THE ISCOTT EXPERIENCE

by

Michael James
Research Department
Central Bank of Trinidad & Tobago

July 1997

Michael James

The author is an Economist in the Research Department of the Central Bank of Trinidad and Tobago. *The author wishes to thank those individuals who were instrumental in providing the necessary information for the completion of the paper. Views expressed are those of the author and not necessarily those of the Central Bank of Trinidad and Tobago.*

ABSTRACT

With the advent of the oil shocks in the 1970's and the subsequent quadrupling of revenue, the Government of Trinidad and Tobago embarked on a development strategy aimed at creating energy based export industries capable of replacing petroleum as the engine of growth. With this as the reason d'etre, the decision was taken to invest in a steel mill. The Iron and Steel Company of Trinidad and Tobago began commercial production in 1980 but throughout the first five years output at the facility failed to meet the minimum industry standard. By the end of 1988, the state-owned mill had accumulated losses of TT$2.1billion. Caribbean Ispat Limited assumed responsibility of the mill in 1989 and since then, output has increased to unprecendented levels. This paper will attempt to explore the industrialization policy as it relates to the ISCOTT. The paper is not exhaustive but should highlight some of the problems developing countries encounter on their path to transformation and economic independence.

I. INTRODUCTION

The Iron and Steel Company of Trinidad and Tobago(ISCOTT) was envisaged as a means by which the country's vast reserves of natural gas could be monetised. The mill was originally planned as a joint venture between the Government of Trinidad and Tobago, Eastee! of Europe, and the Japanese firms, of Kawasaki Steel and Mitsui. However, with the downturn in the international steel market in the mid 1970s the foreign partners were released from their obligations and the plant's original structure was altered to add value to the mill's output.

Constructed at a cost of TT$1.06 billion, the integrated mill began operating in August 1980 and produced a mere 21.5 thousand tonnes of direct reduced iron and 3.2 thousand tonnes of steel billets that year. Despite this, the mill's output averaged less than 30 per cent of design capacity throughout the first five years of operations, owing to technical, marketing and managerial problems. Technically, the management of the facility was inept at developing an ideal product mix that maximized the benefits from the plant's high technical specifications and quality raw materials. Therefore the company's output was comprised predominantly of low value wire mesh instead of the higher valued wire rods. Added to this, operations at the facility were adversely affected by the inadequate managerial and technical skills at various levels in the organization. Furthermore, "the management of ISCOTT lacked the authority to operate the mill efficiently, due to the inordinate number of decisions that were referred to the government appointed board, where decisions were taken slowly, not at all or based on non commercial reasons" (IFC 1987)[1]

On the marketing side, the company encountered a series of restrictive trade barriers in US and EEC. Between 1983 and 1984, the US Department of Commerce (DOC) imposed an average weighted dumping margin and a countervailing duty of 14.2 per cent and 6.7 per cent respectively, on the company's sales of wire rods into the US. As a direct result, ISCOTT's exports of wire rods fell to 36.7 thousand tonnes in 1985 from 76.9 thousand tonnes achieved in 1984. Similarly in the EEC, the European Commission found a dumping margin of 44 per cent on shipments of wire rods from Trinidad and Tobago. Though no action was taken by the Commission, ISCOTT's international sales of wire rods to the EEC declined by 13.1 per cent between 1984 and 1985. Therefore with the restrictions placed on the company's exports, a spectre of doubt was cast over the future viability of the steel facility.

Notwithstanding all these developments , the Government of Trinidad and Tobago (GOTT) entered into a two year management contract with the consortium of New Hamburg Steelworks of Germany (HSW) and Voest Alpine of Austria in January 1986. The consortium improved the mill's capacity utilization rates and diversified the company's export markets but failed to stem the losses at the facility. This resulted in the mill's accumulated losses rising to TT$2.1 billion by the end of 1988.

