Books

# The Nigerian tin industry

*By Jerker Carlsson*

**Books reviewed:**

B Freund, *Capital and Labour in the Nigerian Tin Mines*, Longman, 1981.
R Olufemi Ekundare, *An Economic History of Nigeria*, Methuen, 1973.
M Perham, *Mining, Commerce and Finance in Nigeria*, Faber and Faber, 1946–48.
R E Ubogu, "Mining and Quarrying", in F A Olaloku et al (eds), *Structure of the Nigerian Economy*, Macmillan, 1982.
G Oroza, "International Commodity Agreements in the Mineral Sector", *Raw Materials Report*, vol 2, no 3, 1983.
G Lanning and M Muller, *Africa Undermined*, Pelican, 1979.
J Thorburn, *Multinationals, Mining and Development*, A study of the tin industry, Gower, 1981.

The tin mining industry of the world – most of it found in the member countries of the *International Tin Council (ITC)*; Malaysia, Indonesia, Thailand, Australia, Nigeria and Zaire – is in a state of despair. Production stagnates, prices in real terms are depressed and unemployment problems are mounting. Attempts to regulate prices, with a long history in the industry, going back to the formation of the Tin Producers Association in 1929, have generally failed to have a significant impact upon price developments and thus the continued expansion of the industry.

A number of factors account for this. The US continues to sell from its strategic stockpile. Smuggling, particularly in Southeast Asia, undermines export controls. A growing share of world production takes place in countries not members of ITC and not signatories to the successive *International Tin Agreements* (ITA). Brazil is rapidly reaching a production level of 15 kt annually, Bolivia, which refused to sign the latest ITA in 1982, produces around 26 kt. Other countries with expansion plans are Peru, China, Burma and Canada.

In a world-wide perspective tin is the only metal whose consumption has stagnated from 1970 onwards. In 1982 consumption was around 158 kt falling drastically from 225 kt in 1970 and 224.3 kt in 1980.[1] The amount of the metal used in tin plate, by far its most important application, has been reduced due to technological improvements. The extended use of plastics and aluminium in the packaging industry has created another source of stiff competition.

Structurally, the international tin industry exhibits some specific features. Concentration of production among producing countries is quite high. The five major producing countries plus Nigeria accounted for about 75 per cent of world output in 1970 and 1980. Further, in the producing countries where production is not entirely nationalized, the corporate structure is very fragmented. Nigerian tin mines, at least up to the 1970s, is a good example of such a structure. A handful of large companies, with rather capital-intensive operations, exist side by side with a large amount of small operators, which account for a surprisingly high share of national output.

Although Nigeria today is a small producer indeed, with an annual output of around 5 kt, facing serious problems, it has not always been so. Tin mining in Nigeria goes back to pre-colonial times, tin straws being an important commodity of exchange in the regional trade of the central savanna. While entering the 20th century a process of capitalist take-over of the formerly indigenous industry began.

This process and its subsequent stages, reaching its final phase in 1977 when the Nigerian Mining Corporation assumed total control over the once foreign dominated industry, is the subject of a book by Bill Freund, *Capital and Labour in the Nigerian Tin Mines* (Longman, 1981), in which he gives a highly interesting account of an industry that up til now has been fairly neglected in the literature.

The book is divided into 8 chapters. The first chapter considers the characteristics of tin production in colonial times, stressing that colonial mining began as a take-over, not discovery. The following three chapters concern tin mining between 1900 and 1940, where he attempts to reconstruct the forms taken by capital and the means by which a labour force was produced and subjugated. Chapter 5 concerns the use of forced labour during the Second World War. In chapters 6 and 7 two types of resistance to mining companies are treated, the reaction of indigenous people in the Birom movement and the trade unions. The final chapter denotes the principal themes in the history of the mine fields since 1945, particularly the growing interventionism of the state. These 8 chapters make a fascinating reading, the book certainly fills a gap in West African social and economic history and should be regarded as a must.

