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# Can Latin American Oil Companies Free Themselves from the Legacy of Nationalization ?

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Abstract

Latin America's national oil companies, created at various moments during the 20th century, have each evolved in their own way. The two main companies – Petróleos de México (Pemex) and Petróleos de Venezuela (PDVSA) – provide excellent illustrations of the rich diversity of organizational and industrial development. Many factors – not least the size of underground oilfields – explain the diversity. Nevertheless, the state's role at the time of nationalization is key. This moment defined the relations between the owners of the land where the resources were located, public operators, regulators, finance ministries, and international operators. The process shaped institutional structures (path dependency) and set the parameters for future entrepreneurial dynamism. The path by which each of these enterprises developed continues to affect their culture as evidenced by the recent reforms that have attempted to restructure Pemex and PDVSA.



## Les compagnies pétrolières latino-américaines peuvent-elles s'affranchir de l'héritage de la nationalisation ?

Résumé

Créées à différents moments au cours du XX$^{e}$ siècle, les compagnies nationales pétrolières latino-américaines ont chacune suivi leur propre évolution. Les deux principales sociétés – Petróleos de México (Pemex) et Petróleos de Venezuela (PDVSA) – illustrent de façon exemplaire la richesse de ces trajectoires organisationnelles et industrielles. De multiples facteurs – dont l'importance des gisements en terre – sont à l'origine de cette hétérogénéité. Néanmoins, le rôle de l'Etat au moment de la nationalisation demeure crucial. Ce fut à ce moment-là que se définirent les relations entre le propriétaire des ressources en terre, l'opérateur public, le régulateur et le ministère des Finances, sans oublier les différents opérateurs internationaux. Ce processus a laissé de profondes empreintes dans le tissu institutionnel (path dependency) et dessiné les possibilités et/ou les limites de la future dynamique entrepreneuriale. Sans jamais devenir un véritable carcan, ce chemin institutionnel continue aujourd'hui encore d'imprégner largement la culture de ces entreprises. Les réformes récentes qui ont tenté de remodeler Pemex et PDVSA en sont la preuve.

# Can Latin American Oil Companies Free Themselves from the Legacy of Nationalization?

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Given the historical weakness of the private sector in Latin America, the state provided the main impetus for the development of heavy industrial facilities. In the oil industry, only the state had the means to invest in the construction and maintenance of such a technically complex industry. Wielding this economic strength, Latin American governments were able to control a strategic industry, develop the country's economic fabric by making use of cheap energy and devise social programs – often tinged with populism – financed by the oil rent. It also enabled the states to implement regional development policies through both direct investment by creating infrastructure in production areas, and indirect investment (the sale of refined oil products required construction of various facilities throughout their respective territories).

However, the nationalization of the hydrocarbon industry and the creation of monopolies did not take place at the same time in all Latin American countries. In this long term process there were three major phases: the first between the two world wars, with Argentina (Yacimientos Petrolíferos Fiscales, YPF, 1922) Bolivia (Yacimientos Petrolíferos Fiscales Bolivianos, YPFB, 1937) and Mexico (Petróleos Mexicanos, Pemex, 1938); the second during the 1950s with Chile (Empresa Nacional del Petróleo, ENAP, 1950), Columbia (Ecopetrol, 1951) and Brazil (Petroleo Do Brasil, Petrobas, 1953); the third during the 1970s with Peru (Petróleos del Perú, Petroperú, 1969), Ecuador (Corporación Estatal Petróleos del Ecuador, CEPE, 1972, renamed PetroEcuador in 1989) and Venezuela (Petróleos de Venezuela S.A., PDVSA, 1975).

In general the new public companies successfully fulfilled the various missions they had been assigned: fiscal contribution, social programs and regional development. They also became the largest business concerns in the region. On other levels, however, there were much more mixed results. The public companies succumbed to classic pitfalls of any monopoly: they lacked the flexibility needed to ensure sound financial management in the sector while the mad dash for profits from oil exports led them to go into excessive debt. At the beginning of the 1980s, the Latin American Energy Organization (OLADE) estimated that the energy sector alone was

responsible for 20 % of the external debt of these countries. The already critical financial and economic situation of the region worsened. Under the aegis of the Washington Consensus, international financial organizations imposed strict corrective measures on these countries so that they could continue to qualify for international loans. Transformation of these national oil companies therefore became an imperative. Most of them retained their public status, but they were all forced to adopt new organizational structures to be more competitive in a rapidly changing world.[1] Although the general strategic orientation was the same everywhere, again, neoliberal reforms were implemented at different paces and by different methods from one country to another.

