
National oil companies in developing producer countries, following the example of the "majors" and the large American or European independents, appear to be tempted by the possibility of internationalizing their activities. But, as with their counterparts in developed countries, not all state-owned oil companies in these countries are in a position to launch themselves on such an adventurous course of action. The trend towards internationalization, largely started in the early 1980s by KPC (Kuwait) and PDVSA (Venezuela), concerns principally, though not exclusively, downstream activities. This can be explained by the fact that these companies already occupy a favourable position upstream and by the existence of a buyer's market in crude oil since 1981.

Les compagnies des pays producteurs en développement semblent, à l'instar des majors et grands indépendants américains ou européens, être tentés par l'internationalisation; mais, comme leurs homologues des pays développés, toutes les sociétés publiques de ces pays producteurs ne sont pas en mesure de se lancer dans cette aventure. Ce mouvement d'internationalisation, qui a pris naissance au début des années 1980 avec principalement les sociétés KPC (Koweït) et PDVSA (Venezuela), a concerné principalement, mais pas uniquement, les activités aval. Cette situation s'explique notamment d'une part par le fait que ces compagnies ont déjà une position favorable dans l'amont et d'autre part par le fait que le marché du pétrole est un marché dominé par les acheteurs depuis 1981.

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The Internationalization of National Oil Companies in Developing Producer Countries

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People who work in the oil industry are very aware of the negative effects of major fluctuations in the international oil market since the early 1980s. After having been dominated by the major international oil companies, and more ephemerally and in a less clear-cut fashion by OPEC, the industry is now seeking new forms of leadership. No alternative solution has yet been found. One area of development, however, lies in the new relations that are being worked out between the oil companies and their host states — relations that will, in time, lead to new forms of market organization and perhaps to a lesser degree of instability. What are the essential features of this recomposition of the oil industry? Two major complementary trends are developing, one affecting Western companies and the other concerning national petroleum companies in the oil-producing countries of the developing world.

After the nationalization of their most profitable upstream assets in the Middle East, the large Western companies, in particular the "majors" (Bourgeois and Perrin, 1987), gave the highest priority to reconstituting their oil reserves. They did so first in their home bases (the United States and the North Sea), and later, after the 1981 fall in oil prices, in other promising non-OPEC areas. Between 1973 and 1981 the share of their total

investment spent on exploration-production rose from 54% to 80% (it was 59% in 1987). Concomitantly, an effort to adapt to the new realities of the petroleum products market also led them to reduce, modernize and convert their refining facilities: from 1973 to 1982, the distillation capacities of these six major companies fell from 23.3 to 13.2 million barrels/day.

As the fall in production of crude oil has apparently been stopped since 1983 and downstream activities have been substantially reduced, the coverage of upstream operations by downstream operations — the rate of integration — has fallen as low as 1.72 in 1987.¹ This reintegration has been accompanied by a process of reinternationalization, which has been large, though normal, for upstream activities, and minor, but more of a departure, for downstream activities. It has involved the initiation of activities in new countries and joint venture agreements with companies in oil producing countries.

Having nationalized the assets of foreign companies, the oil producing countries went on to create national companies of their own, in order to move from a situation of mere legal control to an actual mastery of their resources (thus taking on the role of operator, dealer and exporter of crude oil). This process was uneven, varying from country to country, and is in any case far from finished. However, the control of upstream activities has as yet seldom been accompanied by the development of downstream exporting. Gross exports of refined products from the OPEC countries have increased by little more than 1 million b/d over 10 years (from 1.75 M in 1977 to 2.92 M in 1987), and the net increase — which takes into account the imports of petroleum products — has been even lower. The strategy of setting up source refineries (Angelier, 1988), which was designed to make better use of crude, has in fact had only a limited effect and this is likely to continue in the future. Investment in refining has often been accompanied by substantial extra costs and it is by no means clear that it is a profitable move. Moreover, the industrialized countries have, for economic and political reasons, kept a close watch over refined-product

exports by the OPEC countries.

The decisive factor, however, has been the turnabout in the market for crude. Competition between producers in a buyers' market has led several national companies to acquire refineries and distribution networks in Europe or the US. Such downstream integration abroad was no easy matter, for the original purpose of these state-owned companies was not to develop their activities outside their national territories. Moreover, internationalization calls for an adequate mastery of both refining/logistic techniques and markets, whereas some of these companies are far from controlling the whole of the oil industry in their own countries. Thus the specific dynamics driving decisions in the oil industry are very powerful.

These two major trends — the reinternational-

1/ In this paper the rate of integration is defined as the ratio: sales of petroleum products/petroleum production. An oil company is said to be more integrated the closer are its sales of oil products to its level of crude oil production; i.e., the closer the ratio is to unity.

Western companies, which are "short" on crude, have had ratios of the order of 2, 3 or 4. For companies of this type, when the ratio falls towards 1 they are "reintegrating" themselves; i.e., they are adjusting their upstream and downstream flows into closer balance, notably through a renewed increase in their own oil production. In contrast, the typical structure of oil companies in producer countries, which are "long" on crude, is described by ratios of 0.1 to 0.3. Thus, for these companies, increased integration — an increase in sales of petroleum products relative to crude production — is reflected by an increase in the ratio towards 1.