Using Freund's book as a major frame of reference I shall try to provide an outline of the economic history of Nigerian tin mining. In doing so I shall place a major emphasis on the growing internationalization of Nigerian mining capital. Given the high degree of concentration of the world tin industry, both with respect to countries and companies, the process whereby Nigeria's tin mines become linked to international mining interests deserves to be highlighted. An analysis of this process is also justified by the fact that a particulary distinct feature of West African mining in post-colonial times has been its growing ties with international mining giants, quite often based in South Africa.

It is a bit unfortunate that this internationalization process is perhaps the weakest part of Freund's book. The book is organized around three relationships: between African labour and state and mining capital; between state and companies; and finally relations among the companies themselves. The major part of the book is devoted to an examination of the first two relationships.

Although he deals with the concentration and centralization of capital quite capably, it is nevertheless on a quite general level. Company formations, economic and financial results, all appear a bit randomly and sometimes leave the reader with a lot of loose threads in his hand. To a large extent this is of course due to the fact that Freund has used public records as his major source material, supplementing it with data picked up from journals, newspapers or other secondary sources. This is understandable as primary company records are either difficult to get access to, or simply do not exist. These comments should not be taken as a critique, but rather as a plea for more research. It must be made clear that Freund's priorities are quite in line with his general theoretical point of departure, which is contained in his remark; "I do not see the sense of writing business history ignoring the people who acutally created the wealth which business directs" [2]. A point well taken, as this is something which is frequently forgotten by business historians.

The process of development of the Nigerian tin mining industry is by no means unique in West Africa. On several points there is a strong resemblance to the pattern of development of the Ghanaian gold mining industry.

After an initial phase of pre-colonial mining undertaken by Africans themselves, a period of European take-over of the mine fields, followed roughly between 1880 and 1914. After the inevitable scramble and speculative activities followed a consolidation period, in the Nigerian case between 1914 and 1925. The modern oligopolistic structure began with the formation of the Associated Tin Mines of Nigeria in 1926. The last phase with increasing involvement by the post-colonial state began in 1972 and was completed in 1977. As in Ghana this phase was also characterized by close collaboration with international mining companies, although formal control rested with the state.

## Pre-colonial tin mining

Tin production in Nigeria has always been located to the Jos plateau. Villages in the Bauchi Emirate has been producing tin for a long time. The metal was primarily an article of exchange, as such of less significance than iron and cloth, in the regional trade of the central savanna. Peoples on the plateau refined the ore into tin straws, which formed the basis for smithing which took place as far away as Kano. Tin was used in the manufacture of horsegear, sheaths, bracelets, rings. Mixed with other metals it was used in the production of household goods. It was also widely used as solder in conjunction with iron. Little tin left West Africa until the eve of the colonial conquest.

## The European take-over of the industry

The commercial value of tin had increased considerably by the invention of the tin can in 1810. Its quality as a strong resistant metal increased its industrial application and world demand began go grow. The production of tinplated steel products had become very important in the US by the 1890s. Already in the 1880s the Royal Niger Company had begun buying up tin straws produced locally in response to this growing demand. Big-scale mining, however, had to await Lord Lugard's conquest of the Northern Territories in 1900. Up to that time Northern Nigeria had been the administrative responsibility of the *Royal Niger Company* (RNC). In its early treaties with Northern rulers RNC had always been careful to include a clause on complete surrender of mineral rights. This possession of exclusive mining rights formed the basis for RNCs claim of compensation if it had to transfer its administrative and jurisdictional rights to the colonial Government. In 1899 a rather incredible bargain was struck with the Government. In return for surrendering administrative control over its former empire, RNC would receive 50 per cent of Government revenue accruing from mining for 99 years. This royalty deal was the beginning of RNCs involvement in mining.

RNC never had the intention of abandoning its traditional role as a merchant house. Lord Scarborough, succeeding Goldie as company director, clearly stated that RNC should try to bring in outside entrepreneurs to work the properties. A lack of mining expertise and capital dictated this strategy. Under these circumstances, such a strategy would yield full benefit to RNC from the royalty arrangement with the Government.

