

**THE POLITICAL CONTROL OF STATE OIL COMPANIES.  
A CASE STUDY OF THE INTERNATIONAL VERTICAL INTEGRATION  
PROGRAMME OF PETRÓLEOS DE VENEZUELA (1982-95)**

Juan Carlos Boué

Wolfson College

Thesis submitted in partial fulfillment of the requirements for the degree of  
D.Phil. in Politics in the Faculty of Social Studies at the University of Oxford.

Trinity Term 1997

## ABSTRACT

Trinity Term 1997  
D.Phil.

Juan Carlos Boué, Oxford University

### **THE POLITICAL CONTROL OF STATE OIL COMPANIES. A CASE STUDY OF THE INTERNATIONAL VERTICAL INTEGRATION PROGRAMME OF PETRÓLEOS DE VENEZUELA (1982-95)**

This thesis examines the downstream vertical integration programme of the Venezuelan national oil company, Petróleos de Venezuela S.A. (PDVSA). This programme has transformed PDVSA into the third largest refining company in the world, and turned Venezuela into the OPEC country with access to the largest amount of refining capacity outside its borders. Detailed analysis of the programme shows that this programme does not constitute a policy response to the economic problems traditionally associated with vertical integration practices in the international oil industry. Rather, PDVSA has used the programme in order to put some of its oil export revenues beyond the fiscal reach of the government, firstly, by transferring crude to its subsidiaries abroad at below market prices and, secondly, by converting this cash flow into illiquid assets (refineries and ancillary marketing assets) which, unlike foreign currency holdings and similar liquid assets, are not vulnerable to summary confiscation by the government. The thesis argues that the real motive behind the internationalisation programme was the breakdown, between 1982-3, of the informal political pact struck in 1975-6 by representatives of the nationalised oil industry and the Venezuelan Executive; thus, the weakening of the oil market in 1982 and the collapse of oil prices in 1986 in reality presented PDVSA with the opportunity, more than the motivation, to expand downstream.

## ACKNOWLEDGEMENTS

In the process of completing this study I have accumulated intellectual, personal and financial debts that are too numerous to mention. Nevertheless, I would like to express my gratitude to a number of individuals and institutions without whose help this thesis would not have been possible. First of all, I would like to thank my supervisor Paul Horsnell both for his guidance and for always displaying patience and understanding above and beyond the call of duty. John V. Mitchell and Bernard Mommer spent long hours reading endless drafts, but nevertheless gave me invariably profitable advice. Enrique Cabrero, Pedro Haas and Gabriel Székely read a preliminary version of this study, and offered valuable suggestions. The public relations departments of Citgo Petroleum, AB Nynäs, Veba Öl and Lyondell Petrochemical kindly and promptly responded to my requests for the annual reports of their respective companies. My efforts at data collection were made much easier by the collaboration of Raúl Manzo, Ilkka Lavonius, César Covarrubias and José Luis González. My research also benefited greatly from an interview with Dr. Alirio Parra, former Venezuelan minister of Energy and Mines, and I take this opportunity to thank him both for his time and for the insight I gained through our discussion. To Robert Mabro CBE, I can only say: *pro magna erga me benevolentia, pro multis in me beneficiis*. All of these individuals did their best to enlighten me and to improve the contents of my thesis. The errors that remain, whether through ignorance or obstinacy, are strictly my own.

I would like to acknowledge the financial support I received from a variety of institutions. The Mexican Council for Science and Technology (CONACYT) granted me the scholarship that brought me to Oxford, thanks in no small part to the intermediation of Gustavo Carvajal and Jorge Islas. Additional funding was provided by the Overseas Research Student Scheme, Wolfson College, the Inter Faculty Committee for Latin American Studies of the University of Oxford, and the Institute of Petroleum in London (through the Paul Frankel scholarship).

I would like to thank my wife, Sonia, and my parents for just about everything else.

Approximate number of words (excluding bibliography and appendices with primary statistics): 98,000

*In memoriam*

Miguel Moreno Sánchez (1912-97)

## CONTENTS

Chapter	Page
<b>1 INTRODUCTION</b>	<b>1</b>
<b>2 CONTINUITY AND CHANGE IN THE NATIONALISED VENEZUELAN OIL INDUSTRY</b>	<b>10</b>
2.1 Why Did the Venezuelan State Take Over the Oil Industry?	12
2.2 What Changed after 1976? (I): Legal and Political Status of the Oil Industry	27
2.3 What Changed after 1976?(II): Aims and Conduct of Venezuelan Development Policy	36
2.4 What Changed after 1976? (III): Internal Dynamics of the Venezuelan Oil Industry	43
2.5 Conclusions: <i>Plus ça change . . . ?</i>	46
Annexe 1: PDVSA. Institutional Evolution and Corporate Structure	49
Annexe 2: Comparative Evaluation of the Venezuelan RBI Strategy and Performance of Venezuelan RBI Projects	52
<b>3 PDVSA'S INTERNATIONALISATION PROGRAMME: AN OVERVIEW</b>	<b>54</b>
3.1 Ruhr Öl GmbH.	54
3.2 Refinería Isla (Curazao) S.A.	56
3.3 AB Nynäs Petroleum	58
3.4 Citgo Petroleum Corporation	59
3.5 Champlin Refining Company	60
3.6 Citgo Asphalt Refining Company	61
3.7 The Uno-Ven Corporation	61
3.8 Lyondell-Citgo Refining Company	62
3.9 The Uneasy Evolution of the Internationalisation Programme	63
3.10 Guidelines for PDVSA's Refinery Acquisitions	66
<b>4 THE INTERNATIONALIZATION PROGRAMME AND THE "REINTEGRATION" OF THE OIL INDUSTRY</b>	<b>69</b>
4.1 Vertical Integration in the Oil Industry: Some Introductory Remarks	71
4.3 The Legacy of the Seven Sisters and the New Dynamics of the World Oil Market	75
4.4 Vertical Integration in the Oil Industry and the New Dynamics of the Major Capital Markets of the World	83
4.4 Oil Exporting Countries and the Case for "Reintegrating" the Oil Industry	89

<b>5 PDVSA'S INTERNATIONALISATION PROGRAMME AND THE INDUSTRIAL ECONOMICS OF OIL: WEAK REASONS, ELUSIVE MOTIVES</b>	<b>95</b>
5.1 PDVSA's Justifications for the Internationalisation Programme	97
5.1.1 Revenue Stabilisation	98
5.1.2 Securing Outlets for Venezuelan Crudes	104
5.1.3 The Capture of Profits in Various Segments of the Oil Industry	114
5.2 Vertical Market Failures: the True Motives behind PDVSA's Internationalisation?	122
5.2.1 Bilateral Monopoly in the Market for Heavy Sour Crudes	124
5.2.2 Projection of PDVSA's Market Power	137
5.2.3 Protection from the Market Power of PDVSA's Commercial Counterparts	140
5.2.4 Development of Market Niches for Venezuelan Crudes	144
5.3 Conclusions	150
Annexe 3: Comparative Statistics for Selected Oil Companies in the US	154
Annexe 4: Breakdown of Crude Oil Imports or Crude Runs by PDVSA's Overseas Refineries	157
Annexe 5: Yields and Equations Used for the Assessment of Refining Margins of Selected Crudes in Chicago	166
Annexe 6: PDVSA Term Supply Contracts	167
<b>6 CONCLUSIONS: THE POLITICAL MOTIVATIONS OF THE INTERNATIONALISATION PROGRAMME</b>	<b>168</b>
6.1 The Triggering Factor? The Breakdown of the Co-existence Arrangement between PDVSA and the Venezuelan Government during the Presidency of Herrera Campíns	172
6.2 The Rationale of the Veba Deal Reconsidered	178
6.3 A Brief Diversion: the Problem of PDVSA's Internal Cohesion (1976-82)	182
6.4 The Internationalisation Programme and the Oil Market Crash of 1986	187
6.5 But How Have They Got Away with It? The Antinomies of PDVSA's Commercial Oil Policy Revisited	197
Annexe 7: PDV América Financial Statistics	206
<b>7 FINAL REFLECTIONS: THE INTERNATIONALISATION PROGRAMME AND THE POLITICAL OUTLOOK FOR THE NATIONALISED OIL INDUSTRY IN VENEZUELA</b>	<b>207</b>
<b>BIBLIOGRAPHY</b>	<b>222</b>

## TABLES

T3.10.1	Synopsis of the Purchases of Refining Assets Outside Venezuela by PDVSA (1983-97)	68
T5.1.1	Citgo. Behaviour of Selected Financial Variables (1986-95)	103
T5.1.2	Nynäs. Behaviour of Selected Financial Variables (1986-95)	103
T5.1.2.1	Citgo. Price Breakdown of Crude Supplies (1989-93)	112
T5.1.3.1	Total Gasoline Sales to Retail Sites Ratio of Major US Oil Companies (1986-95). Base Year: 1986	118
T5.1.32	Gasoline Distribution Set-ups of Selected Oil Companies in the US (1995)	119
T5.2.1.1	Weighted API Gravity and Sulphur Content of PDVSA's Crude Exports to the US (1987-95)	127
T5.2.1.2	Comparison of the Mexican and Venezuelan US Client Bases for Heavy Sour Crudes	128
T6.4.1	Composition of PDVSA's assets, in percentages (1976-95)	195

## FIGURES

F2.5.1	PDVSA. Behaviour (Cumulative) of Key Financial Variables (1976-88)	42
F2.5.2	PDVSA. Composition of Financial Reserves (1976-88)	42
F5.0.1	PDVSA. Crude Production by Type (1976-93)	96
F5.0.2	PDVSA. Crude Exports by Type (1976-93)	97
F5.1.2.1	Netback Margin Differential in Coking Configuration Tía Juana Ligeró - Bow River, Chicago (1991-5)	111
F5.1.2.2	Citgo Asphalt Savannah. Imports of Boscán as a Proportion of Boscán Output and US Boscán Imports (1987-95)	113
F5.1.3.1	Evolution of the US Gasoline Market (1986-95)	117
F5.1.3.2	Gasoline Sales of Major Oil Companies (Excluding Citgo) as a Proportion of Total Gasoline Sales in the US (1986-95)	117
F5.2.1.1	Schematic Representation of the US Crude Oil Market	126
F5.2.1.2	Venezuelan Exports of Light/Medium Crude to the US (1987-95)	126
F5.2.1.3	US Monthly Asphalt Production (1989-95)	128
F5.2.4.1	Schematic Representation of the Effect of an Increase in the Available Conversion Capacity in the Market for Heavy Crude Oil	148
F6.3.1	PDVSA. Exports of Crude by Affiliate (1976-92)	187
F6.4.1	PMI/Petromar. Selected Financial Statistics (1988-93)	193
F6.4.2	Selected Financial Variables as a Proportion of Gross Venezuelan Oil Income (1976-93)	194
F6.4.3	Composition of Citgo's Asset Base (1986-95)	196
F6.5.1	Patterns of Employment in the Venezuelan Oil Industry (1958-93)	200

## ABBREVIATIONS

AD	Acción Democrática
ADNOC	Abu Dhabi National Oil Company
Agropet	Agrupación de Orientación Petrolera
AIOC	Anglo-Iranian Oil Company
ANS	Alaskan North Slope
API	American Petroleum Institute
Aramco	Arabian American Oil Company
Bbl	Barrel of oil
BCF	Bolívar Coastal Field
BCV	Banco Central de Venezuela
BOPEC	Bonaire Petroleum Company
BORCO	Bahamas Oil Refining Company
BP	British Petroleum
CAT	Convenio de Asistencia Técnica
CCCCH	Comisión Coordinadora de la Conservación y el Comercio de los Hidrocarburos
CIF	Cost, Insurance and Freight
COPEI	Comité de Organización Política Electoral Independiente
Cordiplan	Oficina Central de Coordinación y Planificación
CVG	Corporación Venezolana de Guayana
CVP	Corporación Venezolana del Petróleo
DASM	Desarrollo Área Sur de Monagas
DM	Deutsche Mark
DOE	US Department of Energy
EIA	Energy Information Agency
E&P	Exploration and production
FCC	Fluid catalytic cracking
Fedecámaras	Federación de Cámaras y Asociaciones de Comercio y Producción
FOB	Free on Board
FRV	Fiscal reference value
GDP	Gross domestic product
GPW	Gross product worth
GTCs	General terms and conditions
IEA	International Energy Agency
IMF	International Monetary Fund
INTEVEP	Instituto Venezolano del Petróleo
IPC	Iraq Petroleum Company
IPE	International Petroleum Exchange of London
KPC	Kuwait Petroleum Company

LCRC	Lyondell Citgo Refining Company
LDC	Less developed country
LLS	Louisiana Light Sweet
LNG	Liquid natural gas
LNOC	Libyan National Oil Company
LPG	Liquid petroleum gas
MAS	Movimiento al Socialismo
MEM	Ministerio de Energía y Minas
MBD	Thousand barrels per day
MMBD	Million barrels per day
MMMT	Million metric tons
MMT	Million tonnes
MPRA	Modificación del Patrón de Refinación de la Refinería de Amuay
MMUSD	Millions of dollars
MNC	Multinational company
MTBE	Methyl tertiary butyl ether
NGCI	Nelson Generalised Complexity Index
NOC	National oil company
NYMEX	New York Mercantile Exchange
OAPEC	Organisation of Arab Petroleum Exporting Countries
OPEC	Organisation of Petroleum Exporting Countries
OECD	Organisation for Economic Cooperation and Development
PDVSA	Petróleos de Venezuela S.A.
PEG	Participación del Estado en las Ganancias
PEMEX	Petróleos Mexicanos
PMI	Petróleos de Venezuela Marketing International
RBI	Resource-based Industry
RON	Research Octane Number
R/P	Reserves to production ratio
Saudi Aramco	Saudi Arabian Oil Company
Sinopec	China Petrochemical Corporation
SITCO	Shell International Trading Company
SOE	State owned enterprise
SOFIP	Sociedad de Fomento a la Inversión Petrolera
TAP-Line	Trans-Arabian Pipeline
USD	US Dollars
USD/Bbl	US Dollars per barrel
USGC	US Gulf Coast
VLCC	Very Large Crude Carrier
WT%	Percentage by weight
WTI	West Texas Intermediate
WTS	West Texas Sour

## 1 INTRODUCTION

The nationalisation of the Venezuelan oil industry created one of the largest oil companies in the world: Petróleos de Venezuela S.A. (PDVSA). In 1976, at the moment of its inception, PDVSA found itself in possession of hundreds of active oilfields and a large system of 12 refineries. Unfortunately, the quality of PDVSA's inheritance was not comparable to its size: the Venezuelan upstream sector was in a rather poor condition (as a result of lack of investment by the foreign concessionaires, the country's crude output had been in steady decline since 1970, and the Venezuelan reserves to production ratio had shrunk considerably), and the company's refining system was more of a liability than an asset, since its output was totally inadequate to satisfy the demand patterns of either the Venezuelan or the international oil products markets (Venezuelan refineries had been designed to produce large amounts of high sulphur residual fuel oil, a product whose demand plummeted from the beginning of the 1970s onwards). However, in spite of these rather inauspicious beginnings, PDVSA is now considered the epitome of entrepreneurial success in the category of state-owned oil firms.<sup>1</sup> This is a fitting testimony to the company's many impressive achievements: transforming the obsolescent Venezuelan refineries into an integrated refining system of great complexity<sup>2</sup> geared towards the production of high-value clean products, arresting the decline in the country's crude production capacity; pulling the Venezuelan petrochemical sector back into the black after decades of mismanagement and, last but not least, successfully diversifying into activities such as coal, fertilisers, and the production and marketing of boiler fuels derived from natural bitumens. However, even though the consummation of any one of these assignments would have taxed the resources and ingenuity of almost any other national oil company (NOC), none of PDVSA's multiple business endeavours has drawn an amount of attention comparable to that generated by its so-called 'internationalisation programme'. This programme of acquisition of downstream assets has transformed PDVSA into the third largest refiner in the world after Exxon and Royal Dutch/Shell, and given the Venezuelan NOC a firm foothold in the product retail sector of some of the most important oil consuming markets of the world; in addition, it has turned Venezuela into the OPEC country with access to the largest amount of refining capacity outside its borders.

---

<sup>1</sup>The company is admired even in those circles which are opposed in principle to the existence of state enterprises (see for instance *The Economist*, January 11, 1992: 77-8).

<sup>2</sup>A refinery's complexity is an indication of its conversion capacity. Numerically, this can be represented as an index (known as Nelson's Generalised Complexity Index, or NGCI). To calculate it, each refinery unit is assigned a capital cost factor, representing the cost of a barrel per day of capacity compared with the cost of crude distillation capacity; the refinery's NGCI is the sum of the capacity of each unit times its factor, divided by the crude distillation capacity. The generalised complexity factors for each refining process can be found in Johnston, 1992: 199200.

The very high international profile of the internationalisation programme is a reflection of the fact that, besides PDVSA, a number of NOCs which control between them around 70 per cent of the world's proven crude reserves (those of Abu Dhabi, Kuwait, Libya, Mexico and Saudi Arabia) have also decided to pursue policies of downstream expansion beyond their national borders. Even though, as a group, these NOCs own less than five per cent of the installed refining capacity in OECD countries (and, therefore, have a degree of control over the refining business in developed countries which is infinitesimal when compared to that enjoyed by the Seven Sisters in their heyday), their vertical integration efforts have sometimes been interpreted as an attempt on their part to reinstate - on a worldwide scale - the industrial structure which was prevalent in the oil market throughout the Seven Sisters' period of dominance. In other words, the more or less contemporary acquisition of refining assets located in important oil-consuming countries by these NOCs has been seen as the spearhead of a long-term global trend whereby the world oil industry *as a whole* is gradually reassuming its 'natural' (i.e. highly integrated and concentrated) form, after the hiatus provoked by the nationalisation of the upstream assets of the major international oil companies in the most important OPEC countries during the 1970s.

We would argue that the interest in the so-called 'reintegration of the oil industry' is misplaced: the economic conditions which in the past impelled major multinational oil companies to become highly integrated are not really similar to those which crude-long NOCs face nowadays, so this means that there is really no justification for making a *tabula rasa* of the concrete political and economic factors that prompted each one of them to acquire refineries overseas. Indeed, it is these factors which lie behind our interest in the Venezuelan internationalisation programme. Even though one could think of this programme as being devoid of any relevant political undertones or ramifications (given its rather esoteric nature) throughout this study we shall demonstrate that it actually provides a lens by means of which one can arrive at a novel understanding of some of the most important developments in

Venezuelan politics of the past twenty years: the failure of Venezuelan development policy, the government's dilapidation of the oil windfalls of 1974 and 1980, the effective dismantling of the legal regime created by the nationalisation of the oil industry, and the appearance of rationality and legitimisation crises in the Venezuelan political system since 1989.

### **Structure of the Thesis**

This thesis is divided into seven chapters, the first of which is this introduction. Chapter 2 gives background information both on the political and economic set-up of the Venezuelan oil industry up to the early 1970s, and on the surprisingly minor changes in this set-up after the promulgation of the Nationalisation Law. Our analysis stresses the continuity of the main long-term objectives of Venezuelan oil and development policies even after the birth of PDVSA: the extraction by the Venezuelan government, in its capacity as representative of the

owner of the country's oilfields, of the maximum possible ground rent<sup>3</sup> from all capitalist enterprises (including those owned by itself!) producing Venezuelan oil for export, on the one hand, and the transformation of this supposedly exhaustible rent into a reproducible and diversified industrial base (i.e. the 'sowing of the country's oil'<sup>4</sup>), on the other hand. It also shows that a distinction should be made between the Venezuelan government's actual *take over* of the oil industry in 1975-6, and the *nationalisation* of the industry (which we contend happened earlier, during 1970-1). Finally, it indicates how a number of issues not addressed by the Nationalisation Law prompted the almost immediate appearance of serious jurisdictional conflicts between PDVSA and the Ministry of Energy and Mines (MEM), and elaborates on the manner in which these conflicts have influenced the political relationship between the nationalised oil industry and the Venezuelan government since 1976.

Chapter 3 contains a chronological overview of PDVSA's internationalisation programme. In this chapter, we provide a brief description of each one of PDVSA's overseas refineries, as well as an account of the circumstances under which their acquisition took place. We underline certain characteristics common to all of PDVSA's refining subsidiaries abroad, which have to be a central part of any hypothesis regarding the true motives behind the internationalisation programme.

The arguments presented in the next two chapters of the study (which deal with the issue of vertical integration in the oil industry) are very closely linked. Chapter 4 shows why it makes little sense to tackle the question of the downstream expansion of crude-long NOCs from a global perspective. The argument which says that the so-called "reintegration" of the industry is nothing more than an attempt by certain very large NOCs to imitate the marketing practices of the Seven Sisters is, in fact, an invalid *petitio principii* riven with economic contradictions. Conditions in the current world oil market are structurally different from those that prevailed before the 1970s. The existence of active and liquid markets for most crude oils, refined products and financial oil derivatives means that those firms which participate in only one segment of the industry can have an access to supplies, to markets and to risk management options comparable to those of integrated oil companies. Given that these market conditions have dissipated the advantages which multinational oil companies routinely reaped before 1973, and in view of the very high costs attached to a strategy of vertical integration, we find no evidence to suggest that an integrated form of operation will necessarily be rational for a crude-long NOC. Our argument demonstrates that, since no obvious case can be made for the need for "reintegration across the industry", the only one fruitful way of tackling this phenomenon is to take the concrete economic and/or political

---

<sup>3</sup>This term denotes that part of surplus value which landowners, by virtue of their monopoly on land or other natural resources, are able to extract from their tenants at a given historical juncture. It should be distinguished from Ricardian - or differential - rent, which denotes the difference between the market price of a commodity and its production costs, with capital and labour being paid at market rates.

<sup>4</sup>An expression coined in 1936 by Arturo Uslar Pietri.

situation of each one of the NOCs that have chosen to expand downstream (in terms of such things as the physical characteristics of the crude they have to sell, the legal and practical arrangements governing the division of petroleum rent between themselves and their governments, the type of political relationship existing between their managers and government officials, and so on) as the point of departure for any analytical effort.

Having detached the issue of vertical integration from its past, in Chapter 5 we begin our attempt to unravel the circumstances that have prompted PDVSA to become the NOC that has most avidly - and single-mindedly - pursued the goal of international vertical integration. In the first section, we will be examining the various arguments which the management of PDVSA has put forward in order to mobilise support for the internationalisation programme within the Venezuelan government (and, to a lesser degree, within Venezuelan public opinion). The company has always maintained that its acquisition of refining and marketing assets in oil consuming countries is a *defensive* and purely *commercial* policy response, prompted by:

- a) the need to counteract the effects of the enormous volatility in the price for oil;
- b) the need to secure commercial outlets for Venezuela's heavy crudes; and
- c) the possibility of maintaining profitable operations in diverse segments of the oil industry.

Starting from the assumption that "the public declarations of government officials . . . are an acceptable initial explanations for important policy decisions"<sup>5</sup> such as those that led to the internationalisation programme, we weigh each one of these arguments in turn. Drawing freely from the commercial experiences of PEMEX (the NOC which, in terms of the type of crude it has to sell, resembles PDVSA the most), we demonstrate that none of them is convincing and that, hence, the declarations of PDVSA officials can only be seen as *ex post* rationalisations aimed at justifying the company's move downstream (rather than as legitimate explanations for this move).

Given the inadequacy of the putative motives of the internationalisation programme, in the second section of Chapter 5 we posit that this programme was undertaken in response to other circumstances. Using a theoretical perspective based on transaction costs, we will show that the internationalisation programme could be seen as a rational policy response to the unfavourable transactional characteristics which prevail in the market for heavy crude oils (crudes which constitute the lion's share of PDVSA's resource endowment). This market is extremely thin and, in consequence, the threat of opportunistic behaviour and strategic misrepresentation always hangs above all those who participate in it. However, by virtue of being highly integrated, PDVSA *could* be in a position to:

---

<sup>5</sup>Székely, 1983: 21.

- a) purge its commercial relationships from the perverse incentive effects stemming from conditions of bilateral monopoly;
- b) protect itself from abuses of market power on the part of its most important clients;
- c) price-discriminate among its clients (in other words, project its own market power);
- d) develop new markets (or rather, special market niches) for Venezuelan heavy crudes.

Unfortunately, the fact that the internationalisation programme *could* bring about all these desirable outcomes does not sort out the welter of contradictions surrounding PDVSA's motives for integration, and actually complicates the panorama. The rest of the elements which constitute the company's commercial strategy (its contractual and spot supply policies, its pricing policy, etc.) tend to *exacerbate* the transactional problems of the market for Venezuelan crudes and, hence, to annul *in practice* the beneficial effects which *in theory* should accrue to PDVSA as a result of its high degree of integration. Thus, we bring this section to a close with a paradoxical conclusion: vertical market failures have not been among the motives which have prompted PDVSA's international downstream expansion, even though they are prevalent in those markets in which, by dint of the physical characteristics of Venezuelan crude oils, the company is forced to participate.

But then, should one presume that the expansion of the internationalisation programme has been due to an inability on the part of the company's managers (and their overseers at MEM) to perceive that the internationalisation programme and the other parts of the company's commercial policy run in diametrically opposite directions? In Chapter 6 we attempt to answer this question by placing PDVSA's vertical integration drive in the context of the company's political and economic circumstances during the early 1980s. Our analysis indicates that the internationalisation programme was the outcome of the breakdown of the *entente cordiale* that developed between oil industry managers and the Venezuelan Executive in the aftermath of the decision by the latter to take over the assets of all private oil companies operating in the country. This breakdown (a product of a fiscal crisis brought about by, among other things, the Venezuelan government's over-ambitious industrialisation drive) occurred during the presidency of Luis Herrera Campíns. This provoked a strong defensive reaction on PDVSA's part, which eventually crystallised in the internationalisation programme. Our main finding is that the internationalisation programme was prompted by a *political* - rather than an *economic* - motive<sup>6</sup>: the company's need to transfer petroleum rent abroad on a massive scale, in order to counter what most Venezuelan oil executives consider to be the main threat to the long-term health of their company; namely, "the [Venezuelan]

---

<sup>6</sup>The fact that an action has political motives should not be taken to mean that it was not undertaken for reasons of pecuniary gain; rather, it is an action prompted by circumstances arising from the company's political environment. In contrast, a company can be said to respond to an economic motive when its actions are prompted by the dynamics of the markets in which it participates.

government's voracious appetite for oil revenue".<sup>7</sup> This means, in turn, that the weakening of the oil market in 1982 and the collapse of oil prices in 1986 only provided PDVSA with the *opportunity*, and not the *motivation*, to expand downstream.

We bring our study to a close by reflecting on the political outlook for the nationalised oil industry in Venezuela, in the light of our verdict about the motives and evolution of the internationalisation programme. In Chapter 7, we will show that the company's main entrepreneurial initiatives since 1990 - all aimed at undermining the legal regime established by the 1976 nationalisation - are fully consistent with the development of the political relationship between the government and PDVSA as manifested by the internationalisation programme. In addition, we will highlight the crucial role which the internationalisation programme has played in the gradual takeover of Venezuelan oil policy (and, by default, of the country's whole economic development agenda) by PDVSA and its affiliates. Finally, we discuss the long-term prospects of an oil policy predicated on the principles of absolute primacy of profit over ground rent, volume maximisation, low taxation and encouragement of foreign investment which PDVSA, of late, has managed to impose on the Venezuelan government.

#### **A Note on the Method of Exposition**

A few words about our chosen method of exposition are in order. Instead of proposing an explanation that can account for all the features of the subject of inquiry immediately after the latter has been defined, our thesis follows the more indirect method of evaluating a series of null hypotheses which are unable to account for these features, and then proceeding to offer a definitive hypothesis which can. It is fair to question whether we could have dispensed with - or at least abbreviated - this intermediate explanatory stage. However, such a step was not deemed advisable, on two grounds. Firstly, without exhaustive background information, our hypothesis could easily be dismissed as an example of that least creditable of heuristic devices, the conspiracy theory. Secondly, our main conclusions are highly counterintuitive, to say the least. Since we expect our readers to be rather less forgiving than the Mad Hatter (who had no difficulty in believing six impossible things even before breakfast), we have elected to present our study in the form of a Holmesian *reductio ad absurdum*: thus, by first eliminating all the impossible theories on the motivations of the internationalisation programme, we will demonstrate that our own theory - implausible as it may sound on first impression - is in fact the only one that can adequately explain all the peculiarities of the internationalisation programme.

---

<sup>7</sup>PON, 20 November, 1991: 5.

## A Note on Primary Sources

Even though in some Venezuelan quarters PDVSA has become a byword for impenetrable secrecy<sup>8</sup>, there exists a considerable amount of publicly available information about its entrepreneurial activities. PDVSA and two of its overseas subsidiaries (Citgo Petroleum and AB Nynäs) issue fully-audited annual reports, and its integrated oil subsidiaries in Venezuela (Lagoven, Maraven, Corpoven) as well as its refining affiliate in Germany (Ruhr Öl) publish annual operations reports. PDVSA and its domestic subsidiaries also produce periodicals (*PDVSA Contact*, *Enfoque Corporativo*, *Petróleos Informa*) and a number of internal magazines which sometimes contain useful additional details about its operations and policies. These sources are complemented by the company's statistical annuals<sup>9</sup> and by the comprehensive annual reports which two of its affiliates (PDV América and Citgo) have to file with the Securities Exchange Commission in Washington as issuers of certain regulated securities.<sup>10</sup> Finally, the company also maintains a website where, among other things, its press releases can be found. The annual reports of its partners in some of its overseas refining ventures (Unocal, Union Pacific, Lyondell, Veba) provide another range of statistics, as do the annual reports of some of PDVSA's clients and competitors. Also extremely useful are the detailed reports on all aspects of the operations of the Venezuelan oil industry published by MEM, and sundry reports put out by the International Energy Agency (IEA) and the US Energy Information Agency (DOE/EIA). Finally, one should mention the monthly reports published by the American Petroleum Institute (API), which itemise all the crude and products imports of the United States.<sup>11</sup> In these reports, the particulars (quantity, port of entry, destination, API gravity and sulphur content, identity of buyer, etc.) of all the Venezuelan crude and products cargoes which have entered the United States are listed. Given that the majority of PDVSA's export volume goes to the United States and that, in turn, PDVSA's affiliates lift most of this volume, these reports constitute a major source of information on both the internationalisation programme and Venezuelan commercial oil policy in general (a source that has received very little attention to date in analyses of Venezuelan oil policy).

These sources have been essential for our investigation; after all, the quality of empirical research is very much a function of the availability and quantity of data. However, they do not contain all the necessary information to understand the internationalisation programme. This has meant we have had to complement them with additional material. Unfortunately, PDVSA's information disclosure policy makes it difficult to collect such

---

<sup>8</sup>As José Vicente Rangel quips, in Venezuela "military, banking and legal secrecy have disappeared", and now the only real secrecy to be found is "in the confessional and in PDVSA" *El Universal*, August 28, 1994, section 1: 12).

<sup>9</sup>PDVSA (c).

<sup>10</sup>PDVSA (b); Citgo 10-k; S-3; 10-12B/A.

<sup>11</sup>API (a).

material from people involved on a first-hand basis with the operations of the Venezuelan oil industry. This policy states that current and former PDVSA employees are not to engage in "useless polemics" with politicians or critics of the industry, and that they should always be "discreet" and "circumspect" when discussing oil policies.<sup>12</sup> In practice, these restrictions make it difficult to obtain anything other than the "official view" on any issue in which the interests of PDVSA might be at stake.<sup>13</sup> It would appear, then, that the only way in which we can arrive at a satisfactory reconstruction of the events that sired the internationalisation programme and the political exchanges that have determined its evolution since 1982 is to practice the Venezuelan equivalent of kremlinology (defined as the art of divining motives and political deals by means of "close analyses of leaders' speeches, exegesis of official and semi-official texts . . . tracking of personnel movements . . . [and keeping] an ear [close] to the . . . grapevine"<sup>14</sup>). But does kremlinology really offer the analyst the best alternative to pierce the veil of secrecy which surrounds many important details about the genesis, implementation and outcome of the programme? Not necessarily. As the author of an exemplary book on policymaking in the Soviet Union observed:

when we study the Kremlin we will always have to use kremlinology. [But] outside [certain] walled topics is a world of politics and policymaking which is much more open. That is the world of economic and social policy, and studying it will repay the political analyst handsomely . . . [because] these subjects reveal as much of the leaders' fundamental aims and strategies, and their political culture and resources, as the veiled topics of conventional 'high' politics, perhaps even more so . . . For social and economic policy, there is a wealth of information available about how decisions are made, the roles of institutions and specialists, the ways political agendas are formed, the place of conflict and learning, the formation and use of power and influence - in short, all the classic themes of politics.<sup>15</sup>

*Mutatis mutandis*, the same things hold true for the petroleum policymaking *milieu* in Venezuela. Thus, although teasing hidden meanings out of official and semi-official publications will have a place in our analytical efforts, most of our conjectures regarding the political aspects of internationalisation - the 'who got what, when, and how' of the programme - are based on material obtained from an extensive trawl through a number of international oil trade journals. As repositories of industry-related knowledge, these journals are invaluable to the oil policy analyst; nevertheless, they should always be approached with caution, because

---

<sup>12</sup>*Petróleos Informa*, no. 9, August 1985: 14.

<sup>13</sup>Particularly since PDVSA officials have often invoked reasons of commercial secrecy to avoid having to account for their actions. For instance, in 1986, there was a great outcry in the Venezuelan Congress regarding alleged irregularities in PDVSA's purchase of Citgo. In order to put an end to the legislative sniping, President Jaime Lusinchi ordered PDVSA president Brígido Natera to explain the deal to Congress. Natera refused to disclose all of the details of the deal, explaining his decision in the following terms: "the industry cannot reveal to the public all of the details concerning a complex commercial transaction, because the complete disclosure of details will prove to be advantageous for PDVSA's competitors, which is something that runs against PDVSA's best interests" (*Petróleos Informa*, no. 15, June 1986: 15).

<sup>14</sup>Gustafson, 1989: xv.

<sup>15</sup>*Ibid.*

the grains of valuable information which they undoubtedly contain are often immersed in a sea of chaff. As Horsnell and Mabro warn:

this source cannot be ignored given the paucity of other information, but its use requires both caution and critical skills. In this area the historian's training is more relevant than the economist's. It must always be remembered that journalists are mainly concerned with *news*, not with the accuracy of archival records. They do not necessarily revise facts, figures or stories published yesterday if they find out today that these were wrong. Yesterday's story or statistic is no longer news today. This can pose problems for the researcher who has nowhere to go but through old issues of trade journals.<sup>16</sup>

Given that petroleum-related issues receive ample column space in Venezuelan newspapers and journals, some readers might think that our reliance on international trade journals has been excessive, and that we have made insufficient use of the embarrassment of riches present in the Venezuelan press. We justify our preference for trade journals on two grounds. Firstly, the reports of oil trade journals are generally more accurate (particularly with regard to technical matters). Secondly, the coverage which oil issues receive in the Venezuelan press *generally* comes in one of two forms: either violent diatribes penned by journalists or columnists who seem ready to denounce any and all of PDVSA's actions, or uncritical paeans written by persons who are willing to take at face value any statement or figure which PDVSA might produce. Thus, even though coverage in international trade journals is far from being objective, the fact that emotions do not run nearly as high in their editorial rooms as they do in those of the Venezuelan press makes their reports more useful for any researcher who is interested in something other than the din of axes being ceaselessly grinded.

---

<sup>16</sup>Horsnell and Mabro, 1993: 6-7; italics in the original.

## 2 CONTINUITY AND CHANGE IN THE NATIONALISED VENEZUELAN OIL INDUSTRY

The destinies of Venezuela and petroleum have been inextricably linked in a sometimes uneasy marriage for the best part of the twentieth century, yet some of the most crucial aspects of this relationship are even today very much misunderstood. To a considerable extent, this is a reflection of the fact that the 'official history' of the political evolution of the Venezuelan oil industry "was erected upon the militant [i.e. biased] criticism and denunciation of Venezuela's economic, political and social conditions before 18 October, 1945".<sup>1</sup> However, it is also a consequence of the contorted sophistries which those responsible for the elaboration of the various accounts that have gradually coalesced into this history have had to put forward over the years in order to conceal the insoluble objective contradiction which lies at the heart of Venezuela's oil policy; namely, that it is a policy intended to promote Venezuela's capitalist development by *shackling* the most productive sector of the economy - to the detriment of the foreign consumers of its output - in order to generate a rent which the government can then use both to promote capitalist accumulation in other sectors of the economy and to increase the consumption capacity of the Venezuelan population as a whole.<sup>2</sup>

In this chapter, we shall be conducting an exercise in 'institutional genetics' aimed at elucidating the development of the institutional environment for oil activities in Venezuela since the 1930s, on the one hand, and the evolution of the institutional arrangements which have conditioned the interaction between the oil industry and the Venezuelan government before and after the promulgation of the Oil Nationalisation Law, on the other.<sup>3</sup> Our intention is to place the nationalisation in its broad political and economic context, so as to highlight the flaws which we think invalidate the widespread notion that sees in the 1975 Nationalisation Law the high point of a protracted patriotic struggle for the control of this crucial industry, waged by the country's *democratic* administrations against foreign oil companies bent on cheating the country out of its legitimate birthright with the collaboration of reactionary sectors of Venezuelan society. Having done this, we shall present a revisionist interpretation of the state takeover of the oil industry (inspired by Lenin's lucid deconstruction of the rhetoric surrounding the question of agrarian reform in Tsarist Russia).

---

<sup>1</sup>Baptista and Mommer, 1987: 49.

<sup>2</sup>"Rentistic capitalism is presented with a very peculiar legitimation problem. The means [of development], ground rent, contradicts the end, the development of capitalism . . . [Thus] for the space of decades . . . all Venezuelan economic literature hid and denied systematically that the state's fiscal oil revenues were in fact ground rent" (Mommer, 1989: 60).

<sup>3</sup>As defined by Davis and North, an "*institutional environment* is the set of fundamental political, social and legal ground rules that establishes the basis for production, exchange and distribution", while "*institutional arrangement* is an arrangement between economic units that governs the ways in which these units can cooperate and/or compete" (1971: 67; italics in original).

We shall show that this measure was just as much an inevitable *consequence* as the desired *result* of the rent-centred oil and development policies pursued by Venezuelan governments of *all* political persuasions from the 1930s onwards. We will also argue that, because of this ambivalence, the requisites which the Nationalisation Law had to fulfill in order to provide a viable formula for the fruitful co-existence between the government and the oil industry were rather more complex than those identified in the simplistic discourse adopted by President Rómulo Betancourt and his oil minister Juan Pablo Pérez Alfonzo, and continued by all of their successors. Finally, we will discuss just how far the political settlement reached in 1975 was from satisfying all of these requirements, and we will point out the potentially serious implications which its shortcomings posed with regard to the political control of the nationalised oil industry.

Our account of the Venezuelan government's efforts to control PDVSA after 1976 will only make implicit references to the abundant economic literature on the relationships between governments and SOEs that stresses the manner in which certain characteristics typical of this type of firm (fuzzy mandates for action, undefined property rights, lack of identifiable principals) compound the serious incentive alignment problems inherent in delegation accords struck under conditions of informational asymmetry with self-interested agents who have access to privileged information.<sup>4</sup> The main assumptions underlying the rational-utilitarian framework (moral hazard, hidden action, risk aversion, strategic misrepresentation, difficulty of measuring individual performances in joint-product endeavours, etc.) might seem realistic enough, but its treatment of political exchange as an extension of market exchange tends to produce models of behaviour that are more normative than positive in character: i.e. "not . . . very accurate descriptions of what is, but . . . useful in exploring what might be, if [for example] there were a single principal seeking to control a single agent".<sup>5</sup> The more complex and refined game-theoretical models of agency and control do recognise that in situations of strategic interaction, the maximising pursuit of interests by single actors is systematically conditioned by the interdependence of their decisions; however, these models do not take into consideration that, in situations of political exchange, "the contact with the 'other' (partner, competitor, adversary, foe) [also] implies a communicative dimension which remits to the identity of the actors". This extra dimension, as Rusconi says, "does not annul the possibility of cost-benefit calculations", but does "interweave it with a dynamic that overflows the banks of conventional utilitarian schemes".<sup>6</sup>

The crucial difference between political exchange and 'simple' market exchange is that, whereas the latter is a system of collective action that to a large extent hinges on the impersonality of those taking part in it (this is the very essence of the 'invisible hand'), the

---

<sup>4</sup>See the survey by Lawson, 1994.

<sup>5</sup>Lawson, *ibid.*: 294-5.

<sup>6</sup>Rusconi, 1984: 14-5.

former is a system where participants have to "put into play the very sense of their behaviour, in a logic of reciprocity from which their own identity can emerge confirmed, redimensioned or refuted".<sup>7</sup> Thus, in order to understand the dynamics behind a concrete political exchange, one must look at "the identity-building process of the subjects taking part in it . . . [because] only after having reconstructed or at least intuited the modes of this process will it be possible to say something about an exchange of political resources between actors in a system, and to understand how these resources become valuable in the first place".<sup>8</sup> Again, such a reconstruction does not rule out the possibility of cost-benefit calculation by actors in a given political market. However, it certainly leaves no place for deriving these actors' utility and reaction functions *solely* on the basis of general postulates like informational asymmetry, moral hazard, risk aversion, strategic misrepresentation, and so on. Instead, conjectures regarding the reasons behind the political choices of concrete actors have to be made, first and foremost, by taking into account *why* these actors entered a given political market in the first place, *how* they went about entering it, and *who else* is in it with them.

PDVSA is a good case with which to illustrate the soundness of this approach. The Venezuelan NOC appears as almost the exact opposite of what rationalist/utilitarian models say it should be: a market-responsive and reasonably well-managed company<sup>9</sup> that has proven very resistant to political penetration and capture (characteristics that appear all the more remarkable given the government's proneness to interfere in oil industry affairs, and the fact that the Venezuelan polity is extremely corrupt<sup>10</sup>). This counterintuitive entrepreneurial efficiency, which in fact constitutes the cornerstone of PDVSA's corporate selfhood<sup>11</sup>, can only be explained and understood through a reconstruction of the manner in which the collective identity of its managers and employees was forged in the crucible of Venezuelan oil policy before, during, and after the promulgation of the Nationalisation Law in 1975. The remainder of this chapter will be dedicated to this reconstruction, which shall in turn be the basis for our institution-centred analysis of PDVSA's internationalisation programme.

## 2.1 Why Did the Venezuelan State Take Over the Oil Industry?

One of the aims of Lenin's analysis of the agrarian programme of the Russian social-democrats was to highlight the conceptual error committed by those who equated land reform (i.e. the substitution of feudal by capitalist relations of production in the agricultural sector)

---

<sup>7</sup> Rusconi, 1985: 68.

<sup>8</sup>Rusconi, 1984: 68. As Pizzorno observes, "it is not possible to have a concept of utility without implying the intersubjective recognition of the values which lead to it [because] the processes of satisfaction of needs vary according to the diverse collective identities of those who sustain or recognize these needs" (*ibid.*: 64).

<sup>9</sup>The *Petroleum Economist* commissions an annual poll asking which NOC is the most efficient of all, and PDVSA has topped the list on every occasion.

<sup>10</sup>Venezuela placed about twentieth from bottom in a recent survey of more than 200 countries aimed at finding which countries were the least corrupt.

<sup>11</sup>See Urbaneja, 1992: 422-9.

with the distribution of land among the peasants. Lenin asserted that capitalism had taken root in the Prussian countryside without any such distribution and pointed out that, even though land distribution as such was a highly desirable goal, it was perfectly possible for Russia to follow a path of development similar to Prussia's (indeed, he showed that this was the goal of Stolypin's policies).<sup>12</sup> The didactic thrust of Lenin's argument, then, was that one should be wary lest ideological preferences mislead one into conflating the ultimate objective/result of a political process like agrarian reform with any one of the disparate ways that may bring about this objective/result. This message is of great relevance for the study of the institutional evolution of the Venezuelan oil industry because, in our opinion, all those who maintain that the Nationalisation Law is the ultimate expression of the Venezuelan government's long-held conviction that "decisions about operating the industry were political decisions that should be made by a sovereign nation, not economic decisions that could be left to a foreign investor"<sup>13</sup> are conflating the long-term policy objective which the Venezuelan government successfully achieved in 1970-1 (i.e. the maximisation of oil rent through the total and minute control of the operations of the oil industry<sup>14</sup>) with the concrete measures that the Pérez administration was forced to take in 1974-5 in order to consolidate this accomplishment (i.e. the takeover of the oil industry by the state as laid down by the Nationalisation Law).

The fact that most observers and commentators of Venezuelan oil affairs mistakenly confuse these two quite separate things is a reflection of the long shadow cast by the conception of the political economy of Venezuelan oil popularised by Betancourt and Pérez Alfonzo. According to this perspective, the nationalisation of the oil industry became an aspiration for democratically-minded politicians even before the beginning of the *trienio* (the brief spell of democratic government between the military dictatorships of Medina Angarita and Pérez Jiménez), because it was seen as the only measure which could put to rights the disastrous petroleum legacy of Venezuela's authoritarian regimes: "a situation of: exaggerated vulnerability and dependence . . . [towards an industry dominated] by foreign investors in cahoots with creole opportunists", who thought nothing of functioning "as the advance guard of imperialism to . . . promote the despoliation of the main economic resources of all Venezuelans".<sup>15</sup> In the words of Betancourt: "the *desideratum* for Venezuela, and the ultimate aspiration of all Venezuelan patriots, [was] the nationalisation of the [oil] industry", because only the state's assumption of control over oil production would "liberate the country from the presence in its soil of aggressive political and economic foreign forces"<sup>16</sup>, and

---

<sup>12</sup>Lenin, 1962.

<sup>13</sup>Randall, 1987: 21.

<sup>14</sup>As Coronel (1983: 41) says, "for all practical purposes, the Venezuelan oil industry was in the hands of the state by 1972".

<sup>15</sup>Pérez Alfonzo, 1971: 218-9; 64.

<sup>16</sup>Betancourt, 1956: 717; 740.

enable the government to "promote general economic development at a measured pace, without brusque changes".<sup>17</sup> However, Betancourt claimed that this goal could not be as aggressively pursued in Venezuela as it had been in Mexico because, given the overwhelming dependence of his country towards oil income, "nationalising [prematurely] the oil industry by decree would have amounted to a suicidal cartwheel in space".<sup>18</sup> Thus, in the 'official history' of Venezuelan oil,

the long period of time which had to elapse before the nationalisation of the industry finally became a reality is presented as a consequence of the fact that the post-Pérez Jiménez democratic Venezuelan administrations (starting with Betancourt's) were forced to dismantle the *ancien régime* piecemeal, by means of a cautious strategy predicated on Pérez Alfonzo's well-known "oil pentagon": the preemption of any further involvement by foreign oil companies in oil production activities in Venezuela through their definitive exclusion from all those prospective areas that they did not hold under concession already (the principle of 'no more concessions'), the constant search for a more equitable distribution of oil profits through the careful fiscalisation of the commercial activities of the concessionaires (the principle of 'reasonable participation'), the curbing of the wasteful production practices of the oil companies through the creation of a regulatory body tasked with monitoring oil production and marketing (Comisión Coordinadora de la Conservación y el Comercio de los Hidrocarburos, or CCCCH), the establishment of a genuinely Venezuelan presence in the oil sector through the creation of a national oil company (Corporación Venezolana del Petróleo, or CVP) that would be tasked with all exploration and production activities in areas not covered by concessions, and finally, the pursuit of 'fair' international prices for Venezuelan oil through the country's active participation in OPEC.<sup>19</sup>

It is beyond the scope of this study to present a detailed account of the many fallacies, fabrications and inaccuracies which this interpretation of the institutional evolution of Venezuela's oil industry contains.<sup>20</sup> Nevertheless, to enable the reader to understand the subtle distinction between the nationalisation and the state takeover of the Venezuelan oil industry, we have to dissect the main premises of Betancourt's doctrinal position. This exercise will make it clear, firstly, that the nationalisation of the industry along Mexican lines was definitely not the long-term objective of the 'oil pentagon' and secondly, that the contents of the Betancourt-Pérez Alfonzo 'radical' oil policy in fact amounted to nothing more than the logical continuation - albeit in an extreme form - of the rentistic policies pursued by previous

---

<sup>17</sup>*Ibid.*: 242.

<sup>18</sup>Betancourt, quoted by Urbaneja, 1992: 388.

<sup>19</sup>See Pérez Alfonzo, 1967, *passim*.

<sup>20</sup>For this, the reader is referred to *Ruptura*, 1977; Rivero, 1979; Mommer, 1988.

'anti-patriotic' Venezuelan administrations. Here then are the main oil-related premises of what Urbaneja calls the political programme of Venezuelan democracy<sup>21</sup>:

a) The democratic programme pursued a more nationalistic agenda and hence was able to secure a better deal for the state in term of participation the country's oil export revenues:

Implicit in the principle of 'reasonable participation' is the notion that the fiscal participation obtained by Venezuela's pre-1959 governments was unreasonable (i.e. too low). However, although it cannot be denied that democratic administrations successfully demanded ever larger shares of the concessionaires' revenues after 1959, it is not true that they were only able to do so because - unlike their predecessors - they were not beholden to powerful foreign interests. As a matter of fact, the factor ultimately responsible for their great success in this regard was a piece of legislation passed by one of these administrations: the 1943 Hydrocarbons Law. Pérez Alfonzo disingenuously dismissed this law as nothing but a sham, because "through the relative sacrifice of small benefits conceded by the industry, and other apparent advantages . . . which any legal system recognizes without the need for special acceptance, like . . . submission to the State's powers of taxation", the oil companies had obtained something which was much more valuable, "the CLEANUP . . . of their situation in Venezuela".<sup>22</sup> However, those who subscribe to this view have not pointed out that most other OPEC countries had to wait for thirty years (and had to nationalise their respective oil industries as well) before they could emulate Medina Angarita's achievement of getting the oil majors to agree that a state was entitled to demand the payment of income tax at a rate determined by the *sovereign* (i.e. unilateral) decision of its legislative power, *over and above* rent payments specified in concession contracts. That is why Betancourt's accusation that the Medina Angarita regime "welcomed the thesis of petroleum reform in order to geld it"<sup>23</sup> for the benefit of the foreign oil companies do not hold any water. Of course, like all successful compromises, the 1943 Law had something to offer for both sides, and it cannot be said that the oil companies came away from the negotiating table empty-handed: their valuable concessions were extended by 40 years, the somewhat muddled legal situation of their titles and acquired rights was clarified unambiguously, and they were spared the embarrassment of another massive political fracas just five years after their intransigence had led them to

---

<sup>21</sup>Urbaneja (1992: 28) defines a political programme as a "set of diagnoses and prognoses about . . . society, from which is derived a certain proposition about the form which the political order has to adopt and on the tasks which those that hold political power have to fulfill". This author considers that three such programmes have held sway in Venezuela since the days of its consolidation as a nation state: "the *liberal programme*, which predominated throughout the last century; the *positivist programme*, which predominated throughout the first forty five years of this century; and the *democratic programme*, which dominates Venezuelan political life from 1958 onwards" (*ibid.*: 17; italics in original).

<sup>22</sup>Pérez Alfonzo, 1971: 11-2.

<sup>23</sup>Betancourt, *op. cit.*: 154-5.

disaster in Mexico.<sup>24</sup> However, there can be no doubt as to which party was the real winner of the 1943 compromise: the Venezuelan state pushed through a nearly two-fold increase in royalty payments, obtained assurances about the construction of huge refineries in the Paraguaná, erected a legal and economic framework for the oil industry which was the copy of the best practices in the US<sup>25</sup> and, most important of all, "achieved a specified rent and fiscal participation . . . [by] making legitimate use of its condition of sovereign Power, [thus opening] the possibility of [unilaterally] increasing both rent and participation at any moment" in the future.<sup>26</sup> This possibility was later exploited to the full by the nationalistic apostles of 'reasonable participation', although they would never acknowledge their debt to the key 1943 legislation.

b) The democratic programme put an end to the squandering of Venezuelan oil resources:

One of the key articles of faith of the democratic programme is that, before the adoption of the 'oil pentagon', the exploitation of Venezuela's oil ("an exhaustible resource [that continually became] dearer to find and produce . . . [and which] the needs of progress . . . demand[ed] in ever greater quantities"<sup>27</sup>) was carried out in accordance with irrational and short-termist objectives that only benefited foreign oil companies and consumers, and a very small privileged elite within Venezuela. The crux of this accusation of wastefulness was that the country was improvidently throwing away its precious endowment by generating, through its rapid oil production, financial resources in excess of what the non-oil economy could productively invest. This imperative to deplete only as much oil reserves as the economy could absorb supposedly lay behind two of the components of the 'oil pentagon': the not very successful CCCCH, and the much more significant principle of 'no more concessions'. Obviously, the train of thought underlying this imperative - that Venezuela would 'run out of oil' before it had had the chance to make adequate provisions for a future without this source of wealth - is open to criticism on the grounds that, since mineral reserves are an inventory that has to be replenished through investment, the quantity of any mineral remaining in the subsoil at a given point in time is somewhat of an irrelevant fact. However, this criticism is not strictly relevant to our analysis because, in fact, these elements of the 'oil pentagon' had nothing to do with a conservationist vocation and were meant, instead, to facilitate the extraction of higher rent payments from present and prospective tenants through the restriction of access to the oil enclave. Such restrictions were nothing new in Venezuelan oil policy: the supposedly radical 'no more concessions' principle was an extreme manifestation

---

<sup>24</sup>Medina Angarita had indicated unambiguously that he would not shy away from a showdown with the companies, and the US government intervened in the dispute and told the companies that it expected them to accept the terms offered by Medina.

<sup>25</sup>In terms of such aspects as royalty payments, surface rentals and the like, the Hydrocarbons Law followed very closely the patterns of leases on federal lands in the US.

<sup>26</sup>*Ruptura, op. cit.*: 133.

<sup>27</sup>Pérez Alfonzo, 1967: 55.

of restrictive practices which had already been applied to great effect by López Contreras, Medina Angarita (and even Pérez Jiménez).<sup>28</sup> In other words, the arguments invoked by democratic administrations to justify their oil policy may have been novel, the effects of the measures these administrations adopted might have been more pronounced, but the *animating spirit* of these measures continued to be, as in the past, the maximisation of ground rent. Consider a key passage in Betancourt's book *Venezuela: Política y Petróleo*, where conservation and fiscal income are discussed together:

it is perfectly possible to *diminish* the output from Venezuelan wells and to *increase* the Nation's income. The reduction of production, together with a readjustment in the national participation in the returns of the industry, would determine two outcomes: 1) we would make savings of natural non-recuperable riches; and 2) the Treasury's income and the volume of our purchases abroad would not suffer any dent.<sup>29</sup>

These lines clearly reveal where Betancourt's true priorities lay. As Baptista and Mommer observe, after having taken a bow in the laudable direction of thrift and moderation, Betancourt came out in the open and reached "the conclusion that rent [was] relatively low, and that what really [had] to be done [was] to increase its magnitude".<sup>30</sup>

c) The democratic programme sought to curb the influence which foreign oil companies had on the economic life of the country: According to Betancourt and Pérez Alfonzo, their nationalist oil policy differed from those of its predecessors in that it maintained that oil was too important a matter to be left in the hands of foreign companies, because "a country despoiled to the extreme that it [lost] an appreciable proportion of its Gross Territorial Product through transfers to the External Sector [i.e. the profit remittances of the foreign oil multinationals]"<sup>31</sup> could not but find sustainable economic development very difficult to achieve. Although the resentment of this duo at the foreign oil companies was real enough, the objective appraisal of their policies and those of their successors suggests firstly, that what the Venezuelan government officials and politicians *really* seemed to think was that oil was too important a matter to be left in the hands of *rent-minimising capitalist enterprises* (foreign and domestic alike), and secondly, that these policies acquired their fiercely

---

<sup>28</sup>López Contreras' oil minister wrote in 1939: "from the first months of 1938 onwards, the Federal Executive decided to suspend the granting of new concessions . . . so that the Nation will be in a position to get the most benefits out of lands whose worth has become more intimately [*sic.*] known" (*Ruptura*, *op. cit.*: 290). When President Medina decided to relax this policy, he made it clear that companies without operations in Venezuela would be given preference because "it was convenient for the country to attract new producers since . . . the competition that would develop between them would permit . . . [us] to demand better conditions for the granting of concessions" (Medina Angarita, 1963: 84).

<sup>29</sup>Betancourt, *op. cit.*: 702; italics in original.

<sup>30</sup>Baptista and Mommer, *op. cit.*: 72.

<sup>31</sup>Pérez Alfonzo, 1971: 218-9. This vision chose ignore the fact that, thanks to the high productivity of Venezuela's oilfields and the large rent element in the price of oil, Venezuela enjoyed the most favourable absolute terms of exchange of any country in the world for a very long time (Mommer, 1988).

nationalistic overtones largely by default, because the bulk of Venezuela's oil resources happened to be in the hands of very large, 'imperialistic' oil companies. There is a way in which such conclusions can be validated, of course, and that is to ask whether the Venezuelan government would have acted any differently if the companies producing oil in the country had not had to send what Pérez Alfonzo theatrically called a "colonial tithe" abroad. Fortunately, we do not have to enter the realms of speculation to answer this question, because there existed a small number of wholly Venezuelan concessionaires whose instructiveness in terms of the real mainsprings of Venezuelan oil policy is disproportionate to their modest size and ambitions. Consider the case of Mito Juan: this concessionaire (which produced less than 1 per cent of the country's output) prided itself on playing a "pioneering role in the Venezolanisation of the industry"<sup>32</sup>; nevertheless, it opposed the 1970 reforms to the Income Tax Law and the 1971 Reversion Law (see below) on the same grounds as the foreign concessionaires. In protesting against these measures, Mito Juan was not doing the devil's work (the foreign concessionaires had many more powerful advocates on their payrolls); rather, it was just expressing the fact that the government's rent-centred policies were making life impossible for oil *capital*, foreign and domestic alike. Thus, it is not surprising that when the state takeover of the industry finally went ahead in 1975-6, the proudly Venezuelan Mito Juan suffered the same fate of the foreign concessionaires. Simply put, the Venezuelan state could not tolerate the existence of any profit-maximising entity which - regardless of whether it was large or small, foreign or Venezuelan - would inevitably oppose and frustrate its attempts to maximise ground rent.

d) The democratic programme sought to increase the Venezuelan entrepreneurial presence in the oil sector through a NOC: According to Betancourt, CVP was the embodiment of "a cherished dream and a deep aspiration of all Venezuelans"<sup>33</sup>; namely, the creation of a genuinely Venezuelan oil company which would exploit the country's resources with its best interests at heart. In reality, CVP's main objectives (as specified in its founding decree) were rather more modest; to wit, the development of areas adjacent to existing concessions where this was necessary to prevent drainage, and the promotion and administration of a new type of petroleum lease, the badly named service contracts.<sup>34</sup> In other words, the government wanted CVP to be an administrative agency that would enable it "to squeeze some additional ground-rent out of existing concessions", on the one hand, and "to strengthen the position of the landlord state in new contracts on lands previously evaluated by the [NOC]"<sup>35</sup>, on the

---

<sup>32</sup>Quoted by Rivero, *op. cit.*: 332.

<sup>33</sup>Quoted by Ruptura, *op. cit.*: 328.

<sup>34</sup>The service contracts were essentially concessions with rather stiff terms, but they could not be called concessions because of the 'no more concessions' principle; for more details about the service contracts consult González Berti, 1972.

<sup>35</sup>Mommer, 1994: 15. Pérez Alfonzo made this point quite clearly: "CVP's main role will be to continue accepting investment from private parties . . . for the development of oil potential in areas

other. It certainly did not want an oil *enterprise* which would increase the country's oil production and, in the process, depress both prices and rent levels. However, this was precisely what CVP wanted to be: a *bona fide* oil company that would find, produce and sell oil just like the concessionaires. The fact that CVP and MEM were at cross-purposes in this regard put the company squarely on a collision course with the ministry<sup>36</sup> (then at the height of its power and prestige). In 1976, this 'national champion' - just like all private foreign and domestic concessionaires - was absorbed into the new 'national petroleum administration'.

e) The formation of OPEC was the result of the pursuit of a just remuneration for Venezuela's oil by the country's democratic governments: The creation of OPEC has justifiably been hailed as the greatest achievement of Venezuelan oil diplomacy. However, although there can be no doubt that Pérez Alfonzo was instrumental in bringing to fruition the novel initiative of a formal organisation of sovereign states defending their oil fiscal income through collective bargaining with the major oil companies, one should point out that the democratic programme does not deserve to take all the credit for Venezuela's role in promoting this initiative, because the first tentative steps towards the formation of an oil exporters' club were actually taken as far back as 1949, under the auspices of the military *junta* presided by Delgado Chalbaud. During that year, global oil demand actually shrank in absolute terms (something which would not happen again until the 1970s). As a result of this drop, world oil output fell by 1.5 per cent, and oil production in Venezuela and the US fell by 1.6 per cent and 8.8 per cent, respectively. However, oil output in the Middle East actually *increased* by 14.8 per cent, as the Seven Sisters brought the prolific oilfields of Saudi Arabia and Kuwait on stream. Although Venezuela at this point was still producing more oil than the entire Middle East combined, it was quite clear that since production costs in the new fields were but a fraction of costs anywhere else in the world, Middle East oil would gradually account for an increasingly large share of global oil demand, to the detriment of higher cost producers like Venezuela. Joseph Pogue - an oilman-turned-banker who had strong links to Standard of New Jersey - visited Caracas in that year and gave a conference in which he said that Venezuela would only be able to defend its market share from Middle East oil if it lowered its taxes significantly and offered new concessions with more attractive terms for investors. Unsurprisingly, oil minister Egaña saw things rather differently. He reckoned that the solution to the challenge posed by the new entrants to the market actually lay in

---

outside concessions" (1967: 37). Betancourt, for his part, declared at one point that the government did not "pretend to convert CVP into a competitor for the oil companies" (Sáder Pérez, 1972:146).

<sup>36</sup>The conflicts between CVP's first president, Rubén Sáder Pérez, and various Venezuelan oil ministers and policymakers (including Betancourt) are well documented (see Sáder Pérez 1966; 1969; 1972). CVP and MEM were at odds right up to the state takeover of the industry. A few months later, the head of the company, general Carlos Carnevali, resigned over MEM's decision to overrule CVP and declare commercial a find made by Occidental in one of the blocks it had explored under the 1971 service contracts (thereby making the American company eligible for compensation for its investments in the block; *PON*, October 30, 1975: 4).

getting Middle East states (which were desperately poor and backward) to put their own low levels of taxation on a par with Venezuela's, rather than the other way around. To that effect, he had all Venezuelan oil legislation and other relevant documents translated into Arabic and arranged for a Venezuelan delegation to tour the Middle East. In Egaña's instructions to this delegation, one can clearly discern the logic that would underpin Venezuela's eventually successful bid to forge a common front of large oil exporters:

there is no doubt that it is in Venezuela's convenience to initiate direct relations of friendship with governments in the Middle East, in order to seek a way to reach a price equilibrium for oils from both origins, so that all can be received by world markets without detriment to the benefits which we obtain for ours . . . [We] have attained invaluable social and economic conquests, and we must avoid any retreat from these achievements. It is possible that we can get an equilibrium of competitive forces through which benefits for the peoples of the Middle East can be obtained without a deterioration in the economic position of the Venezuelan people.<sup>37</sup>

The Venezuelan delegates had their work cut out for them, partly because their government exhibited a remarkable degree of ignorance about Middle Eastern affairs<sup>38</sup> and also because some personages linked to the major oil companies tried to sabotage their mission.<sup>39</sup> Nevertheless, the mission did have a perceptible practical impact (the legal initiatives which ultimately led to the nationalisation of oil in Iran were clearly influenced by Venezuelan legislation). But the mission produced one even more important long-term ramification. The Venezuelan delegation invited representatives of Iran, Iraq, Syria and Egypt to attend the first National Petroleum Congress held in Caracas in 1951. These countries reciprocated by inviting Venezuela to send representatives to the first Arab Petroleum Congress (held in 1959). It was at this event that Tariki and Pérez Alfonzo reached the agreement now known as the 'Gentlemen's Pact of Cairo', an agreement whose main claim to fame, of course, is that it set the practical bases for the foundation of OPEC just one year later.

This brief critical deconstruction of the 'oil pentagon' shows that the consolidation of a democratic regime in Venezuela did not bring about a radical about face in any aspect of the country's oil policy. Some would argue, though, that the undeniable increase in the friction between the oil concessionaires and the Venezuelan government from 1959 onwards does not bear this conclusion out. Tugwell, for instance, points out that under Pérez Jiménez, "on a personal as well as an administrative level, relationships between company executives and government officials [were] . . . amicable and cooperative . . . [because of the government's] willingness to accommodate the companies by continuing the concession

---

<sup>37</sup>Quoted by Mommer, 1988: 95-6.

<sup>38</sup>The documents were only translated into Arabic, because it was assumed that this was also the language used in Iran!

<sup>39</sup>Members of the delegation were refused visas to enter Saudi Arabia at the instigation of the American ambassador in the country.

system and allowing a generous return on investments"<sup>40</sup>; in marked contrast, almost as soon as Betancourt was sworn in, the companies, "led by Creole and Shell . . . adopted a . . . strategy designed to bring indirect economic and political pressure on the government . . . The majors embarked on a programme of graduated disinvestment . . . and simultaneously began drawing increases in production from other areas under their control . . . [Hence] fiscal income from oil leveled off, and in 1966 even declined".<sup>41</sup> While this interpretation of the change in the companies' attitude towards the government is broadly acceptable chronologically, the implied message that the democratic government's oil policy was entirely responsible for this change is inaccurate, on two grounds. On the one hand, the major step down the path of confrontation was taken in December 1958, when the *junta* led by Sanabria abjured the pattern of taxation established by the 1943 Hydrocarbons Law, and raised Venezuelan oil taxes far above the levels then prevailing in the US (to Betancourt's chagrin and alarm, one might add<sup>42</sup>). On the other hand, the measures adopted by Pérez Alfonzo certainly did not amount to a "campaign to refashion the institutional relationship between the state and the private oil industry"<sup>43</sup>: the fulcrum of this relationship after 1959 continued to be the government's intention to extract as much rent as possible from the concessionaires, and the only detectable change in Venezuela's oil policy was one of *emphasis* rather than *direction* (i.e. the policy became more rent-oriented than ever before<sup>44</sup>).

The sharp decline in the concessionaires' levels of investment<sup>45</sup>, in general, and in their exploratory activities, in particular, was a direct consequence of the most restrictive component of the 'oil pentagon': the 'no more concessions' policy. However, contrary to what many Venezuelan academics and politicians claim, the oil companies were not aiming to bring the government to its knees when they began curtailing their E&P investments; in fact, their reaction constituted a rational and entirely predictable response to the 'endgame'

---

<sup>40</sup>Tugwell, 1975: 47.

<sup>41</sup>Tugwell, *op. cit.*: 77-9.

<sup>42</sup>*Time* magazine said in an editorial that even though Betancourt was forced to applaud the measure in public, in private he had been "taken aback" by Sanabria's decree (quoted in *Ruptura*, *op. cit.*: 316).

<sup>43</sup>Tugwell, *ibid.*: 50.

<sup>44</sup>Although pre-1959 legislation contained many elements intended to shackle the free developments of the oil sector - limits on the maximum extension of concessions, relinquishment provisions, surface taxes and the like - there was nothing in it as deliberately obstructionist as the 'no more concessions' principle which so incensed Uslar Pietri (1966) and Vallenilla (1973). Similarly, this legislation took care to distinguish between purely contractual rent payments (royalties and surface taxes) from income taxes. Pérez Alfonzo and his successors regarded this distinction as unimportant, which explains why surface taxes were allowed to fade into insignificance (these taxes were set in 1943 set at a rate of 2 bolívares per hectare and were never adjusted thereafter). Indeed, Pérez Alfonzo's reply to those who insisted that royalties should be kept separate from income taxes for the purpose of calculating the state's participation in oil revenues indicates the extent to which, for him, the collection of rent overshadowed any other practical concern: "I have said it many times that what is important to us is the sum of all income".

<sup>45</sup>After 1959, net investment declined sharply - and even became negative for a number of years - due to depreciation and the re-export of oil equipment by the multinationals.

problem faced by a tenant whose lease will be up for renewal at some point in the future, and who has to undertake investments with very long lead times. Thus, rather than invest in new fixed assets and inventories (i.e. proved reserves) which their landlord would inevitably appropriate when their contract ended, the Venezuelan concessionaires chose to continue producing oil with those assets that would be fully amortised by the time of expiry, to let their assets deteriorate (in the hope that their landlord would be forced to renew their concessions before expiry<sup>46</sup>) and to invest only in those areas where the end of their concessions was not yet in sight (concessions in the Middle East were set to run from one to several decades longer than in Venezuela). Obviously, the Venezuelan government could not stand idly by while its life-support machine slowly ground to a halt and, in 1962, MEM attempted to stop the concessionaires from dismantling and exporting installations by arguing that, since one fortieth of every concession was effectively reverting to the nation every year, it - as the legal representative of the *de facto* owner of roughly half of each concession and future inheritor of all concessions - had the right to monitor and control the uses to which the assets necessary for the adequate exploitation of the concessions were put.

This first attempt to subject the operations of the concessionaires to intrusive and detailed bureaucratic control failed when the Venezuelan Supreme Court found that MEM's arguments lacked any merit. Although this judicial decision represented a serious setback for the ministry<sup>47</sup>, it could not and did not put the matter of the 'capital strike' in the oil industry to rest (indeed, the passing of time only made this problem more acute for the government); hence, ministry officials and politicians bided their time, waiting for a favourable juncture that might give them the opportunity to press their claims for control over the industry more effectively. The progressive tightening of the world oil market during 1969-70 (the product of the attempt on the part of the US to lower domestic oil prices to world levels by increasing US oil imports) not only rekindled their ambition to bring all the variables affecting Venezuela's oil *production* under the control of the state but also gave some of them the idea that they might eventually be able to extend this control to *all* segments of the oil industry (i.e. refining, transportation and marketing, as well as E&P<sup>48</sup>). That is not to say, of course,

---

<sup>46</sup>As Rivero (*op. cit.*: 303) says, by 1959 "the country's decisive production potential was already in the hands of the companies", so the granting of *new* leases would not have changed this situation drastically. "The Venezuelan government had very little to offer the oil companies other than the prorogation of their old concessions, because the tracts which interested the companies the most in terms of future production were all located within them. Thus, the real problem posed by the drastic reduction of investment by the oil companies was the problem of the reversion [of concessions]" (*ibid.*: 304).

<sup>47</sup>This verdict was one of the reasons behind Pérez Alfonzo's resignation in January 1964.

<sup>48</sup>Late in 1969, for instance, AD's petroleum spokesman declared, that "before talking about the reversion of concessions, it was necessary to define what will revert to the country . . . [because] whereas the companies say that reversion will affect only parcels of land . . . AD maintains that, when the concessions ended, all oil installations will become part of the national patrimony" (Rivero, *ibid.*: 306). AD's position was derived from Pérez Alfonzo's absurd notion that the oil industry was a utility, and that oil concessions were not granted for the exploitation of a natural resource so much as for the

that they were in any way prepared for the rise in oil prices provoked by the rupture of the TAP-Line in Syria, the unilateral cutbacks in Libyan output, the disappearance of all remaining idle production capacity in Texas, and the massive increase in US oil imports.<sup>49</sup> However, for all of their surprise at this turn of events, Venezuelan congressmen and government officials had the sufficient presence of mind to recognize that the balance of power between oil producers and oil companies had taken a massive swing in favour of the former, and they acted in consequence. Thus, in June 1970, the Venezuelan Congress approved reforms to the Income Tax Law which raised the income tax rate for oil activities from 52 to 60 per cent and gave the Venezuelan Executive the power to determine *unilaterally*, for periods of up to three years, the reference prices used to calculate the concessionaires' income tax liability.<sup>50</sup> Then, in July 1971 (against the backdrop of the Teheran and Tripoli agreements), Congress passed the Reversion Law, which stipulated that reversion would encompass *all* the concessionaires' assets (not only those used for the direct exploitation of the concessions<sup>51</sup>), and also forced them to provide for the adequate maintenance of these assets. Finally, in December of that same year, President Rafael Caldera put the finishing touches to this new system of control by issuing a presidential decree (Decree 832) which required concessionaires to obtain MEM's approval for all of their planned entrepreneurial activities one year in advance<sup>52</sup>, and by introducing penalties meant to compensate the government financially if the companies' oil exports fell below the levels they had attained in 1970 (the year in which crude extraction in Venezuela had set an all-time record).<sup>53</sup>

When these radical measures were adopted, Venezuelan politicians and academics justified them on the grounds that they would "permit the Venezuelan state to recuperate [*sic.*] the country's oil wealth under the most satisfactory conditions for the national interest", and prevent foreign concessionaires from frustrating "this recuperation through either an anticipated disposal or the destruction of the elements necessary for the administration of the

---

provision of a *public service* (like a telephone concession, say). Hence, when the concessions expired, the State would have to have in its power all the elements necessary for the adequate provision of this service.

<sup>49</sup>The Venezuelan government's total surprise in the face of these events is described in D. Mommer, 1974: 50-79.

<sup>50</sup>Reference prices (more commonly known as Fiscal Reference Values or FRVs) had been introduced in Venezuela in 1966, and were due to be renegotiated with the companies in late 1971.

<sup>51</sup>The assets subject to reversion included not only refineries, storage facilities and pipelines, but also office buildings, cars and even office furniture!

<sup>52</sup>As Coronel (1983: 41) notes, Decree 832 meant that "there was nothing that the [oil] industry could do without previous approval from the ministry. The companies had to submit . . . a detailed programme of activities including exploration, production, refining, local sales, international sales and all financial data. The ministry staff would receive these documents and could suggest minor or important changes in the programmes. The number and locations of exploration wells could change, production levels or refining levels could be modified, clients for the oil could be vetoed, prices could be challenged".

<sup>53</sup>For details see Rivero, *op. cit.*: 296-9.

oil industry".<sup>54</sup> Unsurprisingly, the oil companies mounted a spirited legal action against the Reversion Law (which was justifiably denounced as being both confiscatory and retroactive in character). Although this challenge had the potential to develop into a massive political row<sup>55</sup> (particularly since the concessionaires were very keen on preventing other OPEC countries from following the Venezuelan example), the controversy surrounding the constitutionality of the Reversion Law was rapidly overtaken by the first oil shock, and eventually overshadowed by the anticipated reversion of concessions in 1976. The relatively short amount of time which this issue spent in the political limelight prevented many observers from appreciating a crucial point; namely, that the Reversion Law, Decree 832 and the reforms to the Income Tax Law, as a whole, ushered the *de facto* nationalisation of the Venezuelan oil industry. Admittedly, this *corpus* of legislation lacked an element which many consider a *sine qua non* requisite of any genuine nationalisation: the transfer of assets from the private to the public sector.<sup>56</sup> However, we would argue that such a conception of nationalisation places undue emphasis on the dimension of property and neglects the rather more important dimension of control. If we instead define nationalisation as a measure whereby a state, invoking the higher public interest, can place under its sole control an economic sector or activity which had previously been under the control of the private sector, we can see that what happened in Venezuela during 1970-1 amounted to a true nationalisation. After all, from 1972 onwards, the concessionaires lost all say over how much oil they could produce, how much money they could invest and for what purposes, what uses they could put their assets to, and so on. Thus, the 1970-1 system of control legislated their entrepreneurial rights out of existence and, by turning "into obligations what had previously been prerogatives"<sup>57</sup>, converted the concessionaires into mere contractors of the Venezuelan state. It should be noted that, by 1974, the other OPEC countries had also succeeded in doing very much the same but, unlike its *confrères* in the organisation, Venezuela did not take a shareholding stake in the concessionaire companies, mainly because "the reversion of the great majority of the concessions was scheduled to take place in 1983-5 . . . [and the] country did not need an immediate capital participation to improve its legal position in general. Thus, Venezuela restricted itself to preparing for the eventual reversion of concessions".<sup>58</sup>

---

<sup>54</sup>Novoa Monreal, 1981: 295.

<sup>55</sup>In 1971, three US senators tabled a proposal for a US boycott on Venezuelan oil if the Reversion Law was approved.

<sup>56</sup>Julliot de la Morandière, for instance, defines nationalisation as "the transformation of private enterprises into state enterprises in order to subtract the means of production and distribution of wealth from private property, and to put them in the hands either of the nation or of the organs that represent its collective interests" (Katzarov, 1963: 5).

<sup>57</sup>Rivero, *op. cit.*: 312.

<sup>58</sup>1988: 243. As Rivero (*ibid*: 87-8) observes, in Venezuela "all the concessions were entirely subject to national sovereignty and legislation"; for other OPEC countries, however, a shareholding participation in the producing companies represented the only way in which they could achieve "a

The ambivalent legal situation created by the Reversion Law, Decree 832 and the reform to the Income Tax Law was sustainable for as long as oil prices remained at relatively reasonable levels (and the difference between government and company income was not too disproportionate<sup>59</sup>). Up to 1972 inclusive, the definitive takeover of the oil industry by the state was conceived strictly in terms of a 'natural' reversion: existing concessions would not be renewed after 1983-5, and all oil-related activities would then be carried out on behalf of the Venezuelan government by genuine contractors or by mixed enterprises in which the Venezuelan state would have a shareholding majority.<sup>60</sup> However, when the price of crude oil skyrocketed as a result of the OAPEC embargo, the concessionaires finally found all the restrictions placed on their entrepreneurial freedom by the Venezuelan state intolerable (no capitalist entrepreneur, after all, will put up with being told by a 'silent partner' how much risk capital he has to invest and how, just so that he can reap a reward of .40 USD for every barrel of oil he sells, while his 'partner' gets nearly 10 USD/Bbl in rent<sup>61</sup>), and reached the conclusion that they would actually be better off if their concessions were terminated before 1983-5.<sup>62</sup> To the great surprise of the Venezuelan government, the companies all of a sudden came out in favour of the 'anticipated reversion' of concessions!<sup>63</sup> This, of course, suited the Venezuelan government: entrusting an NOC in which it held a 100 per cent shareholding with all oil-related activities seemed to offer the best option for extracting the maximum amount of rent from every barrel of Venezuelan oil exported. The idea that the government would be the sole claimant of this huge rent also appealed to those groups in the Venezuelan private sector which, having previously expressed strong reservations about a wholly state-owned oil industry on grounds of the government's spendthrift ways, began to see the

---

control of prices and export volumes similar to the one enjoyed by Venezuela", because their "concession contracts excluded explicitly any unilateral change . . . [their] concessionaires were not subject to [national] legislation and sovereignty . . . [and all disputes had] to be solved through international arbitration".

<sup>59</sup>In 1972, say, for every barrel of oil exported at an average price of about 2.44 USD/Bbl, the government received 2.12 USD/Bbl, while the companies received .31 USD/Bbl. This difference in income is huge, but it is dwarfed by the differences that would obtain after 1973.

<sup>60</sup>The various options for the state administration of the oil industry after the reversion of concessions were discussed in a forum held in Caracas in 1971 (the proceedings of which can be found in Egaña *et al.*, 1971).

<sup>61</sup>This was the approximate distribution of oil revenues that obtained in Venezuela in 1975.

<sup>62</sup>As a senior manager of one of these companies said, "international oil companies don't like to work for fees . . . we want to invest risk capital and get oil in return" (*PE*, March 1992: 8).

<sup>63</sup>In a bizarre episode, the presidents of Creole and Shell turned up at Miraflores to wish President Caldera an auspicious 1974, and began dropping heavy hints in the sense that the "reversion situation should be cleared up as soon as possible" (*PON*, December 29, 1973: 1). Creole's Robert Dolph declared on that occasion: "it's unrealistic to say everything will stay unchanged until some magic day in 1983 and 1984 when a curtain will fall . . . It's unrealistic to wait till the last minute. What do you do, for example, if you need new investment in 1981, when there's no provision for short-term amortisation . . . You can't ignore the fact that relationships between oil producing countries and the companies are changing . . . all over the world. Change is coming here too, but who's afraid of change? We're flexible, so long as both parties recognize the aspirations involved" (*ibid.*).

advantages of receiving a large part of this windfall through the time-honoured mechanism of an overvalued exchange rate. Naturally, there were many other groups - those that benefited from the government's investments in other state-owned industries, or from its generous subsidies on foodstuffs and the like - which did not need to be convinced about the merits of the takeover. Thus, the Venezuelan employees of the multinationals were gradually left as the only real detractors of the complete state takeover of the oil industry, but their opposition was not enough to prevent 'anticipated reversion' from becoming a foregone conclusion by December 1973, when the elections to decide who would succeed Caldera in the presidency were held (nevertheless, as we shall see, the victor in these elections took great care to ensure that disaffected oil industry employees did not jeopardise the smoothness of the transition to the new *status quo*). Within two years of this election, the Venezuelan Executive would enact measures formalising the 1971 *de facto* nationalisation of the oil industry through the legal figures of the anticipated reversion of concessions, on the one hand, and the reservation of an economic activity to the state, on the other.

The anticipated reversion of concessions in Venezuela, then, was quite different from the nationalisation of oil in Mexico. The latter country had a relatively large oil consumption and a rapidly diminishing exportable surplus, state control of the oil industry was seen as a means of harnessing domestic oil resources for the benefit of a vigorous industrialisation effort (the thorny problem of the distribution of oil rent between the Mexican government and PEMEX was neither addressed nor solved by nationalisation, but merely defused through the company's almost total withdrawal from the international oil market). In Venezuela, conditions were completely different: oil production there was destined essentially for export, and control over oil industry operations was seen as desirable only because it would enable the state to claim an ever larger proportion of the oil companies' revenues in the form of rent. This idea of control made no allowance for an equitable distribution of oil rent between the landlord state and its tenant oil companies, because it did not recognise that private capital might be entitled to any profit beyond a certain threshold (arbitrarily set by Pérez Alfonzo at 15 per cent return on net fixed assets). This provision (which was at the core of the 1971 Reversion Law) effectively transformed the Venezuelan concessionaires into *contractors* of the state; however, even though it amounted to an outright denial of the legitimacy of private enterprise in oil activities, it generated no serious opposition within Venezuela, because the concessionaires were *foreign* companies whose interests were *by definition* subordinate to the national rentistic claims.<sup>64</sup> Granted, in 1976, the Venezuelan government arrived at more or less the same destination that the Mexican government had reached nearly forty years

---

<sup>64</sup>Only on one occasion did a sizable bloc of Venezuelan entrepreneurs rally to the defense of the foreign oil companies: when the Leoni administration unwisely attempted to introduce a wide ranging fiscal reform *and* a new oil tax simultaneously. In the event, the oil companies made a separate peace over this issue with the government and abandoned Fedecámaras to its fate (this action did not endear them to this very powerful domestic actor and left them more politically isolated than ever).

previously. Unlike the latter, however, it did so with very little understanding of how it had managed to do so or what had finally got it there. One should also point out that, contrary to PEMEX's first generation managers, the Venezuelan managers in the oil companies (who, for the most part, expected to play an important role in the administration of the industry after the multinationals' last bow) only had a very hazy comprehension of what was truly at stake in the state takeover of the oil industry. The fact that, until early 1973 inclusive, oil nationalisation had been predominantly conceived in terms of CVP's gradual assimilation of the operations of the concessionaires as concessions expired meant that these managers' main concern was, to paraphrase Sáder Pérez, whether the Venezuelan government would prove "capable of taking control of the oil industry even though public administration [was] a disaster"<sup>65</sup>, and *not* whether the government and the nationalised oil industry would be able to reach a viable agreement for the division of oil rent between them. Thus, their lobbying efforts in the run-up to the state takeover were focused at ensuring managerial continuity and autonomy in the industry after 1976 (see below). Venezuelan oilmen interpreted the willingness of the Pérez administration to meet their demands in this regard as proof that what the government wanted to achieve through nationalisation was the creation of a 'truly Venezuelan oil business'. For instance, the way Alberto Quirós (president of Shell de Venezuela in 1974-5, and of its successor company Maraven after 1976) saw it, the Nationalisation Law addressed the fundamental anomaly that Venezuela had always "had an efficient productive apparatus, managed and controlled by Venezuelans . . . [but had never had] an oil business . . . [We had] had production *norms* and *procedures* but . . . [not] a production *policy*. We [had] controlled *how* the fields produced, but we [had] never controlled how much we produced, what quality of crude we produced, how much we sold a barrel for or who we sold the barrel to".<sup>66</sup> Thus, it is clear that Quirós thought that for the Venezuelan government, the takeover of the oil industry was an end in itself, rather than a means to an end (this end being the maximisation of rent through the control of oil investment, fiscal reference prices and production volumes). As a result, Quirós (and many other Venezuelan oilmen with him) assumed that, after 1976, there would be a significant change for the better in MEM's attitude towards the oil industry. However, as we shall now see, it did not take very long for these expectations to be dashed against the rentistic claims of the Venezuelan state.

