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BAUXITE BARGAINING

The consequences for a bauxite-producing country of the renegotiation of the bauxite levy: The example of Guinea

by Bonnie K. Campbell

Prepared for the Negotiations Branch
United Nations Industrial Development Organization

May 1986

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The consequences for a bauxite-producing country of the renegotiation of the bauxite levy: The example of Guinea

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SUMMARY

Past discussion of the place of a producer country such as Guinea in the context of the development of the bauxite-alumina-aluminium industry on a world scale, has centred around the causes which limit and condition the capacity of a bauxite-producing country to negotiate with the trans-nationals of the aluminium industry with a view of attracting further local transformation of the raw material.

More recent developments suggest that the restructuring of the aluminium industry (its increasing tightening, vertical integration and internationalization) has, among other factors, resulted in renewed pressure on bauxite-producing countries of the Third World. Hence the issue at stake has shifted ground. The central question no longer appears to be that of the conditions permitting eventual local trans-formation, but rather, for those countries highly dependent on bauxite, the conditions for maintaining a minimal level of revenue through export taxes on the non-transformed raw material in order for public investment spending to remain at an adequate level and, consequently, for the country not to regress economically.

For at least one producer country, the Republic of Guinea, if the present attempts by the transnationals of the aluminium industry operating the important site of Boké should succeed in suppressing the Guinean bauxite levy, the country would find itself in a situation of cessation of payments: debt service could no longer be honoured; the operating budget would come to a complete halt; and the measure would wipe out the country's public investment programme - the central instrument on which the new government and the international and bilateral organizations supporting it (the World Bank, the IMF, UNDP, FED, KWF, CCCE, etc.) have concentrated funding and technical assistance in an attempt to permit the country's economic reorganization and recovery.

In this sense, as is documented in the case study, there appears to be, at present, a fundamental contradiction between the stringent position taken in negotiations by the integrated transnationals of aluminium on the one hand and, on the other, the planning and funding objectives and commitments of international and bilateral organizations supporting the strategies of development and co-operation of developing countries such as Guinea.

While the case study examines the situation in only one bauxite-producing country, there is every reason to believe that, should bauxite prices be reduced, similarly alarming results would be obtained if the analysis were applied to certain other countries which are in a position of extreme dependence vis-à-vis revenue from bauxite, notably Jamaica and Surinam.

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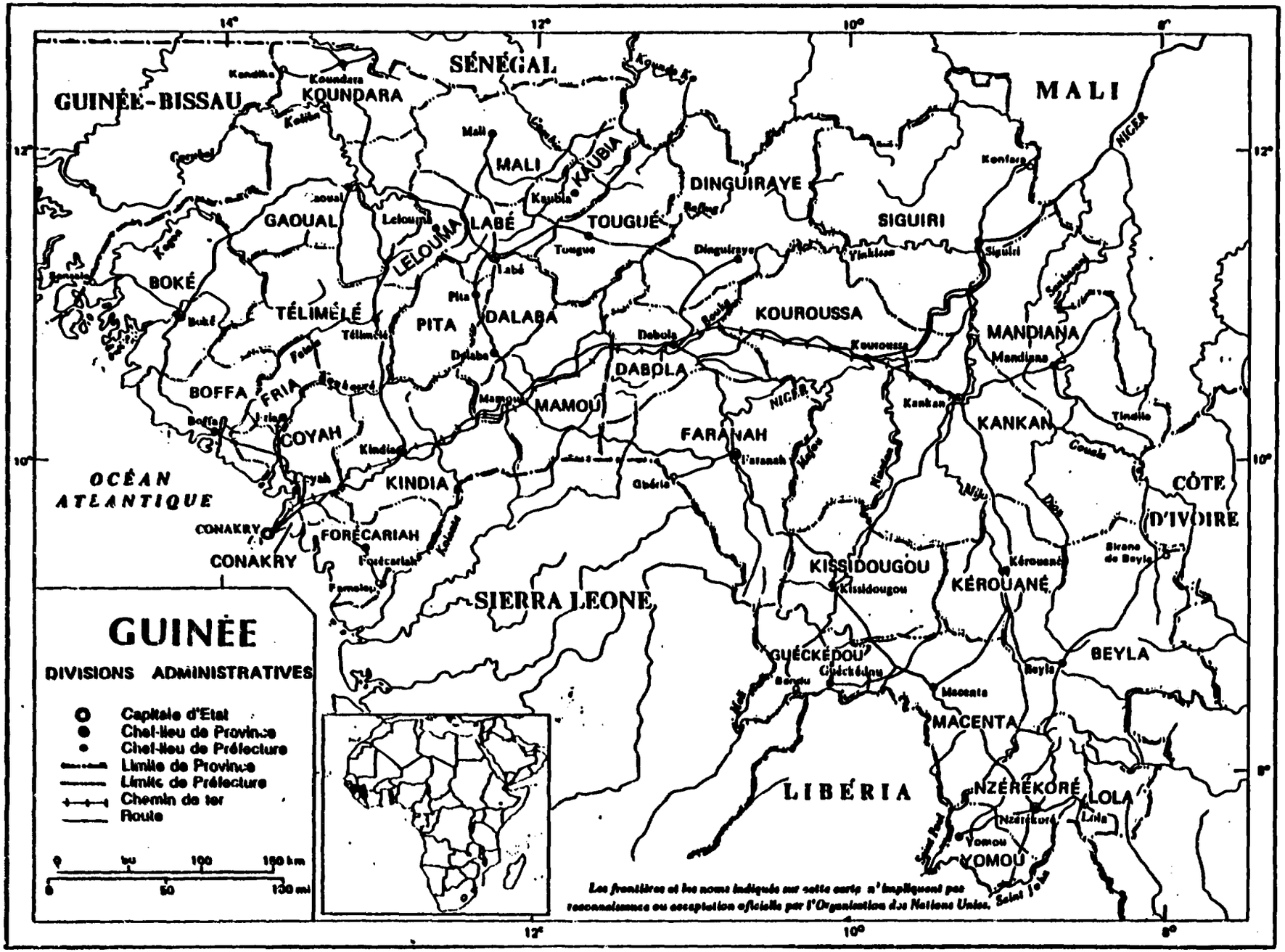
CONVERSION TABLE

1 metric tonne	0.984	tonnes (long)
	1.102	tonnes (short)
	2204.622	pounds
	22.046	hundred-weight (short)
	1000.000	kilograms
1 long tonne	1.016	tonnes
	2240.000	pounds
1 short tonne	0.9071	tonnes
	2000	pounds

THE REPUBLIC OF GUINEA - ADMINISTRATIVE DIVISIONS



SOURCE: Map No. 3022 Rev. 2(F) UNITED NATIONS
November 1985

INTRODUCTION

Past discussion of the place of a producer country such as Guinea in the context of the development of the bauxite-alumina-aluminium industry on a world scale, has centred around the causes which limit and condition the capacity of a bauxite-producing country to negotiate with the transnationals of the aluminum industry with a view of attracting further local transformation of the raw material.

More recent developments suggest that the restructuring of the aluminium industry has, among other factors, resulted in tightened pressure on bauxite-producing countries of the Third World. Hence, the issue at stake has shifted ground. The central question no longer appears to be that of the conditions permitting eventual local transformation, but rather for those countries highly dependent on bauxite, the conditions for maintaining a minimal level of revenue through export taxes on the non-transformed raw material in order for public investment spending to remain at an adequate level and, consequently, for the country not to regress economically.

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In this sense, as will be documented by the case study, there appears, at present, to be a fundamental contradiction between the stringent position taken in negotiations by the integrated transnationals on the one hand, and on the other, the planning and funding objectives of the international and bilateral organizations supporting the strategies of development and co-operation of countries such as Guinea.

The explanation for this situation lies not merely at the level of the political determination of the producer country concerned, nor at the level of the strategies of the firms involved, nor even at the level of the interaction of these two types of factors. A government's policies, vis-à-vis foreign firms, just as the strategies of the firms themselves, only become comprehensible if the analysis takes into consideration the forces which act on and through these policies and strategies. An evaluation of the negotiating capacity of a raw material-producing country depends on another level of analysis, that of the conditions of accumulation specific to the industrial branch in question and, more generally, the conditions of accumulation on a world scale.

It is on the basis of the above hypothesis and approach that the present paper will, in accordance with the terms of reference suggested, present an analysis of the technical and socio-economic characteristics of both mining and processing operations, as well as the strategies of development and co-operation with regards to an important producer of bauxite, the Republic of Guinea.

In order to do so, the study will be composed of the following sub-sections:

- **PART I**
  A brief presentation of the specific characteristics of the process of accumulation of the aluminium branch, which will permit summarizing, very briefly, recent developments in the evolution of the bauxite/alumina and aluminium industry on a world scale.

- **PART II**
  A rapid overview of the historical development of the bauxite and alumina sector in Guinea, with a view of presenting the most recent developments.(1)

- **PART III**
  A case study of the consequences for the Republic of Guinea of the re-negotiation of the bauxite levy.

(1) A far more comprehensive presentation is given in our volume: Les enjeux de la bauxite: La Guinée face aux multinationales de l'aluminium, (Presses de l'Université de Montréal et Institut Universitaire de Hautes Études Internationales, Genève), 1983.

PART I

A brief presentation of the specific characteristics of the process of accumulation of the aluminium branch, and recent developments in the evolution of the bauxite, alumina, and aluminium industry on a world scale.

Before undertaking the study of a producer country such as Guinea, it is useful to recall the specific characteristics of the process of accumulation in the aluminium branch. This will, in turn, enable us to better understand recent developments in the evolution of the bauxite-alumina-aluminium industry on a world scale, which is the essential background for understanding recent developments in Guinea.

On a general level, the conditions of accumulation and realization of surplus value in a given industry may be clarified if one takes into account a series of variables. These variables are important in determining the form and degree of competition among firms, and the nature of their strategies. Moreover, there is a dynamic interaction between the impact of the strategies of the firms and the evolution of the conditions of accumulation in the industry. The following five variables are proposed by J.-P. Vignolle.[1] Applied to the aluminium industry, they

(1) J.-P. Vignolle, La politique commerciale d'une grande entreprise, École des Mines, Centre de sociologie de l'innovation, document de travail, March 1972. Quoted by Pierre François, "Stratégie du capital: l'aluminium", Travaux sur le capitalisme et l'économie politique, no 12, Département d'économie politique, Paris VIII, Vincennes n.d.

suggest the following characteristics:

1. The rapidity of the renewal of the techniques of production.

   The great stability of techniques may be explained by the fact that the transformation process remains that by electrolysis. The nature of this process explains, in turn, the critical size of production units, the importance of fixed capital, and the degree of economic concentration, etc.

2. The degree of interdependence of the firms in the industrial branch.

   The high degree of interpenetration of markets in the aluminium industry is a result, among other things, of the geographic redefinition of productive regions at the time of the Second World War and the expansion of the capacity of North American producers.

3. The relation between the productive capacity of the firms and demand.

   This industry is characterized by a strong tendency for over-capacity, which reflects factors such as those noted above; e.g., critical size, fixed capital, etc.

4. The nature of the final product - whether it is a raw or finished product.

   In the aluminium industry, due to the high degree of concentration, competition has shifted from the raw product (bauxite) to the finished product.

5. The nature of relations between this industrial branch and those branches which use its output as an input - whether the branch may be considered dominant or not.

   The aluminium industry has become dominant, and has tended to replace competing products such as copper, paper, cardboard, etc. The tendency to dominate is illustrated by the economic and financial integration of client sectors and competitors - as, for example, Noranda Mines, initially a multinational copper producer, recently became the largest private shareholder in the Guinean site at Fria, ahead of the French firm, P.U.K., which initiated the project during the colonial period.

While each of these characteristics is interrelated, recent developments in the aluminium industry have drawn much attention to the third, the tendency towards over-capacity.

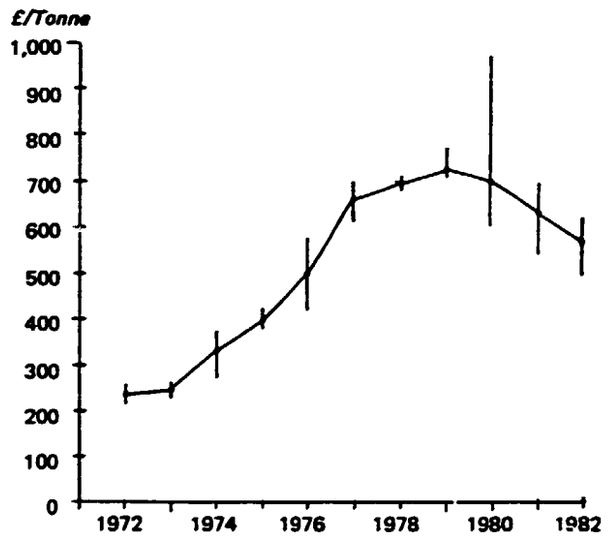
In fact, a great deal which has been written lately attributes the slump of the last few years of aluminium and alumina prices, and the more generally "depressed primary aluminium market", to the problem of over-supply. Because the argument which emphasizes the "depressed" situation is invoked in the renegotiations which will be discussed in Part III, it is worthwhile to situate recent trends in a broader perspective.

