CEPAL

REVIEW

NUMBER 62
AUGUST 1997
SANTIAGO, CHILE

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UNITED NATIONS

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Reforms in the *oil industry: the* available options

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In the 1990s, a considerable number of countries of the region embarked on substantial changes in their regulations governing the oil industry, with the aim of doing away with public monopolies, promoting competitive markets, and encouraging increased private investment under new forms of contracts. These reforms had a considerable impact on the economic stabilization programmes, since they involved price corrections which helped to reduce fiscal pressures, as well as leading to the restructuring and financial reorganization of public oil companies. The State-centered approach which had imbued public policies up to the 1980s was thus left behind. However, privatization is only one of the possible options. Even more interesting possibilities are opened up by the increasing processes of internationalization of public oil companies through strategic associations among them and also with major oil companies from outside the region. Thus, this article analyses the paradigm behind these reforms and the queries that arise regarding its real applicability, in the light of three main option that are open to the Latin American countries: i) the promotion of strategic associations and the internationalization of public enterprises; ii) a leading role for the State, together with the promotion of private investment, and iii) complete privatization of the industry.

I
Introduction

In recent years there have been substantial changes in the regulations governing the petroleum industry in Argentina, Bolivia, Brazil, Colombia, Ecuador, Peru and Venezuela.

These reforms have deregulated the industry in areas where competition is possible and regulated it in those where competition is not possible. They have also sought to promote foreign investment under new forms of contracts which do not rule out a significant State presence in the largest oil-producing countries (Brazil, Mexico and Venezuela) or even in some countries which are predominantly importers (such as Chile, through the National Petroleum Enterprise, ENAP).

At present, the development of the oil industry is fully in the hands of private capital only in Argentina and Peru, after the privatization of Yacimientos Petrolíferos Fiscales (YPF) and PETROPERU. In Bolivia the privatization of Yacimientos Petrolíferos Fiscales Bolivianos (YPFB) is under way in the form of the investment of private capital, and in Ecuador private investment is welcomed but the State continues to participate on an important scale through PETROECUADOR. In Brazil (PETROBRAS), Colombia (ECOPETROL) and Venezuela (PDVSA), strategic associations are being promoted between the State enterprises and major international oil firms, and only in Mexico is there still a State monopoly, although PEMEX is becoming increasingly internationalized.

II
The progress of the reforms

In general lines, the sequence of the reforms has been as follows: correction of prices, restructuring and financial rehabilitation of the public enterprises, organization of a competitive market, promotion of private investment, and finally privatization (although in only a minority of cases for the moment).[1]

The rate of progress has been variable. The process is still under way, but the biggest achievements so far have been in the field of the correction of prices and the rehabilitation of the public oil companies, as part of larger economic reform processes.

1. Price adjustments

To begin with, price correction was motivated by fiscal considerations and was aimed at reducing the budget transfers needed to cover the deficits of the public enterprises; in some cases it therefore took place in a gradual manner, in line with the aims of economic stabilization programmes.

The public enterprises gradually increased their share of final fuel prices, and in a second stage they therefore mostly adopted policies taking international prices as their benchmark, although this pattern was not fully applied in all the countries of the region, taking the opportunity cost as the basic criterion.

2. Restructuring and financial rehabilitation of public enterprises

The financial rehabilitation of State oil companies has been favoured –although not in all cases, and depending in each instance on the actual national conditions– by such factors as the following: reorientation of price policies, lower transfers of resources from the companies to the government, restructuring of liabilities, and refinancing of the external debt.

The formation of conglomerates has been promoted in State business activity, and efforts are being made to improve operating efficiency by providing for separate costs and profit or loss margins in each of the

[1] Chile is a special case in this respect as it began its reform of the oil industry in 1978, following this sequence of measures, but without privatizing the National Petroleum Company (ENAP), which controls all the refineries.

"business units" and rationalizing current expenditure, in order to reduce costs. In some cases, poorly performing units have been closed or decentralization schemes have been applied in order to make the functioning of the different "business units" more open to public scrutiny.