## 2.2 What Changed after 1976? (I): Legal and Political Status of the Oil Industry

Shortly after Carlos Andrés Pérez won the 1973 presidential elections with a surprising landslide, the new President

---

<sup>65</sup>Preface to Silva Michelena and Soublotte, 1976: 13. Managers in the concessionaires were quite keen to point out that CVP produced only 4 per cent of Venezuela's output with 13 per cent of the oil industry workforce.

<sup>66</sup>Quirós, 1987: 97; italics in original.

requested extraordinary powers to issue decrees for one year on a wide and vaguely worded set of issues. The congressional majority of AD granted him [on May 30, 1974] that authority on the condition that he give advance notice to multiparty commissions, but these commissions were largely ignored. Even the leaders of AD sometimes learned of decrees only after they had been published in the *Gaceta Oficial*, and the sheer volume of decrees went beyond any standard of responsible government - 830 decrees and 51 new commissions in one year's time.<sup>67</sup>

Among the many "extraordinary economic and financial measures" which the President pushed through in this period there were some of transcendental importance, notably the establishment of the Venezuelan investment fund (an anti-cyclical device which was to be endowed with 15 per cent of the country's annual oil export income) and the nationalisation of the iron ore industry (iron mining was the second most important economic activity in the country). But even though the idea of 'anticipated reversion' of the oil industry had the overwhelming support of the Venezuelan public - and Pérez could easily have interpreted his victory margin as a mandate for immediate nationalisation, particularly since outgoing President Caldera had declared that whoever succeeded him would have to make this measure his first priority - the President decided to tackle the issue of the takeover of the oil industry with uncharacteristic restraint. Thus, instead of going for a 'fast track' nationalisation akin to the one which he adopted for the iron ore industry, Pérez set up a presidential commission (*Comisión Presidencial de la Reversión Petrolera*) "to study and analyse the alternatives to bring forward the reversion of the concessions and the assets attached to them, so that the State [could] assume the control of exploration, exploitation, manufacturing, refining, transport and marketing of hydrocarbons".<sup>68</sup> Moreover, Pérez did not give this commission *carte blanche* to study any and all possible alternatives for the state takeover: the very specific preliminary guidelines he laid down were clearly meant to restrict the potential range of the commission's inquiries to alternatives known to be amenable to oil industry executives.<sup>69</sup> For good measure, Pérez vowed that the lobby created by some industry employees (Agropet) would be consulted at all major steps of the political process leading to the takeover<sup>70</sup>, and that the nationalised oil industry would be run by the Venezuelans that managed the operations of the concessionaires.

Pérez's actions were prompted by the threatening noises coming from the camp of senior managers in the concessionaires. These executives had let the President know in no uncertain terms that, were he to act on the suggestions of those who believed that the

---

<sup>67</sup>Coppedge, 1994: 65-6.

<sup>68</sup>Article 1 of *Decreto 10 del 22 de marzo de 1974* (*Gaceta Oficial*, no. 30358).

<sup>69</sup>See Coronel, 1983: 54.

<sup>70</sup>"To those Venezuelans who . . . work in the multinational oil companies, I want to say that they make up a fundamental resource for our country and that no decision in this field will be taken without their previous knowledge and participation" (*ibid.*: 65). Pérez accused those persons which dared to question where the loyalties of Venezuelan oil industry personnel might lay as being guilty of "sterile extremism" (*PON*, March 13, 1975: 1; see also Coronel, 1983: 67-8).

takeover had to be a radical break with the 'tainted' (i.e. foreign-dominated) past of the Venezuelan oil industry, he would be courting disaster. The least circumspect among Venezuelan oil industry leaders was probably Guillermo Rodríguez Eraso (vice-president of Creole in 1974 and first president of its nationalised successor, Lagoven), who not only stressed that "personnel should be kept at their . . . posts in order to guarantee normal operations"<sup>71</sup> but also hinted at the problems which any attempt by the government to ignore this advice could produce.<sup>72</sup> Shell's Quirós chose an altogether softer approach: although he was also quite wary of Pérez's populist instincts and very unimpressed with the government's entrepreneurial track record, he nonetheless assured Venezuelan politicians that nationalisation would have "very great possibilities of success . . . [if] the government faced realities, instead of being moved by emotional factors"<sup>73</sup>, and made sure not only that men like himself were left in charge of the operations of the oil industry but also took steps to guarantee that the industry would never become a hostage to the country's notorious brand of party politics.

The discreet but firm pressure applied by Venezuelan oilmen to the government paid dividends: the final report of the Reversion commission expressed the need for a "national petroleum administration as separate and distinct from public administration as possible"<sup>74</sup>, able to go about its business with a minimum of governmental interference. The Nationalisation Law enshrined this principle in three key areas; namely

- a) the legal status accorded to those "entities owned by the Executive which would be entrusted to carry out the activities reserved to the state" (i.e. PDVSA and its operating affiliates);<sup>75</sup>
- b) the legal treatment which their employees would be given<sup>76</sup>;
- c) the financial arrangements through which these entities were to fund their activities.<sup>77</sup>

---

<sup>71</sup>*PON*, June 26, 1975: 1. In particular, he said that on no account should "the operating entities" be left "orphans [*sic.*] of their directors [i.e. men like himself]" (*ibid.*).

<sup>72</sup>"The industry will produce 'X' number of barrels per day. Something will have to be done with them. It would be logical to refer to us, because we have the necessary experience" (*PON*, June 26, 1975: 1).

<sup>73</sup>*PON*, July 11, 1975: 1. Quirós turned down an international posting at Shell, and manifested his desire to do everything in his power to help nationalisation work (Malavé Mata, 1987: 188).

<sup>74</sup>Brewer-Carías, 1981: 359.

<sup>75</sup>PDVSA is a corporation subject to private mercantile law. However, the company is legally bound to "follow the dispositions of the National Executive" (clause 3 of PDVSA's bylaws) and this, as Brewer-Carías notes, "gives [the government] ample leeway to apply norms of public law to the company by means of unilateral administrative acts" (*ibid.*: 384-5).

<sup>76</sup>Article eight of the Nationalisation Law states that the directors, managers, employees and workers of the nationalized oil industry are not considered public officials or public employees. This disposition exempts them from the provisos of the Career Civil Service Law and also from the administrative system which holds sway in the rest of the Venezuelan public sector.

<sup>77</sup>The Law states that the company will receive every month "a quantity of money equivalent to ten percent of the net income generated by oil exports . . . during the previous month". The company is exempt from paying any taxes or contributions on these monies (including income tax). In addition, as Vilorio (1983: 145) noted, the government let PDVSA retain all of its after-tax earnings for investment purposes (PDVSA declared a dividend for the first time only in 1996).

Although the tenor of all these dispositions was quite favourable to the fledgling PDVSA, most of the executives in the former concessionaires were reconciled to the idea that they would not be given a free hand to run the industry (Quirós declared that, inevitably, "nationalisation would mean state control over investments to be made, expansion plans, operational programmes, refining strategy and marketing strategy"<sup>78</sup>). Indeed, outside the hotbed of anti-government feeling that was Creole/Lagoven, few people in the industry seriously believed that PDVSA's sole shareholder should (or would) have "delegate[d] all responsibility for the [oil] business unto the company's management in all cases" for the simple reason that, since the shareholder in question "depended on PDVSA's results to administer the country", this would have been tantamount to delegating "on the oil technocracy the responsibility for the economic policy of the country as a whole".<sup>79</sup> However, although pragmatists in the affiliates were willing to countenance a certain degree of ministerial interference in the affairs of the industry, even they fully expected the government to keep its distance in three key areas; to wit, day-to-day operations, personnel policy - salaries, promotions, recruitment, training<sup>80</sup> - and the use of the monies which, according to the Nationalisation Law, were the exclusive patrimony of the company (Quirós summed up their expectations thus: "once the operational and investment budget had been decided, resources earmarked for specific projects . . . and the overall debt level of the company set . . . the role of the political sector [had to be limited] to scrutinizing PDVSA's operational and financial results in shareholders' meetings"<sup>81</sup>). Such an arrangement, which would have freed the affiliates from the minute scrutiny to which MEM had subjected the operations of the foreign concessionaires under the terms of the 1971 Reversion Law and Decree 832, was very much in tone with the recommendations put forward by the Reversion Committee. Nevertheless, the majority of ministry staff could not see the rationale behind this curbing of their supervisory faculties, and they did not subscribe to PDVSA's legal advisor's view that "Decree 832 had automatically been rendered invalid by the Nationalisation Law". Hence, they insisted that, as in the past, "all nationalised oil industry activities had to have their previous approval"<sup>82</sup> and made it a point to "spend a substantial part of their time doing routine functions which had been important before nationalisation but were no longer justified . . . [because] they occupied time that should have been dedicated to

---

<sup>78</sup>*PON*, November 6, 1974: 2.

<sup>79</sup>Quirós, 1993: 2.

<sup>80</sup>See Alfonzo Ravard, 1981: 230 *ss*.

<sup>81</sup>Quirós, 1993: 2. The energy minister was expected not to confuse his "role as chairman of the board with the role of PDVSA president", and to "refrain from constantly bringing PDVSA directors to account, as if he were the company's president" (*ibid.*). Agropet had suggested that it would be best if the minister of Energy and Mines were not the chairman of the board of the new company (as had been the case with CVP), but this pretension was not taken seriously by the Presidential Reversion Commission (Coronel, 1983: 58).

<sup>82</sup>*Ibid.*: 107.

the elaboration of policy guidelines".<sup>83</sup> According to Coronel, this was a reflection of the intense dislike which ministry staff felt for "the Venezuelan technocrats working for the oil companies"<sup>84</sup> but, as we shall see in brief, the reasons behind MEM's zeal to apply Decree 832 were structural in nature, and transcended mere personal animosities. For the moment, though, suffice it to say that, after a couple of little-known skirmishes, this jurisdictional conflict was eventually resolved in PDVSA's favour and, as a result, the ministry only managed to hold on to the two faculties which quintessentially defined its rent-maximising role: the setting of export and fiscal reference prices for crude and products, and the regulation of Venezuelan production.

The fact that "the compromises adopted with the oil companies kept to a minimum the changes due to the change in ownership" and maintained "the form of operation imposed [before] the nationalisation by the foreign oil companies" led critics of the government - and even MEM personnel - to denounce the Nationalisation Law as a sham<sup>85</sup> which would not free Venezuela from its condition of abject servitude to foreign interests.<sup>86</sup> These critics concluded that oil industry leaders were not acting on their own behalf when they negotiated the terms of this legislation with the government and were, instead, being manipulated by their erstwhile superiors in the foreign oil multinationals (when, in fact, all the latter wanted was adequate compensation for their assets and profitable offtake arrangements with the new NOC). The tendency to see the shadowy machinations of the Seven Sisters everywhere prevented many observers from realizing that the key political compromises contained in the Nationalisation Law had been negotiated with Venezuelan industry executives who were 'trading on their own account' (so to speak), and not so much with foreign oil companies bent upon "transnationalising" the newly-nationalised Venezuelan oil industry.<sup>87</sup> In addition, their inadequate understanding of the main assumptions and limitations of the country's rent-fueled economic development policy left them clutching at conspiratorial straws to explain why a government that enjoyed immense popular support nonetheless felt that it was absolutely imperative to buy the loyalty - or rather, the tacit acquiescence - of these executives (the reasons for this are explained in detail in section 2.4 below). Finally, these critics' near

---

<sup>83</sup>Such was the verdict of a consulting firm retained by MEM to evaluate its activities (Viloria, 1983: 119).

<sup>84</sup>Coronel, 1983: 107.

<sup>85</sup>Novoa Monreal, 1981: 313.

<sup>86</sup>For Novoa Monreal (1979: 17), an act of nationalisation is "a manifestation of the sovereignty of the state and, as such, it should be put into effect in imperative [*sic.*] terms". In his opinion, the nationalisation of oil lacked the *auctoritas* which had permeated the nationalisation of the iron ore industry (for which see Gamboa, 1974).

<sup>87</sup>According to the participants in the seminar held to commemorate the first centenary of the Venezuelan Oil Industry (in Mieres, 1981: 262), "a key element in the transnationalisation [of the industry was] the presence at [PDVSA's] helm of executives and directors, formed by the ex concessionaire corporations, which had resolutely manifested their opposition to nationalisation, and [were] still loyal to the interests and rationality of transnational capital".

pathological suspicion towards the motives of men like Quirós or Rodríguez Eraso<sup>88</sup> also blinded them to the fact that many of the 'propitiatory offerings' in the Nationalisation Law and related legislation had clearly been included there because the government considered that they met some of its own political needs as well. For instance, the addition to Article 5 of the nationalisation bill of clauses which authorized the state to carry out the "reserved activities" through operating contracts as well as association agreements with private parties "in special cases and when convenient for the public interest" was widely denounced as a concession that would allow the multinationals to return to the Venezuelan oil sector by a back door; however, it was not remarked at the time that this amendment also gave the government a chance to make what it saw as a token gesture which would defuse the criticism put forward by Fedecámaras in the sense that the Nationalisation draft was too restrictive "because it [closed] the door on any possible private sector participation".<sup>89</sup> Similarly, while the adoption of a federal form of organisation for the nationalised industry allowed the administrative structure of the most important concessionaires to be kept virtually intact (as their top executives wanted), it also provided the government with the means of turning the sometimes serious divisions between the various operating companies to its advantage, thus making it difficult for the nationalised industry to become a more cohesive - and, hence, more powerful - political interlocutor.<sup>90</sup>

It is clear, then, that the state takeover of the oil industry was the product of a consultation in which the opinion of Venezuelan executives of the oil multinationals carried a great deal of weight. However, this political exchange was not nearly as one-sided as its critics made it out to be (for instance, the government "decided to maintain the fiscal export values . . . in order to assess the tax obligations of PDVSA and its subsidiaries" despite the fact that the FRV system was fiercely attacked "by multiple voices within . . . the industry, [which adduced] that maintaining a figure [*sic.*] . . . established in the mid 1960s because of the doubts which the Executive held concerning the rationale of the prices reported by the

---

<sup>88</sup>See Quirós, 1987: 98; Coronel, 1983: 273.

<sup>89</sup>*PON*, August 19, 1974: 1 (see also October, 9, 1974: 2; Malavé Mata, *op. cit.*: 184-263; Rivero, *op. cit.*: 349-52). As originally drafted, Article 5 ruled out "any possibility of creating mixed enterprises...for the execution of reserved activities" (Rivero, *ibid.*: 349). President Pérez assumed full responsibility for the modifications to the legal text, adducing that it made no sense to constrain the range of choices available to the Executive given the possibility that, in the future and in special circumstances, the State might need to enlist the collaboration of foreign companies (*ibid.*). However, González Berti (1982: 109) concluded that these modifications had been incorporated to the Law "in the hope that the exceptional cases contemplated there would never occur" (see also the declarations of oil minister Hernández Grisanti in Trotta de Godoy, 1995: 45). Industry lawyers did not see things quite this way (see Duque Corredor, 1978: 152), but the serious implications of this divergence of opinions only became evident in late 1990, when Lagoven requested a pronouncement by the Supreme Court on alleged inconsistencies between Article 5 and some dispositions contained in previous hydrocarbons legislation (see chapter 7).

<sup>90</sup>Calderón Berti, when he was head of MEM's Reversion division, acknowledged that the government felt that "a single company should not be established . . . because the magnitude of its operations would be excessively large, and power would be excessively concentrated" (1976: 678).

concessionaires"<sup>91</sup> was unjustifiable). In other words, both the government and these executives had to compromise on some of their desiderata regarding the path which the takeover was to follow. Given the intense bargaining which characterised this process, one would have expected the agreement contained in the Nationalisation Law to be both reasonably stable and enduring; after all, as Rusconi says, "political exchange involves 'authority goods' that have the form of commands (laws, administrative norms) that . . . are efficacious - that is, they obtain obedience and consensus - in so far as they have been transacted and recognised through a market of sorts".<sup>92</sup> However, the efficacy of the Nationalisation Law *qua* 'authority good' has been rather disappointing, as can be gauged not only from the frequency with which Venezuelan energy ministers and PDVSA presidents have found themselves at daggers drawn, but also from the oil industry's secular resentment at what PDVSA president Luis Giusti has called "the tendency to see petroleum income as the part of the state's income that is 'truly Venezuelan and permanent', existing only in order to be diverted towards the non-petroleum economy".<sup>93</sup>

Most observers have tended to attribute the perennial friction between government and company to the former's cupidity and its disastrous ineptitude at sowing the oil windfalls of 1974 and 1980.<sup>94</sup> However, although the penury of the Venezuelan government undoubtedly has had a deleterious effect on its relationship with PDVSA, the jurisdictional tensions between MEM and the company flared up years before the government got into any serious financial trouble. To understand why this happened, it is necessary to leave the rhetoric of nationalisation aside and to bring to mind once again the *real* reason behind the oil industry's change in ownership. As Baptista and Mommer observe, the Reversion Law, the unilateral determination of FRVs and Decree 832 together created "a situation which could not last and which put the country on the path of a decisive confrontation. The [foreign oil] companies would not be permitted to be what they were: private firms; unless the State took over their obligations and responsibilities. With nationalisation this situation was resolved".<sup>95</sup> However, we should add that the situation was only *partially* solved: after the 1976 takeover, the foreign multinationals may indeed have been liberated from all the

---

<sup>91</sup>Palma, 1985: 14. The FRV was nothing more than a sliding-scale royalty, intended to guarantee a minimum level of oil rent to the state (regardless of how much oil companies spent or invested on any given year), on the one hand, and to enable the government to respond to changes in market prices in order to absorb as much of the companies' oil revenues in the form of rent as possible, on the other hand (see Mommer, 1994: 19). As such, the FRV system was equally suited for taxing the operations of either a foreign concessionaire or a NOC (and the proof of its efficacy in this respect is that, between 1976-95, PDVSA did not have to declare a single dividend to distribute extraordinary profits to its shareholder).

<sup>92</sup>Rusconi, 1984: 25-6.

<sup>93</sup>*The Daily Journal*, July 13, 1993: 12.

<sup>94</sup>This is Uslar Pietri's point of view: "the plain and brutal truth is that a bankrupt state cannot adequately manage a prosperous economic enterprise [like PDVSA], because the temptation to use it to the extreme as a source of funds for public spending is inconceivable [*ic.*]" (in Sosa Pietri, 1993: 14).

<sup>95</sup>Baptista and Mommer, *op. cit.*: 86.

contradictions of Venezuela's oil legislation, but their state-owned successors and PDVSA (and MEM, for that matter) continued to be in thrall of them, because the Nationalisation Law did not clarify many of the incoherences that were the legacy of the last years of the concessionary regime. And how could it be otherwise? After all, such a clarification would only have been possible had the government been inclined not only to reassess the rent-centred foundations of the policy edifice built by the venerable Betancourt and Pérez Alfonzo but also to strive for a harmonisation of rentier and producer interests at a time when the aggressive pursuit of the former was delivering hitherto inconceivable wealth to Venezuela, in particular, and to the whole of OPEC, in general.

The fact that the state takeover of the industry was a political and economic *cul de sac* meant that MEM, on the one hand, and PDVSA and its subsidiaries, on the other, interpreted the contents of the Nationalisation Law - and particularly Article 5, which stated that "reserved activities" could either be carried out *directly* by the National Executive (i.e. MEM), *or indirectly* "through entities owned by the State" - in diametrically opposite forms. The position of the ministry (which had its eye firmly fixed on the coming of the 'post-petroleum Venezuela' that Pérez Alfonzo had said was nigh) was that the Nationalisation Law only complemented the previous rent-oriented legislation and that, hence, its supervisory faculties remained unaltered. In contrast, the position of the industry was, firstly, that the Nationalisation Law superseded and annulled past legislation on grounds of redundancy<sup>96</sup>; secondly, that the conjunction "or" in the text of Article 5 denoted mutually exclusive options for the administration of the reserved activities; and thirdly, that the creation of PDVSA unequivocally showed which one of these two paths the Venezuelan state had chosen to follow (as Viloría put it: "*fortunately* . . . direct administration by the state never went beyond a simple legal prevision because, in practice, the [preferred] option was to manage the industry through public enterprises . . . owned by the state"<sup>97</sup>).

Given these irreconcilable readings of the state takeover of the oil industry, it is not hard to understand why it could only be a matter of time before the ministry and the NOC clashed, even though the more accommodating oilmen (like Quirós) had digested the fact that PDVSA's total "financial and planning independence . . . [was] a fiction . . . [that] could not possibly subsist"<sup>98</sup>, and notwithstanding the fact that some ministry officials (admittedly not many) had manifested a certain willingness to bury the hatchet with the oil companies.<sup>99</sup> The first serious confrontation between both agencies took place as early as February 1976. On

---

<sup>96</sup>Thus Coronel (1983: 41): "with nationalisation . . . there was no . . . reason to keep, within the ministry, the comanagement of the industry that had been typical of the transition period 1972-1975". See also Duque Corredor, *op. cit.*, *passim*.

<sup>97</sup>Viloría, 1983: 95; italics ours.

<sup>98</sup>Quirós, 1993: 2.

<sup>99</sup>On the eve of nationalisation, Calderón Berti reminded his colleagues at the ministry: "we in MEM will have to accept that the [oil] industry will be a national industry and our attitude towards [it] will have to be a bit different from that with which we confront private oil industry" (1976: 99).

that occasion, President Pérez - at the behest of MEM - created a commission of jurists to study a potential reform to Venezuelan oil legislation in order to confirm unequivocally the attribution of the direction of all oil activities to the *State*. PDVSA went out of its way to sabotage the proceedings (partly because its managers could see that any modification in legislation could only lead to a tighter control over its operations by the ministry but also because this would have undermined its managers' claim in the sense that the direction of the reserved activities had been attributed to the *company*).<sup>100</sup> Less than a year later, in March 1977, President Pérez sent PDVSA a letter delimiting its "field of action", because MEM felt that the company was taking over more attributes than it was legally entitled to.<sup>101</sup> Then, in October of that same year, there arose yet another controversy, this time surrounding the question of jurisdiction over the Orinoco oil belt (an area which, at that time, was expected to account for most of Venezuela's future crude production).<sup>102</sup> According to Coronel,

there were deep differences of opinion between . . . [MEM and PDVSA] regarding the Orinoco heavy-oil deposits and the ways to develop them. The ministry's technical staff wanted to retain operational control of this project, while the industry felt it had all the resources to take over operations and conduct them in a more efficient manner. . . The board felt the project should be transferred to PDVSA for management . . . [while] the Permanent Commission of the National Energy Council . . . demanded that the Orinoco project be handled only by 'patriotic' Venezuelans such as those working at the ministry. PDVSA felt . . . that a showdown was inevitable and went to President Pérez requesting a decision on this matter . . . [The company argued] that the organisation created within the ministry to manage the Orinoco project was small and lacked the financial, technical and human resources to do the job properly . . . [and also that the] integral planning of petroleum activities could not be done by the industry without incorporating the Orinoco project . . . [Finally, the President] decided in favour of PDVSA.<sup>103</sup>

This last incident temporarily settled the issue of which agency - PDVSA or the ministry - was to decide exactly how the oil industry complied with the "general policy guidelines set by the Venezuelan Executive". It also inaugurated a period of relative calm that was to last until late 1979, when an ambitious and dynamic oil minister (Humberto Calderón Berti) decided to claw back some of the ground which MEM had surrendered to the company over the previous four years. But that is a matter which we shall be taking up in a forthcoming chapter.

For the moment, we hope to have made clear that the process whereby the Venezuelan state finally took over the country's oil industry in 1976 was a rather Tocquevillean affair: a supposedly revolutionary break with tradition which, in reality,

---

<sup>100</sup>See Trotta de Godoy, *op. cit.*: 48-50. So blatant was the lack of cooperation displayed by PDVSA representatives that the president of the commission, Manuel Egaña, insisted that mention of it be made in the public record (personal interview).

<sup>101</sup>Sosa Pietri, *op. cit.*: 66.

<sup>102</sup>This is an area in eastern Venezuela which contains about 1 *trillion* barrels of extra-heavy crude *in situ* (see Ocando, 1980; Martínez, 1987).

<sup>103</sup>Coronel, 1983: 115.

modified the *status quo ante* only slightly. From a strictly legal viewpoint, for instance, the Nationalisation Law does not even qualify as a radical reassignment of property rights since, by 1975, the Venezuelan state (like all the other OPEC member states) had already become the real 'owner' of 'its' oil industry in all but name. At a more practical level, the changes brought about by this law were even more minute: the oil industry continued to be insulated from Venezuelan society and political life, and PDVSA was unable to shed its role as an enclave whose sole *raison d'être* was to be the provider of funds destined for the 'genuinely productive' sectors of the economy. Thus, it is not surprising to see that PDVSA has never exhibited the slightest symptom of "isomorphism" (i.e. the tendency of firms - both private and state-owned - to replicate the organisational structures, procedures and vices of governments with which they maintain close, essentially collaborative, political ties<sup>104</sup>). Unlike many other NOCs, PDVSA has remained a bastion of probity amidst a sea of corruption, and retained a merit and efficiency-driven ethos in a public sector where rent-seeking behaviour and cronyism are endemic. In part, this situation is a testimony to the high quality of PDVSA's management, which is bound by a very strong *esprit de corps* and a keen aversion to the excesses associated with 'politicised' NOCs.<sup>105</sup> On the whole, though, the fact that PDVSA has not come to resemble PEMEX more closely - as former oil minister Egaña feared any Venezuelan NOC was bound to do<sup>106</sup> - is a consequence of the radical qualitative differences between the Mexican and Venezuelan nationalisations. The isomorphic - and downright unhealthy - imbrication of PEMEX and the Mexican state reflects the fact that nationalisation in this country was essentially an inward-looking measure, which was not motivated by a desire to maximise international ground rent. In contrast, the impermeability of the institutional barrier separating PDVSA from the Venezuelan state (i.e. the degree to which the company's ranks have proven resistant to infiltration by 'commissars'<sup>107</sup>) was a function of a systemic requirement to preserve the type of economic and political links which had defined the government's relationship with the export-oriented oil sector when the latter was still in the hands of foreign multinationals.

### 2.3 What Changed after 1976? (II): Internal Dynamics of the Venezuelan Oil Industry

---

<sup>104</sup>Zysman's study of the French electronics industry provides a good insight into the dynamics of isomorphism. This author found that "the centralised and functional structure of the [French] state's procurement funding procedures provided strong incentives for the [private French electronics] firms not only to retain but perhaps even to create functional and centralized operations", even though such a form of organisation was not suited to resolving their technological challenges (Zysman, 1977: 92).

<sup>105</sup>See Coronel, 1983: 64.

<sup>106</sup>In Egaña *et. al.*, *op. cit.*: 19.

<sup>107</sup>Kelly de Escobar (1982: 107-8) says that decision-making coalitions within SOEs are formed by two sorts of actors, ideal-typically defined as "engineers" (who are assumed "to choose strategies prompted by the same basic motivations as [their] colleague[s] in private enterprise"), on the one hand, and "commissars" (who judge the performance and the policies of the SOE exclusively in terms "of the enhancement of [their] political career [and/or] the position of his party or sponsoring group"), on the other.)

On an occasion when he was asked about the prospects of a nationalised Venezuelan petroleum industry, Juan Pablo Pérez Alfonzo said that the first thing that the Venezuelan government needed to do was to make sure that those Venezuelans who made up 96 per cent of the industry's workforce remained at their posts, "working for the state".<sup>108</sup> Although the former oil minister did not seem to think that this would be a particularly difficult task to accomplish, many Venezuelan politicians had had a chance to verify in the early 1970s that the loyalty of oil industry employees (particularly those in management positions) towards the state *qua* employer was anything but unconditional.<sup>109</sup> The lengths to which President Pérez went in order to cultivate the good will of these employees in the run-up to the promulgation of the Nationalisation Law and the fact that the administrative structures of the concessionaires were left intact (to say nothing of the prominent role which Agropet played in the discussions surrounding the various takeover proposals), convinced many Venezuelan intellectuals and politicians that the government had sold out the fort to 'foreign interests', and that nationalisation had 'changed nothing' in terms of the administration of the industry.<sup>110</sup> This impression, though, was flawed: the degree of operational autonomy accorded to PDVSA and its subsidiaries was actually *greater* than that enjoyed either by concessionaires (under the joint terms of the 1971 Reversion Law and Decree 832) or by CVP and, in this sense at least, the transition to a 'Nationalised Petroleum Administration' amounted to a significant break with the immediate past of the Venezuelan oil industry. Having said that, though, there was an important aspect of the administrative legacy of the foreign oil multinationals which nationalisation did not change at all: after 1976, executives in PDVSA's operating affiliates (particularly in Lagoven and Meneven<sup>111</sup>) clearly continued to think that their highest duty was to take whatever measures were necessary to strengthen their *individual companies*, regardless of how little or how much these measures contributed to the welfare of the collective (i.e. PDVSA), on the one hand, and of how divisive these measures promised to be, on the other.

The unique federative structure adopted by the Venezuelan oil industry after nationalisation was a reflection of the cleavages that divided the various organisations that were to conform it. These cleavages - the inevitable result of competition among commercial enterprises - were made, if anything, even more pronounced by the takeover of the oil

---

<sup>108</sup>Chávez, 1990: 59 (see also Calderón Berti, 1976: 67).

<sup>109</sup>Calderón Berti witnessed a worrying rate of attrition for oil industry cadres, as the Venezuelan state tightened its control over the concessionaires (*ibid.*: 24; see also *ibid.*: 74).

<sup>110</sup>As a MEM official told Johnson de Vogeler (1987: 211): "before nationalisation some [oil industry executives] said: 'I'm not going to work for a state-owned enterprise. I'll plant potatoes first. Then you would see them afterwards. 'Hey, why aren't you planting potatoes?' And you know why not? Because they kept their exact same working conditions. Nothing changed. It was so gentle that you couldn't tell if it was nationalised or not'".

<sup>111</sup>Maraven was the most 'pro-PDVSA' among the operating affiliates. During PDVSA's early years, a large proportion of PDVSA's top officers were Maraven executives.

industry by the state. Before this event, no great love had been lost between the various concessionaires, but their entrepreneurial rivalry and mutual suspicion had been tempered by an awareness that they were not engaged in a game where an improvement in the relative situation of any one of them could only be purchased at the expense of the rest, on the one hand, and by a shared perception that their true antagonist was the Venezuelan government, on the other. With the promulgation of the Nationalisation Law - which made all of them the property of a *common* owner - the first of these conditions ceased to be true (the second, of course, did not). Thus, the interaction of the operating affiliates with one another assumed the character of "a vital struggle where there would be winners and losers"<sup>112</sup> (particularly after July 1976, when the rationalisation process that was to reduce the number of operating companies from fourteen to four got under way in earnest).<sup>113</sup> Corporate strategists thought that these Hobbesian dynamics could be turned to the advantage of the holding company: their idea was that PDVSA - while keeping 'unhealthy competition' between affiliates in check - would promote the 'friendly' rivalry between them in order to fill the vacuums left behind by the former concessionaires (in crucial areas like international marketing and strategic planning), thus establishing a power base that would enable it to claim primacy over the affiliates gradually. In practice, though, things did not work out this way: "the holding company was not perceived by the industry as its leader . . . [since] it was starting to deviate significantly from the oilman's vision of what a business concern should be"<sup>114</sup> and thus, regardless of the good will towards the holding of 'moderates' like Maraven's Quirós, PDVSA was unable to prevent its affiliates from occupying these interstices themselves.<sup>115</sup> The result of this situation was that, except for those occasions when top executives in the affiliates found it convenient to let PDVSA fight the government on their collective behalf (as happened with the issue of jurisdiction over the Orinoco oil belt), the holding company was relegated to a secondary role in the decision making process of the oil industry.<sup>116</sup>

According to Johnson de Vogeler, this arrangement was the product of a transaction between "outsiders and insiders" aimed at establishing a "division of labour . . . [whereby] PDVSA's president and board concentrated on dealing with the national environment and on

---

<sup>112</sup>Interview in Johnson de Vogeler, *ibid.*: 264.

<sup>113</sup>See Figure FA1.3 in Annexe 1. On the actual political jockeying surrounding rationalisation, see Coronel, 1983: 109-13.

<sup>114</sup>Coronel, 1983: 120. PDVSA was accused by some sectors of the industry of looking and behaving "more like a government agency than a private corporation", and the "exaggerated interest of some of [its] coordinators in the day-to-day activities of the operating companies" was deeply resented by many executives in the affiliates (*ibid.*: 81-2).

<sup>115</sup>For instance, the Presidential Reversion Commission had recommended the creation of a separate and centralised unit to handle all oil exports, but the operating affiliates torpedoed this proposal. Likewise, they successfully opposed the expansion of the staff at PDVSA's coordination for exploration (*ibid.*: 82).

<sup>116</sup>As a former PDVSA director put it, "the power of decision of PDVSA was only potential . . . We used to accept the recommendations of the operating units. PDVSA had the last word but it did not use it . . . [because] there wasn't [any] real authority" (Johnson deVogeler, *op. cit.*: 432).

keeping a reliable image overseas, while the oilmen concentrated on gearing up and assuring operational normality".<sup>117</sup> Coronel, in turn, ascribed the stated desire of executives in the operating companies to retain "full authority to make major decisions" and to convert PDVSA into "a rather remote holding company [that would let] them do their job without interference" to their common "overriding concern . . . to keep the industry strong".<sup>118</sup> However, both of these views seem highly suspect. On the one hand, it is quite evident that officials in the holding company only accepted this 'division of labour' because PDVSA's institutional weakness left them with no other alternative (Coronel acknowledged that the desire "to centralise operations never left the minds of several of the most influential member of the board and would constitute a major source of disagreement for some time to come [until late 1982, to be precise]"<sup>119</sup>). On the other hand, if one looks at even the most benign consequences of the retention of full authority to make major decisions by PDVSA's affiliates, it is equally obvious that the motives behind their clannish behaviour were nothing as altruistic as Coronel implies. Take, for instance, the case of the technical assistance contracts (*CATs*) which the affiliates signed with their former parent companies: a researcher who was puzzled by the fact that the Venezuelan oil industry had "not exploited a set of advantageous contractual clauses from the *CATs* which allow[ed] the transfer of technology among the affiliates of PDVSA" discovered that internal barriers - and not poor communication or insufficient bargaining power at the negotiation stage - had actually been the major obstacle to the transfer of technology within the corporation.<sup>120</sup> Likewise, up until 1983, PDVSA's equipment purchasing decisions "were made not according to what was available in the companies and what was needed for the general interest of the industry, but instead according to the relative power of one or two affiliates to impose their preference".<sup>121</sup> However, the best illustration of the affiliates' penchant for *sacro egoismo* - and the clearest indictment of Coronel's claims - is the concerted attempt by Lagoven and Meneven to shut Maraven out of the least challenging areas of the Orinoco belt.

The foreign predecessors of Lagoven and Maraven had traditionally dominated the Venezuelan oil scene<sup>122</sup> and, therefore, it is not surprising to find that the rivalry between

---

<sup>117</sup>*Ibid.*: 341.

<sup>118</sup>Coronel, 1983: 121.

<sup>119</sup>*Ibid.*: 82.

<sup>120</sup>Villalba, 1983: 213.

<sup>121</sup>Johnson de Vogeler, *op. cit.*: 288 (see also *ibid.*: 431-2, and Randall, *op. cit.*: 150). The same factors were responsible for the company's technological choices for certain key projects (Villalba, *op. cit.*: *passim*). The MPRA project is the clearest example of this. MEM commissioned Bonner & Moore to study Lagoven's proposal to install an enormous flexicoker at the Amuay refinery and, even though these consultants kept within the framework of the proposal (notwithstanding their "disagreement with its premises"), they reached the conclusion that the flexicoker was not the best option to increase the yields of light products at the refinery (Pérez Alfonzo, 1981: 13). Nevertheless, the MPRA project went ahead as originally planned, and came on stream in 1982.

<sup>122</sup>As one executive remarked, "the Venezuelan oil industry was a matter of Creole and Shell fighting with each other or agreeing how to face the government" (Johnson de Vogeler, *op. cit.*: 108).

these organisations after the nationalisation was very intense. This rivalry - heightened by the partiality which general Alfonso Ravard often showed towards Lagoven (a result of his personal friendship with the conservative and self-effacing Rodríguez Eraso, and his rather dim view of the ebullient and outspoken Quirós<sup>123</sup>) - reached its peak after the problem of jurisdiction over the Orinoco heavy oil project had been resolved in PDVSA's favour in October 1977. At that point, Lagoven and Meneven managed to corner the most prospective acreage in the Orinoco oil province, to the detriment of Maraven.<sup>124</sup> Maraven - whose dwindling resource base put it at a disadvantage relative to the other affiliates (since its reserves consisted mainly of heavy crudes which were increasingly costly to produce) - quite justifiably saw this action as a menace to its long-term viability. Maraven tried to counter Lagoven's move, first of all, by intensifying its enhanced oil recovery efforts in Lake Maracaibo. In addition, it implemented a marketing strategy centred on long-term heavy oil supply contracts with refiners that had deep conversion or specialty products facilities.<sup>125</sup> Finally, on a strictly political plane, the company responded with an exercise in public relations aimed at building bridges with key political actors in Shell's traditional stronghold in Zulia, on the one hand, and at highlighting its differences with Lagoven with regards to its concern for problems affecting the communities in which it operated<sup>126</sup>, on the other hand. Thanks to this three-pronged offensive (and not to any show of solidarity by its sisters), Maraven managed to stave off the immediate threat to its existence. However, its success obviously did nothing to allay the internal strife which had been responsible not only for the debilitating and sterile dispute over the development of the Orinoco oil province, but also for PDVSA's contracting a very serious case of institutional paralysis.

The most noticeable manifestation of this institutional paralysis is the growth of the oil industry's investment fund between 1977-82. For obvious reasons, executives in the

---

<sup>123</sup>General Alfonso Ravard had been the government observer assigned to Creole in the run-up to nationalisation.

<sup>124</sup>See Blank, 1986. Corpoven, which had grave internal problems of its own at this time, stayed out of trouble while this dispute raged.

<sup>125</sup>*El Diario de Caracas*, March 26, 1982: 37. The core of this strategy was the "creative, non-dogmatic marketing . . . [of] heavy crudes . . . [which needed] a special pricing strategy . . . [based on] a reasonable differential between heavy crudes and OPEC crudes [that would] persuade people to invest" in conversion facilities (*PON*, April 6, 1982: 1).

<sup>126</sup>Maraven, together with the Bolívar district council and the ministry of Urban Development, prepared a *Plan de Ordenación Territorial de la Costa Oriental del Lago de Maracaibo* with the objective of identifying those urban concentrations which would have been adversely affected by the enhanced oil recovery techniques it was applying in the area (Maraven a, 1982: 345). Maraven also contributed to the establishment of PRODUZCA (the agency for the promotion of urban development in Zulia), which was entrusted with paving streets and building sewers, parks and schools in the state. The implication of these exercises, as Blank says, was that the oil industry "had responsibilities to individuals and firms in the affected areas . . . that only Maraven [not Lagoven] was prepared to assume" (1986: 285). Maraven also financed a *Predagnostic Study of the Master Territorial Organisation Plan for the Orinoco Oil Belt* (CENDES, 1979) which, according to Blank (*op. cit.*: 289) played a crucial role in amplifying political opposition to Lagoven's DASM Orinoco megaproject.

operating companies realized early on that financial matters would be a decisive factor in their 'vital struggle', and the *practical* arrangements governing the distribution of funds within the nationalised oil industry clearly reflected their desire to retain complete control over the cash flows generated by their companies. Whereas in theory the affiliates were supposed to turn over all their income to PDVSA (which would act as a clearing house and coordinator, registering the contribution of each one in its respective account and then administering the funds in such a way as to minimise the working capital requirements of the whole corporation), in practice the affiliates kept all of their foreign exchange income outside Venezuela, and merely notified PDVSA of their payment needs (so that the latter could place their net income in interest bearing term deposits and credit the affiliates' accounts in the holding company). The holding company was also supposed to have the last say with regards to investment decisions (because its shareholder assembly had to approve the business plans of its affiliates before the latter could receive any funds for investment purposes). However, like many central authorities in loose federations, PDVSA found that its control over the federal purse strings was limited (partly because of its already mentioned organisational and political weaknesses, and partly because of the affiliates' insistence to take out of the common kitty at least as much money as they had put in), and this meant that the affiliates' operating and investment budgets were rarely challenged - let alone adjusted - by the board of the holding company. In other words, even though PDVSA's relationship with its affiliates (particularly on the financial plane) was supposed to be squarely based on the notion of *divide et impera*, up to 1982 the holding company could not exercise an effective budgetary control, simply because there was too much money going around.<sup>127</sup> Thus, the holding company found that both the pace and the concrete steps of the "expansion along all the spectrum of its activities"<sup>128</sup> which it had initiated in 1976 were essentially dictated by its affiliates, even in those cases when their preferences did not offer the most cost/effective alternative to solve the problems of the corporation as a whole (as happened with Lagoven's very expensive MPRA project). However, for all of their technological extravagances, the affiliates were not in a position to spend the totality of the enormous surpluses which their individual operations generated yearly during the period 1976-82 (particularly given their unwillingness to embark on collaborative projects). As a result of this, the financial reserves accumulated abroad by the industry multiplied very rapidly (Figures F2.3.1 and F2.3.2).<sup>129</sup> This behaviour appears even more extraordinary when one considers that a diagnose of the

---

<sup>127</sup>An oil industry executive confessed that during, these years "growth was so amazing that no one gave anything to anyone else" (Johnson de Vogeler, *op. cit.*: 290).

<sup>128</sup>PDVSA a, 1977: 9.

<sup>129</sup>The investment budgets which the affiliates presented to PDVSA for approval included not only the then-current year but also the next five years. Thus, a large proportion of these accumulated funds had already been earmarked by each affiliate to be spent on a specific project sometime in the future.

industry's political environment conducted in 1978 by Maraven<sup>130</sup> concluded that any show of affluence by the oil industry would be ill-advised, as it was likely to breed resentment against it, on account of the foreseeable rate of growth in the government's oil revenue needs and the very tangible prospect (even under scenarios of rising oil prices) of major deficits in the Venezuelan balance of payments. Thus, it seems difficult to avoid the conclusion that the explosive growth of the oil industry investment fund (which did eventually put the corporation in a very delicate position *vis-à-vis* the government) owed more to the internal strife prevailing in the oil industry between up until 1982, than to PDVSA's 1976 decision to establish a reserve for future investments with the dividends received from its affiliates.<sup>131</sup>

The very conspicuous accumulation of cash by the nationalised oil industry went on until 1982 inclusive. After this date, PDVSA and its affiliates apparently began to conduct their affairs with an eye to Maraven's recommendations: the financial reserves of the corporation shrank (both in relative and in absolute terms), and it ceased to maintain reserves for investment purposes (most of the corporation's liquid shareholder equity was dedicated to complying with Venezuelan legal reserve provisions and to funding the realization of deferred assets<sup>132</sup>). This *volte face* was symptomatic of a major shift in the equilibrium of forces to the interior of the Venezuelan oil industry, which was to lead to the almost complete disappearance of the "constant state of tension between PDVSA and its affiliates . . . [as the latter stopped] holding on to their power [as] . . . retrenchment . . . made it essential to act more closely with one another under PDVSA's guidance".<sup>133</sup>

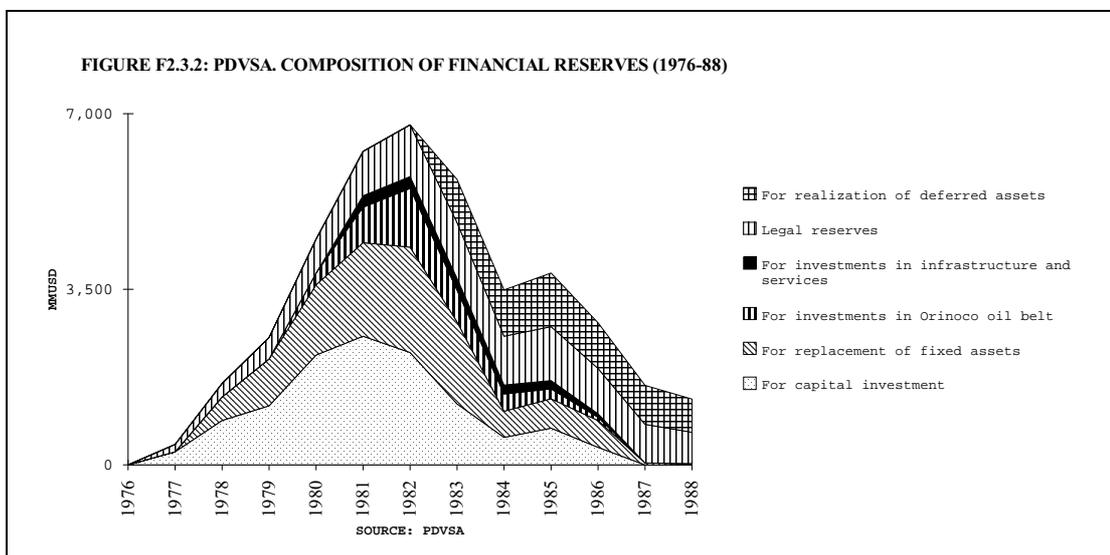
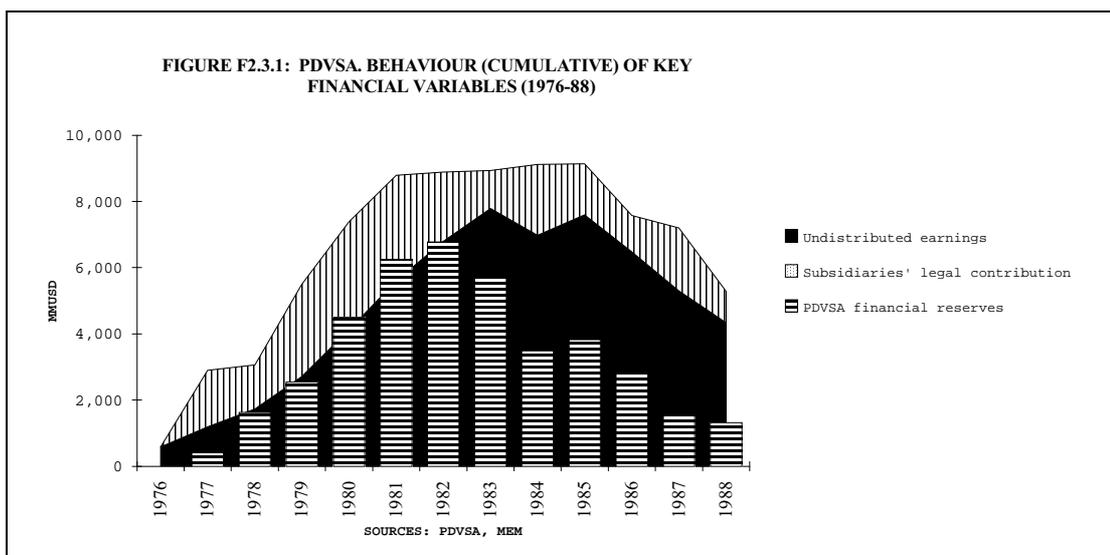
---

<sup>130</sup>Maraven b, 1978.

<sup>131</sup>PDVSA a, 1976: 28.

<sup>132</sup>"The subsidiaries at their respective meetings held in March 1983 decided to create a new reserve for the realization of deferred assets which is to be adjusted at each year-end until it equals the long-term deferred assets" (PDVSA a, 1984: 69).

<sup>133</sup>Johnson de Vogeler, *op. cit.*: 256.



To sum up: nationalisation had less of an impact on the internal dynamics of the Venezuelan oil industry than one would perhaps have expected. In theory, the hierarchical order of the industry, as defined in the Nationalisation Law, was as follows: MEM was in charge of the formulation of policy, PDVSA was entrusted with all strategic planning, coordination, supervision and control functions, and the operating affiliates were tasked with the execution of the industry's plans and programmes. In practice, and notwithstanding the essentially operative role assigned to them in the law, the Venezuelan successors of the foreign multinationals retained most the discretionary decision-making power that was supposed to be PDVSA's. For good measure, these companies remained true to the entrepreneurial ethos pursued by the concessionaires (every company for itself and the devil take the hindmost), which meant that this decision-making power was very fragmented. The conjunction of these two factors gave an air of incoherence to many aspects of PDVSA's entrepreneurial conduct in the early days of the nationalised oil industry. After 1983,

however, this situation was to change radically, as retrenchment suddenly turned the holding company into the real seat of authority for the whole of the oil industry. Later on, we shall have plenty to say about the circumstances that brought this retrenchment about, since they played a crucial role in the gestation and early development of the internationalisation programme.

#### **2.4 What Changed after 1976?(III): Aims and Conduct of Venezuelan Development Policy**

Another clear indication of the persistence of all the contradictions inherent in Venezuela's traditional policy of rent-maximisation was the flawed development strategy implemented by the Venezuelan government (through the Pérez and Herrera Campíns administrations) after 1974. Even though nationalisation effectively transformed the Venezuelan state into a genuine oil producer (i.e. an entrepreneur, as opposed to a parasitic usufructuary of oil production), the ideological cornerstone of the country's development strategy continued to be the position advanced by Pérez Alfonzo: "oil will run out and the nation will have to continue its existence according to what we do now".<sup>134</sup> Unsurprisingly, all the oil-related challenges which this strategy - embodied in the V National Plan<sup>135</sup> - was supposed to address were still conceptualised according to the outlook of a rentier, not a producer (i.e. its main preoccupations were how the rent derived from the extraction of a non-renewable exhaustible natural resource of unquantifiable value was to be maximised in order to irrigate other sectors of the economy, *and not* whether it was possible to create viable physical and consumption linkages between a healthy and unfettered oil industry and the rest of the economy, so that oil could become the nucleus - as opposed to the source of funds - of Venezuelan industrial activity). The only major change in the Venezuelan approach to the question of economic development induced by the first oil shock was again one of *emphasis*, rather than *direction*. As Purroy says:

from the beginning of the 1960s, the state objective [had been] to *bolster* the substitutive industry by means of the cheap and reliable (subsidised) supply of basic industrial inputs. The V plan [however] no longer contemplate[d] such supplementary investment. Basic industry oriented towards exports [became] the dynamic centre of accumulation . . . and monopolise[d] practically all the investment capacity of the state. The novelty [was] that the state itself [turned into] the main promoter of the accumulation process and not just an aid to this process.<sup>136</sup>

The 'oil rent accumulation model' of the Venezuelan government crystallised around a number of ambitious resource-based industry (RBI) projects located for the most part in the

---

<sup>134</sup>Pérez Alfonzo, 1971: 211.

<sup>135</sup>Cordiplan, *V Plan de la Nación*.

<sup>136</sup>Purroy, 1982: 283; italics in original; see also Bitar and Troncoso, 1983.

vicinity of the Ciudad Guayana growth pole.<sup>137</sup> These projects were supposed to turn cheap energy supplies into a source of competitive advantage and - through their exports of attractively-priced RBI outputs - to earn huge amounts of foreign currency that would dynamise the rest of the Venezuelan non-oil economy. In practice, the returns pronosticated for these projects failed to materialise, and the RBI plants became a huge drain on the resources of the Venezuelan treasury.<sup>138</sup> Many other oil-producing countries (Mexico, Saudi Arabia, Indonesia, Nigeria, to name a few) built massive RBI projects during the 1970s, because they also subscribed to the notion that the low cost of their energy inputs would more than offset their considerable disadvantages in terms of high construction and debt-servicing costs, and long distances from target markets. However, although the outcomes of their efforts in this direction were also very disappointing, none of their RBI strategies - with the sole exception of Nigeria's - delivered quite as little as Venezuela's.<sup>139</sup> The main reason behind the latter's dismal RBI performance was that the government ignored all the options which might have reduced the risk and expense of its ambitious industrialisation drive (see Table TA2.1). Firstly, its RBI investments were excessive in relation to GDP (about 14 per cent of non-oil GDP), and they were concentrated in only one particularly difficult sector (industrial metals). Secondly, the government decided to execute several mega-projects simultaneously, with very little help from multinational companies (who could have contributed know-how and access to key export markets). Finally, the RBI programme was launched at a moment when the Venezuelan economy was in the throes of acute Dutch disease<sup>140</sup> and the massive sums invested in the programme only served to crowd out private investment<sup>141</sup> (as a result of which the health of the Venezuelan non-oil economy as a whole came to depend on the rather unlikely prospect that the performance of all the RBI projects would live up to - or even exceed - expectations).

The Venezuelan RBI programme is often been cited as a textbook example of how the temptation of "pursuing dynamic scale economies (through brownfield expansion, vertical integration and agglomeration economies) designed to improve the total [RBI] investment return" can trigger "a Hirschmanian chain of unbalanced growth"<sup>142</sup> which is more than likely to swamp the implementation capacity of any government and turn RBI

---

<sup>137</sup>The projects were: the massive expansion of the Alcasa aluminium smelter and Sidor steelworks, a greenfield aluminium smelter (complete with bauxite mine, refinery and hydroelectric power station) and a greenfield steel and coal mining complex in Zulia (which was abandoned in 1983).

<sup>138</sup>Good treatments of this subject can be found in Auty, 1988; 1989; 1990; Gelbet. *al.*, 1988. See also Tables TA2.2 and TA2.3 in Annexe 2.

<sup>139</sup>As Gelb *et. al.* say, "nothing appears to have been gained from the windfalls in terms of nonoil GDP during 1973-1982" (*op. cit.*: 322). Indeed, it is evident that plenty was lost: Venezuelan per capita non oil GDP fell by 20 per cent between 1978 and 1990 and real income levels dropped by 50 per cent).

<sup>140</sup>On the Dutch disease in general, see Corden, 1982; Corden and Neary, 1982.

<sup>141</sup>Between 1976 and 1984, the productivity of capital dropped by 42 per cent from its historic mean (a clear sign that the absorption of the economy had been amply exceeded).

<sup>142</sup>Auty, 1988: 356.

plants into huge sinks for public funds. However, many critics of Venezuela's misjudged attempt to "jump several stages of historical development"<sup>143</sup> have failed to appreciate that, besides being a reflection of the limited planning capacity of public sectors everywhere, the size and scope of this RBI programme were also a logical corollary of the two fundamental premises underlying Venezuela's rent-driven oil and development policies. These premises - which eclectically combined a Malthusian conception of natural resources with a crude, Rostovian, approach to the question of capitalist development - were, firstly, that the country's oil was running out and, secondly, that the time was coming when the government would no longer be able to extract a rent with which to propel Venezuela on to the crucial stage of economic progress: Rostow's famous "take-off". Thus, the sense of urgency detectable in the Venezuelan RBI strategy<sup>144</sup> can be directly traced to the fact that, in 1974, "the expectations of the [Pérez] government . . . corresponded to a simple extrapolation of past trends"<sup>145</sup>, not only in terms of the price of oil but also in terms of the accelerating rate of depletion of Venezuela's oil reserves (which indicated that the country had enough oil to last it for little over eleven years).<sup>146</sup> The Venezuelan government did not suspect even for a moment that OPEC's success at jacking up international rent levels might have undermined the very foundations of its post-oil shock development policy (by making oil exploration outside OPEC a very attractive proposition and improving the commercial prospects of previously marginal areas like the Orinoco oil belt, hence ensuring that oil would not be running out). Politically, this lack of awareness had one important consequence: it strengthened the bargaining hand of Venezuelan executives in the former oil concessionaires, because President Pérez was anxious to avoid any problems that might get in the way of what he considered to be the last opportunity to sow the country's remaining oil. For their part, these executives failed to appreciate that the arrangement they had negotiated in 1974-5 would be very vulnerable to "obsolescing bargain" dynamics<sup>147</sup>: the day the oil industry failed to provide the government with sufficient funds (i.e. rent) to cover its myriad necessities, the government would have a great incentive to alter the arrangement in its favour, and these managers' capacity to resist such a move would be much diminished (not

---

<sup>143</sup>Werz, 1990: 194. The phrase was Carlos Andrés Pérez's.

<sup>144</sup>Between 1974-9, Pérez spent more money than the republic had in its previous 143 years of existence.

<sup>145</sup>Espinasa and Mommer, 1992: 114.

<sup>146</sup>The ominousness of this R/P ratio was 'confirmed' during 1971-2 by the very disappointing results which Shell, Mobil and Occidental had had exploring those areas of lake Maracaibo which Rómulo Betancourt (in 1963) had trumpeted as being "immensely promising" (see Sáder Pérez, 1972: 146).

<sup>147</sup>This term was coined by Vernon (1971: 46-59) to describe the process whereby governments that have given very favourable conditions to multinationals dedicated to the extraction of minerals for export (because they are keen for investment and so on) gradually - as their income and expenses grow - succumb to the temptation of revising the agreement in their favour, taking advantage of the fact that the companies' capacity to resist is weakened by their sunk costs.

only because a threat of 'exit'<sup>148</sup> on their part would no longer carry the weight it did on the eve of nationalisation but also because PDVSA counted with no domestic allies that would come to its defense). Thus, although these executives always questioned the initiative to turn into exporters "certain sectors . . . [which] did not have the necessary productivity to become competitive in world markets"<sup>149</sup>, they did not realize the grave implications which the government's failure to achieve this would have on the viability of the nationalised Venezuelan oil industry. These implications, as we shall later see, became shockingly clear after 1982.

## 2.5 Conclusions: *Plus ça change . . . ?*

Carlos Andrés Pérez's desire for an uneventful nationalization played into the hands of the senior "native" managers of the foreign oil companies in Venezuela. By hinting obliquely at the many problems that might have arisen had the industry been trusted to inexperienced hands, the first-generation top managers in the nationalised operating companies extracted from the Pérez administration a law that established that the holding company and its subsidiaries would be given a great deal of operational freedom by the Venezuelan government, on the one hand, and that their salaries and sinecures would be respected, on the other hand. Pérez's need for these managers' loyalty, though, was not pressing enough for him to concede that MEM be marginalised from the decision making process in all matters of oil policy (as Agropet disingenuously suggested), or that PDVSA be taxed differently from the way the oil multinationals had been (even though this meant the retention of a rent-collection device - the FRV - which the company decried as being suited for taxing the operations of *foreign* entities only<sup>150</sup>).

Jurisdictional controversies left unresolved by the Nationalisation Law meant that relations between the new NOC and MEM were tense from the outset. Nevertheless, the informal agreement hammered out between 1974-5 did lead to an uneasy equilibrium of sorts between producer and rentier interests, which held for some time. Thus, PDVSA's operating affiliates were able to devote all their energies to revamping Venezuela's refineries, carrying out very ambitious exploration programmes and drawing up plans for the large scale exploitation of the Orinoco oil belt<sup>151</sup>, while the Venezuelan government dedicated itself to

---

<sup>148</sup>Hirschman defines "exit" as any attempt to escape, by whatever means, from an objectionable state of affairs and "voice" as any attempt to change from within- by complaining and making a nuisance of oneself - that objectionable state of affairs (1970: 30).

<sup>149</sup>Quirós (1993: 2) blamed this desire "for the pauperisation of [Venezuelan] society."

<sup>150</sup>As we have seen, this appreciation was not true. Nevertheless, it would have been advisable for the government to substitute the FRV with some other tax, because its retention gave PDVSA the opportunity to say that it was being taxed for money which it was supposedly not earning (this complaint generated quite a bit of sympathy for the company in the Venezuelan private sector).

<sup>151</sup>See Quirós, 1979: 1162-4; due to the maturity of Venezuela as an oil province, exploitation of the Belt was seen as the best alternative to "extend the horizon of the Venezuelan oil industry" (Calderón Berti, 1983: 339).

'sowing the oil' in ambitious RBI projects, with the avowed objective of using the windfalls generated by the two oil shocks - "the largest non-violent transfer of wealth in human history"<sup>152</sup> - to transform Venezuela into a medium-sized industrial power.

Up to 1982 inclusive, then, PDVSA and its affiliates were willing to accept their legal obligations to "follow the dispositions dictated by the National Executive" and implement the decisions of the shareholder assembly of the holding company. The majority of Venezuelan executives occupying key posts in the foreign concessionaires had reluctantly accepted these obligations, in the understanding that they would have a considerable say in the formulation of those dispositions (in so far as they affected the future of the oil industry), on the one hand, and that the intense political penetration characteristic of all other Venezuelan SOEs (and Venezuelan society in general) would not be extended to the oil industry, on the other. What neither they nor government officials apprehended in 1976, though, was that this *modus vivendi* was inherently unstable, because it was not the outcome of a shared desire by both the landlord state and its new tenant - the NOC - to create a viable formula for the reconciliation of their legitimate, albeit many times conflicting, interests related to oil rent. Hence, notwithstanding the nominal commitment of the government to the financial self-sufficiency of the oil industry, there was no clear and established criterion for the legitimate division of oil income between them (since the idea of putting a fixed ceiling on ground rent was anathema to the Venezuelan state, even though it was the owner the entities whose activities would have been sheltered by such a ceiling). Moreover, as Uslar Pietri notes, "the apparatus of surveillance, intervention and control which had been set up to monitor the activities of the multinationals was kept intact . . . [even though] this created an absurd situation of bicephaly whereby the nationalised industry, which is the exclusive property of the state, is treated by this state in much the same way as the foreign companies used to be".<sup>153</sup>

The only reason why the *modus vivendi* established in 1975-6 worked at all, for any length of time, was that PDVSA "was a prosperous and rich company . . . owned by an equally rich and prosperous state [which was willing to give it] a high degree of autonomy".<sup>154</sup> However, when this all-round affluence was swept away by the fiscal crisis connected to the collapse of the oil rent accumulation model in the early 1980s, a government "caught in an uncontrollable process of rising expenditure and debt"<sup>155</sup> quickly began to have second thoughts about whether it had received a fair division of the spoils under the financial self-sufficiency formula which oil industry managers (traditionally regarded with deep suspicion anyway) had been granted in 1976. Company spokespersons urged the government

---

<sup>152</sup>Schneider, 1983: 1.

<sup>153</sup>In Sosa Pietri, *op. cit.*: 8.

<sup>154</sup>*Ibid.*: 13.

<sup>155</sup>Sosa Pietri, *op. cit.*: 8.

not to give in to the temptation of unilaterally altering the *status quo* at the first real test of its commitment to the long-term health of the oil industry.<sup>156</sup> These entreaties, though, fell on deaf ears. As a result, even though the government had appropriated for itself an overwhelming proportion of Venezuela's oil rent since 1976, both the formal *and* informal frameworks which had conditioned the economic and political interaction between PDVSA and the Venezuelan Executive and its dependencies began to buckle under financial pressures in early 1982 and ultimately gave way before that year had ended. The speed with which the institutional arrangements created by the Nationalisation Law collapsed is perhaps the best indication of the fact that - to borrow from Mény's metaphorical terminology<sup>157</sup> - key parts of this legislation were productivist policy transplants which, being totally alien to the nature of the rent-fed tissue unto which they was grafted, were bound to be rejected by the latter. The consequences of this rejection for the company have been grievous. As Mommer indicates,

[whereas] from an operational point of view, PDVSA has been . . . highly successful . . . [f]rom a political viewpoint, however, things look different . . . PDVSA has not succeeded in creating a viable institutional and economic environment, i.e., to take the necessary distance from the [Venezuelan] state and to develop new links with the non-oil sector. There is no adequate legislation to define [its] fiscal contribution . . . and, by the same token, its profits. The company has been forced into indebtedness to maintain . . . output [and] it is suffering heavy losses in its . . . domestic market.<sup>158</sup>

We believe that the internationalisation programme was PDVSA's response to this dramatic (and politically-motivated) deterioration in its business environment. In the chapters that follow, we will attempt to demonstrate that the internationalisation programme was the most important corporate initiative to emerge from the institutional debris which the rapid unraveling of the Venezuelan oil rent accumulation model left in its wake.

---

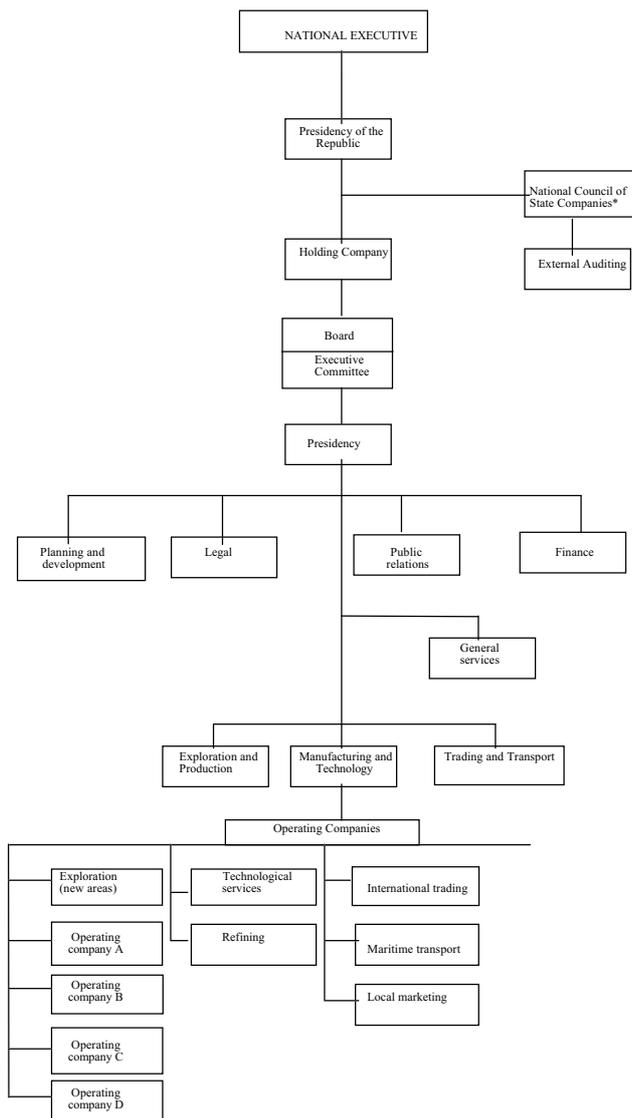
<sup>156</sup>As Vilorio (1983: 149) futilely insisted, "the principle of financial selfsufficiency acquires particular relevance in [those] junctures. . . where, through a reduced fiscal contribution of the industry derived from changing situations in international markets, there can occur a diversion of the reserves of the Industry aimed at plugging eventual [*sic.*] financial deficits or financing non-oil, non-petrochemical activities".

<sup>157</sup>Mény, 1993: 7.

<sup>158</sup>Mommer, 1994: 36.

## ANNEXE 1: PDVSA. INSTITUTIONAL EVOLUTION AND CORPORATE STRUCTURE

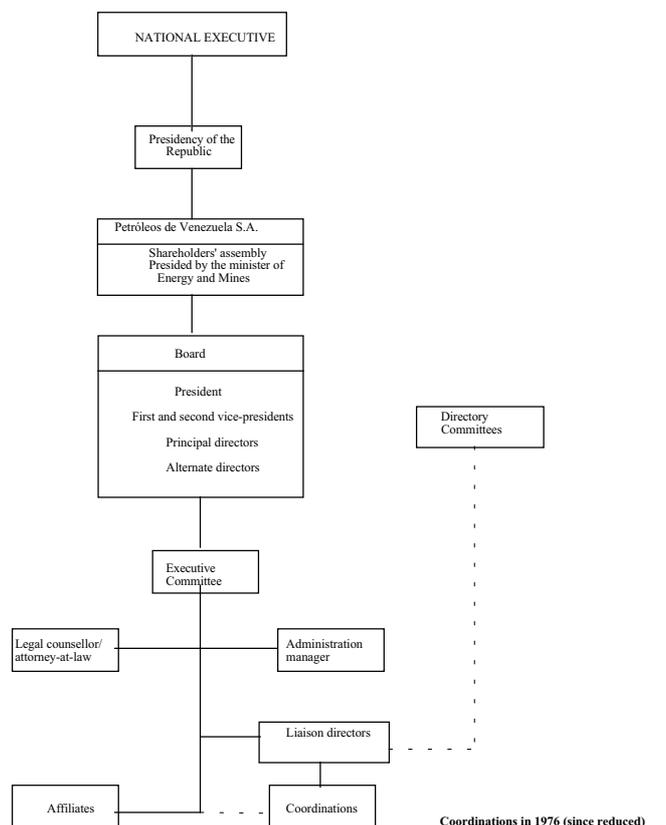
**FIGURE FA1.1:** PROPOSED ORGANISATIONAL SCHEME FOR ADMINISTRATION OF THE NATIONALISED PETROLEUM INDUSTRY



\* Never created

SOURCE: Ornel, 1983: 63

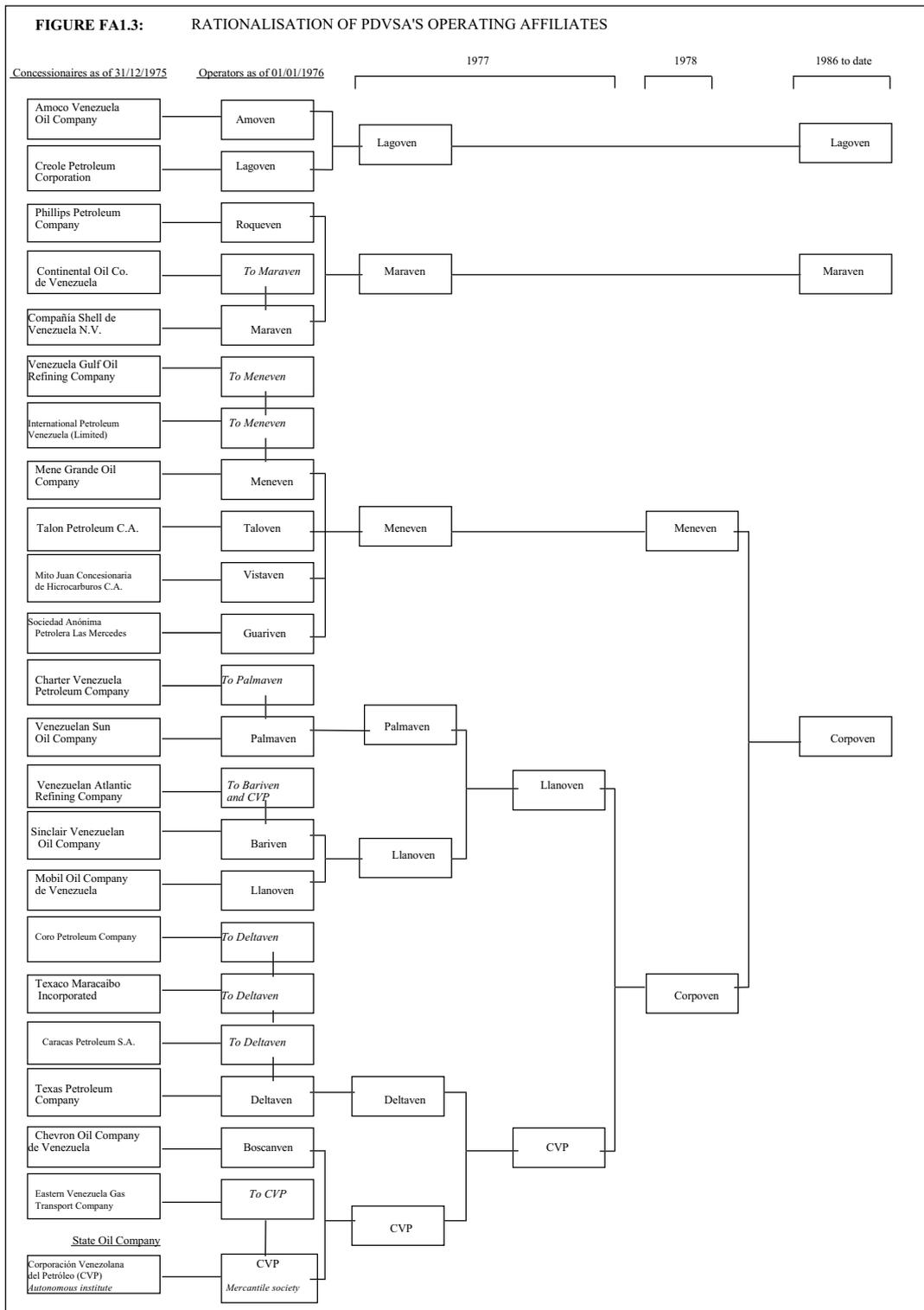
**FIGURE FA1.2: ORGANISATIONAL STRUCTURE OF THE NATIONALISED PETROLEUM INDUSTRY IN VENEZUELA**



**Affiliates (until 1997)**

Integrated oil companies (exploration, production, refining, international marketing): Lagoven S.A., Maraven S.A., Corpoven S.A.  
 Domestic industrialisation of hydrocarbons: Productos Especiales C.A. (PROESCA, coordinated by Maraven)  
 Coordination of domestic Venezuelan investment in oil activities: Sociedad de Fomento a la Inversión Petrolera (SOFIP)  
 Coordination of foreign joint ventures: Intervén S.A.  
 Foreign refining and marketing: Citgo Petroleum Corp., Ruhr Öl GmbH., AB Nynäs Petroleum, Refinería Isla (Curazao), S.A.  
 Natural gas distribution: Cevegas (subsidiary of Corpoven)  
 Investments: PDV América Corp., PDV Europa B.V.  
 Corporate insurance: PDV Insurance S.A.  
 International procurement and financing: Bariven S.A.  
 Market intelligence: PDV UK, S.A., PDV (USA) Corp.  
 Petrochemicals: Pequiven S.A. and affiliates  
 Research and development: INTEVEP S.A.  
 Coal: Carbones del Zulia (Carbozulia) S.A. and affiliates  
 Domestic marketing: Deltaven S.A.  
 Fertilisers: Palmaven S.A.  
 Bitumen: Bitúmenes Orinoco (Bitor) S.A. and affiliates  
 Maritime transportation: PDV Marina S.A.  
 Overseas storage: Bonaire Petroleum Corp. N.V. (Bopec), Bahamas Oil Refining Co. (Borco)  
 Risk exploration in new areas and hydrocarbon production under profit-sharing agreements: Corporación Venezolana del Petróleo (CVP) S.A.  
 International trading: PDVSA Marketing International, Petromar  
 Purchases of national goods and services: Bienes y Servicios C.A. (BISERCA)  
 Corporate Services: PDVSA Services Inc., PDVSA Services B.V.  
 Training: Centro Internacional de Educación y Desarrollo (CIED), previously Centro de Formación y Adiestramiento de Petróleos de Venezuela y sus Filiales (CEPET)

**FIGURE FA1.3: RATIONALISATION OF PDVSA'S OPERATING AFFILIATES**



**ANNEXE 2: COMPARATIVE EVALUATION OF THE VENEZUELAN RBI  
STRATEGY AND PERFORMANCE OF VENEZUELAN RBI PROJECTS**

**TABLE TA2.1: Comparative Evaluation of RBI Strategies of Various Countries**

<i>Options Strategy</i>	<i>Low risk</i>	<i>High risk</i>					
a. Role of RBI in development strategy	Minor	Dominant					
b. Specialisation within RBI	High	Low					
<i>Strategy implementation</i>							
c. RBI project sequencing	Phased	Bunched					
d. Access to MNC expertise	High	Low					
<i>Marketing</i>							
e. Growth of domestic non -oil GDP	Sustained	Erratic					
f. RBI export market access	High	Low					
<i>Calculation of risk index (1=low risk; 5= high risk)</i>							
<i>Options</i>	<i>a</i>	<i>b</i>	<i>C</i>	<i>d</i>	<i>e</i>	<i>f</i>	<i>Index</i>
Cameroun	1	3	1	1	1	5	0.40
Bahrein	3	3	1	1	3	1	0.40
Indonesia	3	1	1	3	3	3	0.46
Malaysia	3	1	3	3	3	3	0.53
Saudi Arabia	5	5	1	1	3	3	0.60
Trinidad and Tobago	5	3	3	3	3	3	0.67
<b>Venezuela</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>3</b>	<b>3</b>	<b>0.87</b>
Nigeria	5	5	5	5	5	5	1.00*

\*An index of 1.00= high risk in all six factors  
Source: Auty, 1989.

**TABLE TA2.2: Estimated Full Capacity Costs and Actual Capacity Use for Steel Enterprises in Various Countries**

<i>Project characteristics</i>	<i>SIDOR IV</i>	<i>Delta</i>	<i>PTK</i>	<i>Sabic</i>	<i>HICOM</i>	<i>Iscott</i>	<i>Base case</i>
Location	<b>Venezuela</b>	Nigeria	Indonesia	Saudi Arabia	Malaysia	Trinidad	-
Vintage	<b>Expansion</b>	New	New	New	New	New	New
Scale (MMT)	<b>4.80</b>	0.95	2.00	0.80	0.56	0.70	0.70
Investment (MMUSD)	<b>4,800</b>	1,700	2,250	800	0.44	0.51	0.25
Start-up date	<b>1979</b>	1981	1981	1983	1985	1981	1984
<i>Cost/Tonne, 100% capacity use (USD)</i>							
DRI Materials and energy	<b>46.46</b>	43.50	63.00	39.75	67.45	45.50	58.20
Scrap	<b>13.42</b>	27.00	14.00	16.00	16	16.00	14.00
Energy	<b>12.20</b>	78.00	85.00	9.00	51.06	14.70	9.00
Other materials	<b>42.31</b>	121.60	81.08	70.26	59.46	64.86	52.70
Labour	<b>96.15</b>	53.05	54.23	63.41	26.80	16.50	8.00
Maintenance and overhead	<b>29.70</b>	51.30	43.30	24.79	19.72	18.10	5.35
Depreciation	<b>74.60</b>	89.40	56.25	39.90	29.43	36.20	17.85
Interest expense	<b>114.30</b>	33.15	10.12	31.45	20.70	39.10	7.14
Return at 280 USD/Tonne	<b>(149.14)</b>	(217.00)	(126.98)	(14.56)	(12.62)	29.04	107.76
<i>Performance</i>							
Investment overrun (%)	<b>150</b>	n/a	n/a	n/a	110	132	100
Debt/equity (%)	<b>71</b>	31	10	70	55	60	50
Man-hours/tonne	<b>13</b>	15	28	5	5	4	4
Investment return (%)	<b>(15)</b>	(8)	(13)	(2)	(2)	4	30
Equity return (%)	<b>(34)</b>	(11)	(113)	(5)	(4)	10	60
Actual capacity use (%)	<b>60</b>	25	45	127	60	n/a	100

Source: Auty, 1990.

**TABLE TA2.3:** Estimated Full Capacity Costs and Actual Capacity Use for Aluminium Enterprises in Various Countries

	<i>Venalum</i>	<i>Alcasa</i>	<i>Inalum</i>	<i>Alucam</i>	<i>Alba</i>	<i>Base case</i>
<i>Project characteristics</i>						
Location	<i>Venezuela</i>	<i>Venezuela</i>	Indonesia	Cameroun	Bahreïn	-
Vintage	<i>New</i>	<i>Expansion</i>	New	Expansion	Expansion	New
Scale (MMT)	<b>0.280</b>	<b>0.120</b>	0.225	0.085	0.175	0.200
Investment (MMUSD)	<b>770</b>	<b>550</b>	1,230	132	185	660
Start-up date	<b>1981</b>	<b>1965</b>	1982	1960	1971	1984
Cost/Tonne, 100% capacity use (USD)						
Alumina	<b>429.90</b>	<b>429.90</b>	331.30	468.00	315.24	412.45
Other materials	<b>219.87</b>	<b>312.32</b>	212.00	326.70	178	205.00
Electricity	<b>73.11</b>	<b>74.42</b>	135.00	180.00	73.74	135.00
Labour	<b>155.51</b>	<b>150.75</b>	78.40	103.70	219.66	48.00
Maintenance	<b>203.05</b>	<b>182.90</b>	106.00	23.60	144.34	30.00
Overhead	<b>71.20</b>	<b>110.90</b>	20.00	15.73	56.48	20.00
Depreciation	<b>97.25</b>	<b>56.80</b>	277.78	80.73	79.38	150.00
Interest expense	<b>79.00</b>	<b>344.90</b>	345.30	101.50	64.95	60.00
Return at 1,250 USD/Tonne	<b>(78.95)</b>	<b>(319.39)</b>	(255.98)	(42.48)	118.20	189.55
<i>Performance</i>						
Investment overrun (%)	<b>175</b>	<b>166</b>	100	n/a	n/a	100
Debt/equity (%)	<b>60</b>	<b>82</b>	78	65	45	50
Manhours/tonne	<b>28</b>	<b>47</b>	25	30	26	12
Investment return (%)	<b>(2)</b>	<b>(7)</b>	(5)	(3)	7	6
Equity return (%)	<b>(5)</b>	<b>(39)</b>	(21)	(8)	13	13
Actual capacity use (%)	<b>100</b>	<b>100</b>	100	100	100	100

Source: Auty, 1990.

### 3 PDVSA'S INTERNATIONALISATION PROGRAMME: AN OVERVIEW

Since 1982, PDVSA has acquired either partial or total control of sixteen refineries - and associated assets for the transportation, distribution and retailing of petroleum products - in the United States, Germany, Great Britain, Sweden, Belgium and the Netherlands Antilles, at a cost of at least 3,000 MMUSD (a sum which makes it one of the most - if not the most - expensive investment programmes ever to be undertaken by an LDC company, state-owned or otherwise, beyond its national borders).<sup>1</sup> The purpose of this chapter is to familiarise the reader with the components of PDVSA's overseas refining emporium, because in subsequent chapters frequent reference will be made to them. This is a descriptive chapter, which does not analyse in depth the internationalisation programme *per se*, nor speculates on its possible motivations. For reference purposes, a synopsis of PDVSA's refinery acquisitions is included at the end of the chapter.

#### 3.1 Ruhr Öl GmbH.

PDVSA struck its first overseas downstream integration deal with Veba Öl - a subsidiary of Veba A.G., a (then) partially state-owned consortium - in late 1982 (although the agreement was to be effective from January 1983). This agreement established a company known as Ruhr Öl, which became the owner of a high conversion<sup>2</sup> 250 MBD refining complex located near Gelsenkirchen. The agreement gave both partners a 50 per cent stake in the new company, and equal representation in the Ruhr board.<sup>3</sup> Veba was left in charge of Ruhr's day-to-day operations as well as all the marketing, distribution and sales of products from the refinery within West Germany. In sharp contrast to what became its standard operating procedure for all its refinery acquisitions after the Ruhr deal, the Venezuelan NOC did *not* sign a long-term supply contract for the Gelsenkirchen complex with Veba (each counterpart is only required to cover half of Ruhr's feedstock needs for the duration of the joint venture agreement, which was set at 20 years). For a short while, Lagoven was in charge of arranging the shipments of Venezuelan crude to Ruhr; this function was later transferred to a PDVSA letterbox subsidiary domiciled in Panama (PDVSA Marketing International, or PMI), although Lagoven continues to be the source for all the crude (Venezuelan and otherwise) run by Ruhr on PDVSA's account.

---

<sup>1</sup>This figure does not include the large sums (upwards of 150 MMUSD) disbursed by PDVSA to acquire storage capacity and products terminals in the Caribbean and the Baltic.

<sup>2</sup>The refinery's yield of residual fuel oil is about 8 percent (against a European mean of 20 per cent).

<sup>3</sup>PDVSA paid DM 115 million for its initial equity stake in Ruhr and a further DM 253 million for its share in a new hydrocracker which came on stream in 1983.

This association accord was signed at a time when the German refining industry was going through an exceptionally difficult period.<sup>4</sup> In common with other German refiners, Veba was affected by the generalised downturn in European refining margins, but its situation was made even more precarious by the fact that it had "very little crude oil of its own, no clear political framework in which to act . . . [and] no 'spiritual' and policy backing [from its home government]".<sup>5</sup> Because of Bonn's reluctance to introduce regulation in order to underpin German refining margins, Veba A.G. resorted to subsidising its refining operations with cash flows from its electricity generation and distribution businesses. However, the managers of the conglomerate understood that this escape route was not sustainable in the long term, and they decided to ally Veba to a company with access to cheap and abundant crude supplies.<sup>6</sup> PDVSA was in many ways the logical choice for them, as Veba's relations with the Venezuelan company were particularly cordial.<sup>7</sup>

In 1985<sup>8</sup>, PDVSA acquired half of Veba's remaining refining and primary petrochemical operations.<sup>9</sup> In this way, Ruhr took over an additional 85.2 MBD of refining capacity in Germany, and a number of petrochemical plants, marine terminals, tank farms and pipelines distributed all over Western Europe.<sup>10</sup> Then, in March 1991, Ruhr expanded its refining operations once again, buying a 37.5 per cent share in the Schwedt refinery (the biggest in the former German Democratic Republic). This transformed Ruhr into the largest refiner in Germany (with a 19.8 per cent share of the total refining capacity in the country). PDVSA went ahead with this operation in spite of a number of rather serious disadvantages (firstly, the very disperse ownership structure of the refinery made it difficult to arrange long-term supply contracts; secondly, sizable investments were necessary if the plant was to meet West German environmental standards and product specifications<sup>11</sup>; thirdly, it appeared

---

<sup>4</sup>During the years 1980, 1981 and 1982, German refiners lost 1,700, 5,500, and 4,500 MMUSD, respectively.