If, during the most recent time of glut (1981-1983), the six major producers (Alcan, Alcoa, Alusuisse, Kaiser, Pechiney, and Reynolds) have been forced tc abandon their list price (fixed on the basis of costs plus a return) and adhere more closely to the free market price, the more recent slight depreciation in prices does not erase the fact that aluminium prices tripled over the decade (1972-1982) as Diagram I following indicates. It was during this period of expansion and profitability that many new projects were undertaken.

Diagram 2 reveals even more clearly that the down-turn of prices is a recent phenomenon (1981). It has, nonetheless, affected U.S. production which, by December 1984, was 77.6% of annual rated capacity.

DIAGRAM 1[1]

Aluminium Ingots (99.5%) Prices—Annual Averages, Highs and Lows (Free Market)



[1] SOURCE: World Index of Strategic Minerals: Production, Exploitation and Risk, by D. Hargreave and S. Fromson. Published by Gower, 1983, p. 40.

DIAGRAM 2
U.S. Aluminium Price and Production Comparison

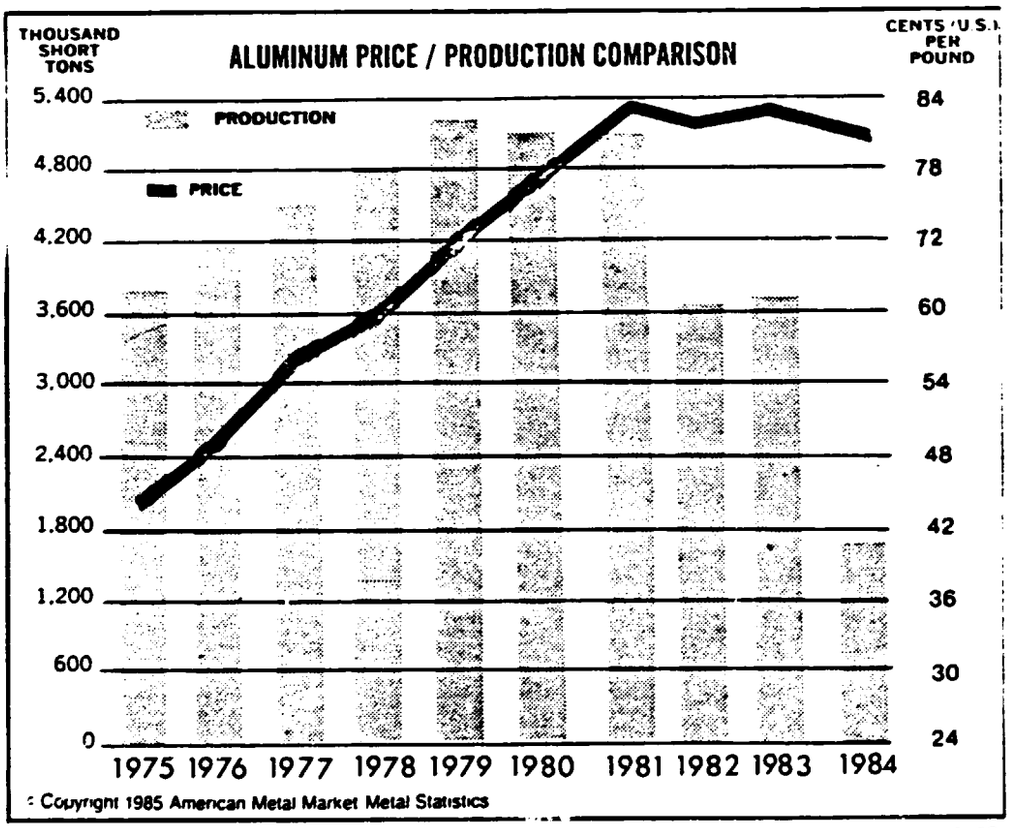


Chart compiled by AMERICAN METAL MARKET from total monthly primary production figures of the U.S. Aluminum Association and AMM monthly average prices.

SOURCE: Metal Statistics, 1985. Produced by American Metal Market, Fairfield Publications, 1986, p. 22.

In order to replace the current situation of over-supply in perspective, it is useful to recall that this is not a unique situation. At the beginning of the seventies, world aluminium productive capacity increased more rapidly than demand. The price of the ingot dropped, and stocks increased. It was in this context that the International Primary Aluminium Institute was created in 1972. One of its functions was to monitor production. A first question, therefore, becomes, what were the causes of the more recent over-supply?

Secondly, in the context of a state of over-supply, what has been the structural evolution of the aluminium industry?

Finally, as a result of the above, with the pressure shifting to the costs of bauxite and pressure to cut prices evidently intensifying, what are the implications for a bauxite-producing country such as Guinea?

At one level, the explanation for the over-supply is quite simple: too many refineries are producing too much alumina, while the level of demand has not kept pace, with the result that the surplus becomes a bargain source of supply for those smelters not fully committed to long-term supply contracts. Prices for these sales have an impact on the long-term contracts they are designed to supplement, and the downward spiral begins.

While, according to certain analysts, some of the blame can be

attributed to developing nations who have decided to develop their own refinery facility, regardless of the world supply-demand situation (Venezuela's Interalumina plant is cited), the bulk of the over-supply, however, is recognized to be the responsibility of the integrated producers. Poor forward planning is in part explained by the typically long-term leads required for refinery construction. After years of high consumption growth rates and the still low per capita use of aluminium in the Third World, the integrated producers appear to have planned for demand which never materialized.

Certain of the leading integrated transnationals have apparently made important miscalculations by constructing new modern refineries.(1)

(1) Alcan Aluminium Ltd., which is of particular interest to this study because of its interests in Guinea, is one of the transnationals which appears most affected by apparent miscalculations. In recent years, the company had assumed major shares of refineries constructed in Spain and Ireland with the view of better supplying its European smelters. With world demand failing to develop as the company had anticipated when the projects were first launched, Alcan finds itself with considerable excess capacity and equity stakes in the two most modern and most costly alumina refineries in the western world. As a result, the company is attempting to make quite drastic adjustments which, according to certain sources,(i) may involve the closure of the newest plant at Aughinish in Ireland. In view of the extremely generous concession accorded the company by the Industrial Development Authority of Ireland to attract the project and ensure its profitability, such as a tax-free holiday on all products destined for export to 1990, the eventuality of a closure is particularly significant.

(i) "Alcan négocierait la fermeture de son usine d'alumine à Aughinish en Irelande." Finance, September 30, 1985.

Another, and perhaps the most central cause of over-supply is Australia's expansion, as illustrated by Tables 1 and 2.

TABLE 1
Alumina: World Production[1] by country[2]
(In thousand metric tonnes)

Country[3]	1980	1981	1982	1983[p]	1984[e]
Australia	7,246	7,079	6,631	7,231	[4]8,390
Brazil	[r]517	497	606	787	800
Canada	1,202	1,278	[e]1,127	1,116	[4]1,126
China[e]	750	750	800	800	800
Czechoslovakia[e]	100	100	100	100	100
France	1,173	1,095	960	853	850
German Democratic Republic	43	[r]45	46	42	43
Germany, Federal Republic of	1,608	1,651	1,510	1,580	1,550
Greece	494	490	420	[r e]410	410
Guinea	708	608	549	583	[4]508
Guyana[5]	[r]214	[r]157	73	--	--
Hungary	805	792	710	836	[4]839
India[e]	500	500	500	450	560
Ireland	--	--	--	66	[4]654
Italy	900	786	698	476	750
Jamaica	2,456	2,556	1,758	1,907	1,690
Japan	1,936	1,344	959	1,065	[4]1,172
Romania[e]	534	540	514	[r]512	510
Spain	58	605	672	[e]650	660
Suriname	[r]1,329	[r]1,165	1,055	1,129	[4]1,208
Taiwan	(6)	(6)	(6)	--	--
Turkey	128	131	84	57	80
U.S.S.R.[e]	2,700	2,800	3,000	3,200	3,300
United Kingdom	102	90	88	93	70
United States[e]	6,810	5,960	4,130	4,000	4,680
Venezuela	--	--	--	560	1,130
Yugoslavia	1,058	1,037	1,017	[r e]1,015	1,000
Total	[r 7]33,382	[r]32,076	28,007	29,518	32,980

[e]Estimated. [p]Preliminary. [r]Revised.
[1]Figures presented generally represent calcined alumina; exceptions are noted individually.
[2]Table includes data available through July 2, 1985.
[3]In addition to the countries listed, Austria produces alumina (fused aluminum oxide), but output is entirely for abrasives production. Output totaled 28,223 metric tons in 1973; production data subsequent to 1973 are not available.
[4]Reported figure.
[5]Calcined alumina, plus calcined alumina equivalent of alumina hydrate.
[6]Revised to zero. Data published in previous editions of this table were found to be imports and as such were duplicative of production reported for other countries.
[7]Data do not add to total shown because of independent rounding.

SOURCE: Minerals Yearbook, 1984.
"Bauxite and alumina", United States Department of the Interior. Preprint from the 1984 Bureau of Mines Minerals Yearbook, p. 11.

TABLE 2
World annual alumina capacity, by country
(In thousand metric tonnes, yearend)

Country	1982	1983	1984
Australia	7,840	7,910	9,750
Brazil	540	r650	1,150
Canada	1,225	1,225	1,225
China	r850	r850	850
Czechoslovakia	100	100	100
France	1,320	1,320	1,320
German Democratic Republic	65	65	65
Germany, Federal Republic of	1,745	1,745	1,745
Greece	500	500	500
Guinea	700	700	700
Guyana	355	355	355
Hungary	895	895	895
India	675	675	675
Ireland	--	800	800
Italy	920	920	920
Jamaica	2,825	2,825	2,825
Japan	2,615	2,615	2,615
Romania	540	540	540
Spain	800	800	800
Suriname	1,350	1,350	1,350
Taiwan	160	160	160
Turkey	200	200	200
U.S.S.R.e	4,500	4,500	4,500
United Kingdom	140	140	140
United States	7,495	7,145	6,345
Venezuela	--	1,000	1,000
Yugoslavia	1,635	1,635	1,635
Total	r39,990	r41,620	43,160

eEstimated. rRevised.

SOURCE: Ibid., p. 11.

As can be seen from the foregoing tables, by far the largest part of recent expansion of world alumina refinery capacity has taken place in Australia. In 1972 Australian capacity was a little over 3 million tonnes per year from six plants. Actual 1984 production was 8.8 million tonnes, and accounted for no less than 34% of western alumina production.(1) This expansion has occurred because Australian alumina is cheap. With massive deposits of bauxite and low-cost fuel (coal), the decision to proceed with the new projects remains logical even today. What is more difficult to understand, however, is the argument that the new Australian refineries were intended by the integrateds who were responsible for financing them to be complementary, rather than replacement capacity.

In 1984 annual alumina capacity in Australia was increased by 1.84 million tonnes during the year alone by the opening of two new refineries and the expansion of a third.

Without entering into the detail of the various sites, it is important to note the involvement of certain of the largest integrated firms in the new Australian operations.(2)

(1) Metal Bulletin, November 22, 1985.

(2) Australia's major aluminium industry expansion took place in the state of Western Australia, where annual alumina capacity in 1984 increased by 1.5 million tonnes to a total of 5.3 million tonnes. In February of the same year, Alcoa of Australia (Western Australia) started up operation of the 500,000-tonne-per-year Wagerup refinery and, in May, the one-million-tonne-per-year Worsley Alumina Pty Ltd started production. Worsley Alumina is owned by Reynolds Alumina Australia Ltd (40%), Shell Co. of Australia Ltd (30%), BHP Minerals Ltd (20%), and Kobe Alumina Associates (Australia) Ltd (10%). Minerals Yearbook 1984. "Bauxite and Alumina", op. cit., p. 8.