Our calculations indicate the reintegration of the Western oil companies (as their average integration rate has fallen from 3 to approximately 1.7) and the initial integration of oil companies in producer countries (as their integration rate has increased from the 0.1-0.2 range to the range 0.5-0.6).

Note, however, that the content of the reintegrated industry has not been the same before and after 1973. During the 1950s and 60s, the majors had centralized management of their crude supplies from their own refineries, thus marginalizing spot market sales, which were small compared with the size of the average transaction. In contrast, the management system adopted during the 1970s and 80s tends to give much greater autonomy to refining subsidiaries, reflecting a strategy of decoupling the upstream and downstream.

Inset: National Companies in Several Oil Producing Countries

- **The Kuwait Petroleum Corporation** is particularly important among the companies that have internationalized their activities. It is the only one to have followed the example of the large Western oil companies by internationalizing simultaneously in both the upstream and downstream sectors. Created by a law passed in January 1980, KPC was intended to bring together the entire Kuwaiti hydrocarbon industry, including petrochemicals. It is run by a board chaired by the oil Minister. Its principal subsidiaries are: Kuwait Oil Company (domestic exploration-production of hydrocarbons and exports), Kuwait Oil Tanker Company, Petrochemical Industries Company, Kuwait Foreign Petroleum Exploration Company, Kuwait Santa Fe Braun for Engineering and Petroleum Enterprises, KPS/US Holdings and KPC International NV. KPC International controls the group's downstream activities in Europe, while the three preceding subsidiaries are involved in exploration-production or oil services abroad.

In 1987, KPC's turnover was \$10.1 billion (US) and its net profit \$250 million. The group employed 15,500 people.

- **Petrobras in Brazil**, with a turnover of \$15.6 billion in 1987, is the largest oil company in the developing countries. Like KPC, Petrobras is responsible for the entire national oil industry. The group, with 60,000 employees, is also involved in petrochemicals (Petrobras Quimica or Petroquisa), in fertilizers (Petrobras Fertilizantes or Petrofertil), the sale of alcohol for use as a fuel (Petrobras Distribuidora) and mining (Petrobras Mineração and Petromisa). The efficiency of state enterprises is often questioned in Brazil, but Petrobras has a good reputation abroad. The group is, however, convinced that it still has a lot to learn from its foreign competitors. It has often stood up against the nationalist and protectionist lobbies, which are particularly powerful in Brazil — for example, during the debates concerning the new Constitution in 1988.
- **Petroleos Mexicanos**, set up in 1938 when the oil industry was nationalized, also controls upstream and downstream oil activities, as well as petrochemicals. The effort to develop Pemex over the last 50 years has in many ways been considerable, but it has not yet become a model of efficiency. Although its turnover in 1987 was over \$13 billion — that is, at a level comparable to the companies described above — it employed three times more people than Petrobras and eleven times more than KPC! This illustrates the constraints under which national companies operate in some countries. For Pemex this situation is bound to influence the scope for downstream integration abroad and the strategies it may apply.
- Though smaller than its two Latin American rivals, (with sales of \$8.3 billion in 1987), **Petroleos de Venezuela** also has control over the entire oil sector. In 1978 the government gave it responsibility for petrochemicals (Pequiven) and in 1985 it took charge of the development of coal in Western Venezuela (Carbozulia). At home, PDVSA has often been criticized for what are seen as excessively outward-looking policies. Since the reorganization of the oil industry in 1976, PDVSA has shown itself to be one of the most successful state-owned enterprises within the region. As with Mexico, the Venezuelan government is likely to be very tempted to use PDVSA increasingly as a means of lightening the burden of foreign debt.
- The **Nigerian National Petroleum Corporation** presents quite a different picture. Nigeria joined OPEC in 1971, when it set up the Nigerian National Oil Corporation — which, via the state, took shares of between 60% and 90% in the subsidiaries of foreign oil companies operating in Nigeria (80% in the case of the Shell-BP Consortium). In 1977 the government decided to merge the NNOC with the Ministry of Oil Resources, creating the NNPC, which thus acquired both commercial and regulatory functions. This rather original but somewhat inconsistent formula was apparently not a great success. In 1988 the NNPC once again became a purely commercial enterprise with the basic objectives of intensifying exploration within Nigeria and downstream integration abroad. The human and financial resources available may well be insufficient to achieve these goals. Thus, for example, NNPC has to leave the technical exploitation of Nigerian deposits to foreign companies (Shell, Chevron, Elf, Mobil, Texaco, Agip, Ashland, Panocean, Tenneco, Phillips).

Inset (Cont'd.)

The Libyan oil industry has also undergone a major reorganization recently. In 1988 the National Oil Corporation, the Libyan Arab Foreign Investment Company and the Libyan Arab Foreign Bank set up the Oil Investments International Company, more commonly known as Oil Invest. The aim of Oil Invest is to supervise Libyan energy investments abroad, particularly in refining and distribution. Its main asset is an 85% stake in Tamoil, which operates in Italy. During the third quarter of 1989 Tamoil acquired a 50% stake in a distribution company called Bortolatti and Co., bringing the level of its Italian sales to 5 Mt/yr (*Pétrostratégies*, 1989a).

