

**TRANSNATIONAL RESTRUCTURING AND THE JAMAICAN BAUXITE INDUSTRY:
THE SWINGING PENDULUM OF BARGAINING POWER¹**

Lou Anne Barclay and Norman Girvan

Abstract

Since the late 1970s, the Jamaican government has progressively changed its policy stance vis-a-vis the Transnational Corporations (TNCs) operating in its bauxite industry from relatively confrontational to relatively accommodating. A controversial bauxite production levy was replaced by a fiscal regime based on corporate profits taxes and royalties. The changes were due to a steep decline in the government's bargaining power in relation to the traditional TNCs players and to the new players in the global industry; manifested in a dramatic fall in Jamaica's global bauxite and alumina market share and the perceived need to restore international competitiveness. Also playing a part were the deteriorating economic situation of the country and the changing ideological climate associated with the Washington Consensus. The policy changes, in the context of the global restructuring of the aluminium industry; resulted in new investment with increases in plant capacity and production; but aggregate returns from the industry have not grown significantly as per unit returns have declined; and the recent global economic slowdown has resulted in plant closures. The paper argues that taxation as a policy tool for securing benefits and externalities from the bauxite industry may have reached the limits of its effectiveness in Jamaica. It also suggests that successful resource-based development rests on institutions that are not only autonomous but also endowed with the requisite resources to effectively fulfil their mandate.

Key words

Bauxite and alumina, Jamaica, international competitiveness, fiscal systems, hypothecating mode, institutions, transnational corporations.

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1.0 Introduction

The pendulum has swung. The decade of the 1990s witnessed a resurgence of Foreign Direct Investment (FDI) into the primary sector (fuel, ores and minerals) of some resource-rich, developing countries. This surge in resource-seeking FDI was triggered by privatisation schemes implemented in the context of structural adjustment programmes; favourable price movements in some commodities; for example, oil; growing demand from rapidly industrialising countries such as China and India; and by technological developments (UNCTAD, 2005, p. 38-40). This recent embrace of resource-seeking FDI is a dramatic reversal from the policies that were adopted by many resource-rich, developing countries in the 1970s, when attempts were made to secure greater control over the primary sector, with some countries even nationalising this strategic sector.

Jamaica is a classic example of such a developing country - This country has been exporting bauxite and alumina since 1952 when the North American aluminium Transnational Corporations (TNCs) (Alcan, Kaiser and Reynolds) established operations. In the following two decades, these firms contributed significantly to Jamaica's economic growth. However, the aluminium TNCs were able to successfully evade taxes through the use of transfer pricing and other creative accounting measures (Girvan, 1967, 1971, 1984). Moreover, the control of this strategic industry by the aluminium TNCs resulted in 'the throttling of a potentially dynamic effect on the transformation of the economy' (Girvan, 1971, p.75).

In the 1970s, the government, having adopted an ideology of democratic socialism², attempted to loosen the control of the aluminium TNCs over the bauxite and alumina industry. State participation was aimed at securing greater control over the industry's economic returns, production, processing and marketing. To this end, in 1974, the government reformed the fiscal regime, replacing the corporate tax system with a controversial bauxite production levy. In addition, in 1975 it purchased 51 percent of the capital assets of the local bauxite operations of Kaiser and Reynolds, 6 percent of Alcoa and 7 percent of Alcan's alumina operations, and repurchased most of the reserve lands owned by the companies (Jamaica Bauxite Institute, 1996). It also strengthened its capability to manage the industry with the creation of new institutions. Jamaica also helped to spearhead formation of the International Bauxite Association, a producer association, inspired by OPEC's success, which aimed at increasing the economic rents accruing to the bauxite-producing countries.

However, since the late 1970s there has been a gradual reversal of these policies; most notably the removal of the bauxite production levy and the reintroduction of a fiscal system based on corporate

taxes and royalties. Several factors influenced these policy changes, including the ideological shift of Jamaican governments towards the tenets of the Washington Consensus, a steep decline in Jamaica's global market share and the need to restore industry competitiveness, and the country's parlous economic performance since the late 1970s. Furthermore, policy changes took place during a period of major restructuring of the global industry in the pattern of corporate ownership and the geographic distribution of production and trade.

What has been the impact of these policy changes in the context of global restructuring? This paper attempts to answer this question. It shows that the Jamaican Government's policy changes have achieved their desired objectives in terms of increased investment by the resident aluminium TNCs with the resultant increases in plant capacity and production levels. They have had a positive influence on the locational decisions of foreign firms; as Jamaica is now an attractive location for new FDI in the bauxite and alumina industry. However, they have had unforeseen effects on the country's fiscal revenues during a period when it is experiencing endemic fiscal crises. This dire situation has been exacerbated by the very recent decline in the international aluminium industry: two companies have closed their operations and another has significantly reduced its production levels. Indeed, the government's net earnings from this industry in 2009 are projected to decline to about one-third of their 2008 level.³

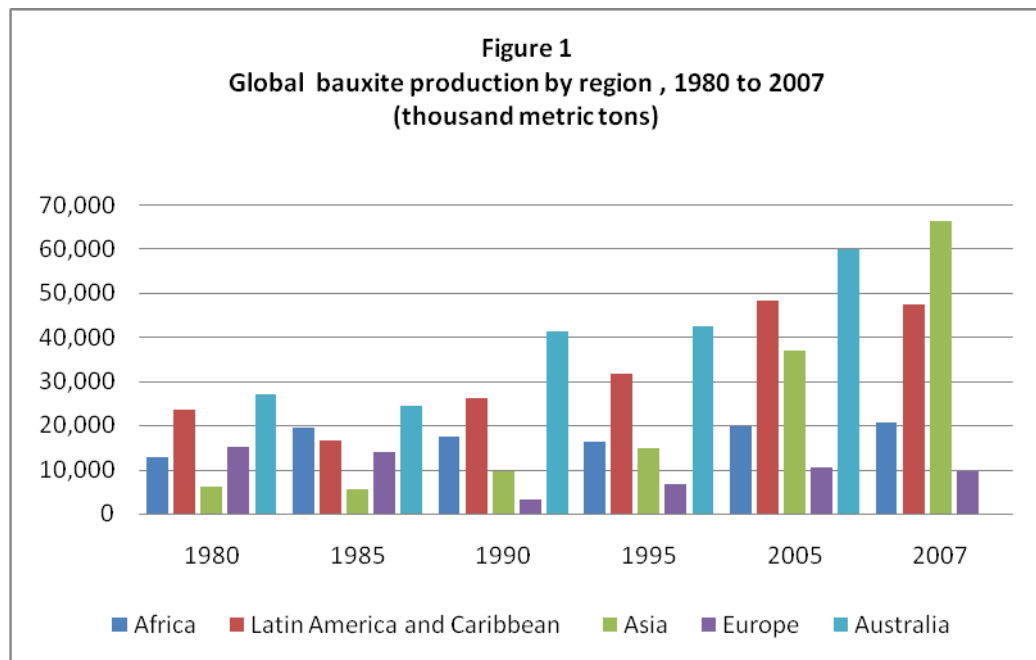
This paper is organised as follows: Section 2 discusses the pertinent factors underlying the restructuring of the international aluminium industry since 1980. Special attention is paid to the issues that affect the industry in Jamaica. Section 3 examines the response of Jamaica's bauxite and alumina industry to these global developments while Section 4 analyses the impact that the policy reversals, implemented in the post 1980 period, have had on this industry. The information in this section was obtained from interviews with key policy makers as well as secondary sources of data including the annual reports of companies. Section 5 presents the conclusion.

2.0 The restructuring of the international aluminium industry

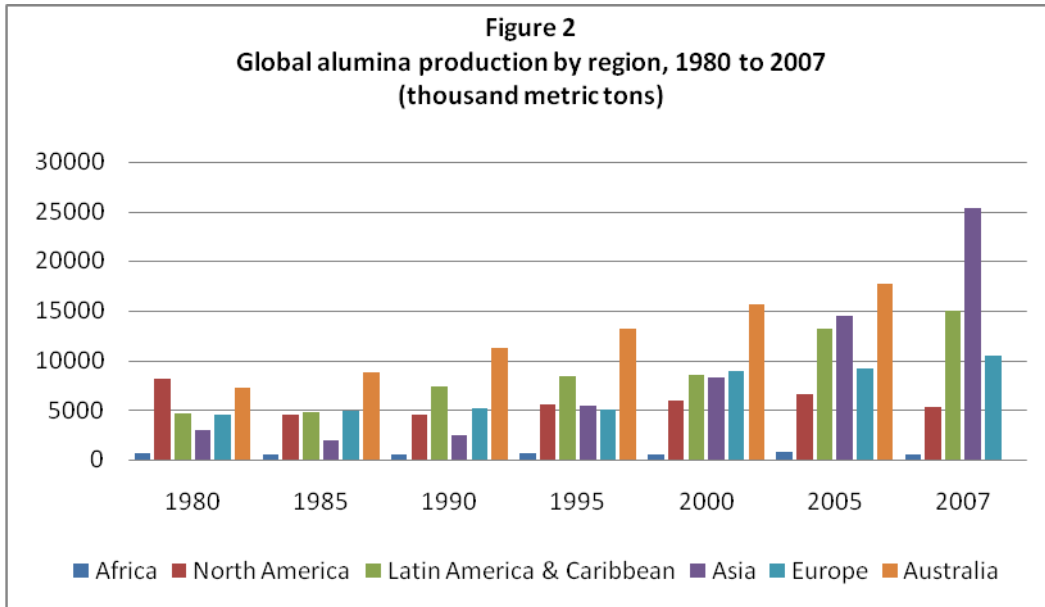
Post 1980 global restructuring of the industry served to weaken the bargaining position of developing country bauxite exporters such as Jamaica vis-à-vis their resident aluminium TNCs. The most significant changes were the rise of new locations for bauxite, alumina and aluminium production; the emergence of China as the largest global producer and consumer of primary aluminium; the formation of the London Metal Exchange for aluminium; increased firm concentration in the industry; and the demise of the International Bauxite Association (IBA) (Barclay, forthcoming).

2.1. Changing geographic patterns of production

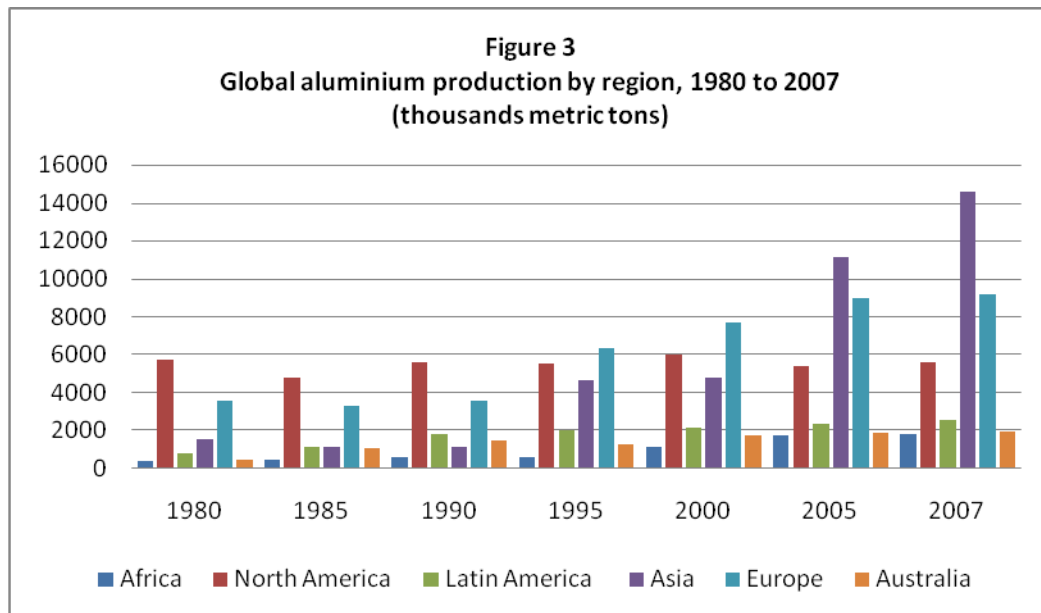
A major development has been the emergence of Asia in all stages of production in the industry. In bauxite production, Asia's global share rose from 7 percent in 1980 to 31 percent in 2007, with China accounting for more than 30 percent Asian output (See Figure 1). Asia's share of global alumina production increased from 8 percent to 32.7 percent in the same period and its share in global aluminium production now stands at 38 percent, more than double that of North America. Russia also emerged as a major aluminium producer, with almost 50 percent of European aluminium production. Hence, North America lost its dominant position in world alumina and aluminium production; its global market shares falling from 29 and 45 percent and to 6.8 and 15 percent, respectively during 1980 to 2007 (Figures 2-3). In the case of Jamaica, the country's share in world bauxite production shrank from 13.5 percent to 6.8 percent over the same period.