The significance of these new Australian operations may be appreciated in the context of the recent structural changes of the aluminium industry. One analyst points to several trends which have resulted in the tightening of the structure.(1)

(i) Several integrated North American transnationals have gotten rid of important blocks of shares, and others have substantially reduced capacities. In view of the recent developments in Australia, the example of Reynolds is particularly interesting in this regard. In March 1984, Reynolds' Jamaica Mine was closed down, and Alpart Jamaica, in which Reynolds is associated with Kaiser and Arco, was off-stream for over half of 1985. Reynolds will obtain new bauxite supplies from other countries, notably Australia and Guinea. Reynolds has a 40% interest in the new Worsley bauxite and alumina complex in Western Australia that was to start shipments in the second quarter of 1984. Also, and of particular interest to the case study at hand, Reynolds agreed, in 1984, to purchase from Martin Marietta 6% of the common stock of Halco Mining Inc. which, in turn, owns 51% of the 9 million t.p.y. Boké bauxite mine in Guinea. As will

(1) Gilles Proulx (Chief Economist at Alcan): "Les prix de l'aluminium ont continué de frôler les cours planchers en 1985." Les Affaires, Montreal, January 25, 1986, p. S-23. The examples given of these trends are ours, and not the author's.

be seen in Part III, Martin Marietta either shut down or sold all of its remaining aluminium interests, notably to Comalco.

Of the other examples of reduction of capacity, Mitsui recently closed its Wakamatsu refinery in Japan (although much of the reduction will be made up by increased operating rates at other Japanese plants), and Alcoa of Australia was to reduce the operating rate of its Kwinana plant to 70% of its 1.4 million t.p.y. capacity in 1985 and early 1986.[1]

(ii) Secondly, there were many important changes in ownership, as illustrated by the Reynolds-Martin Marietta example just cited which have permitted certain firms, such as Reynolds, to improve their access to high-grade sources of bauxite, while other firms have abandonned their operations in aluminium (i.e., Martin Marietta).

(iii) Consequently, a third aspect is that certain companies, particularly newcomers to the industry, are withdrawing from the market or attempting to minimize their losses.

[1] Metal Bulletin, November 22, 1985, p. 11.

A rather spectacular example of this is the case of the Japanese primary aluminium industry. Particularly since 1978, and over a period of only five years, there has been a free fall in Japanese production levels. From 1,118,000 tonnes per year, the record high, production fell to 257,000 tonnes in 1983, and production in 1985 was expected to drop further. Simultaneously, however, Japanese imports of primary aluminium increased from 350,000 in the early 1970's to 1,300,000 tonnes in 1983.(1)

To summarize these remarkable changes, the Japanese strategy has been to reduce productive capacity on the national territory, and to open new capacity near sources of bauxite and cheap sources of energy and, finally, to concentrate on further processing in Japan itself.

The fact that the Japanese industry depends more and more on imports for its primary aluminium has forced it to become increasingly internationalized, and not only with regards to direct foreign investment abroad. Firms such as Comalco, Pechiney, and Alcoa have increasingly closened their links with the Japanese industry.

One may conclude this section by suggesting that there has definitely resulted a tightening and a further vertical integration and

(1) L'Usine Nouvelle, No. 28, November 28, 1984.

internationalization of the structure of the aluminium industry through the reinforcement of the position of transnationals in a more advantageous position and the withdrawal of others.

Whether the advantages of this tightening are based on the creation of several coherent and independent geographical zones of operation, as certain indicators suggested in the mid-1970's might happen, would require a more detailed examination. However, whether this has happened or not, one may concluded that the expansion of Australian production, in particular, has had the result of lessening the dependence of integrated transnationals on Third World sources of the raw material - with the far-reaching implications on pricing that this entails.

Before looking more closely at recent developments of the bauxite sector in Guinea with a view of studying the impact of current negotiations over pricing, it is useful to look briefly at production and pricing of bauxite in general.

The Production and Pricing of Bauxite

Because of the vertically-integrated nature of the aluminium industry, bauxite, like alumina, is rarely traded on open-world markets. Both commodities are normally traded under long-term contracts, or through intra-company transfers. With the exception of spot sales and specialty forms and grades, prices are not listed in trade journals.

Over the past years, the International Bauxite Association,[1] formed in 1974, has attempted to guide its members each year by recommending minimum prices at which they should sell their products to the major consumers in North America and Western Europe. This has not been an easy task because of the different ways in which individual producers determine their costs of production. Furthermore, over the past few years, when the market has been in over-supply and producers have been anxious to secure sales, the recommended prices have not generally been followed by member countries.

For example, the IBA had recommended a minimum c.i.f. price of $35 per tonne for base-grade bauxite ore in 1985, and a minimum c.i.f. price of $225 per tonne for metallurgical grade alumina.[2]

The Association subsequently attempted to produce a reference system for pricing its members' raw materials. This was to be determined by using the price of primary aluminium ingot. The reference price is calculated by taking 50% of the average of medium to long term prices for aluminium ingot, and adding to it 50% of the average spot

[1] The International Bauxite Association acts as monitor and data bank for the major bauxite and alumina-producing nations of the world. In 1984, its eleven member countries accounted for about 73% of world bauxite production. Its members include: Australia, Guinea, Jamaica, the Dominican Republic, Ghana, Guyana, Indonesia, Sierra Leone, Surinam, and Yugoslavia.

[2] Mining Journal, December 7, 1984.

market price for 99.5% purity metal sold in North America and Europe. The IBA has recommended that, in 1986, its members should set the minimum price for metallurgical-grade bauxite between 2.5% and 3.5% of the reference price. The recommended minimum price for alumina is between 12% and 16% of the reference price. Whilst the recommended minimum prices are not binding upon members, the IBA regards them as fundamental if producers are to receive a fair price for their products.

Meanwhile, the Association continues its efforts to encourage major producers who are not members to join the IBA. In particular, the Association is anxious that Brazil join.

However, by far the most problematic member of IBA is Australia. As with alumina, Australia is the world's largest and cheapest producer. See Table 3.

Estimated Australian production of bauxite in 1984 was around 29 million tonnes out of a western world total of close to 70 million tonnes. However, as has been noted, more and more of this is being refined and smelted domestically. In fact, Australia exports only about 5 million tonnes of its bauxite production, consuming most of its annual output domestically in the production of alumina. Australia does, however, export a large proportion of its alumina because the domestic primary aluminium industry is relatively small in proportion to the country's raw material capacity.

Because of these particular circumstances, the relatively small portion of Australian bauxite exported is set at very competitive prices - at around $15 per tonne.

TABLE 3
Bauxite: World Production by Country
(In thousand metric tonnes)

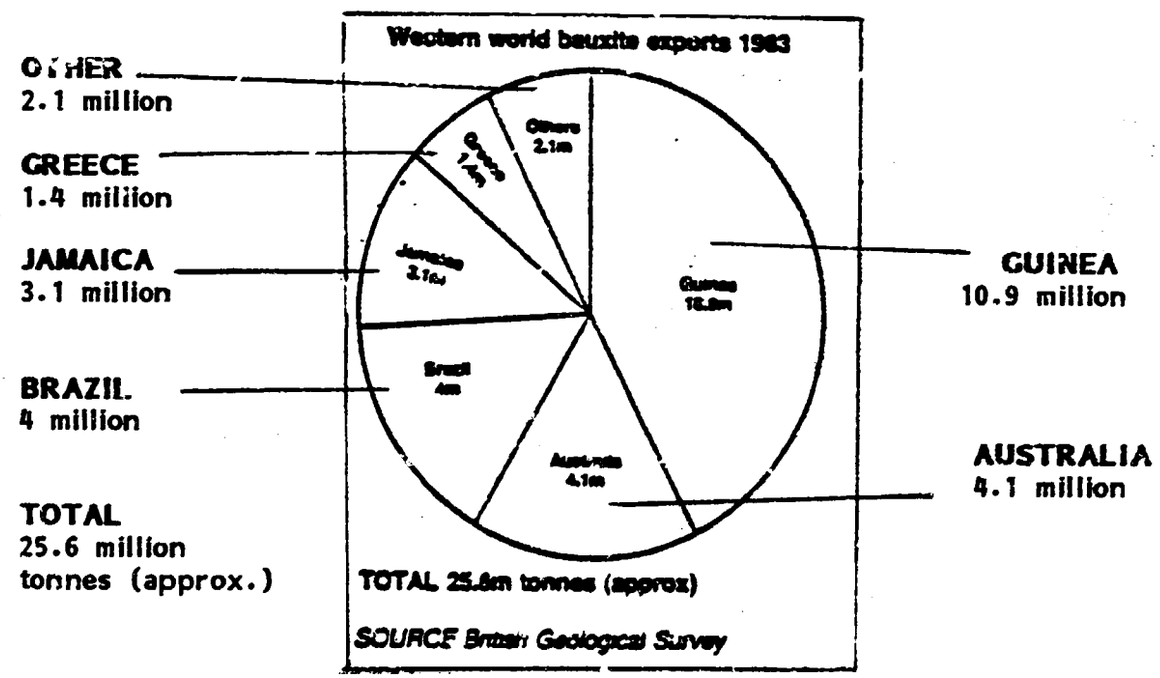
Country	1980	1981	1982	1983[p]	1984[e]
Australia	[r]27,179	[r]25,441	23,625	24,540	29,300
Brazil	5,538	5,779	6,289	7,199	5,239
China[e]	1,500	1,500	1,500	[r]1,600	1,600
Dominican Republic[2]	606	457	141	--	--
France	1,921	[r]1,827	1,662	1,716	1,528
Germany, Federal Republic of	[3]	[3]	[3]	[3]	[3]
Ghana	225	181	64	79	115
Greece	3,286	3,216	2,853	2,455	2,800
Guinea[4]	11,862	11,112	11,927	12,421	[b]13,160
Guyana[2]	1,844	1,681	1,783	1,791	[b]1,556
Haiti[e]	312	427	377	--	--
Hungary	2,950	2,914	2,627	2,517	[b]2,994
India	1,785	1,923	1,854	1,922	1,994
Indonesia	1,219	1,203	700	778	942
Italy	23	19	23	23	10
Jamaica[7]	12,054	11,682	8,361	7,693	[b]8,734
Malaysia	929	701	589	502	657
Pakistan	2	2	1	4	4
Romania	710	[e]712	[e]680	650	620
Sierra Leone	766	[e]610	606	600	[b]1,000
Spain	[r]8	9	7	5	6
Suriname	4,646	4,100	3,059	2,886	[b]3,454
Turkey	533	575	508	296	[b]128
U.S.S.R.[e 8]	4,600	4,600	4,600	4,600	4,600
United States[2]	1,559	1,510	732	879	856
Yugoslavia	3,138	3,219	3,666	3,500	3,347
Zimbabwe	4	5	8	23	20
Total	[r]89,220	[r]85,426	78,144	78,661	84,664

[e]Estimated. [p]Preliminary. [r]Revised.
[1]Table includes data available through July 2, 1985.
[2]Dry bauxite equivalent of crude ore.
[3]Less than 1/2 unit.
[4]Dry bauxite equivalent of ore processed by drying plant.
[5]Reported figure.
[6]Shipments.
[7]Bauxite processed for conversion to alumina in Jamaica plus kiln-dried ore prepared for export.
[8]In addition to the bauxite reported in the body of the table, the U.S.S.R. produces nepheline syenite concentrates and alunite ore as sources of aluminum. Estimated nepheline syenite production was as follows, in thousand metric tons: 1979—2,500; 1980—2,500; 1981—2,500; 1982—2,500, and 1983—2,500. Estimated alunite ore production was as follows in thousand metric tons: 1979—600; 1980—600; 1981—605 (revised); 1982—610 (revised); and 1983—615. Nepheline syenite concentrate grades 25% to 30% alumina, and alunite ore grades 16% to 18% alumina; these commodities may be converted to their bauxite equivalent by using factors of 1 ton of nepheline syenite concentrate equals 0.55 ton of bauxite and 1 ton of alunite equals 0.34 ton of bauxite.

SOURCE: Minerals Yearbook, 1984. "Bauxite and Alumina", op. cit. p. 10.

Moreover, because of the importance of domestic production of aluminium in Australia, Guinea - with only around half the Australian production of bauxite, but with a very high-grade ore - is the western world's largest exporter of bauxite.

DIAGRAM 3
Western World Bauxite Exports
in 1983



SOURCE: British Geological Survey, quoted in Metal Bulletin, November 22, 1985.

A comparison of the quality of Guinean bauxite with other sources of ore is given in Table 4.

TABLE 4
Comparison of Bauxite Ores
from Five Sources

AREA	ORE GRADE PERCENT (AL2 03)	SILICON (Si 02)	BAUXITE CONSUMPTION PER TONNE OF ALUMINIUM
Boké (Guinea)	60%	Inferior to 2%	4t
Weipa (Australia)	58%	5.5%	4.5t
Var (France)	50%-52%	7%-9%	5.3t
Jamaica	50%	0.7%-1.6%	4.3t
Kwinana (Australia)	27%-29%	Inferior to 2%	8.5t

SOURCE: L'adaptation industrielle dans l'industrie de l'aluminium de première fusion. OECD. Paris, 1977. Quoted by GRESEA: Géopolitique de l'Aluminium, Bruxelles, 1983, p. 234.