In the Middle East, in addition to KPC, the Abu Dhabi National Oil Company (ADNOC) should also be mentioned. The legislation setting it up in 1971 stipulated that the company should control all of its upstream and downstream oil activities (including petrochemicals), both at home and abroad. In January 1973 ADNOC took a 25% share in the two concession-holding companies operating in the Emirate and then gradually enlarged its activities. The Abu Dhabi oil industry has not escaped the tendency towards restructuring to which crude oil producers have in general been subject: as of June, 1988 the oil Ministry and the management of ADNOC have been merged to form a new organization called the Supreme Oil Council.

- Since 1987 Saudi Arabia has undertaken a major reorganization of its oil industry, which (as of December 1989) is not yet over. It involves:
 - an attempt to increase productivity, particularly labour productivity;
 - the “Saudi-ization” of personnel, as well as of purchases of materials and services;
 - greater autonomy in the management of subsidiaries and responsibility of their directors to the Ministry of Oil and Natural Resources;
 - an increased presence on international markets, particularly through the acquisition of downstream assets and a more active commercial policy in terms of sales of crude and products; and
 - an increased allocation of production to guaranteed outlets.

The increased presence in foreign downstream markets will be achieved by encouraging cooperation (through joint ventures) with leading Western oil companies.

Because the Saudi authorities are usually very discrete in regard to detailed information about their oil industry and its strategic orientations, it is difficult to forecast future developments. Nevertheless the following features seem likely: Saudi Aramco will probably be responsible for developing exports, as well as the domestic development and production of crude; Sarco will manage the joint venture with Texaco in the US; Saudi Petroleum International will sell the crude in the Atlantic zone; finally, Samarec (the most recent subsidiary to be set up) will control refining and sales of petroleum products at a national and international level. The oil Minister, Mr M.H. Nazer, is Chairman and Managing Director of this new organization.

alization of Western producers and the initial extension of state-owned companies in oil-producing countries beyond their own frontiers — involve vertical integration for individual companies. However, the global oil market remained horizontally non-integrated throughout the 1980s — agreement among competing firms was not sufficiently powerful. Is there likely to be any sort of “barter” at the international level in the 1990s between the leading companies in these two groups, an understanding that would guarantee the one group a greater market share in the

major oil-consuming countries and the other group advantageous terms of access to crude oil from the producer countries? While it is too early to answer such a question, it is nonetheless useful to review the present recomposition of the industry. Since the situation of the Western companies has been well covered in the relevant literature,² the objective of this paper is to exam-

2/ See such publications as *Petroleum Intelligence Weekly*, *Oil and Gas Journal*, *Petroleum Economist* and *International Petroleum Finance*.

ine the strategies of several major state-owned companies (see Inset) that have internationalized their upstream and, especially, downstream activities.

1. The Internationalization of Exploration-Production Activities

Only two national companies — the Kuwait Petroleum Corporation (KPC) and Petrobras — have been active internationally in their exploration and production.³ These companies, and the countries in which they are found, differ in ways relevant to this discussion. However, there are also similarities in the international strategies of Petrobras and KPC, implemented through Petrobras Internacional S.A. (or Braspetro), the Kuwait Foreign Petroleum Exploration Company (KUFPEC) and Santa Fe International Corporation.

1.1 KPC and Petrobras: Substantial Differences

The international activities of KPC and Petrobras differ in terms of their starting date, their motivation, the manner in which they were implemented and the limits imposed by the state.

Braspetro was set up and began operations in 1972. In 1972-73 it was actively exploring in Iraq, Madagascar and Columbia and had signed agreements in Egypt and Iran (Braspetro, 1974, p.4). Throughout the 1970s Petrobras was to remain the only national oil company to play this role, until it was joined by KPC in 1981. KPC was created in 1980 through a reorganization of the Kuwaiti oil industry. In 1981 it set up KUFPEC as a wholly-owned subsidiary in charge of exploration and the production of hydrocarbons outside Kuwait.

Since Brazil was an oil-importer and had a rapidly rising level of consumption, it had long shown concern about its supply situation. Petrobras was set up in 1953 in order to exploit domestic resources as intensively as possible. The creation of Braspetro in 1972 was a useful extension of this overall strategy. The discovery of hydrocarbons abroad allowed Petrobras, and therefore Brazil, to benefit from supplies of rea-

sonably-priced crude. The other objective of Braspetro, the diffusion of Brazilian techniques, earned and saved hard currency (Le Conseiller Commercial, 1988). In this way, Braspetro helped to reduce the country's dependence on energy from abroad and to increase export revenue.⁴

The situation is quite different in Kuwait, which is *par excellence* an oil exporter. Its abundant reserves and small population could hardly be incentives to invest abroad in order to meet domestic consumption requirements, even in the long term. Its essential motivations were to diversify risk and increase the profitability of KPC, which, since its creation, has modelled itself on the majors. As the oil Minister (who is also Chairman of the oil company) put it in 1983, the strategy of KPC is based on integration and diversification. In order to diversify risk and ensure sound future prospects for profit-making, "KPC has . . . tapped the field of petroleum exploration which is noted for its high economic return and its importance throughout the industry" (KPC, 1983, p.9). Thus, the minister went on to explain, "day by day, Kuwait Petroleum Corporation is becoming more firmly established, steadily advancing to assume its position in the forefront among major oil companies, establishing itself as a major economic force and emerging as the pioneer in the preservation of Kuwait's oil interests in the various regions of the world" (KPC, 1983, p.11).