Source: Bamgardener and Hough (1982, 1987), British Geological Survey (2007, 2009), Plunkett (1999, 2000), Senke (1996)



Source: British Geological Survey (2007, 2009), Plunkert (1999, 2000), International Aluminium Institute website.



Source: British Geological Survey (2009), Lee Bray (2006), International Aluminium Institute (n.d).

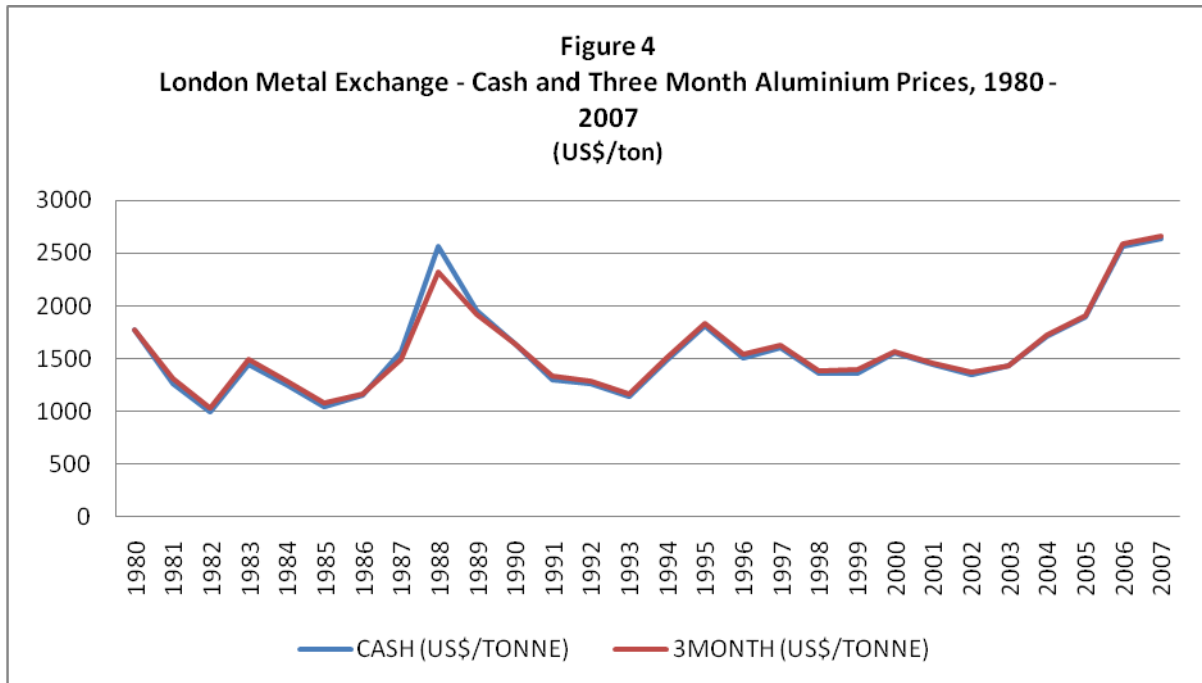
2.2 Pricing, the LME and the entry of new players

In the decades following immediately after World War II, the six oligopolistic aluminium TNCs had considerable control over the pricing of aluminium. There was a recognised price leader, Alcan,

whose international ingot price changed infrequently and was followed by other major producers. Price stability was a strategy to capture market share from rival metals, notably copper (Lines, 1990). Lines (1990, p. 250) notes that between 1995 to 1991, real copper prices fluctuated widely, deviating by 15.3 percent on average from a five-year moving average, but aluminium prices deviated the least among nine leading metals and ores, and those for bauxite, the third least, by 4.6 and 5.6 percent, respectively. However, as new sources of aluminium supplies entered the market in the 1970s,⁴ the stability of this price system weakened. Merchants developed a limited 'free' market in aluminium in the 1970s, which, while covering a small percentage of aluminium transactions, was very influential. These transactions attracted the attention of the London Metal Exchange (LME), resulting in its establishing a contract in primary aluminium ingots in 1978.

The introduction of the LME for aluminium shattered the stability of prices in this industry. The aluminium TNCs now had much less influence over the stock levels in this industry⁵, and thus were not able to significantly influence price levels. For instance, during the years, 1980 to 1982, the LME cash quotation fell from US\$ 0.80 cents per ton to US\$ 0.45, while the Alcan list price remained unchanged. Prices recovered in 1983 but declined once more in 1984, and by October 1984, the LME price was US\$ 1.020 per ton while Alcan's was US\$ 1.750. Alcan later ceased to endorse the system of list prices, and aluminium producers joined other non-ferrous base metal producers in having their international prices based on LME transactions (Lines, 1990).

Consequentially, the aluminium industry soon began to demonstrate the cyclical nature that characterises copper and many other primary commodities. For example, the aluminium market declined significantly as a result of the recession of the early 1980s, rebounded when demand grew during 1983 to 1984, and fell precipitously in the early 1990s when Russia began to divert low-priced aluminium into the global market. Although the market recovered by 1995, partly because of the Memorandum of Understanding signed by several of the major aluminium producing countries, this cyclical behaviour still characterises the industry (See Figure 4).



Source: Economics Division, Jamaica Bauxite Institute, unpublished statistics, 2008

Another consequence of this development was the entry of world fund investors into the industry. Aluminium is the most traded metal on the LME, and members of the investment community are moving from trading into production, including bauxite. Thus in 2007, the private equity firm, Apollo Management, acquired a 24.5 percent interest in the Jamaican bauxite mining company, St. Ann Jamaica Bauxite, from the Anglo-Swiss mining company, Xstrata plc (International Business Times, 2007). This is the first investment of its kind in the Jamaica industry; as previously investing companies have been aluminium TNCs and more recently, a metals trading company.

2.3. Increasing firm concentration in the aluminium industry

In response to intensified competition, there has been a wave of mergers and acquisitions in the international aluminium industry since the 1980s. The six aluminium TNCs dominant in most of the post World War II era have dwindled to two firms, Alcoa and Alcan. The latter was acquired by Rio Tinto in August 2007, making the merged firm, Rio Tinto Alcan, the largest global producer of bauxite and aluminium. At the same time new global players have emerged. The Russian smelters and Commonwealth of Independent States (CIS) refineries were consolidated to form either Rusal or Sual. In

March 2007, these two firms merged, and acquired the bauxite and alumina assets of the Swiss metal trader, Glencore International AG, creating the United Company Rusal, the second largest global producer of aluminium. Finally, all the Chinese alumina plants as well as some smelters merged under Chalco (Global Alumina, n.d.). These firms are highly internationalised and it is noteworthy that with the exception of Chalco, all operate in Jamaica.

A further corporate response has seen several aluminium TNCs strategically repositioning themselves along the aluminium production chain, seeking activities that are more compatible with their present and future core competencies and divesting themselves of those which are not

Bauxite-exporting, developing countries have been impacted by this strategy. Kaiser Aluminium, in its post Chapter 11 period, divested its downstream assets in Jamaica and retained only its 49 stake in the Anglesey smelter in Wales. The firm has concentrated its core competencies in the upstream end of the industry, becoming a cost-efficient supplier of rolled products to the aerospace industry, and forgings and drawn products to the general engineering industry (Baker, 2007). Other developments in the international aluminium industry that have impacted the Jamaican industry are discussed in the following section.

2.4. The demise of the International Bauxite Association

The International Bauxite Association (IBA), had been launched in 1974, in the era of 'resource nationalism' in developing countries. IBA hoped to emulate OPEC's success in securing dramatic increases in the returns to producing countries from exports of resource products by cartelising the market and increasing bargaining power vis-a-vis the TNCs. IBA's eleven members countries accounted for 69 percent of world bauxite production in 1973 and 74 percent in 1974 (Litvak and Maule, 1980). But IBA failed in its principal objectives. It never reached agreement on a uniform system of prices and taxes for bauxite and alumina exported by member counties; or on maintaining world market prices by means of global production limits. It was not able to cartelise the bauxite market; had no significant impact on bauxite pricing and processing and did not materially affect the oligopolistic power of the incumbent aluminium TNCs in the main product markets.

One reason for this is that bauxite is not a homogenous commodity traded freely on world markets. Bauxite from different sources differs in chemical composition and is destined for specific alumina plants built to process particular ore deposits. IBA members would therefore have had to agree on a formula for determining 'reference' prices but, since production, processing and transport costs

vary widely in different locations, this presented major technical difficulties. A second difficulty for IBA was the inherent contradiction between the interests of the older bauxite producing countries, particularly Jamaica and Guyana; and the newer producers, particularly Australia and Guinea. The older producers wanted to maximise their returns from existing production while the newer producers wanted to maximise their returns through new investment, higher production and increasing global market shares (Girvan 1994). In IBA's first two years the combined global market share of Jamaica and Guyana fell from 22.8 to 15.8 percent while that of Australia and Guinea increased from 29.6 to 45.1 percent (Litvak and Maule, 1980).⁶ In 1995, the combined global market share of Jamaica and Guyana had shrunk further to 11.5 percent. The withdrawal of Australia from IBA in 1991 signalled the impending demise of the Association. Arrears in member country contributions accumulated and attendance at meetings declined (Davis 1995). Jamaica's withdrawal in 1994 led to its formal dissolution.

Davis (1995; esp. p. 353) reflected that the IBA was a disappointing experiment for Jamaica. He cited the failure to secure timely information on industry developments from member countries, the departure of key member countries from the association, and the lack of dedicated service from senior appointees; and argued that Jamaica's interest would be better served by investing in industry information systems and developing bilateral relationships with players in the industry.

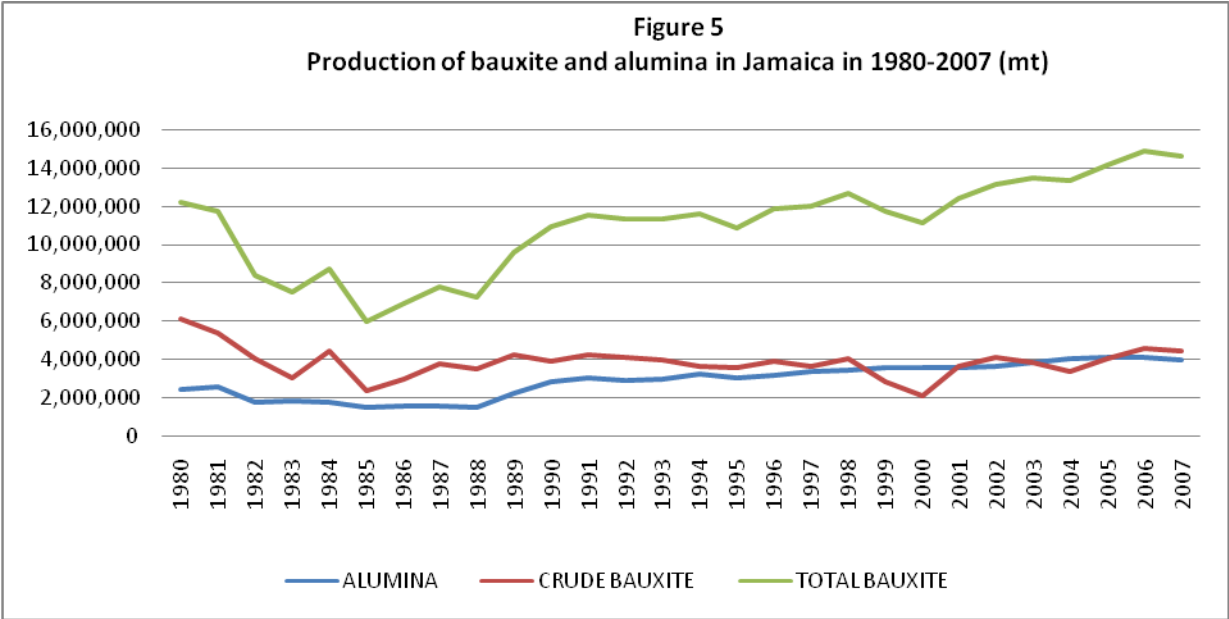
3.0 National restructuring of Jamaica's bauxite and alumina industry

In the post 1980 period, Jamaica's bauxite and alumina industry was dramatically restructured and two paradoxical trends emerged: Production levels in the industry were significantly increased while the country's shares in global bauxite and alumina production declined, and the structure of export markets remained virtually unchanged amidst frequent changes in firm ownership. These issues will be discussed in the following section.

