prices drop rapidly with falling industrial demand.

This brings us to the third, developing country-specific, dynamic. Mineral exports for many third world economies are the major means of earning hard currency, so when the unit value of their mineral/s declines, they attempt to increase their production and sales so as to avoid cutting back on vital imports. In this way supply often increases or remains constant during periods of falling demand resulting in an oversupplied "buyers' market" and low prices. These lower prices provoke a further increase in production to maintain foreign currency flows by the third world producers which again results in lower prices, and so the downward spiral continues.

As a result of falling foreign exchange earnings aggravated by high interest rates stemming from the OECD crisis, third world mineral economies have..."extensive loans to pay off and their need for foreign currency is so great that production must continue

unabated". (Shearson/American Express, 1984,p.5), resulting in oversupply and lower prices. In addition, mining tends to be capital intensive, requiring large imports of capital goods which with the prevailing low prices is often financed by loans, increasing debt servicing commitments. Other hard currency costs such as the mining TNC's profit repatriation or management fees and expatriate salaries are common for third world mining industries.

MINERAL PRODUCER ORGANIZATIONS - THE CASE OF TIN.

Tin has maintained its value (see Table 5) in the face of falling consumption (see Table 6) and very high stocks which stood at 67% of annual consumption in 1983 (Shearson-American Express, 1984,p.E2). The I.T.C. maintains a buffer stock which is added to via purchases of tin on the open market when demand is weak and depleted via selling when demand is strong. The ITC also exerts export controls on its members during periods of continued low demand.

An argument against producer organisations intervening in the "free market" to set "false" prices is that over time these minerals will suffer from substitution by other, now relatively cheaper minerals or non-mineral substitutes. Tin's high stocks and falling consumption are given as examples of the penalties for this sort of "overpricing". This type of argument would only be valid, though, if it could be shown that the total value of the decreased consumption of an "overpriced" mineral is less than the total value of the increased consumption with lower prices of a "free market" priced mineral. A calculation comparing tin, copper and nickel consumption using values from Table 5, for the period 1972 to 1982 is presented in Table 7.

7
TABLE 7.
TOTAL REAL VALUE OF CONSUMPTION (1970=100)

METAL	UNIT VALUE			CONSUMPTION			TOTAL VALUE		
	1972	1982	%chg	1972	1982	%chg	1972	1982	%chg
Tin	100	149	+49%	100	86	-14%	100	128	+28%
Copper	100	62	-38%	100	114	+14%	100	71	-29%
Nickel	100	68	-32%	100	109	+9%	100	74	-26%

Sources: Table 5 for unit values,
Metallgesellschaft, 1983, for consumption data.

The results from this "experiment" would appear to come down strongly in favour of a policy of coordinated producer market intervention. Although consumption of both copper and nickel increased from 1972 to 1982, the total indexed value of that consumption decreased by 29% and 26% respectively. Both copper and nickel are traded relatively "freely" with no market "tampering" by producer organizations. On the other hand, although the consumption of tin was down some 14% over this period, the total indexed value of that consumption rose by 28%.

FUTURE PROSPECTS

Although the industrialized market economies strengthened in 1983 and the first half of 1984 with an average GDP growth rate in 1983 of 2.3% (World Bank, 1984), demand for most metals and minerals stayed weak with developing countries experiencing a fall in the export volume of their metals and minerals of 1.9% and a fall in prices of 2.2% (see Table 3).

Even if the OECD recovery continues the prospects for non-cartelized and non-precious metals and minerals are not encouraging due to the following factors:

- 1). The present high stock levels that need to be absorbed before demand can outstrip supply.
- 2). The present low mine capacity utilization meaning that any increase in demand can rapidly be soaked up by extra production from existing mines.
- 3). The present high debt servicing ratio of many third world producers will encourage them to continue with the present tendency of "export or bust" guaranteeing an oversupplied market and low prices.

It will take a long period of sustained economic recovery in the OECD countries before stock levels come down, unused mine capacity is absorbed and subsidised producers go into the "black".