Immediately after the deal was struck in 1899 RNC began securing concessions. Between 1902 and 1906 the company had obtained an almost total control of the tin deposits.

RNC soon began selling out its prospecting rights and in 1910 99 companies had filed applications for exclusive prospecting licenses. In the years preceeding the First World War a formidable boom started. The first company to move in was Champion (Nigeria) Tin Fields Company, which abandoned its unproductive gold-mining projects on the Gold Coast around 1909. When the railway reached Bauchi in 1911 and a number of roads had been built by 1914 over 200 companies had made investments, at least on paper, in the neighbourhood of 10 million pounds (GBP). But very few of these companies produced anything and by 1918 the number of companies was down to 82, with an issued capital of 2 million pounds.[3]

Among the largest producers at this time – Naraguta, Bisichi, Rayfield and Northern Nigeria – production was between 1–2 kt. Other, smaller producers, produced something between 0.3–1 kt annually. Few of the companies made use of any machinery, they obtained ore from a labour force who prospected and washed in the old ways and then sold their produce to the companies. "Early British tin miners in Northern Nigeria were only doing on a large scale what the black man with his limited resources has been doing for generations" [4]. Thus, companies were making their profit through the control of land and their exclusive right to export tin.

Up to 1909 a small smelter had been operated by RNC. It then decided to ship only ore (cassiterite). However, miners had become dissatisfied by the unwillingness of British smelters to pay Malayan prices and in 1911 they raised the idea of building a jointly owned smelter. RNC objected, knowing fully well that British smelters needed Nigerian ore to sweeten the less pure ones, imported particularly from Bolivia. When smelters finally agreed to raise prices, the idea of a smelter was dropped and tin was henceforth exported unrefined until 1961. To gain complete control of the mine fields and alienate indigenous producers, European companies and the colonial Government worked hand in hand. Two measures in particular were applied:

- Tin straws, refined tin ore produced indigenously, were sometimes sold at prices lower than the companies'own production costs. It therefore became imperative to eliminate this source of competition. Company pressures on the Government finally bore fruit and in 1913 Nigerian smelters were forced to shut down completely.
- The second means of achieving control was through expropriation of land. This dispossesion took two forms; African miners lost any right to work land and land rights in many communities where tin ore was located were simply disregarded.

The final blow to any African participation in the tin industry, except as labourer, came in 1909–10. In an effort to accelerate mineral development and tidy up the rather chaotic situation prevailing after the boom years, a new mineral code was formulated. It attempted to eliminate the large non-productive speculators and the small producers. The means applied were renewable leases after certain years and minimum lease fees, set high beyond the possibilities of the African miner.

> "Since the growth of European economic enterprise in Nigeria, native mining has been on the decline because of the de facto monopolisation of deposits by Europeans or on account of technical inadequacy or through the competition of European products with the final products of native mineral industries." [5]

Given the organization of production by early European companies, methods not marked by their high technological superiority, the prime cause to the elimination of Nigerian miners and smelters was the joint effort of the colonial Government and European capital to monopolise the deposits and create a satisfactory labour force supply.

A common area of concern of the Government and the mining companies was labour supply and the price of labour. Given the labour-intensive nature of the mining operations this was an extremely important issue. The solution to this problem, which we cannot deal with in detail here, involved a combination of forced labour, food imports to crush the native agricultural system, excessive taxation on the African and the construction of a railway network.

In early 1920 the tin price reached 372 GBP ton. The profits of RNC and the mining companies soared. Unfortunately by the mid-20s prices began to fall and the whole structure began to shudder. When the average profit fell from 64 GBP/ton to 4 GBP between 1920 and 1921, a process of liquidation and absorption started on the Jos plateau. The victim par excellence was RNC.