At the beginning of the 21st century, the steep increase in the per-barrel price of oil and the installation of left-wing governments in Latin America provoked a resurgence of state interventionism in energy policy. Venezuela, at the instigation of President Hugo Chávez, was a pioneer in this change of course, followed on the heels by Bolivia and Ecuador. Mexico and Brazil took different routes, as did Columbia, Peru and Chile (even though the oil industry in these last three countries is less important).

In view of the variety of these trajectories, the following hypothesis will be tested: although differences in models of governance in the industry and national companies are due to multiple variables, one being the size of the underground oil deposits, the state's role at the time of nationalization and then during its development is what largely explains the organizational choices taken thereafter. The strategies used by the governments of Mexico and Venezuela to build and develop their oil industries,[2] as they are the two oldest and largest oil-producing countries in the region, will be examined in this paper. For each country, particular focus will be placed on the relation the state has maintained with the public company as well as the institutions it created to establish a national oil industry. In both cases, the major goals set by the successive administrations will be considered in relation to the institutional structure they edified. An attempt will also be made to shed light on the reasons for these two countries' different organizational choices.

This comparison will proceed chronologically. While underlining the characteristics and organizational differences of these industries, this paper will also retrace the birth and development of the oil industry up until the moment of its nationalization, the construction of a national industry, the opening up the industry in the 1990s and then the current period starting with the 2000s.

Given the angle chosen, the political, institutional and economic environment in which the two oil companies studied (Pemex in Mexico and PDVSA in Venezuela) have evolved will be treated only incidentally. Likewise, only information that is strictly necessary for understanding the changes that took place in the oil system will be provided, and the paper will not address the question of the repercussions that the type of oil governance adopted has had on the country's development.

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[1] The profound changes affecting the international oil sector during the 1990s led to a vast process of mergers and acquisitions among the very large oil companies.

[2] Since 2006, Brazil has achieved a production level similar to these two countries.

# The birth and development of the oil industry in Mexico and Venezuela

## The Mexican Revolution and Nationalization of the Oil Industry

Mexico started oil exploration and production toward the end of the 1860s, but the beginning of large-scale production in the Ébano-Pánuco region dates back to 1901 and was for the most part the result of a change in the legal framework. Up until then, in accordance with a concept inherited from Spain, the Mexican government had "absolute and total" ownership of the soil and subsoil. Those who occupied the land – peasants or large landowners – had only the right of use or usufruct.[3] In 1884, Porfirio Díaz's administration issued a new mining code that broke with the traditional Hispano-Mexican principle and adopted the Anglo-Saxon concept whereby subsoil resources were the exclusive property of the landowners who could freely exploit them. Stemming from this new jurisdiction, the 1901 law, which applied to hydrocarbons, confirmed landowners' right to extract underground oil.[4] This legal framework encouraged the arrival of British and American companies, which also benefited from a very favorable tax regime. Mexico quickly became one of the main oil producing and exporting countries. However, the capital, management and technology were all in foreign hands.[5] At the end of the Revolution, which lasted from 1910 to 1917, the 1917 Constitution modified the Porfirio legislation and reinstated the nation's ownership rights on subsoil resources (article 27).[6] At the same time, post-Revolution administrations undertook to modify the fiscal framework by making companies pay royalties amounting to 5 % of their total production revenue (law of February 19, 1918).[7] This measure immediately led to tension between the Mexican government and the oil companies, which from then on had to be granted a concession to continue exploiting the oil fields that they had acquired during Porfirio Díaz's era. The companies (as well as the American government) were quick to react: considering the 1918 decree as the first step toward nationalization, they rejected the new legislation and accused the Mexican government of wanting to confiscate rights they had acquired over the soil and subsoil. The prior legislation therefore continued to apply. The Revolution had in fact upset the country's economy and affected entrepreneurs' confidence: the state was in the throes of total reconstruction, making the production of crude oil a priority. And it indeed increased between 1917 and 1921.

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[3] A. de la Vega Navarro, 1999, pp. 31-32.

[4] This law also enabled the Mexican government to issue concessions to private companies in areas that were national property. The law of 1909 confirmed the right of the landowner to possess all underground mineral fuels and bituminous substances. Ibid., p. 33.

[5] In 1918, 73 % of the crude oil in Mexico was owned by American companies, 21 %, by British companies, 4 % by Dutch companies and the remaining 2 % by Hispano-Mexicans.

