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TAXING MINING COMPANIES IN
IN BOTSWANA AND ZAMBIA

By

Dr. Robert Curry

OCCASIONAL PAPER NO.6

DECEMBER, 1979

**Botswana
Lesotho
Swaziland**

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F O R E W O R D

Dr. Robert Curry from the California State University, Sacramento was with the IDM during the months of June to August 1979. This was Dr. Curry's second tour with the IDM having first joined us during the summer of 1976.

Dr. Curry has had experiences in both Zambia and Botswana and in this paper he draws some parallels between Botswana in the early 1980's and Zambia in the early 1970's.

USAID made it possible for us to have Dr. Curry return to Botswana.

The author assumes full responsibility for the contents of the study. Provided acknowledgement is made part or all of the study may be reproduced.

J.G. Campbell
Assistant Director

TAXING MINING COMPANIES
IN ZAMBIA AND BOTSWANA

I. BOTSWANA'S CURRENT SITUATION

Botswana enters the 1980's on the crest of an economic growth wave that is enviable among African States. From the Fiscal Year (FY) 1974/75 to FY 1979/80, real gross domestic product (GDP) doubled from P213 to P423 million (Pula, the Botswana currency, exchanges for 1.20 United States dollars). Real GDP per capita experienced a similar increase as it grew from P330 to P610.¹ Growth was led by a strong export performance, mainly by the mining sector. From 1974 to 1978 the copper, nickel and coal exports grew from P8 to P54 million. Diamond sales rose from P23 to P79 million. Meat products, Botswana's traditional export, however, dropped from P50 to P31 million due to an outbreak of foot and mouth disease.²

Real growth in Botswana is expected to average about six percent per capita during the early 1980's. The projected growth hinges on Botswana's ability to sustain a healthy export performance. The value of exports are projected to increase by about nine percent per year into the early 1980's, a level sufficient to maintain real growth at the expected rate.³

The export sector is linked to national growth in two ways: via the generation of foreign exchanges required to obtain growth-oriented imports and public revenue needed to cover the cost of public capital formation and recurrent expenditures

Foreign exchange holdings have been generated rapidly, rising from less than P20 million in 1974 to over P121 million by the end of 1978. The build-up occurred despite a rapid increase in imports that were induced by the growth process. This caused Botswana to experience a trade deficit of nearly P100 million in 1978. This was offset by miners' remittances and foreign assistance so that the recurrent account surplus that year was P21 million.⁴ Private capital transfers and direct foreign investment contributed to an overall balance of payments surplus that permitted the country to increase its foreign exchange holdings by P36 million during 1978. Botswana's foreign exchange holdings amounted to nearly five-months of its 1978 import bill, an extraordinarily high proportion, e.g. Africa holds foreign exchange equivalent to less than two months of continental imports.⁵

A key to supporting growth and promoting development is what the public sector is able to do. Botswana's export performance has had a salutary impact on generating public sector revenues. In his 1979 Budget Speech, the Vice-President Dr. Q.K.J. Masire pointed at that.

In 1978/79, recurrent revenues reached P129 million, or P10 million more than estimated. This growth came mainly from increased customs and mineral revenues. Recurrent expenditures also grew rapidly. With the large supplementary appropriations to cover expenses associated with the outbreak of foot and mouth disease, security needs, and the effects of the Third Salaries Review, they totalled P128 million, or P16 million more than originally estimated. Development expenditure reached P80 million for 1978/79. Of this total, about P50 million was allocated to what might be called the core or basic development programme, an increase of almost 13 percent over the previous year, and another P30 million to various projects of a contingency nature.⁶

The 1979 Budget estimates that recurrent revenues will reach P167 million, about 29 percent above the revised 1978/79 estimates. As has been the case the Common Customs Pool and mineral revenues are the items supplying most of this increase. Most other sources of domestically generated revenue remain stagnant. With virtually no growth in real terms in either customs revenue or mineral revenue projected for 1980/81 or 1981/82, and continued stagnation in other revenue sources, no significant increase in recurrent revenues can be expected before 1982/83 when Jwaneng enters production. This underlines the nation's growing dependence on mineral revenue. It also suggests that Government reserves be kept at higher levels than would be adequate for more diversified economies.⁷