This deterioration in the facility's financial performance and the failure of the Government of Trinidad and Tobago to secure a long term agreement with HSW, ISCOTT was leased to Pt. Ispat of Indonesia in October 1988. Ispat began operating the ISCOTT facility in January 1989 under a management contract and assumed full operational responsibility in May of that year under the name of Caribbean Ispat Limited (CIL). Within one year of the lease agreement, outturn at the steel mill, increased to levels unsurpassed prior to 1989. Moreover, Caribbean Ispat Limited was able to declare small operational profits in each of the first five years of its existence.

Given the success of CIL along with the Government desire to rationalize the state sector, the decision was taken to sell the assets of the mill to Caribbean Ispat Limited (CIL) in 1994 for a sum of US$70.05 million. Since then, operations at the mill have displayed robust growth trends so much so that CIL has committed an additional US$73.5 million to capacity enhancement and an environmental upgrade.[2]

With the advent of the two oil shocks in the mid 1970's and the subsequent quadrupling of oil revenues, the Government of Trinidad and Tobago embarked on a specific development path. This strategy was aimed at creating energy-based export industries capable of replacing petroleum as the engine of growth in the economy, and this provided the raison d'ltre to invest in a steel mill. Moreover the facility was viewed as the new corner stone of national development to give the impetus to a wide range of downstream activities.

Against this backdrop, this paper attempts to explore the impact of this strategy as it relates to the ISCOTT experience. The paper is not meant to be exhaustive but should highlight some of the problems encountered by developing countries on their path to transformation and economic independence. The paper is divided into five sections. Section II, focuses on the turbulent post start-up years and the many attempts to improve the performance of the steel facility. Section III provides a background into the pricing and supply dispute between the downstream steel industry and Caribbean Ispat Limited (CIL), while section IV analyses the effects of leasing the mill to Caribbean Ispat Limited and the issue of divestment. In section V the paper concludes with a look at the future of the steel industry in Trinidad and Tobago.

II. THE EARLY DAYS OF ISCOTT

Amid the downturn in the international steel market and speculations about its viability, ISCOTT began production in August 1980. The facility consisted of two Midrex Direct Reduction Iron modules with a combined capacity of 840 thousand tonnes of direct reduced iron (DRI). A meltshop, consisting of two 90 - ton Demag Electric Arc Furnaces (EAF) and two four strand casters capable of producing 600 thousand tonnes of steel billets and a Morgan/ Stelmor Rod mill with the capacity of 485 thousand tonnes of wire rods per annum. This notwithstanding, the mill's production levels never exceeded 30 per cent of capacity throughout the first five years of operations. (Table 1).

TABLE 1
PRODUCTION OF IRON AND STEEL PRODUCTS (1980-1987)
'000 metric tonnes

Commodity	1980	1981	1982	1983	1984	1985	1986	1987
DRI								
Production	21.5	179.6	217.9	302.3	239.0	243.2	337.2	441.2
Exports	10.0	87.1	53.1	56.5	61.1	65.3	53.2	106.7
Local Sales	-	-	-	-	3.0	-	-	-
BILLETS								
Production	3.2	53.1	179.2	209.6	198.9	166.9	327.0	375.5
Exports	-	-	14.9	14.4	17.3	1.1	23.1	24.0
Local Sales	-	0.2	14.5	21.6	18.2	54.7	64.0	46.7
WIRE RODS								
Production	-	29.1	115.5	164.2	134.7	102.9	217.1	276.2
Exports	-	5.4	87.6	119.6	130.4	76.9	186.2	239.6
Local Sales	-	5.1	26.4	26.4	24.5	17.7	25.0	20.5

Source: Annual Economic Survey; Central Bank of Trinidad and Tobago

With these low levels of productivity and higher than normal costs per ton, ISCOTT's sales revenue fell significantly below the cost of production, resulting in the accumulation of substantial losses between 1980 and 1985 (Table 2). In addition, long term debts amounted to TT$559 million while total current liabilities exceeded total current assets by a ratio of 2 to 1 by the end of 1985 (Table 3).