<sup>5</sup>Grayson, 1981: 146.

<sup>6</sup>Veba had taken this route before in the 1970s. Unfortunately, neither Gulf nor BP (the companies which Veba allied itself with, in 1975 and 1979, respectively) had been able to offer the German company a lasting stability in either its crude supplies or its refining margins.

<sup>7</sup>The two companies had signed a technological cooperation agreement to evaluate and investigate techniques for handling and processing extra-heavy crudes and residuals back in 1978. Moreover, just before the Ruhr deal was announced, both companies had been trying to set up a joint venture to process Orinoco extra-heavy crude.

<sup>8</sup>In that year, the German refining industry underwent a new bout of restructuring, which reduced total installed distillation capacity to 1.650 MMBD (1.350 MMBD less than in 1976).

<sup>9</sup>Randall (*op. cit.*: 207) claims that PDVSA had paid Veba 16 MMUSD for a call with a 1985 expiry date on the assets involved in this expansion.

<sup>10</sup>PDVSA paid DM 130.5 million for its share in these assets, which included 25 per cent of Erdöl Raffinerie Neustadt and 33 per cent of Oberrheinische Mineralölwerke. The OMW refinery was merged with Esso's Karlsruhe refinery in 1996. Ruhr now has a 24 per cent interest in the amalgamated units.

<sup>11</sup>The consortium which submitted the winning bid for the refinery paid only DM 60 million up front, as the German government had written off DM 2.035 billion of the refinery's nominal value (DS, 51/1991: 97). However, it had to promise that it would invest DM 1.3 billion in revamping the plant

highly unlikely that the refinery's degree of dependence towards Russian crude could be lessened; finally, it seemed equally unlikely that the refinery would ever process much Venezuelan crude at all<sup>12</sup>). However, it seems evident that PDVSA considered the growth perspectives of the retail gasoline market in the former East Germany as sufficiently attractive to compensate for all these adverse factors (in the event, the refining and retailing sector in East Germany has proven to be anything but a gold mine<sup>13</sup>, to the extent that PCK Schwedt has consistently refused to disclose the profits or losses made by the refinery<sup>14</sup>).

### 3.2 Refinería Isla (Curazao), S.A.

In October 1985, a PDVSA subsidiary, Refinería Isla, brought a 320 MBD capacity refinery located in Emmastad (Curaçao) back on stream, under the terms of a lease arranged with the government of the Netherlands Antilles. The lease stipulated that PDVSA would pay the government 11 MMUSD per year for an initial period of five years, after which the lease would be open for renewal every two years.<sup>15</sup> It also exempted PDVSA from the payment of taxes and duties in the Netherlands Antilles, and gave the Venezuelan company the right to use the refinery's marine terminals and extensive storage installations.

Before becoming a part of PDVSA's overseas refining system, the Curaçao refinery had been in the hands of Royal Dutch/Shell for about 50 years. Like the rest of the enormous refineries in the Caribbean, Curaçao had been designed to produce colossal amounts of high sulphur residual fuel oil to supply the eastern seaboard of the United States. During the early 1980s, a number of factors - increases in international crude prices, a widening of the price spread between light and heavy products, and the lifting on the ban on US petroleum product exports - forced many of these entrepôt refineries either to shut down or to scale back their operations dramatically. Shell Curaçao and Exxon Aruba were able to maintain their refinery runs at an almost reasonable 50 per cent of installed distillation capacity, but only because

---

between 1990-5. After this investment had been completed, the consortium announced that it would be forced to spend an additional 1,000 MMUSD from 1996 onwards (*PON*, August 29, 1995: 2).

<sup>12</sup>Before German reunification, the refinery received all of its crude supplies from Siberia. PDVSA estimated that a colossal investment (800 MMUSD) in pipelines, port facilities and plant modifications would be necessary for the refinery to process 180 MBD of Venezuelan crude (see Boué, 1993: 172-3).

<sup>13</sup>When PCK was established, its owners estimated that by 1995 East German oil consumption would surpass 19 MMT; the actual consumption figure for this year was about 17 MMT. PCK has downgraded its estimates for East German consumption for the year 2000 from 24 MMT to 20 MMT (*PON*, August 29, 1995: 2).

<sup>14</sup>*EER*, July 8, 1994: 8. It is possible, though, to have a rough idea of how poor Schwedt's financial performance has been. In 1992, RWE-DEA (holder of 37.5 per cent of the shares of the consortium) revealed that it expected to lose about DM 200 million between 1992-6 in its Schwedt operations. On the basis of the equity stakes the other consortium partners, one arrives at an estimated loss of DM 94 million for PDVSA and DM 534 million for the refinery as a whole (over these four years). PCK's chairman has said that, unless the situation in the German market changes radically in the near future, the partners "will not be able to reckon with an acceptable return on [their] investments" in the plant (*PON*, August 29, 1995: 2).

<sup>15</sup>From 1988 onwards, the fee has been set at 15 MMUSD per annum. In 1994, PDVSA extended the lease for a 20 year period.

Venezuela continued to invoice them on the basis of preferential formulae which linked the price of their crude supplies to the price of residuals in the US. When, at the end of 1984, PDVSA informed both companies that their crude supplies would be cut even more and that, in the future, it would price their volumes on the basis of official Venezuelan postings, the financial situation of the two refineries became unsustainable.

The Aruba refinery was shut down in March 1985. Then, in April 1985, Shell announced that it would cease operations in Curaçao at the end of that year, unless some other party (either the Netherlands Antilles government, the Dutch government or PDVSA) absorbed part of its considerable losses and contributed a sizable proportion of the 500 MMUSD investment which modernising the refinery would cost. It soon became clear, however, that the Netherlands Antilles government was not in a financial position to comply with Shell's demands, and that neither PDVSA nor the Dutch government thought that the prevention of economic collapse in the island was an objective which merited this type of expenditure.<sup>16</sup> Furthermore, the entreaties of the Dutch government failed to convince Shell that it had the moral obligation of preventing the widespread emigration of islanders to the Netherlands by continuing to operate the refinery. However, just as the plant's closure seemed imminent, the international oil market started to give evidences of great weakness. As a result of the marketing difficulties which PDVSA encountered, the Venezuelan company - which had previously refused to earmark any volumes for Curaçao - promptly assigned it a supply quota of 150 MBD (the equivalent of 10 per cent of Venezuelan exports at the time). Unsurprisingly, this disinterested gesture did not convince Shell of altering its designs towards the refinery, and the threat of Curaçao's closure began to loom even larger in the minds of officials in both PDVSA and the Venezuelan government (particularly after June 1985, when total Venezuelan oil exports fell below the 1 MMBD mark). This led to the deadlock in the negotiations being broken, and the parties quickly reached the following agreement: Shell would sell the refinery to the island government for one guilder, while PDVSA would pay Shell an undisclosed sum for the inventories of the refinery, and would assume the operatorship of the plant.<sup>17</sup>

The original plans for the Curaçao refinery apparently contemplated Maraven supplying it with approximately 150 MBD of crude for processing under contract. Initially, Maraven was reluctant to supply this volume, partly because Shell's product off-take from the plant was much smaller than expected, but also because the Venezuelan government did not allow PDVSA to change the postings for the refinery's products without previous approval

---

<sup>16</sup>Politicians thought it would only make sense to subsidise Aruba and Curaçao if they consented to enter into some form of political association with Venezuela, under the latter's tutelage (Calderón Berti, 1986: 120-1).

<sup>17</sup>The Netherlands Antilles government retained the right to process crude in the plant but, to date, it has never exercised it.

from MEM.<sup>18</sup> As a result of this, crude runs in the refinery did not exceed 100 MBD for some time, but the refinery now routinely processes an average of 190 MBD of Venezuelan crude.

The main market for Isla's products is the Caribbean. This highly dispersed market (which accounts for around 26 per cent of the refinery's exports) allows Isla to sell its products at premium prices, according to PDVSA.<sup>19</sup> Nevertheless, PDVSA has always accepted that, if operated as a standalone refinery, Isla would make no economic sense (given its relatively high operating costs, low energy efficiency, high labour costs and large output of residuals)<sup>20</sup>, although the company insists that it is acceptably profitable in the context of its large international refining and marketing network.<sup>21</sup>

### 3.3 AB Nynäs Petroleum

In June 1986, PDVSA and Swedish conglomerate Axel Johnson signed a contract whereby, effective January 1986, the Venezuelan company would acquire half of AB Nynäs Petroleum, for the sum of 165 million Swedish kronor.<sup>22</sup> Nynäs operated two refineries in Sweden (with a combined distillation capacity of 40 MBD<sup>23</sup>) which processed about 20 MBD of Venezuelan 11° API crude; it also owned a road tanker fleet, an asphalt-dedicated ship and barge fleet, and 16 distribution terminals across Western Europe. The crude supply contract for the joint venture also covered a mothballed 15 MBD refinery located in Antwerp, which Nynäs had bought early in 1986, in anticipation of the deal with PDVSA.<sup>24</sup>

Nynäs' strong presence in key specialty products markets<sup>25</sup>, as well as its experience in handling heavy crudes, led PDVSA to believe that its acquisition would be a decisive step towards consolidating the position of Venezuelan crudes in the European oil market. To a large extent, however, PDVSA's stated expectations regarding the growth potential of the Swedish company have not been fulfilled (Nynäs' original supply contract was for 40 MBD

---

<sup>18</sup>*PON*, July 15, 1986: 1; November 5, 1985: 2.

<sup>19</sup>The rest of Latin America and the US absorb 14 and 21 per cent of the refinery's exports (respectively), with Europe and Canada accounting for about 4 per cent each.

<sup>20</sup>*FT*, September 27, 1990: 37. Operating costs in the refinery are about 3 USD/Bbl (against 2 USD/Bbl in Venezuela), the plant is about 20 per cent over-staffed, and fuel oil represents about 38 per cent of its total output (*LL*, September 6, 1996: 7).

<sup>21</sup>Isla's president explained in March 1995 that "the fact that Isla is operating with a negative refining margin does not necessarily mean that the business is generating losses for PDVSA . . . [which], looking at the enterprise in an integrated form, has decided to take the losses because future retributions will outweigh them". He went on to say that, in any case, the losses were really "opportunity costs, rather than net losses" (*Economía Hoy*, March 31, 1995: 5).

<sup>22</sup>Maraven had broached the issue of a partnership to the Swedish company as far back as 1982, but political controversies delayed the signing of an agreement.

<sup>23</sup>Both refineries only processed Venezuelan Laguna crude, acquired under a preferential formula which discounted the official Venezuelan posting when this price exceeded "an agreed 'equitable' differential with a basket of lighter crudes" (*PIW*, September 5, 1983: 8).

<sup>24</sup>Before being shut down, this refinery also processed Venezuelan 11° API crude exclusively.

<sup>25</sup>In 1986, Nynäs accounted for 18 per cent and 15 per cent of the European markets for naphthenic lubes and asphalts, respectively.

of crude, but the liftings of these three refineries have never appreciably exceeded 20 MBD). However, the joint venture agreement has proven very beneficial for Nynäs, whose long-term prospects in 1986 appeared quite compromised by Axel Johnson's precarious financial situation.<sup>26</sup>

In August 1992, Nynäs expanded its marketing base by purchasing Tarmac's interests in two asphalt refineries in the UK, for a price of 133 MMUSD.<sup>27</sup> The deal stipulated that asphalt from the refineries would continue being sold to Tarmac through a long-term contract. Tarmac's divestiture of its refining business was prompted by the fact that its share price had been in a free fall for most of 1991, due to the company's disappointing results during previous years.

### **3.4 Citgo Petroleum Corporation**

In September 1986, PDVSA and the Southland Corporation - which at the time was the largest independent gasoline retailer in the US - signed an agreement effective January 1986, whereby the Venezuelan company would pay 290 MMUSD for 50 per cent of Citgo Petroleum (a Southland subsidiary which owned a 320 MBD refinery located in Lake Charles, Louisiana). This refinery (the eighth largest in the US) processed mainly heavy and sour crude oils, and had a very high conversion index.<sup>28</sup> PDVSA pledged to supply the Lake Charles refinery with a minimum of 120 MBD of crude over 20 years (with the option of increasing contractual deliveries to 200 MBD at its discretion). Southland, for its part, assumed the obligation of covering a certain proportion of its gasoline needs with Citgo product (the lesser of either 50 MBD or 35 per cent of its gasoline purchases). It was also agreed that Citgo could only have one other shareholder besides PDVSA, and that the Venezuelan company would have the right of first refusal in the event that Southland decided to sell its block of shares.

Southland's decision to ally itself with PDVSA was the result of pressing financial troubles. Despite the size and state-of-the-art equipment of the Lake Charles refinery, Citgo's financial performance throughout the early 1980s had been anything but satisfactory.<sup>29</sup> The

---

<sup>26</sup>When PDVSA bought half of Nynäs, Axel Johnson turned over 23 per cent of its shares in the company to the Swedish Investment Bank, in lieu of debt payments. Axel Johnson later sold the its remaining share in Nynäs to Finnish state oil company Neste Öy.

<sup>27</sup>Tarmac's refining interests were: 100 per cent share in Briggs Oil's 10 MBD plant in Dundee, and a 50 per cent share in Eastham Refinery's 25 MBD plant in Eastham.

<sup>28</sup>Citgo also had a shareholding stake in the Colonial and Explorer pipeline systems (which link the US Gulf Coast with New England and the Great Lakes region, respectively). Citgo supplied gasoline to more than seven thousand stations, and also had extensive lubes operations.

<sup>29</sup>When Southland acquired Citgo, its management assumed that the combined gasoline sales of both companies - 235 MBD - would enable it to run the Lake Charles refinery at full capacity, thus reducing its operational costs significantly. Southland management also considered that the coming on stream of state-of-the-art conversion plants would reduce the plant's feedstock costs even further. Unfortunately, Southland's expectations regarding the profitability of Citgo's assets proved rather optimistic: by mid

year 1986, however, proved to be particularly disastrous: during the first quarter alone, Citgo lost about 100 MMUSD.<sup>30</sup> As a result of this event, the company's management gave top priority to finding a source of crude that would, in their words, "reduce sharply, perhaps even eliminate, Citgo's vulnerability to large losses stemming from market downturns".<sup>31</sup>

The PDVSA-Southland union worked reasonably well for some time, but the relationship came under strain as a result of the Thompson brothers' (founders of Southland) decision to embark upon a leveraged buy-out of their company, valued at 5,100 MMUSD. The massive interest payments to Southland's junk bond holders took it to the brink of insolvency, and forced the Thompsons to sell hundreds of their most profitable gasoline stations, and also to consider liquidating their Citgo shares. PDVSA's managers viewed these developments with alarm, because they thought that the Thompsons' quest for cash could lead to their being saddled with an undesirable business partner. The Thompsons proposed that, as a palatable alternative to selling their shares, PDVSA should allow them to put the refinery up as collateral for a new emission of high interest bonds. Unsurprisingly, PDVSA vetoed this attempt to have the joint venture underwrite the costs of the Thompsons' financial misjudgments and, in consequence, the brothers announced that they would sell their Citgo shares to the highest bidder. PDVSA took advantage of Getty Oil's publicly-stated interest in Citgo to convince the Venezuelan government that it should be allowed to buy the Thompsons out, at a cost of 662 MMUSD.<sup>32</sup>

Citgo's performance since 1990 has been lauded as stellar by all oil trade journals. Its annual growth rate in gasoline sales has averaged 20 per cent. It has also become the largest gasoline retailer in the US (in terms of the number of stations flying its banner), surpassing in the process even the most sanguine expectations both of its managers and of its sole shareholder.<sup>33</sup>

### 3.5 Champlin Refining Company

During the first quarter of 1987, PDVSA and the Union Pacific Corporation created a company called the Champlin Refining Company, in which each agreed to take a 50 per cent shareholding interest. As well taking over UP's extensive wholesaling operations in the southeastern US, this joint venture also became the owner of a state-of-the-art 165 MBD

---

1984, the refinery was operating way below its full capacity, and Southland found itself having to cover a good part of its gasoline needs in the spot market (*IPF*, August 31, 1984: 2-3).

<sup>30</sup>Between 1984 and 1986, Citgo lost between 10 and 15 MMUSD per month (*NPN*, October 1995: 83).

<sup>31</sup>*IPF*, June 30, 1986: 6.

<sup>32</sup>*USOW*, June 5, 1989: 1-2. The government established the condition that this half of Citgo had be sold afterwards (Sosa Pietri, *op. cit.*: 111). However, it is probably fair to say that this was a commitment which PDVSA never intended to honour.

<sup>33</sup>For instance, in 1990, Citgo's CEO declared that he anticipated the company's retailing network reaching the 11,000 station mark by 1995 (*NPN*, July 1990: 34); however, in 1995, Citgo had 14,054 stations flying its flag.

refinery (located in Corpus Christi, Texas), whose financial performance during previous years had been very poor.<sup>34</sup>

The PDVSA-UP joint venture agreement was concurrent with a crude supply contract for 80 MBD of Venezuelan crude, meant to run for 25 years. The agreement also incorporated an option giving PDVSA the right to buy the remaining 50 per cent of Champlin in the short term (the inclusion of this clause indicates that it is very probable that, by 1987, Union Pacific had decided to exit the refining sector altogether<sup>35</sup>). In September 1988, PDVSA exercised this option and, effective January 1989, bought out UP for 156 MMUSD.<sup>36</sup> At that point, PDVSA also decided to expand the refinery's supply contract to 130 MBD of crude and 10 MBD of virgin naphtha. In January 1991, Citgo formally absorbed all of Champlin's assets, and the operations of both companies were amalgamated, under the direction of the former. Before this amalgamation took place, there had been a considerable degree of overlapping and duplication between the activities of both companies.

### **3.6 Citgo Asphalt Refining Company**

This company was formed in March 1992, when Citgo formally absorbed all the assets of Seaview Petroleum Company (although at that point Citgo was the sole owner of all outstanding Seaview shares).<sup>37</sup> Seaview's main attraction lay in its 84 MBD refinery and its associated maritime terminal (located in Paulsboro, New Jersey), which were seen as an ideal bridgehead for PDVSA to break into the US East Coast asphalt market. In June 1992, Citgo Asphalt would purchase Amoco Oil Company's 28 MBD refinery - scheduled for imminent closure - located in Savannah, Georgia, and took over Amoco's asphalt refining and marketing operations.<sup>38</sup>

### **3.7 The Uno-Ven Corporation**

Early in 1989, Unocal signed a joint venture accord with PDVSA whereby, effective December 1989, the latter would take a 50 per cent stake in the Californian company's 151 MBD Lemont (Illinois) refinery and its associated distribution and marketing assets. Under the terms of the Uno-Ven accord - which also gave PDVSA access to 3,300 independently

---

<sup>34</sup>Due to the plant's disappointing performance, in early 1986 Union Pacific had taken a 305 MMUSD write-down on its book value.

<sup>35</sup>In that same year, Union Pacific sold its only other refinery to Ultramar.

<sup>36</sup>The first half of Champlin had cost PDVSA 93 MMUSD (30 MMUSD in cash and the balance in oil inventories; *IPF*, April 29, 1988: 6).

<sup>37</sup>In late 1990, Citgo had signed a general partnership agreement with Seaview, and had become the owner of 50 per cent of the latter's assets. In March 1991, Citgo acquired the remaining 50 per cent of Seaview. Citgo paid a total of 84 MMUSD for Seaview (*IPF*, July 15, 1993: 3).

<sup>38</sup>The supply agreements for the Paulsboro and Savannah refineries are slated to run until 2010 and 2013, respectively; contractual volumes for each refinery are 30 MBD and 12 MBD, respectively.

owned service stations - an Interven subsidiary called Tradecal would supply the refinery with 135 MBD of light crudes until the year 2009.<sup>39</sup>

The incorporation of the Lemont refinery to PDVSA's international network allowed the company to fulfill its stated objective of placing at least 700 MBD of its crude exports in facilities under its control. Even so, when the deal with Unocal was announced, many analysts expressed surprise at the fact that PDVSA had bought a refinery located outside its traditional zone of interest - the US Gulf Coast - and whose supply posed considerable logistical problems. However, PDVSA executives defended the acquisition by arguing, firstly, that the refinery was very profitable; secondly, that it gave the company access to a completely new market and finally, that it was attractive because of its extensive distribution network.<sup>40</sup>

The 487 MMUSD<sup>41</sup> which PDVSA paid for the Lemont refinery was a very welcome cash infusion for Unocal, whose share price was still in the doldrums in 1989 as a result of the measures which it had been forced to adopt to fend off a hostile takeover attempt mounted by Mesa Oil in late 1985. In contrast, the benefits which PDVSA expected to reap from the Uno-Ven partnership have not materialised, largely because the logistics of supplying light Venezuelan crude to the Chicago area have compromised the profitability of the venture. As a result of this, for years it was rumoured that PDVSA was seeking to divest its share in Uno-Ven<sup>42</sup> (paradoxically, throughout this same period, it was said just as often that PDVSA wanted to *buy* the remaining 50 per cent of Uno-Ven<sup>43</sup>). This issue was finally laid to rest in May 1997, when PDVSA acquired the 50 per cent share of Uno-Ven that it did not already own for 250 MMUSD, and amalgamated its operations with those of Citgo.

### **3.8 Lyondell-Citgo Refining Company**

PDVSA had expressed an interest in Lyondell's high conversion refinery in Houston long before rumours about a possible joint venture between the two companies surfaced in trade journals. Thus, the news that Lyondell and Citgo would set up a joint-stock company - to be called Lyondell-Citgo Refining Company (LCRC) - which would become the owner and operator of this refinery, was greeted with little surprise in international oil circles. The agreement stipulated that the refinery would be the object of an extensive modernisation project (intended to increase its capability to process heavy crudes<sup>44</sup> and its yields of low

---

<sup>39</sup>The crude supplies have to be of a high gravity because of the viscosity restrictions imposed by the Capline (the pipeline which connects the refinery with the US Gulf Coast).

<sup>40</sup>*PIW*, October 24, 1988: 3.

<sup>41</sup>145 MMUSD in equity contributions and the rest in assumed debt.

<sup>42</sup>On one occasion, a PDVSA official said that the company's board had been considering the sale of its share in Uno-Ven for some time; he also accepted that the profitability of the venture was "marginal" (*PON*, September 1, 1992: 3).

<sup>43</sup>*USOW*, April 13, 1992: 2; May 4, 1992: 1-2; February 7, 1994: 3; July 4, 1994: 5.

<sup>44</sup>Up until 1992, Lyondell processed about 130 MBD of 22°30° API crudes. The addition of new units will take the refinery's heavy crude processing capability to 200 MBD.

sulphur diesel and reformulated gasoline), on the one hand, and that PDVSA would contribute most of the capital necessary to complete it, on the other. The estimated cost of the upgrading project<sup>45</sup> makes it the most expensive ever to be undertaken by PDVSA outside of Venezuela's borders. The Lyondell-Citgo alliance also marks a watershed in the history of the internationalisation programme, because it is the first PDVSA project specifically intended to increase the aggregate demand for heavy crudes in the American oil market.<sup>46</sup>

The Lyondell deal gave Citgo an initial shareholding stake of 10 per cent in LCRC, at a cost of 100 MMUSD. Citgo also committed to reinvest its share of LCRC's operational cash flow in the venture to fund capital projects other than the upgrade of the refinery, and contributed an initial sum of 300 MMUSD for the upgrading project. Upon completion of the modernisation project, Citgo will have to make one additional payment to Lyondell of 30 MMUSD; it will also have the option to increase its ownership share to 50 per cent. Citgo has declared repeatedly that it intends to exercise this option.

Before its management decided to tie Lyondell up in a very long term Venezuelan supply contract, this company boasted of being one of the most market-oriented refiners, with an ability to respond almost instantaneously to profitable arbitrage opportunities in the oil market. These claims were in no way hollow: the company certainly had a great flexibility in feedstock utilisation, and its cost structure was one of the best in both the refining and petrochemical sectors, due to its slim organisation and small workforce. However, when the sizable costs of complying with the 1990 Clean Air Act amendments became clear, the Lyondell board evidently considered that the time had come to embrace stability and predictability of earnings as the cardinal values for the company. The alliance with PDVSA is ideal for this purpose, as it confers upon Lyondell a great deal of volumetric security at a very attractive price<sup>47</sup>, and gives it the possibility of using its cash flows to finance other business lines in which it enjoys considerable competitive advantages (notably petrochemicals).

### **3.9 The Uneasy Evolution of the Internationalisation Programme**

The way in which we have presented PDVSA's downstream expansion thus far might convey the impression that, ever since its inception in 1982, the programme has basically gone from strength to strength. In fact, its history is punctuated by a series of conflictive episodes

---

<sup>45</sup>The cost estimate for the project has been put at 980 MMUSD. Citgo has since reported that it expects to pay 632 MMUSD (*excluding* reinvested earnings) for a 42 per cent share in the upgraded refinery (Citgo S-3A1, 1996: 25).

<sup>46</sup>PDVSA signed a long-term contract to supply LCRC for up to 200 MBD of heavy crude to run until the year 2017.

<sup>47</sup>Furthermore, this volumetric security is double-ended, because Citgo is contractually committed to acquiring a substantial part of the fuels produced in the refinery to supply its retailing network: as of December 31, 1996, CITGO purchases all of LCRC's refined product output under a long-term contract which expires in the year 2017. During 1995, 1994 and 1993, Citgo's purchases from LCRC amounted to 1,400, 1,100 and 1,000 MMUSD (Citgo 10-K 1996: 33).

which have put its continuity very much in doubt. The first one of these events came quick on the heels of PDVSA's agreement with Veba, when the vociferous opposition of AD congressmen to many points in the Ruhr accord led President Jaime Lusinchi to suspend the entire programme. This controversy ultimately did not keep PDVSA from embarking on more ambitious and expensive alliances but it dissipated the considerable momentum generated by the company's first internationalisation accord.<sup>48</sup> Because of it, between 1983-5, the only advance registered by the internationalisation effort was the modest expansion of PDVSA's German operations (this expansion had apparently always been in the wings, but it could only go ahead once the political debate on the Ruhr accord had died down, as a result of the sudden deterioration of the international oil market in 1985<sup>49</sup>).

The hostility of some sectors in the government towards the programme surfaced again a few years later, soon after PDVSA signed its joint venture agreement with Southland. On that occasion, the Venezuelan congress ordered the suspension of all payments to Southland - as well as an immediate cessation in the negotiations with any other potential joint venture partner - while the issue of alleged irregularities in the amount which PDVSA paid for its share in the Lake Charles refinery was cleared up.<sup>50</sup> In early 1988, the programme was again put under pressure by Carlos Andrés Pérez (then campaigning for the presidency of Venezuela), who promised to force PDVSA to invest more in the Venezuelan downstream at the expense of its downstream expansion.<sup>51</sup> As a result of this, the goal of securing access to 700 MBD of overseas refining capacity suddenly assumed great urgency for PDVSA (the company had said in late 1987 that it was quite happy with its 450 MBD of capacity and was not "in a rush to enter into any new ventures"<sup>52</sup>). Thus, after bidding unsuccessfully for a refinery in Louisiana, the company hastily put together the deal with Unocal and convinced the president-to-be not to oppose it. PDVSA also signed a letter of intent to acquire half of a US marketing company (Steuart Petroleum), but this deal later fell through.

The stalemate between PDVSA and President Pérez over the internationalisation programme lasted until January 1992, when energy minister Celestino Armas declared - with the tacit approval of the President - that the government was considering parting with 50 per cent of Citgo, because "Venezuela's international integration policy had always stressed that

---

<sup>48</sup>*PIW*, June 3, 1985: 3. In the words of Rodríguez Eraso (1986: 113), "the polemics and political indecision aroused by the case subtracted dynamism to the application of the internationalisation strategy, to the extent that other opportunities . . . for association that were being studied [suffered] considerable delays".

<sup>49</sup>See *PON*, December 11, 1985: 2.

<sup>50</sup>*PON*, May 23, 24; July 15, 1986: 1.

<sup>51</sup>*PON*, April 22, 1988: 1. Pérez slogan was that "internationalisation" would be substituted by "internalisation".

<sup>52</sup>*PON*, August 8, 1987: 1.

PDVSA should be in 50-50 partnership with major oil companies in its foreign ventures".<sup>53</sup> Armas' statement was greeted with dismay by PDVSA<sup>54</sup> but just as a major confrontation between company and government seemed inevitable, Armas retracted his statements and the controversy on the possible liquidation of part of PDVSA's overseas assets died down. However, the issue resurfaced in June 1992, when the emir of Kuwait paid an official visit to Venezuela. During the course of this visit, it was alleged by government sources that the emir had offered Pérez 3,000 MMUSD for a 50 per cent share in Citgo (1,500 MMUSD more than the government had expected to realize from the sale of the company in January of that same year). PDVSA issued a statement saying that, firstly, "no official offer had been made to [it]"; secondly, "that it could not rule out the possibility that a deal [had been] discussed by the heads of state"; and finally, that "it would prefer a US partner, if at all, in the event a decision is made to sell half of Citgo".<sup>55</sup> For its part, the Venezuelan government said that, although the government had not reversed its stance on the possible sale of Citgo, it would not take up the tempting Kuwaiti offer, in deference to PDVSA's wishes. This explanation convinced nobody: the decision not to sell was widely attributed to Pérez's desire to avoid the political outcry that would have ensued had he ordered PDVSA to sell half of its most successful overseas affiliate to a partner like KPC (with whom the Venezuelan company would be expected to have serious conflicts of interest).<sup>56</sup> By the end of that same year, however, the financial difficulties of the Pérez administration had become so desperate that the President once again declared that he would order PDVSA to sell half of its stake in Citgo (and Ruhr, for good measure). A couple of days later, Armas (who had been transferred to the Secretariat to the Presidency in March 1992) confirmed the President's decision and made it clear that, this time around, the administration would be taking whatever measures were necessary to make sure that PDVSA complied with its directives.<sup>57</sup> Once again, PDVSA's reaction was totally negative, not least because the arguments that Pérez and Armas invoked to justify their decision were rather weak.<sup>58</sup> This incident generated enormous uncertainty

---

<sup>53</sup>*PON*, January 14, 1992: 1. When the chairman of the House Government Operations, Environment, Energy and Natural Resources Committee of the US Congress visited Venezuela in 1990, he was told by Armas that the recently purchased second half of Citgo would eventually be resold to a US company (*PON*, January 4, 1990: 3).

<sup>54</sup>PDVSA issued a statement that read: "Citgo has been a fundamental factor to the growth of PDVSA and has contributed substantially in improving the strategic position of this company . . . Whole or partial sale of Citgo, therefore, is not in PDVSA's current plans" (*PON*, January 14, 1992: 4).

<sup>55</sup>*PON*, 12 June 1992: 1.

<sup>56</sup>As it turned out, the question of Pérez's motives was irrelevant, because Kuwaiti sources vehemently denied that the emir had ever made such an offer (*EC*, June 26, 1992).

<sup>57</sup>Armas rectified Pérez's declarations, saying that PDVSA's share in Ruhr would not be put up for sale, but he insisted that "the decision is that these (international) investments should be maintained at a 50-50 level" (*PON*, September 3, 1992: 1).

<sup>58</sup>Pérez argued somewhat implausibly that "if a US government were to decide some day, and for any motive, to take repressive actions against Venezuela, the presence of a US partner would protect us" (*PON*, September 1, 1992: 1).

within PDVSA, particularly because the company was at that very moment negotiating the possible purchase of the Dundee, Eastham and Savannah refineries, as well as its ambitious joint venture with Lyondell. PDVSA's prolonged and bruising encounter with Pérez was only brought to an end by an event without precedents in Venezuelan history: Pérez's impeachment on charges of corruption.

It is obvious, then, that even though the internationalisation programme constitutes - in theory at least - the backbone of Venezuelan commercial oil policy (as it guarantees the placement of half of the country's oil exports), it has not always enjoyed the unrestricted backing of its alleged main beneficiary: the Venezuelan government. The hostility which many Venezuelan politicians have shown towards the internationalisation programme probably derives from an intuitive perception on their part that its benefits are nothing nearly as substantial as PDVSA likes to claim. The rest of our study will be dedicated, firstly, to showing that this perception is well founded and, secondly, to explaining why the detractors of the programme have been unable to act on their suspicions in order to bring the programme to a halt.

### **3.10 Guidelines for PDVSA's Refinery Acquisitions**

PDVSA has stated openly<sup>59</sup> that its international downstream expansion has been carried out according to the following directives:

- a) Acquiring shares only in companies with both refining *and* marketing assets and operations.
- b) Reducing the risk of its investments by establishing joint ventures with technologically-knowledgeable and, more importantly, financially solvent partners.
- c) Establishing associations either with companies that are capable of processing the wide range of crudes produced by Venezuela (especially heavy streams) in high conversion plants, or with companies whose infrastructure and economic conditions might justify the emplacement of deep conversion plants in their facilities in the future;
- d) Financing its asset purchases through a combination of payments in kind (i.e. crude supplies and inventories), dividends and retained earnings, with cash payments kept to a minimum.
- e) Investing only in countries that have fully convertible currencies and whose legal arrangements do not pose an obstacle to the repatriation of profits.

However, PDVSA's claims to have followed these guidelines scrupulously ring somewhat hollow, for the company has in fact contravened (or tried to contravene) most of them at some point since 1982. First, PDVSA has either acquired or tried to acquire shareholdings in

---

<sup>59</sup>CEPET, 1989, v. II: 177.

refineries lacking any ancillary marketing assets, and in 1989 it almost went through with the purchase of a US marketing company that did not have any refining operations. Secondly, PDVSA has become the sole owner and operator of five refineries in the US, and it has unsuccessfully tried to acquire a 100 per cent shareholding in quite a few other plants. Thirdly, some of PDVSA's non-asphalt refineries - notably Ruhr's - are unsuitable for running Venezuelan heavy crudes (these refineries process sizable volumes of non-Venezuelan crudes bought in the spot market, and one - Schwedt - runs no Venezuelan crude at all).<sup>60</sup> Fourth, PDVSA has bought a few facilities whose economics of supply are very unattractive, either because they lie a considerable way inland (like the Ruhr and Uno-Ven refineries), or because tankers have to negotiate long and complicated waterways to reach them (like Nynäs' Swedish plants); indeed, the supply of *all* of PDVSA's European refineries from terminals located in Lake Maracaibo - the area where the majority of Venezuelan heavy crude is produced - must be quite a costly affair because, distance considerations aside, displacement limitations on ships loading at these terminals mean that no economies of scale on transportation costs through the use of VLCCs can be achieved. Finally, as Table T3.10.1 shows, PDVSA's choice of business partners has clearly not been influenced by their financial solvency; as a matter of fact, the common denominator of most of the refineries that have either been touted as potential PDVSA targets or have actually been acquired by the Venezuelan company has been a poor financial situation. This means that PDVSA has observed only the fourth and fifth precepts in the list (and its compliance with the latter has been largely inconsequential, since it has never attempted to repatriate profits from its overseas joint ventures). In a subsequent chapter, we shall show that, in many ways, the key to understanding the logic behind the internationalisation programme lies in identifying the reasons for PDVSA's selective compliance with its own guidelines.

---

<sup>60</sup>From 1983 onwards, and up until the collapse of the Soviet Union, approximately one fifth of the crude processed by Ruhr on PDVSA's account was Urals, delivered against Venezuelan crude supplies to Cuba. Ironically, after the definitive phasing out of the Soviet-Venezuelan swap agreement, the amount of Urals purchased by PDVSA in order to supply Ruhr has continued to rise, notwithstanding the fact that securing outlets for its crude exports supposedly is one of PDVSA's main priorities.

**TABLE T3.10.1: SYNOPSIS OF THE PURCHASES OF REFINING ASSETS OUTSIDE VENEZUELA BY PDVSA (1983-97)**

Name and location of refinery	Date	Country	PDVSA	Partner	Seller	Capacity Ebl per day*	Complexity	Cost to PDVSA	USD/Ebl of	USD/Ebl of	Financial status of seller or partner at the moment when deal with PDVSA was transacted
			+++	share (if applicable)	(if applicable)			MMUSD † † †	distillation	complexity	
Ruhr Öl GmbH, Gelsenkirchen	1983	FRG	50%	Veba Öl	****	250,000	6.30	250	2,000	159	Delicate; Veba's refineries had experienced several years of serious losses
Oberrheinische Mineralölwerke GmbH, Karlsruhe @	1985	FRG	16.5%	Veba Öl **	****	174,000	9.00	55	1,201	133	Precarious equilibrium. The German refining sector was undergoing a
Erdöl Raffinerie Neustadt GmbH, Neustadt	1985	FRG	12.5%	Veba Öl **	****	144,000	4.70		864	184	traumatic rationalisation process at the time
Refinería Isla (Curacao), S.A., Emmastad	1986	NeA	****	****	****	320,000	6.53	****	****	****	Refinery shut down due to its poor performance and even poorer prospects
Nynäs Petroleum NV, Antwerpen	1986	B	50%	Axel Johnson	****	15,000	3.50		847	242	Refinery shut down; Nynäs bought it in anticipation of agreement with PDVSA
AB Nynäs Petroleum, Göteborg	1986	S	50%	Axel Johnson	****	12,500	3.10	23.5	847	273	Delicate (Swedish Investment Bank had had to accept a debt for equity swap).
AB Nynäs Petroleum, Nynäshamn	1986	S	50%	Axel Johnson	****	28,000	5.36		847	158	Axel Johnson eventually bought out by Neste due to financial problems
Citgo Petroleum Corporation, Lake Charles	1986	USA	50%	Southland	****	320,000	10.10	290	1,813	179	Very poor. The refinery ran up enormous losses during 1986.
Champlin Refining Company, Corpus Christi	1987	USA	50%	Union Pacific	****	165,000	10.40	93	1,127	108	Union had written off most of the refinery's book value. It is quite probable
Champlin Refining Company, Corpus Christi	1988	USA	50%	****	Union Pacific	165,000	10.40	156	1,891	182	that it had decided to quit refining altogether before the deal was signed
Citgo Petroleum Corporation, Lake Charles	1989	USA	50%	****	Southland	320,000	10.10	675	4,219	418	Critical; Southland near bankruptcy
The Uno-Yen Corporation, Lemont	1989	USA	50%	Unocal	****	151,000	9.10	145	1,921	211	Delicate; the sale was part of a radical restructuring process
Seaview Petroleum Company, Paulsboro	1990	USA	50%	Seaview	****	84,000	1.70	35	833	490	No available information
Petrochemie und Kraftstoffe Schwedt AG, Schwedt	1991	FRG	18.75%	Veba Öl ***	Treuhandanstalt	240,000	6.00	18.7	415	69	Sold by German government, which had written off most of its book value † †
Seaview Petroleum Company, Paulsboro	1991	USA	50%	****	Seaview	84,000	1.70	49	1,167	686	No available information
Citgo Asphalt Refining Company, Savannah	1992	USA	100%	****	Amoco	28,000	2.08	15	536	258	Good, but Amoco was planning to close down this plant
Briggs Oil Ltd., Dundee	1992	GB	50%	Neste	Tarmac	10,000	3.40	66.5	6,045	1,778	Very poor. Tarmac's sale to PDVSA was a measure to bolster
Eastham Refinery Ltd., Ellesmere	1992	GB	25%	Neste****	Tarmac	12,000	2.30		12,091	5,257	its share price and ward off a potential hostile takeover
Lyondell-Citgo Refining Company, Houston	1993	USA	42% †	Lyondell	****	265,000	9.50	632	5,678	598	Lacklustre performance ('91 and '92); large capital needs for modernization
The Uno-Yen Corporation, Lemont	1997	USA	50%	****	Unocal	151,000	9.10	250	3,311	364	Sale prompted by Unocal's decision to exit US refining sector

NA=Not Available

@ Merged in 1996 with Esso's Karlsruhe refinery; PDVSA now has an 11 per cent share in the amalgamated facilities

\* Distillation capacity at the time of acquisition \*\* Besides Veba, other companies have shares in these refineries, but they are not partners in Ruhr

\*\*\* The PCK Schwedt consortium includes Agip, Elf, Total and RWE-DEA besides Veba and PDVSA

\*\*\*\* A Shell subsidiary controls 50 % of this refinery

† PDVSA has the option of increasing its shareholding interest to 50 %.

† † This is the up-front cost only, and does not include PDVSA's share in the DM 1.3 billion which the consortium pledged to invest in order to bring the plant up to West German environmental standards.

† † † FRG= Federal Republic of Germany; B=Belgium; NeA= Netherlands Antilles; GB= Great Britain; S= Sweden † † † Not included: assumed debt, foreseen investments at time of acquisition, additional investments since or reinvested undistributed earnings

#### 4 PDVSA'S DOWNSTREAM EXPANSION AND THE QUESTION OF THE INDUSTRIAL LOGIC BEHIND THE "REINTEGRATION" OF THE INTERNATIONAL OIL INDUSTRY

The subject of vertical integration . . . has been an intellectual battleground on which debate between lawyers and economists has continued for a long time. Like the fields of the Mekong delta, this particular piece of terrain has seemed destined to host an almost continuous struggle between opposing armies throughout time. Innumerable skirmishes and several major campaigns have taken place concerning the appropriate public policy response to the various mechanisms by which firms at one stage of production influence the behaviour of firms at a vertically related stage.<sup>1</sup>

Although the martial imagery of this passage might seem over the top, there is no question that vertical integration has long been one of the most contentious topics in the realm of economics. Moreover, in no industry have the disagreements regarding the desirable degree of vertical integration of its constituent firms proved quite as intense and enduring as in the oil industry. This, of course, is a logical consequence of the key place which oil occupies in modern industrial societies and of the colossal economic interests which revolve around it. However, the waters of this particular debate have been muddied further by other factors, like the widespread perception the profitability of the oil business is a direct consequence of oilmen's lack of scruples, or the equally popular view that the industry's relationship with government has always been too cozy.<sup>2</sup> But probably the greatest "clouding effect" has arisen from the fact that, ever since the time of Ida Tarbell's philippics against the Standard Oil Trust, the identification of vertical integration in the oil industry with unbridled market power has been taken as axiomatic by governments, regulatory agencies, many academics and the public at large. Because of this, many studies about the logic of vertical integration in the industry have been rather long on emotive factors and short on rigorous scientific analysis; this, unsurprisingly, has been a major obstacle to the adequate understanding of this phenomenon. Indeed, when revising the extant literature on this subject it is difficult not to be reminded of Carlyle's opinion about the historiography of the French Revolution: "It is unfortunate, though very natural, that the history of this period has so generally been written in hysterics. Exaggeration abounds, execration, wailing; and on the whole, darkness".<sup>3</sup>

This "abundance of darkness" has also affected the downstream expansion of crude-long NOCs, mainly because the few authors that have tackled the topic have started from the questionable assumption that, due to certain intrinsic characteristics of petroleum activities, successful oil companies have to become vertically integrated almost as a matter of course. In this chapter, we will place the downstream expansion programmes of NOCs like PDVSA, KPC or Saudi Aramco within the broad historical context of the *problématique* of vertical

---

<sup>1</sup>Blair and Kaserman, 1983: 1.

<sup>2</sup>Engler, 1961, 1977.

<sup>3</sup>*History of the French Revolution*, III, i, ch. I.

integration in the oil industry. By so doing, we think we can clarify a number of issues which can cloud the political and/or economic motives that really lie behind the downstream expansion efforts of crude-long NOCs. These issues are:

- a) how the economic and physical characteristics of oil production, processing and distribution at an international level fostered vertical integration practices by oil companies during the oil industry's early years, and how this set the conditions for the appearance of a tightly knit group of companies that would come to dominate the industry outside the US;
- b) how two closely related factors - the non-existence of an efficient international market for oil, on the one hand, and the success of this oligopoly at restricting competition at *both* the downstream and upstream ends of the oil business, on the other - gradually led to the integrated mode of operation being taken as, by definition, attractive for *all* oil companies, regardless of market circumstances (even though the US oil industry showed that, in the presence of a reasonably liquid market for oil, independent producers, refiners and integrated companies could co-exist and enjoy broadly similar rates of return on their activities).
- c) how the appearance of an efficient global oil market has gradually eroded the cost-effectiveness of the integrated mode of operation and made the restriction of competition more difficult;
- e) how the recent evolution of world capital markets has influenced the approach to vertical integration of those oil companies whose shares are traded in major stock exchanges.

We intend to show that the "commoditisation of oil"<sup>4</sup> has to a very large extent dissipated the advantages which multinational oil companies routinely reaped before 1973 by virtue of their being integrated from wellhead to petrol pump, because the existence of liquid markets for most crude oils, refined products and financial oil derivatives gives those firms which participate in only one segment of the industry an access to supplies, final markets and risk management options which is comparable to that enjoyed by integrated oil companies. In addition, we will indicate how the evolution of the major international capital markets has transformed both the composition and the rules of the market for corporate control and, by extension, has further diminished the attraction of vertical integration for those companies whose shares are publicly traded. We will also argue that the benefits which vertical integration can bring to oil companies (NOCs included) are now far more elusive and company-specific than they used to be and that, as a result of this, general justifications for integration in the oil industry have become increasingly difficult both to find and to defend.

The last section of this chapter will be dedicated to examining the postulates of an influential school of thought which insists that vertical integration still has a vital role to play in the oil industry, allegedly because it offers the only means through which the volatility that

---

<sup>4</sup>A term coined by Verleger (1987) to describe the process whereby oil has increasingly become "just another commodity".

has plagued the oil market since the early 1970s can be reduced and, eventually, eliminated. This school sees the downstream expansion efforts of crude-long NOCs as, potentially, the first step in a process of re-integration thanks to which the international oil industry *as a whole* could gradually recover the stability it lost after the great oil nationalisations of the 1970s. PDVSA has taken advantage of the widespread appeal of this idea to defend its avid and single-minded pursuit of downstream expansion in large oil consuming centres. Executives in the Venezuelan NOC are wont to remind detractors of the internationalisation programme that "the international petroleum industry has always been characterised by the fact that it is vertically integrated . . . [and, therefore,] *any* oil company that expects to stay in the business in the medium and long term, like *Petróleos de Venezuela*, will have to seek an optimal level of vertical integration".<sup>5</sup> In other words, PDVSA has tried to present its internationalisation programme as being nothing more than the local manifestation of a worldwide effort undertaken by NOCs that control about 70 per cent of the world's proven oil reserves (Saudi Aramco, ADNOC, KPC, LNOC, PEMEX and itself) to reinstate certain institutional structures whose validity was proven beyond any doubt by the Seven Sisters. We shall argue, however, that the conclusions drawn by the proponents of the theory of the "reintegration of the oil industry" are not supported by facts and that, therefore, PDVSA's contention in the sense that its internationalisation programme has been motivated by the irresistible appeal of an industry-wide trend towards re-integrated operations simply cannot be accepted.<sup>6</sup>

#### 4.1 Vertical Integration in the Oil Industry: Some Introductory Remarks

We shall begin our disquisition on the *problématique* of "vertical integration in the oil industry" by stating a couple of propositions:

- a) the industrial chain of oil is essentially composed of six key successive stages (exploration and production, crude oil transportation, refining, refined product transportation, refined product wholesaling and refined product retailing), as well as a large number of related ancillary activities.
- b) an oil company can be said to be vertically integrated if it *owns* assets in more than one of these primary segments; however, because of the primordial role which the E&P and refining activities occupy in the industrial chain of oil, only those companies whose operations span these two stages are generally considered to be well and truly "integrated".<sup>7</sup>

---

<sup>5</sup>CEPET, *op. cit.*: 175-6; italics ours.

<sup>6</sup>We agree with Skeet that "to integrate . . . simply as a response to a slogan would clearly be idiotic and to suggest that any producer considered doing so would be an insult" (1989: 2).

<sup>7</sup>This bias reflects a perception that considers that "forward integration into marketing can be achieved much more easily and changes the structure of the firm much less than backward integration into production . . . [which] assures control over a scarce natural resource" (Lichtblau, 1975: 296).

It is no exaggeration to say that these propositions are regarded as self-evident by most oilmen and lay persons; moreover, they are at the core of the texts which constitute the patrological *corpus* of the industrial economics of oil.<sup>8</sup> Their axiomatic character makes them the obvious point of reference for a study of vertical integration in the oil industry, not least because any attempt to challenge them will probably cause more confusion than it will dispel. Thus, purely for the sake of convenience, throughout this work we shall accept that the oil industry is indeed divided into the aforementioned six stages, and we shall refer to oil companies that own assets in at least two of these stages (but preferably E&P and refining) as integrated companies. However, our acceptance of these propositions is not without reservations, and in the following paragraphs we shall briefly state why. Although this discussion might seem redundant, its usefulness in terms of the clarity of exposition of the study will become apparent to the reader later on.

The reasons why we think the orthodox view regarding integration in the oil industry (as embodied in these two propositions) is insufficiently rigorous are as follows:

a)It establishes an excessively arbitrary division between vertically related activities: there is no real disagreement regarding the essence of vertical integration: to wit, the supersession of the market mechanism as a means to garner information about the demand and supply of a good and to allocate resources between subsequent (i.e. vertically related) stages of production of this good. However, one cannot construct a practical definition of a vertically integrated firm based solely on this antithetical opposition of "markets versus hierarchies". As Coase first showed<sup>9</sup>, the reason why firms exist at all is that, for certain activities, the use of the market mechanism entails very high transaction costs; in other words, all firms are institutional arrangements where "the continuous pricing of [at least some] outputs has been suspended and [at least some] inputs are *managed* by [a] central agent".<sup>10</sup> Since all firms internalise at least some of their transactions, *all* firms can be said to be vertically integrated to some degree. Epistemologically speaking, then, the criterion of "internalisation of transactions" is unacceptable as a basis for framing a definition of the practice of vertical integration.

The reason behind the ambiguity of integration is that there is no undisputed definition of a "transaction". Does this term merely designate an "exchange which require[s] no negotiations or governance of a continuing relationship"?<sup>11</sup> No, because as Commons pointed out, while there are actual transactions between those who actually exchange products" there also are "potential transactions", which *may* or *may not* occur, since the parties are on the market and ready to exchange but do not, for whatever reason. Williamson

---

<sup>8</sup>Frankel, 1946; Hartshorn, 1962; Frank, 1966; Penrose, 1968; Adelman, 1972.

<sup>9</sup>Coase, 1937.

<sup>10</sup>Eggertsson, 1990: 48.

<sup>11</sup>Perry, 1989: 188.

gets around this problem by saying that "a transaction may be said to occur when a good or service is transferred [either by market exchange or by an internal transfer] across a technologically separable interface. One stage of processing or assembling activity terminates and another begins".<sup>12</sup> But this definition begs the question of just what constitutes a technologically separable interface. Consider the case of the passage of a product through an assembly line: one could argue that each one of the stages in the line qualifies as a transaction. Does this mean the company that owns the assembly line is internalising many transactions and, therefore, can be said to be vertically integrated? The answer is: yes, *but only under certain market conditions* (in this case, a neoclassical world with perfect information and no friction; *under all other conditions*, however, the answer would have to be no, because the company would have no alternative to internalising these so-called transactions<sup>13</sup>). Clearly, then, it is not really possible to divide any industry into discrete stages, because the spectrum of activities that have a reasonable probability of being performed on an independent basis (that is, not under the aegis of a single company) changes constantly, in response to the random evolution of markets. It is equally inadvisable to arrange all these activities in a hierarchical fashion set in stone because, under certain circumstances, a company may find that it cannot entrust a vital "secondary" activity to anybody else, whereas such delegation is perfectly feasible with a "primary" activity. To sum up: the meaning of integration is contingent upon market circumstances, as the boundaries between the vertically related activities directly involved in, say, the production, processing and distribution of oil and its products, are blurred and change all the time.

b)It establishes an unduly restrictive view of the degree of reliance on the market that integrated companies have, and a misleading confusion between the "control" of an asset and the "ownership" of this asset: According to Perry, a firm can be said to be vertically integrated if its activities encompass at least two single production processes in which either "(1) the *entire* output of the "upstream" process is employed as *part or all* the quantity of one intermediate input into the "downstream" process, or (2) the *entire* quantity of one intermediate input into the "downstream" process is obtained from *part or all* of the output of the "upstream" process". Translated into oil terms, such a definition would mean that only those companies that refine *all* their oil and their oil *only* could be considered to be integrated (all others would be "best described . . . [as] partially integrated", as Perry would have it).<sup>14</sup> Since no oil company can fine tune its system to such perfection that it can dispense with third party sales or purchases, this condition is restrictive to the point of excess;

---

<sup>12</sup>Quoted in Kay, 1992: 319.

<sup>13</sup>As de Chazeau and Kahn (1959: 20) said *apropos* of oil, "if operation in refining alone is economically inconceivable, it becomes meaningless to characterise as integrated the refiner who does the irreducible minimum of transporting and selling".

<sup>14</sup>Perry, *op. cit.*: 185; italics in the original.

unsurprisingly, nobody in the industry takes it at face value. Its *spirit*, though, permeates the industry's conventional wisdom view of integration, which reserves the term "integrated" for those companies that have access to large volumes of *equity* crude to run through their refineries. This view is too simplistic; after all, as McLean and Haigh point out, "if a company engaged in marketing or producing enters into a processing agreement with a refining company . . . integration is achieved but of a far lower order of intensity than if a company were to own or operate the refining facilities itself".<sup>15</sup> Grossman and Hart's formulation of vertical integration as "the purchase of the assets of a supplier (or a purchaser) for the purposes of acquiring the residual rights of control" is more useful approach to these less intense forms of integration, but it still has one important shortcoming; namely, it is based on the equivalence of ownership and control.<sup>16</sup> The problem with defining integration in terms of ownership is that it "draws an unrealistically sharp line through what is really a continuum. Even contracts of supply, freely negotiated between distinct and independent business entities so far as formal appearances go, may in fact reflect and convey a close control by one part over the other".<sup>17</sup> In other words, the fact that a firm does not own assets in two adjacent segments does not mean that it will rely entirely on pure auction markets to procure feedstocks or sell products, because there exist a host of arrangements through which it can achieve an effective degree of control over others by taking over specific residual rights from them.<sup>18</sup> And classifying such arrangements as vertical control and quasi-integration mechanisms in order to distinguish them from "true" integration (which presupposes ownership) misses the point entirely because, as de Chazeau and Kahn observe, what really matters is "who controls whom and to what extent . . . [and this] depends on the relative freedom of choice and bargaining power of the opposing parts, something difficult to measure but impossible to ignore".<sup>19</sup> In any case, those companies that own a series of vertically related assets are not necessarily integrated in the sense that they do not rely on the market, because they might very well arrange transfers between divisions according to open market prices.<sup>20</sup>

---

<sup>15</sup>McLean and Haigh, 1954: 15.

<sup>16</sup>Grossman and Hart, 1986: 716. These authors consider that ownership is "the power to exercise control" (*ibid.*: 693).

<sup>17</sup>De Chazeau and Kahn, *op. cit.*: 20.

<sup>18</sup>Richardson, 1972: 887

<sup>19</sup>De Chazeau and Kahn: *ibid.*

<sup>20</sup>As Roeber (1984: 4) says "if a producer of crude is free to decide whether to sell his crude into his downstream refineries or sell it into the market, is he integrated to his downstream? When a refiner is able to choose between running his own system's crude, selling it on, or buying other crude in, can he be said to be integrated to his upstream?" Perry (*op. cit.*: 185) acknowledges that if "the upstream subsidiary sold *all* its output to other buyers, and the downstream subsidiary purchased *all* its intermediate output from other suppliers . . . we would not describe this firm as being vertically integrated, even if some of the input sold by the upstream subsidiary was eventually resold to the downstream subsidiary".

Asset ownership, then, cannot be used as a yardstick to ascertain whether a given oil firm is more integrated to its downstream than another one, since there are many commercial mechanisms - long term contracts, franchising or tolling agreements, technology licenses, etc. - with which a company can achieve some of the effects of a vertical integration programme, at a much lower capital cost and with a greater degree of flexibility. In fact, the true hallmark of the integrated company is that it possesses a "nerve centre" which has the authority to coordinate disparate vertically-related activities, and pays particular attention to the prices at which the firm's internal supply and demand curves intersect, even when in the presence of signals from an open market.<sup>21</sup> *The extent to which this central coordinating body deliberately chooses to ignore or override market signals (whatever their intensity might be), then, is the true indicator of a given company's degree of integration.* In subsequent chapters we shall discuss, firstly, whether PDVSA is indeed a highly integrated oil firm according to this criterion and secondly, what are the economic and political implications of its 'real' degree of integration.

#### **4.2 The Legacy of the Seven Sisters and the New Dynamics of the World Oil Market**

*Traditio est, nihil amplius quaeras*

In general, works dealing with the international downstream expansion of the major NOCs begin with a reference to the key role that vertical integration played in domination that the Seven Sisters exerted over the world oil industry. The fact that the vertical integration strategies of the Seven Sisters continue to fascinate oil market analysts is understandable: after all, the Seven are rightly considered to embody the quintessence of success in the oil business, and it is universally acknowledged that their vertically-integrated form of organisation contributed in a crucial way to their rise to the top.

The history of vertical integration in oil, to a large extent, is the search by individual oil companies of ways to bypass thin and inefficient markets for feedstocks, oil transportation services and finished products. This search began in the cradle of the oil industry (the US) and, as industry became increasingly global in scope, it spread to other parts of the world with a sense of urgency that would disappear in the US after the mid-1920s, partly due to the threat posed by American anti-trust legislation but mainly because of the emergence of a fairly efficient market for oil in this country. For the pioneer American oil companies, the option of organising operations in an integrated fashion turned into an attractive proposition as soon as petroleum refining ceased to be an activity which required only a few on-site distillation stills and rusty pipes and became the most demanding (economically and a technologically speaking) of the processes which conform the industrial chain of oil. The

---

<sup>21</sup>The following is a good description of how a truly integrated firm is run: "we may decide . . . that we want to get oil, and that is our decision, but whether or not the final decision is made that we are going to get it is not necessarily [ours]" (Bertrand, 1981: 275).

increasing complexity and cost of refineries brought about a significant contraction in the number of participants in this stage of the industry; this development, coupled with the natural monopoly traits which characterise both railroads and pipelines, gradually reshaped the oil industry into the form of an hour-glass. The American refiners which survived this rationalisation process discovered to their dismay that the profitability of their extremely costly assets depended on the good will of third parties (notably the railroads that transported their crude, or the wholesale distributors that sold their products), who could take advantage of their strategic location at both necks of the industry hour-glass to extract monopolistic rents for their services. In a totally understandable manner, these refiners sought to escape these exactions - typical of immature markets - by performing these activities themselves. The lure of vertical integration became even more compelling as soon as the first fully-integrated oil companies burst on scene, because these new entities dramatically altered the competitive conditions which prevailed in the industry. Before the onset of integration, every refiner was conscious that the price he paid for certain feedstocks and services - and the value added to his products as they moved down the chain - could be the subject to manipulation by some third party; however, he also knew that his competitors shared his misfortunes in this respect, and that they had to survive on profit margins similar to his own. Vertical integration, however, eliminated this source of consolation: non-integrated refiners suddenly found themselves competing against companies that did not have the same ceiling to their profits (because their activities included some other links in the industrial chain - in particular rail or pipeline transportation and, to a lesser extent, crude production - which could give them supernormal returns on their investments). Those companies that did not fall by the wayside as a result of this type of competition were rapid to embrace the gospel of vertical integration. In a very real sense, then, integration bred integration (had no company been vertically integrated, it would have been less urgent for all the others to integrate<sup>22</sup>).

The US legal system - which grants the property of subsoil resources to the owner of the land in which they are found - reinforced the tendency towards integration present in the embryonic American oil industry. The main consequence of this legal arrangement was chronic over-production, because the so-called "rule of capture" left the discoverer of an oilfield with only one rational course of action: extracting the crude from the deposits as quickly as possible (before his neighbours drained off the reservoir) and then selling it equally quickly (so as to avoid storage costs).<sup>23</sup> As a result of this structural characteristic, throughout its first years of existence, the American oil industry oscillated between periods of unbridled expansion and periods of catastrophic contraction. These first few boom and

---

<sup>22</sup>De Chazeau and Kahn, *op. cit.*: 43.

<sup>23</sup>The "rule of capture" stemmed from the fact that oil pools never conformed to the boundaries of the plots of land lying above them, on the one hand, and from the impossibility of determining the exact place of origin of oil (because of its tendency to migrate), on the other hand.

bust cycles left many bankrupt companies in their wake and impressed upon the survivors one lesson: producers who weathered the crises best were those that had some form of guaranteed outlet for their crude, and whose sales, therefore, did not depend on the good will of any one refiner (or railroad) or on the questionable efficiency of a very immature market. As Andrew Mellon (founder of Gulf) observed when he decided to build his company's first refinery, being vertically integrated meant not having to say "by your leave" to anybody. This type of autonomy meant a great deal in an industry where some inauspicious business-environment conditions - the great uncertainty intrinsic to oil exploration, the enormous capital requirements and long pay-out times of oil-related projects, and the need to assure a continuous flow of crude and products through expensive refineries and pipelines - were aggravated by the pervasive pyramiding of monopolistic surcharges through successive stages of production and distribution both fostered and allowed by the highly imperfect nature of the nascent American oil market.

In the early days of the American oil industry, then, there did exist a general logic for vertical integration. Integrated operations were a necessary condition for "the efficient marshalling of funds required for growth and progress, [and] for expansions of facilities and innovations, all in the face of unusual risks".<sup>24</sup> Given that "the preponderance of fixed costs in all stages of the industry [put] a compelling emphasis on volume and a continuity of operations"<sup>25</sup>, and that both of these factors depended in turn on a company's "ability to command supplies and find customers on equal terms with . . . rivals"<sup>26</sup>, American oil companies were forced to minimise their reliance on highly imperfect intermediate markets (particularly for transportation<sup>27</sup>). This inhibited even further the development of a mature and efficient market for oil and led, almost inevitably, to the formation of the Standard Oil Trust. However, with the forcible dissolution of Standard by judicial *fiat* in 1911 and the coming on-stream of massive new oilfields in Texas and Oklahoma, the depth of the American oil market increased to such an extent that it became possible for independent producers, independent refiners, independent marketers and integrated companies to co-exist while enjoying broadly similar *nominal* rates of return on their activities<sup>28</sup> (although, admittedly, the independents may have been forced to operate with lower costs to achieve this). As a result of this, the merits of vertical integration in the US from about 1930

---

<sup>24</sup>De Chazeau and Kahn, *op. cit.*: 259.

<sup>25</sup>*Ibid.*: 70.

<sup>26</sup>*Ibid.*: 48.

<sup>27</sup>The foundations of the Standard Oil Trust were laid on Rockefeller's privileged or exclusive access to railroads and, later, pipelines.

<sup>28</sup>The existence of the depletion allowance permitted crude producers to realize much higher *real* returns, by reducing the effective rate of taxation levied on E&P activities by 27.5 per cent (22 per cent after 1969). It should be noted that independent oil producers were quite profitable despite the fact that integrated oil companies gathered and bought a large proportion of the crude oil output of the former (in 1971, for instance, 70.2 per cent of the independent producers' crude output was purchased by the integrated oil majors; Duchesneau, 1975: 38).

onwards ceased to depend on an industry-wide "general logic", and instead became contingent on specific conditions faced by individual oil companies in local markets.<sup>29</sup> Outside North America, though, the "general logic" for vertical integration in the oil industry was to prove much longer-lived, mainly because of *the non-existence of the institution which we now call the world petroleum market*.<sup>30</sup>

Notwithstanding the fact that large volumes of crude have changed hands across international borders throughout all of this century, the world petroleum market as such is a creature of relatively recent origins.

There is no real consensus among industrial economists or anti-trust practitioners on how to define a market properly<sup>31</sup>; however, there are no similar disagreements regarding the functional essence of markets *qua* social institutions: to act as media for the efficient dissemination of information regarding to the relative scarcity of goods and services in an economy, on the one hand, and to serve as contact surfaces to facilitate exchanges between buyers and sellers who have freely manifested their wish to trade in such goods and services, on the other. This means, quite simply, that in the absence of either buyers or sellers one cannot really talk about the existence of a market as such. And it is precisely this *caveat* which makes it possible for us to speak of the "recent origins" of the world oil market; after all, up until the early 1970s, the dissemination of information and the allocation of resources in the world oil industry essentially depended on the internal transfer mechanisms of the companies that controlled the bulk of the world's oil reserves, and not on the constant interaction between arm's length buyers and sellers of crude oil and petroleum products.<sup>32</sup>

One of the main reasons why the integrated form of operation became the typical form of organisation in the oil industry worldwide (i.e. outside the US) was that Standard Oil was the first oil enterprise to operate on a quasi-global scale. The predatory pricing policies

---

<sup>29</sup>After the dissolution of the trust, in other words, integration was no longer a requisite for any American company that wanted "to avoid becoming in effect a part of Standard Oil Company's production department" (Hartshorn, 1962: 120). See both de Chazeau and Kahn,*op. cit.*, and McLean and Haigh, *op. cit.*, for many examples.

<sup>30</sup>For a long time, the US Gulf Coast was the only genuine international market for oil. However, the price signals generated in this market were the cornerstone of the 'Gulf Plus' pricing system, whose sole purpose was to destroy the transparency of price signals in the rest of the world: thanks to the 'Gulf Plus' system, the FOB price of Iranian oil at Abadan for Iranian destinations could be set much higher than its FOB price for any other destination! (see Elwell-Sutton, 1955: 85).

<sup>31</sup>A number of criteria (looking for gaps in chains of substitutes, establishing the correlations between the prices of goods) for defining markets have been advanced, none of which is totally satisfactory; see Tirole, 1988: 12-3.

<sup>32</sup>Even during the halcyon days of vertical integration there were crude-long (Gulf, BP) and crude-short (Mobil, Shell) majors. However, these firms did not resort to a market to balance their positions; their preferred *modus operandi* was to subscribe long term supply agreements with each other. As the US Senate discovered: "the long period of the contracts, the great quantities of oil involved, the unusual nature of the pricing methods and the conditions of sale, and the inclusions of provisions restricting the marketing of the oil suggest that these contracts extend far beyond the ordinary business transaction" (1952: 45).

of the Rockefeller Trust (made possible by its stranglehold over the US refining sector<sup>33</sup>) forced the other major international oil exporters (the Nobels and Rothschilds in Russia, Shell in the Dutch East Indies) to integrate downstream in order to secure markets for their kerosene. As in the case of the US, then, the compulsion to integrate became all the more intense as all the big oil companies reduced their exposure to intermediate markets on a worldwide scale. However, the establishment of a cartel of tenants (intended to counter demands for higher ground rent from sovereign landlords) and the enthusiastic adoption of restrictive and discriminatory practices - as embodied in the As Is (downstream) and Red Line (upstream) 'treaties', and the infamous 'Gulf plus' pricing system - by the companies that were to become the Seven Sisters also played a pivotal role in the perpetuation of the 'general logic of integration', by stunting the appearance of a world oil market and therefore perpetuating certain material conditions in which only vertically integrated firms could survive.<sup>34</sup>

The aforementioned dissolution of the Standard Oil Trust eased the global pressure to integrate, because the operations of Standard's successors were not nearly as well-balanced as those of their infamous forebear.<sup>35</sup> Coupled with the outbreak of both the First World War and the Russian Revolution (which paralysed the oil industry of the second largest producer in the world), the disappearance of the Trust turned the oil industry into a less hostile environment for the few non-integrated companies which produced and exported crude outside the US (like Doheny's Pan-American or Pearson's Mexican Eagle), not least because oil prices reached levels which they would not approximate again - in real terms - for a space of fifty years.<sup>36</sup> However, the brief respite enjoyed by such non-integrated oil companies was brought to an end by the combined effects of the Red Line and Achnacarry agreements (as well as the fall in the price of oil).<sup>37</sup> The former made getting hold of oil more difficult (because it excluded outsiders from what were then the most promising areas for oil exploration in the world outside the US, and constituted a cartel of tenant companies barred contractually from negotiating individually either better terms or production increases with governments within the IPC concession area), while the latter complicated the task of disposal of oil (because it severely limited the market access of those companies that were not parties to it).<sup>38</sup> Both of these agreements experienced major difficulties at some point in

---

<sup>33</sup>Just before its dissolution, the Standard Oil Trust produced only about 11 per cent of its crude requirements.

<sup>34</sup>For a lucid exposition of this point, see Mommer, 1988.

<sup>35</sup>For instance, Standard of Indiana had a lot of crude but was lacking in refineries; in contrast, Standard of New Jersey suffered from a very large crude deficit.

<sup>36</sup>In 1920, the average US wellhead price was 3.07 USD/Bbl.

<sup>37</sup>The average US wellhead price in 1932 was 0.87 USD/Bbl.

<sup>38</sup>A notorious passage in the 1930 Memorandum for European Markets (an offshoot of the 1928 Achnacarry agreement) reads thus: "it is an essential part of these agreements that each and every party thereto, having been allotted a quota, shall do his utmost to obtain the total share of total trade

their history (for instance, the original "As Is" price-fixing provisos did not survive the combined effect of the Great Depression and the discovery of the prolific East Texas field<sup>39</sup>, and the Red Line agreement came under enormous strain when the question of what to do with the companies that had discovered oil in Saudi Arabia and Kuwait arose); on the whole, however, these agreements enabled the Seven Sisters to synchronise increases in their crude production with the rate of growth in global oil demand after the end of World War II, and to stifle competition in the oil industry very effectively. These companies' propensity to avoid competition from the late 1920s to the late 1960s inclusive probably owed something to the fact that all of them except BP had extremely large investments in higher-cost oil in North America (and, in the case of Royal Dutch/Shell, Indonesia), whose value would have plummeted had competition driven down the price of oil to the levels warranted by the very low production costs of the Middle East<sup>40</sup> (BP and Gulf were the potential disrupters of this set-up, but the other members of the cartel took great care to accommodate them by means of very large, long-term, inter-company purchases which kept their crude surpluses out of the open market<sup>41</sup>). However, it is fair to say that the main incentive for their collusive conduct was the massive profits which these companies could obtain by maintaining the world price of oil at a level warranted by the production costs of the least productive of the major oil regions of the world (the US), and by selling their oil through a worldwide single (and later twin) basing point system which gave rise to significant appropriable locational rents.

The partial closure to imports of the American oil market in 1959 (and the consequent increases both in domestic US crude prices and the differential rent element of oil produced in the Middle East or Venezuela) gave the Seven the chance to monetise this differential petroleum rent by means of their captive downstream systems<sup>42</sup> and to shift the costly burden of the prorationing policy of the American government - which forced all oil producers to idle a certain proportion of their production capacity - unto the shoulders of those companies which did not have access to oil reserves outside the US (mainly because

---

represented by that quota, and to extend it where possible *but not at the expense of the parties to these arrangements* (Blair, 1978: 237; italics in the original).

<sup>39</sup>US prices could only be bolstered with the introduction, in 1934, of production controls (in the name of conservation) in Texas and Oklahoma. This measure was enthusiastically supported by the major oil companies that formed the oil cartel, since it dramatically enhanced the effectiveness of their manipulation of non-US production (see Blair, *ibid.*: 164).

<sup>40</sup>In the late 1950s, the US accounted for two-thirds of the total assets at the production stage of the oil industry worldwide. In terms of the net value of fixed assets, at that time there probably was more oil investment in Canada than in the Middle East or even Venezuela (Hartshorn, 1962: 97).

<sup>41</sup>The US Senate (*op. cit.*: 161) said *apropos* of the most famous of these contracts: "under the Gulf Shell contract, no price is stated, but elaborate provisions were written providing for the division of profits between the two parties. The profits are determined and shared for the entire integrated process of producing, transporting, refining and marketing for a minimum period of 22 years. Thus, to all intents and purposes, Gulf and Shell are joined together in a longterm integrated oil enterprise".

<sup>42</sup>The US majors' downstream earnings in Europe and Japan over 1967-72, for instance, returned on average -1 percent and 1.4 per cent (respectively) on net book investment, while in the major producing countries upstream returns averaged in excess of 40 per cent (Lichtblau, *op. cit.*: 305).

they had been excluded from some of the most prospective zones by the cartel).<sup>43</sup> The Seven Sister's domination of the world oil industry - which rested on their undisputed control the most prolific petroleum provinces of the world - was so overwhelming that, for the space of several decades, arm's-length deals between third parties were seen only as an equilibrium instrument of last resort, used to remedy temporary imbalances arising from unexpected breakdowns in the internal transfer mechanisms of the integrated companies.<sup>44</sup> Of course, the hegemony of vertical integration as an organisational form could only last so long as the intersections of the internal demand and supply curves of the multinational integrated companies were the *only* places where the relative scarcity of non-US crude was reflected, on the one hand, and the company's host governments were content both with the market share allotted to their oil and with the contractual conditions (royalties, taxes, etc.) offered to them by the cartel, on the other.<sup>45</sup> From the late 1950s onwards, however, the Seven Sisters were increasingly unable to satisfy these conditions. Firstly, outsiders like Getty and Mattei muscled in on the Seven's Middle Eastern turf with promises of better terms for host governments. Secondly, the availability of oil from sources outside the jurisdiction of the Red Line agreements or beyond the control of the Seven - the Neutral Zone, the USSR, Nigeria, Libya - expanded rapidly, and swamped these companies' mechanism for the allocation of incremental oil demand (thus leading to the formation of OPEC).<sup>46</sup>

The emergence of a sizable international petroleum proto-market after the resumption of large-scale Soviet oil exports, and the discovery and development of Libyan and Nigerian oil reserves did not have an immediate impact on the organisational practices of the oil industry at large, mostly because most of international movements of crude oil continued to take place via integrated channels (and this meant that price volatility and turbulence could not introduce the wedge of the market between the constituent parts of the integrated systems of the Seven Sisters). This situation changed radically after the nationalisation of oil in the most important OPEC countries in the 1970s, particularly once these countries' desire to market their own crude directly led to the demise of the "buy-back" and participation deals which had kept the old market structure afloat even after the oil companies had lost their

---

<sup>43</sup>See US Senate, *ibid.*: 216-7.

<sup>44</sup>As Robinson (1989c: 163) points out: "We had supply departments, not trading departments. There were small units dealing in exchanges or loans to balance supply and demand at the margin and improve logistics, but the main emphasis was on a centralised system distributing in as rational a manner as possible supplies from the company's production . . . or brought in under long term contracts".

<sup>45</sup>That is the reason why the cartel could brook no competition for potentially oil-bearing lands from rival prospective tenants.

<sup>46</sup>Cheating within the cartel also played an important role in this process. As Hartshorn (1962: 184) noted, when Jersey announced in August 1960 that it was dropping its prices, it made reference to "disruptive influences in the world oil market, and did not mention the Russians alone. It singled out also 'discount sales from marketers with unlimited supplies of crude- which can only have meant some among its fellow majors".

upstream assets. After these events, the majority of international petroleum transactions came to be mediated by a real market: the oil exporting countries assumed the role of sellers, while the integrated companies became net buyers of crude. The companies found that, shorn of large volumes of cheap equity crude to run through them, their extensive refining networks (whose *raison d'être* had never been to make profits on a stand-alone basis) became millstones around their respective necks. Formerly, petroleum rent had enabled them to absorb great fluctuations in the prices of petroleum products; its loss greatly increased their vulnerability in the face of such fluctuations. Furthermore, with the rise of the Rotterdam spot market as a credible alternative source of supply for petroleum products, make-or-buy decisions became ever more important for integrated oil companies. Slowly but surely, as the disruptive effect of the market spread through the innards of the major oil companies, the necessity for de-integration began to dawn upon some of their managers.

"Refiners", observes Hartshorn, "had begun to argue about the need to 'rationalise' from the early seventies onwards. But the process of actual refinery closures took several years to complete and quickened only after the second price shock of 1979".<sup>47</sup> Indeed, after this event, de-integration was forced unto the recalcitrant companies that had stubbornly refused to accept that the downstream end of the oil business could not be indefinitely subsidised by profits arising in the upstream. Several years of crippling losses on their refining operations finally reconciled these companies to the idea that they had to uncouple (if not divest) their various constituents, each of which would have "the option, indeed the obligation, to buy and sell whenever it [paid] better than transferring through [integrated] channels"<sup>48</sup>, in order to defend its own margins. In this way, Marx's "silent compulsion of the iron laws of capitalism", made manifest in what has been called the "commoditisation of oil", achieved what plenty of US legislators had failed to do in the space of several decades.<sup>49</sup> Furthermore, the consolidation of spot and forward oil markets as centres of price discovery and price formation for the great majority of internationally traded crude oil, and the appearance of oil futures markets in response to the urgent risk management needs of the industry have taken this process of commoditisation to a higher plane. Financial speculators (investment banks, Japanese *sogo shosha*, international trading houses, and the so-called Wall Street refiners), attracted by the enormous volatility in the price of crude oil and oil products, have entered local markets like NYMEX, IPE or the North Sea forward market in droves and, in the bargain, have made the global oil marketplace much more liquid. This means that they have further increased the opportunity costs incurred by those firms whose rigid integrated organisational structures pose a hindrance to their exploitation of the

---

<sup>47</sup>Hartshorn, 1993: 104.

<sup>48</sup>*Ibid.*: 215.

<sup>49</sup>On a number of occasions, members of the US Congress tried to pass legislation forcing large oil firms to de-integrate.

continuous (and evanescent) arbitrage opportunities that characterise the modern oil market. Naturally, this has heightened the perception of obsolescence which has grown around the integrated form of organisation in all those markets where economic arbitrage operates with reasonable efficiency.<sup>50</sup> Indeed, the only places where one can say that the "traditional" logic of vertical integration is as valid (and irresistible) today as it was for the Seven Sisters before the 1970s are countries - particularly large producers and consumers of oil like Russia and China - whose local energy markets are not only profoundly distorted (due to the collapse or the withering away of their centrally-planned economies, or to excessive regulation, for instance) but which are also isolated to an important extent from the international oil market because of logistical and/or political factors.<sup>51</sup>

Even though the disadvantages inherent to a highly integrated form of operation started to become apparent by the early 1970s, in 1981 it was still possible for Dirk de Bruyne - president of the Royal Dutch Petroleum Co. - to assert that "major oil companies [were] still seen to operate largely as integrated businesses, consistent with the belief that an efficient linking of the supply and demand chain achieves the best result for customers and shareholders alike, with the inevitable losses in some areas balanced by profits made in others".<sup>52</sup> With the gift of prophecy, de Bruyne labeled this notion as obsolete, and he urged his peers in the industry to make sure that the presence of their companies in each one of the segments of the oil industry could be justified to their shareholders on purely economic grounds. In the following section, we shall examine the dramatic fashion in which unforeseen changes in the major capital markets of the world proved de Bruyne right and, in the process, punished all those oil companies that let the idea of integrated operations get in the way of the maximisation of the value of their shareholder's investment capital.

### **4.3 Vertical Integration in the Oil Industry and the New Dynamics of the Major Capital Markets of the World**

#### *Wall Street shapes Main Street*

On March 5 1985, Gulf Oil was forced to merge with one of its traditional competitors (Chevron), in a deal valued at the - then - almost inconceivable sum of 13,200 MMUSD. The disappearance of Gulf marked a turning point in the evolution of the world petroleum industry, and not precisely because of the magnitude of the transaction (even though, in

---

<sup>50</sup>Thus Robinson: "*Integration . . . is out*. The trading function is needed to keep the flows going. And it adds value in two ways. First, it reduces supply costs: through trade optimisation, back hauls and by relentlessly searching out particular markets that can make the most of a particular crude or blend of crudes or by meeting specifications by blending two of specification products. *The market and trading are a more efficient mechanism for doing this than central supply allocation, with its calculated value structures*. Second, trading adds value by price arbitrage, by perfecting markets" (1989c: 169; italics ours).

<sup>51</sup>See for instance IEA, 1995.

<sup>52</sup>de Bruyne, 1981: 1.

absolute terms, this merger is still one of the largest in the history of corporate finance). Its importance lies in the fact that the disaster which overtook one of the Seven Sisters showed that the organisational legacy of these companies - predicated on the principle of vertical integration *à outrance* - was wholly inadequate to face the new and harsh realities prevailing in the world's great capital markets (realities which were the product of an accelerated evolution that overtook the oil industry - a bastion of financial and managerial conservatism - and shook it to its very foundations).

Nowadays, as a result of the very effective self-promotion of traders, brokers and financiers, it is difficult for the layman to remember that, not so long ago, Wall Street was the haunt of a good number of traders whose capacity to earn their living depended much more on luck and an intuitive grasp of applied psychology than on the mastery of the most abstruse branches of calculus and finance. This situation underwent a radical change after the stock market crash of 1974, which reduced the aggregate value of the companies quoted in NYSE to approximately 40 per cent of the value they had at the beginning of 1972.<sup>53</sup> As the author of an excellent investigation into the origins of the economic ideas that now reign supreme in Wall Street says,

had it not been for the crisis of 1974, few financial practitioners would have paid attention to the ideas that had been stirring in the ivory towers for some twenty years. But when it turned out that improvised strategies to beat the market served only to jeopardise their clients' interests, practitioners decided that they had to change their ways. Reluctantly, they began to show interest in converting the abstract ideas of academics into methods to control risk and to staunch the losses that their clients were suffering. This was the motivating force of the revolution that shaped Wall Street.<sup>54</sup>

One of the main consequences of the practical application of theoretical advances as diverse as Markowitz's principles of portfolio selection or the Black-Scholes model of option valuation (to name but two examples) was the emergence of a much more efficient market for corporate control. This market, obviously, existed before the so-called Wall Street revolution, but this event altered its conformation and its rules in such a radical way that it practically turned it into a new entity. In Bernstein's words,

even an incomplete list of the innovations that have emerged since the mid-1970s reminds us of how profoundly the present differs from the past . . . Today there are money market funds, bank CDs for small savers, unregulated brokerage commissions and discount brokers. There are hundreds of mutual funds specialising in big stocks, small stocks, emerging growth stocks, Treasury bonds, junk bonds, index funds, government guaranteed mortgages and international stocks and bonds from all over the world . . . There are markets for options . . . and markets for futures and markets for options on futures. There is program trading, index arbitrage and risk arbitrage. There are managers who provide portfolio insurance and managers who offer something called tactical asset allocation. There are butterfly swaps and synthetic

---

<sup>53</sup>Making this the most serious setback for NYSE since the crash of 1929.

<sup>54</sup>Bernstein, 1993: 2-3.

equity. Corporations finance themselves with convertible bonds, zero-coupon bonds, bonds that pay interest by promising to pay more interest later on, and bonds that give their money back before the bonds come due . . .<sup>55</sup>

The advent of all these new financial instruments (linked to quantum advances in computer science and technology) in effect introduced the economic force of arbitrage into the rarefied strata of high finance, because it made capital markets much more liquid, volatile and transparent. As a result of this, practitioners of corporate finance were forced to shake off the complacency that had set upon them after two decades of uninterrupted bonanza. The new instruments widened the horizons of many economic actors who had previously been marginalised from financial markets and who suddenly found themselves in a position to translate their opinions regarding the future behaviour of these markets into buy/sell decisions compatible with their individual risk preferences. This brought about a dramatic increase both in the number of people participating in these markets, and in the monetary volume transacted in them. Oil industry stocks were inevitably drawn into this flurry of market activity, even though large integrated oil companies (which accounted for most of the stock market capitalisation of the oil industry) had no real need to raise fresh capital by means of equity financing at that point in time.

Although the new financial markets have been accused - sometimes justifiably - of breeding unscrupulous and irresponsible financiers, and of being at the root of many economic distortions, there is no doubt that, by virtue of their existence,

today's investors . . . have a more sophisticated understanding of how financial markets behave, and are capable of using to advantage the vast array of new vehicles and new trading strategies specifically tailored to their needs. Innovative techniques of corporate finance have led to more careful evaluation of corporate wealth and more effective allocation of capital. The financial restructuring of the 1980s created novel solutions to the problems arising from the separation of ownership and control and made corporate managers more responsive to the interests of shareholders.<sup>56</sup>

The financial restructuring of the international oil industry was set in motion precisely by several controversies *apropos* the most effective allocation of capital between the different business lines of integrated firms, in general, and the "true" worth of a number of individual oil companies, in particular. There were three main factors behind these controversies' being resolved in the very public spaces of the American stock market, as opposed to the narrow confines of the corporate boardrooms of the companies involved. The first one among these was the change in the attitude of institutional investors and money managers towards hostile takeover bids affecting companies in which they held stakes. Up until the 1970s, institutional investors had traditionally been stalwart supporters of the managerial teams of publicly-traded companies, always ready to mobilise their sizable block votes in order to avert a nasty proxy fight or a hostile takeover. After the 1974 stock market crash, however, the pressure

---

<sup>55</sup>*Ibid.*: 14.