Recurrent expenditures continue to increase faster than projected. It is estimated that they will reach P156 million in 1979/80. The excess can be attributed to security-related expenditures and the sharp increase in educational costs brought about by the Third Salaries Review. In recent years there were unexpected increases in mineral revenues to help meet the faster than planned growth in recurrent expenditures but we must not come to expect that mineral prices will always move in our favour. However, the only way that Government's recurrent expenditures can continue to grow at roughly 9 percent per annum in constant prices through 1982/83 in the face of almost no real growth in revenues is by allowing Government reserves to decline temporarily below their present level. This can be done provided no major contingencies occur. In addition, P23 million will be appropriated to the Domestic Development Fund (DDF) to finance those development projects for which no donor financing is available and to pay Botswana's share of the costs of projects for which partial donor financing is available. This P23 million represents one-third of total 1979/80 development programme and P20 million for contingency projects.⁸

Botswana's export sector then is generating the foreign exchange required to maintain flows of growth-oriented imports. And it is generating public revenues sufficient to improve the country's tax effort (e.g. the ratio of taxes and other public revenues to GDP), and to increase the proportion of GDP going to gross capital formation. As the VicePresident noted, however, this has led to a strong dependence on the mineral sector. Part of that dependence hinges on the profitability of mining companies because the public revenue base is company profits. For example, the country is banking heavily on Jwaneng, the new diamond venture. The project's initial capitalization was P200 million and government obtained an initial 30 percent interest in the venture. It borrowed P34 million from a consortium of West German banks and recently exercised its option to purchase another 20 percent interest in the company. Under the terms of the agreement, apparently it is to receive two-thirds of pretax profits and an export levy of some ten percent of unit value independent of corporate profitability. Detailed knowledge about the agreements between De Beers and the government are secret. But discussions at a recent workshop on mining Legislation and Mineral Resources Agreement suggested that indeed there are levies placed directly on exports.¹⁰

The key, therefore, is whether the profit base prior to taxes will be sufficient to cover the expenditures that government plans to undertake. The issue of a "profit-only" tax brings to mind Zambia's recent experience, one that is worth receiving in light of the revenue policies undertaken by the government.

II. ZAMBIA'S RECENT EXPERIENCE

Zambia's economic future looked bright as it entered the 1970's. Real growth during the preceding five years averaged eight percent while real growth per capita averaged nearly four percent. Copper exports led the growth. Export volume was growing and prices on the London Metal Exchange (LME) were volatile but on an upward trend. Export earnings and public revenues grew rapidly. Government succeeded in pushing gross capital formation to 32 percent of gross domestic product (GDP), and the tax effort rose to an impressive 30 percent of GDP.¹¹

However, Zambia's "good years" were limited by a number of factors. Some were beyond the country's control, but one was a matter of conscious policy. It had to do with a 1971 change in tax and ownership policy in the mining sector. Prior to 1971, a threefold levy was placed on companies: a minerals tax was placed on what was mined; an export tax on what was sold abroad, and a profits tax on what was earned.¹² The effect was to place taxes directly on extracting and exporting the country's wealth. As a result, more than half of the country's public revenues originated in the mining sector. The mining companies contended that the three-fold levy discouraged investment

because they were not directly related to company profitability. They convinced government that a profits-only tax would encourage more investment increase exports and add to government revenues and foreign exchange holdings.¹³ The reasoning behind the claim was that while the tax rate would be lower under the profits-only formula, the tax base would be proportionally higher. Public revenues would go up due to incremental investment leading to additional output, sales abroad, revenue to the mining companies, and profits (the tax base). However, net investment following the change was negligible. It was more likely induced by expanded global demand for copper rather than by the tax incentive.