There are, of course, costs involved in such a strategy. Although the managers of KUFPEC have taken pains to stress the strictly commercial nature of their activities, rapid growth in their

3/ A possible additional one is Petroleos de Venezuela, which, according to the *OPEC Bulletin* (January 1989), is to launch an exploration-development program off Aruba in the Dutch West Indies.

4/ The setting up of Braspetro also served a political objective, the desire to promote South-South cooperation. Brazil is in a position to contribute to the development of other developing countries. Note also that the original aims of Braspetro included foreign operations in refining, distribution of petroleum products and transportation of crude. As will be discussed below, the downstream part of the program was never developed.

production (an estimated 80,000 b/d in the early 1990s, according to *Petroleum Intelligence Weekly* (1989)) has not yet produced satisfying financial results. This is not surprising, since it is no easy matter to build up a portfolio of geographically diverse yet profitable assets in the space of a few years. The necessary condition for the pursuit of this policy is that the group has sufficient financial backing and this has been the case until now.

Since 1962, Braspetro has been the sole vehicle of upstream internationalization for Petrobras and it has never taken over other companies. On the other hand, KPC, partly because it wished to expand rapidly, has had both internal and external growth strategies. In December 1981, the same year that KUFPEC was created, KPC took over the American Santa Fe International Corporation. Within Santa Fe International, Santa Fe Minerals became a second pole for the internationalization of KPC.

Although Petrobras is the older of the two companies, KPC has two major advantages: until now its relations with the state have been excellent, which can by no means be taken for granted (Tetreault, 1985, pp.139-140), and its financial resources have lived up to its ambitions. On the other hand, Petrobras has historically been limited by financial constraints and this has necessarily had repercussions on Braspetro. Often considered as a state within a state, Petrobras has not always been given an easy ride from a coalition of interests that, for a variety of reasons, has advocated greater economic nationalism. Braspetro has nonetheless managed to escape these criticisms, having faithfully achieved the objectives set for it by government. Still, the dismissal of Colonel Ozires Silva, who was president of Petrobras from 1986 until 1988, shows that certain limits must not be overreached.⁵ His fall was a warning to his successors. Thus, for Braspetro, shifting onto a larger scale of operations is likely to be very difficult.

1.2 Some Common Features

Certain aspects of the oil sector have led both KPC and Petrobras, despite their particularities, to adopt converging strategies. Moreover, they

both wish to internationalize their activities and develop their technological know-how and both have sought to diversify the areas in which they carry out their exploration and production activities.

Petrobras and KPC, which control the whole of the oil industry in Brazil and Kuwait, are also the most important companies overall in their respective countries. With a turnover of 15.6 billion US dollars in 1987, Petrobras came twenty-seventh among the 500 major companies outside the US and is first in Latin America. KPC, rated fifty-third in 1987 (but twenty-seventh in 1986) with a turnover of \$10.1 billion, dominates Middle East companies.⁶ Thus the logic of size in the oil industry predisposed these two regional giants to internationalize their activities.

Through its subsidiaries, Brasoil and Brasor Neptun (in association with Neptun Teknologi), Braspetro provides services and technical assistance.⁷ Within Santa Fe International, the Santa Fe Drilling Company has similar functions.⁸ Technical assistance and exploration-production are evidently complementary activities; this involvement in them demonstrates that Petrobras and KPC are serious about the internationalization process they have undertaken.

In coping with extremely varied geological and economic conditions, in their association with the big international oil companies for exploration and development, and in their direct control over activities in industries related to oil

5/ Colonel Silva's declared objective was to give Petrobras a greater degree of autonomy. One of the ways in which this was to be done was by creating a London subsidiary called Petrobras Overseas. The chairman of Petrobras also publicly criticized the Proalcool plan and the Brazilian government's incomes policy (*OPEC Bulletin*, 1988, pp.74-75).

6/ *Fortune* (1988). Note that the data provided by the companies is sometimes slightly altered by *Fortune* so as to make comparisons possible.

7/ These activities also involve refining and petrochemicals.

8/ The third division of Santa Fe International, Santa Fe Braun, looks after the design, engineering and construction of refineries, chemical plants and other installations.

production, both these companies have been striving for technical excellence. They have in fact been successful in this respect. In 1987 Braspetro signed its first contracts in the concessions of the industrialized countries (those of the US and in the Norwegian sector of the North Sea). This can be seen as a reward for its know-how concerning offshore techniques. This technical know-how has already been illustrated in Brazil, where Petrobras had beaten the world record depth for production drilling. The synergy between domestic and international activities is very evident here. Also in 1987, Brasnor Neptun, Petrobras and Statoil signed an important technical assistance contract for the development of a monitoring system in underwater hydrocarbon production. In Angola, Elf Aquitaine has entrusted Petrobras with the task of assembling and installing the main platform at the Palanca field (Braspetro, 1987, pp.20 and 22).