This poor financial performance resulted in the signing of a two year management contract involving the firm of Hamburger Stahl Werke (HSW), Voest Alpine and the Government of the Republic of Trinidad and Tobago in January 1986. The consortium's objectives were the apprehension of the capital outflows and the restructuring of the steel facility in Trinidad and Tobago. Under this agreement, the group provided a total of 936 expatriate man - months of labour over a two year period, at a cost of DM27,212,245. In area of production, the contract conferred upon the consortium a payment of DM39.29 for every tonne of billet produced above 17,000 tonnes, equivalent to TT$1,009,580 per month. [3]

TABLE 2
ISCOTT - STATEMENT OF EARNINGS
(TT$Mn)

December 31 Year to	1981	1982	1983	1984	1985
Sales Volumes('000 mt)					
Wire Rods	5.4	87.6	145.9	144.2	91.5
Billets	0.0	14.9	36.0	35.5	52.3
DRI	87.1	53.1	56.5	64.1	65.3
Sales Revenue(fob)	33.5	82.2	109.6	109.1	103.3
Less: Cash cost of goods sold	49.8	167.1	247.6	213.3	205.8
Deprecation and Amortization	0.0	25.8	25.7	-127.5	24.5
Operating Profit(loss)	-16.3	-110.7	-163.7	55.6	-127.0
Less: Financial charges	55.2	108.3	98.5	24.5	110.6
Selling and Administrative	94.5	43.3	18.0	-11.5	26.6
Miscellaneous Expenses	0.0	0.0	10.4	-195.5	-3.5
Profit Before Tax	-165.9	-262.3	-296.6	-195.5	-260.6
Less: Income Taxes	0.0	0.0	0.0	0.0	0.0
Profit after Tax	-165.9	-262.3	-269.6	-195.5	-260.6

Source: IFC 1987

Overall, there were improvements in the operational and marketing performance of ISCOTT. Firstly, the company's product mix was reorganized, with more emphasis placed on the production of higher valued wire rods instead of the lower valued wire mesh. Secondly, capacity utilization rates and outturn levels increased to 50 per cent of design capacity while total cost per ton fell to US$482 per tonne from US$824 per tonne in 1984/ 85 (Table 4). Despite these changes, the mill continued to incur losses, due in part to the onerous financial burden of the management contract and

TABLE 3
ISCOTT BALANCE SHEET (1981 - 1986)
(TT$'000)

Current Liabilities	1981*	1982*	1983**	1984**	1985	1986
Short - terms loans	144,540	240,900	242,100	-	-	-
Accounts Payable	72,727	75,036	71,835	117,526	218,655	292,338
Retention's Payable	5969	13,781	645	532	501	9
Current Portion of Long Term Debt	49,224	22,143	64,166	63,145	100,038	96,602
Mortgage loan			14			
Bank Overdraft			8091	6,073	35,981	694,436
Total Current Liabilities	371,129	253,191	386,851	187,276	355,175	355,175
Non Current Liabilities						
Advances:						
Government	215,847		140,000	573,663	718,122	245,656
Consortium	502,000	539,015				44,709
Long term debt			417,230	345,014	459,685	409,840
Long term mortgage loans			574			
Total Non Current Liabilities	717,847	539,015	557,804	918,677	1,177,807	700,205
Shareholders' Equity:						
Authorized 20,000,000 shares of $100 each						
Issued and fully paid shares	606,912	606,912	1,112,819	1,112,819	1,112,819	1,830,941
Accumulated deficit	(208,303)	(470,588)	(847,288)	(91,042,815)	(1,331,842)	(1,559,477)
Currency Translation			(2,441)	5,815	(174,417)	(177,922)
	136,324	398609	263,090	15,819	(933,440)	93,542
Total Liabilities & Shareholders' Equity	1,190,815	1,225,300	1,207,745	1,181,772	1,139,542	1,188,183

Source: Company's Financial Statement
*Authorized 9,000,100 shares of $100 each
**Authorized 16,000,000 shares of $100 each