The prospects for the non-precious and non-cartelized minerals and metals in the longer term can perhaps best be assessed by the historical performance of the commodities. In times of world boom their real (terms of trade) value tends to decrease and in times of world slump their real unit value tends to decrease faster, as is borne out by Figure 2. The long term prospects should therefore rather be viewed in terms of "bad" prospects or "worse" prospects depending on growth or recession in the industrial countries except in the low probability case of hard commodities being cartelized.

THE SADCC - PROSPECTS FOR METALS AND MINERALS.

Hard commodities have tended to lose their real value over time except for metals and minerals that have strong producer organizations or have a speculative (hoarding) value other than for industrial use. Therefore the prospects for mineral exports for the

states of the SADCC will to a large extent depend on the extent to which their exports are dependent on minerals and metals that are cartelized or speculative (precious).

FUEL MINERALS: The only petroleum production in the SADCC is in Angola. Petroleum exploration is being carried out in several of the other SADCC countries such as Tanzania and Mozambique. Coal is currently mined in Botswana, Zimbabwe, Mozambique, Swaziland and Zambia (Table 2).

Although the real value of oil has fallen since 1981, it has increased substantially since 1973 (Table 3) and is likely to maintain its real value over the longer term as non-OPEC production is peaking meaning that OPEC's share of the market will steadily increase in turn strengthening OPEC's power to determine value and coerce renegade producers. This augurs well for the export earnings of Angola (which has applied for OPEC membership), but with oil and oil products already the principal import of most other SADCC states, terms of trade in the region as a whole are likely to deteriorate further.

Projects for the production of fertilizer from natural gas are under way in Tanzania and under consideration in Mozambique. It is envisaged that this production will mainly be for the local, regional market.

Because of coal's close association through substitutability with cartelized petroleum, demand has increased substantially since 1973. Coal has no effective producer organization and world reserves are huge. In addition several new producers have come onto the export market over the last few years. Coal has a low value to weight ratio, which means that distance to markets is an important factor

in its export feasibility for the SADCC region. For example in 1982, only 36% of the final value of South African coal in Europe was the cost of mining it. By far the greater cost is for moving it from the mines to the OECD end users (Portheine, 1983, p.C3). The world recession and overproduction has meant that in 1983 South African coal was worth 18% less, in real terms, than in 1976 (Mining Journal Ltd., 1984, p.81).

It would be difficult for the states of the SADCC to break into the presently oversupplied world market on a large scale, given the region's logistical disadvantages, but future increases in the real price of oil or sustained recovery in the West, could put coal exports back on the agenda. For Botswana, world coal prices would have to double for its ambitious coal export plan to be viable (Financial Mail, 17:08:84, p.43).

PRECIOUS METALS: Prospects for the SADCC precious metals-minerals are somewhat brighter. As mentioned before, diamonds, gold, platinum and silver have a speculative attraction which often results in demand for these commodities increasing during periods of economic uncertainty, high inflation and low interest rates. The price of all four of these precious minerals shot up in unison in 1980 (see Table 5) in response to the deepening crisis and a loss of confidence in the US dollar at the time.

Diamonds, in addition to having a speculative value, are also effectively cartelized through the De Beer's marketing monopoly, the CSO. Gold and platinum, on the other hand, have a "country concentration". South Africa presently has more than 60% of the western world's gold production and more than 80% of platinum production (Table 2). The extent to which their present relatively

producer supply control would be difficult to determine, but either way the future of these minerals-metals appears to be secure enough to at least predict a maintenance of real value. This bodes well for the export earnings of Botswana (66% diamonds in 1983) and to a lesser extent for Angola (8% diamonds in 1983) and Zimbabwe (15% gold in 1982), but the rest of the SADCC exports little or none of these commodities (Table 1).

OTHER METALS-MINERALS: Of the other minerals and metals produced in the SADCC, the main foreign exchange earners are copper in Zambia, Zimbabwe and Botswana, cobalt in Zambia, nickel in Zimbabwe and Botswana, chrome in Zimbabwe and asbestos in Zimbabwe and Swaziland.

The world crisis has provoked drastic reductions in both the value and consumption of these commodities and even with limited economic recovery in the OECD countries over the next few years, the prospects for these non-cartelized and non-precious minerals and metals do not look bright as over-supply, under-capacity production and high stock levels are likely to continue.