On the basis of U.S. Customs data, it is possible to give the following approximate values to U.S. imports of crude and dried bauxite:

TABLE 5
Average Value of U.S. Imports of Crude and Dried Bauxite[1] (Per metric tonne)

Country	1983		1984	
	Port of shipment (f.a.s.)	Delivered to U.S. ports (c.i.f.)	Port of shipment (f.a.s.)	Delivered to U.S. ports (c.i.f.)
To U.S. mainland:				
Australia	--	--	$14.76	$23.70
Brazil	$30.82	$43.48	28.34	38.47
Guinea	26.49	35.89	28.55	36.42
Guyana	39.13	52.67	36.30	52.11
Jamaica	29.19	36.04	31.44	36.91
Suriname	42.96	52.95	38.22	48.27
Weighted average	28.71	37.36	29.79	36.99

[1]Computed from quantity and value data reported to U.S. Customs Service and compiled by the Bureau of the Census, U.S. Department of Commerce. Not adjusted for moisture content of bauxite or differences in methods used by importers to determine value of individual shipments.

SOURCE: Minerals Yearbook, 1984, Vol. I. "Metals and Minerals", prepared by Bureau of Mines, U.S. Government Printing Office, 1985, p. 5.

As these figures reveal, before Australian shipments began in 1984, Guinean bauxite represented, and in 1982 as well, the least expensive ore in spite of the considerable distances it had to be transported.

While negotiations continue to take place in both Jamaica and Surinam, the most important discussions over the price of bauxite are those which concern the Guinean bauxite levy, and which will be discussed more fully in the third section of this paper.

It should be noted that, during the same period, Brazilian export prices are also undergoing renegotiation. They had been fixed for a two-year period at a base price of $28.50 per tonne. While the Brazilians do not impose a levy on bauxite exports, rates are dependent, to a large degree, on prices charged by competitors which do not include an export levy. The integrated transnationals clearly expect that if, in these negotiations, a cut can be effected in prices from one major bauxite producer, the others will have to fall in line. As suggested above, the current market situation and, more fundamentally, the process of restructuring of the industry largely explains this situation. As one trader put it: "You cannot look at Brazil and Guinea in isolation. If one breaks, the other will have no choice."(1)

(1) Metal Bulletin, November 22, 1985, p. 13.

PART II

Bauxite and Alumina Production in Guinea

The Republic of Guinea possesses approximately 60% of the world's highest-grade bauxite deposits. Its reserves are estimated at approximately 8 to 10 billion tonnes. According to the Guinean ministry of the Economy, the reserves are as follows:

TABLE 6
Guinean Bauxite Reserves

SITE	RESERVES (1000's TONNES)	GRADE OF ORE	
		AL2 03	Si 02
Boké (e)	2000	58 to 62%	0,8 to 11%
Fria (e)	500	45 to 48%	2 to 3%
Kindia (e)	100	48 to 52%	2 to 3%
Tougue	4000	47 to 52%	3 to 4%
Dabola (*)	1000	48 to 52%	2 to 3%
Pita	200	48 to 52%	2 to 3%
Dinguiraye	60	45 to 48%	3 to 4%
Siguiri	30	45 to 48%	3 to 4%
Forecoriah	10	44 to 47%	4 to 5%
Gaoul-Aye Koye (*)	1300	58 to 62%	0,8 to 1%

(e) Presently exploited

* Projected

Guinea possesses, as well, enormous hydro-electric potential and, in a word, each of the main factors of production which traditional economic analysis suggests are necessary to permit local transformation of the raw material. Moreover, the former Guinean government of President Sékou Touré made a point of including in its agreements with the aluminium transnationals involved in the most important site, Boké, clauses to guarantee that Guinean bauxite would be transformed locally into aluminium.

In spite of these clauses, high-grade raw bauxite continues to be shipped to smelters in North America or Europe. In 1984 Guinea produced 14.7 million tonnes of bauxite, of which 9,963,000 were produced at the Boké site. The ore from this site was entirely exported as raw non-transformed bauxite.

As will be seen, negotiations between the integrated transnationals operating the bauxite mines and the Guinean government no longer involve the possibility of local transformation at the Boké site, as promised by the transnationals would happen by the mid-1970's. Rather, the issue which is if vital importance for the Guinean economy involves the legitimacy, and even an eventual suppression, of the Guinean export levy introduced in 1975.

In order to provide background for these discussion, this section will present a very brief history of bauxite and alumina production in

Guinea around the following points:

(i) The colonial period and the creation of Fria;

(ii) Guinean independence and the renegotiation of the mining agreements in the 1960's and 1970's in view of local transformation;

(iii) Guinean policy concerning export taxes - a brief background;

(iv) Developments in the 1980's.

(i) The colonial period and the creation of Fria

Although the existence of important bauxite deposits in Guinea had been recognized since the beginning of the 20th century, it was not until the industry had undergone a reorganization under the leadership of North American interests that important exploitation of resources began. War production gave a tremendous boost to the industry, and brought about massive expansion to North American productive capacities. In 1948 and 1950, Guinean bauxite from the islands of Los began to be shipped in small quantities to Alcan's Saguenay-Lac St-Jean smelters in Quebec. Production continued until 1961 when installations were nationalized by the new Guinean government which became independent in 1958.

During the colonial period, another important project had begun at Fria under the leadership of the French firm, Pechiney Ugine. Although initiated in 1957 by colonial interests, by 1963 the site was controlled by an international consortium in which Olin Mathieson Chemical Corp. (U.S.A.) held the dominant place with 48.5% of shares; Pechiney Ugine, 26.5%; and the remaining shares were distributed among British Aluminium Co., 10%; Aluminium Industrie A.G. (Switzerland), 10%; Vereinigte Aluminium Werke A.G. (Germany), 5%. Alumina production began in 1960, and reached 460,000 tonnes in 1962, representing 58% of the total value of Guinean exports.

(ii) Guinean independence and the renegotiation of the mining agreements in the 1960's and 1970's in view of local transformation

Concerning Guinean independence, it is of considerable irony that the country's radical break with the French colonial system, was to facilitate and even accelerate its integration and subordination to even more powerful foreign interests.

In spite of the country's attempt to break colonial ties, the process which led to political independence which was imposed by the colonial power tended to limit the degree of internal social, political, and economic transformation. For Guinea's gaining of independence depended neither on a radical redefinition of social relations of production, nor on a general mobilization of the

population, nor a transformation of the structures of political participation. The Guinean government's subsequent experience of negotiating with multinationals was, therefore, conditioned by these internal factors, as well as the developments of the world aluminium industry on which the country depended for the sale of its chief product.

The limits of the process of internal transformation are reflected in the objectives of Guinean development strategy. If it may be said that, for a few years after independence, namely the period covered by the First Economic Plan (1960-1963), there was an attempt to base development on a pattern of national accumulation, this orientation was not sustained. Around 1968-1970, and very explicitly in the 1973-1978 Five Year Plan, the initiative for growth was clearly placed in the hands of international capital.

Although it is not possible to enter into the details of the developments of the Guinean bauxite sector, a few points will serve as summary.

In November 1961, the government took possession of the Kassa and Boké sites because of the failure of the private firm, Bauxites du Midi (a 100% subsidiary of Alcan), to respect its agreement to transform locally bauxite to alumina by 1964. The

project was to be taken up by a second-rank American firm, Harvey Aluminium of Delaware. Significantly, the new negotiation for the Boké site between the Guinean government and Harvey coincided with the resumption of closer relations between the U.S. and Guinea. In 1962 Guinea was admitted to the I.B.R.D. and, in 1964, U.S.A.I.D. approved a loan for the new Boké project, and guaranteed Harvey's initial investment.

Harvey's agreement with the Guinean government, signed in October 1963, was to become the prototype for other sites. A semi-public corporation was formed, called the Compagnie des Bauxites de Guinée (CBG), in which the Guinean government held 49% of shares, and the remaining 51% were divided among the private partners as follows: Alcan Aluminium Inc., 27%; Aluminium Company of America, 27%; Harvey Aluminium Inc., 20%; Pechiney Ugine, 10%; Vereignite Aluminium Werke A.G., 10%; Montecatini Edison, 6%. The operations at the Boké site began in 1973. All output was exported as raw bauxite, and purchased in proportions reflecting the shares of the private partners.

At the time of the signing of the CBG agreement, certain clauses concerning taxation, local transformation, etc., were considered to be important gains on the part of the Guinean government. By the mid-1970's, however, President Touré denounced the private firms for not respecting their agreement,

notably the clause concerning local transformation. Important Guinean state participation in the project, considered when the agreement was signed as a guarantee of control, appeared with time as perfectly compatible with the logic of accumulation of the transnationals involved, and not a guarantee to ensure local processing.

As will be seen in the next sub-section, it is this context which gave rise to the new Guinean mining policies concerning taxes. Before entering this subject, however, it is useful to examine briefly the third site in operation, Débélé, as well as the important projects of Ayékoyé and the Konkouré.

The site of Débélé in the Kindia area is operated as a joint project which associates the Soviet Union and the Guinean government. The agreement signed in November 1969 sets the price of the ore, and stipulated the following:

- The Guinean state is 100% owner of the capital of the resulting enterprise: OBK (Office des Bauxites de Kindia);

- The Soviet Union is responsible for the construction of the mine and the railway, and is to be reimbursed by receiving 50% of the ore extracted;

- A further 40% of the ore is destined to the Soviet Union according to the terms of a long-term trade or clearing agreement between the two countries (for the purchase of goods and equipment destined to OBK, for example).

- The remaining 10% may be disposed of by the government of Guinea on the markets of its choice. In fact, because of the integrated structure of western firms, this part goes almost totally to eastern European countries.

OBK is, therefore, the property of the Guinean government. The initial investment of 85 million roubles was put up by the Soviet Union at an interest rate of 2%. The Soviet Union has subsequently committed new funds, most recently for mine, railway, and port improvements.[1]

Production began in 1974 and, although figures vary with different sources, output and exports have evolved approximately as follows:

[1] Mining Annual Review, 1985.

TABLE 7
Production and Exports
of Bauxite from OBK
(In tonnes)

YEAR	PRODUCTION	EXPORTS
1976	2,400,000	
1977	2,250,000	
1978	2,300,000	
1979	2,500,000	2,306,000
1980	1,800,000	1,884,000
1981	1,502,000	1,501,000
1982	2,375,000	2,444,000
1983	2,701,000	2,543,000
1984	3,000,000*	3,000,000*

*Estimate

SOURCE: Bulletin de l'Afrique Noire, no. 1272, May 17, 1985.

The terms of the OBK agreement are difficult to analyze because they are very different from those signed concerning Friguia and CBG. It is, consequently, within this difficult context that prices must be interpreted. Also, although there have been several price changes, prices appear relatively low. According to one 1977 source, the new price of OBK bauxite that year repre-

sented approximately 2/3 of the world price, while the former price represented 1/3.[1] According to another source, prices remained constant between 1970 and 1980, but were renegotiated in January 1981 when Guinea obtained that 40% of production destined to the clearing arrangement with the Soviet Union would be done in a separate account in currency which would be indexed to world market rates.[2] A third source suggests that, when the average price per tonne of bauxite from CBG was between $22-$25 per tonne, it was approximately $20.46 per tonne at OBK. The same source notes that the grade of ore is inferior at Kindia (48% to 59%), as opposed to Boké-Sangaredi (48% to 64%), and the silicon and iron oxide content make the OBK bauxite more difficult to treat.[3]

The above elements concerning OBK underline, on the one hand, the problem concerning reliable sources of information and, on the other, serve to reiterate that any comparison of the prices of

(1) Marchés Tropicaux, June 10, 1977, 33rd Year, No. 1648, p. 1537.

(2) O. Bomsel, "Dynamique Economique d'un pays en voie de développement exportateur de matières premières minérales: le cas de la Guinée", in Pierre-Noël Giraud: Géopolitique des Ressources minières, Economica, 1983, p. 683.

(3) Afrique Industrie, No. 306, September 1, 1984.

bauxite at OKB, as opposed to Friguia or Boké, are made difficult because of the important differences in the agreements with the Guinean government, notably concerning ownership.

Concerning the other Guinean bauxite sites, each of these is discussed more fully elsewhere[1] and, consequently, detail will not be given here.

One site, however, that of Ayékoyé, is worth noting because, in keeping with Guinean mining objectives of local transformation, this site entails eventual production not only of alumina but also of aluminium and the development of the massive hydro-electric resources of the Konkouré River.