TABLE 4
ISCOTT'S CASH MARGINS

Average annual sales(000 tonnes)	1984/85		1986/87	
DRI	64.7		51.1	
BILLETS	46.9		78.5	
WIRE RODS	120.5		216.7	
Cash Costs Per Ton Wire Rod	**TT$/Mt**	**US$/Mt**	**TT$/Mt**	**US$/Mt**
Raw materials	252	105	289	80
Energy	117	49	166	46
Labour	145	60	194	54
Consumable	165	69	176	48
Other & Allocated Overheads	430	179	320	89
Total cash Production Costs	1,109	462	1,145	317
Principal Payments	396	165	279	78
Interest Payments	474	197	212	87
Total Cash Costs	1,979	824	1,636	482
Average Wire Rod Revenue	605	252	762	212
Net Cash Loss per Mt.	(1,374)	(572)	(874)	(270)

Source: IFC 1987
1 weighted average of financial years 1984 - 85 and 1986 - (4 months)

TABLE 5
COMPARATIVE DELIVERED COSTS(1986)
US$/Mt

	US. Producer	EEC Producer	ISCOTT US	ISCOTT EEC
Raw Materials	81	80	80	80
Energy	38	50	46	46
Labour	33	42	54	54
Other & allocated overheads	54	74	137	74
Total Ex- factory Costs	206	246	317	317
(16 per cent duty)	-	-	38	-
Selling & Delivery	-	-	30	-
Capital Charges	30	18	123	18
TOTAL DELIVERED COST	236	264	508	335

SOURCE: IFC 1987

TABLE 6
NET CASH FLOWS TO GOVERNMENT UNDER ALTERNATIVE SCENARIOS
TT$Mt

	ISCOTT continue Operations	Shutdown ISCOTT	North Star/Cargill Proposa	HSW Proposall
1988	- 126.9*	-147.4	-188.9*	-152.0*
1989	-211.1	-120.0	-231.6	-150.6
1990	-213.0	-111.3	-110.8	-70.1
1991	-181.3	-102.7	-47.5	-25.5
1992	-139.5	-27.5	21.2	16.6
1993	-55.3	0.0	110.7	96.4
1994	-55.3	0.0	112.2	85.4
1995	-55.3	0.0	109.0	84.1
1996	-54.3	0.0	86.4	87.2
1997	-53.3	0.0	96.7	87.2
Total	-1,145.3	-508.9	-42.6	59.1

Source: IFC 1987
* 6 months

the failure of the consortium to effectively eradicate the post start up problems. Moreover, the imposition of the 16 per cent duty on ISCOTT'S sales of wire rods into the US by the International Trade Commission resulted in more of the company's output being exported to the EEC and the far east. In both instances the net - back realizations were less, due to lower cif prices and higher transport and selling costs (Table 5).

Faced with the steel facility's inept performance over the period 1980 - 1987 and the distinct possibility of additional losses in the foreseeable future, the International Finance Corporation (IFC) as its role of adviser to the government advocated five scenarios for the restructuring of ISCOTT:

(i) Continue operating the mill in its present condition, which would translate into losses amounting to $TT1.3 billion over a 13 year period;

(ii) Close the mill, which would result in losses totalling TT$508 million;

(iii) Lease the plant to the consortium of North Star/Cargill Group, in return for an undiscounted cash flow of TT$336 million over a 13 year period;

(iv) Lease ISCOTT to the HSW, in return for an undiscounted cash flow of TT$512 million over the same 13 year period; and

(v) Enter into a management contract with the consortium of Centrin and B.S. Livingston.

Given these options, the lease proposal of HSW was chosen as the most viable way forward(Table 6). However due to financial constraints HSW withdrew from the agreement, and the plant was subsequently leased to Pt. Ispat of Indonesia in October 1988. Though Ispat was a relatively unknown company, it was widely believed that the management possessed the necessary technical expertise needed to transform ISCOTT and encourage an active downstream industry.

SECTION III : THE PRICING DISPUTE WITH THE DOWNSTREAM INDUSTRY(DSI)

Prior to the establishment of the ISCOTT in 1980, there existed a small group of re-rollers and wire drawers in Trinidad and Tobago manufacturing a variety of products ranging from reinforcing bars to nails. These companies enjoyed duty free concessions on the importation of raw materials. However with the start up of the ISCOTT facility, a temporary halt was placed on these feedstock imports, on the grounds that the new steel plant would adequately service the needs of a local downstream industry. However given its technical problems, ISCOTT was never able to meet the raw material requirements of the downstreamers. In 1981, ISCOTT supplied the downstreamers with 200 tonnes of billets and 5.1 thousand tonnes of wire rods, respectively whereas the downstreamers had a capacity to consume 12 thousand tonnes of billets and 30 thousand tonnes of wire rods per annum.