The objective conditions for producer organizations within the SADCC are not good as the region does not have a significant share of world production of any mineral or metal (see Table 2). The possibilities of producer collaboration with its neighbours looks better especially for cobalt (Table 2) where Zambia and Zaire have over 50% of world production between them. But whether the necessary subjective conditions of political will exist for effective cartelization is doubtful.

With the USSR being the world's biggest chrome producer with 36% in 1982 and South Africa the second with 26% in 1982 (Engineering and

producer control will come about for chrome even though southern africa has over 50% of western world production (Table 2) and over 80% of world reserves (Hall, 1983, p.J16).

REFERENCES

AFRICAN BUSINESS, 09.84.

Amax Incorporated, ANNUAL REPORT, 1982.

Anglo American Corporation of South Africa, Ltd., ANNUAL REPORTS, 1983 and 1984

Bindura Nickel Corporation, Ltd., ANNUAL REPORT, 1982.

Charter Consolidated, P.L.C., ANNUAL REPORTS, 1983 and 1984

De Beers, Botswana (DEBSWANA) Mining Co. (Pty) Ltd., ANNUAL REPORT, 1983.

De Beers Consolidated Mines Ltd., ANNUAL REPORTS, 1982 and 1983.

The Economist Intelligence Unit, Ltd.,
Quarterly Economic Reviews, Nos. 1 and 2, 1984,
Report No.82, NAMIBIA, BOTSWANA, LESOTHO, SWAZILAND.
Report No.76, ZAMBIA.
Report No.75, ANGOLA.
Report No.67, TANZANIA, MOZAMBIQUE.
Report No.7, ZIMBABWE, MALAWI.

ENGINEERING AND MINING JOURNAL, March, 1984.

FINANCIAL MAIL, 17.08.84.

Hall, J., COPING WITH THE FERRITIC STEEL DEMAND EXPLOITATION.
IN: Second Southern African Minerals Conference, ed. by
Metal Bulletin Conferences, Ltd., 1983.

Lonrho, P.L.C., ANNUAL REPORT, 1982.

Metallgesellschaft Aktiengesellschaft, METAL STATISTICS
1972-1982, ed. by Willy Bauer, 1983.

Minerals and Resources Corp. Ltd., ANNUAL REPORT, 1983.

The Mining Journal Ltd., MINING ANNUAL REVIEW, 1983 and 1984.

Dusey, B. (Personal Communication, 09.84), Central Selling
Organization, London.

OPTIMA, Vol.32, No.2 (pub. by AAC of SA and De Beers).

Portheine, H.E., KEY TO REDUCTION OF LOGISTIC COSTS BY AN INTEGRAL APPROACH TO THE TRANSPORT CHAIN. IN: Second Southern African Minerals Conf., ed. by Metal Bulletin Conferences Ltd., 1983.

Rio Tinto (Zimbabwe) Ltd., ANNUAL REPORT, 1982.

SADCC, REGIONAL CO-OPERATION IN THE MINING INDUSTRY. Document presented by the Government of Zimbabwe to the SADCC Council of Ministers meeting, Blantyre, Nov., 1981.

SADCC, ANNUAL PROGRESS REPORT. July 1983 - June 1984, Gaborone, 1984.

Shearson/American Express, THE ANNUAL REVIEW OF THE METAL MARKETS 1983-4, 1984

US Bureau of Mines, BUREAU OF MINES YEARBOOK 1982. Vol.3, US Dept. of the Interior, 1983.

US Bureau of Mines, MINERAL INDUSTRIES OF AFRICA, US Dept. of the Interior, 1984.

Wankie Colliery Co., Ltd., 60TH ANNUAL REPORT, 1983.

World Bank, WORLD DEVELOPMENT REPORT, 1983 and 1984.

Zambia Consolidated Copper Mines Ltd., ANNUAL REPORT, 1983.



This work is licensed under a
Creative Commons
Attribution – NonCommercial - NoDerivs 3.0 License.

To view a copy of the license please see:
<http://creativecommons.org/licenses/by-nc-nd/3.0/>

This is a download from the BLDS Digital Library on OpenDocs
<http://opendocs.ids.ac.uk/opendocs/>