3. Establishment of competitive markets and promotion of private investment

The petroleum market has some special characteristics which are worthy of note. It is a "multisourcing" market for energy products tradeable under certain universally accepted conditions.

Since the early 1990s, there have been two opposing options in Latin America. One of them acknowledges the multisourcing nature of supply and calls for the suppression of State monopolies, with or without the privatization of State oil industries, while the other, which has been adopted by a minority of countries, insists on maintaining barriers to private investment in view of the perceived strategic nature of oil supplies.

This latter position considers that although petroleum is a tradeable product, it is a very widely used non-renewable energy source which affects a great many activities and users and has a heavy macroeconomic and environmental impact, and it is also subject to a number of geopolitical factors which could affect national sovereignty and security.

The other position holds that in a free economy there should be no "entry barriers" which affect the use of resources (absence of any restrictions on supply) or the satisfaction of demand (free access to supply). In such a context, it would be pointless for suppliers or consumers to try to influence the market jointly or severally. Consequently, petroleum should be treated like any other tradeable good, discarding its perceived strategic nature.

This position therefore advocates a regulatory State, rejecting an entrepreneurial State that excludes private investment, and it calls for the elimination of monopolies because it considers them to be inappropriate for industrial development, since they limit the attraction of foreign capital and the transfer of technology.

In reality, what is still under discussion is whether the State should continue to play a leading entrepreneurial role: an approach which served to justify the nationalization processes which were particularly strong in the 1960s and 1970s and lasted up to the 1980s, so that at the beginning of the 1990s 85% of the region's petroleum industry was under the control of State enterprises.

The liberal position also highlights the fact that State control affected resource allocation, by tending to fix domestic prices below the opportunity cost of supply, thereby giving rise to an income transfer scheme which did not take due account of the profitability of the capital invested, depriving the public enterprises of the financial resources they needed and leading to high levels of external indebtedness.

Most of the countries of the region, with the exception of Mexico, have done away with barriers to the entry of private investment into the various phases of the petroleum industry, giving preference instead to independent operations or projects in association with State enterprises.

Considerable progress has been made compared with the previous decade as regards the entry of private capital into prospecting, refining and marketing activities, under various forms of contracts with domestic and foreign capital (Campodónico, 1996b).

The establishment of competitive markets has basically meant the elimination of import restrictions and, in general, of public foreign trade monopolies, although these still exist in some countries of the region. This progress has been accompanied (although not in all cases) by regulatory criteria based on the idea of the generation of competition, thus making it possible to establish free-price policies.

4. The privatization of public enterprises

The privatization of public petroleum enterprises is not a generalized trend in the region, since only in Argentina, Bolivia and Peru has it been adopted as a strategic option for the development of the industry.

The Argentine enterprise Yacimientos Petrolíferos Fiscales (YPF) was not only the first public oil company in the world (set up in 1921) but also the first major State enterprise to be privatized in the region. In 1993, 45% of the stock of YPF was sold on Argentine and international stock exchanges, while 13% was given to the firm's employees as a contribution to their pension fund. The State retains 20% of the stock, the provinces 11.3%, and the staff of YPF the remaining 10%.

Although the majority of the stock is in the hands of private investors, its ownership is quite dispersed, so that the State continues to have a strong influence in the firm's decisions. Moreover, the favourable vote of the State is indispensable for the approval of mergers, operations to acquire more than 50% of the stock of YPF, total transfers of prospecting and operating rights, and the dissolution of YPF.

The system adopted for the privatization of the Peruvian petroleum industry is radically different. In this case, it was decided to sell "business units" resulting from the division of PETROPERU into smaller parts. The Pampilla refinery –the largest in the country– was sold to a consortium led by REPSOL and YPF, with the Peruvian State retaining 40% of the stock. The lubricants plant was sold to MOBILOIL in its entirety, while the blocks formerly operated by PETROPERU are being awarded under licensing contracts which involve payment for the value of the reserves they contain, plus royalties for the use of the deposits in the block.