Failing mining companies could not pay their debts to RNC. Nigerian agricultural products lost their demand in Europe and the groundnut stock could not be sold. When the banks put on some pressure, RNC went under. Lever Brothers, with a scant interest in tin mining, took over RNC which was converted to the *United Africa Company* (UAC), a branch of the Lever empire.

## The introduction of oligopoly

The mid-20s was a period in Nigerian tin mining history when conditions were particulary ripe for a change in the old structure. Too many operators, where the majority was small-scale business, and none particulary successful, was clearly an outmoded situation. In fact up til then the major beneficiaries had been the Royal Niger Company, London City speculators and a few larger companies.

Technologically, the changing nature of the tin deposits demanded a switch to large-scale operations, if profitability was to be maintained. Two alternatives presented themselves; either a massive increase in the labour force, or the application of earth-moving equipment. The latter alternative was chosen, but required a solution to the energy problem. Water power was the most reasonable alternative, as oil had to be imported and therefore was expensive. The hydro-electric plant at Kwall Falls was opened in 1925 and owned by the mining company Northern Nigeria (Bauchi). Anybody controlling power generation had a safe route to ultimate control of the mine fields. The scramble could start.

H G Latilla, with a base in Rhodesia and the Nigerian tin mines of Ropp and Ex-lands, bought RNCs mining rights in 1925 and formed *Nigerian Base Metals Corporation.* Behind Latilla was Consolidated Gold Fields of South Africa. This giant had for long been interested in ventures outside South Africa, notably the gold mines of the Gold Coast. In a second step Latilla–Consolidated proceeded to build a hydro-electric plant at Kurra Falls, run by the new company Nigerian Power and Tin Fields Co Ltd.

Latilla's move was, however, immediately opposed by a combination of interests concerned about control of international tin production. The financial trust of Anglo-Oriental had first sought control over Malayan tin mines and succeeded by introducing new gigantic dredges. The dredge revolution in Malaya enabled the British to oust the Chinese operators from the scene and in the late 20s Anglo-Oriental controlled one third of Malayan production.

By using a similar integrated strategy of electric power control and dredge building, Anglo-Oriental moved into Nigerian tin mining. *Associated Tin Mines of Nigeria* was formed in 1926 in order to acquire the Jawara Tin Dredging Co and the Juga Valley Co. In 1927 Northern Nigeria (Bauchi) was taken over and Anglo thereby achieved control over Kwall Falls. A further series of absorptions, among them the Latilla property of Ropp, were later consolidated into the *London Tin Corporation* (LTC). LTC had been established in 1925 and had a considerable control of Malayan tin mining through its subsidiary Anglo-Oriental. Normally the LTC empire did not have majority ownership of the different mining companies. Instead control was exercised through the dispersed ownership among other shareholders and Anglo-Oriental acting as managers. A combination of management control and interlocking directorships held the empire together.

In Nigeria Anglo-Oriental specialised in properties using heavy machinery and hydro power. But, in spite of this concentration, smaller companies relying on tributing and with small investments in machinery managed to thrive as independents.

Anglo's next step was tin smelting, and a huge smelter was built in the UK in 1928. This step, however, brought Anglo into a direct clash with Antonio Patino. After bringing a major part of Bolivian tin mining under his control, Patino made a concentrated effort during the First World War to amalgamate British smelting under his control, starting with the largest smelter Williams, Harvey & Co. Simultaneously he expanded production in his high-cost Bolivian mines and thus shared with Anglo a need for a high, controlled price. A truce was reached between the two giants. Anglo invested in Patino's new holding company Consolidated Tin Smelters and Patino invested in Anglo's Malayan mines.[6]

In the middle of the 1920s a wild expansion of tin production occurred as the American market revived. In the last half of the decade Nigerian tin production grew from 8 937 tons in 1925 to 15 335 tons in 1929. But in May 1929 the tin price fell below the magic level of 200 GBP per ton. In December 1930 it was down to 103 GBP. The crisis hit the capital-intensive dredge operations more than the small producers, who simply tightened their belts and survived on a more meagre diet. In 1929 there were 10 companies with an issued capital over 200 000 GBP. They all survived the 1929/30 crisis. The largest number of liquidations took place in the group with an issued capital up to 100 000 GBP. 11 companies pulled out during these years, bringing the total number of mining companies down from 74 in 1929 to 59 in 1930.[7]