The Ayékoyé project in the Boké area, considered a priority of the former Guinean government, would permit mining 9 million tonnes per year of very high-grade bauxite. Depending on the source of information, projections vary; but it is generally estimated that approximately 4 million tonnes of the total would be transformed locally into alumina, and the rest exported in the first phase of the project. In the second phase, depending

[1] Les enjeux de la bauxite, op. cit. pp. 95-112.

on the source of information, the project would permit the production of not only 1,200,000 tonnes of alumina, but also between 75,000 and 150,000 tonnes of aluminium. The project is intimately linked with the development of new sources of hydro-electric power which is abundant in the area concerned. The resources of the Konkouré River were the object of studies during the colonial period by the French administration, and were sub sequently kept secret after the break-off with France.

An agreement concerning the Ayékoyé project was signed in July 1976 creating the Société guinéo-arabe d'alumine in which the Guinean government held 50% of shares in association with the Egyptian, Saudi Arabian, Kuwaiti, Iraqui, Libyan, and United Arab Emirates governments. In August 1976 it was announced that Alusuisse would take part in the project. This participation was to be confirmed in 1977, and Alusuisse undertook a study of the Ayékoyé project at the request of its partners.

Shortly after, in 1978, the French state corporation, Électricité de France (EDF), undertook to update the old colonial studies concerning the Konkouré hydro-electric scheme, at the request of the Guinean government, with the support of the Caisse Centrale de Coopération Économique. The dam was to be located at Souapiti, 45 kilometres east of Fria on the Konkouré River, and the Ayékoyé bauxite mine would be developed near the CBG

Sangaredi mines. The EDF study was completed in 1981.

According to Guinean sources, the results of the Alusuisse study were favourable to the project,[1] but its scale created an important financial obstacle. As a condition for obtaining financial support, notably from the World Bank as well as from other donors, further studies were requested.

The $2.2 billion project was scaled down following new studies undertaken in 1981 by Sir Alexander Gibb and Partners (U.K.), and Bechtel of the U.S. Capacity of the power station was to be halved to 375Mw and the aluminium smelter to 100,000 tonnes from 150,000 tonnes.[2]

While it is difficult to obtain information concerning the results of the Bechtel studies, the project remained of sufficient interest for France's Pechiney Aluminium to sign a contract (November 1983) with the Guinean government to undertake to up-date the feasitility studies by the end of 1984. At the time, if the results were positive, it was anticipated that production

[1] Republic of Guinea, Ministry of Energy and the Konkouré, Projet Intégré - Konkouré, June 1981.

[2] The Financial Times, May 11, 1984.

could start at the end of the 1980's.[1]

We have entered into some detail in order to suggest the continuing very recent interest for this massive project, particularly among certain European transnationals (Pechiney and Alusuisse). However, in the context of the evolution of the structure of the aluminium industry away from creating smelter facilities in Third World countries which appear more and more as sources of the raw material, this project has recently been officially set aside by the World Bank and other Western donors. This point will be developed further in the last sub-section of Part II. First, it is essential to look more closely at Guinean mining policies, notably concerning export taxes.

(iii) Guinean Policy Concerning Export Taxes - A Brief Background

It was in an attempt to encourage the implementation of Guinean mining policy in favour of local transformation that a new tax system was introduced on the export of raw bauxite in the mid-1970's. In order to understand the context in which these taxes were set, it is essential to recall that Guinean high-grade ore had been sold at far lower prices than bauxite from other sources

[1] The Financial Times, May 11, 1984.

since the 1960's, and that this situation continued during the 1970's as the tables below suggest:

TABLE 8
The Price of Bauxite Imported to Canada
($ per Long Tonne)

	1964	1969
Average Price	8.7	10.3
Origin: Guinea	4.6	5.2
Origin: Guyana	8.0	9.7

SOURCE: B. Reysset, Le Marché mondial de l'aluminium, Caisse Centrale de Coopération économique, Services des études économiques et financières, avril 1974. Annexe XI. Quoted in Minerals Yearbook.

TABLE 9
Price in 1973
of a Metric Tonne
of Bauxite
(in Dollars)

Australia	7.20
Jamaica	6.00
Guinea	6.00
Guyana	8.70
France	8.35
Greece	8.76
Yugoslavia	11.02
U.S.A.	13.95
Dominican Republic	10.52
Sierra Leone	7.35
Turkey	8.49
Italy	10.32
Average	7.60

SOURCE: Annales des Mines, December 1975, p. 95.

From the above, it may be seen that Jamaica and Guinea were in a similarly disadvantageous situation in 1973. To redress this situation, Jamaica introduced a bauxite levy in the spring of 1974. Before the new mining policies, the price of Jamaican bauxite was as follows:(1)

Cost of extraction:	$ 5.4	per metric tonne
Taxes :	$ 2.6	per metric tonne
Price (f.o.b.) :	$ 8.	per metric tonne

The new policies set a tax of $0.55 U.S. dollars, and a production levy of 7.5% of the price of a tonne of aluminium for the year 1974/75, which resulted in the following export price:(1)

Cost of extraction and other costs :	$ 6.	per metric tonne
Export tax :	$ 0.55	per metric tonne
Production Levy :	$13.39	per metric tonne
Price (f.o.b.) :	$19.94	per metric tonne

The levy introduced by Jamaica resulted in an increase of 149% of the export price.

(1) SOURCE: L'adaptation industrielle dans l'industrie de l'aluminium, OECD. Paris, 1976, p. 38.

It was in this context, following the creation of I.B.A. in March 1974, and in an attempt to encourage foreign partners to transform local bauxite to alumina, that Guinea introduced its levy on exports of raw bauxite and alumina in January 1975.

The Guinean export levy is linked to the international prices of aluminium, and varies with the degree of transformation in such a way that the levy increases inversely with the degree of transformation. The schedule was set as follows:[1]

1. 0,50 per cent of the price of a ton of aluminium ingot per ton of bauxite with 45 per cent or less alumina content.

2. 0,55 per cent of the price of a ton of aluminium ingot per ton of bauxite with 46-50 percent alumina content.

3. 0,65 per cent of the price of a ton of aluminium ingot per ton of bauxite with 51-55 per cent alumina content.

4. 0.75 per cent of the price of a ton of aluminium ingot per ton of bauxite with 56 per cent or more alumina content.

5. 1 per cent of the price of a ton of aluminium ingot per ton of alumina.

[1] Quarterly Economic Review, Senegal, Mali, Mauretania, and Guinea, no. 1, 1975, p. 6.

While improving the situation slightly, the Guinean levy was very moderate: 0.5% to 0.75%, depending on the grade of ore compared with the 7.5% production levy introduced by Jamaica. Consequently, even after the introduction of its levy, Guinean bauxite remained inferior to average prices in 1975.

TABLE 10
Average Value of U.S. Imports
of Crude and Dried Bauxite
in 1975

PORT OF SHIPMENT (f.a.s.)		DELIVERED TO U.S. PORTS (c.i.f.)
Australia	8.79	17.57
Dominican Republic	18.84	21.74
Guinea	13.82	20.95
Guyana	18.88	33.19
Haiti	22.80	24.47
Jamaica	22.50	25.18
Surinam	21.44	28.56
Others	10.73	16.42

SOURCE: "Bauxite and Alumina", by Horace Kurtz, Minerals Yearbook, United States Department of the Interior, Bureau of Mines. Preprint 1975, p. 7.

In view of the higher quality of Guinean bauxite, as compared to other sources noted earlier (the production of 1 tonne of aluminium requires less than 4 metric tonnes of Guinean bauxite, as opposed to 4.3 tonnes from Jamaica and between 4.5 and 8.5 tonnes from Australian), one may conclude from the above that the country continued to remain in a disadvantageous position, as compared to other producers.

In subsequent years, the Guinean bauxite levy fluctuated with the world price of aluminium.

The resulting price of Guinean bauxite was $20.44 per tonne in 1976, $32.8 in 1980[1] and, more recently, according to the Guinean National Reform Plan, $37. in 1983, $35.9 in 1984, and $36. in 1985.[2]

It is useful here to compare the fluctuations in the price of Guinean bauxite with the fluctuations of the annual average prices of aluminium. The comparison gives the following:

[1] O. Bomsel, "Dynamique économique d'un pays en voie de développement exporteur de matières premières: le cas de la Guinée", in Pierre-Noël Giraud, Géopolitique des Ressources Minières, Economica, 1983, p. 685.

[2] Republic of Guinea: Programme intérimaire de redressement national, November 1985, p. 62, Table 2. These figures refer to CBG bauxite.

TABLE 11
The Evolution of the Price of Guinean bauxite (CBC)
in Comparison to the Fluctuation of the
Annual Average Price of Aluminium

	1976	1980	1983	1984	1985
Price of Guinean	$ 20.44	$ 32.8	$ 37.	$ 35.9	$ 36.
Index	100	160.5	181.0	175.6	176.1
Annual Average Price of Aluminium (in cents per pound)(1)	44.49	70.81	77.53	81.00	N/A
Index	100	159.2	179.3	182.0	-

As can be seen, increases in Guinean bauxite have been kept in line with increases of the price of aluminium, as foreseen by the 1975 bauxite levy.

Finally, as noted in Part I, Table 5, apart from Australian bauxite, the vast majority of which is transformed locally into alumina by the integrated transnationals, in 1982, 1983, and 1984 Guinean bauxite remained the least expensive source delivered to U.S. ports, in spite of its high-grade quality, the distances covered, and the existence of the Guinean levy.

(1) Metal Statistics, 1985. American Metal Market, p. 21.

(iv) Developments in the 1980's

If, during the 1960's and 1970's, the emphasis of Guinean mining policies was on local transformation, events in the 1980's seemed to have rendered this objective more and more remote.

We shall examine this contention by looking very briefly at the following projects:

(i) The Aughinish smelter supplied with bauxite from Boké;

(ii) The Konkouré dam project;

(iii) Recent developments at Friguia and CBG: modernization, profitability, but not expansion.

(i) The Aughinish Smelter Project

In order to replace developments in Guinea in the context of the world aluminium industry, it should be recalled that, at the beginning of the seventies, world aluminium productive capacity increased more rapidly than demand. The price of the ingot dropped between 1971 and 1974, and stocks increased. As noted, it was in this context that the International Primary Aluminium Institute was formed. It was also in this context that Alcan Aluminium Limited announced a restructuring of its international operations on the basis of three new zones. Each of the three geographical regions would be assured its own

internal coherence in that it combined:

(a) control over access to the raw material;

(b) vertical integration of all stages of production and transformation;

(c) a certain degree of autonomy of each region vis-a-vis the others.

The plan which was made public in June 1975 contained the following zones:

1. Canada, the United States, and the Caribbean

2. The Far East (including Japan and India) and Oceania (including Australia and New Zealand); and finally

3. Continental Europe, the United Kingdom, Africa, and Latin America.

While the division into geographical zones may, at first, appear arbitrary, the reorganization may be seen as an example of a multinational's strategy in the face of worsening economic conditions. This strategy entailed the creation of a series of coherent trading blocks which combine all conditions of accumulation. Moreover, the

reorganization seems important in order to understand the Company's strategy vis-a-vis a producing country such as Guinea. For in 1974, and the coincidence of date is worth underlining, it was announced that one of the important partners of the Boké holding, Alcan Aluminium Limited, was to proceed to transformation of bauxite from the Boké site not locally, as stipulated in the agreement signed with the Guinean government, but in Ireland.

Alcan's project entailed the construction of installations at Aughinish, near Shannon airport, permitting the transformation of imported raw bauxite into alumina which would then be exported to be processed into aluminium at Lynemouth (U.K.). Annual capacity at Aughinish is 800,000 tonnes of alumina, and the factory employs 800 workers. Production began in 1983.

Alcan's partners in the project were initially Billiton, of the group Royal Dutch Shell (35%), and Anaconda, of the group Atlantic Richfield (25%). Alcan Ireland was to control 40% of shares. The three associates formed Aughinish Alumina. In December 1981, Aluminium Co. of Canada bought the shares which were held by the parent company, Alcan Aluminium Ltd., thus gaining control of 40% of the shares of Aughinish Alumina. In January 1985, when Alcan

Aluminium acquired most of Atlantic Richfield's properties in aluminium, this included ARCO's 25% stake of the $1 billion Aughinish smelter.

In view of the very considerable costs entailed in shipping Guinean bauxite to Ireland, the choice of the Aughinish site appears paradoxical. While a fuller analysis of the conditions explaining this paradox has been undertaken elsewhere,[1] it is worth underlining the extensiveness of the concessions offered investors in the Aughinish project by the Industrial Development Authority of Ireland in order to ensure the profitability of this project. Consequently, it is of some irony that, subsequent to reductions in productive capacity in operation in 1985 and 1986, there is now discussion about the eventual abandonment of this extremely expensive project. The difficulties at Aughinish are invoked not only in an attempt by the integrated private partners to bring down the costs of fuel at Aughinish, but also to bring down the price of the bauxite it uses. In 1985, the companies operating Aughinish were seeking to reduce the payments

[1] Les enjeux de la bauxite, Chapter IV, pp. 142-151.

made to the Guinean government in respect to bauxite purchases from $35 to $25 per tonne. These negotiations have a direct bearing on the renegotiation of the bauxite levy to be discussed in Part III.