In Bolivia, the new Petroleum Act has set afoot the privatization of YPFB under the scheme laid down in the Capitalization Act. Under this scheme, the buyer must make a capital contribution big enough to allow him to gain control of the "business unit" he is interested in. The remainder of the stock is shared out among the firm's workers as a contribution to their pension fund. At the time of writing, the main oil production blocks and the oil pipeline installations have been capitalized, while the capitalization of the refineries remains pending.

III

Changes in the terms of oil contracts

There are various forms of oil contracts in the region, and they have been changing with time, in line with public policy aims and the changes which have taken place in the world oil market. In these contracts, many of which were signed in the 1970s, investors usually have to assume the risks of the prospecting operation (Campodónico, 1996a).

Thus, "service contracts" or "operating contracts" were signed in those years instead of the traditional system of oil prospecting concessions. The changes involved were substantial, for previously the concession-holders had much more flexible deadlines and conditions for bringing the possible proven reserves into operation, while moreover they retained ownership of the oil produced.

The new system, which originated in the Middle East nationalization operations, involved the provision of services to the State petroleum company which owned the oil and which, in return for the services provided (prospecting risks and operating expenditure), paid the contractor in kind or in cash, according to a tariff linked to international oil prices.

Around that time there was also considerable use of "output sharing" contracts, fairly similar to the system mentioned above, under which the contractor continued to assume the prospecting risks in exchange for a share of the production which, according to the particular case, could be either sold to the State enterprise at international prices or sold on external markets.

Public policies insisted that the State, as sovereign owner of the resources, not only had a right to a proportion of the production but also the right to decide what should be done with the rest of the crude extracted, using it to ensure supply of the domestic market or selling it on the international market, depending on its trade interests.

These types of contracts spread to various countries of the region (Argentina, Bolivia, Brazil, Chile, Ecuador and Peru) in the 1970s, parallel with the strengthening of officially concerted action on petroleum within the Organization of Petroleum Exporting Countries (OPEC).

In the midst of the impact of the first oil crisis (in the early 1970s), because of the fear that the oil supplies of the importing countries might be at risk, oil industry contractors signed agreements giving 50% (or even more) of the oil extracted to the State oil companies, without the latter assuming any risks whatever.

In Colombia a different system was adopted: contractors assumed the prospecting risks, and if they found commercially significant reserves they were under the obligation to enter into association with ECOPETROL for the operation of the reserves thus located.

These new forms of contracts were even actively supported by the big oil companies, which chose to provide services or enter into association with the State oil companies because they knew that sharing out the benefits of oil negotiations was always a source of conflict which often led to policies of State intervention and nationalization. Such policies had long been applied in some countries of the region, but they began to gain force from the late 1960s onward and were further strengthened by the new attitudes arising from the creation of OPEC.[2]

Peru nationalized its oil industry in 1968, Ecuador did the same in 1971, and Venezuela followed suit in 1975. The 1970s thus mark the beginning of a long period in which the governments of the region played a leading role in petroleum activities. Except in Mexico and Venezuela, however, the new rules regarding contracts did not exclude private participation.

These rules clearly defined the contractors' obligations, demanding compulsory work programmes in the prospecting stage, development programmes with specific investment commitments in the operating phase, and suitable bank guarantees to ensure the fulfillment of all these commitments.

In the 1980s, as a result of the more plentiful supply of crude on the world market, the levels of payment of the contractors began to be negotiated more flexibly, in order to attract more investments, but there was no major change in the pattern of contracts.

The opening up of the oil market in the 1990s has meant new forms of contracts. These have come into effect basically in Argentina and Peru, with the return of oil concessions and "licensing contracts" respectively, whereby the contractors become the owners of the petroleum extracted, in return for the payment of royalties.

The most important new developments are undoubtedly the elimination of PETROBRAS's monopoly in Brazil in 1995 and the new contracts for the operation of marginal oilfields signed by Venezuela in 1992-1993, along with the recent profit-sharing contracts which that country began to sign as from 1996.

In view of the size of the reserves involved, Venezuela's policy of greater openness will undoubtedly have a decisive impact on the world market and on the production and export quotas agreed upon in OPEC.