The policy change would return to haunt Zambia. The change meant accepting the risk that prices would not move unfavourably in world markets. Zambia compounded this type of risk-taking by purchasing fifty-one percent shares in the country's two largest mining companies. The 1971 change in tax policy and nationalization could not have been more poorly timed because a number of events soon turned against the country. ¹⁴

On the supply side the first event struck in 1971 when the tragic mine disaster claimed at Mafulira some 100 lives. It also crippled one-sixth of Zambia's mining capacity for a year. Shortly thereafter breakdowns paralyzed twenty-percent of the country's capacity to produce. Second, the understandable trade cutoff with South African meant delays in obtaining replacement parts for the mines. Third, in 1972 and 1973 transportation bottle-necks began to impair Zambia's capacity to export what it could produce. The Rhodesian border was closed, the Benguela rail-road through Angola was virtually shut down as a consequence of the struggle against the Portuguese and the Civil war, the availability of shipping services was curtailed in the wake of the 1973-1974 oil shortage, and by 1975 Dar Es Salaam's port facilities became over-crowded. ¹⁵

Longer term problems were also emerging during the mid-1970's. Progressively more copper was being mined underground, and deeper underground at that. It was becoming progressively more difficult for workers to maintain the ratio of tonnage mined to hours worked. The decline in productivity put downward pressures on output available for export and boosted unit production costs. On the demand side, other factors were beginning to influence the global market demand for Zambia's copper. The global economic disturbances of 1974 through 1976, a factor beyond the country's control, depressed copper demand. At the same time some uses of copper were stepping up its substitution in favour of aluminium and other materials in production processes.

The inter-governmental Council of Copper Exporting State (CIPEC) was unable to boost demand. Unlike OPEC its market power was insufficient to support demand (and price).¹⁷ Its effort to limit supply in order to raise price backfired as stockpiling became costly and served to further close the gap between dropping LME prices and increasing production costs.

As unit prices declined and unit costs increased, profits were squeezed. The base taxation began to disappear. Zambia's revenue collections from mining companies began to dwindle. They accounted for 55 percent of public revenues in 1970 but by 1978 they contributed nothing.¹⁸ In 1970 Zambia collected 251 million Kwacha from mining companies but only 11 million was collected from the companies in 1977. By 1978, no such collections were made.

Zambia's economic collapse was more profound than simply the disappearance of mineral sector public revenues (see Table I). For example GDP declined from 998 million Kwacha in 1970 to 978 million in 1978. Real GDP per capita fell from 237 Kwacha in 1970 to only 185 Kwacha in 1978. Exports expanded marginally while imports rose from 328 to 565 million Kwacha over the period. Fuel imports climbed from 10 to 68 million Kwacha. The country's current account balance went from a positive 77 million Kwacha in 1970 to a negative 288 million in 1978. Zambia's foreign exchange holdings dwindled from 275 to 55 million Kwacha. The overall tax effort fell to nine percent of GDP, and by 1977 virtually no capital formation was taking place.

TABLE 1

ECONOMIC INDICATORS ZAMBIA: 1970-1978

(millions of Kwacha)

	<u>1970</u>	<u>1974</u>	<u>1978</u>
Gross Domestic Product (1965 prices)	998	1,000	978
Per Capital Gross Domestic product, (1965 prices, Kwacha)	237	207	185
Exports	673	900	701
Copper Exports	640	836	647
Imports	348	509	565
Fuel imports	10	46	68
Current Account Balance	77	48	-288
Foreign Exchange	275	129	55
Borrowing (Foreign)	0	13	17
Borrowing (Domestic)	3	-222	0
Public Revenue (total)	437	628	500
Public Revenue (mineral sector)	257	287	0

*

The Kwacha exchange for approximately 1,20 to 1,25 United States Dollars over the period.

Source: Bank of Zambia, Annual Report: 1974 (Lusaka: 1974),

pp. 1,2,25,49,50,60, and 82; and Bank of Zambia,

Annual Report: 1978 (Lusaka: 1978), pp. 27, 56, 57, 64 and 91.