During 1983-84 KUFPEC became an operator, for the first time, on two concessions, one in Tunisia and the other in Bahrain (KPC, 1984, p.29). Santa Fe Minerals has been established for some time now in the US and the North Sea. Lastly, during 1986-87, a time which was hardly conducive to this type of activity, 14 countries in Europe, Africa, the Middle East, Asia and America made use of drilling platforms produced by the Santa Fe Drilling Company (KPC, 1987, pp.39-40).

Since 1962 Braspetro has carried out its activities in more than 20 countries. In late 1987 the company was present in Angola, Columbia, Ecuador, the US and Norway. KPC was present in the US, the North Sea, Australia, Tunisia, Indonesia, China, Italy and the Congo.⁹ Both companies began in the developing countries, and then, as they became more self-confident, acquired assets in the industrialized countries. For KPC this shift of activity was carried out extremely rapidly because of the Santa Fe takeover. This geographical diversification has been the corollary of a very rapid acquisition of a technical know-how, recognized by both KPC's partners and its rivals in the international oil industry.

Exploration and production activities represent, however, only a small part of the interna-

tionalization strategy of state-owned companies from oil-producing nations in the developing world. Most of their efforts have been concentrated downstream. Consider next how this has taken place and the reasons for it.

2. The Internationalization of Downstream Activities

Although it only began less than five years ago, the internationalization of downstream activities (including petrochemicals) has expanded rapidly over the last two years and has been extremely diverse. In order to give a clearer picture of what is happening, each type of initiative examined in sections 2.1-2.5 can be examined in three dimensions:

(1) a sector-based segmentation specifying the main activity upon which the firm intends to focus — refining, the distribution and marketing of petroleum products, petrochemicals or the marketing and sales of petrochemical products; (2) a geographical segmentation: employing the categories used by industrial analysts and consultants, a distinction is made between "closed," "permeable" and "open" countries; and (3) the financial nature of the acquisition, which can reveal the type of control the company is seeking and the strategic objectives involved in downstream internationalization.

With regard to the second dimension, in downstream activities the open countries tend to be located in Europe. The US would seem to be only permeable and Japan closed. However, the degree of resistance of these countries depends on the type of national company attempting to acquire assets.

2.1 Processing and Marketing Agreements Without Acquisition of Assets

This is an extreme case, representing the lowest degree of internationalization. It involves two sub-categories: (a) using a foreign refiner or dis-

9/ Concessions were abandoned in Bahrain, Oman and Tanzania and stakes acquired in Pakistan and South Yemen (KPC, 1987, pp.35 and 39).

tributor in order to have crude oil processed and then returned to the national territory, or (b) selling petroleum products in a foreign country in exchange for a guaranteed fixed profit margin.

This type of agreement may result from a temporary shortfall in refining capacity and the consequent inability to meet the requirements of the country, in terms of refined products (in the case of Nigeria)^{10,11} or of exports (which probably explains the Saudi Aramco-Petronas agreement). Or it may be seen as a means of testing the initial difficulties involved in penetrating foreign markets.

If there is no follow-up by the national company to this type of refining agreement, or to the use of a foreign-controlled distribution network, then it cannot really be seen as the beginning of a downstream integration process. Otherwise even straightforward sales of crude, on a netback basis, could be considered as examples of downstream internationalization.

2.2 Shareholdings in Western Oil Companies

Two examples can be given here. The first received prolonged attention from financial journalists in London. It concerned the Kuwait Investment Office (KIO), which obtained first 3%, then 9% and later 21.8% of the shares of British Petroleum, the market price of which had plummeted after the British government sold off its shares. Later, after a rise in the share price, KIO was required by the British government to sell back 12% of its holding to BP (a \$4.4 billion transaction).

The second, less well-known example may well become a model for joint shareholdings between Western companies and producing countries; in this case, Total CFP and the Abu Dhabi Investment Authority (ADIA) are involved.¹² This type of agreement is clearly intended to make the most of the strong points of each of the partners: a downstream market in an industrial zone (France and Europe) and access to cheap and abundant crude oil deposits in Abu Dhabi. It is not yet clear whether this will be a lasting partnership; however, Total CFP, which already has minority holdings in the subsidiaries

of the Abu Dhabi National Oil Company (ADNOC), is clearly attempting to consolidate its position within Abu Dhabi — a country with which it already has a long-standing relationship. The use of Total CFP refineries as an outlet for Abu Dhabi crude is one possibility, though this is not currently being confirmed by trends in supplies from Abu Dhabi to the French market.

For the moment, then, acquiring shares seems to reflect a financial strategy. While it does not call for a very high degree of commitment from the producing countries in terms of human resources, financial involvement might well be the first visible sign of a strategy of cooperation between two companies, including closer supply and processing links between the complementary firms.¹³ This illustrates the possibility of an indirect path towards joint downstream integration.