It may be noted that the profit-sharing form of contract is undoubtedly most attractive in the case of a country like Venezuela. It would be much more difficult to apply in most of the other countries of the region, where prospecting risks are significantly higher than in Venezuela.

Another interesting development in terms of contract systems is the introduction of conditions linking the contractors' shares with the amount and quality of the oil extracted (Ecuador) or the income obtained (Colombia). In the first case, the greater the amount of oil extracted the lower is the contractor's share, while in the second case a rise in prices would mean a lower share in percentage terms.

With regard to tax and tariff treatment, a noteworthy feature is the application of criteria which are in line with those applied to all other production activities, in order to maintain the neutral nature of taxation. Thus, the treatment given to the oil industry is neither more nor less favourable than that accorded to other activities, although some countries (Ecuador, Guatemala, Peru) still retain tariff incentives for the prospecting phase.

It should be noted that income tax rates have been significantly reduced in some countries, so that in this respect the treatment now accorded is more favourable than in the 1980s.

IV

From model to reality

The quest for greater competitiveness and a less prominent role for the State form the basis for the model behind the oil industry reforms in the region, although the relative importance of these two factors depends on the resource endowment and the nature of the local markets.

The model holds that State intervention only makes sense if there are flaws in the market; the State is normally seen as playing a regulatory role designed to ensure greater competition and to protect the national heritage. Questions of reliability of supply or social equity would represent exceptional situations where the subsidiary role of the State would apply.

[2] As noted earlier, Argentina set up the first State oil company in the world (YPF) as far back as 1921. In the 1930s, the Empresa Petrolera Fiscal was set up in Peru in 1934 and YPFB was established in Bolivia in 1936, while in 1938 Mexico nationalized its oil industry and formed PEMEX. The 1950s witnessed the establishment of ENAP in Chile (1950), ECOPETROL in Colombia (1951) and PETROBRAS in Brazil (1953).

Some aspects of actual conditions raise doubts about the effects of the application of this oil industry reform model in the areas indicated below, however.

1. Concentration of the oil industry

The first doubt that arises concerns the increased concentration of the industry resulting from massive privatizations that would endanger the balance between producers and consumers and, ultimately, the continued existence of a free market.

The public policies applied as from the 1970s favoured the deconcentration of the world oil industry. In 1971, the so-called "Seven Sisters"[3] controlled 58% of world oil supplies, but in the mid-1990s they accounted for only 13% of world production (Gutiérrez and Jaramillo, 1995).

The economic power of the oil companies is very considerable and derives not only from the size of their operations but also from the significant proportion of intra-firm trading they engage in. Suffice it to mention that the annual operations of the 52 oil companies which are among the 600 largest companies in the world amount to some US$ 800 billion. This is three times the region's 1996 exports and the amount of foreign capital which entered the region between 1990 and 1996 (United Nations, 1988; ECLAC, 1996).

It is hard to say for sure what effects greater concentration of the oil industry would have on the operation of the world market. What is clear is that privatization will affect the concerted adoption of policies among developing country producers in OPEC. Such concerted policies would be at variance with the free market model. Thus, while the reforms mean a smaller role for the public authorities, geopolitics counsels a more pragmatic approach which would not make any major changes in the important role of the State in the coordination of the developed countries' energy policies.

The European countries which have signed the European Energy Charter recognize the right of States to participate in the prospection and operation of energy resources through their governments or State enterprises, and they also acknowledge the possibility of expropriation in the public interest.

[3] The Seven Sisters are British Petroleum, Standard Oil of New Jersey, Exxon, Royal Dutch Shell, Gulf, Standard Oil of California and Mobil Oil.

The member countries of the International Energy Agency, for their part, have made significant progress in coordinating their strategic planning policies: they have fixed import ceilings and minimum reserve levels, and they have made arrangements to cope with world crises in the supply of crude and refined products. Furthermore, since the Gulf War the countries of the Organization for Economic Cooperation and Development (OECD) have been paying increasing attention to energy supply security, and many of them (including France, Belgium and Italy) have given strategic status to their companies operating in this field.