3.1 Changing production and processing patterns

Production levels in the Jamaican industry fluctuated according to global market conditions as well as conditions in the local environment. The decade of the 1980s was a bleak one for the Jamaican industry. Plagued by deteriorating international conditions and exacerbated by lack of competitiveness due to the imposition of the bauxite levy, there were closures of two refineries (Alpart and Jamalco) and one bauxite mining operations (Reynolds). Accordingly, the levels of total bauxite production plunged.

As Figure 5 shows, the decline began in 1981 and continued until 1989. Similar trends were observed for alumina production where the decline started in 1982 and continued unabatedly until 1989.



Source: Economics Division, Jamaica Bauxite Institute, unpublished statistics, 2008

The domestic industry rebounded during the 1990s, despite the cyclical performance of the international aluminium industry during this period. As Figure 5 shows, since 1990, total bauxite production in Jamaica increased almost annually, with production levels in 2006 doubling those recorded a decade earlier. Similarly, alumina production soared with production levels in the 1990s far exceeding those of the 1980s.

Several factors concert, were responsible for the dramatically improved performance of the 1990s. First, from 1979 the Jamaican government has been implementing incentives to boost production (see Section 4). In response, per capita investment in the industry, which averaged at US\$ 25 million per year in 1989, increased to US\$ 80 million per year by 1998. This investment was critically needed in the industry since Jamaica’s refineries were older and smaller than its competitors (James, 1998). The alumina refineries have been operating at full capacity since 1998 and the aluminium companies subsequently increased refinery capacity; in 2002, Alpart completed its US\$ 200 million investment, augmenting capacity by 250,000 tons per year to 1.5 metric tons per year (James, 2001). Later investments increased capacity to its current levels of 1.7 million tons per year. Similarly, Winalco

and Jamalco increased their refinery capacity to the current levels of 1.3 million tons and 1.5 million tons, respectively, and both companies planned to increase capacity by 2 million tons and 2.8 million tons, respectively.

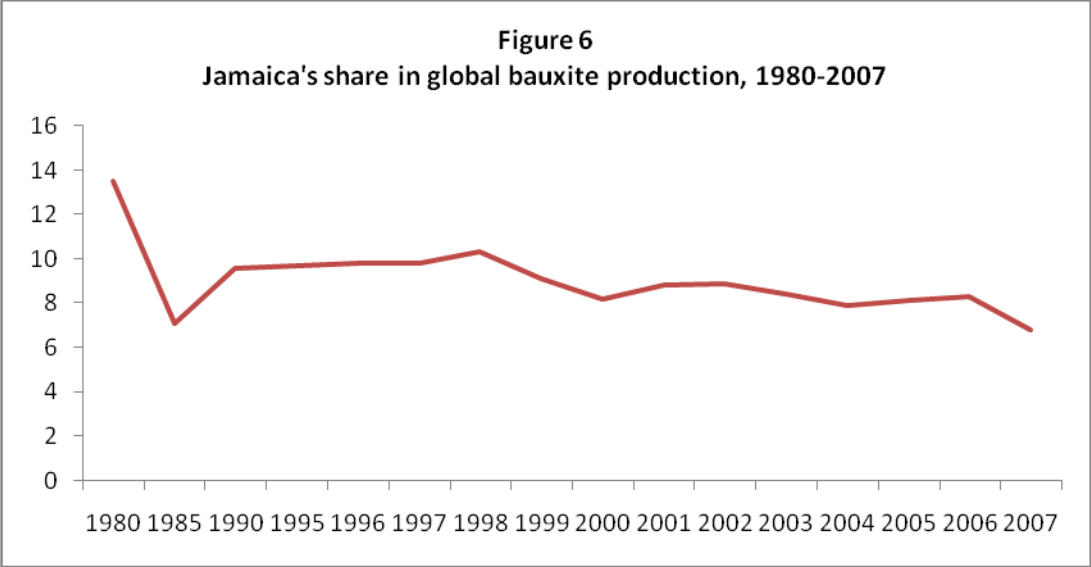
Jamaican refineries were also plagued by high production costs, with the production costs of alumina in 2002 averaging US\$ 166 compared with US\$ 160 in Australia (The Economist Intelligent Unit ViewWire, 2003). Several measures were implemented to reduce production costs. Two refineries, Jamalco and Alpart merged their mining operations in 1998. However, this merger ended with the collapse of the mining operator, Henry Walker Eltin Group Ltd. in 2005. Further, the companies, through their rationalisation and modernisation initiatives, also sought to reduce employment levels; in 2008, the industry directly employed only 3,400 workers down from a high of more than 6,900 in 1975 (Jamaica Bauxite Institute, 2008).

Perhaps one of the more successful initiatives was the government-inspired attempt to address variable costs through the tripartite memorandum of understanding (the Manley Accord) between the companies, trade unions and the government, signed in 1998. The years preceding this Accord were characterised by labour unrest, arising from demands for wage increases driven by high inflation and the frequent devaluations of the Jamaican currency (James, 1998). This Accord thus sought to promote industrial stability as well as improve labour productivity. It also contained provisions for energy efficiency, new fiscal arrangements and capacity expansion. The Accord, together with the production incentives offered by the Jamaican government, evidently has increased production levels in the industry.

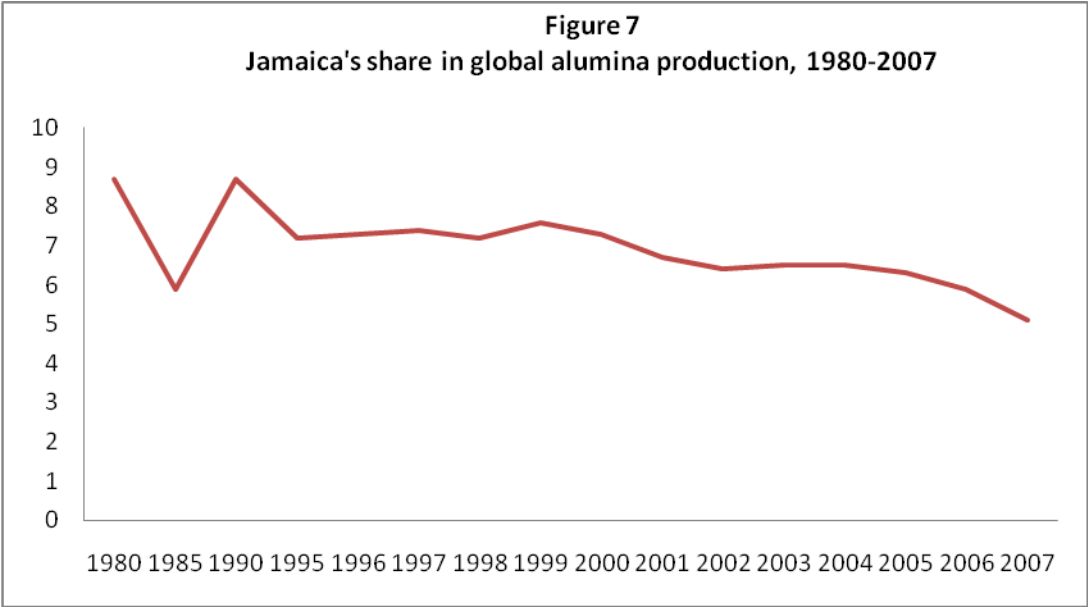
3.2. Jamaica's declining share in global bauxite and alumina production

It is thus ironic that despite the increasing production levels in Jamaica's bauxite and alumina industry, the country's share in global bauxite and alumina production declined significantly over the last twenty-five years. In 1980, Jamaica's share in global bauxite production totalled 13.5 percent, a value that has not been since attained. With Reynolds' closure of its bauxite mining operations, the country's share in global bauxite production plunged by almost 50 percent to 7.1 percent in 1985, but climbed to 10 percent by 1998. However, the country's share declined in later years, averaging around 7 to 9 percent of world bauxite production (See Figure 6). A similar trend was observed for alumina. In 1980, Jamaica's share in global alumina production was 8.7 percent. With the closure of the Alpart and Jamalco refineries in 1985, the country's share in global alumina production plummeted to 5.9 percent

in this year. However, by 1990 its share was restored to the 1980 value. Nonetheless, the country's share in global alumina production has been declining since 1990, averaging around 5 to 7 percent of global alumina production (See Figure 7).



Source: Same as Figure 1



Source: Same as Figure 1

3.3 Changing firm ownership in Jamaica's bauxite and alumina industry

Also notable were frequent ownership changes in the Jamaican industry that mirrored those in the global industry. In 1984, four of the six oligopolistic aluminium TNCs dominated the operations of the two bauxite and three alumina companies in Jamaica; by 2009, the number had dwindled to only one (See Tables 1 and 2).

As Table 1 shows, on January 1984, the US aluminium TNCs, Kaiser Bauxite and Reynolds had 49 percent equity participation in the bauxite industry. The ownership structure in alumina was more diversified with Alcan, Anaconda, Reynolds, Kaiser Bauxite and Alcoa enjoying majority shareholdings (See Table 2). At the end 1984, Reynolds closed its mining operations and withdrew from its participation in the joint venture, Jamaica Reynolds Bauxite Partners. The company cited the protracted decline in the international aluminium industry as forcing it to take advantage of alternative sources of supply in Australia, Brazil and Guinea (Friedland, 1984).⁷ The government was obliged to acquire all the local assets of Reynolds. The mine, formerly operated by Reynolds, still remains closed.

In 2002 to 2003 Kaiser Aluminium filed for bankruptcy. In the ensuing reorganisation of its operations, it divested all its downstream assets, including those in Jamaica, to focusing on building its core competencies in upstream operations. In 2004, the company sold its 49 percent stake in Kaiser Jamaica Bauxite Company to St. Ann Bauxite Ltd. (a consortium comprising Century Aluminium Company and Noranda Aluminium Inc.). The government of Jamaica continues to be the majority shareholder and the company has been renamed, St. Ann's Bauxite Partners Limited. There was a further change in ownership in April 2007 when the Apollo Management company acquired the assets of Noranda Aluminium Inc., making St. Ann's Bauxite Partners Ltd. the first firm in the history of Jamaica's bauxite industry to be partially owned by a private equity firm (See Table 1).

The alumina industry was also affected. In July 1985, Kaiser and Reynolds purchased Anaconda's share in Alpart, only to close the company in September of that year, citing declining market conditions and the high costs of raw materials and energy. The company was re-opened in 1988 under a joint venture with Kaiser holding 55 percent of the equity and the new entrant, Hydro Aluminium, 35 percent. However, this partnership was short-lived. As Table 2 shows, in 2004, Glencore International AG acquired Kaiser's 65 per cent ownership and Alpart's ownership structure became Glencore, 65 percent and Hydro Aluminium, 35 percent. However, this partnership was as short-lived as the previous one. In 2007, Rusal acquired the bauxite and alumina assets of Glencore and presently has majority ownership

in Alpart, with the ownership position of this new company being Rusal, 65 per cent and Hydro Aluminium, 35 per cent.