One year later the mill was able to redress the situation, and supplied the re-rollers with 14.5 thousand tonnes of steel billets and 19.2 thousand tonnes of wire coils (Table 1). However with the commissioning of a new merchant bar mill Central Trinidad Steels Limited(Centrin) in 1983, the situation once again became untenable. With the additon of Centrin and its capacity to consume 90 thousand tonnes of billets per annum, the feedstock requirement of the downstreamers had increased significantly. The local downstreamers requirement had risen from 12 thousand tonnes of billets and 30 thousand tonnes of wire coils to 102 thousand tonnes of steel billets and 50 thousand tonnes of wire rods, respectively. Nevertheless, between 1983 and 1986 ISCOTT's sale of raw materials to the downstream users never exceeded 64 thousand tonnes per annum in the case of steel billets and 26.4 thousand tonnes in the case of the wire coils. This tended to have an extremely adverse effect upon the capacity utilization rates of the downstream firms.

The downstreamers as a whole were also forced at times to pay prices that were 40 per cent higher than the average international prices, in large measure of ISCOTT's inability to operate its melt shop at optimum capacity. Though some attempt was made to resolve the pricing issue between 1987 and 1988 by the management consortium, the problem remained largely unresolved up to the time the mill was formally leased to Pt. Ispat of Indonesia in October 1988.

TABLE 7
PRICES OF STEEL BILLETS SOLD LOCALLY AND ON THE INTERNATIONAL MARKET
US$ per tonne

YEAR	Local Prices	F.O.B. Europe Int'l Prices
1983	165	165
1984	165	99
1985	165	99
1986	130	187
1987	144	189

Under Article 14.2 of the lease agreement CIL was mandated to make available to the downstream re-rollers 60,000 tonnes of billets per annum at a price equivalent to 10 per cent below the ex-works f.o.b. market price available to the company. Further, Article 14.2 also mandated the mill to make available another 40,000 tonnes of billets per annum to the Trinidad and Tobago market, once it produced above 510,000 tonnes per annum at a price equal to the ex-works f.o.b. price available to the company. Nevertheless, between May 1989 and November 1989 CIL supplied the re-rollers with a total of 17, 348 metric tonnes of steel billets, 12,652 metric tonnes less than specified in the lease agreement.

Furthermore the re-rolling mills paid CIL on average US$251 per tonne of billet, 6 per cent higher than specified under Article 14.2. In justifying its pricing policy, CIL argued that the prices worked out under the lease agreement were too low and were below the average international price which was around US$268 per tonne at the time. After a series of negotiations and temporary agreements, a permanent and binding accord was reached between CIL and the downstream steel re-rollers in December 1994.

SECTION IV : THE ISPAT EXPERIENCE

Caribbean Ispat Limited(CIL) gained full operational responsibility of the former ISCOTT mill in May 1989. The operating agreement stipulated an initial period of ten years with the option to purchase the plant after the first five years. In return the Government of Trinidad and Tobago received a fixed rental fee of US$10.84 million per annum and a variable rental fee equivalent to 50 per cent of disburseable profits above US$2.5 million. Between 1989 and 1992, CIL invested US$55 million in critical equipment and technology necessary for the transformation of the plant. With the installation of these pieces of equipment, output of all three product lines rose to record levels in the 1994 (Table 8). CIL's efforts also contributed to a marked reduction in the cost of production. Thus between 1989 and 1994 the unit cost of producing a tonne of billet and a tonne of wire rod, fell by 11 per cent and 16 per cent respectively (Table 9).