<sup>56</sup>Bernstein, *op. cit.*: 2.

coming from the public at large in the sense that these financial intermediaries should do more to justify their high commissions increased considerably. As a result of this, investment and pension funds began to take the fiduciary responsibility of doing everything in their power to maximise the value of their shareholders' portfolio far more seriously. Inevitably, this led money managers to demand better returns on their investments from the managers of publicly-traded companies. Thus, the condition that the stock price of a given company should out-perform either a broad stock market index or a share index constituted by a basket of companies participating in the same industry (i.e. utilities, aerospace companies, tobacco companies, and so forth) became the fulcrum on which relations between institutional investors and corporate managers came to rest. Very often, the underperformance of a given company's share price lay behind the positive manner in which institutional investors responded to the wooing of a corporate raider.

The second among the elements commonly linked to the financial restructuring of the oil industry was the rise of junk bonds (high risk, high yield bonds), and of the investment banks that turned them into their specialty (notably Drexel Burnham Lambert). These securities enabled persons who lacked funds of their own to carry out leveraged buy-outs valued in billions of dollars, without having to overcome the reluctance of traditional credit institutions to lend astronomical sums of money to anybody other than large companies with impeccable credit histories. Moreover, the appeal and influence of junk bonds was enhanced, firstly, by the deregulation of the US banking sector; secondly, by the increasing competition between banks for volume and finally, by the pressing need of the international financial system to recycle vast amounts of petro-dollars.

The third precipitating agent of the restructuring process in the oil industry was the manner in which American oil companies responded to the supply crisis of 1973 and to the excess supply of petroleum products which began to weigh upon the oil market from 1980 onwards. The uncertainty which followed the first oil shock generated a considerable increase in the resources which many companies earmarked for the task of finding crude reserves in US territory (ostensibly because this was the only way to secure politically reliable supplies for their big refining systems). The plowing of huge amounts of cash into these exploration efforts was, on the whole, a costly fiasco for the American oil industry. Not surprisingly, given the destruction of shareholder's value that these activities entailed, the American stock market took a rather dim view of the companies that promoted them; thus, the share price of many of them either stagnated or fell in such a way that the liquidation value of their assets began to exceed their stock market values by sizable margins (particularly since many financial consultants assessed the liquidation value of their reserves under the assumption of

continuing high prices for oil).<sup>57</sup> For many integrated companies, this thorny problem was complicated by the fact that the capital demands of many of their marginally profitable activities (metals, uranium, mining, shale oil) reduced the cash flows which they channeled towards their shareholders even further, thus widening the so-called "value gap". Refining activities (governed for so long by the principle of integration *à outrance*<sup>58</sup>) proved to be particularly refractory to rationalisation initiatives.

The first salvo in what was to become the Great Oil Restructuring War was fired in 1979, when Shell - in a bid to strengthen its domestic production of oil and gas - acquired Belridge Oil. Quick on the heels of this merger (1982) came two other deals, of far greater importance: US Steel outbid Mobil for Marathon and Du Pont took over Conoco. The latter operation proved to be a major milestone in the restructuring process, mainly because the fact that lowly Dome Petroleum (a mid-sized Canadian enterprise) nearly ended up with a majority share in Conoco made it plain for all to see that - in marked contrast to olden times - being a company with a very large amount of liquid assets was not a *sine qua non* requisite for buying the ninth largest industrial concern in the US.<sup>59</sup> The lessons of the Conoco saga had a particularly receptive pupil in T. Boone Pickens, an oilman who had discovered the existence of the "value gap" - to his great personal benefit - in the late 1960s.<sup>60</sup> Clad with the populist mantle of "defender of shareholders' value", Pickens became the *bête noire* of the major oil companies, thanks to his following in investment banking circles, to his daring and well-orchestrated plans of attack and to his keen understanding of the financial opportunities afforded by some of the more recondite loopholes of US petroleum legislation.<sup>61</sup> Pickens' most notorious exploit was his attempt to take over Gulf. The minutiae of this corporate battle are irrelevant to the matters at hand, so we will not dwell upon them<sup>62</sup>; suffice it to say, however, that Pickens' coup underscored in a dramatic fashion just how much the

---

<sup>57</sup>Thus, for much of the early 1980s, it was far cheaper to explore for oil reserves in the floor of NYSE than in Texas (Pickens, for instance, calculated that Gulf's market value was equivalent to only a third of its liquidation value).

<sup>58</sup>Anecdotal evidence indicates that many oil companies held on to their traditional mode of operations even when the market sent signals that they could afford not to be as highly integrated; de Chazeau and Kahn (*op. cit.*: 363) cite the case of Sun, whose CEO declared that he considered production activities to be a drain on the company's finances, but that this drain would continue to be tolerated because it represented "a form of insurance against some future supply squeeze".

<sup>59</sup>In May 1981, Dome made a tender for 22 million Conoco shares, at a price of USD 65 per share. Dome intended to use its block of shares to force Conoco to sell its shares in another Canadian company, Hudson Oil and Gas. Even though Dome's price offer was way above the price at which Conoco's shares were trading at the moment, Conoco's managers did not deign respond to the tender, because they thought that the company's shareholders would not sell their shares to such an insignificant company. This was proved to be quite an error of judgment when Conoco's shareholders offered 55 million shares to Dome.

<sup>60</sup>See Yergin, 1991: 727-30.

<sup>61</sup>Like the ones that permitted exploration expenses to be offset against the personal income of individuals for income tax calculation purposes.

<sup>62</sup>Yergin, *ibid.*: 734-40.

shareholders of integrated oil companies lost by the complacency of their directors in managing their assets: Chevron paid USD 80 for each one of Gulf's shares, a premium of USD 45 on the price at which the shares were trading before Pickens went on the warpath. Gulf's demise sent an unequivocal signal to the heads of other oil companies that the time had come to put their respective houses in order before somebody else did it for them.<sup>63</sup> Some firms did not embrace the new credo of maximising shareholders' value with sufficient celerity, and suffered accordingly.<sup>64</sup> Most of the large oil companies, however, were able to restructure their operations voluntarily, so as to diminish the appeal to shareholders of the likes of Pickens. The majors divided their operations along well-delimited business lines, blocked the transfer of funds between business units and, finally, established the condition that the return of investment of each one of these units would have to exceed the cost of capital of the company as a whole. In other words, they forced their various divisions to behave like independent entities, and made the profits and losses of every one of them the central criterion for capital allocation within the firm. Thus, even though today the large oil companies still give the outward appearance of being vertically integrated, in practice they try their best to behave as if they were not integrated at all.

The legacy of the financial restructuring of the oil industry has proved to be long-lasting. Nowadays, all private oil companies (and some enlightened NOCs, like Statoil) meticulously pore over their assets, with the double aim of identifying potential inefficiencies and unleashing hidden sources of value. In other words, there is a keen awareness in oil circles that "an integrated company, if it is to fully exploit the industry cycle to its best advantage, must be able and willing to alter the composition of its investment portfolio in a counter-cyclical manner"<sup>65</sup>, and not be married to the idea that integration is a desirable thing for its own sake. Thanks to the appearance of a plethora of new financial instruments, to the rapid evolution of securities and derivatives markets alike, and to some alarming incidents (Gulf's demise, Texaco's bankruptcy), oil companies were forced to submit their hallowed ideas concerning the benefits of vertical integration to a serious reappraisal. As Bacon and Mabro say, "the majors, because of their historical attachment to the virtues of vertical integration, and their ability to finance refining losses with cash flows from both marketing and upstream operations, were in a position to resist retrenchment for a long while".<sup>66</sup>

---

<sup>63</sup>In the words of R.O. Anderson (former chairman of the board at ARCO): "We were a sitting duck, unless we got our share values up more closely to the values of our company" (Yergin,*op. cit.*: 740).

<sup>64</sup>Among these were Phillips Petroleum, Unocal, Texaco and Diamond Shamrock. All of these companies had to fight off hostile takeover attempts at an enormous cost.

<sup>65</sup>*PII*, September 1988: 31.

<sup>66</sup>Bacon and Mabro, 1990: 12. Before the early 1980s it would have been quite difficult to find an oil company manager who disagreed with the idea that integration was something that had to be pursued for its own sake; as George Keller, former Chevron CEO, said: "the concept I was taught was that you moved your own crude through your own refining and downstream system . . . it was so obvious it was a truism"(Yergin,*op. cit.*: 723).

However, after a very difficult didactic process, most oilmen have shifted their allegiance to a new and very different credo, lapidarily summed up by a former chairman of BP: "it's nice to have some integration, of course, but it is not something that we would pay a premium for".<sup>67</sup>

#### 4.4 Oil Exporting Countries and the Case for "Reintegrating" the Oil Industry

A former Saudi Arabian oil minister made the following observations in an article explaining why he thought that the totality of his country's sizable oil exports would eventually have to move through integrated channels<sup>68</sup>:

the oil world is an integrated world by definition. And while some historical and economic anomalies were straightened out in the 1970's, I feel with hindsight that the delinking between producers and the oil companies should perhaps have not been so severe. The present impulse to reintegrate, therefore, is merely a result of the inherent tendency of the oil industry towards global integration.<sup>69</sup>

In the light of what we have said in the previous two sections, these opinions on the need to reintegrate the industry appear quite archaic. Strangely, they seem to be shared by a large number of decision makers, politicians and NOC executives in a number of key oil-exporting countries. Stranger still, they also seem to have a large following among the upper echelons of many of the large oil multinationals, even though the actions of these companies make it quite evident that their managers no longer believe blindly in the dogma of vertical integration.

The oil majors' espousal of the idea that reintegration is a step in the right direction for the industry as a whole has a lot to do with their desire to gain access once again to certain prolific oil provinces. The claim that reintegration is the perfect antidote for volatility has been turned by them into the fulcrum of an argument intended to convince the governments of the most important oil producing countries to jettison those laws that restrict the participation of foreign capital in their exploration and production sectors. The main premise of this argument is that the downstream expansion of crude-long NOCs has reduced market volatility somewhat; its conclusion is that stability will return for good to the market when the industry reintegrates along two axes: the first being the one that has taken these NOCs into the downstream sectors of important oil consuming countries, with the second being the one that could lead the oil multinationals back to their former haunts (in places like the Middle East). In Robinson's words,

the bold, and effective, approach to integration is to accept the logic of shared ownership both upstream and downstream . . . More integration between upstream and downstream sectors would slowly reduce the amount of spot trading in the market . . . so that tensions and pressures would be diminished . . . [This is] the best

---

<sup>67</sup>Sir Peter Walters, quoted in *ibid.*: 722.

<sup>68</sup>*MEES*, November 14, 1988: D3.

<sup>69</sup>*PIW*, October 23, 1989, special supplement: 1.

approach to a solution of integration - not least because it does re-establish some of the features of the classic form of integration.<sup>70</sup>

The apostles of reintegration have generally stopped short of denouncing the wave of nationalisations of the 1970s as a mistake on the part of the oil producing countries. Indeed, the more tactful among them are quite ready to accept that this wave was a logical consequence of "the excessive homogeneity in the economic and political background of the vertically integrated companies" (which translated into "the marginalisation of the oil producers" from decisions which affected them greatly). However, they also like to stress that the oil producers did not revolt "against a vertically integrated industry per se"<sup>71</sup> and that, after having unambiguously reasserted their sovereignty over their valuable natural resource, they should now seriously consider adopting a course of action like the one proposed by Robinson.

Robinson's reasoning, though, conveniently sidesteps some issues which undermine the last remaining general justification for integration in the oil industry: the claim that "reintegration along two axes" might offer an antidote to the conditions of uncertainty which plague the modern oil market. The first issue has to do with the key role that the many horizontal links that bound the signatories of the Achnacarry and Red Line agreements played in their regulation of the incremental supply of oil in the international market. The success of the international oil cartel was not only a function of the vertical form of organisation of its members. It was also a function of "the web of mutual influence, leverage and two-way flow of shared information" between the oil majors<sup>72</sup> (something that is readily acknowledged even by these companies themselves) and, more importantly, of the fact that these companies formed a cohesive cartel of *tenants* - not only of *producers* - which, for many years, managed to frustrate the claims of oil producing countries for higher rents - and, hence, higher oil prices - by preventing other prospective tenants from offering these countries more favourable contractual conditions (for obvious reasons, this latter fact is *not* acknowledged by the majors). This means that it is necessary to make a distinction between the downstream integration of yesterday and that of today. As Robinson observes:

the same word is being used for two rather different things . . . The 'old' integration was not only vertical but also horizontal. The Seven Sisters controlled production in the major producing areas through a system of interlocking concession arrangements . . . [In contrast,] the 'new' integration is vertical and not horizontal. This means that, in itself, it has no effect whatever on the balance between supply and demand . . . As price stability is essentially a function of getting the right balance between supply and demand, it is extremely difficult to see how integration on the new model will have on the current instability in oil prices.<sup>73</sup>

---

<sup>70</sup>Robinson, 1989a: 74.

<sup>71</sup>Luciani, 1995: 26.

<sup>72</sup>Hartshorn, 1993: 117-8.

<sup>73</sup>Robinson, 1989a: 71-2.

So different indeed are the workings of today's integration model that, as Robinson points out, downstream integration by NOCs could even give rise to *more* - rather than less - volatility in the market, because the capital intensive nature of downstream investment means that, in the absence of an enforceable mechanism for the allocation of incremental demand (like the one the Seven had), these NOCs have a strong incentive to run as much crude as possible through their international refining systems.<sup>74</sup> But whereas Robinson is quite right in pointing out that one-way (i.e. downstream) integration will not rid the industry of the bane of volatility, he is guilty of *mauvaise foi* when he says that two-way integration can do the trick. After all, even if the oil majors were to carve out a new empire for themselves in places like the Middle East, Russia, Venezuela or Kazakhstan, it does not necessarily follow that they and their host governments will be able to set up an institutional arrangement that will ensure that new productive capacity will not be brought on stream at a rate greater than that which the world oil market can absorb in order for oil prices to remain stable. As a matter of fact, there is every reason to believe that these parties would not be able to devise, let alone implement, a prorationing system that could mimic the workings of the international oil cartel, mainly because a key element would be lacking from such an arrangement: cohesion. The cartel of the Seven Sisters flourished because all its members pursued *broadly* similar goals and had an incentive to act in unison. The companies often found themselves at loggerheads for *commercial* reasons (the structurally crude-short against the structurally crude-long, for instance), and their entrepreneurial differences sometimes flared up into price wars and the like. In the end, though, the *political* fact that they were all on the same side of the landlord/tenant divide proved to be a very strong adhesive force, which imparted some unity of purpose to their collective behaviour on many important occasions.<sup>75</sup> In contrast, the divergences of interest that would exist within a loose confederation of oil-producing countries, on one side, and oil companies, on the other, would be so strong that their centrifugal pull would probably ensure the failure of any price stabilisation agreement. Such a group might be expected to be torn asunder not only by the fundamental antagonism that has pitted rent-maximising landlords against rent-minimising tenants since the dawn of the international oil industry, but also by conflicts between the oil-dependent landlord states themselves (after all, in a cartelistic world like that envisaged by Robinson, every additional barrel of oil produced by somebody will mean a barrel foregone by somebody else<sup>76</sup>). And

---

<sup>74</sup>See "Will Reintegration Lead to Schism among OPEC Faithful?" (*PIW*, November 25, 1991: 1-2). The notion that the market might be a more stable place if some OPEC NOCs were not vertically integrated is difficult to accept on practical grounds, though, mainly because it presupposes a degree of unity and cohesion within the organisation that has been clearly lacking since the early 1980s.

<sup>75</sup>Like the negotiations that led to the extension of the famous Venezuelan 'fiftyfifty' principle to concessions in the Middle East (see Mommer, 1988).

<sup>76</sup>The fate suffered by the production programmes prepared by OPEC's Economic Commission for the years 1965-6 and 1966-7 is particularly instructive in this regard (see Rivero, *op. cit.*: 93).

those that insist that these structural problems can somehow be overcome should bear in mind the lessons of the past.<sup>77</sup>

Robinson's proposals also do not address the fact that reintegration is unlikely to reduce the very high - and destabilising - R/P ratios which prevail in some parts of the world (particularly the Middle East). John Mitchell has explained how these high R/P ratios contribute to uncertainty in the oil market:

the signal of high Middle East R/P ratios is ambiguous: it says at the same time (a) that the high R/P producers in the Middle East may increase their market share, with the supposed risk to the consumers of higher, cartelized prices, but (b) that competition between the same Middle East producers could dramatically reduce prices until the inventory of unproduced reserves is brought down towards a more economic ratio.<sup>78</sup>

He has also pointed out, however, that this feature of the oil market will not disappear even if "Middle East and other low cost producers . . . [were] to open their oil reserves, on attractive and credible terms, to long-term equity investment by the companies which are currently investing in expanding capacity elsewhere", essentially because "the arithmetic does not work".<sup>79</sup> This arithmetic is flawed because it assumes, firstly, that investment in OPEC high R/P producers would absorb all the funds that would otherwise go to other areas (when in fact a duplication of investment in OPEC would only divert about 14 per cent of the estimated oil industry funds available for investment each year) and, secondly, that the funds available for upstream investment worldwide will be limited to current levels of spending (if, as seems likely, they are not, economic opportunities outside of OPEC could still be developed even if these companies were investing massive amounts in OPEC countries). Paradoxically, it would seem that "the only effective way in which Middle East producers could limit the private-sector funds available for upstream investment elsewhere would be for them to compete so intensely that the oil price falls for a long period".<sup>80</sup> This is hardly a recipe for stability in the oil market, and is clearly an example of a situation where the remedy is worse than the malady.

The final factor which the champions of the "reintegration along two axes" theory have bypassed is that the commoditisation of oil is irreversible. Nowadays, the international oil market has split into two separate, interdependent markets:

---

<sup>77</sup>"No known method of allocating the available growth is likely to simultaneously satisfy each of the four major established concessions"; such was the sombre conclusion of a 1970 Exxon document dealing with the problems of dividing market share among governments which, to paraphrase Adelman, always "want money now because the future leaves them cold" (Adelman, 1995: 62). There is no reason to believe that similarly intractable problems would not affect the arrangement proposed by Robinson.

<sup>78</sup>Mitchell, 1996: 26.

<sup>79</sup>*Ibid.*: 27.

<sup>80</sup>*Ibid.*: 28.

the first is the large physical market for crude oil exports from most OPEC countries and many producers from the developing world . . . This market involves an interface between these oil-exporting countries . . . on the selling side, and oil companies or commodity traders from the rest of the world on the buying side . . . The second constituent part of the world petroleum market has a much smaller physical base. It is comprised of the set of spot, forward and futures markets for marker crudes . . . These 'marker crude markets' *make* prices which the 'producing-countries market *takes* as reference in pricing formulae . . . They can be used not only to lift physical oil but also for hedging and speculation. The prices generated in this segment of the world market have a term structure and thus provide information about both the current and the expected supply/demand balance in future months.<sup>81</sup>

Due to this functional segmentation, the ranks of the participants in the international oil market have swollen considerably. The volatility, liquidity and term structure of the smaller segment of the market have acted like magnets for financial speculators (commodity funds, investment and commercial banks, international trading houses, Wall Street refiners) betting on outright prices, time spreads, inter-crude spreads, crack spreads, etc.; players like airlines and pension funds (who are vulnerable to variations in either oil prices or inflation and are willing and able to hedge their exposure); and finally, all sorts of brokers and intermediaries. In other words, the oil market has ceased to be the exclusive haunt of producing governments and oil companies, and today, many other economic actors have a direct stake not only in the price of oil but also in its volatility. Given the magnitude of their respective stakes in these matters, one could argue that these new players will probably not consent to be sidelined just so that the major oil companies and their sovereign upstream partners can once again manage the market at their leisure. Even more unlikely, however, is the possibility that the governments of the most important oil consuming countries would suffer an arrangement like the one espoused by Robinson to take root. These countries created the International Energy Agency to carve a position for themselves in the oil arena precisely because, after the 1974 oil shock, they became convinced that this was the only way in which the interests of their consumers could be protected against the rapacity of oil producing countries and oil companies alike. These governments had never taken for granted the oil majors' readiness or willingness to act according to the dictates of their respective national interests, but their misgivings in this sense reached a new high in the aftermath of the Tehran and Tripoli conferences, when the majors were perceived as doing the dirty work of the oil producing countries.<sup>82</sup> Since those days, consumer governments view these companies with a degree of mistrust that is second only to the one they reserve for OPEC. Thus, there is every reason to believe that these governments will oppose any attempt at installing an informal framework for regulating oil demand and supply that only involved the major oil companies and oil exporters.

---

<sup>81</sup>Horsnell and Mabro, *op. cit.*: 316.

<sup>82</sup>Adelman, 1972. A critique of Adelman's position (which completely ignored the role which rent related issues played in the oil price rises) can be found in Mommer, 1988: 21950.

One can safely say, then, that turbulence in the oil market will be a fact of life for decades to come, and that a *quid pro quo* like the one Robinson proposes cannot work as advertised. Because of this, his discourse has not had a great *practical* impact in those countries where geological conditions are so favourable that, even in lean times, petroleum exploration and production activities can be reasonably conducted without the participation of the oil multinationals (and where the government is therefore in a position to be the sole claimant and usufructuary of ground rent). Thus, the apparent acceptance by NOC executives and government officials in some of these countries of the theory of the reintegration of the oil industry seems doubly puzzling. We think, however, that there is a pragmatic hypothesis which can explain their attitude. This hypothesis posits that the forces which, in reality, are behind the downstream integration efforts of NOCs like PDVSA have nothing to do with the various motives (like a yearning for stability, say) which the major oil companies, for the rather selfish reasons detailed in the paragraphs above, have invoked in order to explain these efforts. However, managers in many of these NOCs have not taken the trouble to contradict the oil majors publicly because the message of the latter has provided them with a convenient front to hide the true objectives which they have pursued by acquiring refining and marketing assets in important oil consuming countries. After reading the analysis of the internationalisation programme presented in the following chapters, the reader will be in a position to see why managers in an NOC like PDVSA would want to obscure the motives which prompted their company to embark on the path of international downstream expansion. In the meantime, however, we hope to have made clear that the industrial logic which in the past impelled the multinational oil companies to become highly integrated on a global scale can only be applied to companies like Lukoil or one of Sinopec's provincial affiliates, which participate in large but extremely imperfect oil markets. However, this same logic does not apply to a company like PDVSA, which has chosen to acquire refining and marketing assets precisely in those markets where the forces of economic arbitrage engendered by the commoditisation of oil operate with the greatest degree of effectiveness. Simply put, this is the reason why the internationalisation programme cannot be seen as the Venezuelan manifestation of an industry-wide trend towards re-integrated operations.

Since no obvious case can be made for the need for "reintegration across the industry", then, it follows that the only one fruitful way of tackling this phenomenon is to take the concrete economic and/or political situation of each one of these companies (in terms of the physical characteristics of the crude they have to sell, the legal and practical arrangements governing the division of petroleum rent between themselves and their governments, the type of political relationship existing between their managers and government officials, and so on) as the point of departure for any analytical effort. Even as early as the 1950s, there were voices that warned that generalising without making

distinctions was not conducive to an adequate understanding of the phenomenon of vertical integration in all its complexity:

it is apparent that the [large integrated] companies had arrived at quite different positions with respect to their ratios of crude oil production to refinery runs . . . In some cases, the companies moved in quite different directions at approximately the same time. In other cases, they moved in the same direction at about the same time . . . but for very different reasons. In only a few cases could it be said that they did the same things at the same time for the same reasons.<sup>83</sup>

The message of these lines, which were written at a time when the notion that an oil company could have operations in only one segment of the industrial chain of oil was seen as preposterous, is doubly pertinent now, when even the apparent uniformity of conditions which prevailed in the industry during the 1950s has vanished.

---

<sup>83</sup>McLean and Haigh, *op. cit.*: 111; see also de Chazeau and Kahn, *op. cit.*: 115.

## 5 PDVSA'S INTERNATIONALISATION PROGRAMME AND THE INDUSTRIAL ECONOMICS OF OIL: WEAK REASONS, ELUSIVE MOTIVES

Plato was the first political theorist to state that those considerations which impel political actors to behave in a certain way or to propose the adoption of a certain course of action (motives) need not be identical to the considerations which they might invoke either to justify their decision before others or to persuade others to follow a certain course of action (reasons). In *The Republic*, he famously acknowledged that the Guardians of his utopian state - for all of their devotion to the ideal of Truth - would often be forced to be quite economical with it, in order to persuade the unenlightened populace to behave virtuously.

Policy makers are quite familiar with the Guardians' quandary. After all, they frequently have to transmit sets of premises for taking decisions to people who do not share their meta-language and who - to paraphrase Max Weber - might not be swayed by the connections of sense which the policy makers have established between certain actions and sets of consequential events. That is why, as Majone says, "to decide, even to decide correctly, is never enough in policy-making . . . [because] decisions must be legitimated, accepted, and carried out. After the moment of choice comes the process of justification, explanation, persuasion".<sup>1</sup> Most policy makers, in turn, realize that in this sometimes grueling process of argumentation, reason is rarely enough to carry the day. Consequently, they often mobilise support for their policies with arguments that might not have figured in their original calculations and deliberations, but which have the merit of appealing to crucial constituencies. Hence Majone's advice in the sense that policy analysts should always try to distinguish "between the procedure by which a conclusion [i.e. a policy] is reached - the process of discovery - and the process by which the conclusion may be justified - the process of justification".<sup>2</sup>

This recommendation is the *leitmotif* of our study of PDVSA's downstream integration.<sup>3</sup> Taking as our point of departure the reasonable assumption that "the public declarations of government officials . . . are an acceptable initial explanation for important policy decisions"<sup>4</sup>, we will discuss the various arguments - all couched in strictly economic terms - with which PDVSA has defended the internationalisation programme since 1982. In the previous chapter we have already weighed - and found wanting - the least refined of these arguments; namely, that the internationalisation programme is merely the Venezuelan manifestation of an industry-wide trend towards re-integrated operations (we dedicated a full

---

<sup>1</sup>Majone, 1989: 31.

<sup>2</sup>*Ibid.*: 29.

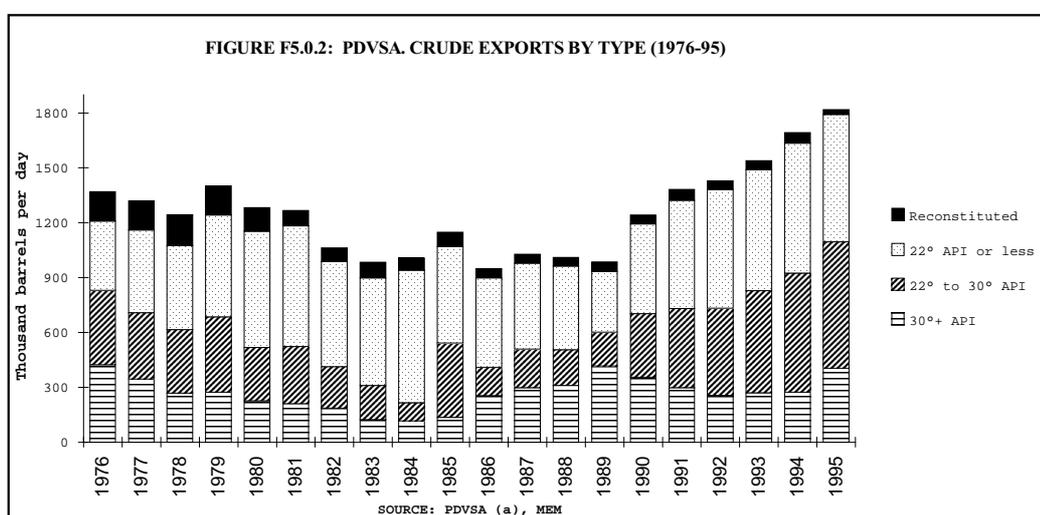
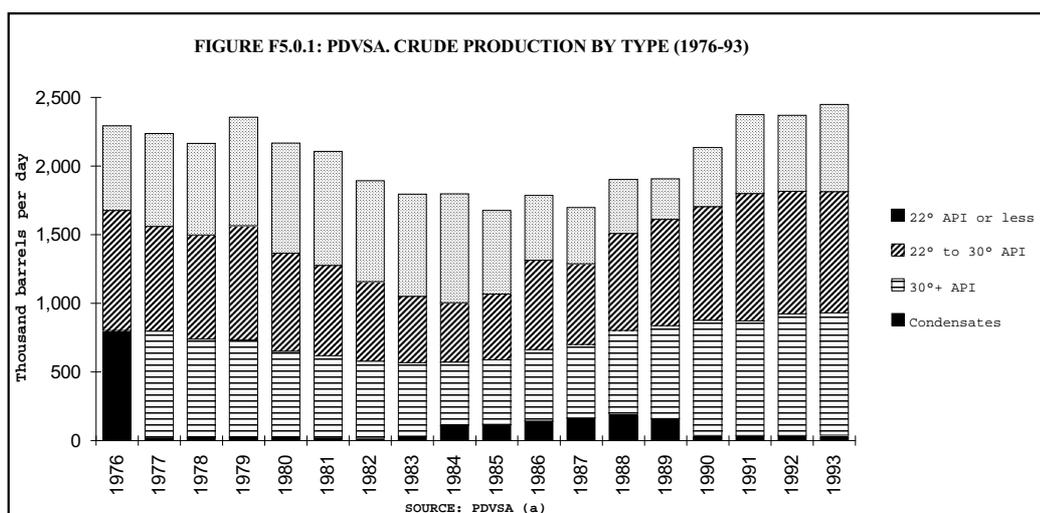
<sup>3</sup>Particularly since, as Stuckey and White observe, "the reasons used to justify vertical integration strategies are often shallow and invalid", notwithstanding the fact that such strategies are "expensive, risky and difficult to reverse" (1993:15).

<sup>4</sup>Székely, *op. cit.*: 21.

chapter to this discussion because the long tradition of vertical integration in the oil industry could easily cloud the issues that lie behind the downstream expansion efforts of crude-long NOCs like PDVSA). Now, in the first part of this chapter we shall demonstrate that the other economic arguments which PDVSA has advanced in favour of its internationalisation programme are also quite unsound. Then, in the second part of the chapter, we shall assume that this programme might have ulterior motives. Since the company has gone to great lengths to stress the purely commercial orientation of the internationalisation programme, we shall assume that these ulterior motives are also based on an industrial - as opposed to a political - logic. Such an assumption is quite reasonable, since those responsible for formulating Venezuela's commercial oil policy<sup>5</sup> since 1976 have had to do so in the face a major problem - the changing character of the Venezuelan crude export slate - which would have made the internationalisation programme *a predictable policy outcome in the eyes of almost any economist familiar with transaction cost economics*.

---

<sup>5</sup>The commercial oil policies of those countries that have a NOC and also export large volumes of oil encompass the general guidelines on the manner in which these surpluses are to be placed in the world oil market, as well as the more concrete measures which each NOC takes to make this placement easier.



As is shown in Figure F5.0.1, from the early 1970s onwards, Venezuelan light and medium crude oil output began to shrink appreciably. Because of this, by the early 1980s, the Venezuelan export slate became much heavier than it had been in the past (Figure F5.0.2). PDVSA's first joint venture deal roughly coincided with this contraction in the exportable surplus of relatively light Venezuelan crude oils. In view of the unfavourable transactional characteristics of the market for heavy crude oil (more of which anon), one could be excused for seeing the internationalisation programme as a natural reaction on the part of a company which realized that, in the very near future, heavy crudes would comprise most of its exports.<sup>6</sup> Our main objective in the second section of this chapter is to prove that this seemingly impeccable hypothesis is, in fact, wide of the mark.

<sup>6</sup>As claimed in Vilorio, 1992: 44-5.

### 5.1 PDVSA's Justifications for the Internationalisation Programme

The official or semi-official expositions of motives and declarations of intent dealing with the internationalisation programme are, on the whole, quite vague. Thus, the first task for the analyst is to sift through the pro-internationalisation arguments found in first-hand Venezuelan sources or accounts by company officials.<sup>7</sup> Once this has been done, it becomes clear that the programme has been conceptualised as being essentially *defensive* in nature. The next logical step in the process is to ask against what exactly is it that PDVSA's managers think they are protecting themselves through the acquisition of refining and marketing assets. Naturally, given the abundance of heavy crude in Venezuela, one would expect problems related to the liquidity and transparency of the market for this type of crude to loom large in these managers' strategic calculations. It comes as somewhat of a surprise, therefore, to find out that these managers consider integration as an indispensable requisite for the economic well-being of all oil companies (but particularly crude-long ones), *regardless of the efficiency of the markets in which - by dint of the physical nature of its respective resource endowment - each company competes*. Indeed, they insist that the vulnerability of a crude-long oil company is not a reflection of the structural characteristics of the market in which it sells its crude so much as a function of its capability to maximise its revenues (a capability which they see in turn as being a function of its degree of vertical integration). The following passage sums up Venezuelan conventional wisdom on this matter:

from any point of view . . . vertical integration constitutes an insurance policy for income under adverse conditions, a position of great advantage to maximise income in a buoyant market [*sic.*] and, at the same time, the best scheme for efficient planning and management in the global oil business . . . The reason [for vertical integration] lies in the necessity of maximising revenues and minimising risk. An optimal level of integration is the *only* scheme that satisfies this premise [*sic.*], and it is no coincidence that it [*sic.*] has been a constant characteristic in the oil industry.<sup>8</sup>

This line of reasoning is quite convenient for PDVSA because, under the terms of the Nationalisation Law, the company has the legal obligation to maximise and protect the Nation's oil income.<sup>9</sup> According to PDVSA, these legal duties can only be discharged by satisfying the following requisites (all of which presuppose a high degree of vertical integration):

a) minimising the random variations in revenues caused by the volatility in the price of oil;

---

<sup>7</sup>CEPET, *op. cit.*, v. II; PDVSA(a) 1976-95; Herrera Marcano, 1986; Alcock, 1992; Vilorio, 1992; Sosa Pietri, *op. cit.*; Rodríguez, 1994; Olmeta, 1995.

<sup>8</sup> CEPET, *op. cit.*, v. II: 175-6, italics ours.

<sup>9</sup>See the instructions of the Presidential Reversion Commission in Vilorio, 1983: 901. Article 3 of the Nationalisation Law says that the main objectives of commercial policy should be: the maximisation of economic benefits derived from exports, in accordance with the requirements of national development; and the maintenance of a stable and diversified foreign market of adequate size.

- b) having guaranteed outlets for its crudes; and
- c) having operations in the diverse segments which make up the oil industry.

In the following three sections, we shall examine each one of these arguments in turn. Drawing freely from the commercial experiences of PEMEX (the company which, in terms of the type of crude it has to sell, resembles PDVSA the most), we shall demonstrate that, from a strictly commercial viewpoint, they are riven with contradictions. Therefore, the declarations of the company's officials have to be seen as *ex post* rationalisations aimed at justifying its move downstream, rather than as acceptable explanations of the motives behind this move.

### 5.1.1 Revenue Stabilisation

Ever since the first oil shock, the international price of crude has exhibited an extraordinary degree of volatility, and this has been a cause of great concern among oil exporters. Hence, one should not be surprised at the interest which some crude long NOCs have manifested in the possibility of using vertical integration not only to soften the impact of unforeseen price shocks but also to mitigate the perverse economic effects derived from societal uncertainty with regards to oil export revenues.<sup>10</sup>

The idea that vertical integration can be a form of insurance against market volatility rests on the assumption that changes in the price of crude prompt changes of similar magnitude - but opposite sign - in refining and retail margins. Because the price of crude is the variable with the greatest incidence on the unit costs of refiners, crude prices and refining margins do exhibit a broadly symmetrical behaviour in the short term. Some authors have concluded that the variation in income for a given oil company will be inversely proportional to its integration index (in other words, a company's earnings will be more stable the more integrated it is).<sup>11</sup> If interpreted as a very broad rule-of-thumb, shorn of any normative undertones, this statement is not very controversial. However, some authors have drawn from it a conclusion which does have such a normative implication; namely, that stability of income confers significant competitive advantages on integrated firms because, by reducing the uncertainty derived from ephemeral market fluctuations, it enables managers to discharge

---

<sup>10</sup>Societal uncertainty regarding the revenues derived from oil exports has important costs for the economies of oil dependent countries. Hausmann *et. al.* (1993: 121) calculated that the variability in Venezuela's oil income during 1986-89 generated costs that have represented losses of the same order of magnitude as those caused by the 1986 price shock and its after-effects (about 10 percent of non-oil GDP). These costs, moreover, did not take into account the decline in the rate of growth caused by lower investment rates and expenditure revisions.

<sup>11</sup>Thus McLean and Haigh (*op. cit.*: 115): "the gross margin and profits available at the different levels of the industry are continually shifting and changing, and the movements at one level frequently differ both time-wise and direction-wise from the movements at another. Gross margins and profits may thus be decreasing at one level while they are stable or increasing at other levels".

more efficiently certain tasks - strategic planning, research and development, etc. - which demand a long range vision untainted by considerations of an "immediatist" nature.<sup>12</sup>

The oil industry is almost universally considered to be one where the "long-range vision" prevails; therefore, it might seem reasonable to assume that the stability-through-integration (STI) hypothesis has many backers in the boardrooms of large oil companies. But the truth is that, for the most part, these companies do not take the claims of this hypothesis too seriously.<sup>13</sup> The reasons behind their sceptical attitude are not difficult to fathom. As we have seen in a previous chapter, oil company managers and directors nowadays are very keen not to tie down their capital in unproductive uses, so as to avoid giving their shareholders an excuse to take punitive measures (like selling their shares) against them. Likewise, they fully understand the negative effect which a flawed integration programme can have on the value of their shareholders' capital. Naturally, this has made them wary of corporate strategies which do not enhance shareholder returns (and revenue stabilisation is one of those strategies, as even the most inveterate supporters of the STI hypothesis will admit<sup>14</sup>). However, NOCs in general exhibit a reduced sensitivity to the forces of the market for corporate control, so this objection to the STI hypothesis would probably not worry them too much.

A second, more serious, shortcoming of the STI hypothesis is that it assumes that stability of earnings will invariably induce directionally similar effects on the profits of any integrated company, and that the magnitude of those effects will depend solely on the company's degree of integration.<sup>15</sup> This is tantamount to asserting that profits in the different business lines of oil companies depend exclusively on exogenous variables, such as the market price of crude oil or processing margins in a representative refinery configuration. This claim is demonstrably false, since a company's profits also depend on a great variety of endogenous variables.<sup>16</sup>

---

<sup>12</sup>As Olmeta puts it (*op. cit.*: 309), an integrated refiner "can depend on a band of core earnings that allows the management to focus on long-term strategies that add value rather than on evading the latest market gyrations".

<sup>13</sup>Oil companies did not accord the STI hypothesis any great respect even during the halcyon days of vertical integration in the fifties and sixties. McLean and Haigh had to admit that the managers they interviewed generally saw stability of earnings as a goal which was not worth their while to pursue. In their words (*ibid.*: 116), they "found only a few cases where it could be said that a company made a particular integration decision primarily because its management believed that the move would in general help to stabilise the company's profit position".

<sup>14</sup>McLean and Haigh, *op. cit.*: 130.

<sup>15</sup>McLean and Haigh put it thus: "the behaviour of net profits at the different levels of the industry was such that vertical integration *could easily have had* somewhat the same significance as a means of stabilising a company's net profits that it did as a means of stabilising gross margins" (*ibid.*: 143; italics ours).

<sup>16</sup>Indeed, this explains, for instance, how Citgo and Champlin (both non-integrated refiners) almost managed to drown in red ink in the midst of the 1986 collapse in oil prices. Citgo's example is especially useful to understand the incidence which endogenous factors have on the profits of a given company, because for most of the other large American refining companies, 1986 was a very good year

Another nail in the coffin of the STI hypothesis has been driven in by the rise of oil derivatives markets. Since 1983, financial instruments like futures, options or swaps have given oil companies the means to protect themselves against temporary liquidity crises brought about by unforeseen market developments. Nowadays, many oil companies routinely smooth their earnings by means of these off-balance-sheet instruments, at a fraction of the cost which the acquisition of even one refinery would entail (and with a much greater flexibility to boot). Of course, hedging price exposures with these instruments has its problems. Firstly, the existence of basis risk<sup>17</sup> means that no hedger can aspire to a 'perfect hedge', because he will always be exposed to a residual risk which will be larger the more the commodity he is trying to hedge differs physically from the underlying futures contract. This is an important consideration in the case of Venezuela, since the heavy and sour blends that constitute the bulk of its exports are quite unlike the light sweet crudes traded in either NYMEX or IPE. Secondly, even though these futures markets have enormous breadth and depth, they would probably not be able to handle the volumes of paper that a country like Venezuela would have to trade if it wanted to hedge its future exports for anything more than a very limited period of time. Moreover, long term hedging is also complicated by the fact that the liquidity of these markets is concentrated in contracts nearest to the spot month (on average, between 80-90 percent of the open interest in oil futures exchanges involves contracts whose expiration date is less than five months away). However, these obstacles are by no means insurmountable. To begin with, high basis risks do not necessarily mean that there is no scope for hedging; after all, even with a very high basis risk of, say, 40 per cent, the use of futures contracts could still, *on average*, potentially reduce the volatility associated with oil prices by 60 per cent.<sup>18</sup> In addition, when used judiciously, these markets have been able to handle the exigencies of major oil exporters; for instance, at the outbreak of hostilities against Iraq in 1991, the Mexican central bank was able to hedge six months' worth of crude exports (about 250 million barrels) by spreading the sale and purchase of futures, options and over-the-counter derivatives. Finally, it should be noted that the degree of protection which derivatives give crude producers is in any case greater than that which forward integration into refining affords.<sup>19</sup>

---

(see *NPNFB*, 1987: 17). However, the fact that almost all American refiners recorded good profits on a year of very low crude oil prices should not be taken as a validation of McLean and Haigh's "rules of thumb". Rather, available data (in *ibid.*) indicate that low prices benefited the various companies in diverse ways, and it is evident that these relative differences cannot be explained solely in terms of the integration index of each company.

<sup>17</sup>Basis risk refers to the divergence between the changes in the price of a commodity and the changes in the price of the underlying futures contract. It is measured as  $1-R^2$  from the regression of changes in the commodity price on the changes in the future price.

<sup>18</sup>See Claesens and Varangis, 1994 and Weiner, 1996.

<sup>19</sup>"The correlations between the prices of crudes and products are high enough to make it unlikely that the overall volatility of an export basket consisting mainly of products will be lower than the volatility of an export basket consisting mainly of crude oil" (Claesens and Varangis, *ibid.*: 16). In the case of

One final objection to the STI hypothesis relates to the fact that governments of oil producing countries are in an even worse position than oil companies to reap the benefits it allegedly brings. The revenues of these governments ebb and flow according to the large variations in an absolute magnitude (the market price of oil), whereas the driving forces behind the profits of private oil companies are much smaller relative or residual magnitudes (in the case of dedicated production companies, the realized price of oil net of all costs of production, taxes and royalties; in the case of refiners, the difference between the prices - net of taxes - at which petroleum products are sold and the price at which delivered crude oil is bought; in the case of retailers, the difference between the wholesale and retail prices of petroleum products). The counter-cyclical movements of the net realized crude prices relative to refining and retailing margins could conceivably - *with all the caveats outlined in the paragraphs above* - stabilise the earnings of an oil company present in all three segments of the industry only because the movements of these variables have comparable (although obviously not identical) *absolute* values, and not just because the three variables have similar volatilities (volatility being a *relative* measure). In contrast, even if a government were to "own" a substantial amount of refining capacity, it could never achieve a similar stability in its earnings (i.e. export revenues), for the simple reason that variations in the price of oil *inclusive of ground rent* (which is what the governments of oil exporting countries really care about) are much larger, in absolute terms, than variations in refining and retailing margins. In sum, forward integration is not a very efficient rent-protection mechanism. Once again, financial oil derivatives (long-dated swaps, futures or options) seem to offer a superior alternative for this purpose.

The STI hypothesis, then, leaks from all quarters. Nonetheless, PDVSA has been very reticent to recognize the merits of financial oil derivatives<sup>20</sup>, even while maintaining that the stabilisation of Venezuela's oil revenues is one of the cornerstones of the internationalisation programme, as the following lines show:

the natural to and fro movement of the market oscillates between a position of strength for the seller to positions where the buyers are supreme. Vertical integration guarantees that, by controlling all the segments of the industry, volume can be maintained and revenues maximised, either from the production segment or from refining and retail sales, according to the conditions of the market . . . [The internationalisation programme] seeks to maximise the Nation's [oil] revenues and minimise substantial variations in those revenues [*sic.*], given their importance to the Nation.<sup>21</sup>

---

Venezuela, PDVSA's high degree of domestic integration has led to statistically insignificant reductions in the overall volatility of export and tax revenues (*ibid.*).

<sup>20</sup>Until recently, the only PDVSA subsidiary active in these markets on a regular basis was Citgo.

<sup>21</sup>CEPET, *op. cit.*: 175-7. Revenue stabilisation has been one of the main reasons why the Venezuelan government has supported the internationalisation programme (see "Venezuela Looks Overseas to Maintain Oil Revenues"; *FT*, June 4, 1987: 31). According to *Platt's*, Carlos Andrés Pérez was convinced not to oppose PDVSA's deal with Unocal because the company's board argued that

However, it is perfectly obvious that PDVSA has not granted priority status to the objective of stabilising the Venezuelan governments' oil revenues. The way to prove this is to look at the dividend payments of PDVSA's refining subsidiaries; after all, if PDVSA's commitment to the objective of revenue stabilisation were genuine, one would expect these payments to increase in years of low oil prices (otherwise, the cash flows generated by these companies would not compensate - even imperfectly - the revenue shortfall experienced by the Venezuelan treasury, because these subsidiaries are beyond the fiscal reach of the Venezuelan government). Fortunately, both Citgo and Nynäs publish detailed annual reports which include information on the payment of dividends to their parent companies. Table T5.1.1 shows the behaviour of Citgo's dividends, shareholder equity and retained earnings since 1986. As can be seen, it is quite clear that changes in the price of Venezuelan crude have had no influence on these variables. Citgo's dividend payments since 1990 have shrunk quite dramatically (both in absolute terms and in relation to the total capitalisation of the corporation<sup>22</sup>) even though, on the one hand, the price of oil declined after the end of the Gulf war and, on the other hand, Citgo absorbed two other firms - Champlin and Seaview - which presumably used to pay dividends of their own to PDVSA. What is more, the shareholder equity numbers indicate that, in some years, PDVSA has invested considerable sums of fresh capital in addition to the already significant contribution which Citgo's undistributed earnings represent. This behaviour pattern appears even more extraordinary when it is viewed in the context of the American oil industry at large (Table TA3.1 in Annexe 3 presents a more detailed comparison between Citgo's behaviour and a representative cross-section of US refiners). Table T5.1.2 provides another good illustration of PDVSA's puzzling reluctance to demand dividends from its subsidiaries abroad. As can be appreciated, Nynäs chose not to distribute any earnings to shareholders *until 1990*, the year in which Neste (a company which presumably has no aversion to receiving dividends) bought out PDVSA's original partner in this refining venture.

---

"Venezuela's serious foreign exchange problem would be alleviated in part by the dollars the venture would bring in" (*PON*, December 6, 1988: 1).

<sup>22</sup>Before 1990, Southland and PDVSA received half of Citgo's dividends each. As of 1990, PDVSA has been the sole claimant of Citgo's dividends.

**TABLE T5.1.1:** Citgo. Behaviour of Selected Financial Variables (1986-95)

	<i>Dividends paid</i>	<i>Retained earnings</i>	<i>Shareholder equity</i>	<i>Assets</i>	<i>FOB price of Venezuelan crude to US destinations</i>
		<i>(in thousands of dollars)</i>			<i>(USD/Bbl)</i>
1986	0	43,578	339,126	1,208,597	10.92
1987	0	85,725	424,851	1,190,572	15.08
1988	80,000	85,635	510,486	1,342,657	12.96
1989	80,000	81,013	591,499	1,586,895	16.09
1990	0	175,755	600,528	2,334,802	19.55
1991*	7,830	43,119	991,658	3,259,046	14.91
1992 <sup>23</sup>	43,089	7,981	1,003,905	3,488,180	14.39
1993	28,483	133,652	1,349,557	3,866,267	12.46
1994	0	184,685	1,576,783	4,440,028	12.20
1995	0	139,724	1,731,507	4,923,578	13.89

\*As adjusted in 1992

Sources: Citgo, MER

**TABLE T5.1.2:** Nynäs. Behaviour of Selected Financial Variables (1986-95)

	<i>Dividends paid</i>	<i>Retained earnings</i>	<i>Total assets</i>	<i>Crude Oil Import Costs (CIF) of Sweden</i>
		<i>(in thousands of Swedish kronor)</i>		<i>(USD/Bbl)</i>
1986	0	38,200	999,000	14.67
1987	0	38,300	1,382,100	18
1988	0	38,300	1,660,300	14.73
1989	0	38,300	1,950,400	18.05
1990	60,000	3,000	2,298,300	23.02
1991	18,000	35,000	2,120,000	20.19
1992	25,000	113,300	2,964,700	18.98
1993	40,000	161,800	2,740,300	16.6
1994	113,000	163,500	2,858,500	15.81
1995	142,300	139,200	2,736,600	17.24

Sources: Nynäs, QOSEB

On the strength of these two tables, we have to conclude that the contribution of Citgo and Nynäs (and, by analogy, the rest of PDVSA's overseas subsidiaries) to the stability of the Venezuelan government's oil revenues has been negligible.<sup>24</sup> Thus, given the absence of any indication that financial transfers from PDVSA's overseas subsidiaries to the parent company

<sup>23</sup>In this year, dividend payments are relatively high because of changes in the Citgo's accounting principles (Citgo, 1992: 34). Dividends for 1991 and 1992 before restatement amounted to 25.725 MMUSD and 25.194 MMUSD, respectively. Retained earnings for 1991, before the restatement, amounted to 117.335 MMUSD. Had Citgo not taken an extraordinary charge of 86.499 MMUSD in 1992, retained earnings for that year would have been 94.480 MMUSD.

<sup>24</sup>PDVSA itself accepts as much. Its 20-F form (PDVSA, 1993 (b): 2; italics ours) laconically states: "PDVSA has permitted [its] subsidiaries and joint ventures to retain for reinvestment the vast majority of the cash flow generated by their operations".

have increased in times of weakness for the oil market, one has to conclude that internationalisation has never been used to stabilise Venezuela's oil export earnings.<sup>25</sup>

### 5.1.2 Securing Outlets for Venezuelan Crudes

In almost all the space which trade journals have dedicated to PDVSA's international vertical integration drive, one can find sentences like these: "the addition of  $y$  refinery to PDVSA's overseas refining system will give the company an assured outlet for  $x$  thousand barrels per day of hard-to-place heavy crude" or "after its latest acquisition, PDVSA is now in a position to run through its own refineries  $z$  per cent of the total Venezuelan crude production". The abundance of statements to this effect is so marked that one must conclude that oil analysts have elevated the search for secure outlets to the place of privilege in the motley mix of arguments with which PDVSA has defended its integration efforts. In this they are quite right, since the official Venezuelan position on vertical integration stresses that "in a situation of global excess supply [like the one that has characterised the international oil market since 1986], the *foremost* risk that has to be faced is the loss of market access" and, as a result of this, "the internationalisation [programme] pursues the *basic immediate objective* [*sic.*] of solving this problem with the greatest priority [*sic.*]"<sup>26</sup>

The idea that an oil producer can assure an outlet for a certain proportion of his crude volume by owning a refining system abroad is unassailable from a strictly logical viewpoint; after all, an integrated producer has every right to refuse to process anything but his equity crude. At first glance, this would seem to make the option of acquiring refineries abroad quite attractive for the revenue-maximising governments of some of oil exporting countries. However, outright acquisition is by no means the only way in which a commercial entity can take over the residual rights of control which one of its client has over certain assets; there is a panoply of contractual practices which also tend to blur the boundaries between firms and markets and which, hence, can give a firm a greater security of outlet than that which it would have if it relied solely on spot markets to place its output. Granted, acquisition has one crucial advantage *vis à vis* these other mechanisms: it completely suppresses the firm-versus-market divide and, hence, can offer full volumetric security to the owner of the downstream assets. However, it does so at a cost which is many times greater than the costs associated with common quasi-integration mechanisms (like netback pricing deals or tolling agreements). Thus, it is not unambiguously clear that vertical integration through acquisition of refining and marketing assets offers crude exporting countries the most cost-effective

---

<sup>25</sup>When PDVSA acquired the second half of Citgo, it terminated the company's established revolving credit facilities and entered into new covenants which "were *considerably more restrictive* as to the allowance of dividends" (Citgo, 1989: 28; italics ours).

<sup>26</sup>CEPET, *op. cit.*: 161; italics ours. As *PIW* (September 5, 1983: 1) puts it: "a basic operating objective is to find 'captive' downstream markets abroad that can assure Venezuela of a guaranteed end user outlet for its crude and products".

option to secure outlets for their exports. In order to ascertain whether this is indeed the case, one has to weigh the extra costs that asset acquisition entails against the value of the incremental security afforded to the producer by these assets (expressed as the net present value of the crude volumes that would not have found a home had the producer not owned the assets).

A useful point of departure to tackle the problem of the price that an oil exporting country should pay for the privilege of secure export outlets is a model proposed by Green<sup>27</sup>, in which firms integrate vertically to assure either the supply of a perishable input or the demand for a perishable output in an intermediate product market. This model assumes the existence of price rigidities in the market, which give rise to periodic and recurrent production shortages or surpluses and, in turn, to rationing on the demand and supply sides of the market, respectively. Underlying the model are three crucial assumptions: firstly, that this rationing "occurs on an all-or-nothing basis to the individual firms, with the percent of firms so rationed (input producers in situations of excess supply and input consumers in situations of excess demand) varying with fluctuations in exogenous excess demand"; secondly, that "individual firms are... unable to affect the probability of being subject to such rationing (through . . . long term contracts or inter-firm ties of a less formal variety)"; and finally, that all the goods exchanged in the market are perishable.<sup>28</sup> The effects of this stochastic rationing on market participants are considerable: non-rationed firms enjoy a constant (exogenous) price for their inputs or outputs, while rationed firms are confronted with an effective price of either zero or infinity (according to whether they are sellers or buyers in the market). The conclusion which Green derives from these premises is not surprising: "since integrated firms are allowed to transfer the output of their upstream divisions directly into the next stage of production without facing the risk of being rationed, an incentive for vertical integration exists in the potential for circumventing an imperfect market".<sup>29</sup>

Accepting that Green's model presents a reasonably accurate picture of today's oil market is tantamount to concluding that all oil companies have to be integrated to some - preferably large - degree. Furthermore, crude-long NOCs would be expected to exhibit an even greater propensity towards integrated operations, because their very large reserves-to-production ratios mean that, for them, the value of crude whose production is foregone today is - in financial terms - essentially lost forever.<sup>30</sup> Moreover, given the havoc which even a temporary exclusion from the world oil market would wreak on the economy of most oil-exporting countries, it would seem sensible for NOCs with large surpluses of crude to protect

---

<sup>27</sup>In Blair and Kaserman, *op. cit.*: 85-6.

<sup>28</sup>*Ibid.*

<sup>29</sup>*Ibid.*

<sup>30</sup>This characteristic makes oil a perishable good in a financial sense.

themselves from such rationing by means of vertical integration programmes focused on those countries which absorb the majority of their export volumes. Seen under this light, PDVSA's internationalisation programme appears as a fundamentally sound investment. After all, the company has acquired a number of world class conversion facilities in its main export markets at relatively reasonable prices.<sup>31</sup> Of course, the validity of this conclusion depends entirely on accepting that, at present, the world petroleum market is characterised by the extreme rationing conditions of Green's model. This, however, is not the case: the theoretical results obtained from Green's model<sup>32</sup> fit the environment that prevailed in the oil industry in the era of ascendancy of the Seven Sisters (when the vast majority of internationally traded crude oil moved through integrated channels, and non-integrated firms could be subject to price-inelastic rationing<sup>33</sup>) much better than they do the highly "commoditised" oil market of today (where the major integrated companies try to behave as if they were not integrated, because the trading function has driven a market wedge between their different constituent parts; where many arbitrageurs - trading houses, investment banks, Wall Street refiners - are ready to take advantage of any price or supply disruption, however slight; and where commodity exchanges give almost anybody with money to gamble the chance to participate in the oil market merely by picking up a phone and calling a brokerage house).

On the strength of the above mentioned facts, it would appear that, nowadays, vertical integration is definitely not the only option available for a crude exporter seeking to protect its market share. However, there are those that insist that the experiences of OPEC countries during the early 1980s indicate otherwise. Granted, during this period, a number of OPEC countries (Venezuela among them) saw their respective market shares and production figures shrink, sometimes dramatically so. However, as Ait-Laoussine and Wood-Collins point out, "it would be a gross oversimplification to suggest that these countries lost market

---

<sup>31</sup>See *PIW's* special supplements on worldwide refinery deals (March 13, 1989: 4; March 19, 1990: 4; April 8, 1991: 9; May 4, 1992: 4; May 7, 1993: 3; April 17, 1994: 5). The company has claimed that, nowadays, it would take 20,000-25,000 MMUSD in 1994 terms to buy the refineries for which it has paid 1,670 MMUSD in nominal terms (*PIW*, November 14, 1994: 3); this, however, is an attempt to cast its downstream acquisitions in an especially favourable light, because while the former figure is clearly the full replacement cost of the facilities, the latter figure does not include assumed debt, additional investments or, just as importantly, the opportunity cost of the discounts implicit in PDVSA's pricing formulae (see below).

<sup>32</sup>Two results emerge from this model. Firstly, the only optimal organisational choice for a firm is to balance its operations perfectly and avoid participation in the market for the intermediate good. Second, the model is inherently unstable at equilibria in which a mixed organisational structure is present (i.e. one in which integrated firms co-exist with non-integrated ones). This means that the market tends towards the extremes of total integration or of no integration whatsoever.

<sup>33</sup>In his famous study of the international oil cartel, Blair remarked: "the data clearly indicate that the eight largest firms have dealt only nominally with independent marketers; several have testified in investigative hearings that they will not sell to independents, regardless of price" (*op. cit.*: 243). The oil cartel's Draft Memorandum of Principles (1934) stated: "except as hereinbefore provided for, no participant shall be free to sell to outsiders either crude oil or finished products (*ibid.*: 61).

share because they were absent from the downstream business".<sup>34</sup> Rather, the decline in their commercial fortunes was an inevitable consequence of their adherence to a moribund OPEC quota arrangement (even in the face of systematic violations by other members of the organisation) and OPEC's minimally responsive pricing system, a sluggish rate of growth in world oil demand and rapidly rising production flows from non-OPEC regions. Indeed, it is fair to say that even under exceptionally turbulent market conditions (such as those that beset the oil market in 1986), "a producer's ability to meet a specified export target depends more upon its freedom to set its export price than on the extent of its downstream involvement"<sup>35</sup>; therefore, security of outlet can be said to be more "a function of price competitiveness than of asset ownership [because] there is ample evidence that under a free-market pricing system . . . producers without downstream involvement do not face a significant disposal problem".<sup>36</sup> What this means - particularly in today's highly commoditised oil market - is that the non-integrated producer who is both ready and able to undercut his competitors' prices all the time can expect to have only marginally less trouble in finding a home for his export volumes than a highly integrated producer.<sup>37</sup> Now, acquiring and managing refineries is, by all accounts, a very expensive enterprise (not only in monetary terms but also in terms of the demands which vertical integration makes on a company's human resources<sup>38</sup>). In contrast, selling crude by means of discounts is both simple and cheap. Therefore, we feel justified in saying that, *purely as a means of securing outlets for crude oil*, vertical integration would not be a very cost-effective option for NOCs when compared to a commercial policy predicated on judicious price discounting *unless the ownership of downstream assets made it possible for companies to avoid granting discounts in order to move their chosen export volumes*.<sup>39</sup>

The key assumption underlying this last sentence - that an input supplier, by virtue of merging with one of its customers, effectively removes the firm's purchases from the

---

<sup>34</sup>Ait-Laoussine and Wood-Collins, 1988: 3.

<sup>35</sup>*Ibid.*: 3.

<sup>36</sup>*Ibid.*

<sup>37</sup>As a former Chief Economist of Ashland Oil bluntly put it, "a producing country can achieve almost all of the objectives of downstream integration through netback deals and save itself the hundreds of millions of dollars required up front in a joint venture arrangement" (Tahmassebi, 1988: 6). That is why, as far back as 1983, Arturo Hernández Grisanti - who was then AD spokesperson on petroleum and later became oil minister under Lusinchi - demanded that the Herrera administration answer "whether Venezuela, to place its crude abroad, really has to go around buying refineries" (Calderón Berti, 1986: 359). More recently, and for much the same reasons, Alberto Quirós publicly entreated PDVSA to "look into the internationalisation policy" and ask itself: "how much of a shareholding is it necessary to maintain the benefits obtained from these operations? What are these benefits in reality? How can the additional benefits received by virtue of being sole shareholder of a given company be quantified? . . . Is it necessary to continue being the owner of 100 per cent of Citgo . . . to enjoy the benefits that its operations generate?" (1996: D2).

<sup>38</sup>As Skeet (1989) points out, NOCs are particularly limited in this respect.

<sup>39</sup>"By establishing ties with refiners and marketers, producers . . . [can] force their crude through the system and avoid discounting heavily on the last few marginal barrels that would otherwise not find a home" (Emond, 1988: 31).

pressures of open market<sup>40</sup> - is highly questionable. Allen, for instance, established that vertically integrated firms operating in reasonably liquid markets have to set their transfer prices according to the open market prices (in other words, they will enter the market - as buyers or sellers - as soon as the market price for a given product differs from the internal price at which their internal supply and demand curves intersect), or incur considerable opportunity costs.<sup>41</sup> Thus, integrated producers, even if running their own oil through their own refining system, in the end have to face much the same choices that confront non-integrated producers competing in an oversupplied market: cutting volume or cutting prices.<sup>42</sup> The assertion that downstream integration can allow producing countries to maintain both their crude prices and their production at levels which please them would hold *if and only if* integrated producers were able to prevent other producers from gaining access to any given refinery, *regardless of the price at which the latter offered their crude* (in other words, if the oil world really behaved like Green's model). Such a condition could be, and often was, fulfilled during the period of hegemony of the Seven Sisters (as prime minister Mossadegh found to his cost); however, this is no longer the case today.

McBride's investigation of the American cement industry offers a good illustration of the limited effect which vertical integration has in reducing competition via prices. In the late 1960s, cement firms - which enjoy a high degree of spatial monopoly due to the high cost of transporting cement relative to the value of the product - were eager to avoid generalised price competition during market downturns, mainly because this would have meant extracting a smaller surplus from their captive customers. These firms, however, also had to maintain a high level of capacity utilisation (because of the high fixed costs of cement manufacturing). Downstream vertical integration (the acquisition of concrete-making concerns) was seen by many cement producers as a way of achieving "security of outlet" without any sacrifice on price. In practice, McBride found that "the cumulative effect of vertical integration [was] to bring the cement price level down", because integrated cement manufacturers in effect exported low-capacity utilisation rates to non-integrated firms, who could only respond by dropping their prices (thus depressing prices in the whole market).<sup>43</sup> Strangely, most oil analysts do not think that similar dynamics might be at work in the oil market. For instance,

---

<sup>40</sup>Blair and Kaserman, *op. cit.*: 147.

<sup>41</sup>Allen, 1971.

<sup>42</sup>An integrated company trading actively in the spot market may sometimes direct a crude cargo to its own refinery if, for instance, it feels that the market cannot absorb any more volume of his particular crude without a fall in its price, and it has an interest in preventing such a fall from taking place (because it has five more cargoes of the same crude being priced on a given day, say). Even though this last cargo has to be priced at a discount to the others (because the refinery has to defend its own profit/loss position), the integrated company will benefit because the transaction will have been kept hidden from the market. Of course, this is a useful procedure if a company wants to dampen the impact of some unforeseen short-term disruption, but it cannot be used to prop up artificially an oversupplied market for any length of time.

<sup>43</sup>McBride, 1983: 1021.

when Saudi Aramco's association with Texaco (involving three refineries and a 600 MBD supply contract) was announced, the conventional wisdom regarding this deal was that it would "lead to more stability in the underlying market, although at the margins there may be some volatility." Given that it is the marginal balance of supply and demand that determines prices in any reasonably competitive market, it is quite surprising to find only one analyst dissenting "from the majority view", and pointing out that the deal would make "the residual demand for crude . . . less elastic" and that, as a result, "more drastic price cuts [would] have to be made by those written out of the scenario in order for them to move their displaced crudes".<sup>44</sup>

In general terms, then, it seems clear that vertical integration cannot really be billed as "the natural choice" for oil exporting countries, because there are other options which give these countries an acceptable degree of volumetric security at a much lesser cost. Of course, this statement does not necessarily cast a question mark over the commercial common-sense of all those NOCs that have decided to expand downstream, since there are conditions under which vertical integration can exert a positive influence on a company's competitive situation and add value to its activities (see section 5.3 below). Thus, before passing a verdict of this nature on any particular integration programme, one has to make sure that its costs do indeed outweigh its benefits. However, it has to be said that the Venezuelan model of integration is in a class of its own in terms of unattractiveness for potential imitators, because it somehow manages to combine the substantial outlays inherent in asset acquisition with the costs of a price policy based on discounts and, to cap it all, a far-from-negligible degree of residual volumetric insecurity for those crude volumes which it does not place through integrated channels.

For obvious reasons of corporate secrecy, it is impossible for the analyst to be cognizant of the specific provisos of PDVSA's long term supply contracts with overseas affiliates. However, the detailed reports which PDV-América files with the SEC as guarantor of three issues of PDVSA senior notes listed in NYSE clearly state that all these contracts are structured around pricing formulae based on the spot market value of a slate of refined products assumed to be produced from each crude (or feedstock) at each refinery under typical conditions.<sup>45</sup> This value is adjusted downwards by subtracting certain inflation-indexed deemed refining costs, transportation costs, import duties, taxes and a deemed refining margin - calculated "*to assure the refinery of a profitable level of activity*"<sup>46</sup> - for each sort of crude. In the oil industry, this netback-type pricing mechanism goes under the seemingly tautological name of *market related pricing* (tautological because nowadays there are no internationally-trade crudes or products whose price is not related in some way to

---

<sup>44</sup>PON, June 17, 1988: 2.

<sup>45</sup>PDVSA (b), 1993: 12.

<sup>46</sup>IPF, May 29, 1987: 6; italics ours.

either the major spot or paper markets). In reality, this term is used throughout the oil industry as an euphemism for discounted prices that are *inferior* to true spot prices, as the following lines make abundantly clear:

in 1987, Tamoil [Italian arm of the Libyan state oil company] . . . was the only major Italian marketer to make a profit: none of the conventional [*sic.*] refiners is able to stay in the black in a market where prices are controlled at the average of product prices in five other European countries . . . The reason [behind this] is simple . . . Over 80% of the crude refined by Tamoil . . . came from Libya, and, although [Tamoil's annual] report does not say so, the Libyans *must have invoiced Tamoil at market related prices*.<sup>47</sup>

Now, PDVSA's "market related pricing" is germane to the issue of the evaluation of the company's integration strategy because this sales mechanism substantially increases the already quite daunting price tag attached of the internationalisation programme. In their discussion of the pros and cons of vertical integration strategies, Ait-Laoussine and Wood-Collins remark that "a low acquisition price does not necessarily reflect the full cost of the transaction for the buyer . . . if additional investments are needed to bring the assets up to an acceptable standard, these requirements of course must be factored into the acquisition price".<sup>48</sup> No financial analyst would find fault with this opinion; after all, additional investments reduce the cash flow which the asset will generate in the future and thus, for purposes of acquisition, the net present value of the asset has to be discounted accordingly. By the same token, if a NOC that has acquired a stake in a refinery adopts a "market-related pricing" policy in order to assure that its joint venture partner lifts its oil, the net present value of any discount *over and above* the one that would have been necessary to move the crude in the open market should also be included in the total cost calculations (since such discounts reduce the income stream which the producer derives from sales of crude). This means that at least part of the net present value of the generous discounts which PDVSA gives to its foreign affiliates should be included in its refinery acquisition costs.

Although quantifying these rebates accurately is not really feasible, it is nonetheless possible to illustrate *a grosso modo* the high price which PDVSA pays for its volumetric security. A good example of this are the adjustments introduced in 1992 to the crude supply contracts for its Lake Charles, Corpus Christi and Paulsboro refineries, and whose stated objective was to increase these plants' assured margins for the years 1992-6 in order to compensate them for expenditures necessary to comply with the provisos of the Clean Air Act Amendment Bill of 1990. When these additional discounts<sup>49</sup> are multiplied by the average volume of crude run through the plants on a yearly basis, one arrives at a figure of 70 MMUSD per year.

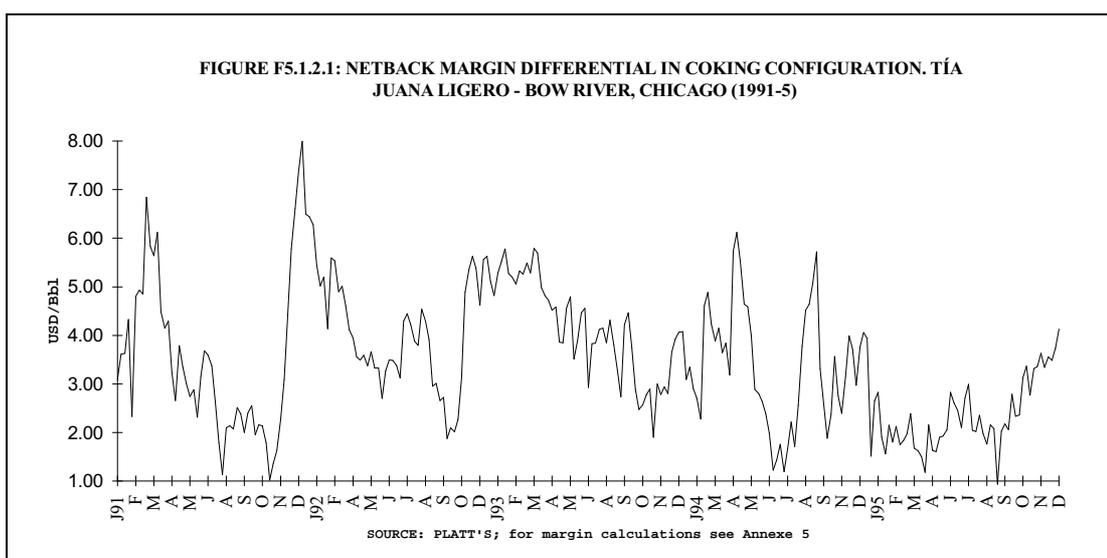
---

<sup>47</sup>*The Barrel*, May 30, 1988: 1; italics ours.

<sup>48</sup>Ait-Laoussine and Wood-Collins, *op. cit.*: 3.

<sup>49</sup>The adjustment for the Corpus Christi refinery translates into a price reduction of .86 USD/Bbl, while the others receive a reduction of .5 USD/Bbl (PDVSA (b), 1993:12).

Uno-Ven's Lemont refinery provides an even better example of the hidden costs of the internationalisation programme. This plant is quite complex, and yet it runs relatively light Venezuelan crudes (because of viscosity restrictions on the Colonial pipeline, which connects it to the US Gulf Coast). This makes running Venezuelan crude through the facility an unattractive proposition, because the margins that can be obtained by processing heavier Canadian crudes are better. Figure F5.1.2.1 poignantly underscores this fact (even when one makes ample allowances for possible measurement errors, excessive generalisation in the refining model and the like): as can be seen, the netback margin differential between Tía Juana Ligero and Bow River Blend is heavily in favour of the Canadian crude because, on the one hand, its yield in a coking configuration is better and, on the other hand, because its price is lower than the official price of Tía Juana (even in FOB terms). Thus, the fact that between 1989-96, Unocal met most of its own crude requirements for the plant almost exclusively with Venezuelan crudes (and did not let heavier Canadian barrels displace them) means that the price it paid for its supplies of Tía Juana Ligero or equivalent Venezuelan crudes must have been, on average, at least 3.50 USD/Bbl below the 'official' Venezuelan posted price.<sup>50</sup>



There is one last possible indication of the real cost of the programme which is worthy of mention. PDVSA's statistical annual publishes the average price of the crude processed by Citgo<sup>51</sup> (which presumably represents the landed cost of crude at Citgo's

<sup>50</sup>A technical aside is in order: this evaluation method does not make any adjustments for mass and, therefore, is actually biased *in favour* of the Venezuelan crude. The margin differential comparison is based on the Gross Product Worth (GPW) which refining an additional barrel of Bow River or Tía Juana Ligero crude in coking mode will produce at the margin. However, since the Venezuelan crude yields less coker feed than the Canadian one, this means that a refiner has to process more of the former in order to obtain a given amount of coker feed. This displacement effect makes Tía Juana even more costly to refine in a coking mode than Bow River.

<sup>51</sup>PDVSA (c), 1993: 79.

refineries, inclusive of transportation costs, harbour dues, and various duties and taxes). If one disaggregates this figure into its components (on the basis of the crude imports data provided by the API, and PEMEX and EIA price data), one can deduce the price of Citgo's Venezuelan crude. And, as can be seen in Table T5.1.2.1, the price of Citgo's Venezuelan crude as derived by this method is consistently inferior to the average landed cost of Venezuelan crude imports of the US, even though the quality of Citgo's crude over the 1989-93 period was better than that of the average Venezuelan crude supplied to this market. However, this result depends on the following assumptions:

- a) in any given year, Citgo runs all its Mexican and "other light" crude imports, but not all of its imports from Venezuela;
- b) Citgo does not run crude from inventories;
- c) the price of Brent is a good proxy for the price of all "other light crude" imports;<sup>52</sup>
- d) the LLS-Brent differential, added to the price of the latter, is a good proxy for the price of light US crudes run by Citgo.

**TABLE T5.1.2.1:** Citgo. Price Breakdown of Crude Supplies (1989-93)

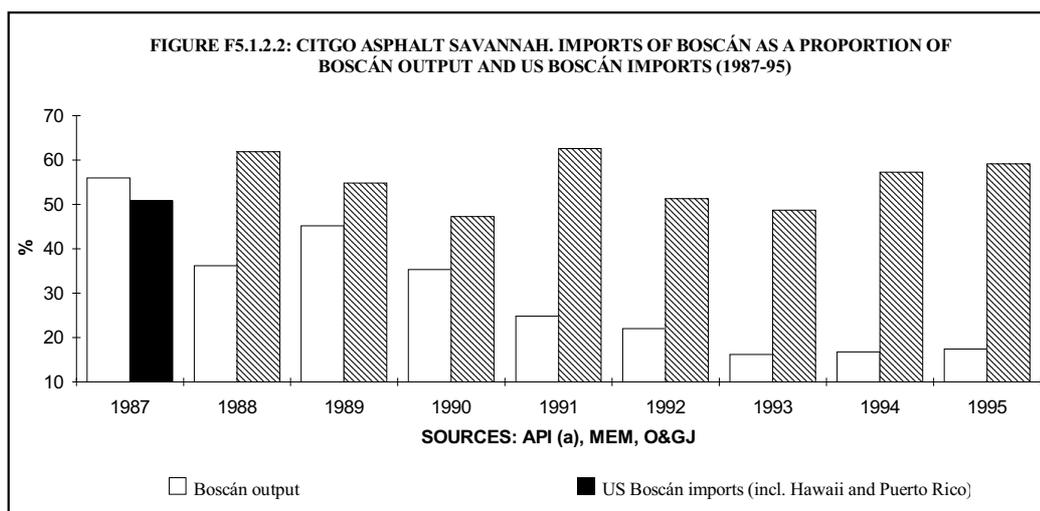
Year	Processed crude (MBD)	Average price (USD/Bbl) *	Landed price (+ taxes) of crude:				API gravity (sulphur)		Landed price (+ taxes) of Venezuelan crude imports to the US+++
			Mexican+	US++	Other light++	Venezuelan	of Venezuelan supplies::		
						Citgo	USA (rest)		
1989	282	17.46	16.03	20.82	19.23	16.55	26.03 (1.5)	23.7 (1.68)	<b>16.89</b>
1990	269	21.79	17.83	30.87	29.73	19.67	25.5 (1.2)	23.3 (1.68)	<b>20.41</b>
1991**	377	17.72	13.74	24.94	22.57	16.55	24.02 (1.36)	23.07 (1.69)	<b>16.03</b>
1992***	431	16.27	14.04	22.55	21.08	14.78	23.89 (1.41)	22.67 (1.75)	<b>15.24</b>
1993****	439	14.10	12.68	20.03	18.42	11.43	22.97 (1.63)	22.17 (1.68)	<b>13.50</b>

Sources:\* PDVSA (c), 1993 Includes volumes for Corpus Christi (\*\*), Paulsboro (\*\*\*), Savannah (\*\*\*\*) from mark onwards. + PEMEX ++PMA +++MER

Since these assumptions are too simplistic, the result cannot be seen as conclusive. Nonetheless, we have come across clues that seem to confirm that, in actual fact, it may not be too wide of the mark: PDV América's 10-K report states that the unitary price that Uno-Ven paid for its crude supplies in 1996, 1995, and 1994 was 18.47, 13.88 and 11.66 USD/B (respectively), while the average landed cost of (heavier and more sulphurous) Venezuelan crude imports to the US for those same years was 18.54, 14.84 and 13.12 USD/B (respectively).<sup>53</sup>

<sup>52</sup>Weighted landed price of Brent to the US (inPMA).

<sup>53</sup>PDV América 10-K, 1996: 15-16. A Venezuelan researcher found a PDVSA document (which she unfortunately did not identify) which stated that, in 1994, the average price of all Venezuelan crude and products exports was 13.23 USD/Bbl, while the average price of the crude and products bought by PDVSA's overseas subsidiaries was only 11.94 USD/Bbl (Trotta de Godoy, *op. cit.*: 195). At a press conference held in Venezuela in early 1997, PDVSA spokespersons disclosed that the realized prices for crude sales to affiliates and third parties during 1995 and 1996 had been 12.62 USD/Bbl vs. 15.07 USD/Bbl, and 16.26 USD/Bbl vs. 18.77 USD/Bbl, respectively (personal interview).



In view of the very high costs of PDVSA's internationalisation programme, one is naturally inclined to think that it must give the company a volumetric security that it could not otherwise approximate, even if it were ready to sell its crude at knock-down prices. However, of the 15 refineries that PDVSA has bought, there is only one for which this appreciation is true: Citgo Asphalt Savannah. Had PDVSA not bought this plant, Amoco would certainly have closed it and, as Figure F5.1.2.2 shows, this would have had a very negative impact on its unpopular sole feedstock.

There is one final factor which makes it difficult not to question PDVSA's "security of placement through integration" strategy; namely, the manner in which PDVSA's crude supply contracts with non-affiliated companies function. Venezuelan term contracts are options - rather than obligations - to buy specified volumes of a specific crude grade every  $x$  period of time.<sup>54</sup> This makes them very different from the relatively stringent supply contracts used by, for instance, PEMEX. Mexican term contracts stipulate that the customer has the obligation to lift the specified volume of crude every  $x$  days, and to make good losses due to underlifting within the duration of the contract; in contrast, Venezuelan contracts grant the buyer the discretionary power to decide whether he will lift oil or not in a given month; if the client decides not to lift a cargo, he does not have to declare *force majeure*, nor does he jeopardise his possibilities of lifting Venezuelan oil in the future (in other words, a Venezuelan contract gives the refiner the right to lift when he thinks that the crude is attractively priced; the refiner is obliged to lift only a certain proportion - specified casuistically - of the contractual volume over the life of the contract<sup>55</sup>). In theory, one would

<sup>54</sup>*PIW* calls these optional contracts "frame contracts"; (May 24, 1993, special supplement: 2).

<sup>55</sup>Venezuelan contracts do not necessarily have a yearly duration. *PIW* (May 24, 1993, special supplement: 1) states that "a single [Venezuelan] client may hold an annual contract for one volume and quarterly contracts for incremental amounts, while also purchasing crude sporadically on a spot basis at different price formulas". According to *IPF* (July 15, 1993: 1), PDVSA has negotiated a number of

expect the crude liftings of a producer with such a contractual arrangement to exhibit a higher variance than the liftings of a producer with a more restrictive system in place; in practice, it is impossible to determine whether this is indeed the case (because variations in export volumes from month to month can be due to insufficient crude nominations but also to logistical problems in terminals, temporal reductions in production, *force majeure*, or even to the way in which the contract of a particular client is structured). Nevertheless, it is fair to assume that this contractual system will, at the very least, tend to diminish the *predictability* of a company's crude nominations (since it gives its clients the chance to adjust contractual volumes almost at will, at no great cost). Reconciling the pitfalls - real or potential - of this esoteric contractual system with PDVSA's concern for volumetric security is very difficult. Therefore, one has to conclude that, had PDVSA's managers really been interested in a cost-effective recipe for "security of outlet", they would have started by reforming their contractual practices. The fact that they have not done so leads us to doubt that the quest for security was really the prime motivation behind the internationalisation programme: whatever "security" is afforded PDVSA by its refineries abroad clearly exists only because the Venezuelan NOC has been willing to set the price of their crude supplies at the level necessary either to persuade its partners in some refineries to process the crude, or to assure its wholly-owned refineries of a very high level of profitability.

### 5.1.3 The Capture of Profits in Various Segments of the Oil Industry

PDVSA's official line on the last of its main motives to pursue a strategy of international vertical integration runs thus: "[vertical integration] has to do with maximisation of revenues, which it favours . . . [because] each segment of the industry has to produce profit in the medium and long term to justify its continuity. *Therefore, an enterprise that does not participate in one or several segments of the industry will be sacrificing the income and margins generated by those segments*".<sup>56</sup> This argument, however, is weak. After all, the principle of comparative advantage and the law of decreasing returns to corporate size suffice to explain why a company would choose to forego certain income streams by not participating in some of the segments of a particular industrial chain. Indeed, such a decision would not be questionable, so long as it did not bring about an erosion in the company's competitive position due to an increase in its transaction costs.

As has been seen, the peculiar form of industrial organisation which the oil market assumed in its early stages of development imposed substantial penalties on non-integrated competitors. But many of the imperfections which plagued the oil market in the past have disappeared, and with them have gone the rents that used to make vertical integration such an attractive proposition. The selective retrenchment of all the major publicly-traded oil

---

longer-term contracts (with lifetimes between two and ten years) for the sale of heavy crudes with a number of majors.

<sup>56</sup>CEPET, *op. cit.*: 175; italics ours.

companies across all segments of the industry constitutes clear proof of this. This retrenchment has not been homogenous (since the decisions of each company have depended on its particular situation at a given point in time) and yet, in every case, it has been prompted by a desire to enhance shareholders' value by abandoning those lines of business whose returns do not exceed costs of capital. In other words, these companies have decided to sacrifice at least part of the margins which these segments generate, for the very good reason that their investment capital can enjoy superior returns in other activities. Needless to say, this sort of behaviour is completely rational; as de Chazeau and Kahn put it, "if integration conferred no additional monopoly power, a rational seller would integrate backward only if he could perform supplier or distributor functions more cheaply than they were previously being performed".<sup>57</sup> In recent times, as a result of the increasing degree of specialisation which now characterises all segments of the industry, fulfilling this condition has become progressively more difficult for oil companies. The effects of this specialisation have not been circumscribed to "second echelon" activities (like drilling or surveying); quite the contrary, the links between "first echelon" activities themselves - E&P, refining, transportation and retailing - have also taken quite a battering. Put quite simply, stock markets have forced oil men to recognize that their companies do not necessarily have what it takes to carry out, simultaneously and in an efficient manner, all these very disparate activities.

When one examines the declarations of PDVSA officials, one does not get the impression that this strategy has been very thoroughly thought out. Take the following quote from the PDVSA president who oversaw the period of most intense international downstream expansion by the company:

the activities of [PDVSA's subsidiaries abroad] will not be limited to maintaining contracts of supply with [domestic] PDVSA subsidiaries and operating their refineries efficiently; rather, it [*sic.*] will extend, with great emphasis [*sic.*] to garnering ever increasing market shares, reaching the final consumer . . . [as well as] revamping refineries, building or acquiring new refineries, building or establishing distribution networks and flagging the largest possible number of service stations . . . [with the aim] of obtaining, day by day, an increased market share, [because] this is part of globalisation [*sic.*].<sup>58</sup>

Of course, one must not take such declarations at face value. More evidence is needed before one could assert that PDVSA's international expansion decisions have been taken on the basis of the justification that PDVSA had to participate in every one of the oil industry's segments. We think, however, that such evidence can be found by examining the implementation of one of the cardinal "principles of internationalisation"; namely, that "it is absolutely

---

<sup>57</sup>De Chazeau and Kahn, *op. cit.*: 45.