The company, Jamalcan also experienced ownership changes. Until 2001, Jamalcan was a joint venture between Alcan (93 percent) and the government of Jamaica (7 percent). In 2000 Alcan acquired the Alusuisse Lonza Group AG and, in order to comply with the divestment requirements imposed by European regulatory authorities it sold its stake in Jamalcan to Glencore in 2001, the company being renamed Winalco. In 2007 Winalco was acquired by the United Company Rusal.

In response to the dramatic decline in the aluminium industry, Alcoa closed its Jamaican operations in 1985. The Jamaican government, through the government-owned, Clarendon Alumina Production (CAP) continued to operate the leased, Jamalco plant. In 1988 Alcoa re-entered the Jamaican industry and Jamalco is now a joint venture owned by Alcoa and the CAP⁸

It is noteworthy that these frequent changes in ownership may not have adverse consequences for Jamaica since its strategic importance to the resident aluminium TNCs has not changed significantly. Indeed, in 1999, one aluminium TNC, Alcan got 20 percent of its alumina from its two Jamaican refineries (James, 1999a). In 2008, Jamaica accounted for 27 per cent of the alumina produced by the emerging global player, Rusal (authors' estimates).

Table 1: Ownership changes in Jamaica's bauxite industry, 1984 to 2008

Company	Ownership				Date of Establishment	Location	Capacity (tons)			
	1984	1988	2005	2008			1984	1988	2005	2009
St. Ann's Bauxite Partners	Kaiser Jamaica Bauxite Company Ltd.	Kaiser Jamaica Bauxite Company Ltd.	St. Ann's Bauxite Partners	St. Ann's Bauxite Partners	Kaiser Bauxite - 1953	Discovery Bay	3,800,000	4,500,000	4,500,000	4,700,000
	Kaiser Bauxite (US) - 49%	Kaiser Aluminum and Chemical Corporation (US) - 49%	Century Aluminum Company & Noranda Aluminum Inc. (US) - 49%	Century Aluminum Company & Apollo Management (US) - 49%						
	Jamaica Bauxite Mining Ltd. (GOJ) - 51%	Jamaica Bauxite Mining Ltd. (GOJ) - 51%	Jamaica Bauxite Mining (GOJ) - 51%	Jamaica Bauxite Mining (GOJ) - 51%						
Jamaica Bauxite Mines/Lydford Mines	Jamaica Reynolds Bauxite Partners	Jamaica Bauxite Mines/Lydford Mines	Jamaica Bauxite Mines/Lydford Mines	Jamaica Bauxite Mines/Lydford Mines	Reynolds -1952	Lydford, St. Ann	2,800,000	0	0	0
	Reynolds (US) - 49%	Jamaica Bauxite Mining Ltd. (GOJ) - 100%	Jamaica Bauxite Mining Ltd. (GOJ) - 100%	Jamaica Bauxite Mining Ltd. (GOJ) - 100%						
	Jamaica Bauxite Mining Ltd. (GOJ) - 51%									

Source: Jamaica Bauxite Institute (2001, 2005), Barclay (forthcoming)

Table 2: Ownership changes in Jamaica's alumina industry, 1984-2008

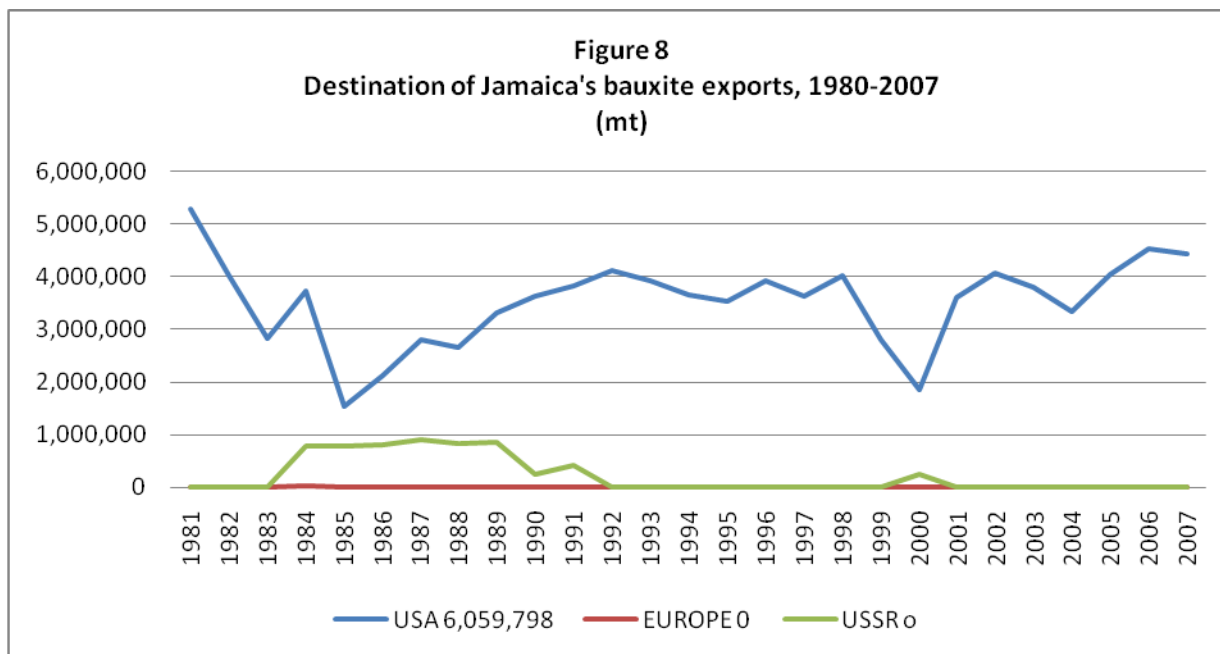
Company	Ownership				Date of Establishment	Location	Capacity (tons)			
	1984	1988	2005	2008			1984	1988	2005	2009
West Indies Alumina Company (WINDALCO)	Alcan Jamaica Company (JAMALCAN)	Alcan Jamaica Company (JAMALCAN)	West Indies Alumina Company (WINDALCO)	West Indies Alumina Company (WINDALCO)	Alcan - 1952	Kirkvine, Manchester	550,000	550,000	700,000	625,000
	Alcan Aluminum Ltd. (Canada) – 93%	Alcan (Canada) – 93%	Glencore (Switzerland) – 93%	United Company Rusal (Russia) – 93%						
	Jamaica Bauxite Mining Ltd. (GOJ) – 7%	Jamaica Bauxite Mining Ltd. (GOJ) – 7%	Jamaica Bauxite Mining Ltd. (GOJ) – 7%	Jamaica Bauxite Mining Ltd. (GOJ) – 7%		Ewarton, St. Catherine	550,000	550,000	600,000	675,000
Alumina Partners of Jamaica (ALPART)	Alumina Partners of Jamaica (ALPART)	Alumina Partners of Jamaica (ALPART)	Alumina Partners of Jamaica (ALPART)	Alumina Partners of Jamaica (ALPART)	Anaconda, Reynolds and Kaiser Bauxite - 1969	Nain, St. Elizabeth	600,000	1,450,000	1,700,000	1,700,000 to be expanded to 2,000,000
	Anaconda, Reynolds Metals and Kaiser Bauxite (US) – 100%	Kaiser Aluminum and Chemical Corporation (US) – 65%	Glencore (Switzerland) – 65%	United Company Rusal (Rusal) – 65%						
		Hydro Aluminum (Norway) – 35%	Hydro Agri (Norway) – 35%	Hydro Agri (Norway) – 35%						
Jamaica Alumina Company (JAMALCO)	Jamaica Alumina Company (JAMALCO)	Jamaica Alumina Company (JAMALCO)	Jamaica Alumina Company (JAMALCO)	Jamaica Alumina Company (JAMALCO)	Alcoa bauxite - 1963 alumina - 1973	Halse Hall, Clarendon	500,000	850,000	1,250,000	1,500,000 to be expanded to 2,800,000
	Alcoa (US) – 94%	Alcoa Minerals of Jamaica (US) and Western Mining Corporation (Australia) – 50%	Alcoa (US) – 50%	Alcoa (US) – 55%						
	GOJ- 6%	Clarendon Aluminum Production (GOJ) - 50%	Clarendon Aluminum Production (GOJ) - 50%	Clarendon Aluminum Production (GOJ) - 45%						

Source: Jamaica Bauxite Institute (2001, 2005), Barclay (forthcoming)

3.4 The restructuring of export markets

Despite frequent ownership changes, the structure of export markets for the Jamaican industry has remained relatively unchanged. The foreign companies appear to be reluctant to change their traditional commercial relationships because the recipient aluminium refineries and smelters have been configured to process Jamaica's bauxite and alumina. A change in the source of bauxite and alumina would negatively affect the efficient operations of the refinery or smelter.⁹ Thus, not surprisingly, the Noranda Incorporation and Century Aluminium acquired *both* the Gramercy alumina refinery in Louisiana from Kaiser and the bankrupt company's 40 percent interest in the company, Kaiser Jamaica Bauxite Company, thereby ensuring the maintenance of the long-standing supply relationship between the aluminium TNC and bauxite-exporting, Jamaica. Furthermore, when Alcoa sold its two refineries in Jamaica to Glencore, it also concluded a supply contract for the delivery of 7.7 million tons of alumina over a seven-year period, also ensuring that the supply relationship between the divesting, aluminium TNC and Jamaica remained intact (James, 2001).

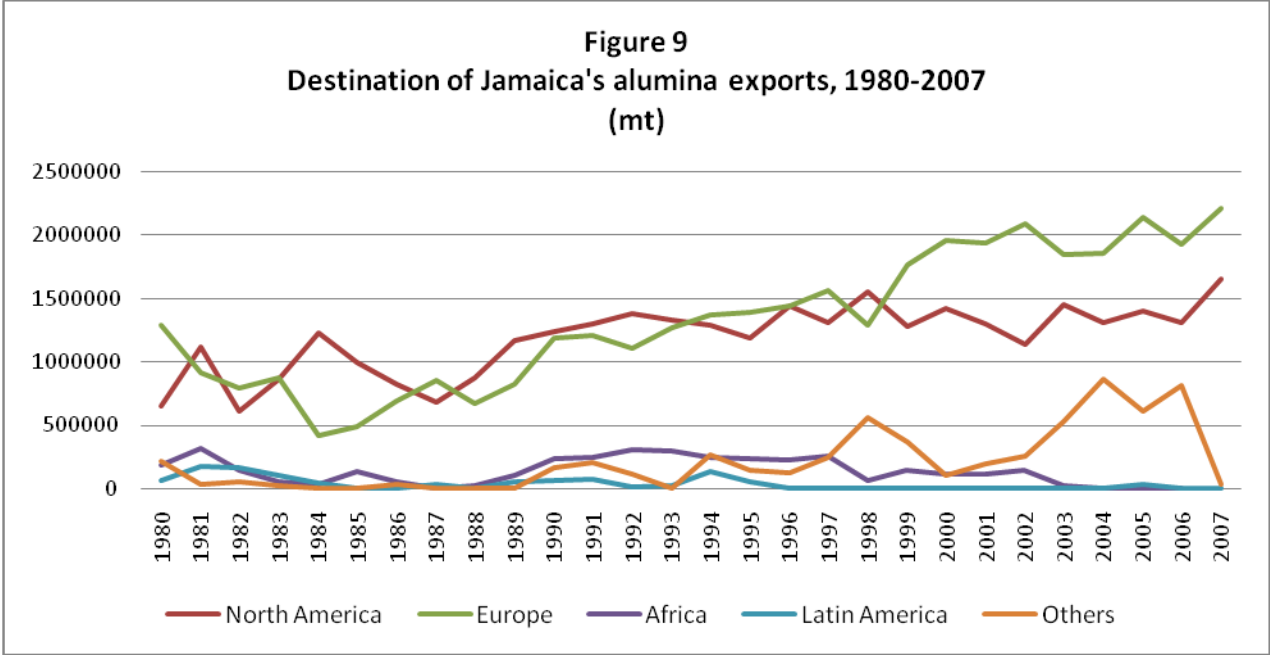
One-third of the bauxite mined in Jamaica has traditionally been exported unprocessed to the USA, specifically to the Gramercy refinery in Louisiana and a third-party refinery in Texas. It was only during the years, 1983 to 1991 when a small percentage of Jamaica's bauxite was exported under contract to the Nikolayev refinery in the Ukraine under a counter-purchase agreement that Jamaica had with this country.¹⁰ In 2000, bauxite was also exported to the Nikolaevskij Glinonzemnji Zavod (NGZ) refinery after the temporary closure of the Gramercy refinery in 1999 (See Figure 8).