Consequently, the elimination of barriers to the entry of private investment has been effected cautiously, and it has been viewed mainly in terms of "strategic alliances" in the countries that account for most of the region's oil reserves (Mexico and Venezuela), in order to maintain more leeway for formulating national initiatives regarding the behaviour of the world market.

2. Distribution of oil rents

The second doubt concerns the distribution of the benefits arising from the exploitation of natural resources: a consideration which was always foremost among the motives behind policies favouring a State-run oil industry.

The use made of oil rents in the region has not been the best. In some cases, it caused the postponement of urgent tax reforms which would have ended the excessive dependence of fiscal expenditure on income from the oil industry. In others, prices were distorted and this income was reduced for anti-inflation purposes, or else there was a tendency to siphon off the income of public enterprises, depriving them of the capital they needed and severely affecting their investment expenditure.

This question is important both in approaches that favour a leading role for the State and in those that advocate the privatization of the oil industry. On the one hand, it is necessary to avoid a situation where the fiscal appropriation of oil income adversely affects the development of the oil industry, and on the other hand the promotion of private investment should not lead to a deterioration in the average income retained by the State authorities.

The important thing is to maintain a sustainable balance in the distribution of benefits, so that the contractual arrangements between the State and private operators remain stable in the long term.

3. Security of supply and its effects on prices

Another doubt that arises in connection with the reforms concerns security of supply and the behaviour of prices: questions that are important both for producer and consumer countries.

Security of supply will continue to be a crucial issue in world geopolitics, even if the share of oil in the primary energy consumption structure goes down, as estimated, from nearly 40% in the early 1990s to 37% by the end of the first decade of the next century (Campodónico, 1996b).

Over this period of time, the OECD countries are expected to reduce their share of world oil consumption from 56% to 47%, through the replacement of energy sources and more efficient energy use. They will become even more dependent on imported supplies, however, because on average the reserves/production ratio is 8 years in Western Europe and 11 years in North America. In Latin America, in contrast, it is 50 years, which explains why the OECD countries are so interested in increasing Latin America's share in their supplies (Campodónico, 1996b).

In view of the continuing political uncertainty in the Middle East and Russia, bringing more Latin American reserves into production would make the supply of oil more secure, while at the same time the increased supply from the region would help to reduce upward pressures on world oil prices. As real prices are currently depressed compared with the high prices of the 1970s, the Latin American oil exporting countries will have to make a bigger production effort in order to obtain the goods they need to import from the world market. Consequently, business management will have to concentrate on costs in order to avoid any reduction in oil income.

4. Market flaws

Most of the countries of the region have done away with controls on external trade and made substantial reforms in the oil refining and transport stages. Only in Mexico and Venezuela are there still barriers to entry into these activities. In the other countries, private investment is permitted in oil refining, and private operators can build pipelines, subject to free access to the pipeline systems and regulated tariffs; petroleum products are freely sold in service stations, and there are practically no price controls.

In applying the model it is important not to overlook the possible existence of natural monopolies. Although some phases of the industry permit competition, the decisive element is market size. Because of their different sizes, the domestic markets of the countries of the region may be conducive to a variety of situations, ranging from full competition to various forms of oligopolies and even monopolies, in the case of the smallest countries.

This gives rise to some doubts connected with domestic price levels (including taxes) and their impact on the macroeconomic accounts and international competitiveness.

There are those who consider that, taking into account the opportunity cost, producer countries could have more leeway in fixing domestic oil prices, even at the risk of reducing the profitability of their State enterprises, in order to check inflationary pressures or improve competitiveness.

Countries which depend on imports, however, simply have no efficient option but to fix domestic prices as a function of international prices. At all events, tax levels must be handled cautiously in order not to generate inflationary pressures or affect the competitiveness of fuel users.

5. Integration or disintegration of the industry?

The history of the oil industry shows that vertical integration has been and continues to be essential in order to gain the difference between the income from production and the value added in refining and marketing, although this in no way rules out decentralized management.

Whether or not to maintain the integration of the industry has been one of the items of discussion when considering privatization. Selling off various "business units" may be advisable in large markets, but in small ones it may adversely affect competition, if monopolies are created in each phase of the industry. In such a case, the scope for deregulation is a good deal more limited when changing an integrated public monopoly for a private one.