<sup>58</sup>Sosa Pietri, *op. cit.*: 109.

indispensable that [all potential partners] have the means of channeling their sales to the level of the final consumer [*sic.*].<sup>59</sup>

The defenders of the internationalisation programme have not explained why PDVSA's prospective partners necessarily have to count with retailing operations. Instead, they have asserted that the twin objectives of participating in all stages of the industry and "reaching the final consumer" are complementary and good in themselves.<sup>60</sup> These arguments overlook two important facts: that "it is *economic surplus* - not value added or closeness to the consumer - that drives superior returns", on the one hand, and that "it is merely coincidental if the surplus arising in one stage of an industry chain is proportional to its value added . . . [because] the pattern of economic surplus along industry chains is highly variable", on the other hand.<sup>61</sup> Once again, though, and notwithstanding the apparent dearth of cogent arguments in support of PDVSA's decision to participate in the US retail market, one cannot immediately conclude that this decision was not the product of careful and methodical economic analysis regarding the past and present profitability of retailing assets, investment requirements and growth perspectives of the retailing segment, and so on. However, the empirical evidence afforded by the pattern of growth of Citgo's retailing operations over the last decade is revealing in this regard.

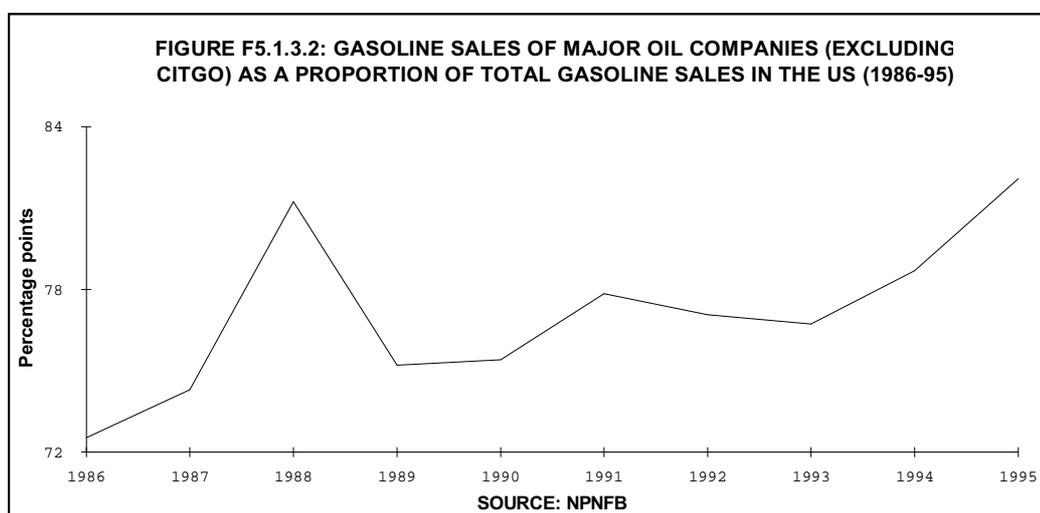
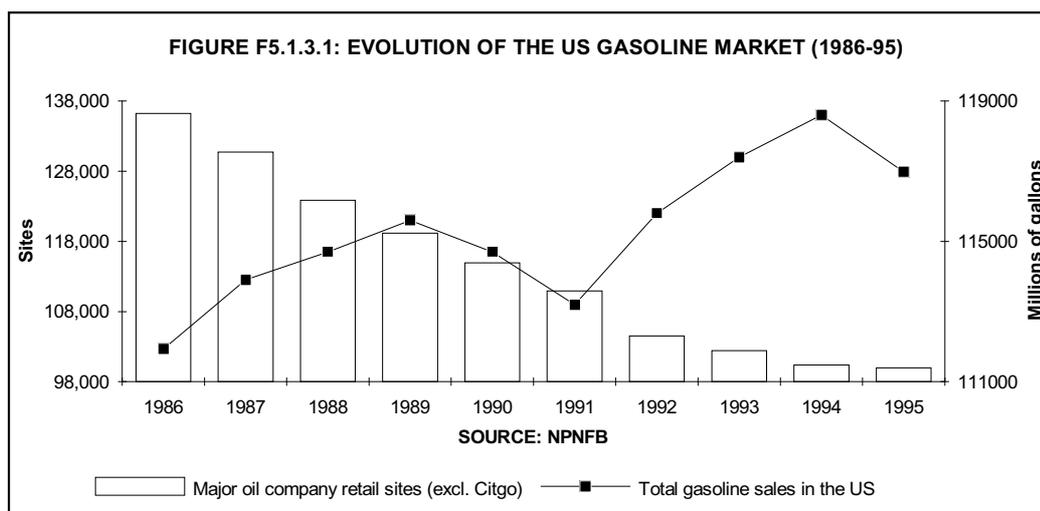
*Prima facie*, a comparison between the current state of Citgo's gasoline retailing operations and their position in 1986 leaves no room to think that the company's foray in the US automotive fuels market has been anything but successful. In 1986, 7,458 stations flew Citgo's banner, and the company was the eight largest gasoline retailer in the US, with total sales of 5,058 million gallons and a 4.52 per cent market share. By 1995, only two companies - Mobil and Shell - had gasoline sales that were superior to Citgo's (11,068 million gallons, equivalent to a 9.46 per cent market share), and its station network (composed of 14,054 stations in 46 states) had become the largest in the US. However, closer analysis reveals that Citgo's achievements in gasoline retailing have come at a considerable cost.

---

<sup>59</sup>CEPET, *op. cit.*: 160.

<sup>60</sup>Thus CEPET (*ibid.*): "the internationalisation [programme] aims to ensure stable markets in the long term for our production by means of attractive commercial mechanisms which guarantee that we reach the final consumer".

<sup>61</sup>Stuckey and White, *op. cit.*: 17. Also, it should be noted *en passant* that much of the apparent surplus in oil refining and marketing is actually accounted for by excise taxes levied by the governments of consuming countries.



As Figure F5.1.3.1 shows, gasoline sales in the US since 1986 have exhibited a positive trend, while the number of gasoline stations flying the banner of major oil companies has steadily decreased.<sup>62</sup> However, the major's share of the gasoline market has gone up during this period (Figure F5.1.3.2). The behaviour of these variables reflects the considerable rationalisation to which integrated companies have subjected their gasoline retailing operations. Due to a variety of factors - increases in real estate costs in urban zones, ever-stricter environmental regulations, new specifications for products, increases in maintenance costs - these companies have sought to reduce the size of their retailing networks by shedding marginal sites and investing selectively in those markets where they enjoy some sort of comparative advantage (such as operating an efficient refinery in the

<sup>62</sup>Majors include: Amoco, ARCO, BP, Chevron, Conoco, Exxon, Marathon, Mobil, Phillips, Shell, Sun, Texaco (with Star Enterprise) and Unocal (with Uno-Ven).

region). In other words, the majors have tried to boost the productivity of their retailing operations, and their achievements in this regard (as Table T5.1.3.1 shows) have been impressive.

**TABLE T5.1.3.1:** Total Gasoline Sales to Retail Sites<sup>63</sup>Ratio of Major US Oil Companies (1986-95)  
Base Year: 1986

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Amoco	100	108.8	121.3	130.2	133.8	139.1	142.4	150.3	150.3	150.9
<b>Arco *</b>	<b>100</b>	<b>101.9</b>	<b>67.4</b>	<b>68.8</b>	<b>78.6</b>	<b>75.5</b>	<b>77.2</b>	<b>82.5</b>	<b>86.0</b>	<b>79.2</b>
Arco **	-	-	100	102.1	116.6	112.1	114.6	122.4	118.0	115.2
BP ***	100	111.4	112.5	124.9	127.2	127.8	150.6	155.363	130.8	108.8
Chevron	100	108.0	119.350	135.7	150.0	158.9	170.4	177.644	180.8	178.8
<b>Citgo</b>	<b>100</b>	<b>95.2</b>	<b>97.0</b>	<b>96.0</b>	<b>93.2</b>	<b>98.4</b>	<b>105.8</b>	<b>108.0</b>	<b>107.2</b>	<b>113.6</b>
Conoco	100	127.2	167.0	135.3	141.0	149.5	142.0	147.2	154.3	163.5
Exxon	100	105.8	120.0	126.9	132.1	156.5	167.1	171.6	189.0	205.7
Marathon	100	100.1	102.7	124.7	154.2	158.9	146.5	149.6	156.9	156.0
Mobil	100	115.3	129.2	154.2	152.8	155.5	176.7	199.5	232.0	258.9
Phillips	100	103.9	122.8	140.0	144.9	155.6	165.2	177.7	185.1	202.9
Shell	100	113.7	211.6	121.4	126.8	127.3	125.4	134.3	142.9	153.6
Sun	100	101.8	78.3	101.6	102.6	105.4	114.5	124.1	148.1	182.6
Texaco ****	100	106.1	117.5	110.8	128.9	147.6	148.0	141.6	148.2	161.1
Unocal *****	100	104.7	113.8	115.3	101.6	121.5	213.7	194.8	180.3	159.4

\* Includes Lyondell Petroleum until 1987 \*\* Without Lyondell, base year 1988 \*\*\* Standard of Ohio until 1986

\*\*\*\* Includes Star Enterprise from 1989 \*\*\*\*\* Includes Uno-Ven from 1990

Source: NPNFB , 1987-96

Amidst this panorama of generalized productivity increases, two companies seem to have been marching to a different drumbeat: Arco and Citgo. The reason behind Arco's apparent sluggishness is readily identifiable: the company's total sales figures for 1986 and 1987 include Lyondell Petroleum's gasoline sales. Lumping together Lyondell's volumes with those of its former owner distorts the latter's productivity figures for those years (all the more so since Lyondell did not have any retail sites, which means that its substantial sales volume has to be parceled out among Arco's relatively small number of sites). However, if Arco's productivity is measured starting in the year 1988, one can see that the company's performance has been reasonably good.<sup>64</sup>

In view of the above, and in the absence of any mitigating circumstances such as those identified in the case of Arco, one can only conclude that the manner in which Citgo

<sup>63</sup>Not all of these companies publish information on what proportion of their gasoline volumes is sold through their retailing networks. Therefore, we have had to use their total gasoline sales as an imperfect proxy (since this volume includes cargoes or odd lots sold to other companies).

<sup>64</sup>The rate of growth of Arco's retailing productivity has been less spectacular than that of its peers, but this is probably because the company sells all its gasoline in a very mature market (the US West Coast) in which it enjoys a dominant position (about 20 per cent market share).

has conducted its retailing operations in recent years has been very inefficient: the high rate of growth in its gasoline volumes is not a function of higher productivity but a reflection of the unbridled expansion of its retailing network ( with Citgo branding many of the stations shed by the other majors with seemingly little thought for logistical considerations<sup>65</sup>). Granted, the fact that the company carries out its distribution through 754 independent jobbers or commissioned agents greatly reduces its overheads, as well as its capital and logistics requirements; in contrast, most of the other majors supply a sizable - albeit increasingly smaller - proportion of their branded stations directly (see Table T5.1.3.2), and this can increase distribution costs quite substantially. However, this still does not mean that "Citgo's grow-till-you-drop philosophy"<sup>66</sup> is commercial, especially as other companies which also entrust jobbers and dealers to carry out a large proportion of their fuel distribution have not displayed a similar penchant for unrestrained expansion.

**TABLE T5.1.3.2:** Gasoline Distribution Set-ups of Selected Oil Companies in the US (1995)

	<i>Total branded outlets</i>	<i>How supplied:</i>	
		<i>Directly</i>	<i>Through jobbers/ agents</i>
Amoco	9,600	1,250	5,500
Arco	1,547	1,399	148
BP	6,750	1,250	5,500
Chevron	7,903	2,541	5,362
<b>Citgo</b>	<b>14,054</b>	<b>16</b>	<b>14,038</b>
Conoco	5,196	427	4,688
Exxon	8,250	2,300	5,950
Marathon	2,380	354	2,026
Mobil	7,689	3,970	3,719
Phillips	7,106	300	6,806
Shell	8,767	4,165	4,602
Star Enterprise	9,378	1,572	7,806
Sun	3,861	2,057	1,804
Texaco	4,378	1,130	3,120
Unocal	1,421	1,421	0
Uno-Ven	2,395	71	2,324

*Source: NPNFB, 1996*

<sup>65</sup>It should be kept in mind that, up until the joint venture agreement with Lyondell was concluded, Citgo's chronic short position in gasoline meant that it had to cover a sizable proportion of its contractual commitments with spot market purchases. Even after this acquisition, however, Citgo still has to buy large volumes of gasoline to supply its distributors in the Midwest. Former CEO Ralph Cunningham said in 1995 that the company's "chronic shortage of products [made] a refinery buy [in the Mid-West] necessary" (*USOW*, June 26, 1995: 3). This statement is puzzling because the product deficit is of the company's own making. Indeed, it would have made far more sense had Cunningham said that Citgo's product deficit made the shedding of some of its marginal stations necessary. Instead, Citgo has declared that it anticipates that "its purchased product requirements will continue to increase, in volume and as a percentage of refined products sold, in order to meet marketing demands" (Citgo, S 3/A1, 1996: 23).

<sup>66</sup>A felicitous phrase coined by *USOW* (August 23, 1993: 1).

The reason behind this difference in behaviour is easy to pinpoint: unlike Citgo, other major US oil companies have not been willing to implement a commercial policy predicated on substantial discounts in order to attract independent jobbers to their orbits. Their reluctance to do so is a consequence of the opportunity costs of such a policy. Citgo sells gasoline to its jobbers under a quasi-netback formula which links the price of their gasoline volumes to the prevailing retail price for their specific location, minus a net discount (equivalent to a gross retailing margin of about ten cents a gallon, or 4.20 USD/Bbl).<sup>67</sup> At first glance, this margin does not appear unduly munificent: it is equivalent to the historical average break-even margin for gasoline retailing in the US<sup>68</sup>, and it is in every way comparable to the margins which the distributors of other oil companies can achieve for every gallon of gasoline they *sell*. Citgo's generosity becomes rather more apparent when one thinks that its sales formula - in the same way as a netback - guarantees this margin to its jobbers and commissioned agents for every gallon of gasoline they *buy*. Therefore, the formula gives these agents an unusual degree of freedom to undercut competitors in their localities<sup>69</sup>, which in turn would imply that a substantial proportion of Citgo's retailing sites can only be marginally profitable for the company. This, of course, must be particularly true for all those sites which Citgo has to supply with gasoline acquired in the spot market. Confirmation of the rather slim margins which Citgo obtains in its capacity as major wholesale reseller of light fuels can be found in the company's filings to the SEC.<sup>70</sup>

The fact that Citgo relies on independent dealers (as opposed to its "own" pumps) to move all its gasoline volumes has another, very important, implication. Those oil companies that fully control their pumps can (and reputedly, do) take advantage of the "stickiness" of retail product markets to delay the transmission of changes in crude prices down to the retail level (a practice which we can designate market micro-management, for want of a better term). Oil companies can micro-manage either by keeping retail prices constant and absorbing any crude price increases during bull market spells (a generous conduct which the

---

<sup>67</sup>*PIW*, April 15, 1991: 2. *PIW* observed that Citgo's arrangement "is uncharacteristic of the US retail motor fuel industry and could potentially revolutionize the gasoline distribution system".

<sup>68</sup>*EC*, April 23, 1993: 7.

<sup>69</sup>Small wonder that the jobbers of other oil companies find it so difficult to compete against Citgo's. For instance, Shell USA's jobbers in the East Coast have complained that the company's rack prices leaves them open to undercutting by Citgo's jobbers. Shell has refused to compete on price terms with Citgo, saying that the latter does not behave like a major oil company would (*USOW*, September 5, 1994: 2).

<sup>70</sup>"Margins on purchased products . . . are somewhat lower than margins on produced products due to the fact that Citgo can only receive the marketing portion of the total margin received on the produced refined products. However, *purchased products are not segregated from Citgo produced products* and margins may vary due to market conditions and other factors beyond the Company's control. *As such, it is difficult to measure the effects on profitability of changes in volumes of purchased products[!]*" (Citgo, S-3/A1, 1996: 23). Citgo's refined product purchases represented 50%, 52%, 55% and 57% of the company's total cost of sales for the years 1993, 1994, 1995 and 1996, respectively (*bid.*).

public at large does not believe they follow at all<sup>71</sup>) or by freezing retail prices at times of falling crude prices (a course of action which they are often accused of indulging in).<sup>72</sup> The frequency and extent of "predatory micro-management" is a matter of contention: as Duffy-Deno notes in his literature review on the subject of retail price asymmetries, academic and government econometric analyses of the US gasoline market have not been able to reject decisively the hypothesis of price symmetry between retail gasoline prices and wholesale gasoline and crude oil prices.<sup>73</sup> In any case, whatever the true extent of market micro-management throughout the industry might be, it should be stressed that Citgo is not in a position to engage in this practice (which could make it worth an oil company's while to integrate into retailing). Citgo's wholesale pricing mechanism means that, on the one hand, it cannot freeze its retail prices during bull market spells (because it would squeeze its distributors) and, on the other hand, that it would probably not keep its retail prices up during a bearish spell for ex-refinery prices (because its dealers would reap all the financial benefits if it did).

Citgo's gasoline business, then, has been a success in appearance only, because the expansion of its retailing system and the growth in its gasoline sales have been achieved at a cost which almost any other oil company would have found prohibitive. Or, to put it another way, Citgo's retailing operations have been profitable only because PDVSA has subsidised them, on the grounds that such is the price that it has had to pay for the dubious privilege of being present in all the primary links of the industrial chain of oil.<sup>74</sup>

## 5.2 Vertical Market Failures: the True Motives behind PDVSA's Internationalisation?

The market is a wonderful thing  
Friedrich Hayek

Under the assumptions of the perfect competition paradigm - the cornerstone of the neoclassical theory of the firm - a firm is "a dimensionless and indivisible decision-taking

---

<sup>71</sup>Although there are some companies that will readily take credit for it; see Arco, 1990: 43.

<sup>72</sup>As Duffy-Deno (1996: 81) notes, "the typical consumer of gasoline in the USA appears to believe that retail gasoline markets are characterised by price asymmetries. In response to higher crude oil prices and, hence, higher wholesale prices, retail (pump) prices rise quickly and completely. But when wholesale prices decline, retail prices fall at a much slower rate and may not fully adjust to the lower wholesale price environment. This perception has led [*sic.*] many an oil industry executive to defend his pricing strategies before US congressional inquiries". The perception has also prompted three inquiries by the Monopolies and Mergers Commission in the UK (see Bacon, 1986, 1990).

<sup>73</sup>Duffy-Deno, *op. cit.*: 82. All of these studies have been based on national prices which may not be really suitable for studying the dynamics of local markets. Bacon (1990), however, has arrived at somewhat more conclusive results for the UK market.

<sup>74</sup>On one occasion, an institutional advisor cautioned pension funds against buying Southland (Citgo's former parent) shares, remarking - prophetically, as it turned out - that "just because they have gasoline stations doesn't mean that they can make money" (*PPF*, December 17, 1984: 4); PDVSA would seem to deserve exactly the same criticism. Citgo now envisages a yearly growth rate in gasoline sales of "only" eight (as opposed to twenty) percent and has declared that it will limit its gasoline sites to a maximum of around 15,000 (*USOW*, September 13, 1993: 5).

unit" which appears "quite unrecognizable to even the most superficial observer of actual firms operating in an ordinary industrial context"<sup>75</sup>, as opposed to an ideal world where things like externalities, currencies, governments and taxes do not exist. This paradigm is only relatively useful for tackling questions related to the organisational choice of firms - such as "what factors determine the institutional arrangements that govern supply relationships between input supplier and their customers? Why are some transactions internalised through vertical integration? Why are many transactions governed by long-term contracts? What determines the structure of such contracts and why are they used instead of simple spot transactions?"<sup>76</sup> - for the simple reason that its point of departure is that, regardless of how a firm is organised, it will always face a perfectly elastic demand function in a frictionless market. This vision is, of course, too simplistic: many firms enjoy a non-negligible amount of market power (which they may exploit to the detriment of other firms) and, more importantly, many markets are far from being "wonderful" (because the cost of transacting in them is too high).

These two facts of life can best be incorporated into a theory on the behaviour of firms if, as transactionist approaches to industrial economics do, one "states the question of economic organisation as a problem in contracting".<sup>77</sup> As one of the main proponents of this approach explains, transaction-cost economics "tries to identify a series of environmental factors which explain the circumstances under which it will be costly to write, execute and enforce complex contingent conditions contracts", and which might prompt firms "to avoid the market altogether and to resort to hierarchical models of organisation"<sup>78</sup>, like vertical integration. At first glance, there seems to be no place within this theoretical approach for two of the most popular motives put forward to explain firms' decisions to internalise certain transactions: creating opportunities for the exercise of monopoly power, on the one hand, and achieving technological and scale economies, on the other. Upon more careful consideration, however, one can see that this is not the case: monopoly and high transaction costs are in reality nothing more than opposite and complementary sides of the same coin (one firm's monopoly power is some other firm's transactional nightmare)<sup>79</sup>, and there is no technological efficiency issue which cannot be fully and adequately expressed as a contracting problem.<sup>80</sup>

---

<sup>75</sup>Hay and Morris, 1991: 6.

<sup>76</sup>Joskow, 1985: 281.

<sup>77</sup>Williamson, 1989: 30

<sup>78</sup>Williamson, 1991: 25.

<sup>79</sup>A point overlooked by neoclassical approaches to vertical integration.

<sup>80</sup>It is often assumed that there are certain successive processes which, on strictly technological grounds, have to be organised by one firm. This assumption is for the most part unwarranted. Take the case of the steel industry (an industry where thermal economies are of the utmost importance). The reason why hot-metal production and steel making are almost always found under common ownership is that hot metal trading, although not technologically inefficient *per se*, is fraught with transactional problems (see Stuckey and White, *op. cit.*).

According to transactionist economists, vertical integration can be a good organisational strategy for firms that either have to face a bilateral monopoly in the products they sell or the feedstocks they utilise, that maintain vertical market relationships with firms whose market power greatly exceeds their own, that have to sell their products in immature, undeveloped markets, or finally, that are in a position to price-discriminate among their customers. In the following sections, working under the assumption that PDVSA might have chosen not to reveal the "true" grounds behind its internationalisation programme, we shall investigate whether any of these motives for vertical integration can explain PDVSA's downstream expansion. Our conclusion in this regard is quite paradoxical: vertical market failures have not really influenced PDVSA's internationalisation policy, even though they are endemic in the market in which the company participates.

There is a further incentive for vertical integration which we will consider in a later chapter; namely, that a vertically-integrated multinational corporation can use transfer prices to shift profits between countries, and so reduce its tax payments, at least if tax rates differ significantly between the various countries in which it operates. The reason for this omission is that tax optimisation falls within our arbitrarily drawn boundary for "politically motivated" actions (taxes and differential tax rates, after all, are not intrinsic features of markets).

### **5.2.1 Bilateral Monopoly in the Market for Heavy Sour Crudes**

One of the central concerns of transaction cost economics is the condition of bilateral monopoly brought about by asset specificity. As Williamson notes, "under a small numbers condition, the situation of exchange is greatly transformed . . . [The] problem of bilateral monopoly . . . [is that] the counterparts have an incentive to exchange the quantity that jointly maximises their profits, but they also tend to spend considerable resources in haggling over the price at which the exchange has to take place".<sup>81</sup> Such haggling is problematic because it will always take place under conditions of opportunistic behaviour and bounded rationality.<sup>82</sup> This increases the transaction costs which the parties to a commercial agreement have to face, for two reasons. Firstly, opportunism implies that commercial counterparts can make empty threats or promises, in the expectation that they will reap some advantage from so doing<sup>83</sup>; secondly, bounded rationality limits the reach of planning, and makes it impossible to ascertain whether the problems that might surface during the lifetime of a contract are the

---

<sup>81</sup>Williamson, 1991: 46.

<sup>82</sup>In *theory*, in the absence of *any one* of the following three conditions (asset specificity, bounded rationality and opportunism), the market will allocate resources effectively (see Kay, 1992: 3167). In this section we have given the first condition precedence over the other two because, whereas it is possible to imagine many *real* situations where asset specificity might *not* exist, the same probably cannot be said for opportunism, and certainly cannot be said for bounded rationality.

<sup>83</sup>This is what Schelling (1960) calls "strategic misrepresentation".

result of genuinely unforeseen circumstances, rather than of a counterpart's deliberate non-compliance with contractual terms and conditions.<sup>84</sup>

The simultaneous presence of small numbers conditions, stochastic markets, bounded rationality and opportunistic behaviour in recurrent transactions poses a dilemma:

the parties that contract now know that later on there will be gains from trade between them to be exploited. It is important that these gains from trade be exploited correctly (i.e., that there be an efficient amount of trading *ex post*) and that they be divided properly in order to induce the efficient amount of specific investment *ex ante* . . . [However,] under bilateral monopoly, each party wants to appropriate the common surplus *ex post*, thus jeopardising the efficient realisation of trade *ex post* and the efficient amounts of specific investments *ex ante*.<sup>85</sup>

These undesirable consequences, which stem from the fact that there is no efficient bargaining mechanism under conditions of asymmetrical information<sup>86</sup>, reflect the reluctance of rational economic actors to undertake durable investments in support of specific transactions as long as there is a possibility that these transactions might be terminated prematurely and unilaterally by another party.

Given that uncertainty and complexity make the existence of perfect contracts impossible, "as durable transaction-specific investments become more important, the transaction costs associated with mediating vertical relationships using conventional spot markets increase", because "transaction-specific sunk investments generate a stream of potentially appropriable quasi-rents equal to the difference between the anticipated value in the use to which the investments were committed and the next best use".<sup>87</sup> Naturally, the existence of these quasi-rents provides firms which would lose out if a commercial coalition were to fall apart with an incentive to design institutional safeguards to preserve it and defuse the threats posed to it by other parties. Vertical integration is the most powerful among these safeguards, because the dangers of desertion and misrepresentation which arise in any accord for the joint maximisation of profits are to a very large degree neutralised if the counterparts to the agreement come under common ownership.<sup>88</sup>

According to al-Obaidan and Scully, asset-specificity in the world oil market is all-pervasive, because "all refineries are custom built to handle a particular type of crude" and the cost of switching between crudes is prohibitively high.<sup>89</sup> This assertion, however, is inaccurate because the only modern refineries that have a truly limited feedstock flexibility (and can therefore suffer from conditions of bilateral monopoly) are lubes plants and high-

---

<sup>84</sup>As Hay and Morris (*op. cit.*: 77) point out with regard to cartelistic agreements, "stochastic demand means that firms may experience some loss of demand even though no other member of the cartel has cheated, and . . . [this fact in itself] creates the scope for cheating".

<sup>85</sup>Tirole, *op. cit.*: 21.

<sup>86</sup>Myerson and Satterthwaite, 1983.

<sup>87</sup>Joskow, *op. cit.*: 286.

<sup>88</sup>Williamson, 1989: 127.

<sup>89</sup>Al-Obaidan and Scully, 1993: 1529.

conversion plants designed to process heavy sour crudes. However, this should not be taken to mean that asset-specificity in the oil market is not important: the limited flexibility of these refineries is enough to make this market a highly segmented one (as Figure F5.2.1.1 shows<sup>90</sup>), and to divide it into two major sub-markets with very different structural characteristics. The first sub-market (for light and medium crudes) is very liquid and reasonably efficient, because large numbers of buyers and sellers exchange in it a fungible commodity. In this sub-market, the law which prevails is that of the typical neoclassical contract for discrete (i.e. single) transactions: "sharp in by clear agreement, sharp out by clear performance".<sup>91</sup> The other sub-market (for heavy crude oils) is made up of a very small number of buyers and sellers that exchange an idiosyncratic commodity whose use value in specialized facilities is very high and, conversely, very low in non-specialized facilities.<sup>92</sup> Commercial counterparts in this market are forced to maintain long-term contractual relationships which are always under threat from the counterparts' impossibility to describe "all relevant contingencies pertaining to the supply of a good or service" and to discount these contingencies "with respect to both likelihood and futurity".<sup>93</sup>

The relevance which this has to the matter at hand becomes evident when one considers that Venezuela has vast reserves of extremely viscous, metal- and sulphur-laden heavy crude, and relatively else: upwards of 70 per cent of Venezuelan proved crude reserves consists of crudes whose gravity is inferior to 22° API. Given the composition of the Venezuelan resource base, the internationalisation programme would seem to be a rational policy response on the part of an astute company worried by the problematic transactional characteristics of the market for heavy sour crudes (particularly since PDVSA's first joint venture roughly coincided with a sharp contraction in the exportable surplus of relatively light Venezuelan crude oils). However, good as this hypothesis sounds, it is not borne out by available evidence.

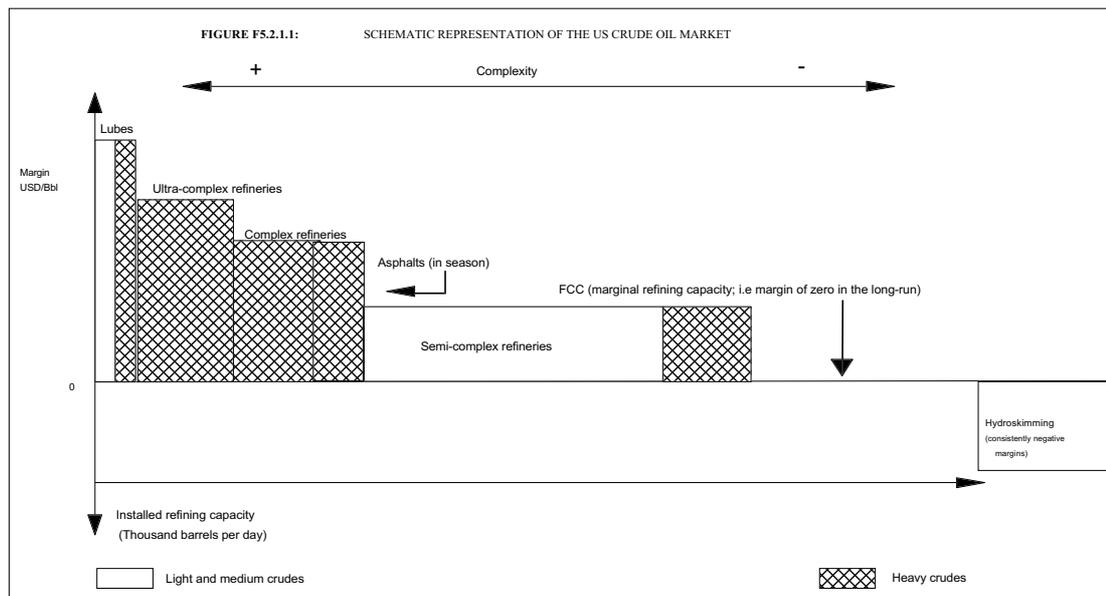
---

<sup>90</sup>The oil market can be represented as a discontinuous production function, in which the Y values are the typical refining margins for the different refining configurations (arranged ordinally), while the X values represent the total processing capacity available for each one of those configurations.

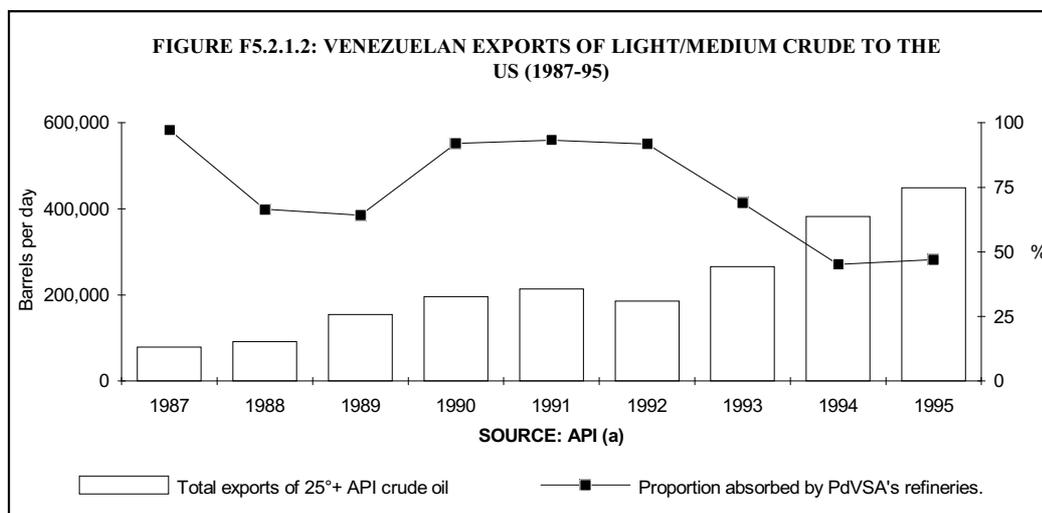
<sup>91</sup>Macneil, 1974: 691.

<sup>92</sup>The enormous cost of high conversion facilities means that the number of refiners which can profitably process heavy crudes is considerably smaller than the number of refiners which can process lighter crudes.

<sup>93</sup>Williamson, 1989: 226.



To begin with, when the deal with Veba was signed, PDVSA was actually in the process of curtailing production of its heavier crude streams to comply with Venezuela's OPEC commitments. Moreover, since 1986, the internationalisation programme has not been used to remedy some of the latent dangers posed by PDVSA's idiosyncratic commercial relationships and it may have, if anything, made some of them potentially more acute. This contentious point can be better appreciated by examining the pattern of PDVSA's exports of light and medium crude to the US (plotted in Figure F5.2.1.2).



As the figure shows, PDVSA's refineries in the United States have absorbed the majority of the Venezuelan light crude placed in this market since 1987. This means that the internationalisation programme has *withdrawn* from the market those Venezuelan crudes whose commercialisation should, in theory, pose no great problems. In other words, PDVSA has used pure market mechanisms to place precisely those crudes that would seem better suited to move through integrated channels. Indeed, as Table T5.2.1.1 indicates, with the exception of Citgo's asphalt refineries, the quality of the crude which PDVSA's US subsidiaries have lifted between 1987 and 1995 has been appreciably better (i.e. higher API gravity and lower sulphur content) than that of the crude bought by PDVSA's arms'-length customers.

**TABLE T5.2.1.1:** Weighted API Gravity and Sulphur Content of PDVSA's Crude Exports to the US (1987-95)

	<i>Citgo Savannah</i>		<i>Citgo Paulsboro</i>		<i>Uno-Ven Lemont</i>		<i>Citgo Corpus Christi</i>	
	<i>API</i>	<i>S</i>	<i>API</i>	<i>S</i>	<i>API</i>	<i>S</i>	<i>API</i>	<i>S</i>
1987	-	-	-	-	-	-	26.060	1.597
1988	-	-	-	-	-	-	24.848	1.674
1989	-	-	-	-	31.196	1.184	25.586	1.507
1990	-	-	13.451	3.039	30.625	1.147	25.810	1.447
1991	-	-	13.059	2.758	30.165	1.104	24.858	1.025
1992	-	-	12.833	2.712	27.504	1.227	25.239	1.071
1993	10.454	5.437	13.863	2.827	28.401	1.366	23.279	1.133
1994	10.424	5.103	13.962	2.684	28.602	1.396	21.501	0.810
1995	10.432	5.120	13.084	2.946	28.683	1.382	23.693	1.049

	<i>Citgo Lake Charles</i>		<i>Lyondell-Citgo Houston</i>		<i>Other US clients</i>	
	<i>API</i>	<i>S</i>	<i>API</i>	<i>S</i>	<i>API</i>	<i>S</i>
1987	25.199	1.598	--	--	15.998	2.670
1988	25.983	1.534	--	--	16.712	2.532
1989	26.036	1.496	--	--	19.038	2.041
1990	25.507	1.210	--	--	19.275	2.089
1991	26.673	1.406	--	--	20.029	2.191
1992	25.328	1.423	--	--	20.290	2.110
1993	24.308	1.374	22.974	0.953	20.196	2.074
1994	23.745	1.379	22.094	0.411	22.443	2.812
1995	24.198	1.513	22.053	0.504	22.444	2.040

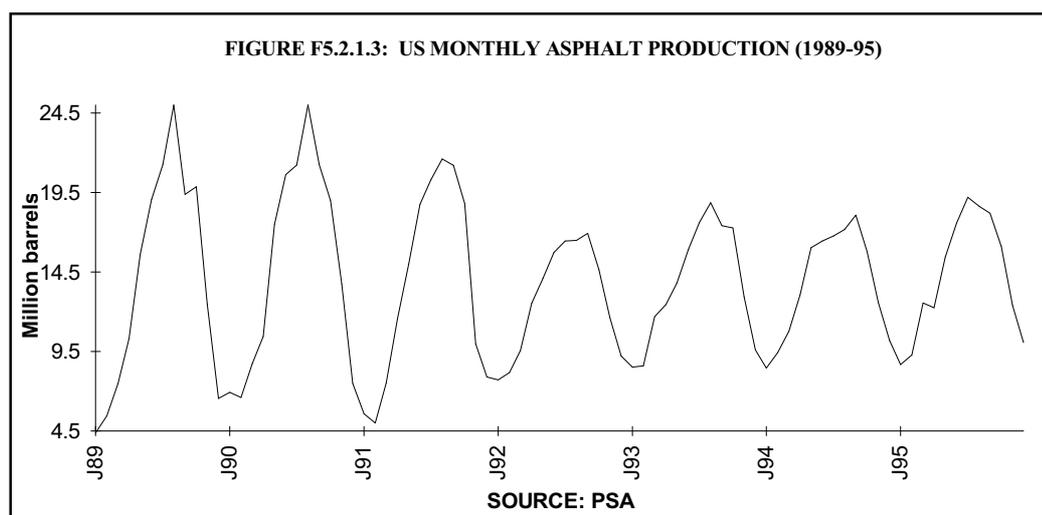
*Source:* API (a)

An important proportion of the volume that PDVSA places in arms'-length transactions in the US goes to the segment occupied by asphalt refiners.<sup>94</sup> This segment constitutes a far less attractive destiny than the segment occupied by refiners with high conversion plants, particularly from the point of view of a company that seeks to channel its volumes to end users that give Venezuela "the best in terms of economic value, stability and security of outlet".<sup>95</sup> The reason why asphalt refiners offer a less favourable market outlet in

<sup>94</sup>See Table TA6.1 in Annexe 6.

<sup>95</sup>CEPET, *op. cit.*, v. II: 157.

comparison to high conversion refiners has to do with the pronounced seasonality of the asphalt market (illustrated in Figure F5.2.1.3). The large variations in demand for this product mean that the demand for crude oil of asphalt refiners fluctuates sensibly throughout the year (the contrary is true for more complex refineries, which need to run at full capacity all the time). Thus, over time, the reservation prices of asphalt refiners will be lower than those of high conversion refiners (because, interruptions in operations as a result of supply shortfalls are costlier for the latter).



Over the last few years, these structural characteristics of the asphalt market have prompted PEMEX - the other large seller of heavy sour crude oil in the American continent - to maximise the proportion of Maya crude that it sells to refiners with complex facilities, at the expense of the volumes it sells to asphalt refiners. As a consequence of this, the weighted complexity of its arm's length customer base has been consistently higher than that of PDVSA's (Table T5.2.1.2).

**TABLE T5.2.1.2:** Comparison of the Mexican and Venezuelan US Client Bases for Heavy Sour Crudes\*

	<i>Weighted Complexity (NGCI) of Arm's-length Clients' Plants</i>			<i>Volume Equivalent of Complexity Differential in Terms of Conversion Capacity (Bbl/D)</i>		<i>Average Volume Lifted by the 5 Most Important Arm's-length Clients (Bbl/D)</i>	
	<i>PEMEX</i>	<i>PDVSA</i>	<i>Difference</i>		<i>Capacity (Bbl/D)</i>	<i>PEMEX</i>	<i>PDVSA</i>
1987	8.769	8.241	0.528		17,111	53,655	28,403
1988	9.443	7.95	1.493		41,851	59,618	23,669
1989	9.36	8.532	0.8284		21,530	64,664	21,248
1990	9.41	8.937	0.4732		20,334	54,892	32,397
1991	10.309	8.933	1.376		52,358	62,633	32,377
1992	9.21	7.61	1.599		81,086	67,920	37,566
1993	8.948	8.143	0.8051		44,887	69,168	43,538
1994	9.485	8.428	1.0571		54,188	81,700	39,800
1995	9.630	8.878	0.7520		41,577	71,728	42,517

\*Mexico= Maya (22° API); Venezuela= Crudes from 13° API to 25° API

Sources: API (a), O&GJDB

The comparison between the commercial strategies of PEMEX and PDVSA is quite revealing because, in many ways, it would seem that, at least until 1996, the competitive position of the latter company in the US market has generally been less favourable than the former's, even though PEMEX entered this market at a later date than its highly-integrated Venezuelan peer. Indeed, not only did the average PEMEX client own a more complex refinery than the average PDVSA client; it also lifted larger volumes of crude (Table T5.2.1.2). So how does one account for this contrast between the commercial position of both companies, *particularly in the light of the fact that both participate in a market where integrated operations are supposed to confer a crucial competitive advantage?* As we shall now see in the following, more comprehensive, comparison between the commercial policies of PEMEX and PDVSA, this apparent anomaly is not a reflection of faults in the implementation of the internationalisation programme so much as a by-product of the credible commitments that form the backbone of PEMEX's commercial policy. Far from imitating these commitments, PDVSA has consistently tried to undermine them (by turning over the function of price leader for the market for heavy crude to PEMEX and then undercutting Mexican oil prices). As we shall now see, up until 1996, this behaviour worked mainly to PDVSA's detriment.

Williamson defines credible commitments as those measures which, by fostering mutual trust between contracting parties, can expand beyond restrictive boundaries those commercial relationships characterised by a high degree of closure.<sup>96</sup> Credible commitments, in other words, give counterparts that cannot (or do not want to) integrate vertically the possibility of maintaining an optimal volume of trade thanks to the deliberate, voluntary and verifiable limitation of the liberty of action and decision of either one (or both) of them. The abdication of certain prerogatives (the faculty to set the price of a product unilaterally, say) functions as a guarantee of good behaviour on the part of the party signing the contract, regardless of fluctuating market conditions. Thus, credible commitments confer flexibility to potentially problematic relationships by enabling signatories to a contract to meet a variety of unforeseen circumstances without dissipating valuable resources identifying possible future contingencies, codifying acceptable responses to these contingencies and, last but not least, monitoring the accord. This is of the utmost importance for firms that compete in very volatile stochastic markets (like that of crude oil) because, as Tirole remarks,

the most . . . important limitation of a long-run relationship is the presence of outside opportunities . . . [F]orcing the parties to stick to each other through high penalties for breach may hurt them if there are no gains from trade or . . . if better outside opportunities are available to one or both of the parties. As breach may be desirable, the contract must find the optimal trade-off between flexibility and the prevention of opportunism.<sup>97</sup>

---

<sup>96</sup>Williamson, 1989: 195.

<sup>97</sup>Tirole, *op. cit.*, 27.

The contractual mechanism that has enabled PEMEX to comply with the flexibility requirements of today's international oil market while simultaneously limiting opportunistic behaviour on the part of its commercial counterparts is formula pricing (an innovation which has been adopted by many oil exporters as an alternative to price administration and netback pricing). The designers of PEMEX's original formulae understood that the formulae would only be accepted if, on top of meeting the two minimum requisites which any exporting country expects of a pricing mechanism (namely "to ensure . . . that the exporter realizes prices which reflect movements in the general oil price level in the world petroleum market" and "to ensure competitiveness between the export crude which a country wants to sell and the set of close substitutes which other countries also sell in the same market"<sup>98</sup>) they also satisfied the demands of refiners in the sense that the task of discovering the 'economic' price of crude be entrusted exclusively to the "market". These conflicting exigencies virtually dictated the crudes around which the Mexican price formulae would have to be structured - WTS, LLS, ANS, Brent - because, although any crude might have satisfied the first set of requirements, the second set could only be met by "marker" crudes which:

- a) were quoted daily in reliable oil price information services like *Platt's*;
- b) supported a sizable volume of spot trade<sup>99</sup>;
- c) were not vulnerable to monopolistic manipulation<sup>100</sup> and
- d) were not subject to OPEC production quotas or similar production restrictions.

PEMEX's decision to use formulae to price even its heavy Maya crude was quite risky, but also far-sighted. The risk element had to do with the fact that, in strictly technical terms, heavy crudes do not lend themselves at all well to being priced with formulae. This is due to two reasons. Firstly, the inevitable simplifications which have to be incorporated into the calculation of relevant transportation costs and marginal refining configuration for *any* formula may lead to the exporter's setting the price of crude *X* at a level that makes it competitive with a certain reference crude in the eyes of the refiner that values crude *X* the least (in other words, the crude will be undervalued for all buyers except one). This shortcoming is serious because the marked segmentation within the heavy crude oil market means that the differences between the reservation prices of marginal and intra-marginal customers can be very large. The second problem has to do with the fact that nearly all the international marker crudes are light and sweet, which makes it quite difficult for the prices generated by a heavy sour crude formula to track the marginal refining value of marker crudes. This means that the discretionary adjustment factor carries a lot of weight in heavy

---

<sup>98</sup>Horsnell and Mabro, *op. cit.*: 292.

<sup>99</sup>The first Mexican formulae for Europe incorporated Flotta and Urals crudes, neither of which met the liquidity requisites. Because of this, European refiners rejected them (PIWK, 1986: 15).

<sup>100</sup>This means that the ownership of the fields from which a marker crude is produced has to be reasonably dispersed.

crude formulae (far more than would be ideally desirable for what is supposed to be a fine-tuning instrument), particularly when the price spreads between light and heavy products and high- and low-sulphur residuals are very volatile.

PEMEX recognized that formulae-based term contracts compensated for these drawbacks by enabling the seller to make a number high-power credible commitments which would be very attractive for refiners with complex plants. These are:

a)Guarantee of non-expropriation of quasi-rents: When a seller adopts a pricing formula, he is accepting explicitly that most of the value of his crude be determined by markets over which he may have some influence, but no control. For a refiner who is satisfied with the composition of the formula (in terms of its constituent elements, the relative weights accorded to each one of them and the size of the adjustment factor), this amounts to a credible promise of non-expropriation of the quasi-rents generated by very complex plants. In other words, by tying himself to a formula, the seller is, up to a point, openly renouncing the option of behaving opportunistically in order to apply extortionate prices to his customers in tight markets. This has a positive influence on the reservation prices of refiners.<sup>101</sup>

b)Guarantee of uniform pricing: Refining is a business of margins and, therefore, the main focus of a refiner's attention will always be the relationship between the price of crude and products (rather than just the absolute price of crude itself). Because of this, a refiner's greatest worry will always be that one or more of his competitors get access to cheaper sources of crude oil because "any company that acquires oil on advantageous terms can cause damage to the profitability and production of other refiners if it has excess capacity at its disposal".<sup>102</sup> As Bacon and Mabro indicate, "different types of property rights, different modes of access to primary supplies of crude oil and differences in bargaining power *vis-à-vis* producers mean that crude oil of the same specification [can be] acquired at different prices and on different terms by different buyers"<sup>103</sup>, with the price differential of crude oil exchanged under long-term contracts and oil sold in a spot transaction "unlikely to reflect exactly the economic value of the security that term contracts afford".<sup>104</sup> Pricing formulae address this problem: their transparency assures buyers that the FOB price of a certain crude will be the same for all of them (although, of course, formulae cannot eliminate locational rents).

---

<sup>101</sup>Klemperer's (1987a, 1987b) model of markets with high switching costs (like the market for heavy crudes) shows that customers' reservation prices will be lower than one would reasonably expect if the seller has a reputation for exploiting temporary monopoly situations.

<sup>102</sup>Bacon and Mabro, *op. cit.*: 21. If a refiner with access to preferentially-priced crude has no excess capacity at his disposal he can achieve more profits, but not at the detriment of other refiners.

<sup>103</sup>*Ibid.*: 32.

<sup>104</sup>*Ibid.*: 20.

c)Insurance against market volatility: Pricing formulae generally incorporate a delayed valuation element which protects the client against movements in the price of oil taking place whilst cargoes are in transit to their final destination.

d)Limited insurance against local market distortions: This feature can only be found in Mexican formulae, which are structured around baskets of different crudes and products. The different components of the formula do not move in unison, and this enables the formula to dampen any distorsionary effects arising from temporal supply/demand imbalances affecting only one crude or local market.

e)Intertemporal compensation for price distortions: The prices generated by formulae cannot track marginal refining yields exactly. However, this becomes less of a problem within the context of a long-term commercial relationship, because positive and negative distortions in the formula price tend to even out over time.

A seller who unilaterally grants all these guarantees is in effect establishing a sequential authority relationship between himself and the buyer which reduces the incentive which the latter has for bargaining, on the one hand, and for engaging in strategic misrepresentation, on the other hand.<sup>105</sup> The mere existence of a formula is a clear signal to his clients that he wishes to apply a uniform open price in a given geographical area and that, in consequence, any haggling or lying on their part with a view to obtaining casuistic discounts will be a waste of time. To put it another way (using Hirschman's terminology), a pricing formula inhibits a buyer's natural temptation to use his "voice" indiscriminately in an attempt to alter a commercial relationship in his favour without dwelling on the potential damage that such a behaviour can cause to the good will on which this relationship is built. This does not mean, of course, that formulae effectively close communication channels between commercial counterparts: if a buyer feels that the situation merits it, he can communicate to the seller his displeasure with the behaviour of a formula over a given period, and expect an improvement for the next period. The seller is not legally bound to give satisfaction to these complaints, but there is no doubt that, were he to ignore such complaints consistently, he would soon find himself without clients (because their frustration will lead them to choose the "exit" option).<sup>106</sup> However, so long as the seller takes due care that his formulae work as advertised, he can expect his clients to go for the "loyalty" option (a qualified sort of loyalty, perhaps, but loyalty in the end).

---

<sup>105</sup>Sequential authority relationships are characterised by the fact that "one party has the authority to choose the price and the other party has only the authority over the trade decision" (Tirole, *op. cit.*: 23). In this case, the sequential authority relationship has to be called "attenuated", because the seller has the liberty to define the parameters of the formula and change the adjustment factor, but not to set the price of the crude.

<sup>106</sup>Lest we be accused of rhapsodising about PEMEX's commercial policy, we point out that quite a few of its European customers have chosen this option because they have not been favourably impressed with the way the company has handled the very large adjustment factors of its formulae for the region.

So what would we expect to see when a heavy crude oil seller refuses, like PDVSA, to commit in this way? The answer is this: in any market where, given a certain demand function, prices reflect the supply decisions of sellers to a reasonable degree, a non-committed seller will actually be worse off than a committed one because sequential authority mechanisms have a stabilising effect on commercial relationships characterised by a high degree of closure. The best way of appreciating this point is to compare the success of formula pricing with the resounding failure of *arm's-length* netback pricing. At first glance, it would seem logical to expect netback contracts to foster stronger and more stable commercial relationships between a crude seller and his clients than those that would obtain from relationships mediated by open pricing formulae; after all, unlike formulae, netbacks *guarantee* a positive margin for every barrel of crude processed (and one would think that refiners would hesitate to jeopardize such a cozy arrangement by behaving mercenarily for the sake of small temporary gains<sup>107</sup>). In practice, though, this assumption has not held: during 1986, netback contracts exerted a pernicious influence on the oil market, because of their structural unsuitability as a means of conveying information. This unsuitability stemmed from a number of factors. Firstly, the prices for individual cargoes generated by netbacks were very opaque, as they were derived *ex post* from product prices unknown at the time each cargo was lifted. This opacity was compounded by the fact that the parameters of each netback formula were secretly and individually negotiated with every refiner (sometimes for each one of his refineries). Moreover, the calculation of each formula involved a significant subjective element on the part of the seller, and entailed the use of assumptions that many times were nothing short of heroic (in terms of relevant refining costs, transportation costs, products prices, etc.). Finally, the functioning of netbacks depended heavily on the disclosure to over-eager sellers of information privy to potential buyers. Understandably, refiners tried to turn all these factors to their advantage by pressing sellers to include in their netback formulae as many cost elements as possible (with suitably inflated values), on the one hand, and to give them very attractive processing fees, on the other. In this way, every refiner could be sure of achieving a positive refining margin (whose exact size only he knew) when running crude acquired under netback conditions. Crucially, though, he could *not* be sure that his competitors would not be able to negotiate better terms for themselves. In the end, and sooner rather than later, this uncertainty - coupled with a persistent supply overhang - drove each refiner to "challenge sellers by pointing to the more attractive terms of competitors, often on the basis of flimsy information"<sup>108</sup>, long before the terms originally agreed upon were due to expire. Thus, the dynamics behind the abrupt

---

<sup>107</sup>As the head of an independent European refiner put it to *PIW* in the midst of the netback crisis: "my board of directors wants a sure refining margin and is willing to forgo the possibility of the bigger profits aggressive trading might bring" (*PIWK, op. cit.*: 3).

<sup>108</sup>*Ibid.*: 4.

"death spiral" that obtained once most oil exporters clambered on the netback bandwagon were a direct consequence of the opacity and secrecy of netback contracts. These characteristics gave crude buyers every incentive to renegotiate and/or desert supply accords more often than would have been the case had most producers been selling their crude on some other basis.<sup>109</sup>

This brief detour into the demise of netback pricing should make it quite clear why, as a result of the fact that they enhance (rather than reduce) market transparency, formulae are a better option - in theory - for producers worried about the stability or durability of their commercial relationships. In practice, of course, the advantages inherent to pricing formulae will tend to vanish if the clients of an NOC are not genuinely convinced of the impossibility of negotiating discounts with its officers behind closed doors (in such cases, the prices generated by formulae assume a merely indicative character).<sup>110</sup> PEMEX, however, has been able to establish a reputation for never resorting to company-specific discounts to shift volume. Its credibility in this regard has been bolstered by its refusal to sell to brokers, traders or any other type of intermediary<sup>111</sup>, by its refusal to sell under anything other than contractual terms (even to non-contractual customers), and by unequivocal declarations in the sense that it prefers to sell crude within the framework of long-term contractual relationships.<sup>112</sup> Because of this, the Mexican company has been able to sign contracts for very large volumes of Maya with refiners that have high reservation prices for this type of crude and are therefore willing to pay a slight premium for the privilege of maintaining this relationship flowing smoothly.<sup>113</sup> Given this fact, and the great similarities which exist

---

<sup>109</sup>Mabro says that netbacks, by preventing "prices from performing their role as signals for the efficient allocation of resources . . . confuse[d] economic agents and elicit[ed] imperfect responses" from them (1987: 36).

<sup>110</sup>That is why, as Adelman says, any small, local discount has the potential of becoming a generalised discount (1995: 6).

<sup>111</sup>The companies whose formulae serve purely for "indicative purposes" can be identified by the large number of traders that they have as clients (it goes without saying that, if traders were not able to get discounted crude they would not be able to resell it at a profit).

<sup>112</sup>Notice how we do not say a long-term *contract*. PEMEX does not attempt to tie its customers in long-term contracts (Mexican contracts are evergreen, but have a nominal duration of a year). This type of contractual arrangement is typical of buyers' markets (see Aghion and Bolton, 1987). As Tirole *op. cit.*: 27) says, "a limitation of long-run relationships may be due to the fact that a short-term relationship is generally more advantageous to a party who knows that he will have good outside opportunities in the future. Because good outside opportunities tomorrow are related to his general ability to perform well and thus improve his bargaining position today, this party has an incentive to signal them through the signature of a short-term contract (possibly disguised as a long-term contract)". An evergreen contract is in fact a short-term contract disguised as a long-term contract. For obvious reasons, evergreen contracts also defuse the "endgame" problem (i.e. the growing incentive one party has to cheat as a contract is coming to an end).

<sup>113</sup>Before 1986, oil exporters assumed - wrongly - that buyers would always be willing to pay over the odds to maintain long term relationships with them in the interests of security of supply (even though the value of the security these relationships offered was questionable, given the frequency with which contractual terms were altered). In the words of the Chevron CEO, these were longterm relationships that added nothing to the oil companies' bottom line (*PfW*, October 11, 1987: 1). The type of security

between PEMEX and PDVSA (in terms of the type of crude they have to sell, the profile of their 'ideal client', etc.), it seems quite extraordinary that the Venezuelan company should have chosen not to follow PEMEX's lead in terms of pricing methods (particularly since PDVSA would have had no trouble in establishing a commercial reputation similar to PEMEX's *vis-à-vis* the issue of discounts, which is more than can be said of other NOCs). At one point, such a decision could have been attributed to understandable caution on the part of the Venezuelan company (since the concept of formulae was new and untested), but this is clearly no longer the case (PDVSA is now one of the few NOCs that do not use open pricing formulae). Indeed, the contrast between the commercial procedures of both companies could not be more marked. Whereas PEMEX has renounced the faculty of setting its prices unilaterally, PDVSA has resisted a similar move by adducing that it represents an intolerable abdication of Venezuelan "pricing sovereignty"<sup>114</sup>; whilst PEMEX has opted for a pricing method that is simple and does not involve too many people, PDVSA has clung to a cumbersome system which often involves at least "35-40 people at different levels" every time prices have to be set and approved<sup>115</sup>; finally, where the Mexican company has sought to introduce light and transparency, the Venezuelan company has preferred darkness and opacity.

PDVSA's pricing system is very arcane, and concrete information about it is scant. The company itself does not go further than this in describing it:

pricing mechanisms have evolved with the object of adapting adequately to changing market circumstances and to increase commercial flexibility. In 1986 . . . [PDVSA] established the so-called assessed prices [which are posted prices that substituted the official prices tied to OPEC], *which can represent invoice prices for certain markets or which can be used as indicators to determine the final invoicing prices in other markets.*<sup>116</sup>

It is known, however, that PDVSA's published posted prices are used solely to invoice its customers in Central America.<sup>117</sup> The form in which PDVSA's operating subsidiaries invoice other customers is "tailored individually to each client and pegged against baskets of competing crudes or products sold in the client's marketing area"<sup>118</sup>: cargoes for some US clients are priced on the basis of "adjustable notified prices", while others are priced on a pure netback basis or a mixture of netbacks and asphalt postings; some customers have the option of fixing light/heavy and/or sweet/sour differentials for a particular cargo or cargoes, while some others can choose to lift all cargoes during a given period (which can last

---

PEMEX offers, however, does contribute to its customers bottomline (since their profits hinge on the reliability of supply of one specific grade of crude).

<sup>114</sup>*PIW*, January 27, 1986: 3; October 13, 1986: 4.

<sup>115</sup>*PIW*, October 13, 1986: 3; November 30, 1992: 3.

<sup>116</sup>CEPET, *op. cit.*, v. II: 159; italics ours.

<sup>117</sup>Interestingly enough, these are clients that are supposed to get preferential treatment from Venezuela.

<sup>118</sup>*PON*, January 27, 1986: 1.

anything from a month to years) at a fixed price.<sup>119</sup> Of late, PDVSA has increasingly resorted to pricing its heavy blends by the simple expedient of giving individual clients variable discounts from the PEMEX Maya formula applicable to their home market.<sup>120</sup> The particulars of each one of these methods are not really important; what cannot be stressed enough is that all of them are very opaque, and involve an important element of haggling with the customers. Since many oil producers have found it in their interest to banish haggling from their pricing methods - in order to prevent Gresham's law of adverse selection from ruling (and ruining) their commercial relationships - one is naturally prompted to ask what possible motive can PDVSA have for maintaining such an awkward system in operation.

The main reason advanced to justify the retention of a pricing system which is out of step with the oil market's obsession for transparency and simplicity is that it enables PDVSA to price the cargoes of every customer according to their particular circumstances (location, complexity of the refinery, etc.), and to the state of the market at any given moment.<sup>121</sup> However, no other integrated or non-integrated NOC, not even Saudi Aramco, has been able to thrust such an arrangement upon its clients. Further, even though Citgo and Uno-Ven - thanks to their shareholdings in many important pipelines, to their extensive retailing operations and to their sizable imports of non-Venezuelan crudes - give PDVSA a knowledge superior to that of any other NOC regarding the "micro" conditions of the US oil market, the smooth operation of a discriminatory pricing system like this one would still rely heavily on the accurate disclosure to PDVSA by its clients of information privy to them (and these clients would obviously have every incentive to conceal). Most revealing of all, however, is the fact that many of the pricing options which PDVSA has given its clients are symptomatic of a great deal of weakness, rather than strength (in other words, PDVSA would seem to be a target for discrimination on the part of its customers, rather than the opposite). For instance, when PDVSA permits a client to fix a light/heavy differential at will at no additional cost, it is giving away nothing less than a gasoline/fuel oil swap (because PDVSA assumes all the risk that this differential might diminish and receives nothing in exchange). By the same token, a supply contract like the one Maraven allegedly offered Chevron in 1995 (20 years' worth of crude at a fixed price) is the equivalent of a free long-term swap on a very large volume of heavy sour crude.<sup>122</sup> The fact that PDVSA has had to go to such lengths while

---

<sup>119</sup>On adjusted posted prices see PIWK, *op. cit.*: 16; on the mixture of netbacks and asphalt postings see *PIW*, May 15, 1995: 4-5.

<sup>120</sup>Personal interviews.

<sup>121</sup>Personal interview.

<sup>122</sup>As an ancillary part of an oilfield reactivation deal, Maraven subscribed three separate supply contracts for Chevron's Pascagoula, Perth Amboy and West Coast refineries. Pascagoula will receive 16 MBD of crude, with this volume possibly increasing to 40 MBD at a later, unspecified, date. Perth Amboy will receive between 15 and 20 MBD of heavy crudes (mostly Boscán). Finally, the two West Coast refineries will receive about 10 MBD of Boscán. A Maraven source said that these supply contracts would be maintained at a quoted price for 20 years (*PON*, June 26, 1995: 4)

other producers have not it is quite revealing of the inability of the Venezuelan company to dictate commercial terms to the companies that lift its crude.

It seems quite clear that PDVSA's explicit refusal to dictate its prices unilaterally, far from reporting the company any benefits, has actually reduced the incentives which its clients with potentially large appropriable quasi-rents have to subscribe term contracts for large volumes of crude, and has strengthened the propensity of these clients to behave opportunistically. In other words, PDVSA's retention of an opaque pricing mechanism has tended to exacerbate the bilateral monopoly problems inherent in repeated transactions involving heavy crudes (by eroding the already scarce transparency in the heavy crude market), and to increase the bargaining power of its commercial counterparts.<sup>123</sup> This pattern of behaviour is bizarre, and definitely not what one would expect from a company worried about the "closure effect" of its commercial relationships (it is quite obvious that "an effective competitive strategy takes offensive or defensive action in order to create a *defendable* [*sic.*] position against . . . forces affecting competition in an industry"<sup>124</sup>, and not the other way around). Therefore, we have to conclude that remedying these bilateral monopoly problems cannot have been one of the priorities of the Venezuelan internationalisation programme.

### 5.2.2 Projection of PDVSA's Market Power

PDVSA officials state that their pricing mechanisms have been designed with one goal in mind: ensuring that the price paid by refiners for every cargo of Venezuelan crude reflects both their geographical location (i.e. locational rents) *and* the margins obtainable in their particular refining configurations when the crude is processed (i.e. asset quasi-rents).<sup>125</sup> If true, this would mean that an important part of the company's commercial strategy revolves around price discrimination.<sup>126</sup> Given that, in many circumstances, integrated firms may be more likely to engage in price discrimination than non-integrated firms (because vertical integration can make it easier for a firm to isolate those clients which are willing to pay the highest prices for its product<sup>127</sup>), could one argue that PDVSA might have decided to integrate vertically in order to project its market power more effectively?

Vertical integration is not a *necessary* condition for successful price discrimination; what is necessary, though, is that the firm enjoy some degree of monopoly power in the

---

<sup>123</sup>Moreover, PDVSA's pricing antics have also complicated the lives of its competitors in this market, for the same reasons.

<sup>124</sup>Porter, 1980: 29; italics in original.

<sup>125</sup>Personal interview.

<sup>126</sup>Price discrimination can be defined as the practice of charging different prices to different customers for an identical product or, alternatively, charging a uniform price for a product regardless of the fact that the costs of supplying it to different customers vary (see Pigou, 1920: 240-56).

<sup>127</sup>The case of a supplier who, having identified different elasticities in the demand functions of its clients, acquires those who have higher demand elasticities and charges the rest a price premium is a classic example of this (see Tirole, *op. cit.*: 141).

market for its product. There are two more requisites which potential price-discriminators also have to meet. Firstly, they must be able to identify either the reservation prices of their various clients or, at the very least, the demand elasticities of different market segments (otherwise they will lack the information to prepare a discriminatory pricing schedule); secondly, they must be in a position to eliminate arbitrage opportunities for their product (or else those clients to whom they sell at a low price will resell the product to those clients to whom they apply higher prices). If we analyze the supply and demand conditions that prevail in the American heavy crude oil market (not including the West Coast), we see that PDVSA is responsible for about a third of the imported heavy crude requirements of this highly-segmented market. In addition to this, the General Terms and Conditions (GTC's) for crude oil sales of PDVSA's operating subsidiaries bar customers from reselling any Venezuelan crude cargo before it is off-loaded at the destination stated in the Bill of Lading of the vessel carrying it.<sup>128</sup> These two factors could suggest that PDVSA has a considerable scope for price-discrimination within this market. However, since this scope has little to do with its high degree of integration, PDVSA could perhaps be accused of "overkill" in having pursued a policy of aggressive downstream expansion if the sole objective of this policy had been to give it the capability to price-discriminate among its American clients.

There are three reasons why such an accusation might be unfair. The first one is that PDVSA's operating subsidiaries do not have total control over the resale of its crudes: once an American customer has unloaded a Venezuelan cargo at a terminal, it can take advantage of the extensive US pipeline network to sell the volume to some other company at a profit without fear of discovery (and hence, of reprisals). This type of trading is by no means common; in the main, it is restricted to refiners which sell limited volumes of crude at premium prices - and then only exceptionally - to refiners that unexpectedly find themselves in a distressed position. Nonetheless, one would expect such practices to be more prevalent amongst customers of companies that price-discriminate. Therefore, it is conceivable that PDVSA could have used the internationalisation programme to foreclose preemptively this 'bootleg' market, so as to underpin a discriminatory pricing schedule. The second reason has to do with the important element of spatial discrimination which allegedly permeates the company's pricing mechanism, because PDVSA's ownership of certain downstream assets (notably its shareholdings in various inter- and intra-state pipeline systems in the US) might enable it to appropriate a larger proportion of its clients' surplus through an accurate quantification of the locational rents which these clients would reap if crude were sold to them on an uniform FOB basis. The third and final reason is related to the informational demands which price-discriminating firms might face in very unstable markets. Given the volatility of the oil market, and the difficulties inherent in quantifying refining margins by means of models based on necessarily simplistic assumptions, the property of refining assets

---

<sup>128</sup>See PDVSA (e), 1992: 4.

could conceivably give a price-discriminating crude oil seller a first-hand means to keep abreast of variations in the margins of different refining configurations so as to alter its prices rapidly and accurately enough to absorb a large share of its clients' surplus consistently over time. These, then, are the abstract reasons which might have made it either convenient or necessary for a company like PDVSA to integrate vertically in order to price-discriminate effectively. Let us now see whether PDVSA's acquisition of refining assets was in fact prompted by such a desire.

One would think that answering this question requires, at the very least, some knowledge (however imperfect) of the prices at which PDVSA invoiced a representative sample of its clients before and after it acquired the assets. This is a problematic requirement, since the aforementioned obscurity of the Venezuelan pricing mechanism makes it impossible to ascertain whether the expansion of PDVSA's international refining system has coincided with a change in the prices which its operating subsidiaries charge to their clients with complex refining configurations relative to those which they charge to clients with simpler configurations. However, the fact that this information is not readily available need not mean that we cannot identify the links between the internationalisation programme and PDVSA's alleged price-discrimination against complex refineries. Indeed, the conclusions advanced in the previous section with regard to the practical drawbacks of the Venezuelan pricing mechanism make it clear that such links *do not exist* and that, if anything, it is PDVSA that is being discriminated against by its large contractual clients.

There remains the possibility that PDVSA might have taken advantage of its status as sole provider of substantial volumes of spot waterborne heavy crudes to the American market in order to price-discriminate within its client base for this type of cargo. However, this supposition is weakened when one considers the manner in which Lagoven, Maraven and Corpoven used to place their crude in the American spot market until very recently. The *modus operandi* of these affiliates (characterised by a strong degree of competition<sup>129</sup>) not only did not force clients to bid against each other for cargoes (so that crude supplies could be channeled toward those clients that revealed higher reservation prices) but actually turned PDVSA itself into an easy *target* for opportunistic practices on the part of its clients. According to *PIW*, buyers of Venezuelan spot cargoes found that "the three operating divisions . . . [were] so aggressive in their independent marketing that they sometimes undercut each other on the sale of the same spot cargo" because, even though "each division [was] technically in charge of selling its own allotments, [in practice] they [placed] each

---

<sup>129</sup>As the *Energy Economist* (December 15, 1991: 15) puts it, "to some, the three are brothers, each seeking to excel against the world in the interests of all. To others, they are again three brothers, yet this time fighting against each other to be top dog. To outsiders, the ambiguity seems to reach its oddest form when three sets of logos dominate three different types of gasoline service stations. Here, a ferocious marketing fight seems to be going on between three identical products to send money to exactly the same ultimate destination".

others' supplies from time to time"<sup>130</sup> and often tried to "lure customers [away] from the others".<sup>131</sup> Unsurprisingly, many refiners ended up by becoming "proficient at lowering acquisition costs by negotiating the same spot cargo with all three [PDVSA] units".<sup>132</sup> Thus, during those years in which its international refining system underwent accelerated expansion, PDVSA *consented* that its affiliates engage in a sterile competition amongst themselves. This prevented PDVSA from presenting a unified facade in its international crude deals and, hence, nullified whatever leverage the company might have had in the heavy crude spot market. Because of this, we also have to discard the hypothesis that one of the motives of the internationalisation drive might have been the desire to enhance PDVSA's capability to price discriminate in the spot market.<sup>133</sup>

### 5.2.3 Protection from the Market Power of PDVSA's Commercial Counterparts

Most industrial economists agree that it is very understandable for a firm to integrate up- or downstream if firms occupying stages adjacent to its own in a vertically-related market enjoy an unusual degree of market power. Under these circumstances, vertical integration constitutes a safeguard against the danger (latent or manifest) that a firm's commercial counterparts might avail themselves by force to portions of the economic surplus generated by its operations. As we shall now see, PDVSA suffered at first hand the disagreeable consequences of commercial relationships characterised by massive asymmetries in the counterparts' bargaining power during the first four years after the nationalisation of the Venezuelan oil industry (a very delicate juncture in the company's history). Since it is not unreasonable to suggest that PDVSA's managers were left with a particularly deep impression by this experience, could one consider the internationalisation programme as a response to this type of vertical market failure?

Up until 1976, the commercialisation of Venezuela's petroleum exports was essentially an exclusive reserve of the concessionaires operating in the country.<sup>134</sup> In addition, the amount of contact which the concessionaires' Venezuelan personnel had with the international oil market was very limited, since - with the notable exception of Shell -

---

<sup>130</sup>*PIW*, November 30, 1992: 3.

<sup>131</sup>"PDV Restructures in Effort to Get More Term Deals", *PIW*, July 18, 1994: 4.

<sup>132</sup>"PDV's Downstream Model Tarnished by US Sales Woes", *PIW*, February 28, 1994: 3.

<sup>133</sup>In its early years of existence, PDVSA had discovered that interaffiliate competitions was quite sterile and had taken steps to prevent it. As Coronel (1983: 1489) remarked, "with more than one Venezuelan oil company selling oil abroad there [existed the risk of] . . . more than one company competing for the same client and selling oil at less than an optimum price. Several cases of this type occurred during the first years of nationalisation . . . This situation was satisfactorily resolved when the technical trading committee started to meet to analyze clients and potential markets and assign them to each of the companies. The assignments were based on the type of hydrocarbons being marketed, the experience of the companies in different geographical areas and the existing commercial ties between the client and organisations". In the light of these antecedents, PDVSA's willingness to countenance inter-affiliate competition once again appears even more puzzling.

<sup>134</sup>CVP's exports were always negligible.

none of them maintained a dedicated crude trading department in Venezuela. Thus, after the Venezuelan nationalisation, PDVSA found itself in a rather uncomfortable situation as far as marketing its crude output was concerned: on the one hand, its commercial dependence *vis-à-vis* a very small base of contractual clients (mainly ex-concessionaires) was excessive by any standards; on the other hand, its managers' lack of international marketing experience would have condemned to failure any attempt to place its crudes in alternative destinations. Unsurprisingly, in the negotiations that followed the nationalisation, Venezuelan clients played the trump card of PDVSA's vulnerability for all it was worth, and were thus able to gain from PDVSA many unusual privileges; to wit:

- a) Ex-concessionaires received a fee of about .20 USD for every barrel of oil they lifted.<sup>135</sup>
- b) Ex-concessionaires had the right to reduce, unilaterally, their crude liftings by up to ten percent of contractually stipulated volumes, whenever they deemed market circumstances to be unfavourable (or, alternatively, to increase liftings by ten percent during buoyant periods).<sup>136</sup>
- c) PDVSA was barred from "entering markets served by the buyers of its crude if they [judged] that [this] would affect their sales" in those markets; moreover, in those cases where PDVSA might be interested to present bids in order to penetrate a market not served by the ex-concessionaires, the latter reserved the right to undercut PDVSA's bid with bids of their own (which, at their discretion, could include Venezuelan crude supplies).<sup>137</sup>
- d) MEM abrogated the right to set its export prices unilaterally (it could only modify its prices quarterly, and then only after consulting PDVSA's clients).<sup>138</sup>
- e) Ex-concessionaires could terminate their contracts under very favourable conditions.<sup>139</sup>
- f) PDVSA agreed to let supply contracts run for two years (extendable by two more years at the behest of only *one* of the parties to the contract).

---

<sup>135</sup>This figure was in line with the fees that other new OPEC NOCs had to pay to their own ex concessionaires.

<sup>136</sup>In any given quarter, buyers could vary their liftings by up to 20 per cent of stipulated volumes so long as the variation in their liftings at the end of the year did not exceed 20 per cent of the stipulated volumes.

<sup>137</sup>Maza Zavala and Malavé Mata, *op. cit.*: 180.

<sup>138</sup>Calderón Berti, 1983: 68. This clause was exceptionally favourable for the exconcessionaires, because the notification and negotiation periods generally lasted fifteen days each. This meant that up to thirty days could elapse before a price modification went into force and, during this period, the buyer could still lift crude at the old price and resell it at the new price.

<sup>139</sup>If buyers became displeased with Venezuelan prices, they could phase out their purchases of Venezuelan crude over a whole year (25 per cent of their volume per quarter). Official Venezuelan prices were not applied to the cargoes lifted during the phase-out period (prices for these cargoes were determined by averaging the "new" official price with the price prevailing before the disagreement between the counterparts occurred; in no case could this average exceed the "old" price by more than 50 per cent).

g) The concessionaires were recognized the right to transfer their contractual rights to third parties and to resell their assigned volumes of crude freely, with no restrictions on final destination.

In the short run, PDVSA was not in a position to refuse the ex-concessionaires' demands<sup>140</sup>, since this probably would have had calamitous effects on its export volumes. Under this light, it is quite easy to understand why PDVSA made the reduction of its commercial dependency *vis-à-vis* the ex-concessionaires one of the four fundamental objectives of its first medium-term strategic business plan.<sup>141</sup>

The company's efforts to modify its portfolio of contractual clients have been very successful: whereas in 1976 the liftings of Venezuelan ex-concessionaires accounted for about 80 per cent of the its exports, they now account for only 15 per cent of the total (see Table TA6.1). Since the volumes which PDVSA's affiliates abroad absorb have come to supplant those that it used to sell to Venezuelan ex-concessionaires, it would be tempting to conclude that PDVSA's internationalisation drive played a major role in the company's commercial emancipation. However, available evidence indicates that, by the time the internationalisation programme gathered pace in earnest (1986), PDVSA had already managed to tilt the balance of commercial bargaining power in its favour.

In reality, the event that put PDVSA out of its commercial misery was the 1979 Iranian revolution. The chaos which descended on the oil market in the aftermath of the revolution swelled the ranks of potential clients willing to pay high prices for OPEC crudes. As luck would have it, this event coincided with the moment when the Venezuelan supply contracts signed in 1976 were coming up for renewal. Logically, the existence of a long list of interested buyers bolstered PDVSA's negotiating position, and the Venezuelan company took full advantage of this to rid itself of those contractual clauses which it found most objectionable, arguing - with implacable logic - that "changed conditions from five years ago require new arrangements".<sup>142</sup> Thus, after 1980, Venezuelan customers found that their contracts would no longer give them either volumetric flexibility or long phase out periods and that, as well as having a reduced duration of only one year, they would contain strict destiny clauses, many resale restrictions and substantial increases in the amount of heavy

---

<sup>140</sup>The Venezuelan Left, however, saw this as clear proof that imperialist interests had chosen to exploit Venezuela through a "transnationalised national petroleum industry", with the enthusiastic collaboration of PDVSA's managers (see Maza Zavala and Malavé Mata, *op. cit.*: 180). Even more balanced Marxist interpretations of the 1976 nationalisation (see Rivero, *op. cit.*: 35-49) failed to appreciate that, after the first oil shock, the commercial position of the new crude-long NOCs like PDVSA was quite vulnerable, due to the fact that a majority of internationally-traded crude still had to flow through the integrated systems of the Seven Sisters.

<sup>141</sup>The other three were the modification of the yield patterns of the Venezuelan refineries, the search for new accumulations of light and medium crudes, and the expansion of E&P activities in the Orinoco belt.

<sup>142</sup>See "PDVSA has Edge in Renegotiating with Majors", *PIW*, November 19, 1979: 5.

crude which would have to be lifted in exchange for an entitlement to light and medium crudes.<sup>143</sup> Even after this extensive revamping of PDVSA's contractual portfolio, however, Shell and Exxon managed to hold on to certain important pricing privileges (volumes destined for their refineries in Aruba and Curaçao would continue to be priced with preferential formulae which included an adjustment factor related to the price of fuel oil in New York harbour). In the event, only a couple of years passed before PDVSA rescinded these contractual clauses as well, whereupon its "commercial emancipation" finally became a tangible reality.<sup>144</sup>

It is apparent, then, that between 1982 and 1986 - when the scope of the internationalisation programme was still rather modest - PDVSA did not reap great benefits from its ownership of refining assets outside of Venezuela. And, quite surprisingly, the great expansion which the programme has undergone since 1986 has not led to any improvement of the company's strategic position *vis-à-vis* its major clients. On the contrary, the results of our examination of PDVSA's current commercial practices indicate that the growth of the Venezuelan company's refining empire has, if anything, coincided with a sensible deterioration in its capabilities to dictate terms to the companies that buy crude from it. What are we to make of this?

One factor can be held responsible for *most* of the erosion in PDVSA's bargaining power after 1986; namely, the structural transformation of the international oil market into a buyers' market. As a result of the persistent supply overhang which has plagued the oil market since then, all oil exporters (including those with access to an international refining system) have been forced to accept certain commercial practices - such as formulae based on marker crudes or differed pricing for long-haul cargoes - which they would never have countenanced while the phantom of a third oil shock still loomed over the heads of consumer countries. However, even if it is true that all crude-long NOCs have had to give up many of the things which they took for granted after 1973, it is difficult not to notice that PDVSA has relinquished more privileges than its peers. In other words, PDVSA's clients enjoy commercial conditions which seem generous in comparison to those which other NOCs give to their own clients. A clear example of this, once again, is PDVSA's crude valuation mechanisms which, as a result of their being structured around a bilateral haggling process, give clients an unusual degree of say in the determination of Venezuelan export prices. Given PDVSA's very high integration index, these findings appear highly counter-intuitive. Therefore, we have to close this section with a negative conclusion once again: the search for protection against the market power of the main buyers of Venezuelan crude oil was clearly

---

<sup>143</sup>*PIW: ibid*; CEPET, *op. cit.*: 158.

<sup>144</sup>One example suffices to illustrate just how favourable these formulae were: while the Aruba refinery posted annual profits of 25-75 MMUSD while the old formulae were in force, Exxon forecast that it would lose about 50 MMUSD a year with the new formulae.

not among the motives that prompted PDVSA to acquire its extensive overseas refining system.

#### 5.2.4 Development of Market Niches for Venezuelan Crudes

According to the 'official history' of the Venezuelan oil industry, PDVSA's interest in international vertical integration began at the very moment that the company was born:

the National Petroleum Industry has always been conscious of the need to integrate vertically in markets outside Venezuela . . . [and] from the first year of the nationalisation onwards, [PDVSA] and its subsidiaries were analyzing investment alternatives abroad . . . In 1981, in the presence of signs which indicated that a situation of weakness in the market was to be expected in the short term, PDVSA . . . gives the internationalisation maximum priority. Logically, this being such a new subject, and Venezuela being a pioneer<sup>145</sup> [*sic.*], the study and negotiations for the first agreement took some time, and it was only in 1983 that the first association agreement was signed . . .<sup>146</sup>

One could think that the inclusion of the question of extra-territorial vertical integration in the Venezuelan oil agenda as early as 1975 shows commendable foresight on the part of PDVSA's managers; after all, many years were to pass before the subject of international vertical integration became *de rigueur* for other NOCs with exportable surpluses of crude. However, PDVSA's claim that its investigation of the pro's and con's of integration was prompted by its anticipation of a deterioration in the international oil market sounds rather undermined by the manner in which the company faced the 1986 price war. PDVSA gave no sign of having anticipated this event, nor did it behave like a company in possession of the key to solve the conundrum posed by the very unfavourable market conditions of the time. Indeed, the mechanism eventually adopted by PDVSA to defend its export volumes (price discounts) was anything *but* original or innovative. What is more, if one compares PDVSA's reactions to those of other NOCs, the Venezuelan company does not fare at all well in terms of its capacity to respond quickly and effectively to changing market conditions: MEM's steadfast support of OPEC's official price accords<sup>147</sup> - at a moment when all of Venezuela's main competitors in the oil market (bar Mexico) were selling their crude through netback arrangements - led to a massive reduction in the country's exports (which was only reversed when PDVSA began discounting heavily).<sup>148</sup>

All of the above notwithstanding, it is a fact that at an early stage of its existence, PDVSA *did* consider the option of forming strategic alliances with major multinational oil

---

<sup>145</sup>Although Venezuelans make much of this pioneering spirit, the truth is that Venezuela was not the first oil exporter to acquire refining capacity overseas. The government of Iran acquired a 17.7 per cent stake in South Africa's Natref refinery as far back as 1971. PEMEX bought 34 per cent of a Spanish refinery (Petronor) in 1979, while KPC started its own downstream expansion in 1982.

<sup>146</sup>CEPET, *op. cit.*: 176.

<sup>147</sup>Venezuela finally cut all ties to official OPEC pricing in February 1986 (see *PIW*, February 17, 1986: 3). Previously, fierce competition in the heavy crude market had forced it to withdraw its heavy crudes from the OPEC pricing system (*PIW*, January 6, 1986: 1).

<sup>148</sup>See "Venezuela Joins Pricing Free-for-All as OPEC Ties Erode" (*PIW*, February 17, 1986: 3-4).

companies. Initially (1974-6), PDVSA concentrated on the possibility of acquiring stakes in the Aruba and Curaçao refineries (preferably in exchange for shares in its two export refineries in the Paraguaná peninsula), as a quick and cheap way to add value to Venezuela's crude oil exports.<sup>149</sup> The rapidity with which PDVSA's enthusiasm for these plans waned once the economic unviability of the plants became apparent, however, shows that these earliest manifestations of interest in vertical integration were essentially a product of institutional inertia (a desire on the part of its affiliates to continue having a very close commercial relationship with the traditional buyers of Venezuelan oil), rather than of a critical reappraisal of the company's position in the world oil market. Hence, these stillborn projects do not refute the allegation made above in the sense that PDVSA did not get an early start down the path of vertical integration because it was able to detect "the presence of signs that heralded that a significant deterioration in market conditions"<sup>150</sup> before any other NOC.

But what about PDVSA's attempts to integrate downstream by building highly sophisticated grassroots refineries in association with three major European oil firms (Elf Aquitaine, Veba Öl and Agip)? These projects, which did involve a major rethink of PDVSA's commercial goals, explicitly pursued an objective traditionally associated with vertical integration (the creation of a new market or market niche for a product). However, by contrasting some of their peculiarities with those of the internationalisation programme, we shall demonstrate that the objective of market creation or development has quite clearly *not* been among those pursued by the latter programme.