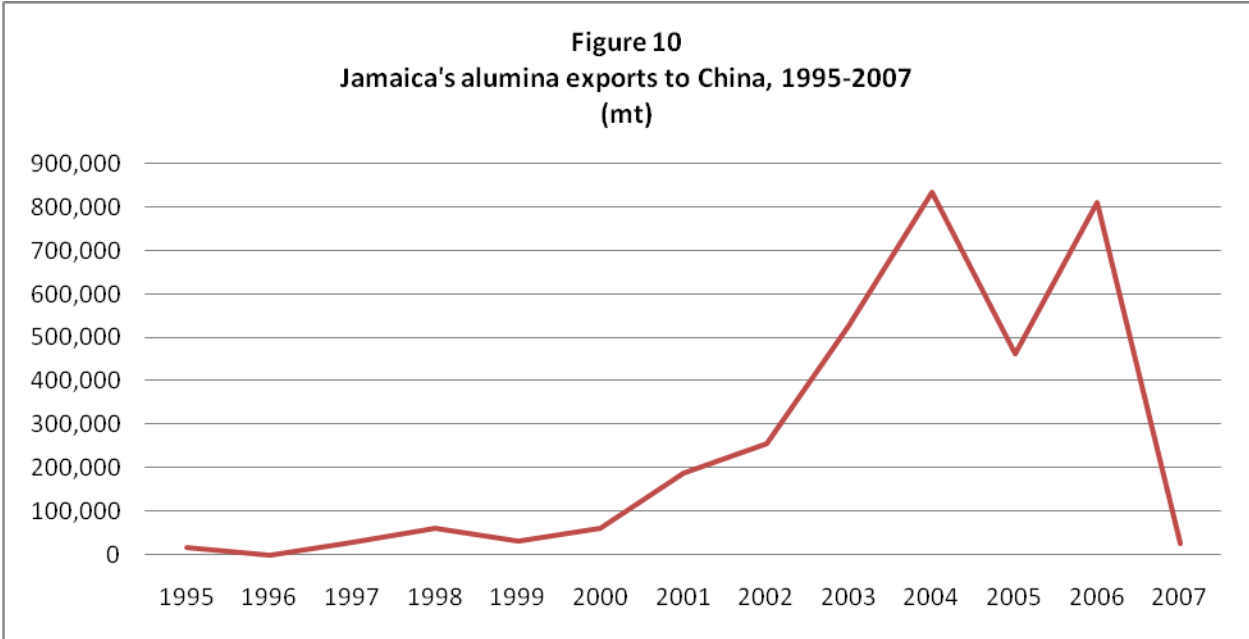
Source: Economic Division, Jamaica Bauxite Institute, unpublished statistics, 2008

As Figure 9 illustrates, more than 80 percent of the Jamaica's alumina was exported to Europe and North America during the period under review. However, Europe, notably the Netherlands (since 1983) and the USSR, was the most important market for Jamaica's alumina, with exports accounting for 61, 49 and 56 percent of total exports during the years, 1980, 1990 and 2007, respectively. Most of these exports came from the Alpart and Jamalco refineries, which have traditionally exported the majority of their output to Europe. North America was the second largest market, accounting for 27, 43 and 42 percent of total exports during the same years. Jamalco, through its joint venture partner, Alcoa exports alumina to the USA while Winalco, which has maintained the long-standing supply relationship of its previous owner, Alcan, supplies alumina to Canada.

It is noteworthy that alumina exports to the less significant markets of Ghana and Brazil ceased by 2004 and 1996, respectively. Exports to Ghana ended because of the closure of the Volta Aluminium Smelter Company Ltd. while Brazil, which by 2003 emerged as the leading producer of alumina in the Latin American and Caribbean region, no longer needed to import alumina from Jamaica. The loss of these markets was compensated by alumina exports to China; since 1995, all three alumina refineries have been exporting alumina to China (See Figure 10).



Source: Economic Division, Jamaica Bauxite Institute, unpublished statistics, 2008



Source: Economic Division, Jamaica Bauxite Institute, unpublished statistics, 2008

4.0 Restructuring and the changing role of the state

Restructuring of the Jamaican industry was also a result of the changing role of the state associated with ideological shifts. The election of the Seaga-led Jamaica Labour Party (JLP) Administration in 1980 to replace the Michael Manley-led Peoples National Party (PNP) Administration, which had espoused a philosophy of Democratic Socialism, signalled Jamaica's turn towards a neo-liberal policy stance guided by the principles of the Washington Consensus. Neo-liberalism, the fusion of neo-classical economics with neo-liberal political thought (Rapley, 2001), is presently the dominant political ideology globally. This ideology asserts the primacy of market forces in stimulating and sustaining economic growth. Hence, the first wave of neo-liberal policies was aimed at reducing the role of the state in the domestic economy. Governments in developed and developing countries, were urged to practice 'macroeconomic prudence' (i.e., control inflation and maintain fiscal discipline), deregulation, privatisation and economic liberalisation (i.e., trade and capital account liberalisation). More recently these policies have been supplemented by those of the 'augmented-Washington Consensus', which addresses concerns of poverty reduction and a range of governance issues (Besson and Islam, 2005).

Adoption of neo-liberal policies was a gradual process in Jamaica, beginning in the late 1970s. The implementing agencies were the IMF and the World Bank. In September 1976, in the midst of an impending economic crisis caused by a critical need for foreign exchange, the Manley government initiated negotiations with the IMF. Although the government subsequently commissioned economists from the University of the West Indies, to draft an Emergency Production Plan that was premised on non-IMF self reliance (Henke, 2000); Prime Minister Manley eventually rejected the Emergency Production Plan and sought the IMF's assistance. Henke (2000) suggests that Manley's turn to the IMF was influenced by the country's parlous economic situation, which was compounded by government overspending and the flight of both local and foreign capital, and the prospects of warming relations with the new Carter administration in the US.¹¹ It is noteworthy; however, that the local private sector played a critical role in Manley's decision to adopt what eventually turned out to be a short-lived programme.¹² In December 1977, Jamaica missed the domestic asset target of the IMF by a mere 2.6 percent or J\$ 9.1 million. In response, the IMF immediately suspended the programme, which meant that Jamaica was in a worse position than it was in early 1977 (Girvan *et al.*, 1980).

The next two years saw the continued migration of skilled professionals, business persons and a surge in the rate of divestment¹³ (Stephens and Stephens, 1983). The country's precarious economic

situation meant that once more it was forced to approach the IMF for loan financing. The eventual IMF programme that was signed imposed draconian conditions on Jamaica, which resulted in anti-IMF sentiments culminating in the country's eventual break with this international financial institution in 1980. Henke (2000) notes that by the time the government called for elections, the private sector and the middle class were determined to ensure that the ruling party was not victorious. He states, 'the unprecedented level of political intimidation, death threats and violence, on the one hand, and the dire island shortages of even the basic foods, on the other hand, made the defeat of the People's National Party (PNP) at the polls virtually unavoidable' (*ibid.*, p. 67).

The opposition party Jamaica Labour Party (JLP), headed by Edward Seaga resoundingly won the 1980 elections; and held office until 1989. This administration, enjoyed a much more harmonious relationship with the US and, with substantial IMF and World Bank support, adopted many of the policies of the Washington Consensus (Stephens and Stephens, 1989; Henke, 2000)¹⁴. Seaga, however, has been described as a 'reluctant liberaliser' (King, 2001)¹⁵ and it was the PNP administration, of 1989-2007 that, that fully implemented neo-liberal policies.¹⁶ This administration *inter alia* liberalised trade and the domestic financial sector, accelerated the privatisation programme initiated by the Seaga administration, continued with the removal of restrictions on foreign investment in the strategic industries, and reformed the tax system. The JLP government which was elected to office in late 2007 has continued these policies.

4.1 Neo-liberalism, anaemic economic growth, loss of competitiveness and the changing role of the state

The decade of the 1970s marked a watershed in the history of this industry in Jamaica. The PNP administration led Prime Minister Michael Manley adopted an ideology of democratic socialism; and state participation was the vehicle to secure greater control over production, processing and marketing in bauxite and alumina. To this end, in 1975 the government purchased 51 percent of the capital assets of the local bauxite operations of Kaiser and Reynolds, 6 percent of Alcoa and 7 percent of Alcan's alumina operations, and repurchased most of the reserve lands owned by the companies (Jamaica Bauxite Institute, 1996). In addition, it strengthened its institutional capability to better manage this industry by creating three institutions: the Jamaica Bauxite Institute (JBI), the Jamaica Bauxite Mining Limited (JBM) and the Bauxite and Alumina Trading Company (BATCO).¹⁷ Finally, in a quest to capture a

greater share of the economic rent from this industry, in 1974, the government reformed the fiscal regime, replacing the corporate tax system with a bauxite production levy.¹⁸

Ideology was not the only factor in the post-1980 policy changes. The country's parlous economic situation also played a part. The government was also troubled by the loss of competitiveness of the industry, traditionally a driver of Jamaican economic growth (Girvan, 1984). These three factors all influenced the government's decision to modify its policies with the aim of creating a more internationally competitive environment for its resident aluminium firms.

An examination of the effect of these policy changes reveals four critical issues, *viz.*

- i. Changes in the fiscal regime have triggered new foreign investment inflows into the industry and a marked recovery in output,
- ii. Fiscal revenue per ton of bauxite and alumina has fallen steeply.
- iii. Fiscal revenue from the industry have continued to show a decline relative to its contribution to the country's total fiscal revenues, and
- iv. The institutions created in the 1970s to enhance the government's managerial capabilities in the industry have had a mixed record.

4.1.1 Changing the fiscal regime in the bauxite and alumina industry

In 1974, following the dramatic increases in world oil prices, the Manley government changed the tax regime for the aluminium TNCs operating in the Jamaican bauxite industry. The main change was the replacement of the income tax with a production levy. The levy was set at 7.5 percent of the arithmetic average of the price realised by Alcoa, Reynolds and Kaiser for one short ton of primary aluminium as defined in their Form 10K reports to the US' Securities and Exchange Commission (Davis, 1995). At the existing prices, the companies would be required to pay taxes of US\$ 11 per ton of bauxite mined and exported and US\$ 15.40 per ton for bauxite processed into alumina. This resulted in a five to six-fold increase in government revenues relative to the 1960 to 1973 average returns (Wint, 2005).

The companies' response to the levy was to restrict investments in Jamaica, resulting in the downgrading of plant capabilities. Further, companies such as Reynolds accelerated the pace of their earlier strategy to expand investments in Guinea or Australia and/ or divested themselves of their Jamaican operations.¹⁹ Accordingly, the government of Jamaica came under pressure to revise the levy regime; in response to the declining international competitiveness of the local industry,²⁰ difficulties experienced by the international aluminium industry in the 1980s and the changed ideological climate.

The levy was revised, in 1979, 1984, in 1988 and since 2002, a tax-only regime has gradually been introduced to replace the levy.