The low price threatened Anglo in Nigeria, as well as Patino in Bolivia. Immediately required was a price stabilization over 200 GBP. Anglo and Patino had already in 1928 started to manipulate tin stocks in order to control prices, but now the situation demanded more organized action. Dominated by Anglo a cartel, the *Tin Producers Association* (TPA) was formed in 1929.

The price control device first tried by TPA was voluntary restrictions of productions. This attempt failed, and in April 1930 a 20 per cent reduction of previous production levels was agreed upon. The *International Tin Control Scheme* was formed and charged with imposing compulsory restrictions on tin production.[8] When the agreement was renewed in 1934 Nigeria's quota was increased and exports began to climb again from the low of 9 800 tons in 1931.

In addition to the effects of the International Tin Control Scheme, a significant impact on prices was achieved when efforts to persuade the British Government to cut production in all its colonies succeeded in early 1931. About 85 per cent of the tin supply of the world was at this time produced within the British colonial empire. Furthermore, Anglo made its own contribution to price stabilization by secretly withholding tin from the world market.

In Nigeria companies had a hard time, belt tightening helped smaller companies to survive, but the colonial Government had to step in and reduced rents, royalty and freight rates. But, even more important was the continued hard taxation levied on the peasantry, forcing them to work for very low wages at the mines. The period nevertheless saw liquidations and amalgamations at the top of the corporate structure. The number of companies with an issued capital over 200 000 GBP were drastically reduced, from 10 in 1931 to 5 in 1932.[9]

From 1933 the world market picked up again and the second half of the 30s can be described as the golden era of tin mining in Nigeria. Rates of return on invested capital rose from 5 per cent in 1933 to 27 per cent in 1937.[10] This fortunate situation was largely due to the aftermath of the Depression and the then extremely low wages imposed with the aid of the colonial Government.

In the last half of the 30s, columbium was introduced in the manufacture of military aircraft. The raw material for this metal is columbite. This mineral, formerly regarded as an impurity, occurs with tinstone from which it is removed by means of magnetic separators. The Nigerian tin fields are the leading suppliers in the world. As it required little extra effort for the mining companies to recover columbite, production and profitability was given an additional boost. The first shipments to the US were sent off in 1936.

The revival of production in the late 30s – apart from a brief crisis interlude, when American demand temporarily faltered, but was efficiently dealt with by the International Tin Council through stock hoarding, made Anglo determined to embark on a massive investment programme. A new corporate structure emerged out of these attempts to raise the capital-intensity of the operations. The various Anglo companies in Nigeria were unified under the name of *Amalgamated Tin Mines of Nigeria* (ATMN). The dominant position of ATMN in Nigeria tin mining was witnessed by its control of 26 per cent of leased mining land, 47 per cent of tin ore production and 90 per cent of power consumption.[11]

On the eve of the Second World War a new expansionary phase was expected. But the production peaks of the war years, exhaustion of the richer ore bodies, limited possibilities for further efficiency gains through mechanization, and a weakening industrial demand, strongly indicated a trend towards stagnation. In anticipation of such a business outlook ATMN did not seek further expansion, but rather consolidation and retainment of achieved production levels.

## Interference by the post-colonial state

During the post-war period tin production stagnated as tin substitutes were found, steel producers economized in their use of tin, and electrolytic tinplating was invented in the US. While tinplate production grew, the consumption of tin fell.

The years of the Cold War was an exception, however, as the US Government embarked on several stockpiling programmes with a positive effect on prices. But with the entry of the Eisenhower administration, tin hoarding was stopped and prices fell. From then on tin demand was very sluggish indeed. A new upsurge did not materialize until 1973, with increasing demand, particulary from the expanding steel industry of Japan as an important contributing factor.