2.3 Acquisition of Minority Shareholdings in Refining and Distribution Companies

Two countries were found to have adopted this strategy: Mexico and Abu Dhabi. In both cases they have chosen to invest in Spain, which has

10/ The Société Ivoirienne de Raffinage (47.3% owned by the Ivory Coast government, 10.3% by Shell, 10.1% by BP, 8% by Mobil, 5.4% by the Burkina Faso government, 3.7% by Texaco, and 0.1% by Exxon) will process 750,000 t/yr of Nigerian crude for Chevron over the period 1987-89. This contract represents 30% of the effective 2.6 million t/yr capacity of the Ivory Coast refinery in Vridi. A new refinery unit at Port Harcourt (Nigeria) will start to compete with the Ivory Coast refinery in this part of Africa in 1989 (*Le Pétrole et le Gaz Arabes*, 1987).

11/ Mexico had a net deficit in terms of lubricants at the end of the 1970s. In order to maintain availability in the corresponding products, Pemex and Cepsa signed an agreement under which Pemex delivered crude oil in exchange for a quantity of lubricants up to a maximum of 35,000 t³ (Perrin, 1988).

12/ The Abu Dhabi Investment Authority acquired 5% and then 10% of the capital of Total CFP in 1987 and 1988 respectively.

13/ In the case of ADNOC, statements from company leaders (see below) suggest quite clearly that the financial link is only one stage in a more ambitious project.

been attracting a lot of attention because of its policy of welcoming international companies (with 1992 in view) and the growth rate of its gasoline market.

In 1979 and then later in 1988, Petroleos Mexicano bought shares of two Spanish refineries: Petronor and Repsol.¹⁴

In January 1988 the International Petroleum Investment Corporation (IPIC), a state-controlled institution in Abu Dhabi, took a 10% shareholding in CEPSA (an operation which cost some \$110 million). In return, Abu Dhabi will be able to supply 60,000 b/d to CEPSA. The chairman of IPIC clarified the reasons for the move (*Pétrostratégies*, 1988, pp.6-7):

The profitability of downstream oil investment (abroad) may be low compared with conventional investment. Oil investment involves very large sums of money, if a reasonable share and therefore direct influence or control over investment are to be obtained. However, the main reason for such investment is that it is of vital, strategic importance for an oil-producing country that depends entirely on its reserves of crude oil.... Instability on the oil market is bound to last. We are therefore in a better position (to invest), and if we invest with others in the industrialized countries, this will give us the capacity and the opportunity to commercialize our oil on local markets. We must become the owners of certain refining and distribution facilities abroad. If there were to be a price collapse in oil markets, such investment would enable us to sell our production and be less dependent on marketing methods based on (export) contracts.

Two hypotheses can be proposed to explain the logic of this type of downstream integration. It may be a transitional strategy, during which the national company enters into a learning process, enabling it to test its ability to develop the new policy without too great a financial risk. From this standpoint, taking a minority shareholding is only a temporary strategy that will lead either to a much stronger participation or to withdrawal. The other hypothesis is that the companies involved are not front runners and therefore are either unable or not allowed by their administrative supervisors to engage in

any real form of internationalization.

2.4 Establishing Common Downstream Subsidiaries

The fourth approach goes further than those above. The setting up of common subsidiaries implies that responsibility is shared between the two partners, not only in terms of financial management but also in regard to the management of refinery and distribution assets. This joint responsibility remains even if the actual use of assets is, for practical reasons, delegated to one of the two associated companies.

This type of downstream integration is illustrated by several recent agreements:

- Petroleos de Venezuela S.A. (PVDSA) (see Table 1);
- the recent major agreement between Texaco and Saudi Refining Inc (16 June 1988) involving \$1800 million, 600,000 b/d of crude and three refineries in the eastern US; and
- the agreements linking the Nigerian National Petroleum Corporation and Chevron through two common subsidiaries, Hyson and Calson, which will handle the refining of part of Nigeria's crude and sales of petroleum products in West Africa.

NNPC is currently (October 1989) engaged in two negotiations:

- the first one involves a 50% share in a common subsidiary called Nigermid, the other 50% being held by Incomed, a trading subsidiary of Petromed (Spain). The intention is that Nigermid will buy Nigerian crude, refine it (possibly at the Petromed refinery at Castellon de la Plana) and sell the resulting products in Europe;
- the second involves a 49% share in the Coffeyville refinery in Kansas (60,000 b/d), which belongs to the Farmland company (US) (*Pétrostratégies*, 1989b).

The most important feature of these strategies is that both partners must be willing to share the risks: crude prices, technical and political inci-

14/ This involved 34% of one of Petronor's refineries, with a capacity of 80,000 b/d in 1979 and 10% in a Repsol refinery (100,000 b/d) in 1988.

Table 1: The different stages in the internationalization of PDVSA

Year	Partner	Type of assets	Oil outlet (thousand b/d)	Price (million \$)
1983-86	Ruhr Oel subsidiary of VEBA, West Germany	3 refineries + distribution network + 2 pipelines + petrochemical plant	145	110
1986	Nynas petroleum Sweden	refineries + distribution network	30	25
1986	Citgo United States	refineries + distribution network	140	190
1987-88	Champlin United States	refineries + distribution network	160	n.a.