(ii) The Konkouré Dam Project

In spite of the many studies mentionned above and the obvious interest in this immense hydro-electric scheme which would make possible the Ayékoyé smelter with a view of producing alumina and aluminium in Guinea, the Konkouré project has recently been set aside.

No longer do banking sources speak of an integrated plan of producing hydro-electric capacity to permit local smelting operations. Certain observers emphasize the costs of the enormous Konkouré project and the need to keep development schemes more in line with the financial capacities of the country. However, others - notably French financial sources - suggest that at least part of the reason for abandoning the project is the surplus hydro-electric capacity of the Song-Loulou dam in the Cameroun, which also received French public funding, and especially the surplus aluminium capacity at Pechiney's smelter, Alucam, in the Cameroun. As will be seen, this explains that in an attempt to reduce the price it pays for Guinean

bauxite at Fria, Pechiney acuses Guinean bauxite prices of being disloyal vis-a-vis the Camerounean operations (when, as has been shown, it is in fact Australian expansion which is the cause of over-capacity and the difficulties certain integrateds are facing).

(iii) Recent developments at Friguia and CBG: Modernization Profitability, but not Expansion

Friguia:

In spite of recent improvements in storing and processing (and perhaps because of the drop in the price of alumina), Friguia's output and exports decreased after 1980. Friguia's modernization programme, which took place from 1980 to 1982, was mainly designed to ensure maximum utilization of the 20-year-old plant's nominal capacity, raised some time before to 700,000 metric tonnes per year from 460,000 tonnes, and to provide infrastructures for a possible extension. The plan involved, among other things, filters and other equipment to reduce production costs. The European Investment Bank made a $6.2 million loan under the first Lomé convention as a contribution to the $33 million modernization scheme. The French Caisse Centrale de Coopération Economique had co-financed the venture.(1)

(1) American Metal Market, August 5, 1980.

While information varies depending on sources, output appears to have evolved as follows:

TABLE 12
Production and Exports
of Alumina at Friguia

YEAR	PRODUCTION	EXPORTS
1980	692,000	715,000
1981	670,000	608,000
1982	530,000	540,000
1983	624,000	583,000
1984	551,000	Not Available

SOURCE: Afrique-Industrie, September 1, 1984 (for 1980 to 1982).

The projected expansion which would have doubled capacity from 700,000 to 1,350,000 tonnes has been set aside. However, in an attempt to improve the quality of the alumina produced, Friguia is to adapt its alumina refinery to produce an upgraded product using a modified version of the Bayer process. The $14.8 million facility was to be funded in part by a $5.3 million loan from the E.I.B.[1]

[1] International Mining, August 1985, p. 88.

The emphasis in the 1980's at Friguia has, therefore, been on modernizing existing capacity, improving quality of the alumina, and reducing costs rather than on expansion.

It appears that the most recent means by which Péchiney is seeking to reduce the costs of operations in Guinea and, consequently, in the Cameroun, is by putting pressure on Guinea to reduce the price of its bauxite at the Fria site. Pechiney remains the operating partner at Frialco, the private consortium at Friguia, in spite of the fact that Noranda Mines is the most important shareholder. Frialco's shares are distributed as follows:

- Noranda Aluminium (U.S.A.) (Olin Mathieson)	38.5%
- Alusuisse	10%
- Péchiney Ugine Kuhlman	36.5%
- British Aluminium Company	10%
- Vereinigte Aluminium Werke	5%

Moreover, Pechiney's smelter, Alucam, situated at Edéa in the Cameroun, is supplied by Friguia. Alucam is controlled as follows:[1]

[1] Géopolitique de l'aluminium, GRESEA, Bruxelles, December 1983, p. 144.

- The State of the Cameroun	25%
- Pechiney	48%
- Comal et Cie	8.5%
- Caisse Centrale de Coopération Economique	10.7%
- COGEI	3.5%
- Nouvelle Cofimer	2%
- S.A. Transaction Electricité	2%

Recent over-capacity at Alucam underlines the importance of the indirect, as well as the direct, repercussions for the private partners of Friguia, and notably Pechiney, of the present negotiations taking place at the Boké site of CBG. While discussions continue, there are even rumours at Friguia of "reducing capacity" and, in any case, the partners at Friguia are said to be waiting to see the results of developments initiated by the "North Americans" at Halco.

Boké and CBG

Recent changes which have taken place in the distribution of shares of the U.S.-based consortium, Halco Mining, which operates CBG, reflects the restructuring process noted in Part I and the replacement of certain groups by more solidly-entrenched ones. Until 1980, Halco was comprised of Alcan, Alcoa, Martin Marietta, PUK, Vereinigte Aluminium Werke, and Montecatini Edison. In 1984 a 6%

interest of Martin Marietta was sold to Reynolds Metals. The sale was made necessary, according to Marietta, out of the "need of cash", and represented a redeployment of assets which was to lead to further changes.[1] The remaining 8% of Martin Marietta was acquired by Comalco Limited, an Australian subsidiary of Kaiser (U.S.A.).[2] As a result of these changes, the ownership of Halco Mining is as follows:[3]

- Alcan Finances (Bermuda)	27%
- Aluminium Co. of America (U.S.A.)	27%
- Commonwealth Aluminium Corp. (U.S.A.)	8%
- Pechiney (France)	10%
- Vereignite Aluminium Werke (Germany)	10%
- Aluminia I.SpA (Italy)	6%
- Reynolds Metals Co. (U.S.A.)	6%
- Billiton BV (Netherlands)	6%

(1) "Reynolds Metals Purchases Bauxite Interest in Guinea", Journal of Metals, May 1, 1984.

(2) This transaction contributed to the creation of a new company, Commonwealth Aluminium Corp. (U.S.A.). The formation of Commonwealth was concluded on January 8, 1985, when Comalco Ltd (Melbourne, Victoria) bought most of the assets of the former Martin Marietta Corp., including the Lewisport KY rolling mill, the Goldendale smelter, a Portland alumina unloading facility, and an 8% stake in Halco Mining Inc.

(3) Mining 1986, Financial Times International Yearbooks. Published by Longmans, London, 1986.

The participants in Halco have contracted to purchase approximately 9 million tonnes per year of bauxite from CBG over a 20-year period. As noted, shipments began in 1973.

While figures vary slightly according to different sources, output and exports of CBG have evolved approximately as follows:

TABLE 13
Production and Exports of CBG

YEAR	PRODUCTION	EXPORTS
1980	9,964,000 t (AI)	9,381,000 (AI)
1981	8,298,000 t (AI)	8 869,000 (AI)
1982	8,285,000 t (AI)	7,989,000 (AI)
1983	8,534,496 t (CBG)	9,499,509 (CBG)
1984	9,963,434 t (CBG)	8,829,379 (CBG)

AI : Afrique-Industrie, September 1, 1984.

CBG: Annual Report, 1984.

Immediately after 1980, production was voluntarily reduced. Certain observers suggest that this reduction took place in order to wait until the Aughinish smelter, which was to receive bauxite from Boké, got underway.

In 1980 production was principally exported to the U.S.A. (50%), Canada, France, and other European countries. Boké's strong dependence on the situation prevailing in North American or European countries is suggested by the fact that all of its output is exported for transformation to these areas. The destination and relative importance of bauxite from Boké to recipient countries is illustrated by the following chart.

ORIGIN OF BAUXITE	DESTINATION OF BAUXITE			
	COUNTRY	SMELTER	COMPANY	RELATIVE IMPORTANCE OF BOKE SOURCE
Boké (Guinea)	U.S.A.	Point Comfort	Alcoa	50%
	U.S.A.	Mobile	Alcoa	65%
	U.S.A. Virgin Is.	Sainte-Croix	Martin Marietta	100%
	Canada	Arvida	Alcan	20%
	W.Germany	-Stade	Reynolds/VAW	40%
		-Schwandorf	VAW	100%
		-Lunen	VAW	50%
	Spain	San Ciprian	Alcan/PUK	100%
	France	Gardanne	PUK	73%
	Italy	Porto Marghera	Aluminio Italia	100%

SOURCE: Michel Huard, "Bauxite - Les effets de la crise", Industrie Minérale, mai 1983, p. 265.

In 1984 Halco and the Guinean Government renegotiated some of the terms of the purchase contract for Boké bauxite. In return for greater flexibility to tonnages it is committed to take, Halco undertook to expand mine capacity to around 11 million tonnes per year at an unspecified future date.(1) During 1985 the proposed expansion which had, by then, been incorporated into the new Government of Guinea's national economic plan, was set aside by Halco and, as will be seen in the next section, a new "lower hypothesis" had to be introduced into the Guinean planning document.

Conclusion

With the Konkouré dam project set aside and, consequently, the setting aside of important new sources of hydro-electric power for local transformation at the Ayékoyé site, the abandonment of the projects of expansion at Friguia and of transformation and expansion at the Boké site, the issue of negotiations between the integrated transnationals (notably Halco) and the new Guinean government has now changed. In an attempt to further cut costs, and in the context of a tightening of the international structure of the industry in order to lessen dependence on Third World bauxite producers, the integrated transnationals are at present in a good position to exert pressure in view of a renegotiation of the Guinean bauxite levy.

(1) Metal Bulletin, October 11, 1985, p. 15.

PART III

The Consequences for the Republic of Guinea of the Renegotiation of the Bauxite Levy

Basing their arguments on the over-supply of alumina and the consequent decline in prices of both alumina and aluminium, and subsequent to the process of restructuring of the industry summarized above, notably the important expansion of Australian production which, as has been seen, has weakened the position of other bauxite producers, Halco Mining Inc., the private consortium associated with the Guinean government in the Compagnie des Bauxites de Guinée, CBG, decided to re-open negotiations on the Guinean bauxite levy in the fall of 1985.

Although spokesmen for Halco Mining suggested that every element in the total cost of material including production costs, taxes, and freight was to be coming under scrutiny, the main focus is on taxes with a view to obtaining a substantial reduction of f.o.b. prices.

Moreover, integrated firms feel levies charged by bauxite-producing countries such as Guinea enable other producers - in particular, Brazil, Surinam, and Jamaica, to set prices higher than would otherwise be possible. It is officially expected by the foreign partners that a reduction in Guinean rates would, therefore, have wider-ranging consequences for the world market.(1)

(1) Metal Bulletin, "Guinea bauxite talks imminent", October 11, 1985, p. 15.

Consequently, while the focus of attention is on Guinea, the Jamaica bauxite-alumina sector is currently undergoing a painful rationalization period and "restructuring" talks proceed in Surinam.

However, pressure for a reduction of the Guinean levy is particularly strong because of the impact this renegotiation is exptected to have on new supply contracts with Brazil's Mineracao Rio do Norte (MRN) which runs the Trombetas mine. The base price for Trombetas material had been fixed for two years at $28.50 per tonne (and has, in fact, changed little over the last four years). This put the actual f.o.b. price at around $29.50, but these contracts were to expire at the end of 1985.

Integrated companies maintain that the levies charged by Guinea have enabled Brazil to sell bauxite at unjustifiably high prices, and that if these taxes could be reduced or discarded altogether, the Brazilians would be forced to fall in line.[1]

The central importance of the Guinean negotiations is obvious. The context which explains the weight of the pressures facing bauxite-

(1) Metal Bulletin, "Pressure on bauxite levies intensifies", October 8, 1985, p. 13.

producing countries due, in part, to the restructuring of the bauxite/aluminium industry has been discussed above.

What we shall undertake to do here is to illustrate the consequences for Guinea of the doing-away of the bauxite levy. Although it is not possible to present other examples, there is every reason to believe that very similar conclusions could be drawn for other countries highly dependent on the bauxite/alumina sector for export revenue. Surinam and Jamaica are 79% and 62% dependent, respectively.

The situation with which the new Government of Guinea was confronted after the political changes of April 3rd, 1984, was an extremely difficult one. The country was ill-equipped; the infrastructure (roads, communications, energy, buildings/housing, etc.) were worn down; agricultural production had deteriorated; the industrial sector was not at all well-developed, and operating very much at under-capacity; internal markets were disorganized; and mining activities, the country's principal source of wealth, totally enclaved. Moreover, the country's administrative and public sectors are very much over-developed and not well-adapted to the country's needs; the state of sanitation has deteriorated; the educational sector, although well-developed, is not always suited to needs; the local currency has lost much of its value, and it is estimated that half of internal trade taking place does so on the black market. Finally, the country is very much indebted. The official public debt in 1984 (1.2 billion U.S. $) and the arrears (200

million U.S. $) represent approximately the value of the country's G.D.P.[1]

Guinea, however, is not short of resources. As as been seen, it possesses very important mineral wealth (bauxite, diamonds, gold, iron); favourable climatic conditions, good soils for agriculture and raising cattle; fish and forest wealth; very important hydro-electric potential; and, finally, a young population, and a considerable number of trained people not only within, but also outside the country. The development of this potential will, however, entail considerable efforts of reorganization, restoration, and investment.