Nigeria experienced a somewhat different situation as its tin fields also produced columbite. In the first half of the 1950s producers switched to columbite and the US Government made special contracts with firms in Nigeria to develop columbite production. Phelps Dodge and Kennecott formed a subsidiary company – Tin and Associated Minerals – which bought out smaller tin operators in 1952 and worked the deposits at Odegi. Boom conditions prevailed during these years, but ended in 1955 when the US Government decided to reduce its purchases. Kennecott remained in Nigeria until 1974, when Tin and Associated Metals were sold to Sumitomo Metals and Mitsubishi.[12]

But columbite production remained an important complement to tin ore mining. Columbite production was 3 047 tons in 1955 (27 per cent of tin ore production), 3 332 tons in 1960 (32 per cent), 2 600 tons in 1965 (21 per cent) and 1 646 tons in 1970 (15 per cent), falling further to 1 312 tons in 1974 (19 per cent[13]).

After the war it was clear that the richer tin deposits were running out. In fact, already in 1944 a Government survey had indicated that new finds would require substantial investments in underground mining. But without considerable state support, companies were reluctant to do anything else than replacing worn out machinery. Except for the stockpiling years, profits during the 50s were low. They were frequently directed straight into dividends rather than ploughed back into re-investments. The bleak outlook of the industry led mining capital away from any expansion plans, instead it tended to revert to using manual labour.

Immediately after the war the policy of the colonial Government began to change towards interventionism. In 1946 a Colonial Office memo contained a new approach to minerals development:

> "Assertion of government control over mineral rights, the use of enhanced revenues from capitalist mining operations for expenditure within the colonies, establishment of a coherent planning policy controlling the size of concessions, the rate of exploitation and the length of mining leases."[14]

The implementation of the new Government policy immediately brought out two hot issues. After the war the old dispute over the UAC mineral right on tin royalties, inherited from the RNC, arose again. This time a settlement was reached. In 1950 the colonial Government took over UACs rights for 1 M GBP. The new attitude of the colonial Government was also seen in the question of smelting capacity in Nigeria. The Government put some pressure on ATMN and *Consolidated Tin Smelters* (Patino dominated) to open up a smelter. This was in stark contrast to the position in 1949, when the colonial Government had resisted such a project due to the need of British smelters for high-quality tin to mix with poorer Bolivian qualities. The new policy of the Government was influenced by import-substitution concerns, in turn related to the overall concern of maintaining the colony of Nigeria.

In 1961 a Portuguese firm, Embel, opened a smelter. This activated Consolidated and ATMN. They followed suit and opened a smelter at Makeri. When Embel closed down in 1962, with great assistance from ATMN and Consolidated, the latter had a monopoly on tin smelting in Nigeria. Further, as it also controlled Williams, Harvey in the UK, the Sydney smelter in Australia, Eastern Smelters in Malaysia, Consolidated in fact controlled 40 per cent of the tin supply of the world.

After independence, mining companies

weathered strong complaints about excessive taxation. ATMN claimed that in 1968, 95 per cent of its profits were swallowed by taxes and royalties. Similar complaints had also come from for example, Bisichi Tin Co when in 1961 it claimed that 69 per cent of its profits went straight to the state.[15] The sources of revenue to the Government included royalties, rents and licence fees and a mineral profits tax. However, unlike mining industries, the tin mines paid a royalty which was progressively calculated by a sliding scale based on the price of tin.[16]

Far more serious was the situation for smaller, private European miners, who virtually ceased to function during the 60s. A contributing factor, in addition to the harsh tax regime, was the inflationary impact on wage rates created by the oil boom. Labour supply problems soon arose on the tin fields, inflated wage rates, particulary compared to pre-war standards, levied a heavy burden on these comparatively labour-intensive operations. The final effect was that mining capital began to leave Nigeria.