Source: data compiled by the author.
n.a. — not available

dents or accidents, and financial commitments. This shared responsibility is probably one of the reasons why such agreements are politically acceptable to the industrialized countries.

2.5 Total Control of Assets: KPC and PDVSA

For a long time KPC was the only national company to be firmly committed to this line of action. For the moment it prefers to operate in Europe, although the possibility of totally-owned subsidiaries and joint ventures in Asia and Australia are under study.

According to statements made in February 1988 by the president of Kuwait Petroleum International Ltd, the acquisitions shown in Table 2 are the result not only of the medium- to long-term strategy elaborated by KPC at the beginning of the 1980s, but also of the investment possibilities in refining and distribution that were created when Gulf withdrew from Europe.

The acquisition of major distribution networks (4,800 sales points at the end of 1987) and of two refineries (which may be followed by other assets in Europe), appears to fulfil a twin strategic objective: improved exploitation and security of Kuwait's oil production and the desire to bring the international refining-distribution subsidiary (essentially European for the mo-

ment) into financial equilibrium. In order to survive in a very competitive market the subsidiary has to attain the right size.

These medium- and long-term strategic calculations are accompanied by financial and commercial measures worthy of any major Western oil company. They are one of the reasons for the expression: "KPC, the seventh sister."

What is the source of KPC's particularly "Western" business culture? It is probably due to the education obtained by the Kuwaiti elite in English-speaking countries, as well as the widespread consensus and determination (there are, apparently, no internal splits) to use every available financial means as quickly as possible to spread the risks that permanently threaten export income from crude oil. To these could be added the absence of strong macroeconomic constraints affecting Kuwait.

Petroleos de Venezuela (PDVSA), which engaged in downstream integration abroad at the same time as KPC, has, until now, preferred to use joint ventures in which they have an equal share with their partners. A change in this strategy appears to have taken place in 1989, first of all early in the year when the initial 50% shareholding in a refinery at Corpus Christie (Champlin, US) was increased to 100% and then, on 6 November when the same happened with

Table 2: The different stages in the internationalization of KPC

Year	Partner	Type of assets	Oil outlets (thousand b/d)	Price (million \$)
1983	Hoechst West Germany	chemicals	n.a.	n.a.
1983	Gulf Petroleum Inc Bahrain	chemicals	n.a.	n.a.
1983	Gulf Oil Benelux	refining + distribution network	75	150
1983	Gulf Oil Denmark + Sweden	refining + distribution network	70	310
1984	Gulf Oil Italy	refining + distribution network	35	n.a.
1985	Elf Belgium	distribution network	n.a.	n.a.
1986-87	Hays/Ultramar UK	refining + distribution network	70	n.a.
1987	BP Denmark	refining	127	n.a.
1987	Nafta UK	distribution network	n.a.	n.a.
1987	Engrais de Gabès Tunisia	chemicals	n.a.	n.a.
1987	Exp Rio Tinto Spain	chemicals + refining	n.a.	n.a.

Source: Data compiled by the author.

the Lake Charles refinery (Citgo, US). As with KPC, the shift to 100% control of new assets abroad implies not only a desire to be strategically autonomous, but also an ability to manage a more complex oil and financial system.

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A world-wide assessment of downstream integration by national oil companies (see Table 3) shows that the product volumes involved — of the order of 2.5 million b/d — are still small compared with the volume of petroleum products consumed in Western Europe (12.2 million b/d) or in the US (16 million b/d). It also shows

the very unequal development of these companies in terms of downstream integration. Rates vary from less than 20% for the NNPC (Nigeria) to over 100% for PDVSA (Venezuela). In the latter case, a rate of over 100% means that the company has to resort to supplementary purchases of crude in order to meet its refinery requirements.

Operations aimed at downstream integration will probably continue to develop. The volume refined abroad is already greater than the volume of petroleum products exported by these countries (with the exception of Mexico).

In addition, some of the methods used (i.e.,

Table 3: Worldwide rate of downstream integration of national companies (thousands of b/d)

	Kuwait	Saudi Arabia	Libya	Nigeria	UAE	Venezuela	Mexico
Oil production capacity 1979	3300	10800	2500	2500	2000	2400	n.a.
Oil production capacity 1987 ¹	1700	6500	1400	1800	2000	2500	2805
Oil production 1987	972	3975	973	1273	1418	1576	2614
Domestic refinery capacity (distillation) 1987	720	1490	342	243 - 420	162	1258	1955
Domestic production of petroleum products 1987	575	1387	220	139	172	903	1401
Exports of petroleum products 1987	510	865	126	7	114	492	95
Exports of crude oil 1987	511	2623	765	1107	1215	1025	1345
Access to foreign refining ²	133	600 - 886	105	0 - 156	60 - 346	455 - 1355	50
World rate of downstream integration ³	0.9	0.5 - 0.6	0.5	0.2 - 0.4	0.2 - 0.4	1.1 - 1.7	0.8

Source:

Le Pétrole et le Gaz Arabes (1989); OPEC (1987); PEMEX (1987); Williams (1988).

Notes:

UAE = United Arab Emirates

1/ The figure for Mexico was estimated on the basis of the highest year, 1984.