In order to understand the *raison d'être* of these refining projects, we have to make a quick reference to the situation prevailing in the Venezuelan upstream sector during 1976-80. At that point, PDVSA's position was precarious because, as we have seen, crude extraction in Venezuela's traditional producing areas began to decline after 1970.<sup>151</sup> Thus, PDVSA's leaders concluded that the company's future would inevitably be tied to the exploitation of new sources of hydrocarbons, the most promising among which seemed to be the Orinoco oil belt. PDVSA's plans contemplated extracting about 1 MMBD of crude by the mid-1980s from this area.<sup>152</sup> These plans were extremely ambitious, since the adverse physical characteristics of the Orinoco crudes meant that they could not be processed economically in a conventional refinery. This was quite an inconvenience since, as a former PDVSA president used to remark, "there is no reason to produce or develop . . . this type of oil if you

---

<sup>149</sup>Chávez, *op. cit.*: 70-1.

<sup>150</sup>CEPET, *op. cit.*, v. II: 176.

<sup>151</sup>In 1976, oil production in the six most important structures in the Maracaibo basin came to barely 1.5 MMBD. In contrast, in 1970, production in these fields was 2.7 MMBD (equivalent to 72 per cent of total Venezuelan production). Between 1970 and 1980, total Venezuelan crude extraction fell by 1.145 MMBD.

<sup>152</sup>Coronel, 1983: 167.

cannot sell it".<sup>153</sup> Through a line of reasoning analogous to the one which led US companies like Texaco, Union Oil and Gulf to include petroleum refining among their chosen business activities during the late nineteenth century<sup>154</sup>, the directors of the Venezuelan company concluded that placing Orinoco crudes in the international market would require some sort of close vertical integration arrangement with prospective clients. PDVSA never seriously considered the possibility of reserving for itself the task of building and operating the refineries for these crudes and, instead, chose "a new kind of agreement [officially called 'technical sales'] whereby the sale of hydrocarbons under long-term, preferential, terms [would be] linked to the provision of some technological input"<sup>155</sup> by these three European refiners.

PDVSA's "technical sales" programme (all of whose components were eventually cancelled) and the internationalisation programme proper differ in so many respects that it is difficult to see how anyone can take seriously PDVSA's claims in the sense that they are successive stages of the same basic master plan.<sup>156</sup> Some of these differences are actually less significant than they appear, since they reflect structural changes in the oil market over which PDVSA had no control.<sup>157</sup> But there is one thing which clearly separates both programmes; namely, that while the internationalisation programme has always had a conservative and reactive character (with its main objective being the preservation of the share of Venezuelan crude in the markets of certain countries<sup>158</sup>), its supposed forebear had an eminently proactive character (being as it aspired to create a totally new market segment, to be occupied by Orinoco crudes<sup>159</sup>).

---

<sup>153</sup>Zlatnar, 1986: 28. See also "Caracas Eyeing Global Network of Heavy Oil Plants", *PIW*, August 24, 1981: 5-6.

<sup>154</sup>Those American companies were among the first to discover crude accumulations in Texas, Oklahoma and California. Oil found in these accumulations had a higher sulphur content than Pennsylvania and Ohio crudes, and this made it unattractive to refiners (because its kerosene cutwas of an unacceptable quality). Thus, the discoverers of these crudes were literally forced to develop new processing methods for them and to build refineries incorporating these technological advances. In other words, these companies had to integrate "merely in order to give value above ground to what they were finding below" (de Chazeau and Kahn, *op. cit.*: 114).

<sup>155</sup>Villalba, *op. cit.*: 174.

<sup>156</sup>PDVSA's technical sales drive targeted state oil companies, while the internationalisation programme has primarily involved non-state oil companies. Moreover, the focus of the early programme was Europe, while the internationalisation programme has concentrated mainly on the US.

<sup>157</sup>The change in geographical focus, for instance, is a consequence of the disappearance of OPEC's official pricing system. While this system was in place, oil exporters were indifferent to the location of their clients (because the official prices were uniform FOB prices). However, the introduction of spot market-related pricing mechanisms made some markets more attractive for certain exporters (this was the case of the US for Venezuela). The fact that NOCs have not had a prominent place in the internationalisation programme is a natural consequence of the change in geographical focus, as state oil companies have never been plentiful in the US.

<sup>158</sup>In the words of former Corpoven president and PDVSA vicepresident Frank Alcock, the main reason which drove PDVSA to the downstream was "to protect its share in some of the most competitive markets where it was present" (*op. cit.*: 10).

<sup>159</sup>Calderón Berti, 1986: 70.

One might think that the difference in emphasis between both programmes is a logical consequence of the fact that, while the Orinoco crudes were essentially an unknown quantity at the time PDVSA started searching for partners willing to process them, the crudes that have been involved in the internationalisation programme had been present in the international oil market for a long time by the time the programme was conceived. In other words, the tenuous or non-existent activism - that is, the deliberate creation of demand - characteristic of the internationalisation programme might be a consequence of the long commercial history of the major Venezuelan crude streams (after all, the task of developing a market for crudes that have been marketed actively for decades could be seen as a redundant task). However, this argument overlooks an important detail: developing a market need not mean creating it *ex nihilo*, because merely modifying the structure of a market may totally alter the demand pattern of a product or commodity. This means that the market for any product can conceivably be the subject of a proactive development strategy (understood as the identification and exploitation of new and more attractive market niches, or the implementation of actions meant to create *additional* demand in these niches), even if this product has been sold in other segments of the same market for a long period of time.

For the case at hand, this last point is of great importance, particularly when viewed in the context of the dynamics of the heavy crude oil market after 1973. Up until this date, the majority of refiners that bought heavy crude did so with one objective in mind: producing vast amounts of residual fuel oil destined for electricity generation. The increase in the price of oil led to this product being displaced from this niche by other primary energy sources (natural gas, nuclear energy). Naturally, this reduced its value relative to other petroleum products, and the value of heavy crudes relative to lighter crudes fell. In turn, this brought about a structural increase in the slope of the demand curve for heavy crudes (due to the widening differential between the margins obtainable in high conversion and simple refining configurations) or, to put it another way, a more pronounced segmentation of the market for heavy crude oil.

This new demand curve configuration has an important implication for the evaluation of the vertical integration strategy of heavy sour crude oil exporters: any increase in the installed conversion capacity in the market that is not accompanied by an increase in the supply of heavy sour crudes will have a positive impact on the price of all the heavy sour crude in the market - and not just on the crude processed in the new conversion capacity - because the entire demand curve will shift towards the left (Figure F5.2.4.1).<sup>160</sup>

---

<sup>160</sup>The coming on-stream of new plants for light crudes also has a positive, but much less pronounced, effect on the slope of the demand curve for light crudes. This is because the market for light crudes is not as markedly segmented as the market for heavy crudes (since the GPWs obtained from light crudes in high conversion plants are only slightly better than the ones which can be obtained in less complex plants).



associate "with those companies that either have the capability to process most of the wide range of crudes produced by Venezuela or whose infrastructure and economic conditions might justify the emplacement of deep conversion plants in their refining facilities in the future"<sup>163</sup>. All of the company's overseas asphalt plants used to process Venezuelan crude exclusively before being purchased by PDVSA, and their acquisition has not led to any substantial increases in their crude runs. The Corpus Christi refinery also used to satisfy its imported crude requirements exclusively with Venezuelan crude before PDVSA acquired a stake in it. The large increase in the refinery's imports of Venezuelan crude since 1986 has not been due to the coming on stream of new conversion capacity; rather, it is a reflection of the backing out of US crudes by Venezuelan crudes, on the one hand, and of much higher utilisation rates in the less complex plants of the refinery, on the other.

The case of the Lake Charles refinery is less straightforward. Its imports of heavy crude experienced a sensible expansion after 1986, and most of this increase came as a result of the coming on stream of new coking and hydrocracking plants in the refinery. However, the decision to build these plants (designed to run Mexican Maya crude) had been taken by the managers of Cities Services as far back as 1980, way before the acquisition of Cities by Occidental and the sale of the Lake Charles refinery to Southland.<sup>164</sup> This means that PDVSA had nothing to do with the process that led to the construction of these plants and that, therefore, the Venezuelan company should not be credited with the increase in demand for heavy crude which the new conversion plants generated.

The Uno-Ven refinery is a better example of PDVSA's confused priorities: the Venezuelan crude processed in Lemont since 1989 has been, on average, lighter than the Canadian crude which used to be run there (30° API against 26° API), which means that the acquisition of the refinery by PDVSA has actually *reduced* the aggregate demand for heavy crude in the US Mid-Continent. As for Ruhr, there is no doubt that PDVSA's association with Veba opened a new market for Venezuelan crude in Europe<sup>165</sup>; nevertheless, there is little doubt that supplying Ruhr's remote landlocked German refineries is an operation that has entailed very large opportunity costs for PDVSA (and the substantial reduction in the amount of Venezuelan crude sent to these refineries seems to be a tacit admission of this fact

---

<sup>163</sup>CEPET, *op. cit.*, v. II: 160; see figures in Annexe 4.

<sup>164</sup>IPF, April 15, 1983: 2.

<sup>165</sup>Lack of information makes it impossible to know the API gravity of the Venezuelan crudes processed in Ruhr's German plants or, indeed, the quality of the crudes which they displaced from these plants (Ruhr's annual reports make no mention of the quality of its crude oil imports). Contreras and Thöne (1996: 6), however, state that the light versus heavy ratio of the Venezuelan crude supplies is 7.7/2.3. It should be noted that figures for German and Swedish purchases of Venezuelan crude are published by MEM, on the one hand, and the Mineralölwirtschaftverband (MZ) and IEA (*QOSEB*), on the other hand, in different units (barrels and tonnes, respectively). In theory, this should make it possible to calculate the API gravity of the crude, but the nonsensical results obtained from this procedure indicate that the data sets are incompatible.

by the company<sup>166</sup>). Finally, LCRC is a *sui generis* case in the history of the internationalisation programme. Notwithstanding the fact that Venezuelan crudes displaced Maya and Arab Heavy crudes from the refinery's feedstock slate before the association accord between Citgo and Lyondell was signed, LCRC stands apart from the rest of PDVSA's refining ventures because it is the only one to have been planned from the outset with the objective of increasing the aggregate demand for heavy crude in mind.<sup>167</sup>

### 5.3 Conclusions

When you have eliminated the impossible, whatever remains, *however improbable*, must be the truth.  
Sir Arthur Conan Doyle, *The Sign of Four*

Judging from the evidence presented in this chapter, it would appear that the main beneficiaries of the internationalisation programme have been PDVSA's refining partners and wholly-owned overseas subsidiaries. Association with the Venezuelan company has multiplied their downstream earnings, shored up their financial position and considerably simplified their logistical and operational requirements.<sup>168</sup> Indeed, it is no exaggeration to say that the internationalisation programme surely has fulfilled these refiners' most sanguine expectations. To appreciate why, one need only consider the response which the chairman of Ashland Oil gave when asked about the possible problems which might obstruct or complicate associations between US refiners and crude-long NOCs:

the price of raw material is a critical issue for . . . refiners. Perhaps the best of [all] worlds for a refiner [is] to have some type of margin guaranteed or protected [but] this type of arrangement is not . . . attractive to producers . . . [Since] the price of the raw material is the one issue on which the interest of each partner [in a downstream joint venture] is different . . . [it] could be the biggest source of conflict in the partnership.<sup>169</sup>

This source of conflict, though, has not affected the internationalisation programme, because PDVSA has consented to set the price of its crude at whatever level is necessary for its partners or subsidiaries to make a tidy profit by processing it. In other words, the internationalisation programme has permitted PDVSA's partners to integrate backwards, *at no apparent cost to themselves*. But whereas it is easy to see why a refiner would want to get

---

<sup>166</sup>Indeed, PDVSA has now made it quite clear that it has no further plans to expand its refining capacity in Europe (*WPA*, December 16, 1996: 19).

<sup>167</sup>The contrast between PEMEX and PDVSA in this regard could not be greater. PEMEX always had the objective of increasing aggregate demand for heavy crude in mind when it decided to become Shell USA's partner in a high conversion refining venture in Deer Park, Texas. The company calculated that, so long as the volume of heavy crude supplied to the US market remained relatively stable over 1995-2005 and beyond, the shift in the Maya demand curve brought about by the coming on stream of this refinery would generate monetary benefits way in excess of the profits expected of the new plant.

<sup>168</sup>A constant supply of crude oil of uniform quality means that a refiner can adjust his facilities to boost his yields of some products through an improved optimisation of cut points and unit/process severities, enhance the quality of his products thanks to simplified blending, reduce inventory requirements, reduce downtime in his plants and, finally, reduce direct and indirect labour.

<sup>169</sup>John Hall, in *IPF*, October 17, 1988: 4-5.

hold through backward integration of at least a small part of the ground rent element present in the price of crude oil, it is not at all clear why a NOC like PDVSA would want to dissipate this rent *deliberately*, by entering the international refining sector in the manner it has. Moreover, this finding begs one further awkward question: why has PDVSA found it necessary to surrender so much in its joint venture agreements, when the dire financial situation of its partners at the time the agreements were signed probably made it easier for the Venezuelan company to extract concessions from *them*, and not the other way around?<sup>170</sup>

The explanation for the PDVSA's generosity clearly does not lie in Alcock's argument that acquiring refineries abroad is a justifiable action because it affords NOCs the opportunity to know the most obscure details of an admittedly very intricate business<sup>171</sup>; after all, it is safe to say that no private oil company would dare defend the expenditure of more than 3,000 MMUSD of its shareholders' funds adducing purely didactic purposes!<sup>172</sup> And what about the oft-invoked adverse physical characteristics of Venezuelan crude oil? If one leaves the rather special case of the Savannah refinery aside, this explanation is also quite unconvincing, and to see why one need only consider the case of the other Western hemisphere NOC which also has to sell large volumes of non-fungible heavy crude: PEMEX. Unlike PDVSA, PEMEX has not found it necessary to include netback pricing clauses in its sole joint venture supply contract, even though its partner in this venture is Shell USA (a company whose size and financial solidity give it a vastly superior bargaining power to the one which PDVSA's partners enjoyed when they negotiated their respective deals). Moreover, the operations of the Mexican NOC - predicated on credible commitments of non-expropriation of quasi-rents and long-term contractual relationships - prove that it is possible for a crude-long company to enjoy a reasonable degree of volumetric security for exports even if it is not highly integrated and does not discount its cargoes. In marked contrast to PEMEX, PDVSA has renounced the option of selling sizable volumes of its crude at anything resembling true market prices and, in exchange, has only attained a shaky security of placement during bear market spells (while it is true that roughly half of the Venezuela's crude exports have a secure home abroad, considerable uncertainty has plagued the rest, to

---

<sup>170</sup>For instance, when Southland entered into its joint venture agreement with PDVSA, it exchanged its existing Citgo shares for 1,000 shares of common stock Class A and 1,000 shares of common stock Class B, and then sold to PDVSA all the Class A common stock. Surprisingly enough, only Class B stock could vote "on disputes related to a crude supply agreement" (disputes which were of great concern for PDVSA)

, while Class A stock voted "on disputes related to [the] product purchase agreement" (Citgo, 1986: 20).

<sup>171</sup>This author contends that "there is no substitute to being present in the market on a day-to-day basis" (Alcock, *op. cit.*: 10). This assertion is quite contradictory, since vertical integration is supposed to be a means whereby firms *avoid* contact with the market. Paradoxically, Sosa Pietri wrote that PDVSA's domestic subsidiaries frequently complained that "thanks [*sic.*] to Citgo and PDV-Europa, they lose contact with the market, since everything has to be channeled through these enterprises" (*op. cit.*: 116).

<sup>172</sup>As Skeet (1995: 2) rightly says, "the wish to improve understanding of the oil market . . . can be no more than a useful spin-off of advantage from a decision taken for more weighty reasons".

the extent that PDVSA felt obliged to acquire vast amounts of storage capacity in the Caribbean<sup>173</sup>). As of early 1997, PEMEX's commercial situation (particularly in terms of its volumetric security) has become much less favourable than it was in the past, largely as a result of PDVSA's decision to increase its production of heavy crude and to undercut very aggressively the price of Maya crude. However, it should be stressed once again that, even in this respect, PDVSA still does not enjoy a real advantage *vis-à-vis* PEMEX: the Venezuelan company has only purchased the *appearance* of volumetric security for itself by conceding over-the-odds discounts to its customers.

In one of the more thoughtful interventions by an oil industry insider in the debate concerning the downstream expansion of the major crude-long NOCs, Silvan Robinson (former head of SITCO) tried to make it clear to those NOCs which had acquired refining assets in OECD countries - or were thinking about doing so in the future - that their interests (and the interests of the oil industry at large) would be better served if:

- a) they did not yield to the temptation of buying unprofitable refineries;<sup>174</sup>
- b) they refrained from accepting artificially low netbacks for crude supplied to their refineries abroad (even if this was the only way which the purchase of these assets could be 'economically' justified);<sup>175</sup>
- c) they did not value the capital employed in their refineries at anything less than its true market value;<sup>176</sup>
- d) they did not acquire these assets with the idea of processing crude *à outrance* in them and, instead, were willing to reduce their crude runs in marginal plants when market conditions so demanded.<sup>177</sup>

Most of the NOCs which have pursued international vertical integration strategies have ignored Robinson's advice that they should set their transfer prices and evaluate the profitability of their investment capital according to strictly commercial criteria; none, however, can be said to have done so with more alacrity and disregard for both the economic

---

<sup>173</sup>Paradoxically, PDVSA's downstream presence has sometimes been a liability even during times of healthy oil demand (there have been occasions when the company has found itself either having to buy crude in the spot market to meet its commitments or, worse, having to trim the crude entitlements of some of its term customers; *PON* June 5 and 8 and September 29, 1987; *PIW*, March 9, 1987).

<sup>174</sup>"Inefficient refineries should be closed down to help improve the refining capacity balance, not given new life" (Robinson, 1989 (a): 73).

<sup>175</sup>"[Underpricing] devalues the price of crude; not only of crude supplied to the refinery, but all crude" (*ibid.*).

<sup>176</sup>"The view that a long time-horizon is justified in making a strategic investment is simply another way of saying that you are prepared to absorb short-term losses in the interests of quite uncertain long term gain. You are throwing money away" (*ibid.*).

<sup>177</sup>"The temptation to run marginal crude . . . devalues profitability both in your own refinery and in all refineries . . . [Also,] although under the OPEC rules it is [possible to pretend] . . . that, until stocks have been converted into products and sold they are not part of production and are no different to you from oil reserves in the ground . . . this is all a mirage. Such additional production is simply over production and tends to devalue prices everywhere" (*ibid.*).

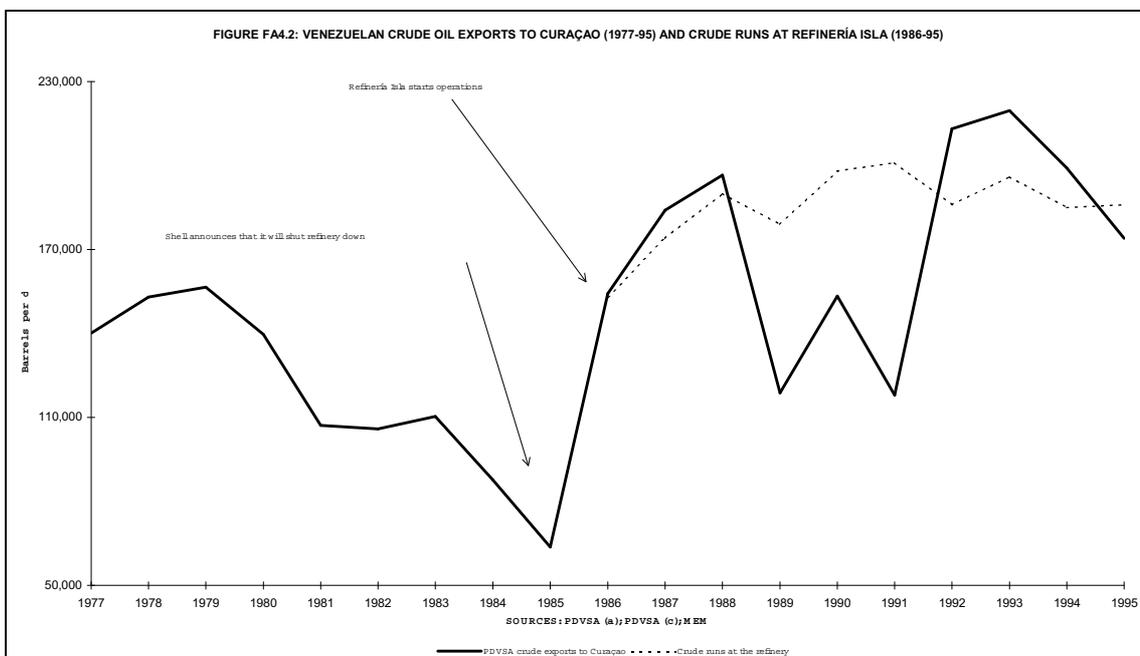
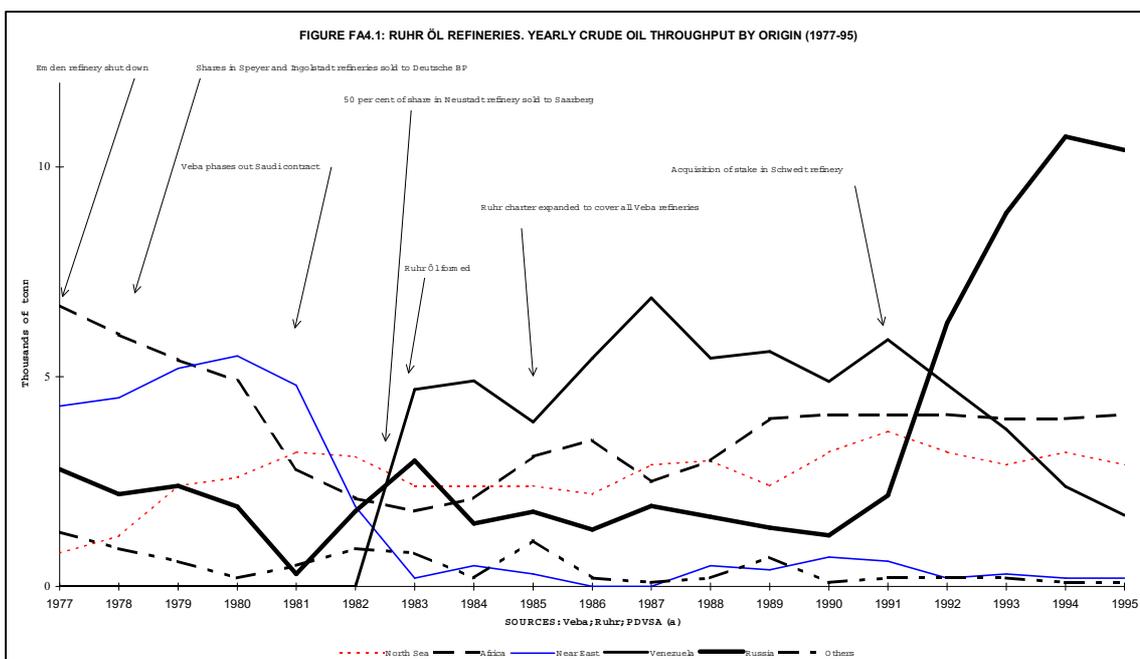
interests of their shareholder governments and the health of the refining industry than PDVSA. There are those who would excuse such behaviour by pointing out that, "for national oil companies . . . in major producing nations, the issues of size and integration go beyond economics and include national security" and, therefore, "these cases may be appropriately exempt from the strictly financial evaluation applied to private oil companies".<sup>178</sup> Such a line of reasoning, if taken at face value, would condone even the most irrational vertical integration strategy; however, not one of the analysts who hold this view has seriously suggested that considerations of profitability be completely ignored when evaluating such strategies, "lest integration in the name of national security simply becomes an inefficient and expensive government subsidy".<sup>179</sup> However, throughout this chapter we have shown that PDVSA has maintained in operation just such an inefficient and expensive subsidy - for the benefit of overseas oil consumers - for the space of fifteen years (and counting), on the basis of flimsy justifications. Indeed, if the true measure of a crude-long company's integration is not ownership of downstream assets so much as the degree to which its central coordinating body chooses to ignore or override market signals when carrying out inter-segment transfers, then it is clear that the internationalisation programme has transformed PDVSA into one of the most highly integrated (i.e. least market responsive) oil firms around. What we have not explained, though, is *why* this came to pass. This crucial question will be answered in the next chapter of the study.

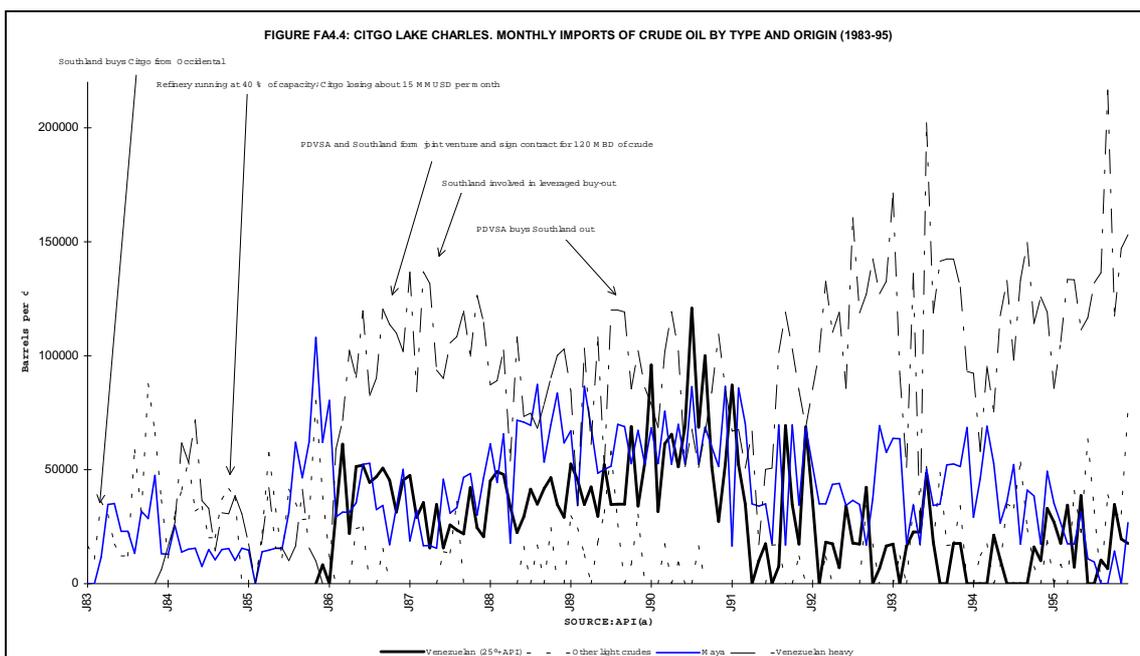
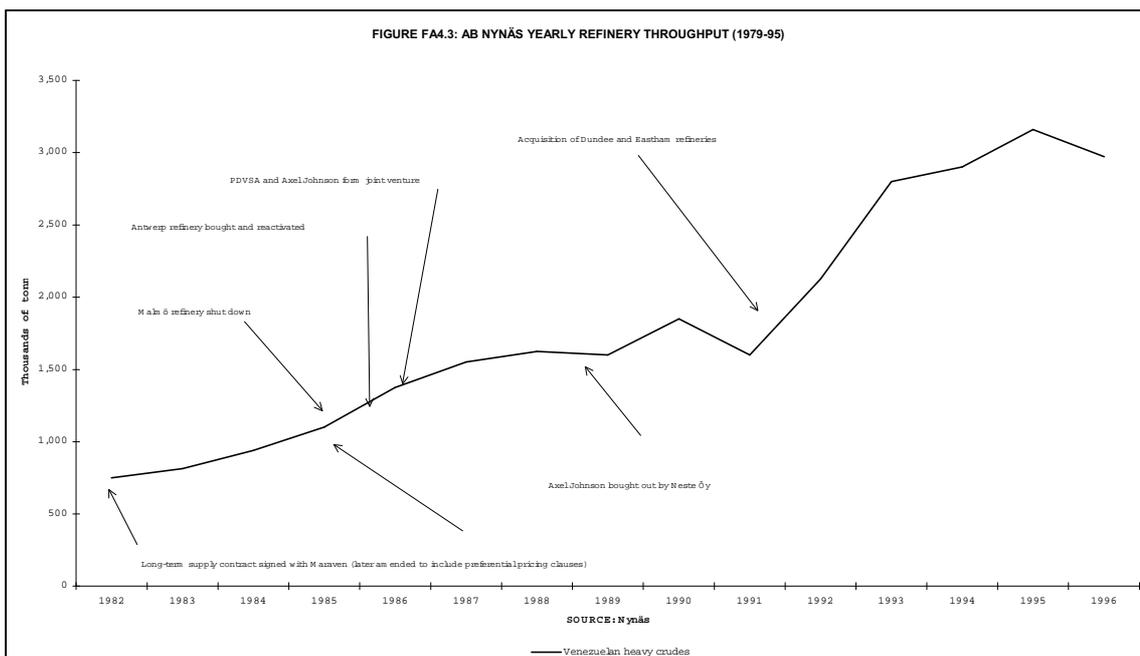
---

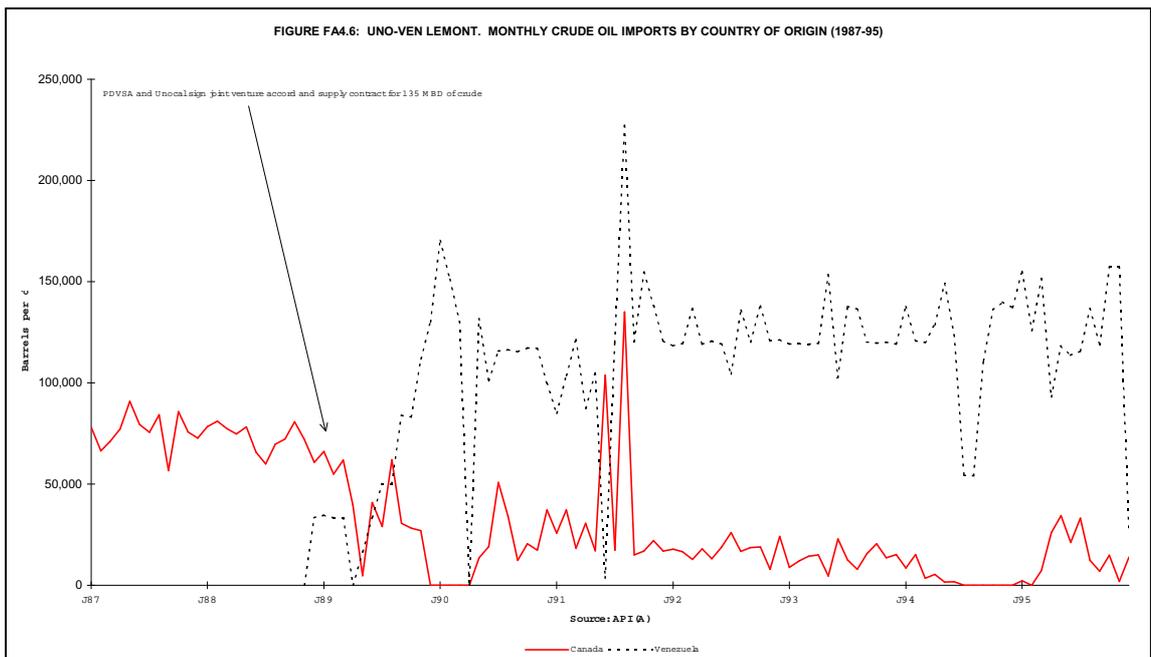
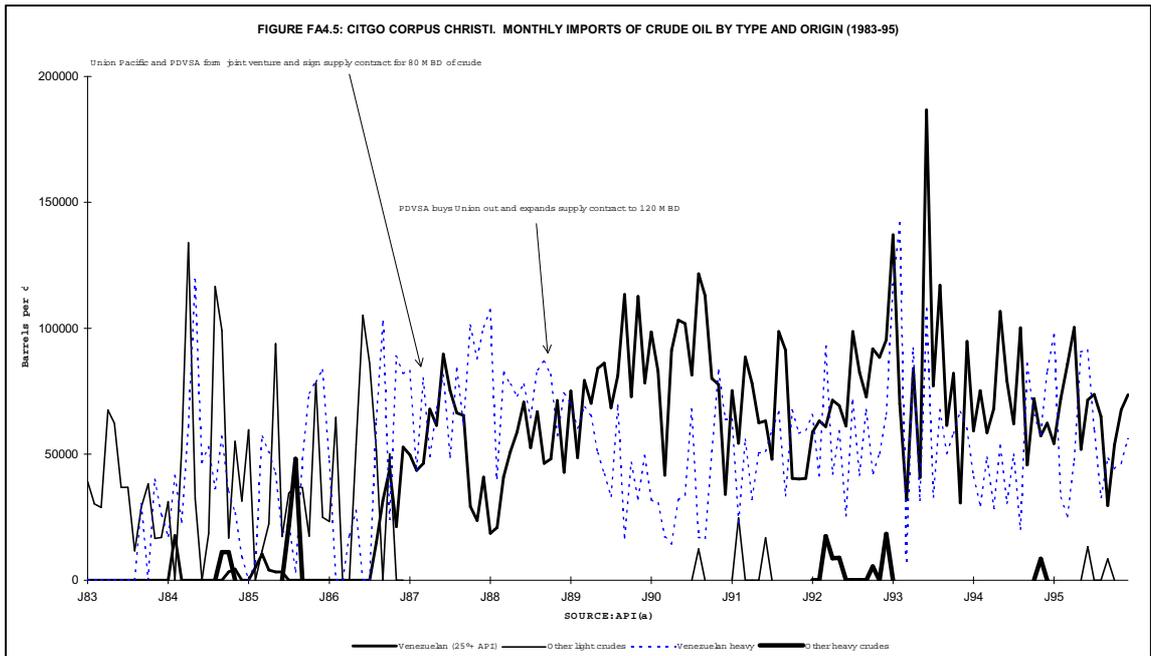
<sup>178</sup>Mlotok, 1994: D3.

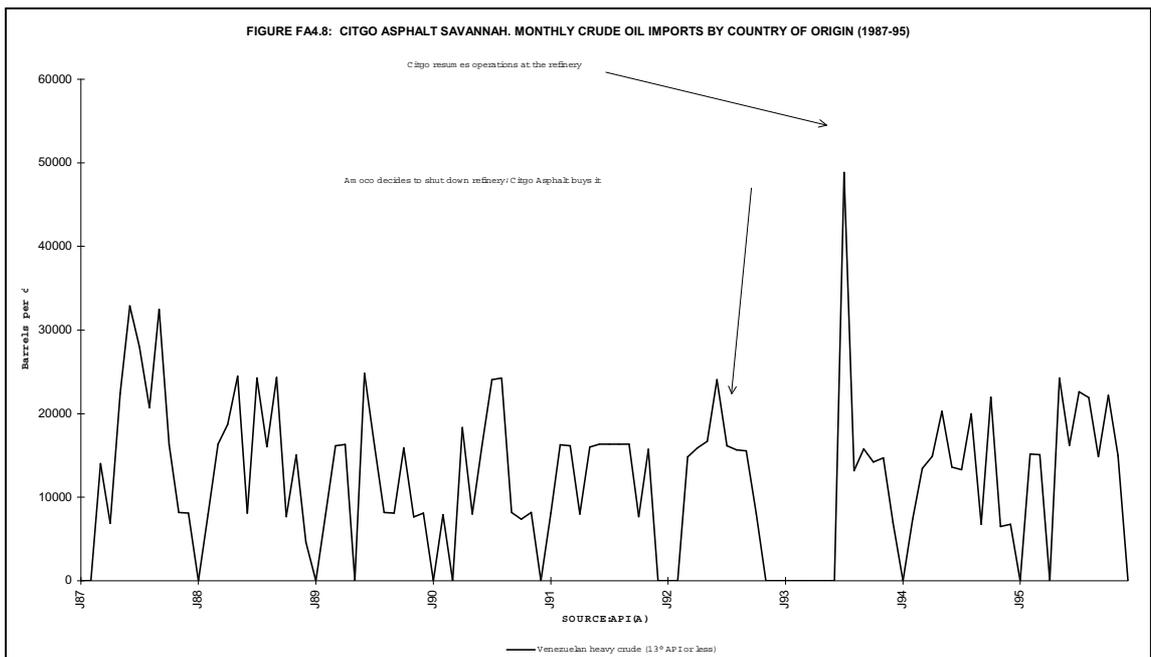
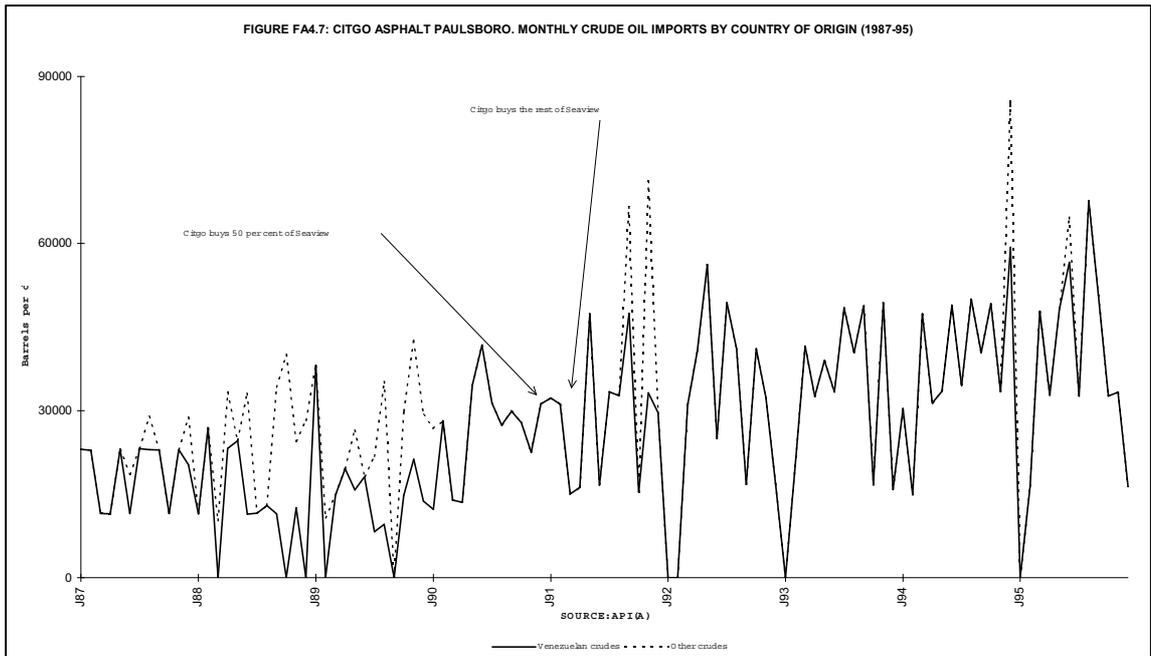
<sup>179</sup>*Ibid.*

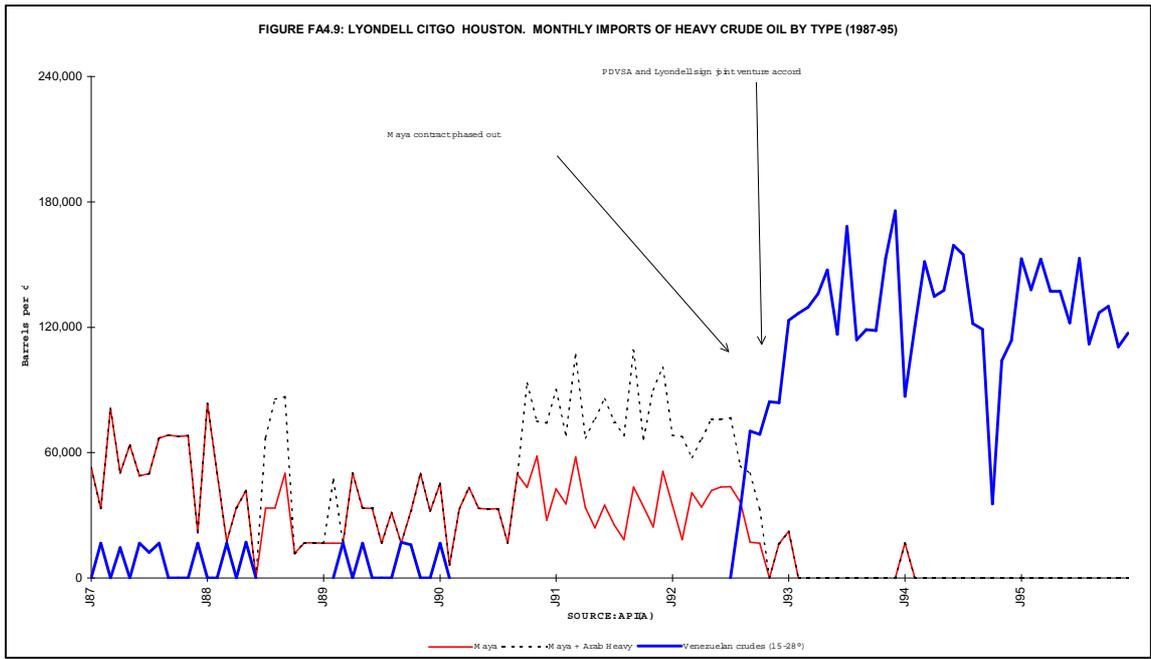
### ANNEXE 4: BREAKDOWN OF CRUDE OIL IMPORTS OR CRUDE RUNS BY PDVSA'S OVERSEAS REFINERIES











**ANNEXE 5: YIELDS AND EQUATIONS USED FOR THE  
ASSESSMENT OF REFINING MARGINS OF SELECTED  
CRUDES IN THE CHICAGO REFINING AREA.**

**Bow River Blend (28° API) and Tía Juana Ligero (31.5° API) yields in a coking/FCC/alkylation configuration in Chicago, in maximum gasoline (summer) and distillate (winter) production modes.**

TABLE TA5.1: Product Yields of Selected Crudes (%) in a Coking/FCC/Alkylation Configuration, Chicago	Summer		Winter	
	Tía Juana L.	Bow River	Tía Juana L.	Bow River
	LPG	0.0408255	0.0394152	0.0343221
PREMIUM 92 RON	0.2139664	0.1582526	0.1543725	0.1036905
UNLEADED 87 RON	0.3921524	0.4577533	0.3572141	0.4239562
JET	0.12743	0.10108	0.17578	0.13746
DIESEL	0.1988874	0.2111504	0.2421154	0.2577666
FUEL OIL	0	0	0	0
WT% SULPHUR	0	0	0	0
ASPHALT	0	0	0	0
COKE	0.0808086	0.1020112	0.0815302	0.1029499
<i>PURCHASES</i>				
CUTTER STOCK	0	0	0	0
BUTANE	0.0314382	0.0301179	0.0266621	0.0248936
ISOBUTANE	0.0379891	0.0477489	0.0254866	0.0337661
REFINERY FUEL	0.2279176	0.2268149	0.2643496	0.2772117
MTBE	0	0	0	0
OPERATING COSTS	0.6485176	0.7318054	0.6254936	0.7184055

**Equations used to calculate the optimal netback in Chicago (USD/Bbl), where  
Y= Product yield. P= Product purchases.**

**All product spot prices from *Platt's* (except asphalt, coke, natural gas and MTBE).**

**Netback=** (Y LPG) \* (Spot price propane Conway \* 0.42) + (Y Premium gasoline) \* (Spot price premium unleaded Chicago pipeline \* 0.42) + (Y unleaded regular) \* (Spot price unleaded regular Chicago pipeline \* 0.42) + (Y diesel) \* (Spot price No. 2 fuel oil Chicago pipeline \* 0.42) + (Y fuel oil) \* {[(Spot price No. 6 fuel oil 1% sulphur New York Harbour barge - Spot price No. 6 fuel oil 3.5 % sulphur New York Harbour barge)/(-2)] \* [(Sulphur content of fuel oil expressed as a percentage \* 100) - 3] + (Spot price No. 6 fuel oil 3.5 % sulphur New York Harbour barge)} + (Y asphalt) \* (Regional asphalt posted price<sup>♠</sup>/6.12) + (Y coke) (Spot coke price<sup>♠♠</sup>/ 5.2) - (P cutter stock) \* (Spot price No. 2 fuel oil Chicago pipeline \* 0.42) - (P butane) \* (Spot price butane Conway \* 0.42) - (P isobutane) \* (Spot price isobutane Conway \* 0.42) - (P refinery fuel) \* (Spot price of delivered natural gas Chicago) - (Operating costs) - (P MTBE) \* (Spot price MTBE Mid-Con<sup>♠♠♠</sup>/0.42) - (Shipping and pipeline costs<sup>♠♠♠♠</sup>) - (Taxes<sup>♠♠♠♠♠</sup>)

♠: Average of regional posted prices, *Poten & Partners Asphalt Weekly Monitor*

♠♠: *McCloskey's Coal Index*

♠♠♠: *OPIS*

♠♠♠♠: Maritime transportation costs are calculated by multiplying the freight rate for the specific trip (say, Puerto Miranda to Houston) published in *World Scale* by the assessment (expressed as a percentage of *World Scale*) for the applicable regional route (in this case Caribbean to USGC) published weekly by shipping brokers John I. Jacobs. This operation results in a cost expressed in dollars per tonne. To transform this number into barrels it should be divided by a conversion factor that varies from crude to crude (because it depends on the specific gravity of the crude). The pipeline costs are calculated on the basis of tariffs published by the Federal Energy Regulatory Commission.

♠♠♠♠♠: Oil spill tax, harbour dues, import duties and Superfund tax (as applicable).

## ANNEXE 6: PDVSA TERM SUPPLY CONTRACTS

<b>TABLE TA6.1: PDVSA Supply Contracts, 1992-5 (MBD)</b>			
<i>Client</i>	<i>1992</i>	<i>1993</i>	<i>1995</i>
Citgo	130-170	300-320	300-320
Ruhr	200	200	40
Uno-Ven	120	120	135
Lyondell	1.3	100	130
Mobil*	35	30-100	130
Phibro	1.3	0-75	45
Conoco*	84.5	60-70	40
Star Enterprise*	42	50-60	40
<i>Coastal</i>	26	15-30	8-10
<i>Chevron*</i>	12.5	25	15
<i>Nynäs</i>	24	25	40
<i>Ergon</i>	8	15-25	22
<i>Koch</i>	15	15-25	10
RD/Shell*	23	23	15
<i>Sun*</i>	37	15-20	-
<i>Trifinery</i>	8.6	15-20	15
Exxon US*	5	10-20	-
<i>Texaco Germany*</i>	3	-	-
<i>Cibro</i>	-	7-10	-
<i>Hunt</i>	6	8	8
Champlin**	130	-	-
<i>Tarmac***</i>	30	-	-
<i>Seaview**</i>	25	-	-
<i>Amoco (Savannah)**</i>	18	20	-
Amoco* (rest)	-	-	50-60
Texaco US*	15	10	35-40
<i>Elf</i>	6.5	-	-
<i>Smid and Hollander</i>	6	-	5
<i>Exxon Germany*</i>	5	-	-
Cepsa	3.5	-	15-20
<i>API</i>	2	-	-
<i>Cameli</i>	1	-	-
San José Pact Countries	0-80	0-80	0-30
Petrobrás	-	-	50
Caribbean Gulf	-	-	35-40
Phillips*	-	-	30
Murphy	-	-	15
Petrotrin	-	-	15
<i>Clark</i>	-	-	8-16

\* Ex-concessionaire, or firm controlled by an ex-concessionaire

\*\*Volume taken over by Citgo

\*\*\*Volume taken over by Nynäs

*Companies in italics use Venezuelan crude mainly to produce asphalts*

*Sources: PIW, April 27, 1992; May 24, 1993; March 20, 1995*

**TABLE TA3.1 (I): COMPARATIVE STATISTICS FOR SELECTED OIL COMPANIES IN THE U.S. (1990-5)**

Company	90	91	92	93	94	95	90	91	92	93	94	95	90	91	92	93	94	95
	Refinery Rates (MBEDY)						Refined Product Sales (MBEDY)						Net Refining and Marketing Income (MMUSDY)*					
Exxon	868	937	911	841	931	965	1,109	1,210	1,203	1,152	1,196	1,198	78	514	157	465	243	229
Mobil	729	764	796	836	857	895	903	922	999	1,080	1,172	1,286	91	212	-17	296	273	330
Texaco †	679	661	652	658	673	693	858	869	880	830	882	934	244	188	267	215	257	121
Chevron	1,406	1,276	1,311	1,307	1,213	925	1,489	1,444	1,470	1,423	1,314	1,117	376	-153	297	-170	40	-104
Arco	401	405	425	426	408	439	444	466	480	482	478	494	439	266	386	387	275	177
Amoco	1,029	1,028	1,053	1,066	1,079	1,059	1,014	1,052	1,088	1,131	1,171	1,171	370	644	462	826	410	380
Shell Oil	965	1,002	972	918	905	887	1,188	1,195	1,120	1,200	1,272	1,348	88	-164	6	280	373	474
Ashland	335	326	337	336	338	350	352	346	347	350	358	378	289	207	-74	177	224	-5
Unocal	273	263	286	288	295	213	443	436	417	345	316	269	100	71	102	166	104	11
Sun ††	554	531	537	502	591	700	641	629	646	596	678	778	24	-6	-6	61	-39	159
Murphy	101	102	107	109	109	125	107	104	114	121	121	130	21	21	-6	32	30	2
Lyondell** †††	320	305	286	284	273	286	301	298	231	263	231	254	356	222	16	26	223	389
Chgo**	307	456	517	564	574	559	633	904	941	1,050	1,150	1,197	91	144	33	162	185	140

\* US operations only \*\*Includes petrochemicals  
 † Includes Star Enterprise †† Includes Puerto Rico ††† Wholesale volumes only  
 Sources: Oil Company Annual Reports

**TABLE TA3.1 (II): COMPARATIVE STATISTICS FOR SELECTED OIL COMPANIES IN THE U.S. (1990-5)**

Company	90	91	92	93	94	95	90	91	92	93	94	95	90	91	92	93	94	95
	Income per Barrel/Processed (USD)*						Net Refining and Marketing Income (MMUSDY)*											
Exxon	0.090	0.549	0.172	0.553	0.261	0.237	78	514	157	465	243	229						
Mobil	0.125	0.277	(0.021)	0.354	0.319	0.369	91	212	-17	296	273	330						
Texaco †	0.359	0.284	0.410	0.327	0.382	0.175	244	188	267	215	257	121						
Chevron	0.267	(0.120)	0.226	(0.130)	0.033	(0.112)	376	-153	297	-170	40	-104						
Arco	1.094	0.657	0.908	0.909	0.674	0.403	439	266	386	387	275	177						
Amoco	0.380	0.626	0.439	0.775	0.380	0.359	370	644	462	826	410	380						
Shell Oil	0.091	(0.164)	0.006	0.305	0.412	0.534	88	-164	6	280	373	474						
Ashland	0.864	0.634	(0.219)	0.527	0.662	(0.014)	289	207	-74	177	224	-5						
Unocal	0.366	0.270	0.357	0.576	0.353	0.052	100	71	102	166	104	11						
Sun ††	0.043	(0.011)	(0.011)	0.121	(0.066)	0.227	24	-6	-6	32	30	2						
Murphy	0.207	0.205	(0.056)	0.289	0.277	0.016	21	21	-6	26	223	389						
Lyondell** †††	1.113	0.728	0.056	0.092	0.817	1.360	356	222	16	26	223	389						
Chgo**	0.295	0.315	0.064	0.287	0.322	0.250	91	144	33	162	185	140						

\* US operations only \*\*Includes petrochemicals  
 † Includes Star Enterprise †† Includes Puerto Rico ††† Wholesale volumes only  
 Sources: Oil Company Annual Reports

**TABLE TA3.1 (III): COMPARATIVE STATISTICS FOR SELECTED OIL COMPANIES IN THE U.S. (1990-5)**

Company	90	91	92	93	94	95
	Income per Barrel of Products Marketed (USD)*					
Exxon	0.070	0.425	0.131	0.404	0.203	0.191
Mobil	0.101	0.230	(0.017)	0.274	0.233	0.257
Texaco †	0.284	0.216	0.303	0.259	0.291	0.130
Chevron	0.253	(0.106)	0.202	(0.119)	0.030	(0.093)
Arco	0.969	0.570	0.805	0.804	0.575	0.358
Amoco	0.365	0.612	0.425	0.730	0.348	0.325
Shell Oil	0.074	(0.137)	0.005	0.233	0.293	0.352
Ashland	0.821	0.598	(0.213)	0.505	0.626	(0.013)
Unocal	0.226	0.163	0.245	0.481	0.329	0.041
Sun ††	0.037	(0.010)	(0.009)	0.102	(0.058)	0.204
Murphy	0.197	0.201	(0.053)	0.261	0.250	0.016
Lyondell** †††	1.183	0.745	0.069	0.099	0.965	1.531
Chgo**	0.143	0.159	0.035	0.154	0.165	0.117

\* US operations only \*\*Includes petrochemicals  
 † Includes Star Enterprise †† Includes Puerto Rico ††† Wholesale volumes only  
 Sources: Oil Company Annual Reports

TABLE TAB.1 (IV): COMPARATIVE STATISTICS FOR SELECTED OIL COMPANIES IN THE U.S. (1990-5)

Company	Working Capital (\$MMUSD)					Return on Assets					Interest Coverage							
	90	91	92	93	94	95	90	91	92	93	94	95	90	91	92	93	94	95
Exxon	-5,689	-3,842	-3,239	-3,731	-3,033	-1,418	0.057	0.064	0.056	0.063	0.058	0.071	5,292	9,516	8,295	10,824	9,096	17,287
Mobil	-422	-1,201	-1,673	-1,134	-2,237	-998	0.046	0.046	0.021	0.051	0.026	0.056	7,349	5,891	4,969	13,392	8,978	10,403
Texaco	288	291	1,386	2,109	1,004	1,252	0.056	0.049	0.027	0.040	0.036	0.024	4,737	3,548	3,828	3,553	3,418	3,041
Chevron	1,072	-449	-1,063	-1,924	-1,801	-1,578	0.061	0.037	0.046	0.036	0.049	0.027	7,752	5,339	8,943	8,653	9,101	5,461
Arco	1,788	125	825	1,896	2,325	1,925	0.084	0.029	0.033	0.011	0.037	0.057	4,377	2,300	3,503	1,887	2,802	3,897
Amoco	1,417	-164	810	751	1,618	716	0.059	0.049	(0.003)	0.064	0.061	0.062	6,809	5,054	5,061	8,714	8,833	8,176
Shell Oil	-1,010	-1,262	88	273	-776	-1,427	0.036	0.001	(0.007)	0.029	0.019	0.056	4,083	1,076	3,120	5,442	2,783	10,407
Ashland	338	296	64	354	483	481	0.036	0.027	(0.011)	0.026	0.034	0.003	3,196	2,543	(0.201)	2,626	3,325	1,199
Unocal	528	454	224	382	271	260	0.041	0.007	0.024	0.022	(0.016)	0.026	1,112	1,537	1,921	3,010	2,069	2,591
Sun	-231	-267	-415	-228	-407	-70	0.032	(0.005)	(0.092)	0.049	0.014	0.024	4,169	0.036	(3,454)	6,259	2,237	4,038
Murphy	107	156	372	130	80	105	0.054	(0.005)	0.055	0.047	0.046	(0.056)	7,914	1,969	5,059	18,550	13,892	(8,095)
Lyondell	238	375	223	224	264	-72	0.259	0.150	0.013	0.021	0.134	0.149	7,974	5,581	1,443	1,216	5,716	8,725
Citgo	456	530	711	573	612	571	0.039	0.044	0.010	0.042	0.042	0.028	2,949	3,725	4,319	1,003	6,114	3,435

Sources: Oil Company Annual Reports

TABLE TAB.1 (V): COMPARATIVE STATISTICS FOR SELECTED OIL COMPANIES IN THE U.S. (1990-5)

Company	Dividends as Proportion of Net Annual Income					Debt Ratio						
	90	91	92	93	94	95	90	91	92	93	94	95
Exxon	63.01	60.77	74.95	68.75	71.75	58.19	0.497	0.524	0.540	0.505	0.560	0.621
Mobil	61.95	68.23	157.42	65.12	130.77	62.71	0.654	0.567	0.523	0.572	0.587	0.672
Texaco	61.72	71.87	130.20	86.99	101.21	18,946	0.844	0.807	0.982	1.171	0.929	0.980
Chevron	48.35	88.09	71.06	90.04	71.23	134.95	0.808	0.693	0.675	0.649	0.626	0.664
Arco	40.28	122.99	110.49	326.77	94.99	65.55	1.241	0.859	0.971	1.227	1.340	1.264
Amoco	54.26	73.99	1574	60.00	61.04	64.29	1.042	0.800	0.964	0.933	1.176	0.944
Shell Oil	72.39	3750	494.74	97.70	275.59	92.11	0.670	0.593	0.783	0.857	0.696	0.627
Ashland	31.89	40.16	205.46	46.48	40.10	383.33	0.790	0.800	0.726	0.877	0.930	0.883
Unocal	40.90	224.66	83.64	101.88	250.33	89.62	1.082	1.033	0.929	1.047	0.944	0.924
Sun	83.84	149.35	134.17	66.67	213.33	111.43	0.649	0.589	0.504	0.540	0.467	0.613
Murphy	29.73	504.68	50.98	54.78	54.61	303.60	0.944	1.035	1.450	0.818	0.717	0.715
Lyondell	92.13	63.06	900.00	415.38	32.29	18.51	1.027	1.317	1.084	1.080	1.048	0.496
Citgo	0.00	5.47	129.88	17.57	0.00	0.00	0.937	0.735	0.861	0.733	0.782	0.758

Sources: Oil Company Annual Reports

**TABLE TA3.1 (VI): COMPARATIVE STATISTICS FOR SELECTED OIL COMPANIES IN THE U.S. (1990-5)**

Company	Return on Equity					Sales to Fixed Assets					Total Asset Turnover							
	90	91	92	93	94	95	90	91	92	93	94	95	90	91	92	93	94	95
Exxon	0.152	0.160	0.141	0.152	0.136	0.160	1.68	1.61	1.67	1.58	1.57	1.65	1.20	1.17	1.21	1.16	1.13	1.18
Mobil	0.113	0.110	0.052	0.121	0.063	0.132	2.36	2.20	2.27	2.26	2.31	2.61	1.39	1.33	1.40	1.39	1.42	1.54
Texaco	0.147	0.132	0.071	0.104	0.093	0.064	2.59	2.22	2.14	2.13	2.15	2.79	1.42	1.27	1.25	1.13	1.13	1.41
Chevron	0.145	0.088	0.114	0.090	0.116	0.065	0.09	0.06	0.07	0.06	0.08	0.04	1.10	1.11	1.01	0.99	0.93	0.88
Arco	0.281	0.104	0.119	0.044	0.146	0.204	1.10	0.97	1.18	1.08	0.96	1.03	0.75	0.70	0.72	0.61	0.61	0.66
Amoco	0.136	0.105	(0.006)	0.133	0.124	0.125	1.13	0.99	1.05	1.05	1.05	1.08	0.80	0.74	0.79	0.79	0.77	0.80
Shell Oil	0.063	0.001	(0.013)	0.053	0.037	0.110	1.15	1.04	1.06	1.09	1.13	1.25	0.86	0.79	0.78	0.78	0.82	0.90
Ashland	0.142	0.100	(0.057)	0.109	0.124	0.015	3.96	3.61	3.48	3.45	3.36	3.13	1.75	1.70	1.69	1.72	1.63	1.60
Unocal	0.157	0.030	0.070	0.068	(0.054)	0.089	1.56	1.36	1.29	1.01	1.01	1.02	1.09	0.98	0.94	0.75	1.09	0.73
Sun	0.070	(0.144)	(0.295)	0.145	0.048	0.082	2.50	2.37	2.31	1.90	1.77	2.57	1.45	1.45	1.42	1.24	1.19	1.61
Murphy	0.131	(0.009)	0.088	0.084	0.046	(0.056)	1.75	1.39	1.49	1.03	0.97	1.11	0.86	0.72	0.82	0.74	0.70	0.78
Lyondell	0.813	0.627	0.033	0.046	0.540	1.024	11.43	10.07	7.71	5.45	4.03	2.54	4.73	3.87	3.95	2.90	2.13	1.77
Crigo	0.151	0.044	0.010	0.120	0.117	0.081	7.59	5.68	5.16	4.48	4.06	4.22	2.97	2.74	2.63	2.36	2.08	2.14

Sources: Oil Company Annual Reports

**TABLE TA3.1 (VII): COMPARATIVE STATISTICS FOR SELECTED OIL COMPANIES IN THE U.S. (1990-5)**

Company	Total Asset Turnover					Interest Coverage						
	90	91	92	93	94	95	90	91	92	93	94	95
Exxon	1.20	1.17	1.21	1.16	1.13	1.18	5.292	9.516	8.295	10.824	9.096	17.287
Mobil	1.39	1.33	1.40	1.39	1.42	1.54	7.349	5.891	4.969	13.392	8.978	10.403
Texaco	1.42	1.27	1.25	1.13	1.13	1.41	4.737	3.548	3.828	3.553	3.418	3.041
Chevron	1.10	1.11	1.01	0.99	0.93	0.88	7.752	5.339	8.943	8.653	9.101	5.461
Arco	0.75	0.70	0.72	0.72	0.61	0.66	4.377	2.300	3.503	1.887	2.802	3.897
Amoco	0.80	0.74	0.79	0.79	0.77	0.80	6.809	5.054	5.061	8.714	8.833	8.176
Shell Oil	0.86	0.79	0.78	0.78	0.82	0.90	4.083	1.076	3.120	5.442	2.783	10.407
Ashland	1.75	1.70	1.69	1.72	1.63	1.60	3.196	2.543	(0.201)	2.626	3.325	1.199
Unocal	1.09	0.98	0.94	0.75	1.09	0.73	1.112	1.537	1.921	3.010	2.069	2.591
Sun	1.45	1.45	1.42	1.24	1.19	1.61	4.169	0.036	(3.454)	6.259	2.237	4.038
Murphy	0.86	0.72	0.82	0.74	0.70	0.78	7.914	1.969	5.059	18.550	13.892	(8.095)
Lyondell	4.73	3.87	3.95	2.90	2.13	1.77	7.974	5.581	1.443	1.216	5.716	8.725
Crigo	2.97	2.74	2.63	2.36	2.08	2.14	2.949	3.725	4.319	1.003	6.114	3.435

Sources: Oil Company Annual Reports

## 6 CONCLUSIONS: THE POLITICAL MOTIVATIONS OF THE INTERNATIONALISATION PROGRAMME

Due to the complexity of modern decision-taking processes, it has become increasingly difficult to study policy development in isolation, as even the most detailed description of any particular policy will probably fail to reveal all the connections linking it to others that may interfere with its operation. Indeed, as Majone notes, there are many policies that "are so closely interrelated that it is not possible to make useful descriptions of or analytic statements about one of them without taking the other elements of the set into account".<sup>1</sup> Such structured sets of interdependent - but not necessarily mutually coherent - policies (which Majone refers to as "policy spaces") are now prevalent in today's policy-making *milieu*. As a result, studying the internal arrangement of these spaces, on the one hand, and identifying the nature of the linkages, intersections and interactions between their constituent elements, on the other, have become central concerns for the discipline of policy analysis.<sup>2</sup>

In the previous chapter, we examined at length the internal structure and dynamics of one such space; namely, Venezuelan commercial oil policy. We showed that the effects induced by some elements within it tend to negate or counteract - rather than reinforce - the desired effects of some of its other constituents. In this chapter, we shall show that these contradictions are the key to deciphering the internal structure of this policy space and, by extension, the underlying factors that might have led to the incorporation to the space of each one of these elements in a specific manner and sequence, and at a given moment in time.

PDVSA's failure to address a number of rather serious problems related to its implementation of the internationalisation programme, together with its selective compliance with its own internationalisation guidelines, give the analyst a clear idea of what the programme *cannot be* (an instrument to counteract vertical failures in the market for heavy crude, for instance). However, these contradictions also delineate the elements which any hypothesis as to what the programme *might be* has to contain if it is to be taken seriously. After all, even though they are not immediately obvious to the outsider, the antinomies of the Venezuelan commercial policy are serious enough to make it inconceivable that the decision-takers responsible for the internationalisation programme might have failed to notice them. The fact that no one within the Venezuelan oil establishment has seen fit to address them *explicitly* at any point in the evolution of the internationalisation programme surely indicates that the retention of the elements that give

---

<sup>1</sup>Majone, *op. cit.*: 159.

<sup>2</sup>Wildavsky, 1980.

rise to them has proven advantageous in some way and that, therefore, these contradictions reflect deliberate decisions taken by at least some of the actors involved in the design, implementation, approval, expansion and evaluation of the programme. Hence our belief that an hypothesis as to the real motives of the programme will only make sense if it answers *all* of the following questions (which are related both to the timing and form of implementation of the programme and to the tensions of logic within Venezuelan commercial oil policy as a whole):

- a) if PDVSA is worried about the closure effects of some of its commercial relationships, why does it conduct its operations in a manner that exacerbates the already unfavourable transactional characteristics of the market for heavy crude?
- b) if PDVSA yearns for volumetric security, why does it sell its arm's-length crude in a manner that both decreases the predictability of its export flows and fosters the appearance of opportunistic patterns of behaviour among its commercial counterparts?
- c) if PDVSA is so concerned about the stability of its income, why has it ignored the possibility of participating in futures and derivatives markets to hedge its price exposure; similarly, why has it refused to claim dividends from its overseas affiliates?
- d) why has PDVSA stuck to a cumbersome and opaque commercial *modus operandi* whose replacement would be quite a straightforward matter, and which is not only out of synchrony with current oil market practices but may also cause serious problems of adverse selection in its commercial relationships?
- e) if PDVSA wants to channel its crude volumes to final users that have higher reservation prices and offer more stable and secure outlets for crude, why has it refused to make credible commitments that might appeal to arm's-length customers with high conversion facilities (particularly since it is obvious that it cannot price-discriminate against them)?
- f) if PDVSA is concerned about oversupply in the crude market, why has it not shown greater interest in increasing the aggregate demand for heavy crudes instead of merely displacing crude from competitors?
- g) if heavy crude poses more commercialisation problems than light crude, why does PDVSA place most of its better quality crudes through integrated channels while relying on the market to sell its nastier blends?
- h) if PDVSA truly price-discriminates against some of its customers, why has it been willing to countenance commercial competition between its operating affiliates?
- i) Why has it not sold those overseas plants which either are not very profitable or cannot run much Venezuelan crude?

j) if PDVSA really diagnosed the weakening of the international market as early as 1980, why did the internationalisation programme only gather momentum with the oil price collapse of 1986?

k) why has PDVSA restricted its acquisitions to refineries in serious financial troubles?

l) if the promises of the integration programme have indeed been overstated by its supporters, why have its governmental overseers not been able to monitor it more closely, and why have its detractors not been able to mount an effective opposition against it?

One could, of course, sidestep the requirement of answering all these questions by denying that there is any intentionality in the contradictions that underlie them. However, this requires the invocation of a *deus ex machina* to explain the durability of these contradictions; namely, incompetence on the part of both PDVSA's managers and their overseers within the Venezuelan governmental apparatus (lack of consistency is not a problem if one posits that PDVSA's integration strategy was either misconceived and/or poorly implemented by company officials and was approved and overseen by government officials who were just as misinformed). Such an approach, however, is unsatisfactory, mainly because the two assumptions that underlie it - that this incompetence has been transmitted between many subsequent generations of company managers and government officials; and that not one manager or official since at least 1982 has been immune to it - fall foul of Occam's principles of epistemological economy, on three grounds: firstly, they are statistically very improbable; secondly, they sit together uneasily with the fact that, by all accounts (and the personal experience of the author), Venezuelan oilmen are very knowledgeable about all aspects of the industry and nothing if not extremely competent; finally, they run counter to PDVSA's impressive achievements in its many other chosen fields of endeavour besides international refining. Thus, we feel justified in also rejecting this rather libelous null hypothesis out of hand.

Alternatively, one could posit that the antinomies we observe in Venezuelan commercial oil policy are the unintentional result of organisational processes (in other words, the "outputs of large organisations functioning according to standard patterns of behaviour"<sup>3</sup>). Such an hypothesis would demand "no ingenious rationale for . . . divergent patterns of activity" from an analyst whose "organisational orientation leads him to expect that the left and right hands . . . often operate independently" and who, therefore, is only interested in establishing "the organisational interests, demands and independent actions that yield these divergent patterns".<sup>4</sup> This hypothesis, moreover, appears to be well suited for the case at hand because, as we saw in Chapter 2, PDVSA was formed as an agglomeration of organisations that not only were very set

---

<sup>3</sup>Allison, 1971: 67.

<sup>4</sup>*Ibid.*: 97.

in their traditional ways but also were not too keen on cooperation with one another.<sup>5</sup> However, we will show that PDVSA's present commercial policy in fact represents a major departure from the traditional centrifugal ways of those organisations, a departure prompted by the undeniable failure of their repertoires and procedures to cope with major changes in the political environment of the Venezuelan oil industry in the early 1980s, brought about by the increasing penury of the central government. PDVSA's present commercial oil policy is actually best understood as the product of rational decisions taken by what is essentially a unitary actor seeking to maximise a specific variable (operational and financial autonomy) while operating under some very tight constraints. In other words, our hypothesis eschews apologetics (i.e. excusing or explaining away faults in the constitution of Venezuelan commercial oil policy) in favour of an approach that takes the complicated tensions of logic that characterise this policy as its point of departure, and assumes that its different facets make sense (albeit problematic sense). This hypothesis views the internationalisation programme as the outcome of the breakdown of the *entente cordiale* established between the nationalised oil industry and the Venezuelan Executive in 1975-6 (brought about by the fiscal crisis derived from the financial profligacy of the Venezuelan government) and posits that the weakening of the oil market in 1982 and the collapse of oil prices in 1986 presented PDVSA and its affiliates with the *opportunity*, more than the *motivation*, to expand downstream. In addition, our hypothesis affirms that the event that precipitated this breakdown was as much the undesirable resultant of bargaining games among players within the oil industry itself as the logical conclusion of an unequal power struggle between PDVSA and the Venezuelan government. This hypothesis has some strong implications; namely:

- a) The importance given by PDVSA's leaders to volumetric security has been less than that indicated by their public declarations;
- b) PDVSA's leaders turned the idea of volumetric security into the cornerstone of Venezuelan commercial oil policy only because they perceived that the attraction which such an idea would enjoy in government spheres would enable them to defend the company against the government's desire to secure rentier income more effectively;
- c) the objective of the internationalisation programme has been to put capital reserves the fiscal reach of the Venezuelan government. PDVSA has achieved this, firstly, by transferring crude to its subsidiaries abroad at below market prices and, secondly, by converting the money thus

---

<sup>5</sup>As Mieres (1981: 74) was told by a Maraven executive: "our corporate culture is AngloSaxon, or more appropriately Shell . . . Our neighbours, those of Lagoven, have a Texan organisational and administrative culture; they adduce that theirs is better, but we think that ours is better".

transferred into illiquid assets which - unlike foreign currency holdings, or securities denominated in hard currencies - are not vulnerable to summary confiscation.

Throughout the remainder of this chapter, we shall make a reconstruction of the political events and exchanges that might have shaped the internationalisation programme and determined its evolutionary path.

### **6.1 The Triggering Factor? The Breakdown of the Co-existence Arrangement between PDVSA and the Venezuelan Government during the Presidency of Herrera Campíns**

"The question is", said Humpty Dumpty, "which is to be the master- that's all"  
Lewis Carroll, *Through the Looking Glass*

To the distress of PDVSA's managers, from late 1979 onwards energy minister Humberto Calderón Berti (in an attempt to conform a power base that would enable him to make a bid for the Presidency of the Republic in the future<sup>6</sup>) began to transgress in a systematic fashion many of the unwritten rules that had regulated the political interaction between the oil industry and the Venezuelan Executive.<sup>7</sup> Unsurprisingly, this provoked an increase in the already considerable tension between PDVSA and MEM until then.<sup>8</sup> Nonetheless, it would be an exaggeration to say that, at that point in time, the relations between company and government deteriorated beyond repair (indeed, it seems reasonable to assume that, had the Herrera Campíns administration adopted a more conciliatory stance, senior managers in the oil industry might have forgiven the slights which led to their becoming increasingly disillusioned with their political masters in the first place<sup>9</sup>). However, instead of abandoning its hard line, predicated on a degree of interference in the affairs of the industry which its managers considered intolerable, the Herrera administration - spurred by the financial predicament that would eventually lead to the collapse of the *bolívar* on Black Friday (February 18, 1983) - took a couple of contentious and unpopular decisions which grievously affected PDVSA and its operating subsidiaries. These decisions

---

<sup>6</sup>See Calderón Berti, 1983: 364. Calderón's abrasive posture towards PDVSA's top management was partly a result of the personal animosity he felt towards General Alfaro, who had not only tried to kill Calderón's pet project (the creation of INTEVEP) back in 1975, but had also vetoed his appointment as the head of INTEVEP.

<sup>7</sup>Calderón reduced the tenure of members of PDVSA's board of directors from 4 to 2 years, created the post of second vice-president (to which he appointed a personal friend whom he "might telephone directly, over the heads of the president and first vice-president of PDVSA"; Johnson de Vogeler, *op. cit.*: 271), and attempted to pack the PDVSA board of directors with 'his' men. He also gave the ministry the right to approve or disapprove the consolidated budgets of PDVSA and its subsidiaries before their submission to the shareholders' assembly, and ordered the removal of Meneven's headquarters from Caracas to Puerto La Cruz.

<sup>8</sup>Calderón's actions led even the normally conciliatory Quirós to declare that the honeymoon between MEM and PDVSA was over (*Wall Street Journal*, February 16, 1982: 31).

<sup>9</sup>Coronel, 1983: 181, 266-9.

were the confiscation of the oil industry investment fund (worth by then more than 5,000 MMUSD), on the one hand, and the subsequent application of a 1,500 MMUSD forced loan to the company to fund the bailout of the state-controlled Worker's Bank (which was teetering on the brink of insolvency as a result of larceny and mismanagement), on the other hand.

These two events (upon whose details we shall not dwell, as they have been adequately covered elsewhere<sup>10</sup>) together constitute a crucial milestone in the political history of the nationalised petroleum industry in Venezuela, and not only because they confirmed the end of the era of superabundance that had begun in 1973. In effect, by striking a crippling blow against PDVSA's financial self-sufficiency (the cornerstone of Carlos Andrés Pérez's Hobbesian bargain with the industry), they also gave notice to company managers that the government had no intention of abiding by the fundamental terms of this agreement in the lean years ahead. In the minds of even the least anti-government oilmen, the loss of the investment fund, coupled with the patent lack of public support for PDVSA's predicament<sup>11</sup>, could have only one outcome: the company would gradually be assimilated "to the generalised disorder of the public administration", and its projects would be sacrificed on the altar of the priorities of a sprawling and inefficient state.<sup>12</sup> Some BCV and Finance ministry officials said that PDVSA would be compensated for its loss through a reduction in taxes and that, in any case, the 'centralisation of foreign reserves' (the official name given to the measure) was to be an emergency short-term measure which would not lead to depletion of the company's funds.<sup>13</sup> However, these statements must have done little to reassure executives in both the holding and the operating companies. After all, PDVSA had tried many times in the past (when public finances were still reasonably healthy) to convince the government that petroleum product subsidies be reduced and the company's taxes cut, but to no avail. Moreover, the declarations of one of the prime movers behind the centralisation of reserves (Leopoldo Díaz Bruzual, head of BCV) in the sense that

---

<sup>10</sup>A short summary is in order, though. In September 1982, the government forced PDVSA to put all the funds which it held in dollars in a trust fund account in bolívares held in the BCV (even though a devaluation of the Venezuelan currency was in the wings). Shortly afterwards, it strongarmed the board of directors into acquiring bonds for a total of 7.5 billion bolívares, in order to rescue the Worker's Bank from insolvency. See Coronel, 1983: 219-234 and Malavé Mata, *op. cit.*: 790-3; on the intervention of the Worker's Bank, see Gómez Calcaño *et. al.*, 1989: 127-208.

<sup>11</sup>The company was genuinely disappointed that "no national group [outside a political party context] came forward to defend the industry at that time" (Johnson de Vogeler, *op. cit.*: 241). AD loudly condemned the confiscation of these funds (Coronel, 1983: 226-7), but it is clear that PDVSA thought it did so only because it was in opposition, and hence ready to reject in principle everything the Herrera government did. Only in April 1981, for instance, top AD personalities- ex-minister Octavio Lepage, petroleum spokesman Celestino Armas and AD president Gonzalo Barrios- had heavily criticised alleged "extravagances of the industry" and concluded that the Venezuelan Congress was to blame because it had given PDVSA too much freedom (*El Diario de Caracas*, April 27, 1981: 9).

<sup>12</sup>Sosa Pietri, *op. cit.*: 76.

<sup>13</sup>*PON*, September 30, 1982: 1; October 4, 1982: 2.

"there [was] no reason why the Central Bank should shoulder the burden of capital outflows alone"<sup>14</sup> at a moment when the capital outflows of the Venezuelan private sector were running at an average of 1,200 MMUSD per month<sup>15</sup> and the government was resisting calls to raise domestic interest rates to international levels, must have indicated to managers in the oil industry that a good proportion of their investment fund was being offered for sale at an overvalued exchange rate in order to finance capital flight! Finally, the budgetary adjustments made by the government - most of which concentrated on oil industry expenditure - showed that the burden of adjustment to the crisis was to be distributed very inequitably. Quirós commented at the time that

a hierarchisation of priorities would indicate that the oil industry should be the last to be affected in its financial resources and investments because it is the only really productive [Venezuelan state industry]. Before reducing the budget of the oil industry, however justified this may appear, any professional system of prioritisation would have to declare in a state of emergency all those state companies and institutions whose financial leaks . . . were they to be plugged, would represent potential savings for the government of billions of *bolivares*.<sup>16</sup>

However, the government decided that, rather than adopt such a system of prioritisation (which would have been quite costly in terms of its relationship with some key political constituencies - say, organised labour in the Guayana region - which had successfully appropriated a sizable fraction of Venezuela's windfall earnings since 1973-4), it would go for the easier option of taxing the oil industry in the traditional manner and using the proceeds for "the formation of working capital and even the financing of operating costs of many typically deficitary organisms, even though their inability to generate the funds required to service their debts was readily acknowledged".<sup>17</sup>

Because of all these factors, the underhanded confiscation of PDVSA's investment fund<sup>18</sup> generated widespread discontent and despondency within the ranks of the oil industry. As an editorial in a Caracas daily put it,

there is nothing to guarantee PDVSA that the government will not demand, tomorrow, another 7 billion bolívar loan, backed by more public debt bonds so "solid" and

---

<sup>14</sup>*PON*, September 30, 1982: 1.

<sup>15</sup>Between October 1982 and February 1983 (when exchange controls were finally introduced by Herrera), capital flight from Venezuela totaled about 6,000 MMUSD.

<sup>16</sup>Quirós, 1986: 190.

<sup>17</sup>Palma, *op. cit.*: 106.

<sup>18</sup>Although some PDVSA managers (Quirós and Coronel, for instance) admitted that the government's decision to take over the reserves was technically legal, they still condemned it for the very devious manner in which it had been carried out (Herrera announced the decision while Alfonzo Ravard was out of the country, and without consulting oil industry personnel). However, a Venezuelan legal expert, strictly neutral in this dispute, said that the Executive probably had exceeded his attributions in ordering the transfer of funds (Brewer-Carías, prologue to Vilorio, 1983: 21).

"desirable" that nobody would take them, even if they were given away . . . [19] Within the oil industry, in the minds of tens of thousands of employees, the fundamental doubts now are: What will happen tomorrow?, What should we be ready for?, How can we keep the industry going? . . . In a single act [the government] destroyed the political agreement . . . which protected the oil industry from the fate of other state-owned enterprises [in Venezuela]; it forgot the letter and spirit of those agreements.<sup>20</sup>

However, this event must also have given the managers of PDVSA and its operating subsidiaries the 'wonderful concentration of the mind' that Dr. Johnson associated with mounting the gallows for one's execution and, as a result, they must have quickly reached the following sobering conclusions regarding the conditions of future coexistence between themselves and the government:

a) that with no end in sight for the Venezuelan economic crisis (particularly after Black Friday), the company's financial position was bound to deteriorate even further because, regardless of which of the two main Venezuelan political parties was in office at any particular moment, the government would continue milking the industry to finance its current expenditures, to underpin the other Venezuelan SOEs, and to subsidise the domestic price of fuels, foodstuffs, etc.<sup>21</sup>;

b) that they would be unable to accumulate the necessary political capital to mount an effective defense of PDVSA's long term projects from within the Venezuelan governmental apparatus, partly because their bargaining position had weakened substantially (the financial woes of the government meant that its petroleum strategy focused on short-term considerations to the exclusion of everything else, and this eroded the exchange value of the bargaining chip that PDVSA's leaders had used to such good effect back in 1974-5; namely, that they were the only ones in a position to ensure the long-term health of the industry) and partly because of the company's conspicuous lack of support within both the Venezuelan political system and Venezuelan society at large.

---

<sup>19</sup>Indeed, shortly after this was written, the trust agreement was rescinded and PDVSA received the amount in trust in bonds of the national public debt. Later on, the maturation schedule of these bonds was modified, to ease the company's liquidity problems.

<sup>20</sup>*El Diario de Caracas*, December 15, 1982: 6.

<sup>21</sup>As it was, shortly after the "centralisation of funds", PDVSA barely managed to thwart some other measures (notably the transfer of the administration of its letters of credit from its subsidiaries to BCV) that would have given effective control of its sales operations to the bank *PON*, November 1, 1982: 1). Moreover, the Venezuelan Congress gave the company no guarantees that it would protect its financial resources (*PON*, December 2, 1982: 1), and both Díaz Bruzual and Maritza Izaguirre (head of Cordiplan) stated that PDVSA should stop complaining about its funds, and instead borrow in the international capital markets to finance its operations (*PON*, November 1, 1982: 1), like every other Venezuelan SOE.

- c) that there was a very real risk that the Orinoco projects (considered by them to be the cornerstone of the long-term prospects of the oil industry) would suffer - and perhaps be fatally weakened - unless alternative sources of funds to finance them were secured<sup>22</sup>;
- d) that any accumulation of "robust" liquid assets (cash holdings in strong currencies, or securities denominated in such currencies) by the company would probably draw the unwelcome attention of the government once again;
- e) that active, loud, resistance by PDVSA to government fiat would not only be fruitless but also quite dangerous (since such resistance could tempt the government to "colonise" the administrative ranks of the company with persons whose first alliance lay with a political leader or party).<sup>23</sup>

In sum, the events of 1981-2 gave PDVSA and its affiliates a painful lesson in the inconveniences of their legal obligation to "follow the dispositions dictated by the National Executive" and implementing the decisions of the shareholders' assembly of the holding company.<sup>24</sup> PDVSA's first generation leaders had unenthusiastically accepted this obligation in the understanding that (as Quirós had said back in 1975), "the future of the industry [would not] depend on a favourable vote in a congressional session, and the operations of the oil industry [would never be] a matter for political negotiations between parties".<sup>25</sup> However, the *coup de main* of the Herrera government raised the possibility that such eventualities might occur in the not-too-distant future. Thus, although the pragmatists in the oil industry leadership apparently still refused to take the issue of absolute financial autonomy at face value (even after the confiscation of the investment fund<sup>26</sup>), they were clearly very worried about the danger of polarisation within the ranks of the industry which the government's unilateral action could provoke, to say nothing about the wider political and efficiency-related implications of the government's cupidity. As Quirós (whose opinion about the Venezuelan government was far less negative than that of his colleagues at Lagoven) put it:

---

<sup>22</sup>The official PDVSA view was that, unless the Orinoco belt was developed, Venezuela's exportable surplus would halve by 2000, and would disappear altogether if it only extracted crude from fields that were active in 1980 (*PON*, February 2, 1980: 1; Coronel, 1984: 193).

<sup>23</sup>The composition of PDVSA's second board (in which some COPEI sympathizers figured prominently) was an omen for the industry, and the appointment of Calderón Berti to the presidency of PDVSA must have spelt out even more clearly the risks of antagonising the government (that is probably why, in the aftermath of the investment fund incident, Quirós publicly warned his colleagues in the other operating companies against acting either "stubbornly or indifferently"; *PON*, October 18, 1982: 3).

<sup>24</sup>At that point, six out of fourteen members of PDVSA's directors owed their presence in the board to Calderón Berti.

<sup>25</sup>Chávez, *op. cit.*: 63.