The 1988 regime marked a change in that a profits tax element was introduced with an eye to restoring Jamaica's competitive position in the global aluminium industry. The production levy was fixed at a rate that was indexed to aluminium prices, regardless of profitability.²¹ One of the main reasons cited for the closure of the Alpart and Jamalco plants during the 1984 to 1986 depression in the global aluminium industry was that the levy regime did not allow flexibility during a period of protracted industry decline (Jamaica Bauxite Institute, 2008). The combined levy/profits tax regime of 1988 sought to protect Jamaica's revenue base by maintaining a fixed levy of US\$ 5 per dry ton that was indexed to a lower aluminium base than previously; accompanied by profits tax at the prevailing company rate in Jamaica of 33 1/3 percent. Another new feature was a Government option to take all the production up to full capacity, which was not utilised by the companies. This increased the likelihood of full production at all the plants and the possibility of additional alumina accruing to Jamaica (Jamaica Bauxite Institute, 2008).

The government also signed separate agreements with the operating companies, which took account of the structure of the local industry and the role of each company in the global industry. For example, Kaiser, which was operating in Jamaica during this period, was a net seller of alumina on the world market. Hence, the taxation agreement concluded with Kaiser took cognizance of this fact in terms of the agreed price of alumina for the purposes of computing profits on alumina production and sale (Francis, n.d.).

However, several of the problematic features of the pre-1974 fiscal regime reappeared with the introduction of the 1988 levy/tax regime. Operating firms made contentious claims against revenues, the pace of settling income tax issues was painfully slow and there were insufficient resources, including personnel, at the Income Tax Department to deal expeditiously with the relevant issues (Davis, 1995, p. 322-3).

The 2001 changes were a further attempt to improve the competitiveness of the local industry, attract increased investment from the operating companies and increase export earnings. They involved a withdrawal of the production levy on certain conditions that include a minimum expansion of capacity, guaranteed minimum tax payment over a five-year transitional period, increased royalty per ton of bauxite, provision for additional royalty in certain circumstances, and certain financing structures (Jamaica Bauxite Institute, 2008).

Alcoa is the first company with which an agreement has been concluded because it was at the most advanced stage in meeting the criteria for the introduction of the new fiscal arrangements. Those negotiations led to an agreement which was signed on April 27, 2002, that provides for a 25 percent expansion of the Jamalco plant, as well as guaranteed tax payments based on the average annual payments over the previous five-year period for the five-year period following the completion of the expansion. The terms of this new fiscal regime will be generally applicable to the other companies operating in this industry, once they meet the specified conditions. However, concerns have been expressed about the lack of transparency of the government's new tax regime. Companies have called for the government to move from case-by-case negotiations to a coherent policy for the entire industry (The Economist Intelligence Unit ViewsWire, 2003).

4.1.2 Effects of fiscal regime changes

The changes resulted in a steep decline in the average per ton fiscal cost to the companies of extracting bauxite and alumina from Jamaica (see Table 3). Comparing the two-year period, 2006 to 2008 to the two-year period, 1989 to 1991, the fiscal yield of the industry per ton of bauxite produced had declined to US\$5.7 from US\$9.5, a fall of 40 percent. As a proportion of the industry's export value, the fiscal yield was halved, from 14.5 percent in 1989 to 1991 to 7.1 percent in 2006 to 2007. On the whole, the operating firms have responded positively, increasing their investment in plant upgrade and expanding production levels (See Tables 1-2 and Figure 5). New foreign investors, such as the Chinese firm, Minmetals Aluminium Company (China Chemical Reporter, 2006), have been showing an interest in the Jamaican industry. Bauxite production, which had declined to 6 million tons in the 1985, topped 14 million in 2006. Annual alumina production grew from under 2 million tons to over 4 million tons during the same period. The increases helped to arrest the fall in Jamaica's global market share, though not totally reverse it. In bauxite, Jamaica's global market share recovered after 1985 through most of the 1990s, declined to 2004, and has recovered slightly since then. In alumina, Jamaica recovered global market share in 1985-1990 but has seen a gradual decline since 1995.

The question therefore is: what has been the net impact of the fiscal changes on aggregate fiscal revenue? In effect, fiscal concessions of the kind made by the Jamaican state constitute a trade-off between revenue per unit of production on the one hand and aggregate revenue on the other hand. The expectation (or gamble) is that production growth will more than offset the fall in per unit revenue, so

that aggregate revenue will increase. From this perspective, the gamble has not yet paid off: as Table 3 shows; aggregate revenues from the industry in US dollar terms have fluctuated around a generally flat trend since the late 1980s. Hence, the average per annum aggregate fiscal yield of the industry in the two- year fiscal period, 1989 to 1991 was US\$82 million; in the two-year fiscal period, 2006 to 2008 it was \$84 million. During this period, its relative fiscal contribution declined by two-thirds, from 7.1 percent to 2.4 percent of Jamaica's total revenues.

To this disappointing result, some caveats have to be applied. Insofar as an income (profits) tax is now the main element in revenue, the fiscal take depends not only on aggregate production but also trends in production costs (e.g., fuel costs) and on the monitoring capability of the fiscal authorities. Furthermore, the fiscal outcome is also affected by the prices received for alumina under the special marketing arrangements made by the Jamaican government. Finally, there may be considerable lags in the response of foreign investment to reductions in the fiscal cost that improve relative international competitiveness. In other words, we cannot determine what the future course of investment and growth in the industry might be; and it might be too early to assess the impact of the fiscal regime changes. On the other hand, bauxite is a non-renewable natural resource and the additional depletion costs of higher rates of extraction should also be factored into the assessment. What is evident is that the pendulum of bargaining power has swung sharply; Jamaica is once again in the position of making fiscal concessions in order to secure foreign investment, output growth and global market share.

Table 3 Contribution of Bauxite-Alumina Industry to Fiscal Revenues, 1988 to 2007

(J\$ millions and percentage)

	1988/89	1990/91	1992/93	1994/95	1996/97	1998/99	2001/02	2005/06	2006/07	2007/08
Total revenues & grants	6,139.20	9,648.90	23,557.50	44,595.50	63,085.60	74,096.20	109,721.50	186,684.20	211,364.50	256,640.70
Total tax revenue	4,933.20	7,748.30	19,050.30	38,070.70	55,191.30	66,970.30	90,568.20	162,575.90	188,353.50	219,517.60
Income & profits	2,095.30	3,638.90	7,885.10	15,376.70	21,645.80	25,843.30	35,516.40	66,492.70	76,321.10	92,625.70
Bauxite-alumina profits tax	0	133.7	165	302.3	53.6	418.9	698.1	887.8	1,413.30	731.5
Bauxite-alumina profits tax as % total tax revenues	0.0	1.70	0.90	0.80	0.10	0.60	0.80	0.50	0.80	0.30
Bauxite production levy	390.1	606.9	1622.904	2374.225	2797.525	2786.70	2252.30	3124.60	4169.90	4998.30
Total bauxite-alumina revenues in J\$	390.1	740.6	1787.904	2676.525	2851.172	3205.6	2950.4	4012.4	5583.2	5729.8
Total bauxite-alumina revenues as a % of total revenues & grants	6.4	7.7	7.6	6.0	4.5	4.3	2.7	2.1	2.6	2.2
Bauxite-alumina revenues in US\$ millions	60.9	102.9	80.5	75.86	77.01	86.20	63.9	63.1	84.6	82.9
Bauxite-alumina revenues US\$ per ton bauxite produced	8.4	10.7	7.1	6.6	6.5	6.8	5.2	4.5	5.7	5.7
Bauxite-alumina revenues as a % of export value	14.5	14.6	14.4	12.3	11.2	12.5	8.7	6.2	7.1	NA

Source: Government of Jamaica, Ministry of Finance, unpublished data, 2008, Jamaica Bauxite Institute, unpublished statistics, 2007.

4.2 State management of the industry: an assessment

In the past, the responsibility for the management of the bauxite and alumina industry fell under a number of disparate ministries, which ranged from Overseas Trading to the Electoral Office (Davis, 1995). However, the Manley government of the 1970s correctly understood the critical role that efficient public institutions play in the management of resource industries and set out to improve its capability in this area by creating three new institutions. This section comments on the record of one such institution, the Bauxite and Alumina Trading Company, BATCO.

4.2.1 The marketing capabilities of the BATCO

The BATCO was incorporated in 1977 with a mandate to trade the Jamaica Bauxite Mining Limited's (JBM) and the Clarendon Alumina Production's (CAP) alumina in 'strategically advantageous markets at the best possible price, taking into account fluctuations in the market' (Jamaica Information Service, 2008). With a staff complement of thirteen persons, the BATCO monitors the production and the product quality of alumina produced in the Jamalco and Windalco refineries and tracks international supply, demand and price trajectories as a basis for developing supply contracts that would yield the most favourable revenue stream to the country. It also ensures that the alumina from the Jamalco and Windalco refineries is ISO 14000 certified as a way of building source integrity for alumina from Jamaica. Finally, it is also involved in the search for new markets for alumina (Jamaica Information Service, 2008).

BATCO appears to be a relatively profitable company, earning profits ranging from US\$ 1.72 million in 2003 to US\$ 1.49 million in 2007 (BATCO, Annual Report & Financial Statements, 2003 and 2007). However, inadequate resources have stymied its ability to perform efficaciously. It appears that in the past, a dedicated team of specialists was successfully involved in the trading of alumina, bauxite and oil. In the 1970s, new markets were developed as a result of the operations of the BATCO. For instance, a sales agreement for 1 million tonnes of alumina with Venezuela was made and agreements were also concluded with Algeria, Iraq and the USSR (Girvan, 1984). However, with the expiration of the counter-purchase agreement, which the country had with the Ukraine for bauxite, this trading department was gradually disbanded and not replaced.²² The BATCO's trading activities are now limited to the trading of alumina and oil. The latter commodity is traded on behalf of the CAP.

The issue of the paucity of human resources has critically impacted on the efficiency of the BATCO. It is not clear that the BATCO's responsibility to manage alumina marketing counted with the requisite human resource capability to adequately monitor aluminium prices, track changes in international supply, analyse international industry developments and monitor the production and product quality of the local refineries. All this would have been necessary to develop supply contracts that would yield the most favourable revenue stream to Jamaica. Doubts have been expressed about the advantageousness of the marketing contracts concluded during this period. BATCO concluded long-term contracts for the country's alumina, which were normally for 10 years or more (BATCO, Annual Reports & Financial Statements (various years). These contracts did not allow for any review of future price increases in alumina or intermediate products such as oil or caustic soda. Moreover, all involved a single buyer, Glencore. In fact, the Chairman of the BATCO reported that the country has not been able to benefit from the recent surge in alumina prices since all of the CAP's and the JBM's production is sold on long-term contracts and not on the more volatile spot market (BATCO, Annual Report & Financial Statements, 2005/2006). Moreover, production costs have substantially increased with the result that these costs now exceed the long-term price received for Jamaica's alumina (BATCO, Annual Report & Financial Statements, 2005/2006). As will be discussed subsequently, these contracts have had a negative impact on the profitability of the CAP and the JBM.

There are questions over the priority place by BATCO on human resource development; a survey of the annual reports over the last decade show expenditure on training of just US\$8,666.13 in 2007 (BATCO, Directors' Report and Financial Statements, 2007). The BATCO is presently attempting to overcome some of its resource constraints by employing a professional whose mandate would be to monitor developments in the international aluminium industry.²³ Further, a team of professionals is now negotiating new alumina contracts as well as re-negotiating an existing one. This team has been able to successfully negotiate two new marketing contracts for alumina, which are more favourable to the country than the previous ones. These two new contracts, which are scheduled to begin in 2011 and 2030, contain clauses, which provide the BATCO with the option of ending them, without penalty to the institution, if there is no agreement between the two parties.

4.2.2 The emergence of a hypothecating mode of using bauxite revenues

The efficacy of the BATCO's marketing functions has also been compromised by the country's ongoing fiscal crisis. During periods of economic crisis, the BATCO has been compelled to engage in the

forward sale of alumina to finance the government's budget deficit. Indeed, its marketing capability has become a fiscal tool for the government.