V

The oil industry in the 1990s

The countries with the biggest reserves have serious doubts about the validity of the model currently in vogue, in view of the importance of petroleum in their international relations. The concerted adoption of price policies (in OPEC) has lost its vigour, however, not only because of greater private intervention but also because the countries of the region that have the biggest reserves do not want to become involved in multilateral options that reduce their freedom of action.[4]

This weakening of concerted action is one of the costs of the marked interest in attracting more private investment: an objective which could also have a certain fiscal impact (a matter which still remains to be evaluated) if the new contract conditions mean that the State transfers its control over oil rents in exchange for royalties or payment of income tax.

Only countries with an extensive and well-tried history of oil production can secure more even-handed benefits or even impose their own bargaining conditions. In contrast, those countries which have witnessed a decline in their proven reserves under State leadership and have high prospecting risks tend to take a realistic attitude and opt for more flexible and attractive types of contracts.

The high level of available reserves and the expected positive evolution of supply place consumers in a better bargaining position, although this does not mean that oil has ceased to be a crucial product in world geopolitics.

The important thing is that, within the reform process, the countries of the region should reconcile the objectives of supplying their own needs or increasing their share of the world market, attracting bigger investment flows, and retaining a growing share of the total value of oil production (through domestic purchases, wages, taxes, royalties, etc.), since they should not only take account of the benefits obtained by the government authorities, but the integral effect on their national economies.

The question of oil rents is undoubtedly of the highest importance. It is in the interests of the oil exporting countries to establish tax and regulatory systems which ensure that the prices declared by operators are indeed in line with the best selling options on the world market and avoid the possibility that managed trade strategies may lead to the fixing of transfer prices that adversely affect the value of exports and hence the national tax revenue. The importing countries, for their part, need regulatory mechanisms to ensure that they enjoy the best price conditions and that dominant market positions do not result in supply shortcomings.

In both cases, the point of reference should be the international price of the type of product required, so that both oil company operations and tax receipts effectively correspond to the opportunity cost.

The countries of the region should set up institutional bodies (taking due account of their national potential) which are empowered to sign contracts (for prospecting and operation), to exercise control functions (supervision of contracts, taxation and revenue collection) and to apply regulations in order to ensure that the market operates on a competitive basis. It may be noted that many countries of the region still suffer from serious shortcomings in these areas.

The privatization of public oil companies is one alternative, but it is not the only one, nor can it be said that it is shared by the majority of countries in the region. Where there is clear and undeniable consensus is on the need to promote private investment under the forms of contracts or association that are most appropriate to national conditions (Campodónico, 1996c).

With regard to the future development of the oil industry, at the time of writing the following three options are open.

1. Promotion of "strategic association" arrangements and internationalization of public oil companies

This option, which is most evident in Brazil, Chile, Mexico and Venezuela, with differences and variations in each individual case, offers various possibilities, including entry into operations in countries other than

[4] Ecuador has left the OPEC, Mexico was never part of it, and Venezuela has tried to increase its own quota within that organization.

that of the State enterprise in question in order to satisfy domestic oil needs (Brazil and Chile), operating or production sharing contracts, or the establishment of various types of "strategic association" arrangements to place prospecting and operational activities on a broader and technologically stronger basis.

In Brazil, constitutional reform did away with PETROBRAS's monopoly and gave private operators the possibility of taking part in all phases of the industry. Privatization was rejected, however, because of the importance of PETROBRAS in the national economy.[5]

PETROBRAS's international operations are carried out through BRASPETRO, generating gross annual income of US$ 1,428 million and net profits of US$ 39 million. They cover activities in oil prospecting, development and production and the provision of services in Africa (Angola and Libya), South America (Argentina, Ecuador and Colombia), the United States, and the United Kingdom (North Sea oilfields) (PETROBRAS, 1995).

In the case of the Mexican State company PEMEX, its willingness to enter into strategic alliances is reflected, for example, in its acquisition of 3.5% of the Spanish company REPSOL and in the establishment of a company for projects, co-investment and oil supply contracts which has opened up new trading prospects in the European Union. Furthermore, MEXPETROL has been set up, in association with private capital, to export services and products connected with oil production projects and the petrochemical industry (Arpel, 1990, pp. 86-87).