<sup>26</sup>Quirós (1987: 105) *dixit*: "the oil industry has never had and will never have [total] financial independence".

the recent decision [to seize PDVSA's investment fund] should have been taken under the aegis of political consensus. [The fact that it was not] could well create a new situation, where the introduction of the party politics variable might begin to take an importance which has been unknown and rejected until now [because those in PDVSA that had approved the measure might be identified with the party in power, and vice versa]. Thus... one could pass to a new system of personnel selection, to a new system of salaries, to a new contracting system . . . to a new system of management by excuse, caprice and convenience.<sup>27</sup>

In the following sections, we shall show how senior managers in PDVSA and its subsidiaries defused what they perceived to be a grave threat to the viability of the Venezuelan oil industry by taking advantage of a fortuitous coincidence - the fact that the crude market weakened substantially at the moment the company was holding conversations with Veba Öl regarding the possibility of establishing a joint venture to process Orinoco crude - to push for the adoption of a strategy supposedly intended to protect the main source of income of the government. The Venezuelan Executive gave this strategy the go-ahead, without realizing that it was in fact a surreptitious "exit" mechanism, whose true objective was to safeguard, outside Venezuela, funds intended for the future development of the Orinoco belt. In other words, when PDVSA's leaders found they had been dealt a shoddy hand by a government that was making up the rules of the game on the hoof, they decided to alter preemptively these rules in their favour<sup>28</sup>, rather than continue playing a game they could not win.<sup>29</sup>

## 6.2 The Rationale of the Veba Deal Reconsidered

In 1982, petroleum exporting countries discovered that oil no longer "sold itself" and that the market could not sustain the dizzy heights which it had attained in the aftermath of the Iranian revolution. As a major international daily put it:

dozens of oil companies have suspended or phased out [contracts] . . . After years of submission to the price demands of the oil exporters, the willingness of oil companies to force a showdown with . . . producers has come as quite a shock. 'I have never seen contracts suspended on this scale' said the chief negotiator for an oil company . . . [Previously] even in times of oversupply like the present, the companies were willing to pay uneconomic prices just to maintain a . . . relationship with a producing country. But times have changed.<sup>30</sup>

---

<sup>27</sup>Quirós, 1986: 270.

<sup>28</sup>As Majone notes, "the policy process becomes much more understandable if one assumes that actors view the rules of the game as possible targets of political action", because "attempts to modify procedural rules and other institutional constraints are so pervasive that no descriptive or prescriptive policy analysis can be complete that does not explicitly take institution-changing behaviour into consideration" (*op. cit.*: 114).

<sup>29</sup>As Hirschman says, "the decision whether to exit will often be taken in the light of the prospects for the effective use of voice" (*op. cit.*: 37).

<sup>30</sup>*NYT*, August 7, 1981: D1.

The clearest confirmation of just how much times had changed lay in the fact that, in March of that year, OPEC was forced to implement a system of production quotas for the first time in its history, even though two of its most important members were busily waging a war of annihilation against each other. OPEC's first quota agreement failed to stop the rot, however, and its members continued to lose market share relentlessly (with those that had to compete head to head with North Sea producers being the hardest hit of all<sup>31</sup>). Only when Saudi Arabia explicitly assumed the role of swing producer was the supply/demand balance in the market temporarily stabilised.

Even though it tightened the squeeze on the already stretched finances of the Venezuelan oil industry, the 1982 market downturn (together with the Mexican debt crisis) was a godsend of sorts for PDVSA and its affiliates. Although the market for heavy crudes fared slightly better than the one for light crudes (mainly because heavy crudes accounted for most of the shut-down production capacity in OPEC countries), the highly-leveraged - and highly rent-dependent - Venezuelan government was nervous about the bleak oil market prospects. This enabled oil industry leaders to identify a political good which had a considerable exchange value for the government at that point: security in the placement of crude exports. PDVSA officials took advantage of their knowledge of the market to combine this political good with other lesser - but still quite attractive - goods ("access to new technology and [development of] Venezuelan personnel"<sup>32</sup>, and the possibility that PDVSA's partners could foot part of the bill for the development of the Orinoco Belt), all at a reasonably low cost<sup>33</sup>, in the expectation that the government would find the whole package very appealing.

PDVSA's diagnose of the government's weak spot proved to be sound; its decision to exploit this diagnose by entering into an arrangement that essentially amounted to a very long-term processing deal with Veba was probably due to the fact that this was the most straightforward method<sup>34</sup> which oilmen raised in the Seven Sisters' school of thought could

---

<sup>31</sup>In March 1982, Nigeria was producing only 630 MBD out of a quota of 1.3 MMBD.

<sup>32</sup>PDVSA (a), 1984: 72.

<sup>33</sup>PDVSA argued that the association with Veba would give it access to sophisticated refining capacity at a cost of 6,000 USD/Bbl (equivalent to 50 per cent of the refinery's replacement value), and contrasted this figure with the 20,700 USD/Bbl estimated cost for the upgrading project with Elf, and the 11,800 USD/Bbl cost for revamping the Amuay refinery (Calderón Berti, 1986: 76). Nevertheless, PDVSA's decision to invest in West Germany was fiercely criticised in Venezuela on account of its cost. This prompted PDVSA to introduce a new guideline for the programme; namely, that it would always seek "to obtain financial terms which would permit it to acquire assets by putting the lowest possible quantity of cash up front, and to liquidate acquisitions by payments in kind and the cash flow generated by the company" (CEPET *op. cit.*, v. II: 177).

<sup>34</sup>As Cyert and March (1963: 120-2) argue, organisations pursue satisfactory (rather than optimal) goals and tend to select the first alternative they find that promises to fulfill their requirements, because organisational emphasis is always on solving pressing problems rather than on developing longrun

devise for reconciling the company's need to secure funds for Orinoco development in the face of a fiscal squeeze with its lack of control over Venezuelan oil export prices and its incapacity to accumulate financial reserves. In turn, it is not unreasonable to suggest that the government's familiarity with the integrated practices of its former concessionaires and its strong belief in the inevitability of vertical integration in the oil industry played an important role in its eventual acceptance of PDVSA's proposal.

The conversations which Veba and Lagoven were having regarding the possibility of jointly building conversion plants for Orinoco crudes also gave PDVSA officials the opportunity of presenting the government with a complete joint venture proposal shortly after the latter made a move for the oil industry investment fund. Discussion about the heavy oil upgrading project must have prompted a sizable flow of financial information germane to the project, so it is safe to assume that PDVSA's managers were aware that Veba's refining operations were going through financial difficulties and that the German company was looking for options to enhance the profitability of its refining assets (like associating with a NOC from an exporting country). So when the Venezuelan managers suddenly found themselves having to improvise a strategy to safeguard funds abroad (and the financial aspects of the Ruhr partnership appears to have been designed with this goal clearly in mind<sup>35</sup>), they were able to draft - with Veba's enthusiastic collaboration - a proposal that was complete in most details, and only needed presidential approval to kick off.<sup>36</sup> However, one must not be misled into thinking that PDVSA chose Veba as its first partner solely because the German company happened to be in the right place at the right time. Admittedly, there are some factors which could be said to point towards Veba's being something of a target of opportunity (firstly, the Gelsenkirchen complex was ill-suited for processing heavy sour crudes<sup>37</sup>; secondly, PDVSA began to substitute Venezuelan crude with

---

strategies. The search for solutions in organisations is normally biased according to the special training and experience of their constituent members.

<sup>35</sup>Ruhr is intended to break even always on its refining operations: Veba sells Ruhr's petroleum products and credits PDVSA with the net proceeds after deducting undisclosed attributable handling, transportation, refining and marketing costs.

<sup>36</sup>"With Veba's proposal in hand, PDVSA sought internal and outside advice on the legal, technical, financial, tax, accounting and labour aspects of it. In August 1982, the PDVSA Board approved a letter of intent [for the project] . . . The first shipments of crude were sent in December 1982, 'as if' the contract were signed" (Johnson de Vogeler, *op. cit.*: 445). PDVSA presented the proposal to MEM and the Attorney General in early 1983, and the stockholder's assembly only approved it in April 1983 (by which time, of course, the joint venture was well under way). Incidentally, the presentation of *afait accompli* for governmental rubber-stamping every time PDVSA wanted to buy a new refinery became an enduring characteristic of the internationalisation programme. For instance, in 1986 energy minister Hernández Grisanti declared that Venezuela was "participating fully [*sic.*] in the sales revenues and profits of Ruhr . . . Nynäs . . . Citgo and Champlin . . . even though no formal contracts [had] yet been signed with the latter two firms" (*PON*, September 8, 1986: 3).

<sup>37</sup>*PON*, January 8, 1980: 1.

Urals almost as soon as the ink on the agreement had dried<sup>38</sup>; thirdly, the German refining industry was, by far, the most unprofitable in western Europe at that time<sup>39</sup>). But there are other indications that PDVSA associated with the German company mainly because its gaze was still firmly fixed on developing the Orinoco oil province.<sup>40</sup> Thus, both companies made it clear that the Ruhr partnership was a preliminary step for further investments in a 100 MBD combicracking plant that would eventually enable the refinery to run Orinoco grades<sup>41</sup>; moreover, Veba installed a quite sophisticated pilot plant geared for this type of crude. As it turned out, the Ruhr partners did not proceed with the construction of the combicracker, but not for lack of trying (the project was probably abandoned on account of the problems encountered in the terrestrial and maritime transportation of ultra-viscous crude<sup>42</sup> and the demetallisation and cracking of Orinoco crude vacuum bottoms). But perhaps the clearest indication that PDVSA was not in the market for just *any* refinery is to be found in the company's refusal to invest in Exxon's Aruba refinery. All throughout 1982 and much of 1983, the American company had tried to convince PDVSA to keep Aruba open and thus preserve an assured outlet for a sizable crude volume. However, not only did PDVSA refuse to underwrite this project; it also made it clear that it would have to phase out Exxon's contract if the American major did not assume a more cooperative stance with regards to prices<sup>43</sup> (this, together with the fact that the joint venture agreement with Veba it did not include a long-term supply contract for the refineries involved, would also seem to confirm that the issue of volumetric security was not foremost in the minds of PDVSA's managers when they proposed the Ruhr deal to the Venezuelan government).

In sum, PDVSA's first overseas joint venture bears the imprint of being an emergency (albeit not a haphazard) measure, prompted by a catastrophic event. Johnson de Vogeler implausibly ascribes the major political difficulties which the Ruhr deal encountered to the fact that, six years after the nationalisation of the Venezuelan oil industry, PDVSA's managers were

---

<sup>38</sup>*PON*, August 8, 1983: 1.

<sup>39</sup>Calderón Berti, no doubt having been convinced by PDVSA personnel, defended the Veba acquisition by saying that "in a depressed market, one had to look for a stable outlet [for crude], like the FRG" (1986: 46). He also said that the German market was attractive for Venezuela because "there was no state regulation or interference in the setting of prices . . . in this most important European market" (*ibid.*: 350). Ironically, it was precisely the lack of such regulation that made the German market so unprofitable and unstable.

<sup>40</sup>Even after the loss of its investment fund, the company pressed ahead with the fullscale implementation of the cheaper of its two Orinoco projects, and kept the DASM megaproject on a low burner.

<sup>41</sup>See particularly *DS*, 43/1982: 123-8. After the centralisation of reserves, Venezuelan oil industry sources were reported as saying that "a major review of the Orinoco project [had been] under way before the oil fund transfer", whose objective was to evaluate "various options . . . for financing Orinoco B& development, including co-financing with consumers and joint venture projects". The report went on to say: "the first such [i.e. joint venture] deal, involving new refinery capacity, is being negotiated with Veba" (*PON*, October 12, 1982: 2; see also *April* 22, 1983: 1).

<sup>42</sup>These problems were only solved much later, with the invention of Orimulsion.

<sup>43</sup>*PIW*, August 29: 1983: 1.

still afflicted with some sort of schizophrenia stemming from the company's legal status: "the Veba contract . . . was successful in business terms but not in terms of the national political environment [because they] were not . . . sure whether they were part of a private or public enterprise, and this hampered them from dealing with typical state-owned enterprise dilemmas".<sup>44</sup> In fact, the exact opposite is true: this deal only got off the ground because these managers knew exactly where they stood, and were not loath to take radical measures to arrest the industry's exogenously generated financial decline (however, as we shall see in the following section, even though some of these managers may have seen the writing on the wall before 1982, internecine struggles in PDVSA had rendered them unable of taking appropriate remedial action).

It is highly unlikely that, in 1982-3, PDVSA considered the action of safeguarding money abroad as an end in itself: whatever funds it managed stash away in Germany were probably earmarked for concrete projects (involving Orinoco crudes). After 1986, however, the company essentially gave up on the possibility that the government could ever be trusted to make sound judgements about the magnitude of the financial demands which it could make on the industry, and the internationalisation programme became a way of making sure that these limits would not be vulnerated: firstly, by artificially reducing the appropriable surplus generated by the industry; secondly, by making it impossible for the government to know how much more surplus the industry could have generated. This explains why, after 1986, the internationalisation strategy took a very different turn: the transfer of rent abroad became the central concern of the programme<sup>45</sup>, and PDVSA adopted a less demanding attitude in terms of the refineries it would consider for inclusion in the programme.

### **6.3 A Brief Diversion: the Problem of PDVSA's Internal Cohesion (1976-82)**

The hypothesis presented in the preceding sections takes as its starting point a premise (essentially derived from Olson's logic of collective action) which says that, even in those circumstances when PDVSA's bargaining power is low, the company is bound to enjoy a distinct advantage in confrontations with a sprawling Venezuelan government (which is hostage to many conflicting interests), because the former's superiority on the technical and organisational planes will enhance its capability to alter the rules of the game of political exchange in its favour.<sup>46</sup>

---

<sup>44</sup>Johnson de Vogeler, *op. cit.*: 252.

<sup>45</sup>Perhaps the clearest indication that the joint venture agreement with Veba pursued modest and temporary goals in terms of the transfer of rent abroad was that, unlike all of PDVSA's subsequent internationalisation agreements, it did not include a long-term supply contract for the refineries involved.

<sup>46</sup>"Size is one of the determining factors in deciding whether or not it is possible that the voluntary, rational pursuit of individual interest will bring forth group-oriented behavior. Small groups will further their common interests better than large groups" (Olson, 1971: 52).

However, our hypothesis also claims that, this crucial advantage notwithstanding, in 1982 PDVSA could do nothing to thwart this ineffectual government from confiscating its investment fund. Venezuelan oilmen have readily put PDVSA's helplessness in 1982 down to the fact that the confiscation was a treacherous dawn raid by a government desperate for cash and oblivious to the risks inherent in alienating the oil industry. Unfortunately, even though its characterisation of the government's motives is accurate, this explanation does not offer a way out of our logical impasse. To appreciate why, one need only consider the behaviour of the Venezuelan private sector during 1981-2. Hausmann has established that the massive capital flight, inventory accumulation of imports and reduction in the purchase of non-tradable capital goods which took place in Venezuela at that time were preemptive measures by agents in the private sector which, upon perceiving the government's "insufficient fiscal adjustment to the [negative oil] shock"<sup>47</sup>, realized "that the . . . [prevailing] policy framework [was] no longer viable and . . . [attempted] to secure their assets through speculative attacks in anticipation of debt repudiation, devaluation or regime change".<sup>48</sup> Are we supposed to believe, then, that oil industry executives did not reach similar conclusions about the imminence of a fiscal collapse (even though they had first-hand indications about the parlous state of the government's finances<sup>49</sup>) or, even more implausibly, that they failed to grasp what the government's impending insolvency would mean for their investment fund?<sup>50</sup> Clearly not. But this means, then, that the confiscation occurred despite the fact that many in the oil industry must have been expecting it.<sup>51</sup> Does this not undermine our hypothesis further, perhaps even fatally? Surprisingly enough, the answer is negative, but to show why, it is necessary that we delve into PDVSA's very complex internal dynamics. In the following paragraphs, we will show that, *in addition* to being the outcome of the breakdown of a tacit political accord between the company and the Venezuelan Executive, the internationalisation programme is also the most evident and important manifestation of a political pact that, by putting an end to the debilitating and sterile squabbling of PDVSA's operating affiliates, cured PDVSA of the institutional paralysis that had made the company incapable of resisting the government's *diktats* when its first really major showdown with the latter occurred in 1982.

---

<sup>47</sup>Hausmann, 1991: 24. "The reaction of private agents was dominated by strategies designed to avoid the costs associated with the eventual public default" (*ibid.*: 34).

<sup>48</sup>*Ibid.*: 2.

<sup>49</sup>In early 1982, both Cordiplan and BCV had requested urgent cash loans from PDVSA, only to be rebuffed (Johnson de Vogeler, *op. cit.*: 241).

<sup>50</sup>Already in March 1982, the cabinet was discussing the possibility of taking over the fund to stave off the impending crisis, while the president of the Venezuelan Congress was asking why "Venezuela . . . [had to] borrow from the foreign banks at exorbitant rates" when it had plenty of cash available in the fund *PON*, March 26, 1982: 1).

<sup>51</sup>See Coronel, 1983: 221-9.

Thus far in this chapter, we have spoken of PDVSA as essentially a single entity, and have not drawn any distinctions between the holding company *per se* and its three - until 1986, four - main operating affiliates. In other words, we have followed the official PDVSA line on the issue of intra-company politics, which not only stresses the seamless unity of its various constituent parts but also ascribes the very different responses which a number of issues have elicited from its affiliates to nothing more serious than corporate-cultural nuances. However, as we showed in chapter 2, this conception is very simplistic: PDVSA (the holding company, that is) has never been entirely synonymous with the nationalised Venezuelan oil industry, and the interaction between its affiliates has many times gone way beyond what any neutral observer would consider a friendly rivalry. Indeed, as we made clear when we discussed the dispute between Maraven and Lagoven over the development of the Orinoco oil province, the internal strife (and, by extension, internal disarray) of the Venezuelan oil industry reached a peak just at a moment when the government was beginning to encroach on its day-to-day activities and to cast covetous eyes on its capital reserves. PDVSA (the holding company) did not have either the power or the means to redress this situation, and its impotence is perhaps nowhere more evident than in General Alfonzo Ravard's permanence at the helm of the corporation as a "lame-duck" president<sup>52</sup>, on the one hand, and in the gradual colonisation of the company's board of directors with men who were perhaps too closely identified with one particular political party<sup>53</sup>, on the other. Our contention is that this impotence at a corporate level was responsible in no small degree for the loss of the industry's investment fund in 1982, partly because it caused this fund to grow too much, and partly because it bolstered the government's confidence that confiscating this fund would be easier than enacting other measures in order to face its fiscal emergency.

When the confiscation of the oil industry investment fund took place, the self-preservation instincts of the managers in the affiliates were awakened at long last, as they realized that - to paraphrase Benjamin Franklin - if they did not hang together they would all be hung separately. In a very real sense, then, 1982 marked the birth of PDVSA as a corporation

---

<sup>52</sup>While it is true that the General's appointment "may have reflected a desire to indicate that the nationalised industry [would not be] run by anyone associated with the multinationals", it also "offered an easy solution to the problem of deciding which operating company's chief executive officer should run PDVSA" (Randall, *op. cit.*: 35). His stay for a further two terms at PDVSA's helm reflected the fact that the operating affiliates were unable to agree on a successor acceptable to all of them, even though the requirement that both the company's president and vicepresident had to be members of PDVSA's board of directors was dropped in 1979.

<sup>53</sup>Like Wolf Petzall, Manuel Pulido and Antonio Casas in 1979, and Enrique Daboín and Francisco Guédez in 1981. Coronel's comments in this regard are particularly illuminating: 'the question which inevitably arises is why PDVSA accepted these . . . candidates as new board members. The answer seems to be because they had no choice. General Alfonzo was again fighting for survival, and he simply was not strong enough to block these nominations' (1983: 210).

proper (as opposed to an unstable agglomeration of warring affiliates). It was at this point that the majority of executives in the various companies finally understood that "the logic of collective action of the relatively powerless differs from that of the relatively powerful in that the former implies a paradox that is absent from the latter - the paradox that interests can only be met to the extent that they are partly redefined"<sup>54</sup>, and acted in consequence. The most important outcome of the quick redefinition of their collective and individual interests was the internationalisation programme. The twin cornerstones of this programme were the affiliates' newly-found readiness to act in unison (by strengthening the holding company at the cost of weakening their own independence), on the one hand, and their willingness to compromise (by sacrificing some of their individual pet programmes for the sake of the common advancement), on the other.<sup>55</sup> Indeed, the fact that PDVSA did not insist either on the immediate restitution of its financial assets<sup>56</sup> (in spite of what it presented as urgent investments needed just to keep the industry afloat) or on the non-postponement of the ambitious long-term projects that had put the industry at loggerheads with the Herrera administration - the expansions of Meneven's Puerto La Cruz and Maraven's Cardón refineries, and the 5,000 MMUSD Lagoven DASM Orinoco mega-project - must have gone a long way towards easing the transit of the internationalisation proposal through the hostile corridors of Miraflores Palace.<sup>57</sup>

The process of corporate *Gleichshaltung* which began in 1982 with the internationalisation programme gathered pace after Brígido Natera became the president of PDVSA (his term in office saw the introduction of industry-wide courses in finance, human

---

<sup>54</sup>Offe, 1985: 183-4.

<sup>55</sup>Indeed, the Veba deal itself was a clear expression of this change of attitude by PDVSA's affiliates, as it was essentially a synthesis of the two very different conceptions on international downstream espoused until that moment by Maraven and Lagoven. According to de Lugo (1991: 154), in 1976 Maraven and Lagoven had presented some internationalisation proposals (which had not prospered) to PDVSA. This author writes that, even though it was Maraven that pioneered the internationalisation strategy in its planning exercise called *Perspectiva 1982* (Maraven b, 1978), Maraven actually gives credit for the internationalisation programme to Lagoven (which negotiated the deal with Veba). In actual fact, neither of the two companies was responsible for the internationalisation programme in its final form: both had been busy pursuing their own distinct commercial agendas before 1982, and these were retroactively turned into antecedents of the Veba deal in order to bolster the legitimacy of the latter (this enabled COPEI's Calderón Berti, for instance, to defend it from attacks by AD's congressional fraction by saying that the internationalisation strategy actually dated from the time when the Pérez occupied the Presidency of the Republic; see Martz, 1986: 266).

<sup>56</sup>General Alfonzo Ravard, however, *did* say that he hoped the foreign exchange agreement with BCV would "be temporary because the best thing that could happen is that the reasons that obliged the government to take the measure will disappear and PDVSA can resume control over its finances" (*PON*, November 3, 1982: 1). After the General's retirement, PDVSA dropped the issue of the restitution of the investment fund.

<sup>57</sup>"[PDVSA's] decision to postpone three major oil projects at home is not expected to slow its drive to open new markets abroad for rising output of heavy oils . . . In contrast to up to 8 billion of home outlays being put off . . . the German venture would require relatively modest sums" *PfW*, January 10, 1983: 5)

resources and 'corporate vision', the final homogenisation of the affiliates' reporting formats and information systems, the centralisation of all overseas purchases of materials and supplies within Bariven<sup>58</sup>, the creation of a couple of subsidiaries tasked with market intelligence functions - PDV (UK) and PDV USA - that would report directly to the holding company and, last but not least, a marked increase in the rotation of personnel between companies at both a board and an operative level<sup>59</sup>). This process reached a new high in 1986, when PDVSA announced that it would reduce the number of its operating subsidiaries to three (Meneven was chosen as the company that would disappear, possibly because of the relative cordiality of its relations with MEM<sup>60</sup>), and that it would establish another subsidiary - Interven - expressly dedicated to "finding alternatives for the internationalisation policy".<sup>61</sup> This reorganisation (allegedly taken as a cost-cutting measure) was actually much more extensive than it looked on paper: Meneven's production assets were distributed between both Maraven and Corpoven<sup>62</sup>, so its disappearance led to the consolidation of three operating subsidiaries whose operations and oil reserves (by size and type) were more evenly balanced than had been the case in the past. The creation of Interven also tightened PDVSA's grip on oil exports: sales to new joint venture partners (Citgo, Champlin and, later, Unocal and Seaview) were made the responsibility of letterbox companies (Commercit, Commerchamp and Tradecal, respectively) which were coordinated by the new affiliate, and not by Lagoven, Maraven or Corpoven (see Figure F6.3.1).

---

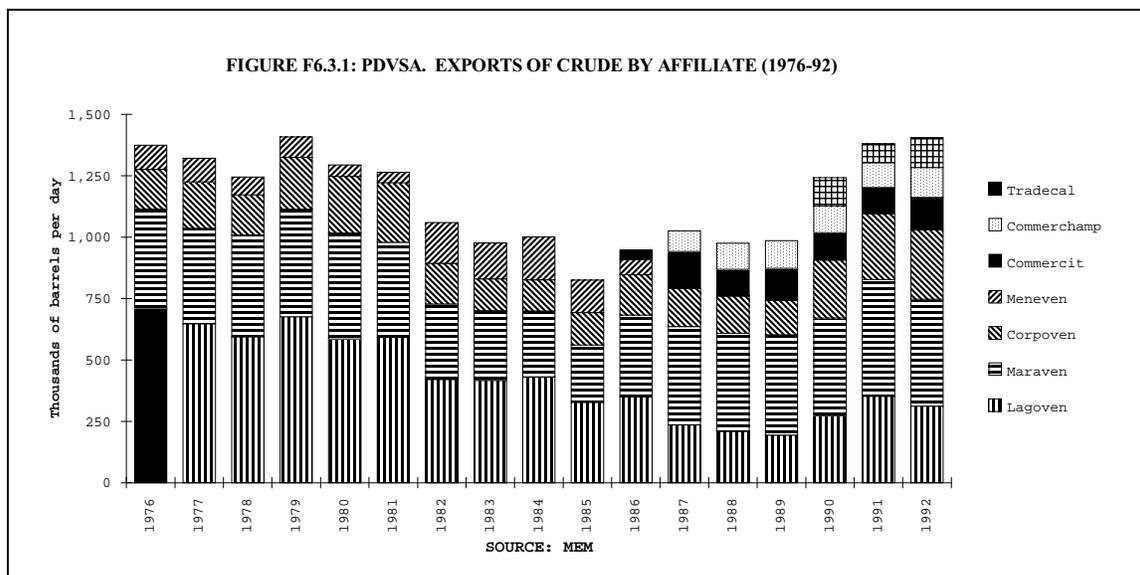
<sup>58</sup>This subsidiary was created in 1980, but it only began covering the full requirements of all of PDVSA's affiliates in 1983, because Lagoven and Maraven insisted on handling directly the majority of their overseas purchases up until late 1982 (see PDVSA a, 1982: 37).

<sup>59</sup>On a symbolic plane, the most important among all the moves prompted by this rotation was the one that took Maraven president Quirós to the presidency of Lagoven.

<sup>60</sup>According to Coronel, the inexperienced Meneven board members were "constantly leaning on other organisations, including the Ministry of Energy and Mines . . . to obtain reassurance for their decisions" (1983: 124). The company's production director, Francisco Guédez, had always been "one of the staunchest allies of [MEM] in the fight for power between the ministry and PDVSA"; Coronel wrote that "he had done all he could to reinforce the authority of the ministry, sometimes at the expense of the authority of PDVSA [and as a result of this] the quality of the relationship between Meneven and PDVSA had deeply deteriorated" (*ibid.*: 209-10). Thus, Meneven's disappearance could perhaps be interpreted in terms of a desire by PDVSA to get rid of a pro-governmental fifth column from its midst. Indeed, this would probably explain why the retired Quirós (whose position on the issue of PDVSA's desirable form of relationship with MEM and the government was relatively dovish) strongly criticised the measure, calling it "another instance of questionable management . . . [which] could lead to excessive centralisation" (*PON*, May 2, 1986: 1).

<sup>61</sup>*Petróleos Informa*, 15:8. Interven was created at the time of the agreement with Veba. However, this subsidiary was only activated in May 1986, after the suspension imposed on the internationalisation programme was lifted (*PON*, May 6, 1986: 1).

<sup>62</sup>Each one of these companies became - at least from the production point of view - "a wholly new company" (CEPET, *op. cit.*, v. II: 206). Maraven received Meneven's prolific Maracaibo operations, and Corpoven's acreage in the Orinoco. Corpoven received the Anaco fields from Maraven, and Meneven's Orinoco acreage and all its oilfields in the Oficina area.



In this way, PDVSA increased its power *vis-à-vis* its operating affiliates even more and, as a result, the crippling centrifugal tendencies which had been so much in evidence during the early years of the nationalised Venezuelan oil industry receded into the background after this date: executives in the operating companies no longer felt that PDVSA's role should be confined to taking "the burdens of dealing with [MEM] . . . off their shoulders"<sup>63</sup> and, hence, PDVSA's "tendency to centralise operations" stopped being "a major source of disagreement".<sup>64</sup> Granted, inter-affiliate rivalries did not disappear completely<sup>65</sup>; nevertheless, the strength of these rivalries was much diminished by the emergence of "procedures, reciprocal recognitions, negotiations which [reduced] the menace of divisive antagonism and [turned] enemies into participants in a game".<sup>66</sup> As a result of this, since 1986, PDVSA and its affiliates have spoken with one voice on most relevant issues; the fact that this has come to pass at all is a testimony of the enormous success of the internationalisation programme at the level of intra-company politics.

<sup>63</sup>Coronel, 1983: 121.

<sup>64</sup>*Ibid.*: 82. After 1982, "interaffiliate committees became stronger as a consensus and powersharing mechanism [*sic.*], with the PDVSA coordinator at the centre. Each affiliate offered specific strengths . . . and PDVSA built upon them and so achieved internal variety that helped make the organisation more responsive to its environment" (Johnson de Vogeler, *op. cit.*: 366).

<sup>65</sup>For instance, when Lagoven announced that it would begin to sell Orimulsion, Maraven expressed opposition to this on the grounds that the new fuel would replace residuals and heavy crudes in some of the markets which it supplied (*PON*, March 14, 1988: 1).

<sup>66</sup>Alessandro Pizzorno, in Rusconi, 1984: 69.

#### 6.4 The Internationalisation Programme and the Oil Market Crash of 1986

Everywhere do I perceive a certain conspiracy of rich men seeking their own advantage under the name and pretext of the commonwealth  
Sir Thomas More

The manner in which a united PDVSA inveigled the Venezuelan government into endorsing its first joint venture agreement seems a perfect example of the form in which technically-naive politicians run the risk of becoming "passengers on a mystery tour" directed by technocrats<sup>67</sup>: those responsible for devising the internationalisation programme never made it clear that their much trumpeted security of outlet would be bought with discounts (discounts which did not affect PDVSA, because they came out of the government's rent). Because of this, it would be easy to read too much into this incident, and think that the signing of the accord marked the beginning of an era of ascendancy of the corporation over the government. This, however, was not the case: throughout 1983, PDVSA and its operating affiliates were kept on the defensive, mainly because the animosity of the Herrera administration towards the oil industry did not flag (as proven by the fact that Herrera's parting shot to PDVSA was to appoint Calderón Berti - the *bête noire* of the industry - to the presidency of the holding company). Moreover, when some AD congressmen found that the netted-back FOB price on the volumes destined for Ruhr was lower than official Venezuelan posted prices, they raised a scandal which almost sank the whole internationalisation programme.<sup>68</sup>

The defeat of the COPEI party (to which both Herrera and Calderón belonged) in the presidential elections of 1983 presented the government with an opportunity to normalise its relations with PDVSA (and vice versa). Herrera's successor, Jaime Lusinchi, was apparently eager to dispel the ill will that the former had provoked among the ranks of the industry<sup>69</sup>, and he gave palpable signs of his good intentions when he sacked both Calderón Berti and Díaz Bruzual from their posts, and appointed a veteran oilman (Natera) to the presidency of PDVSA.<sup>70</sup> One

---

<sup>67</sup>Rose, 1987: 429.

<sup>68</sup>See the book by AD congressman Guevara (1983: 72); in May 1984, congressman Leonardo Montiel Ortega claimed that international prices were .94 USD/Bbl higher than the prices realized by PDVSA in Germany (Randall, *op. cit.*: 207). In response, Quirós disingeniously accused the critics of the programme of not seeing the wood for the trees: "Veba takes less than 7 per cent of our exports . . . but the possibility that this contract might have been concluded in an inconvenient manner or that its results are worse than some other alternative [*sic.*] . . . has unleashed a national controversy which concentrates on this seven per cent and ignores the other ninety three per cent of the commercial activity of the oil industry" (1986: 232).

Congressional indignation surrounding the deal with Veba also had a lot to do with the fact that PDVSA had not sought Congressional approval before signing it, in alleged contravention to Article 5 of the Reservation Law (although the Attorney General unequivocally cleared the company of any wrongdoing). Interestingly, Calderón Berti declared publicly that if he had informed Congress about the deal, PDVSA would not have signed it (Johnson de Vogeler, *op. cit.*: 460).

<sup>69</sup>Personal interview.

<sup>70</sup>PDVSA took the opportunity to remove from its board those men identified with Calderón Berti.

could think, then, that the rise of the friendly Lusinchi to the presidency of the republic was the factor that prompted PDVSA to halt the expansion of the programme. As a matter of fact, though, this suspension was ordered by Lusinchi himself (in the face of intense pressure exerted by AD's congressional fraction), possibly because during 1983-4, neither the oil price decline nor PDVSA's marketing problems were severe enough to convince him that further refinery acquisitions were necessary to safeguard the government's oil income. As for the company's managers, they did not let Lusinchi's apparently good disposition towards the industry mislead them into assuming that the motives which lay behind their first foray into refining abroad had disappeared or that they could afford to begin squabbling again. In fact, it is clear that they reached the pessimistic - but, in the event, correct - conclusion that Venezuela's mounting economic troubles would make their armistice with Lusinchi short-lived.<sup>71</sup>

Even though Lusinchi attacked Herrera's disastrous economic policies and spoke of the imperious need to put the oil industry back on a sound financial footing, his actions ran very much counter to his words<sup>72</sup>: he pumped large amounts of cash into the RBI sinks in Guayana<sup>73</sup>, and threatened to reform Venezuelan oil legislation with a view to tightening MEM's control over PDVSA<sup>74</sup> (just to add insult to injury, he also lowered the salaries of oil executives by ten per cent<sup>75</sup>). Thus, it is not surprising to find that, regardless of the fact that the programme had been officially suspended, PDVSA continued sounding out potential partners for overseas refining joint ventures which, unlike Ruhr, would have the sole *raison d'être* of putting a part of the corporation's oil revenues beyond the fiscal reach of the Venezuelan government. PDVSA's perseverance was to pay off handsome dividends in 1986. In that year, which *does* mark the

---

<sup>71</sup>Noises coming from the AD camp before the 1983 election had been far from encouraging for the company. Former energy minister Valentín Hernández - who was also an advisor to AD's top members - had said in mid-1982 that Orinoco development should be stopped, that PDVSA's handling of Venezuela's interests within OPEC was "dangerously confused", and that there was a dual need for stricter supervision on PDVSA's affairs and strengthening of MEM (*PON*, August 23, 1982: 2).

<sup>72</sup>To the extent that, not too long after his designation, Natera allegedly drafted his resignation, which he was said to carry in his pocket always (Sosa Pietri, *op. cit.*: 73). Natera resigned a short while into his second period as PDVSA president. His successor, Juan Chacín, had an easier ride partly because of his family ties with Lusinchi, but also because he had spent his pre-nationalisation career in CVP (as opposed to a foreign oil company).

<sup>73</sup>Lusinchi was eager to court the masters of the AD stronghold in Ciudad Guayana, and to prove it he elevated CVG head Leopoldo Sucre Figarella to the level of a cabinet minister, and committed "so much money to [CVG's] future expansion . . . that the next government, no matter who [was] running it, [would] not [have been] able to back off from those plans" (*FT*, October 13, 1987, special survey: 10).

<sup>74</sup>On July 7, 1984, Lusinchi decreed the creation of the Presidential Commission for the Revision of the Juridical Arrangements for Hydrocarbons, with the avowed objective of establishing "the basis for a new juridical arrangement, univocal and modern and with vocation for permanence *[i.e.]*, due to the surmounting of the historical moments in which the legislation currently in vigour was inscribed" (Trotta de Godoy, *op. cit.*: 50; see *ibid.*: 50-5, for the various proposals studied by the commission).

<sup>75</sup>Johnson de Vogeler, *op. cit.*: 349.

beginning of PDVSA's ascendancy over the government, the international oil market once again came to the rescue of the Venezuelan NOC by crashing in a manner reminiscent of its behaviour in the aftermath of the discovery of the East Texas field.

At the beginning of 1986, Venezuelan crude exports fell below the 1 MMBD mark. As a result of this development, PDVSA's stock in the eyes of the Venezuelan government rose<sup>76</sup>, and the idea that having captive clients would increase Venezuela's volumetric security regained much of the lustre it had lost after OPEC's March 1983 production accord enabled member countries (Saudi Arabia excepted) to place their crude with relatively more ease than in 1982.<sup>77</sup> Indeed, the 1986 crisis put the programme beyond the partisan bickering which had obstructed its progress until then, and internationalisation suddenly became an issue of life or death for the Venezuelan government.<sup>78</sup> Sosa Pietri's staccato account of this governmental about-face is quite revealing:

in January 1986, exports are below the million barrel per day mark, and there are days without any liftings. The national government is alarmed and it has more than enough reasons to be . . . [Then] with sales at their lowest point ever, the government . . . gives back to PDVSA the liberty to determine prices as well as the liberty to assure markets and avoid a repetition of situations like those experienced in January. Thus, the internationalisation programme begins anew.<sup>79</sup>

Likewise, an interview granted by energy minister Hernández Grisanti to *Platt's* shows also that the *manner* in which PDVSA presented the causes and possible repercussions of the 1986 crisis to the Venezuelan Executive was the factor responsible for the celerity with which the programme was put back into gear:

---

<sup>76</sup>Lusinchi forgot all about the reform of the legal status of Venezuelan hydrocarbons; for a more complete account, see Trotta de Godoy, *op. cit.*: 54-5.

<sup>77</sup>In October 1985, Johnson de Vogeler interviewed a PDVSA executive who gloated about the salutary effect which the deteriorating market situation had exerted even on Venezuela's most radical politicians: "Notice that Radamés [Larrazábal, of the MAS party] doesn't oppose the [Veba] contract now. He just objects to some of the clauses" (*op. cit.*: 460).

<sup>78</sup>As Calderón Berti observed, "oil exports had to decline, foreign exchange earnings had to drop alarmingly and the international oil market's deterioration had to worsen for the government to [approve] the negotiations PDVSA had been conducting with several companies and to accept that internationalisation is good for the country" (*PON*, January 27, 1986: 1).

<sup>79</sup>Sosa Pietri, *op. cit.*: 74-5. His report is based upon oral testimony by Chacín and PDVSA vicepresident Pablo Reimpell. According to *Platt's* (January 23, 1986: 4), these executives said at an extraordinary shareholders' assembly meeting attended by Lusinchi and COPEI party leaders that Venezuela could "avoid netback pricing arrangements by entering into these overseas joint ventures" [even though these ventures would function on the basis of netbacks!], and that, "although Venezuela's broad range of crudes and products had permitted PDVSA to sell at above-market prices[!]" in late 1985, PDVSA would probably encounter "volume and pricing problems as of . . . April [1986] if investment plans [were] delayed any further", because "some of its customers [might] switch to other oil suppliers with whom netback deals had already been worked out".

without elaborating, Hernández Grisanti said that 'those of us who have the responsibility and the information' [furnished by PDVSA, of course] regarding market conditions are aware that 'beginning March or April [*sic.*] the situation could become complicated', [all of which meant] that the government would have to make decisions very soon, because there were 'a series of elements in the petroleum market situation that could make the placing of our exports difficult'. He described the decisions to be those involving 'concrete internationalisation agreements to guarantee placement of Venezuelan oil'.<sup>80</sup>

The collapse of the oil market, then, gave the internationalisation programme a decisive impulse, mainly because it served to convince the Venezuelan government that the programme merited its unrestricted backing (it was only after this event that the government accepted the 'necessity' of placing 700 MBD<sup>81</sup> - half of Venezuela's exports - in plants controlled by PDVSA, on the one hand, and properly institutionalised the programme by allowing PDVSA to activate Interven, on the other). But it also was important because, thanks to it, the government was persuaded that PDVSA's affiliates needed more "commercial flexibility . . . to adapt . . . to the new dynamics of the petroleum market"<sup>82</sup>, and that such flexibility could only be achieved if they were able to set Venezuelan export prices with complete discretion (i.e. without consulting MEM). This argument was true enough, but the operating affiliates took their new pricing faculties to their limits, and adopted an opaque pricing system which put *all* their transactions (arm's-length and internal alike) beyond scrutiny. The convenience of an opaque pricing mechanism for the unfolding internationalisation strategy was obvious: not only did it rule out a possible repetition of the embarrassing episode of Ruhr's net realization prices (which had so damaged the programme back in 1983), it also gave PDVSA the chance to design its internal netback formulae according to its unique 'tax optimisation' requirements.<sup>83</sup> In other words, oil industry executives correctly concluded that, since only "the existence in the world of arm's length markets makes it possible to gauge the extent of excessive transfer prices"<sup>84</sup>, eliminating the Venezuelan price data generated in such markets would make it very difficult for an outsider to tell whether PDVSA's own transfer prices reflected the fair market value of its crudes. And sure enough, from time to time, PDVSA has silenced the critics of the internationalisation programme adducing that sales to its subsidiaries are more profitable (often by very large

---

<sup>80</sup>*PON*, January 21, 1986: 2, and see also Hernández Grisanti, 1988.

<sup>81</sup>A figure which was "some 200,000 b/d above the level previously mentioned by Energy Minister Arturo Hernández Grisanti" (*PON*, February 27, 1986: 1). Moreover, the president of Interven said that this volume was not a fixed objective, and that once PDVSA had attained it, it would "decide whether to increase or lower this target, depending on world oil market conditions" (July 17, 1986: 2).

<sup>82</sup>*PON*, February 11, 1986: 1.

<sup>83</sup>It should be pointed out that, by the time its affiliates were granted the faculty of determining prices for all of Venezuela's oil exports, PDVSA already fully appreciated the advantages of such a system. In late 1985, the company had been given permission to set ex-Curaçao products prices without approval from MEM.

<sup>84</sup>Bertrand, *op. cit.*: 76.

amounts<sup>85</sup>) than sales to unrelated parties, even though the two types of commercial operation are not strictly comparable on price terms alone, because the crude that the company's subsidiaries buy is of a much better quality than the one bought by the rest of its clients.<sup>86</sup>

Thanks to the opacity of its pricing mechanisms, then, PDVSA has been able to put millions of dollars beyond the reach of the Venezuelan treasury, by means of discounts which even an expert would find quite difficult to detect (a slightly unfavourable deemed yield for a crude, a change in the reference spot market for a certain product or and adjustment in the deemed refining margin, to give but three obvious examples).<sup>87</sup> It should be pointed out that PDVSA's domestic refining system, in all likelihood, has also been used by the company to transfer rent abroad: in the last few years, a sizable proportion of Venezuelan products exports to the US have been channeled through Citgo.<sup>88</sup> In addition, it is also probable that PDVSA's decision to supply its US refineries with its own tankers might have at least as much to do with the fact that freight rates are another element which can be manipulated to impute costs to Venezuelan crude as with the difficulty in finding and chartering state-of-the-art, ecologically sound, double hulled tankers.<sup>89</sup>

Figure F6.4.1 reveals one of the cost-imputing facets of the internationalisation programme at work. As can be appreciated, PMI/Petromar's operational costs are quite substantial, even though these PDVSA subsidiaries are actually nothing more than brass plates on a Panamanian letterbox. Given that the majority (if not all) of PMI/Petromar's operational costs are accounted for by the commissions which they pay to the PDVSA affiliates which sell crude and products on their behalf, the tax implications are significant. Moreover, the accounts of PMI/Petromar and all the other PDVSA overseas subsidiaries are audited *individually* by

---

<sup>85</sup>When the Venezuelan congress tried to block the purchase of Citgo, PDVSA pointed out, to great effect, that its crude and products sales to this company were allegedly earning an average 4 USD/Bbl over market prices (*PIW*, June 2, 1986: 10).

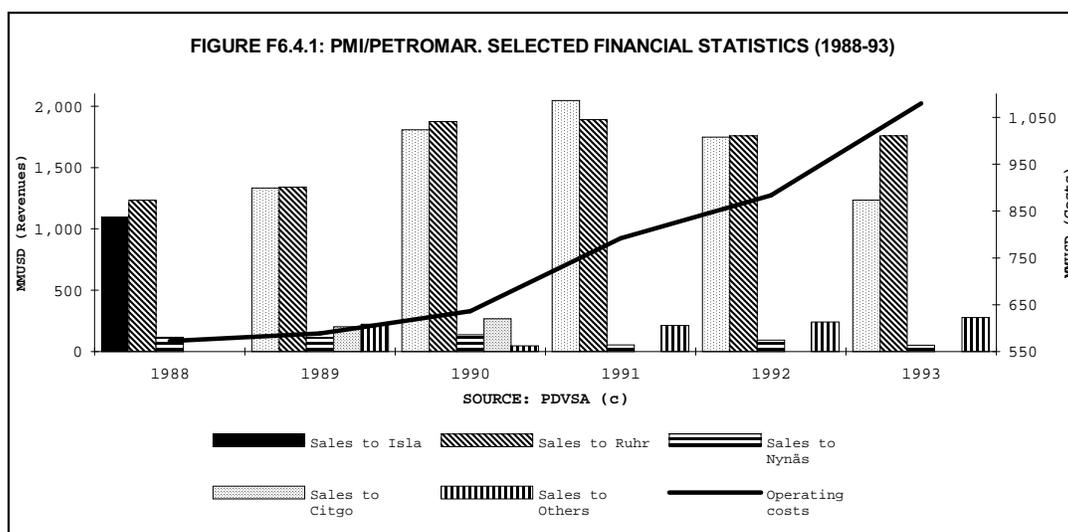
<sup>86</sup>See Calderón Berti, 1988: 56; *PON*, September 9, 1989: 3; November 7, 1989: 3. Moreover, there is no indication in any of these comparisons whether the realized prices they quote have been netted back to Venezuela. Finally, it should be pointed out that, at least in the case of Ruhr, relatively high realized prices have, on occasion, been the result of currency fluctuations (*PIW*, May 12, 1986: 3).

<sup>87</sup>In this context, it is worthwhile to remember the reasons why Enrico Mattei always preferred barter transactions to straightforward trades: "it was never easy to know exactly what the oil which ENI actually got cost, nor could the Italian export prices be assessed on their own. This uncertainty [meant that] no outside observer could ever be sure about the economic significance of the deals [and so Mattei] was free to present them in whatever light he fancied, at any given time" (Frankel, 1966: 139).

<sup>88</sup>PDVSA's aborted joint venture with Steuart Petroleum was probably motivated by its desire to extend the benefits of internationalisation to its marketing of petroleum products; it is likely that the Venezuelan company has not pursued other Steuart-type joint ventures because Citgo has proved quite capable of absorbing a large proportion of PDVSA's product exports.

<sup>89</sup>In 1996 and 1995, 71 per cent and 87 per cent (respectively) of Citgo's imports were delivered on tankers owned by PDVSA Marina (Citgo 10-K, 1996; S-3/A1, 1996). All of Uno-Ven's imports are transported in PDVSA Marina tankers.

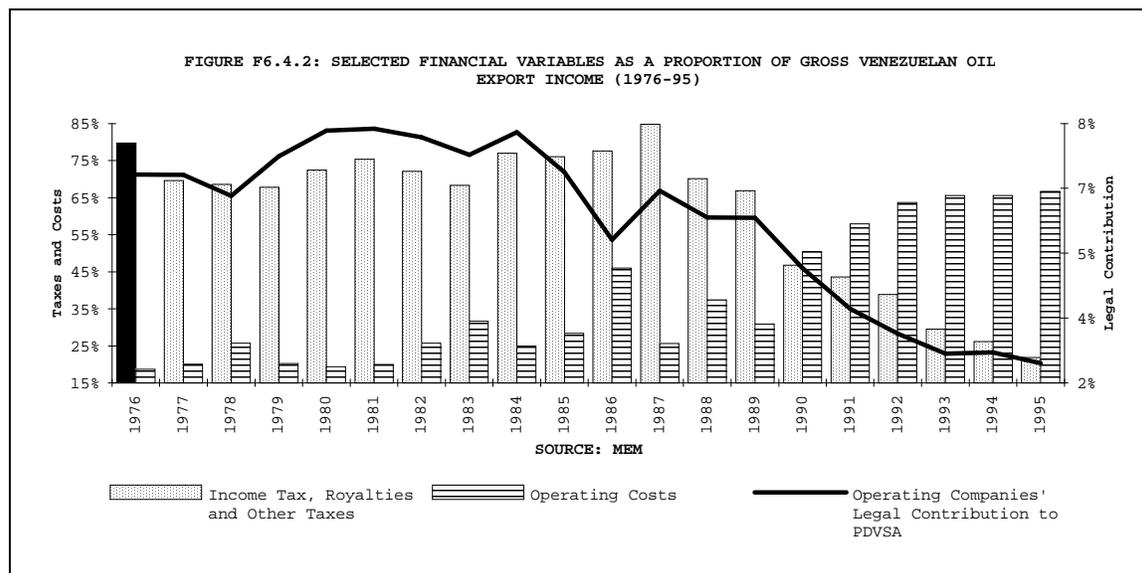
different public accounting firms and the firm which audits PDVSA's *consolidated* balance sheet and income statement does not have access to these subsidiaries' books and only receives reports containing revenue and cost figures which have been previously collated and consolidated elsewhere.<sup>90</sup>



We are not implying that PDVSA does or can convert all the - tax-deductible - expenses of its overseas cost centres into cash flow (there are not enough hard data to conduct the forensic accounting exercise needed to prove such allegation in a conclusive manner). Nevertheless, the large rise in the company's operating costs registered over the last few years and the concomitant squeeze on the government's fiscal revenues (particularly after 1990, when the accounts of wholly-owned overseas affiliates were consolidated with PDVSA's in the latter's financial statements) indicate the scope that the company has to engage in such accounting manouvres (see Figure F6.4.2). Moreover, as this same figure shows, PDVSA has had no qualms in squeezing what, in theory at least, is supposed to be the main source of income for the whole corporation (the 10 per cent of net Venezuelan oil export income that its operating subsidiaries give it as a tax-exempt contribution). The reason for this is simple: any government would be very suspicious if non-royalty costs directly imputable to exports diminished or stayed constant while

<sup>90</sup>Since 1990, the letter to PDVSA's shareholder and board of directors prepared by the company's accountants has contained a disclaimer along the following lines: "The financial statements of certain subsidiaries and affiliates, which statements reflect assets that represent 46% and 45% at December 31, 1994 and 1993, respectively, and revenues that represent 62%, 59% and 59% of the *corresponding consolidated totals* for three years in the period ended December 31, 1994, respectively, *were audited by other auditors whose reports thereon have been furnished to us* and our opinion expressed herein, insofar as it relates to the amounts included for such subsidiaries and affiliates, *is based solely on the reports of the other independent public accountants*" (PDVSA (a), 1994: 55; italics ours). The figures in italics vary from year to year, but they are always very large.

total operating costs skyrocketed (as would be the case if the company were trying to maximise net export income while minimising its net taxable income). Thus, the fact that PDVSA has been willing to engage in this tradeoff at all speaks volumes about the considerable amount of money that must have found its way to its subsidiaries abroad (although it must be borne in mind that the fall in Venezuelan net export income recorded since 1990 has also been provoked by a marked increase in PDVSA's domestic investment, which the company has reported under the guise of operational expenditures). Nevertheless, there is a limit to how much even the most creative accounting can hide, and it has not escaped the attention of some Venezuelan academics that the rather small distributable cash flows of PDVSA's foreign subsidiaries seemingly bear no relation to their huge revenues (see Annexe 7 for an example).<sup>91</sup> PDVSA has responded to this criticism by saying that this imbalance is a result of its efforts to diminish its tax load in the foreign countries in which it operates!<sup>92</sup>



But if it is true that the internationalisation programme is geared towards the transfer of rent abroad, why are the coffers of PDVSA's subsidiaries not overflowing with cash? The answer to this question is quite straightforward: as Table T6.4.1 makes clear, the company is not keen to hold liquid assets which can be taken over at short notice by the Venezuelan government. Instead, its subsidiaries have used the rents transferred to them to expand through the acquisition

<sup>91</sup>Mendoza Pottellá, 1995; Trotta de Godoy, *op. cit.*: 195.

<sup>92</sup>Trotta de Godoy, *ibid.* Citgo and Uno-Ven have a tax allocation agreement with PDV América, under which they have to provide the latter company with sufficient cash to pay its consolidated income tax liabilities. PDV América's provisions for income taxes in 1995 and 1994, respectively, were 84 MMUSD and 118 MMUSD; these figures represent an effective tax rate of only 37 per cent (PDV América 10K, 1996: 29), which compares rather favourably with Venezuela's 67.7 per cent income tax rate for hydrocarbons activities.

of refining, marketing and transportation assets which, by virtue of their being illiquid, are very difficult to confiscate. Hence, the relatively modest growth of affiliates like Ruhr and Uno-Ven is due to the fact that their locational disadvantages dissipate a sizable proportion of their transferred rents; in contrast, Citgo has had to expand at a breakneck pace because only thus has it been able to absorb the surplus generated in its refining system without accumulating large amounts of liquid assets (Figure F6.4.3). Political factors (PDVSA's desire to enhance its entrepreneurial autonomy by increasing its share of Venezuela's petroleum rent at the government's expense) have shifted the locus at which the company's internal supply and demand curves intersect and have altered its responsiveness to market signals. As a result, the Venezuelan NOC has invested capital in assets which other companies would consider both expensive and unprofitable, but which it finds both cheap (since they have been bought with money that the company would not otherwise have had access to<sup>93</sup>), and profitable (since they give it the possibility to monetise ever larger transferred rents).

**TABLE T6.4.1:** Composition of PDVSA's assets, in percentages (1976-95)

	<i>Cash and equivalents</i>	<i>BCV; government bonds *</i>	<i>Accounts receivable</i>	<i>Inventories**</i>	<i>DIT; PPX §</i>	<i>Investments §§</i>	<i>PPE §§§</i>
1976	0.136	0.007	0.333	0.111	0.050	0.019	0.342
1977	0.291	0.003	0.238	0.101	0.040	0.012	0.311
1978	0.252	0.004	0.242	0.088	0.034	0.062	0.314
1979	0.337	0.006	0.219	0.078	0.037	0.039	0.278
1980	0.403	0.000	0.125	0.057	0.037	0.098	0.276
1981	0.285	0.000	0.118	0.077	0.096	0.096	0.374
1981***				0.037			0.415
1982	0.019	0.143	0.114	0.049	0.053	0.063	0.550
1983	0.016	0.138	0.094	0.042	0.057	0.054	0.589
1984	0.011	0.201	0.102	0.024	0.065	0.042	0.529
1985	0.007	0.193	0.078	0.032	0.073	0.045	0.543
1986	0.018	0.131	0.068	0.041	0.078	0.075	0.605
1987	0.034	0.147	0.086	0.044	0.091	0.064	0.515
1988	0.034	0.005	0.088	0.047	0.094	0.072	0.585
1989	0.017	0.014	0.078	0.070	0.004	0.046	0.753
1990	0.015	0.036	0.091	0.062	0.022	0.038	0.714
1991	0.011	0.008	0.025	0.069	0.028	0.035	0.729
1992	0.012	0.001	0.048	0.056	0.024	0.036	0.746
1993	0.013	0.002	0.059	0.050	0.019	0.040	0.780
1994	0.012	0.002	0.071	0.043	0.024	0.044	0.778
1995	0.010	0.001	0.080	0.038	0.029	0.047	0.763

\* Liquid assets held by BCV, or Venezuelan government bonds

\*\* Crude, products, materials, supplies, fertilisers, etc. \*\*\* After restatement in 1982

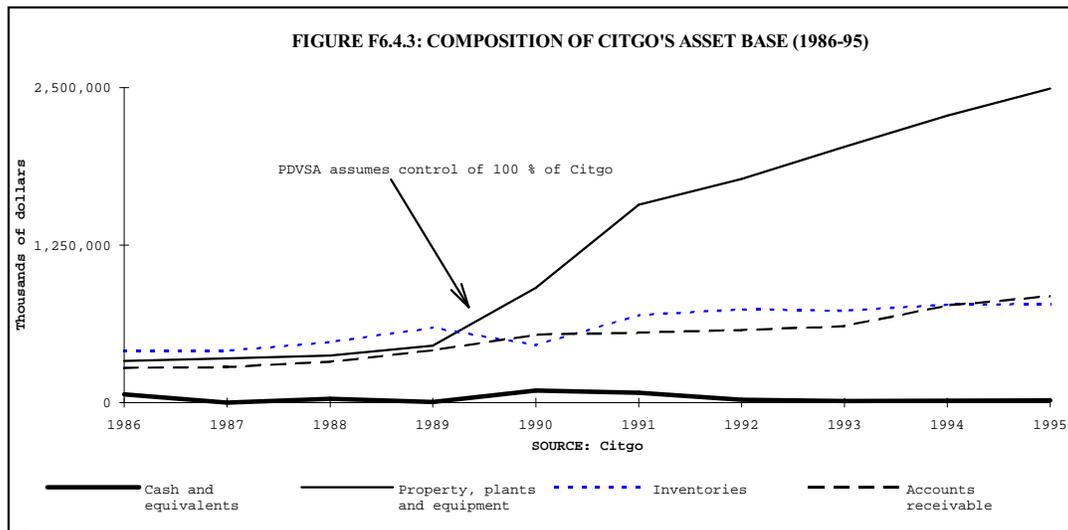
§ Deferred income taxes and pre-paid expenses

§§ Includes investments in Pequiven, Palmaven, Carbozulia; includes Citgo and Champlin until 1989 but not Isla; also includes Ruhr, Uno-Ven and Nynäs.

§§§ Property, plant and equipment (includes Citgo after 1990, and Caribbean storage facilities)

Source: PDVSA (a)

<sup>93</sup>PDVSA's down payments for its refinery acquisitions have been covered with crude inventories that have paid no royalty or income tax, but whose extraction costs have been expensed for income tax calculation purposes (personal interview).



One of the main consequences of the internationalisation programme has been to increase the capability of PDVSA's management to resist passively the directives of the government, particularly those that affect what the company sees as its proprietary resources. The best example of this, ironically enough, is the manner in which PDVSA defied President Pérez when he ordered the company to sell half of Citgo. Even though some oil industry executives expressed their contempt for this directive and openly questioned Pérez's judgment, others just pointed out that Pérez's wishes could not be fulfilled, because the recession in developed countries and the conditions in the oil market meant that nobody would pay the price which Venezuela - that is, PDVSA - would demand for Citgo.<sup>94</sup> Indeed, a very perceptive anonymous PDVSA official observed that negotiating the operation would take so long that, by the time it was ready, Pérez would probably have left office and the sale of Citgo "would not even be an issue anymore".<sup>95</sup> This diagnose, of course, turned out to be very accurate: Pérez was impeached long before PDVSA had take any concrete steps to comply with his orders (it is safe to assume that, had Pérez not been impeached, the company could have gone one stonewalling the government for the remainder of his term, and beyond).

<sup>94</sup>*PON*, September 2, 1992: 1.

<sup>95</sup>*Ibid.*: 5.

## 6.5 But How Have They Got Away with It? The Antinomies of PDVSA's Commercial Oil Policy Revisited

All my means are sane, my motive and object are mad  
Herman Mellville, *Moby Dick*

As Majone notes, "despite the substantial cost of modifying institutional constraints, experienced actors have always recognised the advantage of influencing policy outputs by such indirect methods", because they know that "it is often more efficient to use [their] resources to influence the institutional mechanisms that will produce future streams of valued outcomes", rather than "dispensing resources in trying to secure favourable resources piecemeal".<sup>96</sup> On a number of occasions, PDVSA has demonstrated not only that it understands the superiority of such roundabout methods but also that it is well versed in the art of using them to full advantage. Among the roundabout strategies which the company has adopted over the years, the internationalisation programme must be singled out as the most accomplished of all. This programme has undoubtedly served to increase both the length of time and the leverage that PDVSA has to respond to hostile movements on the part of the government. The company's greater margin for manoeuvre, in turn, has enabled the Venezuelan oil technocracy to behave more and more like the notorious bureaucracy of the Habsburg monarchy, whose favourite motto was *obedezco pero no cumpro* (i.e. I heed orders, but do not carry them out). The great merit of those who conceived the programme lies in the brilliant fashion in which - in authentic Weberian spirit - they used their superior knowledge (about the oil market and the oil industry in general) to convince the Herrera administration to adopt a programme that would alter the conditions of political exchange between the Venezuelan Executive and PDVSA in favour of the latter. Moreover, oil industry managers have demonstrated great resilience and ingenuity at adapting the programme to changing and ever more trying circumstances, and convincing successive Venezuelan administrations to sanction its expansion. This has been no small feat - particularly if one considers that the Venezuelan government has never trusted PDVSA, on the one hand, and that many politicians have strongly questioned the alleged benefits of the internationalisation programme - and it begs one key question: how have they been able to do it?

One could think that PDVSA's success is a reflection of the fact that, particularly since late 1985, it has manipulated the Venezuelan oil agenda at its leisure thanks to the ignorance about oil matters which pervades the Venezuelan political sphere. After all,

if there is a monopoly agenda setter - someone who is completely and uniquely empowered to pick and order elements of an agenda - then . . . there is always sufficient opportunity for him to manipulate the sequence of votes to produce any final outcome he desires; the preferences of other agents are no constraint on the final outcome. On the

---

<sup>96</sup>Majone, *op. cit.*: 97.

other hand, if the agenda is built randomly or by an 'open' process in which any agent may propose an alternative, then the results imply that no matter where the process begins, there is no telling where it will end.<sup>97</sup>

However, PDVSA has never really been in a position to exclude totally other agents from the formation of the agenda and to offer the government a 'take-it-or-leave-it' alternatives. Granted, the company has been able to massage the agenda in such a way that the government has ended up by focusing on one problem (the volatility of the oil market) through a particular lens of PDVSA's choosing (volumetric security through integration). This situation, however, did not come about as a result of an ultimatum delivered by the NOC: as we have shown, the definitive push for the programme was the consequence of an external event, and when this event took place, there was no cast-iron guarantee for PDVSA that the government would react as it did (after all, President Lusinchi could have ordered that PDVSA investigate some other option to face the crisis, following the example of, say, PEMEX). Of course, this does not mean that the superior technical knowledge of oil industry managers has not played an important role in the promotion and defense of the programme, because it has. But this acknowledged superiority is not enough to explain the continuity of an extremely expensive and controversial programme that has been based on a single premise - that security of outlet for crude exports can only be achieved through vertical integration abroad - which even a layman could undermine with no great trouble (by pointing out, for instance, that there are crude exporters which do not have such problems even though they are not vertically integrated, on the one hand, and even though they sell approximately the same volume of crudes which are similar to PDVSA's, on the other).

One could argue that the company's task in this regard has been made easier by the precipitous decline of its nominal overseer, MEM. In 1965, this ministry was accurately described as "the most sophisticated and expert state agency which international oil companies have to deal with in any oil-exporting country".<sup>98</sup> Today, it is widely acknowledged - even by MEM personnel - that the ministry is but a shadow of its former self, and that its once-proud heritage is in tatters.<sup>99</sup> This decline has come about through the conjunction of two factors. Firstly, the *de jure* unresolved issue of who was to decide exactly how the oil industry complied with the general guidelines set by the Venezuelan Executive (the issue at the core of the controversy surrounding the validity of Decree 832 after 1976) was *de facto* resolved in favour of PDVSA, with the consequence that MEM has increasingly found itself relegated to the role of

---

<sup>97</sup>Shepsle, 1986: 54.

<sup>98</sup>*The Economist*, October 23, 1965: 411.

<sup>99</sup>*El Nacional*, January 15, 1996: D-12. This, however, is not a new development: in 1980, ministry employees were already complaining in the national press that "a lack of coherent administrative activity [had brought about] a deterioration of the role of the ministry . . . a climate of uncertainty and . . . [an] absence of plans and work programmes (*El Nacional*, March 15, 1980: D-8).

"gathering information to justify policy... initiated in PDVSA".<sup>100</sup> Secondly, the ministry has been greatly debilitated by a mass exodus of personnel (a consequence of the very poor salaries paid in the Venezuelan public sector). The wage differential between Venezuela's private and public sectors was causing problems for MEM even before the nationalisation of the oil industry<sup>101</sup>, but these problems became much more acute after 1976, partly because of PDVSA's urgent requirements for qualified personnel (to substitute those persons that left the industry as a result of nationalisation and to address its shortage of middle management<sup>102</sup>), but mostly because the failure of governmental salaries to keep up with inflation and successive devaluations of the bolívar has made this wage differential enormous.<sup>103</sup> Thus, PDVSA and its affiliates have been able to recruit many persons who would otherwise have 'gone over to (or stayed with) the enemy'. PDVSA's unusual federative structure, with its ample scope for duplication of clerical, administrative support and middle management functions, may have been a very useful aid in the process of absorbing personnel coming over from MEM. No data are available that confirm whether this was indeed the case, but a look at the evolution of PDVSA's workforce reveals that white collar jobs account for all of the increase in total employment registered since 1976, even though the company's more labour-intensive activities (notably exploration) expanded greatly over this period (Figure F6.5.1).<sup>104</sup>

---

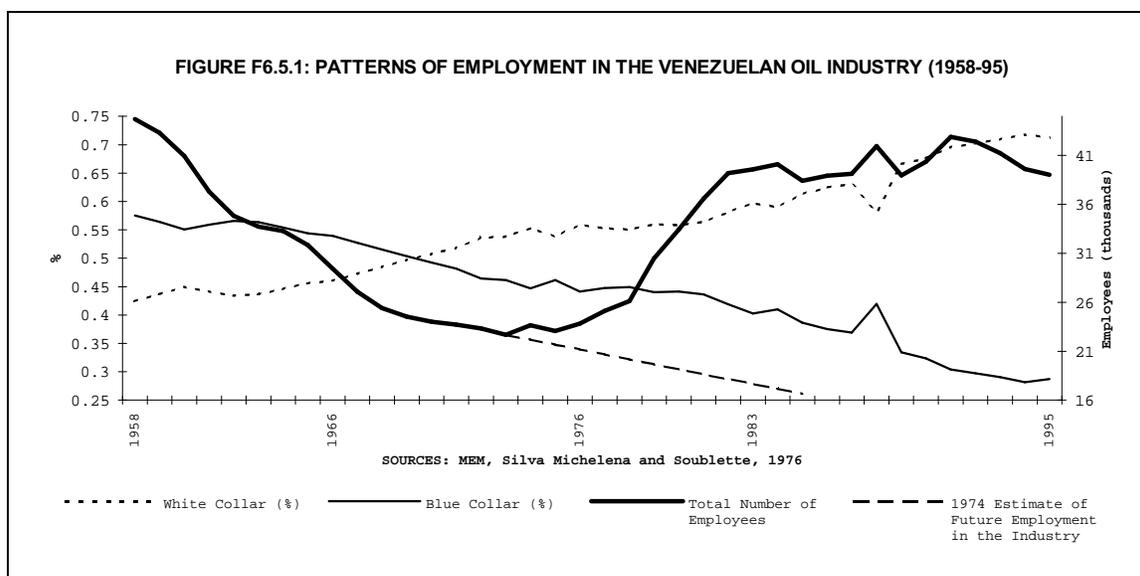
<sup>100</sup>Johnson de Vogeler, *op. cit.*: 215.

<sup>101</sup>"The differences between the level of remuneration for those professionals that work . . . in MEM . . . and those that work in the oil companies is now quite large, and this has made it quite difficult for the Ministry to recruit personnel of an adequate level" (Silva Michelena and Soublette, *op. cit.*: 18; see also Calderón Berti, 1976: 72). Concrete figures on oil industry salaries in the early 1970s can be found in Sáder Pérez, 1972: 236.

<sup>102</sup>A steady trickle of personnel became a haemorrhage during the time in office of Calderón Berti, when 300 qualified persons are said to have left the ministry for the company (Mendoza Pottellá, 1996: 242).

<sup>103</sup>For an official acknowledgment of the problems brought about by the 'remuneration question', see Calderón Berti 1988: 27. In 1984, the president of PDVSA earned 85,000 bolívares, while the president of Venezuela earned 25,000 bolívares. Today, even a middle manager in PDVSA earns more than the President of the Republic (the average yearly compensation paid in 1993 to each one of PDVSA's 23 directors and executive officers - including deferred compensation - came to 250,000 USD; PDVSA b, 1993: 38).

<sup>104</sup>Silva Michelena and Soublette (*op. cit.*) estimated that the secular tendency towards less employment in the industry could only be reversed through renewed exploration activities. After nationalisation, exploration activities increased enormously, but PDVSA's blue collar workforce has continued to decline, as a result of technological improvements and greater productivity.



We think, however, that it is only too easy to overstate the role which MEM's decline has played in the unchecked expansion of the internationalisation programme. After all, those politicians who find themselves as passengers in a mystery tour organised by technocrats are fully capable of recognizing features of the landscape along the way after some time, and to develop some rudimentary sense of direction, regardless of how ignorant they might have been at the beginning of the journey. The assumption that the gullibility of uninformed actors is limitless is the key flaw of supposedly arch-realist, ultra-Machiavellian models of political interaction like the notorious one advanced by Clapmarius in his *De arcana rerum publicarum*. Clapmarius' conception of how some actors may hold on to power by engaging in *simulacra* - the transformation of reality into appearances, of effective power into praises and adulations (*blandimenta*) for its legitimate but dispossessed holders, and of rights into shams (*iura inania*) - rings plausible enough, but it ignores a cardinal rule of common sense; namely, that you can fool most people some of the time, but you cannot fool all the people all the time. This rule makes a Clapmarius model unstable when the *simulacra* in question do not contain at least some grain of truth, as confirmed, for instance, by Kambhu's formalised treatment of the relationships between regulators and regulated firms. Kambhu's model indicates that when false reports to the regulator are undetectable, regulated firms whose reports will be believed will choose to lie. However, when false reports are undetectable, the regulator will disbelieve *all* reports and firms will either adopt a constant strategy that contains no information, or unilaterally disclose additional private information to the regulator.<sup>105</sup> The intuition that disclosure may arise endogenously from the strategic interaction between adversarial actors is of great importance for the case at hand

<sup>105</sup>Kambhu, 1987: 57-82.

because the internationalisation programme has always been dependent upon some sort of external approval to proceed. Thus, we have to conclude that the politicians who have - on successive occasions - consented to the company's overseas expansion, have only done so because they have seen the problem of volumetric insecurity for themselves, and not because they have had blind faith in PDVSA's ability to diagnose market trends (in other words, even though the oil market has not registered turmoil on the scale that shook it in 1986, the Venezuelan political class has suffered the continuous expansion of the programme not because it has heard PDVSA crying wolf, but because it has come face to face with the creature in question).

It is clear, then, that in order for both the bureaucrats at MEM and their overseers to have become convinced of the fact that volumetric insecurity was a real problem, PDVSA would have had to experience genuine - and recurrent - difficulties in its *arm's-length* crude sales after 1986.<sup>106</sup> If one takes PEMEX as a reference (at least up until 1996), it is hard to see why PDVSA's operating subsidiaries should have encountered such problems; after all, the number of occasions when the Mexican NOC has found itself in the position of having to place a crude cargo at any cost (or face shutting some production in) can be counted on the fingers of one hand.<sup>107</sup> But this is where the exotic features of PDVSA's commercial policy come into their own. As has been shown, the contractual relationships of Lagoven, Maraven and Corpoven are distinguished by their vulnerability to opportunism and by the form in which they increase their volumetric uncertainty; this characteristic, inexplicable at first sight, makes far more sense when considered in the context of PDVSA's necessity to convince outside observers that it has serious problems in placing its crude exports. After all, the Venezuelan commercial strategy can, by its very nature, give rise to *random* sales crises: all it takes is for a couple of clients - for whatever reasons - to suspend liftings or lift less on any month, for PDVSA to find itself in a very tight situation, with a number of distressed cargoes on its hands and its storage facilities full to the brim. Needless to say, no records as to the numbers or seriousness of such incidents exist outside PDVSA, but there are reasons to believe that they could be commonplace<sup>108</sup>, and that their

---

<sup>106</sup>PDVSA might actually be in a position to "manufacture" such difficulties by manipulating transfers within its system, but such an action would probably be selfdefeating, because the company's overseers would ultimately get wise on the trick.

<sup>107</sup>Personal interview.

<sup>108</sup>In early 1994, the author was at a meeting with some members of the trading team of one of PDVSA's domestic affiliates, and such was the severity of the placement troubles which their company had encountered in late 1993 and early 1994 that they refused to believe that PEMEX had not had to resort to wholesale discounting to move Maya cargoes at any point in time throughout this period.

recurrence might have served to confirm periodically to the government the necessity to assure its crude exports through the acquisition of overseas refining assets.<sup>109</sup>

Once we have reconciled the coexistence within PDVSA's commercial strategy of mechanisms designed to "buy" volumetric security to coexist with mechanisms that contribute to dissipate it, we can address the few remaining quirks of this strategy. Take the company's dismissive attitude towards financial oil derivatives, perfectly encapsulated in the answer given by a senior PDVSA official when asked what the company thought about risk management ("Why should we hedge for a few pennies a barrel?"<sup>110</sup>). At first sight, this attitude appears quite surprising, since for all the multinational oil companies that PDVSA so keenly aspires to emulate these pennies constitute reason enough to participate in futures and derivatives markets and maintain dedicated risk management and trading teams; it makes far more sense, however, when we think about it in the context of PDVSA's need to convince the government that there is only one good way to protect Venezuela's oil exports: buying refineries abroad.<sup>111</sup>

The reason why PDVSA places sizable volumes of its better quality crudes through integrated channels while relying on the market to sell its heavier blends is also easy to fathom. Firstly, these crudes represented a large proportion of the volume which PDVSA had available for sale from 1982 until 1990 (over this period, Venezuela had to shut-in a sizable amount of heavy crude production capacity to meet its OPEC commitments); secondly, since light and medium crudes command higher prices in the international marketplace than heavy crudes, the former can sustain larger *absolute* discounts and cost imputations without necessarily arousing the suspicion of the taxman. Moreover, PDVSA's incentive to sell its better blends to itself

---

<sup>109</sup>*PIW* (September 11, 1989: 1-2), for instance, once carried a story about the way PDVSA's "cumbersome official posted price system" aggravated the marketing difficulties being experienced by PDVSA during a time of plentiful crude supply ("regular customers . . . turning down contract supplies or asking for lighter grades . . . despite . . . cuts in [PDVSA's] heavy crude export prices"). Coincidentally, this story ran about 40 days before PDVSA managed to convince presidential candidate Carlos Andrés Pérez to back its proposed joint venture with Unocal.

<sup>110</sup>*EC*, 9 August, 1991. Only recently has PDVSA stepped up its involvement with oil derivatives markets, in an effort to hedge its exposure to variations in refining margins: PDVSA's finance coordinator Manuel Urdaneta has said that the company now routinely hedges up to 30 MMUSD worth of oil a day (*EC*, February 16, 1998: 7), although this figure has been disputed by other company officials.

<sup>111</sup>In August 1995, for instance, Maraven introduced a pilot scheme to hedge around 30 MBD of Venezuelan crude and products, using swaps to "lock in margins between crude purchases for refineries in Chicago and Curaçao and the sale of their gasoline, jet and gasoil output, [but not] the price of PDVSA's own production" (*EC*, May 31, 1996: 8; italics ours). Similarly, the company has made no attempt to use derivatives to set up an oil stabilisation fund (like the one proposed in Claesens and Varangis, *op. cit.*), presumably since such a fund would benefit mainly the Venezuelan government.

probably increased after 1987, as new light and medium crude oilfields discovered in 1986 came on stream, and it found itself in a position to export larger volumes of higher-value crudes.<sup>112</sup>

But given that PDVSA could also use its domestic refineries for rent transfer, why has it not invested more in refining plant within Venezuela? After all, marketing activities probably offer a similar scope for tax optimisation and inflation of costs as refining. The crucial difference between these options, though, would seem to lie in that PDVSA's foreign acquisitions can be covered by payments in kind, retained earnings and (most importantly) implicit discounts.<sup>113</sup> Moreover, associating with foreign refiners in financial difficulties has the additional advantage that their tax credits on past capital and operating losses offer another slot to place transferred rents. Indeed, if PDVSA's foreign acquisitions have one serious disadvantage, it is that they are not easy to divest, even when the refineries involved are not very profitable or cannot run much Venezuelan crude. Why? Because divestiture would be a tacit admission on PDVSA's part that it should not have purchased the plant in the first place, and such an acknowledgment could conceivably compromise the rest of the company's overseas operations (since not one of them is really advantageous for the government). Moreover, at least in so far as the company's joint ventures go, divestiture is not really an option, because the company is contractually bound to supply the refineries with crude for periods of 20-25 years.<sup>114</sup>

Finally, we should mention that the apparently nonsensical commercial competition between PDVSA's domestic subsidiaries after 1986 was really a manifestation of the left hand not knowing what the right hand was doing (a consequence of the opacity of the company's commercial operations), rather than - as was the case before 1982 - a fratricidal struggle between rival companies bent upon being "king of the hill". In the early 1980s, a technical trading committee (composed of the trading managers of the operating companies and the PDVSA coordinator for international trading and his support staff) had solved the problem of inter-affiliate competition by assigning clients and potential markets to Lagoven, Maraven and

---

<sup>112</sup>Indeed, after PDVSA's joint venture with Union Pacific was announced, an official in a major oil company remarked that PDVSA appeared "to be walking away from its decade-old strategy of developing a long-term clientele for hard-to-market heavy crudes" (*PON*, March 13, 1987: 2). A senior official at Interven tellingly revealed that this change of emphasis was due to PDVSA's discovery of large new accumulations of light crudes (*LL*, December 8, 1987: 8).

<sup>113</sup>As *Platt's* notes, "the bulk [of PDVSA's] purchases have been financed with crude deliveries, and . . . [debt-centred] financial strategies which amount to leveraged buyouts" (*PON*, November 7, 1989: 3), since Citgo's chosen "debt instruments impose significant restrictions on [its] ability to incur additional debt, place liens on property [and] sell . . . fixed assets" (Citgo S3/A1, 1996: 11). It is also quite telling that Sosa Pietri once defended the internationalisation programme in the following terms: "all of PDVSA's foreign investments can be financed externally, which means no resources within Venezuela are being diverted from essential social and infrastructure projects" (*PON*, April 4, 1990: 3).

<sup>114</sup>PDVSA has been able to reduce the amount of Venezuelan crude it sends to Ruhr, but only because it never signed a long-term supply deal with Veba.

Corpoven on the basis of a number of objective parameters. This committee also had the task of recommending pricing and marketing strategies for the industry to a second committee (composed of the trading directors, the presidents of the operating companies and the PDVSA director in charge of trading), which evaluated and - if necessary - modified them, and then presented its own recommendations to the PDVSA board and MEM for approval.<sup>115</sup> For obvious reasons, this cumbersome system was swamped by increasing market volatility and, after 1986, all the responsibility for operational trading matters reverted to Maraven, Lagoven and Corpoven. Since these companies have no way of knowing how much oil they will be able to sell in a given period - operating as they do under "frame contracts" - they obviously have an incentive to shift as much volume as they can whenever they can, even at the risk of undercutting or displacing their sisters' cargoes.

We have now answered all the questions that we asked at the beginning of this chapter. Indeed, if there is a problem with the picture of the internationalisation programme we have painted so far, it is that it appears to fit together far too neatly. This is a cause for concern because the fact that all the different elements of PDVSA's commercial strategy seem so well suited for increasing the company's share of Venezuela's ground rent at the government's expense could be interpreted as meaning that those responsible for the company's first joint venture in 1982 had an unbelievable foresight, and could accurately predict not only future oil market developments but also the reaction that such developments would elicit from the Venezuelan government and, for good measure, the opportunities that these reactions would open for PDVSA. Such an inference, however, would put us squarely into conspiracy theory territory and we do not want our study to be dismissed as 'the protocols of the Elders of Avenida Libertador'.<sup>116</sup> Once again, though, the quirks, oddities and imperfections that characterise the policy space that we have been focusing on enable us to lay bare the pathways of the programme's history and to prove that it did not spring, Pallas-like, fully grown and armed from a superhuman collective intellect. All we need to remember is that, as Wildavsky says, the events that take place within a dense policy space increasingly determine most of what will happen in that space in the future, with the result that policy eventually becomes its own cause.<sup>117</sup> Thus, PDVSA's deal with Veba was an understandable local adaptation by the holding company and its operating subsidiaries to a variation in their political environment at one point in time (an adaptation selected from the small number of alternatives which offered PDVSA a way to solve the pressing problem of setting funds aside for Orinoco development without accumulating

---

<sup>115</sup>Coronel, 1983: 139.

<sup>116</sup>The street where PDVSA's headquarters are located.

<sup>117</sup>Wildavsky, *op. cit.*: 62-85.

financial reserves). As this environment continued to change for the worse, PDVSA and its operating subsidiaries identified both the desirability to expand the programme (their menu of alternatives being again reduced by the fact that the existence of Ruhr committed them to the policy of downstream integration) and the main obstacles in the way of such expansion (public knowledge about Venezuelan official prices, public concern at the very high cost of the Ruhr joint venture and public opposition to the spending of large sums of money outside Venezuela as long as the country's economic situation continued to be precarious). At the same time, since PDVSA could not modify Venezuelan export prices in order to face increasingly tough competition, and MEM's pricing was not particularly market-responsive, Lagoven, Maraven and Corpoven were forced to defend their market share by giving their clients greater freedom to adjust their liftings (in terms of volume and crude quality) according to market conditions. When the oil market crashed in 1986, PDVSA seized its chance to buy more overseas refineries and to adopt an opaque pricing system. However, its operating affiliates could not revamp their contractual arrangements because, *in the absence of credible price commitments similar to those embodied in the transparent pricing formulae adopted by other crude sellers* (commitments which they could not imitate, given PDVSA's requirement for price opacity), their clients were loath to give up the lifting privileges and flexibility to which they had become accustomed.<sup>118</sup> With these elements - all of which are conducive to problems of adverse selection and opportunism - in place, the internationalisation programme could not but expand as it has (even though there has never been a Master Plan as such behind it). PDVSA's initial success at transferring rent abroad and its resentment at what it considered excessive taxation gave the company powerful incentives to buy more downstream assets (incentives which probably were enhanced from early 1987 onwards, as the operating companies found themselves able to export significant volumes of higher-value crudes due to fortuitous oil discoveries). Moreover, the recurrence of random sales crises furnished PDVSA with numerous opportunities and arguments to convince successive administrations (whose capacity to find fault with the company's logic was undermined by MEM's decline) that it was in their interest to sanction further expansions of the programme. Indeed, the expansion of PDVSA's internationalisation programme is a good example of Rabelais' famous maxim: *l'appétit vient en mangeant*.

---

<sup>118</sup>*PIW*, September 11, 1989: 1-2.

## ANNEXE 7: PDV AMÉRICA FINANCIAL STATISTICS

**TABLE TA7.1:** PDV América. Behaviour of Selected Financial Variables (1992-6)

<i>Income Statement Data</i>					
	1992	1993	1994	1995	1996
Sales	9,178	9,112	9,247	10,522	12,952
Equity in earnings (losses) of affiliates	54	52	55	48	45
Net revenues	9,227	9,193	9,374	10,647	13,071
Income before extraordinary charges and cumulative effect of accounting changes	101	155	205	143	138
Extraordinary gain (charges)	0	0	(2)	3	0
Cumulative effect of accounting changes	(86)	(235)	(4)	0	0
Net income (loss) before tax	(15)	(80)	199	146	138
<i>Balance Sheet Data</i>					
Total assets	3,710	5,138	5,770	6,220	6,938
Long-term debt (excluding current portion)	1,655	2,069	2,155	2,297	2,595
Total debt	1,672	2,117	2,279	2,428	2,755
Shareholder's equity	1,017	1,584	1,812	1,973	2,111

*Source:* PDV América 10-K, 1996

## 7 FINAL REFLECTIONS: THE INTERNATIONALISATION PROGRAMME AND THE POLITICAL OUTLOOK FOR THE NATIONALISED OIL INDUSTRY IN VENEZUELA

We are not interested in the possibilities of defeat; they do not exist.  
Queen Victoria, to A.J. Balfour (1899)

In general, NOCs all over the world have traditionally found it difficult to set up stable institutional arrangements with their respective national governments: good fences might good neighbours make, but few NOCs seem to have proven adroit at fence -building. It is no coincidence that the NOCs that have failed most noticeably in this respect have been companies with large exportable surpluses of crude: this is a logical consequence of the divergences of economic interest that have arisen whenever states (whose priority as landlords is to increase the ground rent they receive for every barrel of oil produced) and their tenant oil companies (which, as capitalist enterprises - regardless of whether they are privately or state-owned -, strive to pay as little ground rent to the landowner as possible) have tried to divide between themselves the invariably large income streams generated by petroleum exports.<sup>1</sup> This fundamental antagonism could conceivably be defused through institutional arrangements that, on the one hand, guaranteed the development of the oil sector (by forcing the government to acknowledge "the legitimacy of profit above and before the ground-rent") and, on the other hand, safeguarded the interests of the landlord state (by forcing tenant companies, in turn, to recognize "the legitimacy of ground-rent"<sup>2</sup>). However, no such producer-rentier compromise has emerged in any of the oil-exporting countries which nationalised their oil concessions in the early 1970s: NOCs in these countries have been squeezed by governments desperate to plug the holes which the combined ravages of Dutch disease, deficitary spending and excessive foreign indebtedness have caused to appear in their respective ships of state (indeed, when one considers the economic interaction between these companies and their home governments, "one is reminded of the hero of Jules Verne's *Around the World in Eighty Days* on his desperate last lap to London, frantically feeding his wooden paddle-steamer to the ship's boiler"<sup>3</sup>).