III. TAXING MINING COMPANIES IN SOUTHERN AFRICA:

The case for including taxes on mineral volumes mined and exported from Southern African and other Third World countries is compelling. By including an element of taxation levied directly on physical wealth extraction avoids complete reliance on taxing profits, the global economy's valuation of that physical wealth. The valuation is expressed as the difference between unit price and cost times the volume exported. There are two ways that market pricing can operate against the fiscal interests of countries hosting foreign mining ventures. The first is transfer pricing. Transfer pricing occurs when volumes are exported to parent from subsidiary company and the parent determines the sale price as well as the unit cost of capital and intermediate inputs required in the extraction process. The parent company can therefore transfer wealth from host to home country by either offering a low transfer price for the mineral, or charging a high transfer price for the items used in its extraction. There are several reasons that a parent company might want to transfer profits to the home country: first, they bring profits and therefore re-investable surplus within arms reach of the corporate decision-makers; second, they escape currency and profit repatriation restrictions imposed by the host government; and third, they shift profits to where marginal tax rates are lower than in host countries. Imposing a levy on what is extracted and/or exported as a part of an overall tax scheme permits a host country to lessen the risk of transfer pricing that is adverse to its interests.¹⁹

The second way that market pricing can work against a host country's interest is when global forces drive down the price of its export and boost the price of imports.

Botswana, for example, appears somewhat susceptible to such forces, though not in the same magnitude as Zambia. On the export side in the impending economic slowdown customer countries could reduce global demand for Botswana's mineral and other exports and this could have a negative impact on its export earnings and unit prices. On the import side, the increase in oil prices to Southern Africa, Botswana's supplier of refined petroleum, will be felt in Botswana and, along with inflation imported from industrialized countries the country's import bill and unit production costs will increase. And it is on this latter score, that is the import side, Botswana is extremely vulnerable to global political and economic forces, particularly in regard to petroleum for which it depends on South Africa's ability to import and re-export. Botswana's future dependence on oil is related to two factors: first, diamond and copper mining are capital and energy intensive, and there is little room to move to more labour and less energy intensive production functions (as in the case of gold and iron ore mining); second, the country is physically large and land-locked and exporting minerals to market will be

petrol-intensive. Projections on the growth in petroleum consumption in Botswana are astonishing: according to the National Development Plan: 1976 - 1981, in 1976 the country consumed 27 million litres of petrol, a figure projected to rise to 54 million in 1981. Both from a unit cost and impact bill point of view, Botswana's petroleum future is clouded. However, on the price side one point stands very much in Botswana's favour: global recession tends to induce investors to hold wealth in assets such as diamonds. This tendency serves to bolster the price of diamonds in the face of market forces which depress economic activity in industrial countries and consequently their demand for non-fuel minerals generally

It appears clear that there will be a significant upward pressure on unit costs, and this could squeeze unit profits and depress the tax base. This is something that Botswana and other mineral rich Third World Countries want to avoid. In Botswana's case, it is particularly striking because of the potential magnitude of physical wealth under the Kalahari desert's sands. For example, a recent air magnetic survey conducted for government by the Canadian International Development Agency covered 80 percent of the Southern Kalahari region and showed positive indications of many minerals laying beneath the surface. The region is likely to be of importance for the development of precious and base metals, diamonds and mineral fuels. Government will certainly seek to capture an appropriately high share of the financial wealth that extracting and exporting of the physical wealth will yield. Imposing a tax scheme that includes a direct tax on the exploitation of physical wealth will go a long way toward realizing this objective.

There is an argument against imposing taxes that are unrelated to profits. The argument holds that taxes on extraction and exporting could lead to an effective tax rate so excessive that it would dissuade foreign investment to undertake or expand mining ventures. Production would decline as would employment, exports and foreign exchange earnings. In addition, the argument goes on, tax revenues might actually decline. A decrease in production would limit sales, reduce revenue and might therefore shrink profits. Under such conditions, the increase in the effective tax rate might be proportionally less than the decrease in the tax base (profits).