Use of future industry revenues as a means of budgetary support was anticipated in 1981, with the purchase by the U.S. government of 1.6 million tons of Jamaican bauxite for its strategic defence stockpile.²⁴ This was repeated on several occasions; and, by 1984 the US government had purchased 11.45 million tons of Jamaican bauxite, most of which ended up in the government stockpile rather than in commercial production (Friedland, 1984).

In the mid-1980s Jamaica began to make forward sales of alumina from the government's share of production in its refineries to Glencore. The previous owner of Glencore, Marc Rich enjoyed a long relationship with the Jamaican government. In the early 1980s, he developed close ties to the then Prime Minister, Edward Seaga, loaning the country more than US\$ 200 million, donating US\$ 45,000 to send the country's track and field team to the 1984 Olympics and underwriting the cost of sending the bobsled team to the 1988 Winter Olympics (Tully, 1988; Juravich and Bronfenbrenner, 2000). In 1986, when the government re-opened the Jamalco plant, which was temporarily closed by Alcoa in 1985 during the protracted decline in the international aluminium industry, it entered into a ten-year agreement with Marc Rich whereby he purchased more than 4 million tons of alumina at less than one-half of the market rate (Juravich and Bronfenbrenner, 2000).

Despite Prime Minister Michael Manley's promises to end his predecessor's ties to Marc Rich, he was forced to deepen them when he returned to office in 1989 (Mokhiber and Weissman, 2001). Faced with intense pressure from the IMF to raise more than US\$ 50 million, Manley found it convenient to accept Rich's offer of US\$ 50 million as a cash advance against future alumina production. As Juravich and Bronfenbrenner (2000, p. 104) succinctly elaborate, 'without Rich's money, the currency would have been devalued, thousands of Jamaicans would have lost their jobs, and the economy and Manley's government would have been destroyed.'

This hypothecating mode of using the country's bauxite revenues was repeated in 2000. At this time, the government was under severe budgetary constraints. The local bauxite and alumina industry suffered a major setback: as earlier discussed, the Gramercy refinery which consumes 60 percent of the bauxite mined by St. Ann's Bauxite Partners was temporarily closed after an accident in 1999. Not surprisingly, for the first half of 1999, export earnings from this industry declined by 11 percent of those recorded for the previous year (James, 1999b). The Jamaican government unsuccessfully sought to raise US\$ 400 million on the international capital market to finance its budget but was deterred by unfavourable interest rates. It is within this context that the government concluded a US\$ 125 million

bond issue for a ten-year term with Glencore that was arranged through the Deutsche bank. The loan payments were offset against the proceeds of future alumina earnings.

Given the furore caused by this arrangement²⁵, the government later clarified that the loan accounted for less than 25 percent of the country's guaranteed earnings from alumina and does not include the additional 250,000 tons to be produced by Jamalco over the loan period, for which no sales agreement existed with Glencore (Government of Jamaica, Ministry of Finance and Development, 1999).

It seems that under this contract, the government sells 50 percent of the contracted alumina to Glencore at an undisclosed price per ton and the other 50 percent at a specified percent of the price of alumina on the LME. The latter price is determined by officials of the BATCO before the first quarter of the year. Further, this contract was premised on oil prices at US\$ 25 a barrel. It is believed that the undisclosed price of alumina is far below current market prices. Moreover, oil prices have more than tripled since 2000.

In 2002, the Jamaican government entered into another ten-year forward sale agreement for alumina with Glencore. In this instance, a US\$ 65 million loan was secured to finance the CAP's investment in the Jamalco expansion to 1.25 million tons per year (BATCO, Annual Report & Financial Statements, 2005/6, p. 2). Like the previous contract, it may be that the pricing of alumina under this arrangement is below current market rates, and perhaps below current production costs. Moreover, this agreement made no allowances for increases in energy and production costs, which rose substantially since the agreement was signed (9 July, The Gleaner, 2008). In addition, it is difficult to determine the quantum of Jamaica's alumina that is involved in these two arrangements. One source states that less than a quarter of the CAP's output for which a sale agreement exists, is involved in the US\$ 125 million loan arrangement with Glencore (25 November, The Gleaner, 1999). Nonetheless, reports suggest that the recently elected JLP government is currently attempting to re-negotiate these agreements with Glencore (9 July, The Gleaner, 2008).

4.2.3 Using the CAP as a tool for fiscal support

The Jamaican government has also used the Clarendon Alumina Production Limited (CAP) as a tool for fiscal support. In 2006, the CAP successfully raised US\$ 200 million on the world bond market. This bond generated considerable excitement in international financial markets (Euroweek, 2006). It has a fifteen-year maturity and carries a coupon of 8.5 percent. The proceeds of this bond allowed the CAP to extend the life of its debt, reduce debt service payments and release encumbered reserve funds

(Government of Jamaica, Ministry of Finance and Planning, 2006). However, US\$ 65 million from this US\$ 200 million bond was also used to clear up the debt incurred from the Government's US\$ 125 million loan arrangement with Glencore (BATCO, Directors' Report and Financial Statements, 2007, Note (5b)). As discussed earlier, the US\$ 125 million was secured to provide budgetary support for the government in 2000. It seems that the government has not only used the forward sale of alumina for budgetary support but also the proceeds from the successful global bond launched by the CAP.

4.2.4 The financial performance of state companies in the bauxite and alumina industry

The foregoing arrangements have impacted the profitability of the state-owned entities in the specifically, the JBM and the CAP. Hence despite the recent surge in alumina prices and the increased production levels of the refineries, both companies show disappointing results in their annual reports for the last eight years. In 2003, the JBM sustained a loss of a just over US\$ 1 million, which increased to US\$2.3 million and US\$4.9 million in 2006 and 2007, respectively. While the company registered after-tax profits during the period reviewed, they were relatively low, ranging from US\$ 2.4 million in 2000 to US\$ 2.6 million in 2004. The financial performance of the CAP was significantly worse. Despite the fact that CAP's refinery is one of the most efficient in Alcoa's system, it has been steadily incurring losses; ranging from US\$ 890, 000 in 2004 to US\$ 30.7 million in 2006. In fact, losses for the period 2000--2006, totalled an outstanding US\$ 90.7 million. It is significant to note that unlike the JBM, the CAP received an annual interest subsidy from the government of approximately US\$ 6 million for the years, 2004 to 2006.

BATCO performed better than its counterparts; with profits ranging from US\$ 1.1 million in 2002 to US\$ 2.8 million in 2006. However, this marketing company earns less than one-third of its revenues from commissions earned for the marketing of the JBM's and the CAP's alumina. The majority of the BATCO's revenues were earned from interest income and foreign exchange gains. Thus, the compounded annual growth rates (CAGR) of the commission earned from the sale of alumina over 2000-2007 was a dismal -0.9 percent, compared to the 10 percent CAGR of its expenses for the same period , resulting in a return on equity for this period of 9.1 percent.

In the case of the JBM, the CAGR of its sales for 2000-2007 was 10 percent while the direct costs of its operations was increasing by 21 percent; with a return on equity for the period of -0.3 percent. CAP's financial performance has been alarmingly poor. While its sales grew by 10.4 percent during 2004

to 2006, its mining costs as a percentage of sales during these years were increasing by 27.9 percent. In addition, despite an annual government subsidy of US\$ 5.6 million over the two years its return on equity for the six-year period 2000- 2006 was a phenomenal -25 percent.

Evidently, these state-owned companies, specifically, the JBM and the CAP are in grave financial difficulty. The difficulties experienced by the JBM and the CAP may be related to the forward sales arrangements concluded between BATCO and Glencore International AG; which has resulted in uncompetitive prices received for alumina at a time when world market alumina prices and the prices of intermediate products such as oil and caustic soda were rising. BATCO's relatively better performance than JBM and the CAP during the period reviewed was not a result of its marketing capabilities, in that most of its revenues were earned from interest income and foreign exchange gains.

Hence, the government's objective of gaining greater control over Jamaica's strategic, bauxite and alumina industry may have been compromised by the pressures of economic expediency in a context of unequal bargaining power. The JBM and the CAP have been persistently operating at a loss and it is highly likely that in the near future, they may not be able to meet their financial obligations to their joint venture partners, namely the United Company Rusal and Alcoa. It is also highly possible that the government may be forced to reduce its equity holdings in these companies in order to forego these financial obligations. It has already reduced its equity holding in Jamalco by 5 percent to the present 45 share holding since it was unable to financially participate in the expansion of the plant. Further, it appears that the government is presently seeking to divest its share in Jamalco (3 April, *The Gleaner*, 2009, p. 3). Thus, it seems highly likely that the ownership structure of the Jamaica's bauxite and alumina industry would revert to what had existed in the pre-1974 period: the industry will be dominated by the aluminium TNCs, including both the old and new global players.

5.0 Conclusion

The Jamaican experience in the bauxite and alumina industry in the past forty years has been one of a swinging pendulum of bargaining power. In the 1970s, the government, pursuing the ideology of social democracy, sought to secure greater control over the economic returns, production, processing and marketing in its bauxite and alumina industry. By the 1980s, several forces acting in concert resulted in a reversal of some of these policies. They were the government's 'conversion' to neo-liberalism, the country's anaemic economic performance, together with the government's quest to increase the competitiveness of its bauxite and alumina industry. The most significant policy change was the removal

of the controversial bauxite production levy and the re-introduction of a fiscal regime system that is based on corporate taxes and royalties. Jamaica's resident aluminium firms responded favourably to these policy changes with increased investment and increases in plant capacity and production. The country regained its reputation of being a favourable location for FDI in the bauxite and alumina industry. Yet, these policy reversals have so far not yielded positive results for the Jamaican economy. While production levels increased, the country has not regained its strategic position in the global production of bauxite and alumina. Jamaica's global market share in bauxite declined from 13.5 percent in 1980 to 8.3 percent in by 2006 and from 8.7 percent to 5.9 percent in alumina. Furthermore, it has been displaced by Brazil as the leading producer of bauxite and alumina in the Latin America and Caribbean region.

The relative contribution of fiscal revenues has declined during a period when the country has been experiencing persistent fiscal deficits. This industry has always been critical to the Jamaican economy. Davies (1984) notes that the bauxite industry was the largest contributor to the country's foreign exchange earnings during 1974 to 1983. In addition, the levy, by means of transfers from the Capital Development Fund, has always been critically important to the government's fiscal budget. In the fiscal years, 1978 to 1979, and 1981 to 1982, it contributed over 25 percent and 20 percent of total government revenue, respectively. Most importantly, there historically has been a link between the performance of the bauxite and alumina industry and the economic health of the country. Girvan (1984) reveals that the periods of high economic growth in Jamaica, namely 1950 to 1953, 1956 to 1958 and 1967 to 1972, corresponded with the large-scale construction programmes of this industry, which not only stimulated the domestic construction sector but also resulted in large capital inflows that helped to finance the country's current account deficit. He further states that the decline in the Jamaican economy that began in 1973 to 1974 could be partly attributed to the withdrawal of capital inflows into the industry after 1972 and the fall in production levels after 1975.

The changes in fiscal regime introduced since 1988 have broken the link between the state of the health of the bauxite and alumina industry and the performance of the domestic economy. While investment and production levels have increased, the contribution to the country's fiscal revenue has fallen steeply and is no longer significant.

This situation has been exacerbated by the losses suffered by the state-owned entities in the bauxite and alumina industry; associated with forward sales arrangements concluded at times of acute fiscal distress. Two entities may not be able to meet their financial obligations to their joint venture partners; and the government may be forced reduce its equity position in these entities to meet these

financial obligations. As noted by Girvan (1984), taxation as a policy tool for securing benefits and externalities from the bauxite and alumina industry may have reached the limits of its effectiveness.

Jamaica's policy makers may need to consider a different set of policies to enhance the competitiveness of this industry. Studies have shown that successful resource-based development, which occurred in developed countries such as Australia, Canada, Norway, has resulted from the existence and the continuous development of human resources and skills, and learning and innovation around the extractive activities (UNCTAD, 2007, p. 93). This paper also suggests that successful resource-based development also rests on institutions that are not only autonomous but also are endowed with the requisite resources to fulfil their mandate.