2/ Low figure — author's estimate; high figure — Report by Bob Williams (1988). The high figure corresponds to the total capacity of foreign refining in which the producer country's national company may own only a part of the corresponding assets.

3/ Defined as the ratio of the sum of domestic and foreign refining capacity to actual oil production. Data for 1987; ranges refer to low and high estimates of refining capacity (see note 2).

processing agreements without acquisition of assets, minority acquisitions in upstream assets) could provide transitional strategies, and lead to a move towards other, more stable forms of internationalization. Given the constraints imposed by the length of the initiation phase, the process is thus open to evolution.

One interruption in this trend should, however, be noted. At the beginning of February 1989 Celestino Armas, the new Venezuelan oil minister, prevented PDVSA from continuing its downstream investments abroad and expressed the wish that joint ventures be set up in the Venezuelan petrochemical industries with for-

eign capital.¹⁵ This apparent contradiction occurred just when Venezuela was about to raise \$1 billion on international financial markets by mortgaging PDVSA's exports to the American Citgo and Champlin refineries. Repayment of the loan was guaranteed by sales of Venezuelan crude to these two refineries. Indeed, prior to the February statement, the public stance of PDVSA was very favourable to continuing downstream investment. In April 1988 the company's president, Juan Chacin, had argued that, "If we find other advantageous opportunities to reinforce our market share in petrochemicals abroad, we will pay particular attention to them." Is the new stance a political detour related to particular circumstances, a consequence of Venezuela's debt level, or a fear on the part of political leaders that PDVSA will become progressively less interested in Venezuela?

Conclusion: Internationalization Will Continue

Some oil industry observers believe that the internationalization of national oil companies has reached its limit. According to this point of view, the best opportunities to buy refineries or distribution networks have already been snapped up by companies such as KPC and PDVSA. This, along with other acquisitions, led to a rise in the value of available assets in 1989. Furthermore, not all national companies are in a position to implement a strategy of internationalization. Finally, internationalization is not always advantageous. Current experience is likely to make some firms think twice before launching into any such adventure.

Although these arguments contain an element of truth, the trend towards internationalization will nevertheless continue. There appear to be three crucial arguments in favour of such a view.

First, the leading companies in the movement towards downstream integration have clearly and explicitly stated their intention to increase their commitment in this field. This is the case for PDVSA, even though the company's strategy has been slowed down by the oil minister's intervention mentioned above. KPC, for its part,

already active in Europe, hopes to carry out similar operations in the US and in the Asian market. Saudi Arabia, in the wake of its agreement with Texaco, is considering the possibility of other partnerships and is currently in the process of establishing contacts with several other European and Far Eastern oil companies.

Second, if we assume that oil will remain a buyer's market, at least until the middle of the next decade, the trend towards internationalization is bound to have a snowball effect. For the market share of those producer countries that have not yet adopted such a strategy, or that have developed it to only a minor extent, is being reduced, with the result that they are more or less obliged to react. The case of Nigeria is particularly striking. Competition between Venezuela, Mexico and Saudi Arabia in the US market provides another illustration. Following the signature of the agreement between Coastal and Sinochem in August 1988, the president of the Chinese firm, Zhen Dunxum, declared that the agreement was a step forward in Sinochem's attempts to diversify and reinforce its outlets (Buchan, 1988). Will the two major OPEC producers, Iran and Iraq, remain outside this movement? Will the need to finance their reconstruction without overstepping the quota limits and incurring "reprisals" on the part of other OPEC countries not lead them logically to adopt this roundabout approach?

Texaco's partnership with Saudi Arabia has demonstrated the eagerness of Western oil companies to join in the movement. Texaco's financial difficulties¹⁶ go some way to explaining this, of course. But several dozen firms negotiated with the Saudi authorities or their representatives before Texaco was finally chosen. Elf

15/ Note, however, that two major investments were completed in 1989 by PDVSA (Citgo, 5 November, \$675 million; Unocal, 1 November, 50% of the Lermont refinery-distribution operations); that is, after the announcement by the oil minister at the beginning of 1989.

16/ Recall that Texaco has agreed to pay \$3 billion compensation to Pennzoil in order to end the long and expensive legal battle entered into by the two companies after Texaco bought Getty Oil in 1984.

Aquitaine and Total expressed an interest in such associations with producer countries, though this interest has not yet been given concrete form. In September 1988, the chairman and managing director of Ente Nazionale Idrocarburi (ENI), Mr. Reviglio, revealed that negotiations were under way with two or three major producer countries (Friedman, 1988). The majors, the independents (Coastal) and European firms are thus all looking for opportunities to cooperate.

For Western firms, transferring part of their downstream activities is one way of increasing upstream profits, either by obtaining preferential access for exploration in the producer countries concerned, or else by obtaining crude under favourable conditions. The internationalization of national oil companies discussed in this paper is associated with these attempts by Western companies to reestablish themselves within producer countries. This point of view is shared by the Saudi oil minister who, during a recent conference in London, argued in favour of closer cooperation between the large producer countries and the majors in order to reduce the imbalance between the upstream and downstream assets of these two dominant groups within the oil market. Downstream integration, an expression of the recomposition of the world oil industry, can only continue in the coming years.

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