The interventionist tendency of the late colonial state was amplified by the post-colonial state, leading to virtual takeovers from foreign capital. In 1972 the *Nigerian Mining Corporation* was formed. The original aim was an investigation of possibilities for continued underground mining. Close links were established with the *Gold and Base Metal Mining Company*, a Latilla owned company. It had grown by buying up less fortunate mines (for example Bisichi and Naraguta), and in 1974 subscribed a 40 per cent interest in NMC. State involvement proceeded. Already in 1967 the Northern Nigeria Development Corporation had bought a 16 per cent interest in Makeri, its share was further expanded in 1977 to 40 per cent. In 1976 NMC bought 40 per cent of ATMN. The 1977 Indigenisation Decree brought Nigerian ownership to 60 per cent.

Simultaneously the corporate structure of the London Tin Corporation, ATMN's parent company, changed. In a stock exchange take-over the Malaysian parastatal Pernas acquired control of LTC. A new company – the *Malaysian Mining Corporation* (MMC) – was established as a partnership with Charter Consolidated, which held a 29 per cent interest in the new company. In 1984 the Charter ownership was down to 13.83 per cent.

The influence exercised by Charter is perhaps larger than this minority share might suggest. MMC was managed by Pernas Charter Management, in which Charter and Pernas held 50 per cent each.[17] Since 1982 MMC is officialy the sole manager, but the old company is still retained . . .

During the period when these ownership changes occured, Nigerian tin production fell steadily. From 13 kt in 1968/69 production went straight down and stabilized around 5 kt. From 1962 almost all of production consisted of refined tin produced at the Makeri smelter and only small amounts of tin ore. Columbite production was also on the decline, down to 1 312 tons in 1974.

Production was by now almost totally dominated by ATMN – 83 per cent of total output in 1977 – and the Gold and Base Metal Mines of Nigeria. The rather ironic situation thus emerged where the Nigerian state entered into partnership with a Malaysian corporation, MMC, in which South African mining capital exercised a considerable influence. Through its stake in MMC, Charter got into ATMN and Nigerian tin mining. GBMM have since Latilla's days had close ties with Consolidated Gold Fields of South Africa. In 1980 the Anglo-American group also got a foot into this part of Nigerian tin mining, when it acquired a 25 per cent interest in Consolidated Gold Fields.[18]

Apparently MMC viewed the future of Nigerian tin mining with considerable pessimism, when in July 1982 it sold out its entire stock in ATMN to Dove Holdings Limited an investment company based in Jersey.[19]

State involvement in the industry was part of a more general indigenization strategy encompassing the national economy as a whole. But the Government had also been quite dissatisfied by the lack of expansion of the tin fields and its obvious state of neglect. However, this situation was largely caused by structural problems facing the tin industry, visible already after the war. A massive modernization programme is needed if production shall stand any chance of revival. In particular underground mining must get underway. On the other hand the former foreign owners had refrained from such a programme as it paid more, in view of the world market situation, to limit production and stimulate profits through creating scarcity. This seems to be the key to the problems of the Nigerian tin industry. Given the world market situation, in essence rather similar to the situation of the 50s, and given the need to maintain the International Tin Agreement, the ultimate profit strategy must consider production quotas. But when quotas do not lead to any substantial price rises, but rather maintain existing price levels, expansion plans becomes risky ventures indeed.

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Notes:

1 South, June 1984, no 59.
2 Freund, p 3.
3 Ekundare, p 180.
4 Freund, p 39.
5 Perham, p 4.
6 Thoburn, p 63–65.
7,8,9 Ekundare, p 180; 178; 180.
10,11 Freund, table 4.5; p 126.
12 Lanning and Muller, p 299.
13 /Annual Abstracts of Statistics, various issues/Nigerian
14,15 Freund, p 212; 233.
16 Obogu, p 52.
17,18 Thoburn, p 83; 70.
19 Malaysian Mining Corporation, Annual Report 1983. ■