PDVSA is one of those crude-long NOCs that have found that establishing a stable *modus vivendi* with their home government is no simple matter when "their overhead cost includes the cost of running the whole country".<sup>4</sup> Over the past five years, however, the

---

<sup>1</sup>The conflict between landlord states and tenant oil companies has reared its head in all places where the oil industry has established a foothold, with the sole exception of the US. There, as Mommer (1988: 263) observes, "a stable compromise between the interests of capitalists and landlords with respect to rent . . . was imposed by capital" through a couple of landmark Supreme Court rulings.

<sup>2</sup>Mommer, 1994: 35.

<sup>3</sup>Gustafson, *op. cit.*: 59.

<sup>4</sup>Robinson, 1989 (b): 6.

company has 'come out of the barracks' and has succeeded in undermining - and, in some cases, overturning - the traditional pillars of Venezuelan oil policy (as embodied in the 'oil pentagon'). Thus, after two decades of rent maximisation, restrained output and the exclusion of private capital from oil activities, PDVSA has managed to impose an oil policy predicated on the principles of absolute primacy of profit over ground rent, volume maximisation, low taxation and promotion of - if not outright reliance on - foreign investment (with all the corollaries that these principles imply: the abandonment of Venezuela's OPEC commitments, the application of international prices to the domestic fuels market, the return of the oil majors to the country and, last but not least, the transformation of the government's fiscal oil revenue into a residual function of PDVSA's investment budget<sup>5</sup>). The internationalisation programme has played an important role in this abrupt change of tack because, thanks to the 'success' of the programme, PDVSA became increasingly bold in its dealings with a sequence of ineffectual Venezuelan governments and ended up by usurping many of MEM's tutelary and regulatory faculties (the granting of concessions, the collection of taxes and royalties from concessionaires, the monitoring of activities undertaken by concessionaires, and even the control of private Venezuelan investment in oil). In other words, PDVSA's managers interpreted the fact that they were able to increase with impunity the company's share of Venezuela's petroleum rent in terms of the Leninist maxim which says: 'strike and if you strike steel, pull back; if you strike mush, keep going'.

It is no coincidence that the interval during which PDVSA has gradually become - in deed if not in law - the administrative agency in charge of Venezuela's oil resources and the main intermediary between the oil sector and the rest of the economy, has also witnessed the country's descent into a politico-economic morass which Venezuelans have called the 'latinamericanisation' of the country (i.e. a state of affairs characterised by "economic decline, inflation, currency swings . . . institutional collapse, political decay and a resurgence of personalist politics, growing crime, civil violence, conspiracies and military coups"<sup>6</sup>). Although an in-depth analysis of the circumstances surrounding this process is beyond the objectives of this study, the key milestones of Venezuela's transition from "political darling of the development set" and "textbook case of step-by-step progress"<sup>7</sup> to political and economic basket case merit at least a cursory mention:

[on] Black Friday . . . the currency collapsed, initiating . . . [a] period of depreciation, economic stagnation and inflation. Six years later came the bloody urban riots touched off on 27 February 1989 (27-F), as a spontaneous response to the new government's structural adjustment package. [Then] came the attempted coups of

---

<sup>5</sup>PDVSA's spending in 1990 amounted to 2,520 MMUSD, an increase of 50 per cent on the company's mean annual investment since 1976; in 1991 the figure was 4,050 MMUSD (of which 1,900 MMUSD were financed with debt), an increase of more than 250 per cent on the historic mean. Nowadays, the company is spending the equivalent of 70 per cent of the government's annual budget.

<sup>6</sup>Levine, 1994: 146.

<sup>7</sup>Karl, 1987: 64.

1992, on 4 February (4-F) and 27 November (27-N), the first such in three decades. Further shocks were produced by the impeachment and removal from office of President Carlos Andrés Pérez . . . in May 1993, followed by the December 1993 election of former president Rafael Caldera, who abandoned the party he himself had founded [COPEI] . . . and ran a brilliant campaign to win a 4-way race on an explicitly anti-party platform.<sup>8</sup>

As Levine notes, "at each of these points, a key pillar of the [Venezuelan] system was undermined or removed: (1) economic strength (Black Friday); (2) social pacts, control and civil order (27-F); (3) a depoliticised and controlled military (4-F and 27-N); and (4) unquestioned executive dominance and party hegemony (the downfall of Pérez and the election of Caldera)".<sup>9</sup> The last three points, in particular, heralded the terminal decay of the Venezuelan political system as conceived in 1958 at Punto Fijo, and the appearance of power vacuums which PDVSA was very quick to fill. However, it is clear that Pérez's impeachment (a consequence of the failure of a reform programme based on IMF policies which Pérez had previously denounced as "genocidal"<sup>10</sup>) marked the true turning point for the company: after this event, PDVSA's managers - who, to paraphrase Sosa Pietri, were always "ready to defend the corporation and its fundamental values in the present and future, far from political games"<sup>11</sup> but had never felt confident enough to ride roughshod over MEM - essentially gave up all pretense of consulting, informing or even bothering to dupe the Venezuelan Executive before taking key policy decisions.<sup>12</sup> This change in attitude is readily discernible, for instance, in the manner that PDVSA has unilaterally determined not to stick to Venezuela's OPEC commitments: whereas even as late as 1990, the company had to resort to complex stratagems in order to over-produce<sup>13</sup>, today its managers think nothing of either exceeding

---

<sup>8</sup>Levine, *op. cit.*: 148. For details about these events see Ochoa Antich, 1992; Naím, *op. cit.*; Navarro, 1994; Sonntag and Maingón, 1992.; McCoy and Smith, 1995; L.R. Rodríguez, 1996; Schuyler, 1996; Crisp, 1996.

<sup>9</sup>Levine, *ibid.* To these events one can add the effective collapse of the Venezuelan banking system during 1994 (the cost to the government of bailing out Venezuela's banks was put at 8,500 MMUSD, the equivalent of 12 per cent of GDP).

<sup>10</sup>Sonntag and Maingón, *op. cit.*: 65.

<sup>11</sup>Sosa Pietri, *op. cit.*: 133.

<sup>12</sup>An anecdote recounted by President Velázquez's press secretary is quite illustrative of this: when the matter of PDVSA's 1994 budget came up in the Cabinet meeting of July 8, 1993, Velázquez - aware that tape recorders in Miraflores were registering his words for posterity - complained "that he had called [PDVSA president] Gustavo Roosen at least eleven times to ask for information on the position of the company, without obtaining a response. He added that Mr. Roosen could not ignore that the centre of gravity of the country was the Presidency . . . and that the only reason why he did not depose him immediately was to avoid a national political crisis . . . He also warned that if Roosen wanted this budget to be approved, he would have to defend it in the Cabinet". However, two days later, after Roosen had returned from a trip abroad, Velázquez received him in his private office and, to the surprise of his closest collaborators, "did not give him the dressing down that everybody expected". A short time after this incident, the company's budget was approved by both Cabinet and Congress, without substantial modifications (Escalante, 1994: 9).

<sup>13</sup>As Sosa Pietri unashamedly confessed: in 1990, "we had increased our storage capacity [by buying BORCO and BOPEC ] in order to produce beyond our quota. In this manner, we were preparing for any change in the official strategy or world event [*sic.*] which would permit us to sell above our quota.

Venezuela's quota with enthusiastic abandon or of publicly stressing that the country's production levels will never again be determined by such a quota.<sup>14</sup>

There can be no doubt that the most important manifestations of PDVSA's recent ascendancy over the government have been three programmes (the reactivation of 'marginal' oilfields, the 'strategic alliances' for the commercial exploitation of extra-heavy Orinoco crudes and offshore natural gas fields, and the profit-sharing deals for E&P activities in 'high risk' areas) which have brought about a radical alteration in the structure of property rights prevailing in the Venezuelan oil sector. Although the stated aim of these programmes was to bring back foreign capital to the Venezuelan upstream under favourable terms (supposedly because a cash-strapped PDVSA was in no condition to shoulder all the tasks that needed to be done to ensure Venezuela's permanence in the league of major oil producers), their aims - i.e. those that can be deduced from the contents of contracts, rather than from declarations of intent prepared for public consumption - actually appear to be as follows:

a) To constrain the state in its exercise of its rights *qua* mineral resource owner and sovereign entity: This intention is readily apparent, for instance, in two of the more noteworthy clauses included in PDVSA's strategic alliance agreements. The first one states that the association contract shall include "provisions which will permit [PDVSA affiliates] to compensate . . . foreign shareholders for any significant and adverse patrimonial consequences derived directly from acts or . . . decisions taken by national, provincial or municipal administrative authorities, or by changes in legislation which . . . implied an unjust discriminatory treatment of the [partnership]".<sup>15</sup> The second clause states that "any controversy or claim . . . in relation to the Association Agreement . . . will be resolved . . . by international arbitration, according to the rules of the International Chamber of Commerce of Paris, in the city of New York".<sup>16</sup> Although PDVSA and its subsidiaries maintain that neither clause is detrimental "to the sovereign right to legislate, inherent to the existence itself of the national, state and municipal legislative powers"<sup>17</sup>, the fact that international arbitrators will interpret which

---

This was, precisely, the circumstance that would arise . . . [after] the cruel, savage and unjustifiable invasion of Kuwait by Iraq" (*ibid.*: 171, 168). Much to Celestino Armas' chagrin, Sosa unilaterally hiked Venezuelan production on the very day of the invasion, ostensibly to build up strategic stocks in PDVSA's storage facilities abroad (*ibid.*: 169-71).

<sup>14</sup>MEM's initial position *vis-à-vis* this quote-busting was to deny that Venezuela was breaking its commitments (energy minister Erwin Arrieta resorted to all sorts of unlikely explanations to account for the discrepancies between 'official' Venezuelan figures and those published in secondary sources and, quite conveniently, he also declared that so long as "the figures from the secondary sources [were] used for reference in OPEC's analysis, Venezuela would abstain from giving official figures"; *PON*, May 17, 1996: 2). When even the Venezuelan Comptroller General - on the basis of PDVSA figures - revealed that Venezuela's 1995 production had exceeded its quota by about 600 MBD, the ministry abandoned all pretense of OPEC compliance (*O&GJ*, May 13, 1996: 35). At present, Venezuela is producing approximately 1 MMBD over quota.

<sup>15</sup>*Gaceta Oficial*, September 9, 1993 (35.293): 285.653.

<sup>16</sup>*Ibid.*: 285.654.

<sup>17</sup>*Ibid.*: 285.649.

"decisions taken by national, provincial or local administrative authorities" or which "changes in legislation" qualify as discriminatory under the terms of the agreement represents a significant retrograde step for the Venezuelan government when compared to any other mining law promulgated in the country during this century. In fact, these clauses are a perfect expression of the institutional failure of the Venezuelan nationalisation, and to see why one need only bring to mind the refusal of the Venezuelan government to accept the wording of an article in the draft for the 1943 Hydrocarbons Law which stated that "all concession holders would pay general taxes, of whatever sort, that would equally affect *all* enterprises".<sup>18</sup> As Mommer notes, on that occasion,

the government's viewpoint was . . . very explicit: it claimed the legitimate right of Venezuela, as the resource owner, to [any] excess profits that might accrue in the exploitation [of its oil] . . . Fifty years later [when the Cristóbal Colón LNG project was launched], a state owned oil company, Lagoven, agreed with its foreign partners to deny this right of the nation, i.e., to deny the very essence of nationalisation . . . [It] enshrined this concession . . . by agreeing to compensate [its foreign partners] . . . in the advent of any unfavourable change in the law. [Moreover,] being the guarantor, Lagoven cannot opt out from the partnership.<sup>19</sup>

The 'state control' clauses of the profit-sharing deals appear to be slightly more favourable for the Venezuelan government than those of the 'strategic alliances', but this impression is deceptive, since CVP may exercise its power of veto only when 'national interests' are at stake (a very narrow set of issues - such as the approval of amendments to the minimum work programmes, the approval of extensions to the exploration and development phases, the adoption of production curtailments but not, for instance, the decision on whether a given oil strike merits commercial development - is considered to have any incidence on these 'national interests', however). Moreover, the profit-sharing contracts give private investors the right to exploit any *hydrocarbon reservoirs* which they might discover (as opposed to specific tracts of land). In addition, whereas PDVSA included in both the strategic alliances and the profit-sharing deals include clauses that would allow the Venezuelan NOC to extend the duration of the agreements if output has to be curtailed at any time due to a sovereign decision by the Venezuelan government arising from an international treaty obligation, and to indemnify foreign capitalists if the government increased oil-related taxes<sup>20</sup>, the company did not include any provision that would either guarantee the continuity of operations at the end of agreements or cover any abandonment costs following shut-down. Finally, it is also worth noting that the operating contract, strategic alliances and profit-sharing contracts alike essentially bar the Venezuelan government (i.e. MEM) from coming

---

<sup>18</sup>Mommer, 1994: 26.

<sup>19</sup>Mommer, 1994: 26. The principle of international arbitration was incorporated to the service contract agreements in June 1997.

<sup>20</sup>PDVSA would not have to indemnify its foreign partners if the Venezuelan government increased the *basic* rate of income tax, but it would have to do so if a tax hike were only applicable to hydrocarbons-related activities.

into contact with the foreign investors *other than through the intermediation of PDVSA or one of its subsidiaries*. Thus, PDVSA's role in all of these so-called 'associations' will not be that of a true partner; instead, the company will be serving as a hostage to guarantee the future good behaviour of the Venezuelan government, on the one hand, while also functioning as a tax collector, on the other hand.

b) To introduce, for the benefit of foreign capitalists, a rent-minimising fiscal regime in Venezuela's upstream sector: On average, PDVSA's after-tax cash flow (including the tax-free contribution from its affiliates) has been roughly comparable to the internally generated funds which many multinational oil companies have had available for investment after taxes and the payment of dividends<sup>21</sup>; however, most of the former's managers have always maintained that their sole shareholder appropriates too large a part of the Venezuela's oil export earnings, only to put these resources to spectacularly unproductive uses.<sup>22</sup> The *Apertura*, however, has given them a chance to make good their creed that oil "should be regarded as a tax-generating business like any other".<sup>23</sup> An across-the-board reduction in hydrocarbons taxation to a level similar to that prevailing in the non-oil economy would have been politically impossible to achieve, but PDVSA has contrived to do the next best thing: to reduce dramatically the tax liability of the foreign companies that will be responsible for the bulk of Venezuela's *incremental* and *depletion replacement* output<sup>24</sup> in the years to come. The 'strategic alliances', for instance, are to be taxed at the rate prevailing in the Venezuelan non-oil sector (instead of the usual rate reserved for hydrocarbon-related activities). PDVSA obtained this reduction in 1991, citing the low profitability estimates of LNG and extra-heavy crude ventures; then, in 1993, the company said that additional tax relief - in the form of a reduction in royalty rates - would be needed to make the projects economically feasible (the Venezuelan congress duly approved this reduction when PDVSA argued that, otherwise, the strategic alliances would "go to the back of the queue for international financing"<sup>25</sup>). Similar

---

<sup>21</sup>L.R. Rodríguez, *op. cit.*: 44. PDVSA's earnings have historically been taxed at a much higher basic rate than those of the multinational oil companies. The latter, however, are not entitled to keep 10 per cent of its net export earnings tax free, as is PDVSA. Moreover, PDVSA did not declare a single dividend between 1976 and 1995. Therefore, great concern was expressed when PDVSA, for the first time in its history, declared a dividend amounting to around 800 MMUSD, because this move - repeated in 1997 - was interpreted as marking a resumption of the government's supposedly ingrained tendency to drain PDVSA of funds (*PON*, March 14, 1996: 1). What observers failed to recognize was that, with the disappearance of the FRV, dividends offered the only means in which the company could distribute part of its excess profits to its shareholder. In any case, the amount of money distributed through the dividend was appreciably smaller than the extra net income which PDVSA has obtained as a result of the disappearance of the FRV and the increases in domestic fuel prices.

<sup>22</sup>Actually, it is not unfair to say that these managers believe that the Venezuelan government's "power to tax is, indeed, the power to destroy" (Galbraith, 1976: 111)..

<sup>23</sup>Luis Giusti, quoted in *The Daily Journal*, July 13, 1993: 12.

<sup>24</sup>It is worth remembering that Venezuela will have to replace about 115 MBD of production capacity every year to sustain an output of 3.5 MMBD.

<sup>25</sup>*The Daily Journal*, May 18, 1993: 3. Under the new royalty arrangements, all those projects whose *expected* internal rate of return (IRR) falls below a generous 20 per cent will be able to claim royalty

royalty relief arrangements have now been adopted for both the marginal field operating contracts and the profit-sharing deals.<sup>26</sup>

Foreign investors participating in PDVSA's E&P risk exploration scheme will be liable for one main petroleum-specific contribution, known as the PEG (*Participación del Estado en las Ganancias*, or Participation of the State in the Profits).<sup>27</sup> As its name implies, this contribution will be assessed on the *profits* which the different production consortia eventually realize from their oil exports. This represents a major departure from the traditional Venezuelan fiscal regime, which was predicated on the principle that the state, as the owner of the country's oil, was entitled to claim a certain share of a concessionaire's oil revenues *regardless* of whether the latter made a profit.

The tax situation of the companies participating as operating contractors in PDVSA's marginal field reactivation scheme is that they are only required to pay the non-oil income tax rate on their per-barrel operating fee. This would not be noteworthy if these investors were contractors in the true sense of the word but, as it happens, they are only concessionaires in disguise. The use of this word might seem inappropriate, given that the contractors do not have the liberty to dispose of their crude oil output (which legally remains, at all times, the exclusive property of PDVSA and its affiliates). However, when one considers that their operating fee is indexed to the international price of oil<sup>28</sup> (and, hence, is much more than a simple payment for services rendered), one can see that these so-called operating contracts are in fact production concessions with the added feature that the concessionaires are obliged to sell all of their output to PDVSA at international market prices minus a given percentage.<sup>29</sup> This flexible percentage, in turn, is calculated in such a way that PDVSA can meet all the specific hydrocarbons taxes from which the contractor is contractually exempt (thereby guaranteeing that PDVSA will *always* absorb any increase in hydrocarbon-specific taxes).<sup>30</sup>

---

relief according to a sliding scale formula. If the IRR is below twelve per cent, the royalty will be set at one per cent.

<sup>26</sup>The royalty payments of each project will be calculated casuistically: in theory, the complicated formula used for royalty calculation can yield values in a range going from one to a maximum of sixteen per cent; in practice, since the formula will be a function of the *expected* return of each one the ventures, it is entirely reasonable to suppose that none will pay a royalty appreciably greater than one per cent (see Mommer, 1997).

<sup>27</sup>Crude extracted from the areas offered for risk exploration also has to pay the royalty, but the contracts allow capitalists to request a reduction of the royalty if the *expected* rate of return of the investments which they consider necessary for commercial development is below 20 per cent.

<sup>28</sup>The deflator used to adjust the fee is the Energy Price Index of the US Consumer Price Index for Urban Consumers, which means that the fee varies in harmony with the international price of oil (i.e. with the price of the 'contractor's' outputs, not their inputs).

<sup>29</sup>The service contract agreements with companies that bid successfully in the third bidding round incorporate a clause giving 'operators' first call (*en lieu* of the operating fee) on all crude produced by them.

<sup>30</sup>A fair proportion of the marginal field production has actually come from reserves lying below or adjacent to the dormant fields that were supposed to be reactivated (in other words, from what are,

c) To increase the number of potentially hostile interlocutors which any future Venezuelan government will have to deal with if it decides to take actions affecting the oil industry: The manner in which PDVSA handled the auction of the 10 "high-risk" exploration blocks offered to foreign investors in September 1995 makes it quite clear that the company was far more interested in bringing back foreign oil companies into the country within the shortest possible space of time (regardless of costs) than in obtaining a good deal for the Venezuelan state. For starters, PDVSA made the distribution of profits between the state and its prospective tenants an *object of auction* for the first time in Venezuelan history: the parameter used by the company to judge rival bids was the contribution - expressed as a percentage of pre-tax profits - which foreign investors were prepared to *offer* the Venezuelan state on the first 1,000 MMUSD worth of crude produced in each area. Secondly, PDVSA set a *ceiling* - and not, as one would have expected in any reasonable auction, a *floor* (i.e. a reservation price) - for the PEG at a value of 50 per cent. But perhaps the clearest indication of PDVSA's priorities was the fact that the company had to be *convinced* by prospective investors that it should allow them to include supplementary cash bonuses in their bids, in case an area drew more than one bid offering the maximum allowable PEG (PDVSA's original proposal to Congress did not contemplate the payment of such bonuses).<sup>31</sup>

It is clear, then, that the return of private foreign capital to the Venezuelan upstream under the framework implemented by PDVSA will be bringing modest benefits to the Venezuelan government (much smaller, in fact, than those which it used to obtain from the 1943-vintage concessions). Indeed, it is difficult to avoid the conclusion that, if the policy goals which PDVSA claimed to be pursuing by reopening the Venezuelan upstream to foreign capital were genuine, then these operating contracts, strategic alliances and profit-sharing deals were probably the worst way in which the company could have gone about achieving them (again, 'old-style' concessions would have offered a much superior alternative<sup>32</sup>).

To a large extent, PDVSA has been able to proceed with the *Apertura* because the Venezuelan government has abdicated all responsibility for oil policy in favour of the

---

technically speaking, new reservoirs). The production figures achieved in some of these fields clearly indicate that they are not "marginal" at all. For instance, BP expects that, by late 1998, output in the Pedernales field will reach 100 MBD (*PIW*, March 17, 1997: 8).

<sup>31</sup>In the end, the bidders paid a very respectable sum to PDVSA in bonuses, but the 245 MMUSD which the company received for blocks with a combined area of 17,600 km<sup>2</sup> looks less impressive if one considers that when federal leases in deep waters of the Gulf of Mexico were auctioned in March 1994, various oil companies paid the US government a total of 277 MMUSD in bonuses for a much smaller amount - 7,500 km<sup>2</sup> - of much more challenging acreage (Mommer, 1995: 307). Moreover, in one case, an area which drew the maximum PEG also attracted a bonus offer, which PDVSA graciously refused to disclose or collect because no other bidder had offered the maximum PEG!

<sup>32</sup>Indeed, this is one of the reasons why PDVSA was so anxious to be rid of Article 3 of the 1967 Hydrocarbons Law, which stated that "the terms and conditions in every contract must be more favourable to the Nation than those foreseen by the present law for concessions" (see note 39 below).

company. However, the progress of the *Apertura* policy has not been entirely unrelated to the way in which the company has honed to perfection the tactic of obtaining "the authorization of Congress . . . in flagrant contradiction with Venezuelan law . . . and then . . . [bringing] pressure to bear on the . . . government for favourable legal reforms".<sup>33</sup> Take, for instance, the 'marginal field' reactivation programme. Originally, PDVSA said that private operators would only be allowed to drill appraisal and development wells in their assigned fields, and that any company that wanted to drill beyond the pay zones tapped when the fields were last operating would have to negotiate a new exploration and production contract.<sup>34</sup> Then, PDVSA began to argue that it was in Venezuela's best interest to allow private companies to drill beyond specified contractual depths (this item was duly included in the second licensing round for marginal fields) and, finally, in the third licensing round, the company offered areas which included non-dormant fields (that is, fields which were producing anything from .2 to 12 MBD and, hence, were not in need of reactivation as such). In a similar fashion, the original idea behind the E&P profit-sharing deals was that foreign oil companies with access to funds and advanced technology would be lured back to the country with the offer of equity stakes in some of the more amenable tracts of the Venezuelan upstream sector but only *in exchange* for long-term commitments on their part to participate in the development of the Orinoco belt.<sup>35</sup> After the fall of Pérez, though, these good intentions were forgotten and, instead, the company pushed for and obtained - to paraphrase a PDVSA executive - "a structural reform like the 1943 Law that granted 40-year concessions to the foreign oil companies".<sup>36</sup> And there is a wealth of additional examples confirming the extent to which PDVSA has managed to introduce many key juridical innovations - regarding foreign arbitration, royalty and income tax calculation, allowable duration of agreements and the like - by relying on what Jellinek called *die normative Kraft des Faktischen* (the normative power of the factic), rather than on its ability to sway governmental opinion with what Simón Bolívar called "the most convincing argument of all, truth clean and pure".<sup>37</sup> In this sense, the *Apertura* is a true political descendant of the internationalisation programme. PDVSA presents it as the culmination of a long-term adaptive response to the economic rationality intrinsic to the oil business, which it set in motion when it bought its first refinery overseas<sup>38</sup>; in reality, though, the link between these strategies lies not in an entirely spurious

---

<sup>33</sup>Mommer, 1994: 31.

<sup>34</sup>*O&GJ*, February 24, 1992: 43.

<sup>35</sup>The Pérez administration gave the company permission to explore ways of establishing "a framework that would permit a combination of long-term associations in extra-heavy crudes with E&P deals to develop light/medium crude potential in . . . high risk areas" (*PON*, October 23, 1992: 4).

<sup>36</sup>*PON*, April 8, 1993: 3.

<sup>37</sup>So many, indeed, that they cannot all be explored in detail here. The reader is instead referred to Mommer, 1997.

<sup>38</sup>"At the beginning of the 1980s, PDVSA identified the convenience of pursuing an internationalisation strategy . . . *As a natural complement to this strategy*; at the beginning of [the 1990s], there begins the

imperative to reintegrate the oil industry but in the fact that, just like the internationalisation programme, the *Apertura* was largely made possible by a *modus operandi* which gave PDVSA the wherewithal to conquer steadily larger areas of the oil policy space without alerting the Venezuelan government as to the company's ultimate intentions.

PDVSA's top executives since 1989 have not been greatly concerned by the irregularities<sup>39</sup> that have vitiated the demand-driven privatisation process<sup>40</sup> which the *Apertura* effectively is. Indeed, the actions and declarations of these managers indicate that they see these irregularities as being largely irrelevant when viewed against such positive developments like the remarkable turn in PDVSA's financial fortunes<sup>41</sup>, or the apparent imminence of the company's long-held dream of opening up the Orinoco to large-scale commercial exploitation.<sup>42</sup> Their insouciance is essentially a reflection of the fact that these managers have interpreted "the general level of discontent towards the political system and the representativeness of the traditional and emergent political parties, as well as the widespread disenchantment with the performance of the government and the policies used to face the economic and social crisis"<sup>43</sup> as a tacit mandate to prevent the state (controlled by a political class which they accuse of having squandered the 2 00,000 MMUSD that PDVSA has paid in taxes and royalties since 1976) from placing any more rentistic fetters - taxes higher than those levied on the non-oil economy, production restrictions, limitations on

---

process of *apertura* of the oil business in our country" (quoted by Mendoza Pottellá, 1996: 232; italics ours; see also "Giusti: success in the oil business lies in integration", *Economía Hoy*, April 26, 1995: 8).<sup>39</sup>When, justice Román Duque Corredor repealed articles 2 and 5 of the 1973 Gas Nationalisation Law and Article 3 of the 1967 Hydrocarbons Law in response to Lagoven's request, he *also* annulled Article 1 of the 1973 Law (something which Lagoven had *not* asked for). Although this would appear to render his sentence invalid on grounds of *ultra petita*, not many people in Venezuela have been bothered by this rather important detail (Vallenilla, 1995: 36-42). Interestingly, Duque Corredor is currently PDVSA's legal counsel in a court case surrounding the constitutionality of the company's profit-sharing deals, and he used to be a PDVSA retainer in the late 1970s (see Duque Corredor, *op. cit.*: 9). Moreover, he had expressed all the arguments with which he supported his legal decision in a book published back in 1978 (*ibid.*: 75; 101; 180), so it is probably fair to ask whether his selection to hear this particular case was just a fortunate coincidence for PDVSA.

<sup>40</sup>This *de facto* privatisation process, which has almost completely overturned the Venezuelan legal regime governing oil activities, can be said to have been demand- rather than policy-driven because, rather than result of a deliberate government action and, instead, stemmed from the decisions of a firm that the government has proven unable to control (see Starr, 1989: 23).

<sup>41</sup>Only recently, in an unprecedented gesture of triumphalism, PDVSA declared itself to be "financially the world's foremost oil company" (see "PDVSA: Financially the World's Foremost Oil Company", *PDVSA News*). Although this claim was made by an 'outsider' (the company's main fiduciary officer), the manner in which it was published means that PDVSA takes it seriously. The evidence used to sustain PDVSA's claim was that, among a group of eight major companies (Shell, Exxon, Mobil, Chevron, Amoco, BP, Texaco and PDVSA) the Venezuelan company had the highest ratio of net profits to income, and net profits inferior only to those of Shell and Exxon (companies whose revenues are five times greater than PDVSA's).

<sup>42</sup>It is still true that (to paraphrase a PDVSA executive) "the first 100,000 b/d of reformulated gasoline from bitumen will make Venezuela the largest petroleum province in the world" (*EE*, December 1991: 19).

<sup>43</sup>Maingón, 1995: 191

access to oil-bearing lands, exclusion of foreign capital - on the free development of a vigorous oil sector. Just how legitimate they consider this mandate to be can be gauged from Coronel's comment in the sense that "the crime committed by the 180 -200 politicians which have had the most absolute power during this period is comparable . . . to the war crimes committed by the Nazis during WWII. The difference is that while the latter were hanged, the former live in Miami or in our midst, calm, fat and smiling, without punishment or guilty consciences, thinking that they have a voice and a vote in the society which they destroyed".<sup>44</sup> One might take exception at Coronel's appalling sense of historical perspective, but there is no doubting the intensity of his outrage at the "dramatic failure of [Venezuelan] economic policy under the most favourable conditions".<sup>45</sup> Crucially, most of PDVSA's current management share Coronel's indignation in this regard, and this ideological posture goes a long way towards explaining why their actions in effect deny that the state might be entitled to any benefit derived from oil activities other than the multiplier effects of investment, or why they appear to be so keen on transforming PDVSA into the corporate equivalent of the Prussian army: an oil company with a country attached to it.<sup>46</sup>

Perhaps surprisingly, PDVSA's message that the *Apertura* will herald a new era of prosperity for both the oil industry and for Venezuela as a whole has been well received by Venezuelan public opinion. This is a reflection of the rather uncritical acceptance accorded in this country (as in much of the developing world) to the property rights theory of privatisation propounded by the IMF and other supranational financial organisations. This theory "does not identify any particular conditions or characteristics that might cause public institutions to perform well . . . [and just] says that society would be better off if, instead of meeting approval in the political process, public organisations or their assets were privately owned".<sup>47</sup> The view that "whatever the government does, the private sector can do better"<sup>48</sup> has an obvious appeal in a country like Venezuela, which since 1974 has been the scene for one of the worst cases of fiscal mismanagement ever recorded. However, besides being a mechanism for the realignment of property rights and managerial incentives, privatisation is also a vehicle for the reordering of claims within society, a reordering which can have massive distributive implications (particularly when it affects a quintessentially *public* good like oil rent, which in theory should accrue equitably to the collective which owns the resource that generates the rent). As Paul Starr observes, "privatisation describes a direction of change, but it does not denote a specific origin or destination. Its meaning depends on the point of departure - the public/private balance previously struck in a particular domain. And

---

<sup>44</sup>Coronel, 1996: 2.

<sup>45</sup>Gelb *et. al.*, *op. cit.*: 322.

<sup>46</sup>The title given by Coronel to one of his newspaper articles - "*PDVSA's Venezuela and the Official Venezuela*" - is, unintentionally, quite revealing (Coronel, 1996; italics ours).

<sup>47</sup>Starr, *op. cit.*: 29.

<sup>48</sup>*Ibid.*: 32.

it is a critical question whether moving from public to private in the sense of state to nonstate entails a movement in other senses: from open to closed (in access to information) or from the whole to the part (particularly in the distribution of benefits)".<sup>49</sup> Just how critical indeed this question is can be ascertained by remembering the cases of those firms whose privatisation has only served to perpetuate precisely the worst among the many undesirable characteristics which they developed while they were under state ownership.<sup>50</sup> Unfortunately, the institutional lessons afforded by these firms have made no impact on proponents of the view that a deepening of the privatisation of the Venezuelan oil sector (this time involving the sale of part of the company to shareholders who would, ideally, "limit the role of government in managing PDVSA"<sup>51</sup>) is the only way in which the quantum gains which the company has made since 1990 can be completely secured against the eventuality that a government disenchanted with its allotted share of revenues under the *Apertura* scheme might decide to demand massive tax and/or dividend increases which PDVSA - as material and intellectual author of this scheme - would be in a weak position to resist.<sup>52</sup>

"The theory of property rights", says Starr, "misses the special claims of the public sphere in a democratic society - claims for greater disclosure of information, which should improve the social capacity to make choices, and for rights of participation and discussion, which permit the discovery and formation of preferences that are more consistent with long-term societal interests".<sup>53</sup> In the light of this assertion, we have to ask: will the *Apertura* and its foreseeable sequels lead to an improvement in the capacity of Venezuelans to make choices regarding the development of the oil industry or, by extension, of their country? This is highly unlikely: the *Apertura* - which is merely a reflection of the imbalance of political power between PDVSA and the Venezuelan government rather than of a shared desire by landlord and tenant to create a viable formula for the reconciliation of their interests - has only exchanged a set of remote and unaccountable decision-makers (PDVSA's managers) for the equally remote and unaccountable *nomenklatura* which used to be in charge of the country's oil and development policies. Indeed, the company's long-term business plan is a national development plan in all but name, such is its magnitude relative to the total resources that will be available for the Venezuelan government over the next decade or so.<sup>54</sup> By the

---

<sup>49</sup>Starr, *op. cit.*: 21.

<sup>50</sup>The cases of the Mexican telephone company and the Mexican banking system come to mind.

<sup>51</sup>*EC*, February 7, 1997: 7. Luis Giusti has repeatedly declared that "the *apertura* should lead towards a policy of privatising PDVSA and its affiliates" (*Economía Hoy*, 25-1-1996: 10).

<sup>52</sup>Mommer, 1995a: 12.

<sup>53</sup>Starr, *ibid.*: 42.

<sup>54</sup>Urbaneja (1997), by no means a detractor of PDVSA, nevertheless has this to say about the *Apertura*: "PDVSA has set in motion and got the state to adopt as its own, an expansion plan which is by now irreversible, and which implies a global transformation of Venezuelan society. PDVSA has changed our life, without our knowing it. The public debate which has taken place, in relation to the potential consequences of this plan . . . is ridiculous, both in its volume and quality. And now this country runs to the compass . . . of a programme designed . . . by the oil techno-bureaucracy. It may sound strange

same token, will the *Apertura* permit Venezuelans to make better choices regarding the utilisation of oil rent? Once again, the answer is negative: PDVSA has decided that this rent - which has been, by far, the most important dynamic factor in Venezuela's economic development - constitutes an obstacle in the path of the free development of the oil sector and, hence, should be terminated with extreme prejudice (as has been done in the North Sea).<sup>55</sup>

To conclude, we would like to come back to Lenin's analysis of the political requirements for a lasting agrarian reform in Russia. Plekhanov and his followers argued that the only way in which the restoration of feudal structures after such a reform could be prevented was to preserve the ties that bound certain communities to certain lands, because this would make the transition to a capitalist mode of production less traumatic for the peasantry. In contrast, Lenin wanted to abolish all such ties (i.e. he advocated nationalisation rather than municipalisation). Lenin criticised the Menshevik stance by pointing out that

nationalisation makes it possible to tear down *all* the fences of landownership to the utmost degree, and to 'clear' all the land for the *new system of economy* suitable to the requirements of capitalism. Of course, even . . . [this] affords no guarantee against the return to the old order . . . But such a clearing of the old *system of landownership* will enable the new *system of economy* to become so firmly rooted that a return to the old forms of landownership would be extremely difficult . . . Under municipalisation, however, [such] a return . . . is *easier*, because municipalisation *perpetuates* the 'pale of settlement', the boundary that separates medieval ownership from the new, municipalised form. After nationalisation, restoration will have to break up millions of new, capitalist farms in order to restore the old system . . . After municipalisation, restoration will not have to break up any farms or set up any new land boundaries. <sup>56</sup>

The essence of this criticism is of relevance to our exposition because it seems to us that the 1975 nationalisation of oil in Venezuela was the parallel of the Menshevik's municipalisation: a superficial measure, which left all the old structures derived from the concessionary regime standing (because the state had become highly dependent on the rentier income which those structures generated). In particular, nationalisation never laid down any roots to connect the traditionally isolated oil sector with other sectors of the Venezuelan economy because, as Mommer notes, the Nationalisation Law was "intended to exclude private national capital even more radically than foreign capital" (the exception regime contained in Article 5 was meant to apply only to associations between the state and oil

---

but, in this respect, the situation with the concessionaires was preferable . . . It is unimaginable that Shell, Creole, Mobil, would tell - notify - the Venezuelan state: in ten years, we will duplicate oil production, okay?"

<sup>55</sup>PDVSA is currently preparing a reform the whole of the entire Venezuelan oil fiscal system (not only those parts of it that affect foreign companies); if, as seems inevitable, the companies' proposals become law, the main tenet of Venezuelan oil policy since the early 1930s - that the state is entitled to compensation (i.e. ground rent) for every single barrel of oil exported - will have become a thing of the past. For more details, see Mommer, 1997.

<sup>56</sup>Lenin, *op. cit.*: 328; italics in original.

companies with access to *avant garde* technology).<sup>57</sup> This explains why, after 1982, it was so easy for the Venezuelan government to return to its 'traditional' mode of interaction with the oil industry. However, as our analysis of the internationalisation programme demonstrates, the fact that oil nationalisation in Venezuela was only a skin-deep measure has proved to be a two-edged sword, for the simple reason that it prevented PDVSA and its affiliates from developing any qualms about engaging in the sort of commercial and political behaviour originally adopted by the foreign concessionaires to secure their entrepreneurial freedom against a landlord state intent on putting as many limitations on it as possible (in order to increase its rentier income).<sup>58</sup> Indeed, if the Nationalisation Law had really succeeded in creating a genuinely viable framework not only for the division of oil rent ('reasonable participation') but also for its productive deployment (the 'sowing of oil'), PDVSA would probably not have chosen to become "an integrated global corporation like Shell or Exxon"<sup>59</sup> in the manner in which it has, let alone taken the decision to dismantle single-handedly the legal regime derived from nationalisation in favour of foreign oil companies.

The impressive political gains which PDVSA has achieved over the past five years cannot be the basis for a sustainable equilibrium between rentier and producer interests, for the simple reason that the *Apertura* radically negates the legitimacy of ground rent: it recognises the Venezuelan government's entitlement to tax excess profits generated by the exploitation of a natural resource<sup>60</sup> but *not* its prerogative to demand, as a representative of the owner of that resource (the Venezuelan nation), the payment of a rent in exchange for the right to exploit it. Moreover, the fact that PDVSA has cleared the way for the more controversial aspects of the *Apertura* through a lobbying and propaganda campaign which has very successfully sought to mask these aspects would appear to indicate that the important lessons afforded by the past mistakes of the oil concessionaires have been forgotten by both the Venezuelan NOC and its foreign partners. After all, as Tugwell noted, while the concessionary regime lasted,

---

<sup>57</sup>Mommer, 1993: 14.

<sup>58</sup>As Urbaneja notes, the greatest political difficulty for the nationalisation lay in "getting the oil industry to become impregnated with a public service ethos that combine[d] the pride of an efficient management with the pride of forming part of the state" (1992: 426). After 1982-6, this difficulty in fact became an insurmountable obstacle.

<sup>59</sup>*PON*, March 4, 1990: 3.

<sup>60</sup>However, even this recognition is limited indeed. For instance, a contractual clause in a recent heavy oil joint venture signed by Lagoven, on the one hand, and Veba and Mobil, on the other hand, stipulates that the price of Brent Blend will have to average 27 USD/Bbl (1996 terms) for a period of at least six months before the Venezuelan government is allowed to introduce measures to tax windfall earnings. The price of Brent has not averaged 27 USD/Bbl for six months since late 1985.

the notorious 'policy of silence' and the general secretiveness of multinational corporations . . . [meant] that only forceful and admittedly experimental initiatives seemed to provide policymakers with an accurate sense of the range of choice available to them. How much income could they extract? How much control could they impose? What were the best ways to force government values upon the corporations? These questions could only be answered by continuous experimentation [i.e. through continuous clashes between MEM and the companies].<sup>61</sup>

Of course, before the Venezuelan government could confront PDVSA and its partners as effectively as it opposed the former concessionaires, the Venezuelan political system as a whole would first have to find its feet again (and it does not look as if conditions favourable to such a stabilisation will be materialising any time soon). Nevertheless, some political observers suspect that some decades hence, the *Apertura* will be remembered as just another episode during which the dragon's teeth of future oil strife in Venezuela were planted, rather than as a watershed which saw the laying down of the foundations of a stable oil regime that enabled PDVSA and the Venezuelan government to sow the oil fruitfully at long last.<sup>62</sup> However, we would suggest that the situation is in fact even more serious than this. The *Apertura*, after all, implies the complete abandonment of the fundamental tenet of Venezuelan oil policy: that the state is entitled to compensation (i.e. ground rent) for every single barrel of oil produced for export, over and above income taxes. To a large extent, it is also predicated on the privatisation of PDVSA's operating affiliates<sup>63</sup> (i.e. on the denationalisation of the nationalised oil industry). Thus, everything seems to indicate that, a few years down the road, the Venezuelan state may find itself essentially without oil rent to sow.

---

<sup>61</sup>Tugwell, *op. cit.*: 146-7.

<sup>62</sup>See Vallenilla, 1995.

<sup>63</sup>The Lagoven-Mobil-Veba association contract, for instance, specifies that if Lagoven were to be privatised, then the company would not be held liable for the indemnification of its foreign partners in case the government introduced new hydrocarbons taxes.

## BIBLIOGRAPHY

### Books and Articles

- Adelman, Morris A.  
1972 *The World Petroleum Market*. Baltimore, The Johns Hopkins University Press.  
1984 "International Oil Agreements", *The Energy Journal*, 5, no.3: 1-9.  
1986 "Oil Producing Countries' Discount Rates", *Resources and Energy*, 8: 309-29.  
1989 "Mideast Governments and the Oil Price Prospect", *The Energy Journal*, 10: 15-24.  
1995 *The Genie out of the Bottle. World Oil since 1970*. Cambridge, Mass. The MIT Press.
- Aghion, Philippe and Bolton, Patrick  
1987 "Contracts as a Barrier to Entry", *The American Economic Review*, 77: 388-401.
- Ait-Laoussine, Nordine and Wood-Collins, John  
1988 "Downstream Integration: Myths and Realities", *PIW*, October 3, 1988, special supplement, 4 pp.
- Akerlof, George A.  
1970 "The Market for 'Lemons': Quality Uncertainty and the Market Mechanism", *Journal of Economic History*, 34: 488-500.
- Alcock, Frank  
1992 "The Future of National Oil Companies: the Experiences of PDVSA", *Oxford Energy Forum*, number 9: 9-11.
- Alfonzo Ravard, Rafael  
1981 *Cinco años de normalidad operativa*. Ediciones PDVSA, Caracas.
- Allen, Bruce  
1971 "Vertical Integration and Market Foreclosure: The Case of Cement and Concrete", *Journal of Law and Economics*, 14: 777-95.
- Allison, Graham T.  
1971 *Essence of Decision. Explaining the Cuban Missile Crisis*. Boston, Little, Brown and Company.
- Anglade, Christian and Fortín, Carlos (eds.)  
1990a *The State and Capital Accumulation in Latin America. Volume 2: Argentina, Bolivia, Colombia, Ecuador, Peru, Uruguay, Venezuela*. London, Macmillan.
- Arreaza, Julio César  
1986 "Aspectos históricos y jurídicos", in PDVSA (d), vol. 2.
- Auty, Richard M.  
1988 "Oil Exporters' Disappointing Diversification into Resource Based Industry: the External Causes", *Energy Policy*, 16: 230-42.  
1989 "The Internal Determinants of Eight Oil-exporting Countries' Resource Based Industry Performance", *Journal of Development Studies*, 34: 354-72.  
1990 *Resource Based Industrialization: Sowing the Oil in Eight Exporting Countries*. Oxford, Clarendon Press.  
1993 *Sustaining Development in Mineral Economies: the Resource Curse Thesis*. London, Routledge.

- Bacon, Robert  
 1986 *UK Gasoline Prices. How Fast are Changes in Crude Prices Transmitted to the Pump?* Oxford, Oxford Institute for Energy Studies.  
 1990 *Rockets and Feathers: the Asymmetric Speed of Adjustment of UK Retail Gasoline Prices to Cost Changes.* Oxford, Oxford Institute for Energy Studies.
- Bacon, Robert and Mabro, Robert  
 1990 "Petroleum Products in Europe: Demand, Pricing and Price Behaviour", in Bacon *et al.*, *Demand, Prices and the Refining Industry. A Case-Study of the European Oil Products Market.* Oxford, Oxford University Press: 1-38.
- Baptista, Asdrúbal and Mommer, Bernard  
 1987 *El petróleo en el pensamiento económico venezolano. Un ensayo.* Caracas, IESA.
- Bernstein, Peter L.  
 1993 *Capital Ideas. The Improbable Origins of Modern Wall Street.* New York, The Free Press.
- Bertrand, Robert J.  
 1981 *Canada's Oil Monopoly. The Story of the \$12 Billion Rip-off of Canadian Consumers.* Toronto, James Lorimer & Co.
- Betancourt, Rómulo  
 1956 *Venezuela: Política y Petróleo.* México, Fondo de Cultura Económica.
- Bigler, Gene E. and Vilorio, Enrique  
 1984 "State Enterprises and the Decentralized Public Administration", in Martz and Myers (1986): 183-217.
- Bitar, Sergio and Troncoso, Eduardo  
 1983 *El desafío industrial de Venezuela.* Buenos Aires, Pomaire.
- Blair, John M.  
 1978 *The Control of Oil.* New York, Vintage Books.
- Blair, Roger D. and Kaserman, David L.  
 1983 *Law and Economics of Vertical Integration and Control.* New York, Academic Press.
- Blank, David Eugene  
 1973 *Politics in Venezuela.* Boston, Little, Brown and Co.  
 1986 "Petroleum: the Community and Regional Perspectives", in Martz and Myers (1986): 270-95.
- Brewer-Carías, Alan R.  
 1981 "Aspectos organizativos de la industria petrolera nacionalizada en Venezuela", in Kaplan (1981): 333-432.
- de Bruyne, Dirk  
 1981 "Is Integration Still the Name of the Oil Game?", *PIW*, October 12, special supplement, 2 pp.
- Calderón Berti, Humberto  
 1978 *La nacionalización petrolera: visión de un proceso.* Caracas, [N.P].  
 1983 *Petróleo y opinión pública.* Caracas, Fondo Editorial Oro Negro.  
 1986 *Venezuela y su política petrolera. 1979-1983.* Caracas, Ediciones Centauro.  
 1988 *Oposición y petróleo en Venezuela. Cronología de una gestión errática 1984-1988.* Caracas, Ediciones Centauro.
- Centro de Estudios del Desarrollo (CENDES)  
 1979 *Estudio de prediagnóstico para el plan maestro de ordenamiento territorial del área de la Faja Petrolífera del Orinoco.* Caracas, CENDES.
- Centro de Formación y Adiestramiento de Petróleos de Venezuela y sus Filiales (CEPET)  
 1989 *La industria venezolana de los hidrocarburos.* Caracas, CEPET. 2 vols.

- Chávez, Carlos R.  
1990 *El petróleo en Venezuela 1974-1989*. Caracas, Editorial Torino.
- de Chazeau, Melvin G. and Kahn, Alfred E.  
1959 *Integration and Competition in the Petroleum Industry*. New Haven, Yale University Press.
- Claesens, Stijn and Varangis, Panos  
1994 *Oil Price Instability, Hedging and an Oil Stabilization Fund. The Case of Venezuela*. Policy Research Working Paper 1290. Washington, The World Bank.
- Coase, Ronald  
1937 "The Nature of the Firm", *Economica*, 4: 386-405.
- Colitti, Marcello  
1988 *The Structure of Oil: the Irreversible Partnership*. Roma, ENI.  
1993 "The Need for Reintegration in the World Oil Industry", en *Oil Production Capacity: Investments, Relationships, Policies*. London, Centre for Global Energy Studies.
- Contreras, Jesús María and Thöne, Ulrich  
1996 *PDVSA, Veba Oel A.G. y el mercado petrolero alemán*. Caracas (mimeo).
- Copeland, Thomas, Koller, Tim and Murrin, Jack  
1991 *Valuation. Measuring and Managing the Value of Companies*. New York, John Wiley & Sons.
- Coppedge, Michael  
1994 *Strong Parties and Lame Ducks: Presidential Partyarchy and Factionalism in Venezuela*. Stanford, Stanford University Press.
- Corden, W. Max  
1973 *The Multinational Corporation and International Trade Theory*. Mimeo.  
1982 "Booming Sector and Dutch Disease Economics: Survey and Consolidation", *Oxford Economic Papers*, 34: 359-80.
- Corden, W. Max and Neary, Peter  
1982 "Booming Sector and De-Industrialisation in a Small Open Economy", *The Economic Journal*, 92: 825-48.
- Coronel, Gustavo  
1983 *The Nationalization of the Venezuelan Oil Industry. From Technocratic Success to Political Failure*. Lexington, Mass., Lexington Books.  
1984 "Energía y petróleo: evolución, organización y perspectivas", in Naím and Piñango (1984): 184-97.  
1996 "La Venezuela de PDVSA y la Venezuela oficial", *El Universal* (Caracas), November 19, section 2: 3.
- Crisp, Brian  
1996 "The Rigidity of Democratic Institutions and the Current Legitimacy Crisis in Venezuela", *Latin American Perspectives*, 23: 30-49.
- Cyert, Richard M. and March, James G.  
1963 *A Behavioural Theory of the Firm*. New York, Prentice Hall.
- Danielsen, Albert L.  
1982 *The Evolution of OPEC*. New York, Harcourt Brace Jovanovich.
- Davis, Lance E. and North, Douglass C.  
1971 *Institutional Change and American Economic Growth*. Cambridge, Cambridge University Press.
- Duchesneau, Thomas D.  
1975 *Competition in the US Energy Industry. A Report to the Energy Policy Project of the Ford Foundation*. Cambridge, Mass., Ballinger Publishing Company.
- Duffy-Deno, Kevin T.,  
1996 "Retail Price Asymmetries in Local Gasoline Markets", *Energy Economics*, 18: 81-92.

- Duque Corredor, Román J.  
1978 *El derecho de la nacionalización petrolera*. Caracas, Editorial Jurídica Venezolana.
- Egaña, Manuel, Maza Zavala, D.F., Monsalve Casado, Ezequiel, Córdoba, Armando, Rodríguez Eraso, Guillermo and Sáder Pérez, Rubén  
1971 *Nacionalización petrolera en Venezuela. Intervenciones y debate en el Foro realizado bajo los auspicios del Ateneo de Caracas, del 4 al 25 de mayo de 1971*. Caracas, Monte Ávila Editores.
- Eggertsson, Thraínn  
1990 *Economic Behaviour and Institutions*. Cambridge, Cambridge University Press.
- Ellner, Steve  
1996 "Political Party Factionalism and Democracy in Venezuela", *Latin American Perspectives*, 23: 87-110.
- Elm, Mostafa  
1992 *Oil, Power and Principle. Iran's Oil Nationalization and its Aftermath*. Syracuse, Syracuse University Press.
- Elwell-Sutton, L.P.  
1955 *Persian Oil. A Study in Power Politics*. London, Lawrence and Wishart.
- Emond, Mark  
1988 "Foreign Oil Producers Target Downstream Operations: What It Means to the Oil Industry", *National Petroleum News*, 68: 28-38.
- Engler, Robert  
1961 *The Politics of Oil: A Study of Private Power and Democratic Directions*. New York, Macmillan.  
1977 *The Brotherhood of Oil. Energy Policy and the Public Interest*. New York, Mentor.
- Enright, Michael J., Francés, Antonio and Scott Saavedra, Edith  
1996 *Venezuela. The Challenge of Competitiveness*. London, Macmillan.
- Escalante, Ricardo  
1994 *De la caída de Pérez a la del Banco Latino. Temores e intereses de Ramón Jota*. Valencia (Venez.), Vadell Hermanos.
- Espinasa, Ramón and Mommer, Bernard  
1992 "Venezuelan Oil Policy in the Long Run", in *International Issues in Energy Policy, Development and Economics*, James P. Dorian and Fereidun Fesharaki, eds., Boulder (Colo.): 103-24.
- Evans, John  
1991 *OPEC and the World Energy Market. A Comprehensive Reference Guide*. Harlow, Longman.
- Fesharaki, Fereidun and Isaak, David  
1983 *OPEC, the Gulf and the World Petroleum Market: A Study in Government Policy and Downstream Operations*. Boulder, Westview Press.
- Frank, Helmut  
1966 *Crude Oil Prices in the Middle East*. New York, Praeger.
- Frankel, Paul  
1946 *Essentials of Petroleum. A Key to Oil Economics*. London, Chapman and Hill.  
1953 "Integration in the Oil Industry", *The Journal of Industrial Economics*, 1, number 3: 202-11.  
1966 *Mattei: Oil and Power Politics*. London, Faber and Faber.
- Fudenberg, Drew and Tirole, Jean  
1984 "The Fat-Cat Effect, the Puppy-Dog Ploy and the Lean and Hungry Look", *American Economic Review*, Papers and Proceedings, 72: 361-6.
- Galbraith, John Kenneth  
1976 *Money: Whence It Came and Where it Went*. New York, Bantam Books.

- Gamboa, Argenís  
1974 *Nacionalización del hierro en Venezuela, 1975*. Caracas, Ediciones Centauro.
- Gelb, Alan, *et. al.*  
1988 *Oil Windfalls. Blessing or Curse?* Oxford, Oxford University Press.
- Gillespie, Kate and Henry, Clement M. (eds.)  
1995 *Oil in the New World Order*. Gainesville, University of Florida Press.
- Gómez Calcaño, Luis and López Maya, Margarita  
1990 *El tejido de Penélope. La reforma del estado en Venezuela (1984-1988)*. Caracas, CENDES/APUCV/IPP.
- Gómez Calcaño, Luis, López Maya, Margarita and Maingón, Thais  
1989 *De Punto Fijo al pacto social. Desarrollo y hegemonía en Venezuela (1955-1985)*. Caracas, Fondo Editorial Acta Científica Venezolana.
- González Berti, Luis  
1972 *Contratos de servicio y nuevos aspectos impositivos*. Mérida (Venez.), Universidad de los Andes.  
1982 *La nacionalización de la industria petrolera venezolana*. Caracas, Editorial Jurídica Venezolana.
- Grayson, Leslie E.  
1981 *National Oil Companies*. Chichester, John Wiley and Sons.
- Grossman, Sanford J. and Hart, Oliver D.  
1986 "The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration", *Journal of Political Economy*, 94: 691-718.
- Guevara, Rafael M.  
1983 *Petróleo y ruina: la verdad sobre el contrato firmado entre PDVSA y la VEBA OEL A.G.* Caracas, Ediciones del Instante.
- Gustafson, Thane  
1989 *Crisis amid Plenty. The Politics of Soviet Energy under Brezhnev and Gorbachev*. Princeton, Princeton University Press.
- Hartshorn, Jack  
1962 *Oil Companies and Governments. An Account of the Oil Industry in Its Political Environment*. London, Faber and Faber.  
1993 *Oil Trade. Politics and Prospects*. Cambridge, Cambridge University Press.
- Hausmann, Ricardo  
1991 *Dealing with Negative Oil Shocks: the Venezuelan Experience in the Eighties*. Caracas, Instituto de Estudios Superiores de Administración.
- Hausmann, Ricardo, Powell, Andrew and Rigobón, Roberto  
1993 "An Optimal Spending Rule Facing Oil Income Uncertainty (Venezuela)", in *External Shocks and Stabilization Mechanisms*, Eduardo Engel and Patricio Meller (eds.). Washington D.C., Inter-American Development Bank: 113-72.
- Hay, Donald, and Morris, Derek  
1991 *Industrial Economics and Organization. Theory and Evidence*. Oxford, Oxford University Press.
- Hernández Grisanti, Arturo  
1988 *Petróleo, energía y minas. 1984-1987*. Caracas, MEM.
- Herrera Marcano, Luis  
1986 "La internacionalización petrolera", *Política Internacional*, number 3: 7-8.
- Hirschman, Albert O.  
1970 *Exit, Voice and Loyalty: Responses to Decline in Firms, Organizations and States*. Cambridge, Mass., Harvard University Press.
- Horsnell, Paul, and Mabro, Robert  
1993 *Oil Markets and Prices. The Brent Market and the Formation of World Oil Prices*. Oxford, Oxford University Press.

- International Energy Agency/ Organisation for Economic Co-Operation and Development (IEA/OECD)  
 1995 *Energy Policies of the Russian Federation. 1995 Survey*. Paris, IEA.
- Johnston, Daniel  
 1992 *Oil Company Financial Analysis in Non-technical Language*. Tulsa, Okla., PennWell.
- Jones, Leroy P.  
 1982 *Public Enterprise in Less-Developed Countries*. Cambridge, Cambridge University Press.
- Joskow, Paul  
 1985 "Vertical Integration and Long-term Contracts: the Case of Coal-burning Electric Generating Plants", *Journal of Law, Economics and Organization*, 1: 281-328.
- Kambhu, John  
 1988 "Unilateral Disclosure of Private Information by a Regulated Firm", *Journal of Economic Behavior and Organization*, 10: 57-82.
- Kaplan, Marcos, (ed.)  
 1981 *Petróleo y desarrollo en México y Venezuela*. México, U.N.A.M./Nueva Imagen.
- Karl, Terry Lynn  
 1987 "Petroleum and Political Pacts: the Transition to Democracy in Venezuela", *Latin American Research Review*, 22: 63-94.
- Katzarov, Konstantin  
 1963 *Teoría de la nacionalización, el estado y la propiedad*. México, U.N.A.M.
- Kay, N.M.  
 1992 "Markets, False Hierarchies and the Evolution of the Modern Corporation", *Journal of Economic Behaviour and Organization*, 17: 315-33.
- Kelly de Escobar, Janet  
 1982 "Comparing State Enterprises across International Boundaries: the Corporación Venezolana de Guayana and the Companhia Vale do Rio Doce", in Jones (1982): 103-28.
- Klemperer, Paul  
 1987a "The Competitiveness of Markets with Switching Costs", *Rand Journal of Economics*, 18: 138-50.  
 1987b "Markets with Consumer Switching Costs", *Quarterly Journal of Economics*, 102: 375-94.
- Kreps, David M. and Wilson, Robert  
 1982 "Sequential Equilibria", *Econometrica*, 50: 863-94.
- Lander, Edgardo  
 1996 "The Impact of Neoliberal Adjustment in Venezuela, 1989-1993", *Latin American Perspectives*, 23: 50-74.
- Lawson, Colin  
 1994 "The Theory of State-owned Enterprises in Market Economies", *Journal of Economic Surveys*, 8:283-309.
- Lenin, Vladimir I.  
 1962 "The Agrarian Programme of Social-democracy in the First Russian Revolution, 1905-1907", in *Collected Works*, London, Lawrence and Wishart, v. 13: 217-431.
- Levin, Richard C.  
 1981 "Vertical Integration and Profitability in the Oil Industry", *Journal of Economic Behavior and Organization*, 2: 215-35.
- Levine, Daniel  
 1994 "Good-bye to Venezuelan Exceptionalism", *Journal of Interamerican Studies and World Affairs*, 36: 145-82.

- Lichtblau, John  
 1975 "The Outlook for Independent Refiners to the Early 1980s", in Duchesneau (1975): 297-319.
- Luciani, Giacomo  
 1995 "The Dynamics of Reintegration in the International Petroleum Industry", in Gillespie and Henry, 1995: 21-51.
- Mabro, Robert  
 1987 *Netback Pricing and the Oil Price Collapse of 1986*. Oxford, Oxford Institute for Energy Studies.  
 1989 *OPEC's Production Policies. How Do They Work? Why Don't They Work?* Oxford, Oxford Institute for Energy Studies.
- Macneil, Ian R.  
 1974 "The Many Futures of Contracts", *Southern California Law Review*, 47: 691-816.
- Maingón, Thais  
 1995 "Las elecciones de 1993: cambio o profundización de las tendencias electorales?", *Revista Venezolana de Economía y Ciencias Sociales*, 1: 188-204.
- Maingón, Thais and Sonntag, Heinz R.  
 1992 *Venezuela: 4-F 1992. Un análisis sociopolítico*. Caracas, Editorial Nueva Sociedad.
- Majeed, Izzat  
 1988 "A Response to Commandments Against Downstream Integration", *MEES*, October 31: D1-D3.
- Majone, Giandomenico  
 1989 *Evidence, Argument and Persuasion in the Policy Process*. New Haven, Conn., Yale University Press.
- Malavé Mata, Héctor  
 1987 *Los extravíos del poder. Euforia y crisis del populismo en Venezuela*. Caracas, Ediciones de la Biblioteca de la Universidad Central de Venezuela.
- Maraven (Maraven b)  
 1978 *Perspectiva 1982*. Caracas, Maraven.  
 1982 *Perspectiva 2000*. Caracas, Maraven.
- Martínez, Aníbal R.  
 1987 "The Orinoco Oil Belt, Venezuela", *Journal of Petroleum Geology*, 2: 125-34.
- Martz, John  
 1986 "Petroleum: the National and International Perspectives", in Martz and Myers (1986): 243-270.
- Martz, John, and Myers, David J.  
 1986 *Venezuela. The Democratic Experience*. New York, Praeger.
- Maza Zavala, Domingo and Malavé Mata, Héctor  
 1981 "Aspectos económicos y políticos de la nacionalización de la industria petrolera en Venezuela", in Kaplan (1981): 157-91.
- McBride, Mark E.  
 1983 "Spatial Competition and Vertical Integration: Cement and Concrete Revisited", *American Economic Review*, 73: 1011-22.
- McCoy, Jennifer L. and Smith, William C.  
 1995 "Democratic Disequilibrium in Venezuela", *Journal of Interamerican Studies and World Affairs*, 37: 113-79.
- McLean, John H. and Haigh, Robert W.  
 1954 *The Growth of Integrated Oil Companies*. Boston, Harvard University Press.
- Medina Angarita, Isaias  
 1963 *Cuatro años de democracia*. Caracas, Editora Gema.

- Mendoza Pottellá, Carlos  
 1993 *El poder petrolero y la economía venezolana*. Caracas, UCV.
- 1995 "¿Delenda est . . . PDVSA?", *Revista Venezolana de Economía y Ciencias Sociales*, 1: 267-80.
- 1996 "Apertura petrolera: nombre de estreno para un viejo proyecto antinacional", *Revista Venezolana de Economía y Ciencias Sociales*, 2-3: 225-54.
- Mény, Yves  
 1993 *Les politiques de mimétisme institutionnel. La greffe et le rejet*. Paris, L'Harmattan.
- Mezger, Dorothea (ed.)  
 1981 *Petróleo y ecodesarrollo en Venezuela*. Caracas, ILDIS.
- Mieres, Francisco  
 1981a "El papel del petróleo venezolano en la perspectiva de la crisis energética", in Kaplan (1981): 219-79.  
 1981b "La desnacionalización de la industria petrolera venezolana", in Mezger, ed. (1981): 59-82.
- Mitchell, John V.  
 1996 *The New Geopolitics of Energy*. London, The Royal Institute of International Affairs.
- Mlotok, Paul  
 1994 "The Dis-Integration of the Oil Industry", *MEES*, September 5: D1-D4.
- Molina, José and Pérez, Carmen  
 1994 "Le Venezuela: les élections de 1993. Vers un nouveau système des partis?", *Problèmes d'Amérique latine*, 15: 87-102.
- Mommer, Bernard  
 1981 ""Valores internacionales y los términos absolutos de intercambio del petróleo venezolano, 1917-1977", in *Renta del suelo y economía internacional*, G. Flichman, L. Hagedoorn and J. Stroom (eds.). Amsterdam, Centrum voor Studie en Documentatie van Latijns Amerika (Incidentele Publicaties 19): 23-55.  
 1988 *La cuestión petrolera*. Caracas. Asociación de Profesores de la Universidad Católica de Venezuela/Editorial Tropykos.  
 1989 ¿Es posible una política petrolera no rentista?, *Revista del Banco Central de Venezuela*, 4, number 3: 55-107.  
 1994 *The Political Role of National Oil Companies in Exporting Countries: the Venezuelan Case*. Oxford, Oxford Institute for Energy Studies.  
 1995 "Política petrolera de apertura: los convenios de asociación en crudos livianos y medianos propuestos por el ejecutivo nacional", *Revista Venezolana de Economía y Ciencias Sociales*, 1: 294-310.  
 1996a "Venezuelan Roulette: the PDVSA Umbrella", *Geopolitics of Energy*, 18, number 5: 10-2.  
 1996b "Integrating the Oil: a Structural Analysis of Petroleum in the Venezuelan Economy", *Latin American Perspectives*, 23, num. 3: 132-58.  
 1997 *Venezuelan Oil: from Nationalization to Apertura*. Forthcoming
- Mommer, Dorothea  
 1974 *El estado venezolano y la industria petrolera*. Caracas, Universidad Central de Venezuela.
- Myerson, Roger and Satterthwaite, Mark  
 1983 "Efficient Mechanism for Bilateral Trading", *Journal of Economic Theory*, 28: 265-81.
- Naím, Moisés  
 1993 *Paper Tigers and Minotaurs: the Politics of Venezuela's Economic Reform*. Washington, D.C., Carnegie Endowment for International Peace.
- Naím, Moisés, and Piñango, Ramón  
 1984 *El caso Venezuela: una ilusión de armonía*. Caracas, Ediciones IESA.

- Navarro, Juan Carlos  
 1994 *Reversal of Fortune: the Ephemeral Success of Adjustment in Venezuela Between 1989 and 1993*. Caracas (mimeo.).
- Novoa Monreal, Eduardo  
 1979 *La nacionalización del petróleo en Venezuela*. México, UNAM.  
 1981 "Características jurídicas y antecedentes políticos de la nacionalización venezolana del petróleo", in Kaplan (1981): 293-315.
- al-Obaidan, Abdullah and Scully, Gerald W.  
 1993 "The Economic Efficiency of Backward Vertical Integration in the International Petroleum Refining Industry", *Applied Economics*, 25: 1529-39.
- Ocando Arias, Ciro Alberto  
 1980 *La Faja Petrolífera del Orinoco. Evaluación y perspectivas*. Valencia (Venez.), Vadell Hermanos.
- Ochoa Antich, Enrique  
 1992 *Los golpes de febrero: 27-2-89, 4-2-92 (de la rebelión de los pobres al alzamiento de los militares)*. Caracas, Fuentes Editores.
- Offe, Claus  
 1985 *Disorganized Capitalism. Contemporary Transformations of Work and Politics*. John Keane (ed.). Cambridge, Polity Press.
- Olmata, Ángel E.  
 1995 "Forward Integration of the Venezuelan Oil Industry", in Gillespie and Henry, 1995: 307-12.
- Olson, Mancur  
 1971 *The Logic of Collective Action. Public Goods and the Theory of Groups*. Cambridge, Mass., Harvard University Press.
- Palma, Pedro A.  
 1986 "Aspectos económicos y financieros de la industria petrolera nacional, 1976-1985" in PDVSA (d), v.3: 9-77.
- Parra Luzardo, Gastón  
 1981 "El petróleo en la estrategia de transnacionalización del capital", in Kaplan (1981): 113-56.
- Penrose, Edith  
 1968 *The Large International Firm in Developing Countries: The International Petroleum Industry*. London, George Allen and Unwin.
- Pérez Alfonzo, Juan Pablo  
 1967 *El pentágono petrolero*. Caracas, Ediciones Revista Política.  
 1971 *Petróleo y dependencia*. Caracas, Síntesis Dosmil.  
 1981 "Venezuela se acerca a la debacle", in Mezger, ed. (1981): 85-184.
- Perry, Motty K.  
 1989 "Vertical Integration: Determinants and Effects", in R. Schmalensee and R. Willig (eds.), *Handbook of Industrial Organization*, Amsterdam, North Holland, v. 1: 185-255.
- Petróleos de Venezuela S.A.  
 (PDVSA d)  
 1986 *Diez años de la industria petrolera nacional. 1976-1985*. Caracas, PDVSA. 3 vols. (PDVSA e)  
 1992 *Aspectos comerciales de Petróleos de Venezuela y sus empresas filiales*. Caracas, Gerencia Corporativa de Asuntos Públicos para la Coordinación de Comercio y Suministro de Petróleos de Venezuela S.A.
- Petroleum Intelligence Weekly (PIWK)  
 1986 *PIW's Encyclopedia of Netback and Formula Pricing Techniques*. New York, PIW.

- Philip, George  
1982 *Oil and Politics in Latin America. Nationalist Movements and State Companies.* Cambridge, Cambridge University Press.
- Pigou, Arthur C.  
1920 *Economics of Welfare.* London, Macmillan.
- Porter, Michael  
1980 *Competitive Strategy. Techniques for Analyzing Industries and Competitors.* New York, The Free Press.
- Purroy, M. Ignacio  
1982 *Estado e industrialización en Venezuela.* Valencia (Venez.), Vadell Hermanos.
- Quirós, Alberto  
1979 "Energy and the Exercise of Power", *Foreign Affairs*, 57: 1144-66.  
1986 *El diagnóstico de lo imposible.* Caracas, Editorial Ateneo de Caracas.  
1987 "La industria petrolera. Notas para el año 2000", in *Venezuela hacia el 2000*, J.A. Silva Michelena (ed.), Caracas, Editorial Nueva Sociedad: 81-124.  
1992 "Carta a los petroleros", *El Universal* (Caracas), April 23, section 2: 2.  
1993 "La visión unidimensional", *El Universal* (Caracas), June 17, section 2: 2.  
1996 "PDVSA: 1996", *El Universal* (Caracas), January 4, section 2: 2.
- Randall, Laura  
1987 *The Political Economy of Venezuelan Oil.* New York, Praeger.
- Richardson, George B.  
1972 "The Organization of Industry", *The Economic Journal*, 82: 883-96.
- Richardson, J.J.  
1981 "Problems of Controlling Public Sector Agencies: the Case of Norwegian Oil Policy", *Political Studies*, 29: 35-50.
- Rivero, Ramón  
1979 *La OPEP y las nacionalizaciones: la renta absoluta.* Volume 3 of *El imperialismo petrolero y la revolución venezolana.* Caracas, Fondo Editorial Salvador de la Plaza.
- Robinson, M. Silvan  
1989a "Anatomy of Downstream Integration by Oil-producing Countries", *Natural Resources Forum*, 13: 71-4.  
1989b "Real Cost Base of Oil Isn't What You Think", *PIW*, April 3: 6-7.  
1989c "Oil Trading: Yesterday, Today and Tomorrow", in *The Oil Market in the 1990s. Challenges for the New Era. Essays in Honor of John K. Evans.* R.G. Reed III and F. Fesharaki (eds.). Boulder, Westview Press: 162-71.
- Rodríguez, Mario  
1994 "National Oil Companies: the View from Venezuela", in *Économies et sociétés*, 28, number 9: 63-9.
- Rodríguez Eraso, Guillermo  
1986 "Aspectos organizacionales y administrativos", in PDVSA (d), v. 1: 63-139.
- Roeber, Joe  
1984 "The End of Integration", in *Crude Oil and Refining. The Economics, the Politics.* New York, Platt's/McGraw Hill. 12 pp.
- Rose, Richard  
1987 "Steering the Ship of State: One Tiller but Two Pairs of Hands", *British Journal of Political Science*, 17: 409-33.
- Ruptura* (Comisión Ideológica de *Ruptura*)  
1977 *Las ganancias extraordinarias y la soberanía nacional.* Volume 2 of *El imperialismo petrolero y la revolución venezolana.* Caracas, Editorial Ruptura.
- Rusconi, Gian Enrico  
1984 *Scambio, minaccia, decisione: elementi di sociologia politica.* Bologna, Il Mulino.  
1985 *Problemas actuales de teoría política.* México, U.N.A.M.

- Sáder Pérez, Rubén  
 1966 *La empresa estatal y los contratos de servicio*. Caracas, Ediciones CVP.  
 1969 *The Venezuelan State Oil Company Reports to the People*. Caracas, Ediciones CVP.  
 1972 *Hacia la nacionalización petrolera*. Caracas, Síntesis Dosmil.
- Schelling, Thomas C.  
 1960 *The Strategy of Conflict*. Cambridge, Mass., Harvard University Press.
- Schneider, Steven A.  
 1983 *The Oil Price Revolution*. Baltimore, Johns Hopkins.
- Schuyler, Geroge W.  
 1996 "Perspectives on Venezuelan Democracy", *Latin American Perspectives*, 23: 10-30.
- Shepsle, Kenneth A.  
 1986 "Institutional Equilibrium and Equilibrium Institutions", in Herbert F. Weisberg (ed.), *Political Science: The Science of Politics*. New York, Agathon: 51-81.
- Silva Michelena, José Agustín, and Soublette, Félix  
 1976 *Nacionalización petrolera: recursos humanos*. Caracas, UCV.
- Skeet, Ian  
 1989 *Downstream Strategy of Middle East Oil Producers and the Effect on the International Oil Industry*. JIME Seminar, Cairo (February 14, 1989), 10 pp.  
 1995 "Integration and Price Management. Oil Regime Prospects and the Multinational Companies", in Gillespie and Henry, 1995: 297-304.
- Smith, K.V. and Schreiner, J.C.  
 1969 "A Portfolio Analysis of Conglomerate Diversification", *Journal of Finance*, 24: 413-29.
- Sosa Pietri, Andrés  
 1993 *Petróleo y poder*. Caracas, Planeta Venezolana.
- Starr, Paul  
 1989 "The Meaning of Privatisation", in *Privatisation and the Welfare State*. S.B. Kamerman and A.J. Kahn (eds.). Princeton, Princeton University Press: 15-47.
- Stuckey, John  
 1983 *Vertical Integration and Joint Ventures in the Aluminum Industry*. Cambridge, Mass., Harvard University Press.
- Stuckey, John and White, David  
 1993 "When and When *Not* to Integrate", *The McKinsey Quarterly*, number 3: 3-27.
- Székely, Gabriel  
 1983 *La economía política del petróleo en México 1976-1982*. México, El Colegio de México.
- Tahmassebi, Cyrus H.  
 1988 *OPEC's Move into Downstream Integration: Goals and Ramifications*. International Association of Energy Economists 10th Annual North American Meeting, Houston (October 31, 1988), 9 pp.
- Tirole, Jean  
 1988 *The Theory of Industrial Organization*. Cambridge, Mass., The MIT Press.
- Tugwell, Franklin  
 1975 *The Politics of Oil in Venezuela*. Stanford, Stanford University Press.
- United States Senate  
 1952 *The International Petroleum Cartel. Staff Report to the Federal Trade Commission Submitted to the Subcommittee on Monopoly of the Select Committee on Small Businesses, United States Senate*. Washington D.C., Government Printing Office.
- Urbaneja, Diego Bautista  
 1992 *Pueblo y petróleo en la política venezolana del siglo XX*. Caracas, CEPET.  
 1995 "Juego de poleas", *El Universal*, July 3.

- Uslar Pietri, Arturo  
1966 *Petróleo de vida o muerte*. Caracas, Editorial Arte.
- Vallenilla, Luis  
1973 *Auge, declinación y porvenir del petróleo venezolano*. Caracas, Monte Ávila Editores.
- 1995 *La apertura petrolera. Un peligroso retorno al pasado*. Caracas, Ediciones Porvenir.
- Verleger, Philip K.  
1987 "The Evolution of Oil as a Commodity", in *Energy: Markets and Regulation. Essays in Honor of M.A. Adelman*. R. Gordon, H. Jacoby and M. Zimmerman (eds.): Cambridge, Mass., MIT Press: 161-86.
- Vernon, Raymond  
1971 *Sovereignty at Bay. The Multinational Spread of U.S. Enterprises*. London, Longman.
- Viloria, Enrique  
1983 *Petróleos de Venezuela: la culminación del proceso de nacionalización*. Caracas, Editorial Jurídica Venezolana.
- 1992 *Planificación de organizaciones (la experiencia de PDVSA)*. Caracas, Asociación Nacional de Relaciones Industriales.
- Weiner, Robert  
1996 "Middle East Crude Oil Pricing and Risk Management in the 1990s: an Exploratory Investigation", *Journal of Energy Finance and Development*, 1: 21-49.
- Werz, Nikolaus  
1990 "State, Oil and Capital Accumulation in Venezuela", in Anglade and Fortín (1990): 182-210.
- Westerfield, Randolph  
1970 "A Note on the Measure of Conglomerate Diversification", *Journal of Finance*, 25: 904-14.
- Wildavsky, Aaron B.  
1980 *The Art and Craft of Policy Analysis*. London, Macmillan.
- Williamson, Oliver E.  
1979 "Transaction-cost Economics: the Governance of Contractual Relations", *Journal of Law and Economics*, 22: 233-61.
- 1989 *Las instituciones económicas del capitalismo*. México, Fondo de Cultura Económica.
- 1991 *Mercados y jerarquías: su análisis y sus implicaciones antitrust*. México, Fondo de Cultura Económica.
- 1992 "Markets, Hierarchies and the Modern Corporation. An Unfolding Perspective", *Journal of Economic Behavior and Organization*, 17: 335-52.
- Yergin, Daniel  
1991 *The Prize. The Epic Quest for Oil, Money and Power*. New York, Simon and Schuster.
- Zlatnar, Mirjana  
1986 "Venezuela Is Ready for Future Challenges", *OPEC Bulletin*, vol. 16, number 10: 28-36.
- Zysman, John  
1977 *Political Strategies for Industrial Order. State, Market and Industry in France*. Berkeley, University of California Press.

### Theses

Johnson de Vogeler, Susan

1987 *Organizational Adaptation in the Venezuelan Petroleum Industry after Nationalization*. Massachusetts Institute of Technology.

de Lugo, Elba G.

1991 *Venezuelan, Mexican and Brazilian Energy Policies in the 1980s: A Comparative Analysis*. Tulane University.

Rodríguez, Luis Roberto

1996 *The Political Economy of Structural Reform in Venezuela: the Case of Tax Reform 1989-1992*. Oxford University.

Trotta de Godoy, Ana María

1995 *Sobre la problemática actual petrolera y las posibilidades de integrar al petróleo a la economía nacional*. Universidad Central de Venezuela, Centro de Estudios del Desarrollo.

Villalba, Julián Obdulio

1983 *Technology within Nationalized Enterprises: a Study of the Factors Influencing Its Acquisition and Development by the Venezuelan Petroleum Industry*. Massachusetts Institute of Technology.

### Interviews

A number of interviews on Venezuelan oil policy were conducted with executives in major oil companies and in PEMEX, all of who requested anonymity, as did a former Venezuelan executive in one of PDVSA's affiliates who discussed with the other topics related to taxation issues. The only other major interview in the study involved Dr. Alirio Parra, former Venezuelan minister of Energy and Mines.

**Oil Company Audited Annual Reports, Unaudited Reports of Operations, and  
Miscellaneous Forms Submitted to the Securities Exchange Commission  
(10-K, 8-K, 20-F, S-3, 10-12B/A)**

AB Nynäs Petroleum (Nynäs), 1980-94  
Amoco Corporation (Amoco), 1990-5  
Ashland Oil Inc. (Ashland), 1990-4  
Atlantic Richfield Company (Arco), 1990-5  
Chevron Corporation (Chevron), 1990-5  
Citgo Petroleum Corporation (Citgo), 1986-94  
Corpoven, 1980-94  
Lagoven, 1976-94  
Lyondell Petrochemical Company (Lyondell), 1988-94  
Maraven, 1976-94 (Maraven a)  
Meneven, 1976-1985  
Mobil Corporation (Mobil), 1990-5  
Murphy Oil Corporation (Murphy), 1990-5  
PDV América Inc., 1995-6  
Petróleos de Venezuela S.A. (PDVSA a), 1976-93  
Petróleos de Venezuela S.A. 20-F form (PDVSA b), 1992-3  
Petróleos Mexicanos (PEMEX a), 1988-95  
Ruhr Öl GmbH. (Ruhr), 1983-94  
Sun Company Inc. (Sunoco), 1990-94  
Shell Oil Company (Shell USA), 1990-4  
Texaco Inc. (Texaco), 1990-4  
Union Pacific Corporation (Union), 1983-6  
Unocal Corporation (Unocal), 1984-94  
Veba Öl GmbH. (Veba), 1979-93

### Official Statistics

American Petroleum Institute (API), Washington, D.C., API Finance Accounting and Statistics Department.

(a) *Imported Crude Oil & Petroleum Products*, 1983-95

(b) *Basic Petroleum Data Book. Petroleum Industry Statistics*, 1970-95

Department of Energy, Energy Information Administration (DOE/EIA), Washington, D.C., National Energy Information Center.

*Monthly Energy Review (MER)*, 1980-95

*Petroleum Marketing Annual (PMA)*, 1980-95

*Petroleum Supply Annual (PSA)*, 1980-95

International Energy Agency (IEA)/Organisation for Economic Co-Operation and Development (OECD), Paris.

*Quarterly Oil Statistics and Energy Balances (QOSEB)*, 1978-95

*Energy Prices and Taxes (EPT)*, 1978-95

International Monetary Fund (IMF), Washington D.C.

*International Financial Statistics Yearbook*.

Mineralölwirtschaftverband e.v., Hamburg am Main

*Mineralöl-Zahlen (MZ)*, 1982-95

Ministerio de Energía y Minas de la República de Venezuela (MEM), Caracas.

*Petróleo y otros datos estadísticos*, 1976-95

Oficina Central de Coordinación y Planificación (CORDIPLAN), Caracas

*V Plan de la Nación*

*VI Plan de la Nación*

*El Gran Viraje. Lineamientos generales del VII Plan de la Nación*

Organization of Petroleum Exporting Countries (OPEC), Vienna, OPEC Secretariat.

*OPEC Annual Statistical Bulletin*

Petróleos de Venezuela S.A., Caracas.

*Anuario Estadístico (PDVSA c)*, 1984-93

## Periodicals, Newspapers, Trade Journals, Annuals and Encyclopaedias

*The Barrel*  
*Bloomberg Oil Buyers' Guide (BOBG)*  
*The Daily Journal (Caracas)*  
*El Diario de Caracas*  
*Economía Hoy*  
*The Economist*  
*Energy Détente (ED)*  
*Energy Economist (EE)*  
*Energy in the News (EIN)*  
*Enfoque Corporativo*  
*European Energy Report (EER)*  
*Financial Times (FT)*  
*Gaceta Oficial de la República de Venezuela (Gaceta Oficial)*  
*International Petroleum Encyclopedia (IPE)*  
*International Petroleum Finance (IPF)*  
*Lloyd's List (LL)*  
*El Nacional (Caracas)*  
*National Petroleum News (NPN)*  
*National Petroleum News Fact Book (NPNFB)*  
*The New York Times (NYT)*  
*Oil Daily Energy Compass (EC)*  
*Oil&Gas Journal (O&GJ)*  
*Oil&Gas Journal Data Book (OGJDB)*  
*Oxford Energy Forum (OEF)*  
*PDVSA Contact*  
*Platt's Oilgram News (PON)*  
*Platt's Oilgram Price Report (POP)*  
*Petróleos Informa*  
*Petroleum Economist (PE)*  
*The Petroleum Industry Indicators (PII)*  
*Petroleum Intelligence Weekly (PIW)*  
*Der Spiegel (DS)*  
*Tópicos*  
*US Oil Week (USOW)*  
*El Universal (Caracas)*  
*The Wall Street Journal*  
*Weekly Petroleum Argus (WPA)*