[6] For the revolutionaries, oil acquired value when it was converted into a strategic resource for the allied forces during the First World War, which quickly led to a strong price increase. At that time, the revolutionaries were attempting to alter the legal status of the oil industry.

[7] A. de la Vega Navarro, *op. cit.*, p. 39.

It took more than two decades for the new law to be applied fully and for the post-Revolution administrations to take control of oil resources. In the meantime the various administrations gradually changed the conditions: they brought in experts to regulate production and created a new fiscal regime. In 1933, the Abelardo Rodríguez administration (September 2, 1932 to November 30 , 1934) created the first state-owned oil company, Petróleos Mexicanos (Petromex) whose production, however, never exceeded 2 % of the nation's total crude oil production.[8]

Foreign companies, knowing that the Mexican government was going to enforce the measures of the 1917 Constitution sooner or later, tirelessly extracted and exported as much as possible to recover their investments quickly. In doing so, they neglected all conservation and protection measures for the wells and fields and were not inclined to acquire new reserves for future production. When President Lázaro Cárdenas expropriated the companies in 1938, crude oil production and the tax revenue it generated had declined sharply.[9]

Expropriation was in part a reaction to the Mexican government's exasperation with the foreign companies' cavalier attitude,[10] but Cárdenas's decision was triggered by the conflict that broke out between the oil companies and the Mexican Republic Oil Workers Union (STPRM). Founded in 1936, this new oil union, affiliated with the Confederation of Mexican Workers (CTM), united various earlier labor groups and represented at the time 18,000 workers. Besides a steep wage increase, the union demanded the right for workers to participate in the management of the oil industry. This demand was unacceptable for the oil companies. Despite the fact that the Supreme Court ruled in favor of the STPRM's demands, the companies rejected both of the union's demands and proved to be particularly unbending in regard to worker participation in management, viewing it as the first step toward nationalization. Their refusal to abide by Mexican law was interpreted as an attack on the state's sovereignty.

The regime, drawing support from worker organizations, was seeking to assert itself in a country that had not yet healed its moral wounds inflicted by foreign occupation and territorial amputations during the second half of the 19th century. Cárdenas thus informed the sixteen foreign oil companies that their belated offers to increase wages were unacceptable and on March 18, 1938 announced his decision to expropriate all of them. By decree, their possessions became the property of the new public company Petróleos Mexicanos (Pemex) created on June 7, 1938. This company, assigned with technical, industrial and commercial functions, was decentralized from the federal government and endowed with a specific legal status and its own assets.[11] From then on, Pemex's mission was to conserve, process and capitalize on a non-renewable resource of major importance for national sovereignty and one that had a large impact on the structure of the country's economy.

[8] A. Knight, 1986, p. 91.

[9] In 1937, production was only one-fifth of what it had been in 1921 and its market value was no more than 2 % of GNP. A. de la Vega Navarro, *op. cit*., p. 46.

[10] The Anglo-Dutch companies had the largest share. In 1938, under the aegis of Royal Dutch Shell (El Águila group), they owned 70 % of the Mexican oil industry.

[11] Pemex, 1988, pp. 23-25.

On November 9, 1940, the principle of a state monopoly was instated. The state became the lawful and political representative of the nation and Pemex an instrument allowing the state – via the federal government – to organize and promote every segment of the oil and natural gas industry. The 1917 Constitution had invested the oil industry with a strategic mission. Nationalization went one step further, as it went from claiming the nation's right to subsurface resources to the state's claim of monopoly over all oil industry-related activities.[12] This meant Pemex was assigned goals and tasks that went far beyond those usually attributed to oil companies.

**From the Discovery of Oil to the Founding of a National Venezuelan Oil Company**

In Venezuela, although the first oil deposits were discovered in 1878, the oil industry was not officially founded until 1914 when Royal Dutch Shell drilled the Zumaque I oil well in the Mene Grande field in the Lake Maracaibo basin. International companies flocked to the area quickly; up until then oil production had been in the hands of large estate owners (*latifundistas*) who simply extracted the oil they needed to run their farms.