In 1992 PEMEX also entered into a strategic association with Shell in order to expand its refining capacity, acquiring 50% of a refinery in Texas (Deer Park, with a capacity of 220,000 barrels per day).

The internationalization of the Venezuelan State company PDVSA is advancing more rapidly than that of PEMEX. Since the earlyefforts to guarantee markets for its exportable oil surpluses, while at the same time expanding its vertical integration in order to increase added value by exporting refined products and acquiring refineries abroad. Under this policy of internationalization it has entered into strategic association agreements with UNOVEN and UNOCAL in the United States, Ruhr Öl GmbH in Germany, and AB Nynas Petroleum in Sweden (Campodónico, 1996c).

The promotion of private investment in the Venezuelan oil industry forms part of this internationalization strategy. PDVSA envisages investments totalling some US$ 60 billion in the 1997-2006 period: 55% by PDVSA itself, 18% through association agreements, and the remaining 27% arranged with private companies under operating contracts. Out of this total, firm commitments have been made for some US$ 33 billion: nearly US$ 4 billion under operating contracts for marginal oilfields; US$ 10 billion under profit-sharing contracts; US$ 14 billion under strategic association agreements in the Orinoco strip, and some US$ 5 billion under the Cristobal Colón Gas Project (PDVSA, 1996).

The internationalization strategies of State enterprises also provide for strategic association agreements with public and private companies of the region. Examples are the agreements between the Chilean State enterprise ENAP and the Argentine companies BRIDAS and YPF; the agreements between PETROBRAS and YPF and the joint project of PDVSA and PETROBRAS to form PETROAMÉRICA, and the interest shown by MARAVEN (a subsidiary of PDVSA) in operating in the markets of Colombia, Ecuador and Peru (Campodónico, 1996c).

In Chile, the 1980 constitutional amendment authorized private participation through concessions and "own risk" contracts,[6] but the privatization of ENAP was rejected. This company was restructured in 1981 and two further companies (PETROX and Refinería de Concón) were formed to run the refineries as subsidiaries of ENAP.

As the results of prospection activities were not encouraging and the domestic supply deficit was increasing, the search for oil abroad was promoted through the establishment of SIPETROL. To begin with, priority was given to operations in the region, through agreements with Argentina, Ecuador and Venezuela, but oil prospection prospects were also studied in countries outside the region (Campodónico, 1996c).

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[5] PETROBRAS's operations are equivalent to nearly 2% of the Brazilian GDP. If its operations as a conglomerate and its purchases of domestic goods and services are included, however, its share could amount to as much as 25%. The conglomerate itself generates 50,000 jobs and it is estimated that the indirect effects of its operations extend to 1.5 million jobs, while its net worth is over US$ 50 billion (Mendes Renno, 1994). It is estimated that since it was set up the foreign exchange savings due to the increase in refining capacity amount to US$ 223.8 billion, and in its 40 years of activity it has invested some US$ 88 billion. In 1995 the PETROBRAS conglomerate paid US$ 6,516 million in taxes (PETROBRAS, 1995).

[6] In these contracts the contractor assumes the whole of the prospecting risk.

2. Maintenance of a leading role for the State, with promotion of private investment

This is an option that lies half way between the formation of strategic associations and the internationalization of public enterprises, on the one hand, and total privatization on the other.

In this intermediate option, the development of the industry is based on the maintenance of a State enterprise which negotiates various forms of participation in production, leaving the prospecting risk to be assumed by private investors, while not excluding strictly private participation in some phases of the industry.

It may be considered that a good example of this option is that adopted in Colombia, where there is a scheme involving compulsory association with ECOPETROL. Ecuador, for its part, has given preference to "own risk" contracts; the privatization of PETROECUADOR is not currently on the agenda, for various reasons, including its fiscal importance and the fact that various national bodies (such as the armed forces) share in the income obtained from the oil industry.