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¹ Revised version of a paper presented at a Pre-Conference on the Global Economic History of Bauxite, Paris, September, 2008; submitted for publication in Mats Ingulstad, Robin Gendron and Espen Storli (eds.) *Bauxite, State and Society in the 20th Century*(prospective publisher, University of British Columbia Press.). The authors wish to thank several individuals and institutions in Jamaica for their help in providing information used in the preparation of this paper; with special mention to Professor Al Francis for sharing his insights on the taxation of the bauxite industry. We alone are responsible for the content and for any errors it may contain.

² Democratic socialism emphasizes economic growth with equity, which requires a state-sector-led model. Under this ideology, the state needs to take control of the commanding heights of the economy in order to influence the type of goods produced as well as the manner in which they are produced. Emphasis is also placed on the production of goods that satisfy basic needs in nutrition, housing and health. While this ideology emphasizes the primacy of the state in investment decisions, it also underscores the important role of the private sector, which has the requisite technical and managerial expertise to operate the economy. This ideology also implies a reduction of foreign ownership, especially in the strategic industries. Other characteristics include the need for the diversification of trading partners and export products to reduce dependence, self sufficiency in food production, egalitarian initiatives in the field of culture to reduce the elitist character of cultural production and consumption, and the development of indigenous productive efforts achieved through the introduction of self-help programmes. Finally, this ideology emphasizes the pursuit of an independent foreign policy (Stephens and Stephens, 1986, pp. 3-6).

³ In an attempt at reducing the excess supply of alumina in their systems, in May 2009, the United Company Rusal and Hydro Aluminium ceased operations in Jamaica. In addition, the owners of sole bauxite exporting company in the country reduced production by 30 percent. These strategic responses will result in a 50 percent reduction in bauxite production and a 60 decline in alumina production in 2009. The companies have also announced their intentions to halt all capital projects. The alumina refineries are not slated to reopen before the next two to three years. Evidently, the consequences on the government's fiscal revenues are dire: the net earnings from this industry, which was US\$ 1221. 8 million in 2008, is projected to plummet to less than US\$ 40 million in 2009 (8 April 2009, *The Gleaner*, p. 1).

⁴ Lines (1990) noted that during 1978 to 1988, aluminium smelting capacity increased substantially in several countries that were outside of the traditional areas for this activity. These included (i) energy-rich but bauxite-poor, developing countries such as Bahrain and Dubai; (ii) energy and bauxite-rich, partially industrialised countries that developed an integrated industry such as Brazil, India and Venezuela; (iii) energy and bauxite-rich, developed countries such as Australia; and (iv) energy-rich but bauxite-poor, developed countries such as Canada and Norway. This period also saw the entry of international mining conglomerates such as RTZ and Amal, which not were previously involved in aluminium operations, into the industry. The expansion in aluminium smelting capacity outside of the traditional regions was also complemented by a change in the ownership structure of firms operating in this industry. State-owned firms in both developed and developing countries were now operating in this industry. Other new entrants included joint venture firms, with many of the aluminium TNCs including the six major firms, having equity ownership in these new entities.

⁵ Lines (1990) states that the six aluminium TNCs, which dominated the industry until mid-1980s, were able to minimise price fluctuations by managing stock levels. They shrewdly matched aluminium production with demand, exchanging metal between producers in order to smooth over particular supply difficulties. In so doing, these firms maintained price stability in the global aluminium industry, which was a decisive factor in their ability to lure customers away from rival metals.

⁶ Litvak and Maule (1980) attributed this inequality to the agreed-upon method for pricing bauxite. Rather, than negotiating a common minimum price for bauxite, each member country was allowed to individually determine how an agreed price should be achieved. Guinea and Australia did not increase prices as much as the Caribbean producers because of their transportation cost disadvantages when marketing bauxite to the US. Further, these two producers also did not follow their Caribbean counterparts in implementing a bauxite production levy.

⁷ However, Friedland (1984) asserts that Jamaica's imposition of a bauxite levy made its industry uncompetitive. Quoting an analyst at the United Nations Development Programme, he states that the levy, combined with a weak

world market for aluminium, created a reaction by the industry to 'get out of Jamaica completely and leave the bauxite in the ground'.

⁸ It is significant to note that Alcoa got a much more efficient plant than the one it gave up in 1985. Wartzman (1987) noted that the Jamaican government was able to decrease the production costs at the refinery by almost a half and was also making a significant profit from its operations.

⁹ The author is grateful to Mr. Michael Mitchell of the Jamaica Bauxite Institute for clarifying this issue.

¹⁰ This counter-purchase agreement allowed Jamaica to export bauxite to the Ukraine and purchase motor vehicles and other goods from Russia and also receive hard currency from the proceeds of its bauxite sales (Francis, n.d.)

¹¹ Manley later revealed that he did not reject the Emergency Production Plan *aka* The People's Plan. Rather, he was forced to approach the IMF for loan financing because of the exigencies for foreign exchange. He stated that the government's early attempts to secure a \$ 100 million line of credit had failed partially because of its support of Cuba's defence of Angola against South Africa. The government's subsequent efforts to obtain financial support from the Soviet Union were also unsuccessful. Manley elucidated that at this juncture, the country had no recourse but to approach the IMF for financing; the entire domestic manufacturing sector would have collapsed without this foreign exchange support. He further stated that the political fallout arising from unemployed workers in the manufacturing sector and the understandably disgruntled trade union officials –the base of his political support- would have only 'delighted' his detractors (Manley and Levitt, 1997, p. 97).

¹² Henke (2000) states that a local industrialist, Mayer Matalon, who was an old school friend of the Prime Minister, played a deciding role in Manley's decision to become involved with the IMF. It seems that Matalon not only had control of local capital and members of the private sector, but also was well connected with Jewish financial circles and the bauxite companies (Henry, n.d. p. 24 cited in Henke, 2000, p. 58).

¹³ Stephens and Stephens (1983, p. 32) estimated that during the years, 1975 to 1976, capital flight in Jamaica was an astounding J\$ 300 million. The authors stated that this sum of money could have made a difference in the country's decision whether or not to go to the IMF.

¹⁴ Stephens and Stephens (1989, p. 1) state that Prime Minister Edward Seaga and the then US President, Ronald Reagan, 'teamed up to make Jamaica the showcase of capitalist development in the Caribbean to demonstrate to the world the merits of the free market'. To this end, during his tenure in office, Prime Minister Seaga received US\$ 1 billion in development assistance and enjoyed IMF loan conditionalities that were far more lenient than those offered to the previous administration (e.g., Ashby, 1989).

¹⁵ King (2001) reveals that the Seaga regime was as distrustful of market-oriented economic policies as its predecessor. The only difference was the Seaga regime's policy on foreign direct investment, which returned to one of encouraging the foreign investor, specifically the foreign investor involved in manufacturing activities, to locate operations in the country. King (2001, p. 12) further notes that the Seaga regime was reluctant to wholeheartedly embrace many of the policies of economic liberalisation. For example, while this regime removed the import license requirement for some goods, it simultaneously increased the import tariff on the same items in an explicit attempt to maintain protective barriers. Further, up until 1987, items were still being added to the negative list.

¹⁶ Girvan (1998) attributes Manley's ideological turnaround to the trauma he suffered in the 1980 elections. He also cites Manley's disillusionment with the negative aspects of the 1970s experience and the dramatic shift in the global balance of power (the ascendancy of the conservative governments in the UK and the US, the Latin American debt crisis, the entrenchment of neo-liberalism, and structural adjustment and stabilisation programmes, and the collapse of state socialism and the Soviet Union) as influencing factors. Girvan (1998) further states that Manley now genuinely believed that the market could succeed where the state had previously failed in improving the living conditions of all Jamaicans. He notes that this result was all that mattered to Manley. Manley, himself, stated that he did not indiscriminately enter into neo-liberalism. He emphasized that before his retirement from politics in 1992, he attempted to develop a 'functionally co-operative social model.' In this model, while the primacy of the market was acknowledged and supported, the state still acted as a 'fulcrum' for the development and maintenance of an on-going social contract between the political directorate, the bureaucracy, the private sector, the trade unions and academia. In addition, the state encouraged the empowerment of its citizens through activities such as worker participation in the share ownership of privatised entities (Manley and Levitt, 1997, pp. 82-83).

¹⁷ The JBI's mandate was to monitor the industry on behalf of the government and carry out technical and economic research relevant to the enhancement of the industry. The JBM was to be the Government's representative, which would hold its equity in all partnership agreements with the bauxite and alumina companies, while BATCO would market bauxite and alumina on behalf of the Government. The Government subsequently extended its involvement in the industry in 1985 with the creation of Clarendon Alumina Production Limited, the 45 percent equity partner of Jamalco (Jamaica Bauxite Institute, 1996).

¹⁸ See Davis (1995) for a detailed discussion on the background to the bauxite levy negotiations, its introduction and its subsequent amendments.

¹⁹ However, Girvan (1984) emphasizes that the imposition of the bauxite levy was not the only reason for the decline in Jamaica's production during this period. He noted that at that time, the aluminium TNCs were not planning to invest in any future expansion in capacity and production in Jamaica. He explained that the strategy of the investing aluminium TNCs was to locate incremental production in one location and subsequently expand production in new locations. In fact, the North American aluminium companies located incremental production in Suriname and Guyana from the 1920s to the late 1940s, in Jamaica and to a lesser extent, the Dominican Republic and Haiti in the 1950s and 1960s, then concentrated on expanding capacity in Australia and Guinea from the 1970s.

²⁰ While the aluminium TNCs were no longer planning to invest in any future expansion and production in Jamaica, the imposition of the bauxite levy made Jamaica's bauxite relatively more expensive since with the exception of Suriname, Dominican Republic and Haiti, the IBA member countries did not impose a bauxite levy

²¹ The government sought to reduce the levy rate and increase production in the 1979 and 1984 regimes. In the 1979 regime, the levy rate, which was originally set at 7.5 percent, to be increased to 8 percent and 8.5 percent in 1975 and 1976, respectively, was reduced and stabilised at 7.5 percent. The government also introduced production incentives. For example, it adopted the concept of dual levy rates: basic and lower incremental ones, which applied to production above 'reference quantities'. In addition, there was the concept of 'moveable caps' at which the basic rates of 6.5 to 6.8 percent was applied. Further, the government introduced the concept of lower 'composite' rates, which ranged from 4.027 percent to 5.033 percent, for successive increments of 200,000 long dry tons above reference quantities. The 1984 regime was even more complex than its predecessors. A basic rate of 6 percent for average realised prices of up to US\$ 0.75 per pound, and 3.6 percent for any increment above US\$ 0.75 per pound for each metric ton of bauxite up to the reference quantity, was introduced. Production in excess of the reference quantity attracted a rate that was 50 percent of the basic composite rate. Further, to encourage foreign exchange inflows into the country, a rebate against the levy of US\$0.08 for every US dollar brought into the country, was offered. In addition, an incentive for dependence on Jamaica was introduced. Here, companies could gain another deduction against the levy on the basis of their dependence on Jamaican bauxite. Finally, royalty payments were changed from US\$ 0.50 per dry ton rather than US\$ 0.50 per long dry ton (Davis, 1995).

²² BATCO could possibly use the services of JBI in this regard. However, the authors are unaware whether BATCO did so or the extent to which the JBI could effectively provide this service.

²³ Of the thirteen staff members at BATCO, two have postgraduate degrees in Business Administration, one has an undergraduate degree in Political Science and the remaining ten do not possess university degrees.

²⁴ This sale of bauxite to the US helped maintain activity in Jamaica's depressed bauxite and alumina industry, however, its contribution to the country's balance of payments problem was limited since the US paid for some of the bauxite with agricultural products (Payne, 1993).

²⁵ The political opposition criticised the agreement to forward sell the country's alumina, stating that this move was 'mortgaging the future of the country' and that 'the government was jeopardising future earnings for a quick fix' (See James, 1999b).