Confronted with this rush toward Venezuela's subsoil, the Juan Vincente Gómez administration (1908-1935) passed legislation giving the state control over the access to land resources and appropriated part of the oil industry's revenues (laws of 1920 and 1922).[13] The government defined the respective rights and obligations of the state and the private company to which a concession was granted and also established a favorable tax framework for investments in the country.[14]

These various measures fostered major discoveries of oil reserves and an increase in production: in 1928 Venezuela became the second largest oil-producing country worldwide behind the United States and the number one exporting country in the world. At the same time public finances became increasingly oil-based as the country became particularly dependent on revenue from crude oil exports. Starting in 1935, the new political leaders revised the oil industry's legal and fiscal framework. The goal was to increase the state's share in revenues from subsurface resource exploitation, and to oblige those who were granted concessions to train Venezuelan workers (in particular petroleum engineers) as well as recognize the jurisdiction of the national court system in the event of any disputes.[15]

A few years later new laws – especially a 1945 law – established the principle of revenue-splitting (known in the oil business as the "fifty-fifty" law) for all concession contracts. This principle, which was an innovation at the time, was later adopted by most oil-producing countries. The Venezuelan government, however, had no means for controlling the quantity of

[12] A. de la Vega Navarro, *op. cit.*, p. 61.

[13] The Bolivar decree of 1829 claimed subsurface mineral deposits as national property.

[14] J. Mora Contreras, 2002, p. 229.

[15] J. C. Boue, 1993, p. 104.

oil produced, the cost of extraction and the sale price: foreign companies therefore continued to set the amount of taxes they paid.

In 1958, the newly elected President Rómulo Betancourt adopted significant measures in the state's favor: he put an end to the automatic renewal of concession contracts, instituted new rules for profit sharing and most of all forged closer ties with the other major oil-producing countries to pool their knowledge in oil regulation matters.[16] In 1960, Venezuela became one of the founders of the Organization of Petroleum Exporting Countries (OPEC) whose member states established the principle of national oil companies. The same year, President Betancourt created the Corporación Venezolana del Petróleo (CVP) which was to provide oil services (covering the whole industrial chain from exploration to transportation and sales). The end of automatic renewal of concession contracts, the increasing influence of OPEC and the creation of CVP led to a modification of the institutional structure of the Venezuelan oil industry. In July 1971 the government passed the reversion law stipulating that all of the possessions that fell under the concession regime and were directly linked to hydrocarbon exploration, production, refining and transport activities could not be dismantled, destroyed, modified or used for other purposes without prior permission from the Ministry of Energy and Mines. For the first time in its history the Venezuelan government positioned itself at the center of domestic oil regulation.[17] As owner of the reserves the government considered it was entitled to organize alone and for its own benefit the development of an oil industry on its territory. The election of Carlos Andrés Pérez (1974-1979) with 75 % of the vote coincided with the enormous oil boom following the Arab oil embargo. In 1974, the new president appointed a committee bringing together political parties and members of civil society to draw up a nationalization bill. Another more select committee, commissioned by the President, introduced changes to the bill. This committee's major contribution was to set limits on the nationalization law: "In special cases and when convenient to the public interest, the National Executive or the aforesaid entities may, in the exercise of any of the aforementioned activities, enter into association agreements with private entities, with a participation such that guarantees the control by the State and with a determined duration" (article 5).[18]

Nationalization was proclaimed in these terms on August 29, 1975 and became effective on January 1, 1976, and Petróleos de Venezuela, Sociedad Anónima (PDVSA) was founded. According to Fernando Coronil,[19] it was supported by a political consensus uniting the Federation of Employers (Fedecamara) and oil industry employees, technicians and workers; and indeed, few of them had benefited from positive externalities related to sharing the oil rent.

[16] "The efforts made by countries to protect prices came up against not only internal resistance from concession companies but also the strategies they deployed abroad to put producer countries in competition. That is why coordination among producers became necessary." A. Silva Calderón, 2006, p. 116.

[17] A. Benhassine, 2008, p. 59.

[18] L. E. Lander, 2006a, p. 103.

[19] F. Coronil, 1988, p. 78.

## Nationalization of the Oil Industry in Perspective

In Mexico as in Venezuela the national oil companies developed in a mixed economy system. In both cases the goal of creating a national oil company with a monopoly over all sector activities was not only to control the oil windfall. It was also part of a policy asserting national sovereignty and development and one that led the state to play a central role in the economy and more specifically in heavy industry. In both cases nationalization was an important reference, driven by patriotism and having deep symbolic value. Again in both cases the state and administrations endeavored – with more or less conviction – to recover resources that they considered to be theirs by legal and fiscal means.

However, that is where the similarities end, because the specificities of the two processes are so great that the institutional frameworks of the hydrocarbon industry in Mexico and in Venezuela are completely different. The political regime and the pre-existing legal framework of subsurface resource ownership in both of these countries partly explain this organizational difference.