3. Total privatization of the industry

This option is in operation in Argentina, Bolivia and Peru, with differences in the actual form of privatization. As noted earlier, Argentina and Peru have privatized their State enterprises in different ways. The maintenance of YPF's vertical integration has the virtue of sustaining a growing process of internationalization. YPF has planned to spend 15% of its prospecting expenditure outside Argentina, in order to help satisfy that country's petroleum requirements: thus, it proposes to carry out prospecting activities in various countries of the region (Bolivia and Peru) and in the Gulf of Mexico.

At the same time, its internationalization strategy involves agreements with a number of important international operators (Campodónico, 1996c), such as its association with British Petroleum, AMOCO and MAXUS (in the last-named of which it acquired 25% of its capital in 1996) for prospecting in Venezuela; its relations with British Gas to evaluate the potential of areas around the Falkland Islands, and its association with REPSOL of Spain and Mobil Oil of the United States in the privatization of the main Peruvian oil refinery (La Pampilla).

With its acquisition of 25% of MAXUS, YPF will be able to project its activities outside the region (to the United States and Indonesia), taking advantage of MAXUS's technology for offshore operations and that company's participation in Bolivia, Ecuador and Venezuela. At the same time, its projection within the region will be strengthened by its association with public enterprises and its strong entry into domestic fuel marketing in Brazil, Chile and Peru (Campodónico, 1996c).

YFP's activities are worth watching closely in the future, as they have some special features which could be of interest to other developing countries inside and outside the region. The privatization strategy adopted by this company is based on the maintenance of its degree of vertical integration, the adoption of a system of "gold shares" (with the power of veto) for the State's share in the company's stock, and the opening-up of the share package offered for sale on international stock exchanges, in order to attract institutional investors. It should also be noted that YPF's stock market operation was one of the largest in the century as far as the entry of countries of the region into international capital markets was concerned.

The interesting feature of this type of privatization is that it does not deprive the State of the possibility of influencing the future course of the enterprise but allows it to participate instead in a growing process of internationalization stemming from a new business strategy in which the State has an active role to play; if it had been decided to sell the bulk of the stock to a big international operator, the Argentine oil industry would have been subordinated to the strategy of that operator. From the national standpoint, this process has also been strengthened by the active participation of private Argentine companies (BRIDAS, PLUSPETROL, etc.) in oil prospecting and production in various countries of the region.

The case of Peru is very different. Here, the integration of the enterprise was not preserved, and instead PETROPERU was split up into several "business units" in the privatization process, so that the Peruvian market is now in the hands of big international operators such as MOBIL, REPSOL and the Argentine company YPF, which have established various ownership relationships among themselves. Although it is early as yet to appraise the Peruvian experience, it seems to be tending towards a reintegration of the industry which, in view of the size of the domestic market, sheds doubt on the effective level of competition.

The Peruvian experience, like that of YPF, can serve as a lesson for other countries of the region where the model in vogue is being applied almost 100%. In Bolivia, the privatization process is still under way, so that it is too early to draw conclusions.

VI

Evaluation criteria

In conclusion, it is worth listing the criteria to be used in appraising the results of the three options in use in the region. The most important point is to determine what proportion of the total oil income remains under State control in each of the options in question.

The oil income arises from the difference between production costs and the international price of oil, which is determined not only by supply and demand but also by factors foreign to the market. This margin of difference is considerable in most of the oil producing countries of the region, even at the prevailing low prices.

It does not therefore appear to be sufficient simply to compare the profits of the companies after privatization with the losses suffered when they were in State hands, since when they were State-owned they were generally prevented from fixing their prices at international levels. If they had enjoyed this possibility, which the private companies now use to fix their prices, it would be fair to use such a criterion, but as this is not the case it would be preferable to use as an evaluation criterion the improvements in efficiency deriving from the reduction in costs, since the industry now "takes" international prices. A matter which remains to be examined in a future analysis is the way in which these improvements in efficiency because of the bigger spread between costs and prices could be passed on to consumers, bearing in mind that the whole idea of the reform is that domestic fuel prices should be in line with international prices.

(Original: Spanish)

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