The argument's validity hinges on whether investment actually responds to a change in an effective tax rate. There is substantial evidence to the contrary. Investment in extracting and refining minerals tends to be induced by more effective demand for minerals. That is, parent companies and other using minerals in productive processes need them as inputs to manufacturing final goods. The profitability of manufacturing partly depends upon the

availability of mineral inputs supplied at favourable prices. What some companies might want, particularly parent companies of subsidiary suppliers, are not highly profitable mining ventures so much as what is mined.

Governments contemplating extraction and/or export levies need to know a great deal about the global structure of the industry they are hosting. They need to know where ventures fit into international product cycles, as well as knowing about corporate inter-relationships within the cycles. Enlightened decisions about what kind of tax system to levy on operations requires detailed information on global market structures.

FOOTNOTES

1. Bank of Botswana, Annual Report for 1978 (Gaborone: 1978) Ch. 1.
2. Central Statistics Office, Statistical Bulletin, Vol. 4 No. 1 (Gaborone: March 1979), pp. 9-10.
3. Bank of Botswana, Annual Report for 1978, Chs. 1-2 and Budget Speech: 1979, His Honour the Vice-President, Dr. Masire, (Gaborone: 1979), pp. 1-12.
4. Statistical Bulletin, Vol. 4 No. 1, pp. 10-12.
5. Ibid., p. 12; and Bank of Botswana, Annual Report for 1978, Chs. 1-2.
6. Budget Speech: 1979, p. 10.
7. Ibid., p. 10.
8. Ibid., p. 10.
9. E. Philip Morgan, "Botswana," in Africa Contemporary Record, edited by Colin Legum (New York: 1979), forthcoming.
10. Mining Legislation and Mineral Resources Agreement Workshop, Institute of Development Management, Gaborone, October, 1978.
11. Bank of Zambia, Annual Report: 1978 (Lusaka: 1979), Chs. 1, 3.
12. For discussions of company acquisition and changes in the tax revenue system, see Mark Bostock and Charles Harvey, Economic Independence and Zambia Copper (London and New York, 1972); and Anthony Martin, Minding Their Own Business: Zambia's Struggle Against Western Control (London, 1973).
13. These points were first outlined in the speech by President Kenneth Kaunda, "Towards Complete Independence," delivered at Matero, August 11, 1969 (Zambia Information Service: Lusaka 1969) p. 35.
14. Bank of Zambia, Report for 1973 (Lusaka, 1974), Chs. 1-4; and Ministry of Finance and Planning, Economic Report for 1973 (Lusaka, 1974), Chs. 1-3.

15. Bank of Zambia, Annual Report for 1973 and 1974 (Lusaka, 1974 and 1975), Chs. 1-4.
16. Ibid., Chs. 3-4.
17. For an analysis of the global copper market and Zambia's role in it, see F.E. Banks. The World Copper Market: An Economic Analysis (Cambridge: 1974). The economic factors constraining CIPE's effectiveness are outlined in Benison Varon and Xenji Takeuchi, "Developing Countries and Non-Fuel Miners," Foreign Affairs Vol. 52 No. 3 (1974), pp. 505-510; Raymond F. Mikesell, International Collusive Action in World Markets for Non-Fuel Minerals (Department of State: Washington, 1974), p. 11; and Donald Rothchild and Robert L. Curry, Jr., Scarcity, Choice and Public in Middle Africa (Berkeley: 1978), pp. 211, 216.
18. Bank of Zambia, Annual Report for 1978, Chs. 4-5. For analyses of the impact of budgetary downturns, see Richard Sklar, The Politics and Multi-National Corporations in African States: The case of copper in Zambia (Berkeley, 1975).
19. Transfer pricing actually has two objectives: The first is to minimise the net tax liabilities of multi-national or otherwise integrated companies by limiting or increasing profits attributed to subsidiaries operating in developing countries. When marginal tax rates are higher there, profits are shifted to developed countries whether the parent companies operate, until marginal tax rates are equalised.



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