In an attempt to deal with the difficulty of the situation, the new government has adopted an interim Plan of National Reform (Programme Intérimaire de Redressement National 1985-1987). The Plan was drawn up under the auspices and with the assistance of international organizations (IMF, UNDP, the World Bank) all of which are very much involved with the Guinean planning process, both at the level of financing as well as in providing technical assistance.

(1) The above description is taken from Chapter I, "The Economic and Social Situation in Guinea in 1985", Republic of Guinea: Programme Intérimaire de Redressement National 1985-1987. Conakry, November 1985.

The overall orientation of the Plan may be summarized by the following characteristics:

- an option in favour of economic liberalism;

- the reduction of the public service and the withdrawal of the state from productive sectors;

- a monetary reform accompanied by a devaluation;

- the realignment of salaries and prices in such a manner as to bring price changes more favourable to producers;

- a strong programme of investment which privileges the restoration and repair of existing capacity before undertaking new projects which seek to extend capacity; the investment programme is centered around rural development; infrastructural development, and human resources.

The government is well aware that the above reforms will not be easy to implement - notably the reduction of the administrative personnel and the modification of the distribution of resources in favour of producers. Also, the success of the monetary reform and the devaluation which aim to do away with the black market cannot be taken for granted. They depend, in large part, on the confidence which the

population accords to the new policies. In order to obtain this confidence, the government is attempting to stimulate and reorganize economic activity; to increase wealth and improve living conditions through economic reforms and, finally, to implement its investment programme. However, if there are no real improvements, it is unlikely that the government will receive the support it requires in order to implement the above reforms successfully.

The revenue in foreign currency obtained through mining activities and, in particular, from the bauxite sector, play a central role in the proposed plan. Moreover, it is the receipt of foreign currency which allows the Guinean state to accumulate public savings in currency, and to obtain the foreign loans which are essential to finance the investment programme. Any reduction of currency would, consequently, threaten the very basis of what is already a rather fragile undertaking. Without sufficient revenue obtained with sufficient predictability, the only aspect of the Plan of National Reform which would be left would be its aspects of stringent austerity, stripped of the elements which are essential to improve the economic situation globally. One could no longer expect economic growth/improvement in the population's living conditions, etc. There would be a very strong possibility that the reaction of the population would be very negative; that difficulties would worsen; and that, moreover, the Guinean state would be unable to meet its foreign obligations, thus reducing to nothing the efforts of the international organizations involved with improving the situation

and restoring the international community's confidence in the country. In what follows, these conclusions will be documented through a brief analysis of the financing of the Guinean Plan of National Reform.

(i) The Guinean Programme of Investment and its Financing

The disorganization of the national economy and the shortage of foreign currency led the authors of the Plan of National Reform, as well as the international organizations which are backing the Plan (UNDP and the World Bank), to set out the investment programme in two separate parts: one in foreign currency (in U.S. dollars), and the other in local currency (in Sylis).* In view of the extensiveness of local shortages of all kinds, it is obviously on the part of the investment programme to be funded in currency that the critical aspects of the Plan rest. It is also on those critical aspects that any fluctuation of foreign currency from the mining sector will have most direct repercussions. Consequently, it is on the investment programme funded in currency that the following analysis will be based.

Table 14 presents a general overview of the Guinean investment programme. The table only includes actual projects, and excludes

*$1.00 U.S. = 25 Sylis at the time that the National Plan of Reform was written (1985) before the devaluation.

TABLE 14
The Programme of Investment of
the Guinean Plan of National Reform
1985-1987
(In millions of $)

	PROJECTS UNDERWAY	PROJECTS OF RESTORATION AND MAINTENANCE	NEW PROJECTS	TOTAL INVESTMENT OF NATIONAL PROJECTS	MICRO-PROJECTS	TOTAL	%
Rural Development	74.6	90.3	57.4	222.3	25.4	247.7	28
Mines	63.7	2.4	17.7	83.8		83.8	9
Industry	14.2	16.4	5.4	36.0		36.0	4
Energy	41.9	29.9	26.7	98.5		98.5	11
Infrastructure	163.7	67.8	13.3	244.8	1.8	246.6	28
Human Resources	76.5	54.5	16.7	147.7	23.7	171.4	19
TOTAL	434.6	261.3	137.2	833.1	50.9	884.0	

SOURCE: Republic of Guinea: Programme Intérimaire de Redressement National 1985-1987. Conakry, 1985, p. 74.

all projects related to preparatory studies which, it is assumed, will be financed directly by the international community. One may note the central importance of the place accorded to rural development; to infrastructure (roads essentially); to human resources (the renovation of schools, the university, etc.) and, finally, to energy. One may note as well the small place accorded to new projects. More than 80% of the funds for national projects are destined to already-existing projects and to projects of restoration. In other words, the investment programme has been limited to the bare minimum, and is directed to only the most essential sectors and projects. Finally, an analysis of the projects which have been undertaken reveals that the majority are to be financed by multilateral organizations (IBRD, AID, FED, UNDP), or by bilateral organizations (CCCE, KWF, etc.), and on very favourable terms.

Of the $884 million set out in the investment programme, it is anticipated that, in view of inevitable delays, the difficulties of mobilizing foreign financial support and the limited capacity of the country to become more indebted, the actual disbursements in foreign currency by the state and by the public sector will be $541 million, to be financed as follows:

TABLE 15
Actual Disbursements of
State Investment in Currency
(In millions of $)

	1985	1986	1987	TOTAL
TOTAL	118	189	234	541
- of which loans	105	168	208	481
- of which local contribution	13	21	26	60

(ii) **The Public Accounts: The Investment Programme and the contribution of the bauxite and alumina sector**

Table 16 (see page 69) summarizes the public sector accounts in foreign currency, actual and forecasted. The origins of these revenues are detailed in Table 17 (see page 70).

What is most striking in these tables is the importance of the bauxite and alumina sector and, more specifically, the predominance of the place occupied by the Compagnie des Bauxites de Guinée (CBG) within this sector.

TABLE 18
State Revenue in Foreign Currency
from the Bauxite/Alumina Sector
(Estimated)
(In millions of $)

	1984	1985	1986	1987
(1) Bauxite and Alumina Sector	232	259	269	272
(2) Total	248.5	276.2	290.2	294.2
(1)/(2) %	93.4	93.8	92.7	92.5

SOURCE: Calculated from Table 17.

TABLE 16
Summary of State and Public Sector
Revenue and Expenditure
in Currency
(In millions of $)

	1984	1985	1986	1987
Revenue from CBG and Friguia and other firms	178.5	196.2	210.2	214.2
Debt paid in kind	40.	46.	46.	46.
Revenue in roubles CBK	30.	34.	34.	34.
TOTAL	248.5	276.2	290.2	294.2
Current expenditure	125.	126.7	129.2	130.
Net transfers to public enterprises	114.9	60.	30.	10.
Current savings	8.6	89.5	131.0	154.2
Investment expenditure	28.3	13.	21.	26.
Investment financed by loans	75.	105.	168.	208.
Amortization of foreign past debt	45.2	104.	126.	122.
Interest and amortization of new debt	-	10.	22.	39.3
Balance to be financed in currency	139.9	142.5	206.	241.1
Foreign loans	75.	105.	168.	208.
Foreign budgetary aid	32.	37.5	38.	33.1
Errors and omissions	32.9	-	-	-

SOURCE: Programme Intérimaire de Redressement National, op. cit. p. 66.

TABLE 17
Origin of State Revenue in Currency
(Estimated)
(In millions of $)

	1984	1985	1986	1987
CBG				
- Bauxite levy	113.	124.	130.	132.
- Taxes on profits	35.	40.	44.	45.
FRIGUIA				
- Bauxite levy and taxes on profits	14.	15.	15.	15.
OBK				
- Debt paid in kind*	40.	46.	46.	46.
- Revenue in roubles	30.	34.	34.	34.
DIAMONDS (15% of turnover)	6.	6.	9.	10.
GOLD	-	0.7	1.2	1.2
INDIRECT TAXES (in currency)	4.	4.	4.	4.
TAXES ON IMPORTS OF MINING SECTOR (5.6%)	6.5	6.5	7.	7.
TOTAL	248.5	276.2	290.2	294.2

*Reimbursement in kind of debt to U.S.S.R.

SOURCE: Programme intérimaire de Redressement National, op. cit. p. 65.

On the expenditure side, one notes that current expenditure has been stabilized, and that transfers to public enterprises have been drastically reduced. These figures are revealing of the measures of austerity and the reorganization of the civil service (where the number of civil servants is to be greatly reduced), on the one hand and, on the other, the decision to withdraw the state from productive sectors, to liberalize the economy and, eventually, the beneficial effects which are expected as a result of the reorganization of public enterprises.

One is struck as well by the extremely heavy burden which the country's cumulated and anticipated new debt represents for the public accounts. Debt service, at the end of the period analyzed (1987), represents one-half of total public revenue.

TABLE 19
Debt Service as a Proportion of
State Revenue in Foreign Currency
(In millions of $)

	1984*	1985	1986	1987
Debt Service (amortization and interest)				
- Cumulated:	45.2	104.	126.	122.
- New :		10.	22.	39.3
TOTAL	45.2	114.	148.	161.3
Revenue in foreign currency	248.5	276.2	290.2	294.2
Cumulated debt (as a % of revenue)	18.2	37.7	43.4	41.5
New debt (as a % of revenue)		3.6	7.6	13.3
TOTAL	18.2	41.3	51.0	54.8

SOURCE: Calculated from Table 16.
*The amount due in 1984 has, in large part, been renegotiated.

It is obvious that, in spite of the soft terms anticipated, the investment programme draws to the maximum extent on the country's capacity to contract new debt. This point may be illustrated by the fact that, to balance its budget, the state depends on budgetary assistance to the amount of over 10% of its revenue (see Table 16). This budgetary assistance includes neither food aid nor technical assistance.

(iii) The Consequences of a Renegotiation of the Bauxite Levy or of the Quantities Exported: The case of CBG

The revenue which accrues to the Guinean state through the activities of CBG comes, on the one hand, from taxes on profits and, on the other, from the bauxite levy which is directly proportional to the quantities exported. This levy represented $13.1 per tonne in 1984. Planning estimates had anticipated that the levy would be $12 per tonne as of 1986, which represented an important reduction in real value, if one takes account of inflation.

Moreover, the estimates which, in the planning document, are presented as the "upper hypothesis" (Hypothesis I), anticipated an expansion of bauxite production from 8.6 million tonnes in 1984 to 11 million tonnes in 1987. Table 20 summarizes these estimates.

TABLE 20
Bauxite Exports and the Bauxite Levy
The Case of CBC

	1984	1985	1986	1987
Volume of exports (10^6 tonnes)	8.6	9.86	10.85	11.0
Revenue from bauxite levy (10^6 $)	113	124	130	132
Levy per tonne	13.1	12.6	12.0	12.0

SOURCE: Programme intérimaire de Redressement National 1985-1987, op. cit., pp. 62 and 65.

(a) The consequences of a modification in productive capacity

During 1985, Halco Mining Inc., the private holding associated with the Guinean government in CBG, informed the government that the world market situation of aluminium had caused them to reconsider the proposed increases in productive capacity. Consequently, the authors of the Plan of National Reform introduced a "lower" or second ..ypothesis which assumed a stabilization of production at 9.6 million tonnes as of 1985.

The consequences of the modification for the public accounts are summarized in Table 21.

TABLE 21
Public Sector Budget in Currency
(In millions of $)

	1984	1985	1986	1987
Revenue	248.5	272.2	276.2	277.2
Expenditure	386.9	418.7	496.2	535.3
Balance to be financed	138.4	146.5	220.	258.1
Foreign loans	75.	105.	168.	208.
Budgetary aid	32.	41.5	52.	50.1
Supplement needed		(4.0)	(14.0)	(17.0)
Errors and omissions	31.4	-	-	-

SOURCE: Programme intérimaire de Redressement National, op. cit., p. 70.

N.B.: "Supplement needed" - our addition.

The authors of this table assumed the upper hypothesis, in which the investment programme was not modified, and supplementary budgetary aid could be found in order to compensate for the shortfalls in revenue - shortfalls which represent $35 million which would have to be found over the three year period. This eventuality reveals the fragility of the Plan of National Reform and its vulnerability vis-à-vis any modification of exports of bauxite, whether in volume or in value.