In the area of marketing, the company achieved higher levels of market penetration and shipping volumes. As a result, revenues increased to US$156 million in 1994 from US$85 million achieved in 1988/89. Overall, CIL achieved a level of success the hitherto loss making facility had never previously experienced. Output of all three product lines had surpassed the rated capacity of

Table 8
Production of Iron and Steel Products(1988-1994)
'000 metric tonnes

Commodity	1988	1989	1990	1991	1992	1993	1994
DRI							
Production	548.0	673.3	681.6	654.0	647.7	714.5	946.7
Exports	151.4	289.3	313.3	196.3	171.7	223.9	292.2
Local Sales	-	-	-	-	-	-	-
Billets							
Production	361.2	344.1	364.5	439.7	552.8	492.1	630.3
Exports	40.9	13.8	1.9	8.8	12.0	15.7	12.6
Local Sales	52.6	38.4	56.3	45.2	59.2	40.8	67.1
Wire Rods							
Production	251.3	273.2	252.1	364.1	446.1	413.0	495.2
Exports	223.7	205.4	266.9	345.3	400.3	357.8	147.3
Local Sales	31.8	34.2	22.3	29.7	20.1	20.9	19.2

Source: Annual Economic Survey, Central Bank of Trinidad and Tobago

Table 9
CIL Product Costs
(US$/TONNE)

	1990/91	1991/92	1992/93	1993/94
DRI	87	92	89	89
Billets	250	223	223	222
Wire Rods	328	280	275	275

Source: WS Atkins

Table 10
ISCOTT Income/Payments
TT$ Mn

Year	Lease Income	Interest Payments	(Deficit)/Surplus Revenue
1989	31.0	145.9	(115.0)
1990	46.5	89.1	(42.7)
1991	46.5	77.0	(30.6)
1992	46.5	57.8	(11.4)
1993	62.4	46.2	16.2
TOTAL	**232.8**	**416.2**	**(183.4)**

SOURCE: Financial Statements of ISCOTT

the plant and the early problems that had beset the facility were satisfactorily arrested. More importantly, the mill was transformed into a profitable private company, with CIL declaring a small profit in each of the five years of operations. Given CIL's success and expressed interest in acquiring the facility a decision was taken sell the mill.

Between 1993 and 1997 the Government of Trinidad and Tobago sold its interest in several companies in the energy sector. Among the companies sold was ISCOTT. The decision to sell the steel mill was guided by the terms and conditions of the 1989 lease agreement obligated government to sell the assets of the plant to Caribbean Ispat Limited. The ISCOTT facility was valued at US$70.05 million by the independent valuators of Mc Lellan and Partners who used two different approaches.

The market value approach produced a net present value of US$103.8 million, the replacement cost approach, which produced a value of US$98.21 million. Taking the average of the two approaches and subtracting the value of improvements of US$30.96 undertaken by CIL a net asset value of US$70.05 million was derived. Though these two approaches proved viable, another approach would have been to value the entity as a going concern. If this method had been followed it would have provided the government with an additional US$16.1 million in revenue.

SECTION V : THE FUTURE OF THE STEEL INDUSTRY

The steel industry in Trinidad and Tobago has undergone a series of changes since the inception of the ISCOTT at Point Lisas. The coming on stream of the ISCOTT facility signalled the entrance of Trinidad and Tobago into the international steel arena, which at that point in time was characterized by falling prices and growing protectionism. In the early years of operations, the mill encountered a series of post start up problems, among which were an inappropriate product mix and a narrow market spread. Between 1981 and 1986, the mill lost TT$1.6 billion and operated at less than 30 per cent of design capacity.

In an attempt to forestall the financial hemorrhaging, the Government of Trinidad and Tobago entered into a two year management contract with the consortium of Hamburg Steelworks of Germany and Voest Alpine of Austria. Though the consortium achieved limited success in reorganizing the product mix and diversifying the facility's export focus, the plant accumulated TT$2.1 billion in losses. Thus in October 1988, the government signed a lease agreement with Pt. Ispat of Indonesia.

Ispat provided management services between January 1989 and April 1989 and assumed full responsibility of the mill in May 1989 under the name of Caribbean Ispat Limited (a wholly owned local subsidiary). During this tenure as operators of the ISCOTT facility, CIL made significant improvements to the plant, and increased output to levels unsurpassed prior to 1989. Further-