(b) The Consequences of a Renegotiation of the Bauxite Levy

In what follows, we shall limit the analysis to the Guinean CBG. However, it is more than likely that, if Halco Mining achieved its objective concerning the suppression of the bauxite levy, Pechiney, which has already complained that production costs of alumina at Friguia are too high in relation to other competitors, would take advantage of the situation to renegotiate with a view of lowering the taxes set on alumina. Obviously, the consequences to Guinea would be all the more severe. However, because present negotiations only involve CBG, it is this aspect which will be analyzed below.

Table 22 presents the state of Guinea's public accounts in 1987 in the event of the suppression of the bauxite levy by CBG.

A rapid glance at this table reveals the dramatic character of the situation. Government revenue is barely superior to current expenditure in spite of the fact that the latter has been drastically reduced. Current savings are inferior to investment based on local financing which is already a very small part (11%) of total investment. Debt service is equal to total revenue, as is the balance, which would have to be financed out of budgetary assistance.

TABLE 22
Revenue and Expenditure in Foreign Currency
of the Public Sector in the Event of
the Suppression of the Bauxite Levy
by CBG (1987)

	TOTAL BUDGET		NON-ALLOCATED BUDGET		ALLOCATED BUDGET
	IN MILLIONS $	AS A % OF REVENUE	IN MILLIONS $	AS A % OF NON-ALLOCATED REV.	IN MILLIONS $
Revenue from CBG. Friguia, and other firms	82.2		82.2		
Debts paid in kind	46.				46.
Revenue in roubles CBK	34.		34.0		
TOTAL REVENUE	162.2	100.0	116.2	100.0	46.
TOTAL CURRENT EXPENDITURE	140.	86.3	140.0	120.5	
Current Savings	22.2	13.7	-23.8	-20.5	
- Investment based on local financing	26.0		26.0		
- Investment from loans	208.0		208.0		
TOTAL INVESTMENT	234.	144.2	234.0	201.4	
Debt Service (capital and interest)	161.3	99.4	115.3	99.2	46.
Balance to be financed in currency	373.1	230.0	373.1	321.1	0
Foreign Loans	208.	128.2	208.	179.0	
Balance still to be financed	165.1	101.8	165.1	142.1	

SOURCES: Calculations based on Table 16.

If one takes into account the fact that part of the revenue which results from OBK is directly allocated to servicing the country's debt to the Soviet Union through payment in kind, one may see that the non-allocated revenue does not even cover current expenditure. Under the circumstances, the Guinean government could no longer even envisage contributing its part to the investment budget.

In other words, the suppression of the Guinean bauxite levy solely on the activities of the Compagnie des Bauxites de Guinée (CBG) would, in one stroke, place the country in a situation of cessation of payments:

1. Debt service could no longer be honoured;
2. The operating budget would come to a complete halt;

but, what is worse,

3. The measure would wipe out the country's investment programme - the central instrument on which the new government and the international and bilateral organizations backing it (the World Bank, IMF, UNDP, FED, KWF, and CCCE) have set their hopes for the country's economic reorganization and recovery.

After all the efforts of reconstruction which have been implemented since 1984, the Guinean state would be faced

with a situation of cessation of all payments and, consequently, with very extensive internal disorganization. It is quite clear that, if the public accounts were in such a state of chaos, no monetary reform would have a possibility of succeeding.

(c) The Consequences of the Suppression of the Bauxite Levy on the Balance of Payments of Guinea

A quick look at the Guinean balance of payments confirms the preceding conclusions. The estimates on which Table 23, The Guinean Balance of Payments 1984-1987: The Higher Hypothesis (see Annex) are based (production at 11 million tonnes at CBG at $36 per tonne) reveal the continuing fragility of the situation: in 1987 the mining sector still represents 97% of the value of exports. However, by the end of the Plan period, there emerges a timid diversification towards other exports as a result of the investment programme. The balance of trade worsens as a result of the growth of investment, while the imports of consumer goods of the public sector decrease. The balance of services and transfers, which was very negative as a result, above all, of debt service (public and private) and direct investment income, becomes more stable as a result of important grant transfers which represent the sum of $129 million in 1987.

In spite of these transfers, the global balance of payments position remains negative at -$50 million in 1987. The line in Table 23 entitled "Structural Errors" refers to the loss of currency as a result of the existence of the black market. It is to be noted that planning estimates assume a stabilization of these losses in spite of the increase in activity - revealing an improvement in the situation which may be explained by the positive impact expected from the monetary reform.

As with the public accounts, the absence of expansion of CBG has important negative effects which, in turn, have repercussions on the balance of payments: the balance of trade becomes negative in 1987, and the negative overall balance to be financed represents $70 million in 1987, as shown in Table 24 of the Guinean balance of payments. (See Annex.)

Again, as with the public accounts, the suppression of the bauxite levy from the operations of CBG would make the situation untenable: the deficit of the balance of trade would reach 27% of export revenue; the deficit of the current account balance, 40%; the overall negative balance would reach 38%; and debt service, a ratio of 47%. The country would, once again, find itself in a situation of

shortage of currency, which would necessitate introducing a system of rationing with all the negative consequences that this might entail, such as the slowing up and disorganizing of economic activity as a result of the interruption of supplies, the lack of spare part, etc. and the development of the black market. It is more than likely that, under these circumstances, the line in Table 24 identified as "Structural Errors" would, once again, increase - revealing a worsening of the situation.

CONCLUSION

In the foregoing study, we chose to analyze the most extreme case of the consequences to Guinea of the suppression of its bauxite levy without, however, taking into account, as has been mentioned, the very likely consequences of such changes on the taxes paid by Friguia.

This most extreme scenario is, in fact, that proposed by the directors of Halco Mining: the elimination of the $13 per metric tonne export tax on bauxite ore, which would cut the export cost 37% from the current level.(1)

(1) Wall Street Journal, "Aluminum Producer Group Asks Guinea to eliminate tax on Exports of Bauxite", March 18, 1986.

It may well be that the above represents a negotiating position. It should be noted, however, that all reduction of the bauxite levy by $1 per tonne entails a reduction of $11 million for Guinea - if one retains the higher hypothesis, or $9.6 million, if it is the low hypothesis of output level at 9.6 million tonnes which is retained. In view of the fact that the country has exhausted its capacity to assume further debt, these shortfalls would have to be financed by grants from the international community or else they would entail a further equivalent reduction of the investment programme.

The above analysis merely underlines the country's extreme dependence vis-a-vis revenue from bauxite. The explanation of this situation is to be found in a complex set of factors - important among which are the country's historical and colonial heritage. A solution to this problem has, in fact, been proposed. Other sources of currency exist and could potentially be made available through the export of bananas, pineapple, coffee, cocoa, livestock, etc. It is precisely this kind of a process of diversification which is the object of Guinea's most recent programme of investment with the far-reaching implications that this entails for the improvement of agricultural production and rural development. The implementation of a more diversified export programme will, however, necessitate years of investment and effort. To interrupt the programme at this stage, and to disorganize the public accounts to the extent entailed by the suppression or a reduction of the bauxite levy would be to ensure that the country remains in a state of total

dependence vis-a-vis its mining sector. It would, moreover, plunge the country, once again, into a situation in which the black market prevails, in which internal markets are disorganized and, finally, where production and social conditions would inevitably regress.

GENERAL CONCLUSION

While the preceding study has examined the case of only one bauxite-producing country, there is every reason to believe that, should bauxite prices be reduced, similarly alarming results would be obtained if the analysis were applied to certain other countries which are in a position of extreme dependence vis-a-vis revenue from bauxite - notably Jamaica and Surinam.

Finally, and perhaps the most central general conclusion which can be drawn from the foregoing study is the fact that there exists, at present, a fundamental contradiction between the very stringent position taken in negotiations by the integrated transnationals of the aluminium sector on the one hand and, on the other, the planning and financial objectives and commitments of international and bilateral organizations supporting the strategies of development and co-operation of developing nations such as Guinea.

ANNEXES

TABLE 23
The Guinean Balance of Payments
(The Higher Hypothesis: CBG at 11 million tonnes)

RUBRIQUES	1984	1985	1986	1987
Export FOB	550,5	613,5	643	657
Import CAF	436,2	506	593	665
. Etat et revenu public				
- consommation	166,9	115	87	85
- investissement hors emprunt	28,3	13	21	26
- investissement sur emprunt	75	105	168	208
. Compagnies minières	134	155	146	148
. Ancien secteur d'état				
- industrie	-	34	47	60
- commerce	-	46	78	83
. Privé	32	38	46	55
Balance Commerciale	114,3	107,5	50	- 8
Services et Transferts	- 134	- 95,5	- 76,6	- 68,5
. Secteur public				
- intérêts dette	- 26	- 24,7	- 23,2	- 21,1
- financement hors projets (90 %)	-	- 29,1	- 50	- 68,2
- autres	- 11	- 12	- 13	- 14
. Secteur privé				
- émigrés coopérants	- 10	0	0	10
- autres services	- 30	- 32	- 33	- 35
- intérêts payés	- 21	- 22	- 23	- 24
- revenus des investissements, dividendes	- 36	- 41	- 43	- 45
- profits réinvestis	- 32	- 20	0	0
. Transferts officiels	32	40	40	40
. Financement hors projets	-	45,3	68,6	88,8
Balance courante	- 19,7	12,0	- 26,6	- 76,5
Capitaux	41,8	15	42	86
Dont long terme				
. Public				
- sur emprunts	75	105	168	208
- amortissement dette	- 45,2	- 104	- 126	- 122
. Privé				
- investissements directs	32	32	13	16
- emprunts	13	15	20	17
- amortissement dette	- 33	- 33	- 33	- 33
Solde	22,1	27	15,4	9,5
. dette nouvelle intérêts + amortissement	-	- 10	- 22	- 39,3
Solde théorique	22,1	17	- 6,6	29,8
. Erreurs structurelles	- 32,1	- 40	- 40	- 40
Solde balance des paiements	- 10	- 23	- 46,6	- 69,8

SOURCE: Programme intérimaire de Redressement National, 1985-1987, op. cit., p. 71.

TABLE 24
The Guinean Balance of Payments
(The Lower Hypothesis:
CBG output at 9.6 million tonnes)

RUBRIQUES	1984	1985	1986	1987
Exportations FOB	550,5	621,5	687	707
. secteur produits miniers	543	612	673	686
. produits agricoles	0,5	0,5	3	6
. autres	7	9	11	15
Importations CAF	436,2	506	615	689
. Etat et secteur d'Etat				
- destinées à la consommation	166,9	115	87	85
- destinées à l'investissement(hors emprunt)	28,3	13	21	26
- destinées à l'investissement(sur emprunt)	75	105	168	208
. Compagnies minières	134	155	168	172
. Ancien secteur d'Etat privatisé ou mixte				
- de l'industrie	-	34	47	60
- du commerce	-	46	78	83
. Privé	32	38	46	55
Balance Commerciale	114,3	115,5	72,0	18
Services et Transferts	-134	- 95,5	-101,6	- 98,5
. Secteur public				
- intérêts sur dette actuelle	- 26	- 24,7	- 23,2	- 21,1
- autres services	- 11	- 12	- 13	- 14
- financement hors projets (1)	-	- 29,1	- 50,0	- 68,2
. Secteur privé				
- émigrés coopérants (2)	- 10	0	0	10
- intérêts payés	- 21	- 22	- 23	- 24
- autres services	- 30	- 32	- 33	- 35
- revenus des investissements, dividendes	- 36	- 41	- 46	- 51
- profits réinvestissements	- 32	- 20	- 22	- 24
. Transferts officiels (dons)	32	32	40	40
. Financement hors projets (3)	-	45,3	68,6	88,8
Balance courante	- 19,7	20,0	- 29,6	- 80,5
Capitaux	41,8	15	64	110
Dont long terme				
. Publics				
- emprunts	75	105	168	208
- amortissement dette actuelle	- 42,5	-104	-126	-122
. Privés				
- investissements directs	32	32	35	40
- emprunts	13	15	20	17
- amortissement	- 33	- 33	- 33	- 33
Court terme	-	-	-	-
Solde	22,1	35,0	34,4	29,5
. Intérêt + amortissement dette nouvelle	-	- 10	- 22	- 39,3
. Paiement d'arriérés (pour mémoire)	pm	pm	pm	pm
Solde théorique	22,1	25	12.4	- 9,8
. Erreurs structurelles	- 32,1	- 40	- 40	- 40
Solde balance des paiements	- 10	- 15	- 27,6	- 49,8

(1) 90 % des financements hors projets non compris l'aide à la balance des paiements et l'aide alimentaire qui est elle, déjà incluse dans les importations, ressortant sous forme de services à l'extérieur.
(2) Les transferts des coopérants seront compensés par un envoi plus systématique des revenus des émigrés guinéens à l'étranger.
(3) Hors aide de la balance des paiements.

SOURCE: Ibid., p. 69