In Mexico, the 1910-1917 Revolution had two main effects on the burgeoning oil industry: first, it accelerated the organization of oil workers and second, it encouraged the budding post-revolutionary regime to reform the status of the industry in accordance with article 27 of the 1917 Constitution. In addition, the new regime's urgent need for revenue must not be minimized.

As for Venezuela, the country did not experience a revolution. The nation's struggles during the 20th century consisted in bringing down dictatorships and replacing them with democracy. The Punto Fijo Pact, which instituted a sort of two-party power-sharing system between the Partido Social Cristiano de Venezuela (COPPEI) and the Accíon Democrática (AD) aimed to lend the country great democratic stability. Thus the building of the regime was not linked to the oil industry as it was in Mexico.

The nature of nationalization was also very different in the two countries. In Mexico, the nationalization of foreign companies in 1938 involved more than mere expropriation by decree whereby the government seized the assets of sixteen foreign companies. It was an act destined to completely transform the country's economic structure.[20] In a radio speech to the nation, President Cárdenas explained that without nationalization the nation's sovereignty would remain at the mercy of maneuvers of foreign capital. After the initial shock that the decision provoked among the population, elation, doubt, fear or even anger followed depending on the case.[21] According to Alan Knight, "(...) the oil industry remained a mental as well as an economic and political enclave. And this enclave status – established under Díaz, defended with guns under Pelaez, with bribe under Calles – remained a stain on Mexican sovereignty. Calles had confronted the companies in 1925, striving, as he put it to be 'master in his own house.' ( ) [In 1937-1938,] the question of oil, to the Mexican people, was only partly an economic matter. It was also emotional, involving race and nationality."[22]

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[20] L. Meyer, 2009, p. 194.

[21] *Ibid.*, p. 195.

[22] A. Knight, 1986, p. 98.

The 1938 decision was the culmination of a "long march" to get the oil industry out of the hands of foreign companies.[23] The risk was high: expropriation involved an enormous commitment – of being capable of forging its own industry – which the country was not completely ready to undertake. Failure would have been critical as it would have caused the collapse of the revolution's whole economic system. And it turned out that the Mexicans were indeed able to build a major oil industry on their own despite the skeptical cynicism of foreign companies ready to return at the slightest sign of weakness from the Mexican government. This success strengthened the country's faith in its own ability to conduct and manage this industry on its own (with a state monopoly). It was a difficult decision indeed, but President Cárdenas judged that the risk had to be taken: he had to end a situation in which post-revolutionary administrations' aspirations were continually contradicted by certain sectors of international capital, especially by extremely powerful consortiums that controlled more than 90 % of the world's oil. Moreover, Cárdenas knew that he would have to face Washington's wrath. Yet, in light of the Second World War, the American government chose to calm the situation: fearing that Mexico would become allied with the Axis powers, the American government negotiated the debt with the international oil companies[24] and in return Mexico rallied to the side of the Allied Forces.

In Venezuela, on the other hand, nationalization was not as brutal and took place within the national and international legal framework. It was a long process: Venezuela waited for the third wave of nationalizations in the 1970s to finish reorganizing its oil industry. Whereas Mexico and Bolivia ran foreign companies out of their countries in the 1940s, Venezuela first opted for the solution of reprimanding them; by doing so it managed to get the foreign companies to accept its great oil industry profit sharing innovation (the "fifty-fifty" principle). This strategy of bringing the foreign countries into line was confirmed at the beginning of the 1960s by Venezuela's key role in founding OPEC and at the very beginning of the 1970s with the Hydrocarbons Reversion Law. But it should be underlined that the Venezuelan government never suspended or modified any contracts.[25] Expropriation and nationalization caused no conflicts or lawsuits in Venezuela or abroad. Indeed after the enactment of the nationalization law and the cancellation of the concessions, the country might have found itself confronted with three types of difficulties: financial (the industry needed to be kept going), staffing and technological (would Venezuelan employees be sufficiently trained and equipped to continue operations?) and commercial (to sell off the oil produced). Contrary to what happened in Mexico, where its pioneer expropriations and nationalizations consequently isolated the country internationally, among other things, none of these difficulties were really a problem for Venezuela. The government dipped into the savings of former oil activities and funds invested abroad. The staff remained in place and obtained better working conditions with the additional advantage of job security guaranteed by national legislation, whereas they could have been fired because they had cooperated with foreign companies or they could have refused to stay and gone off to work for the parent companies abroad. Technological development was thus easily ensured since PDVSA kept the

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[23] L. Meyer, *op. cit.*, p. 196.

[24] The amount of Pemex's debt to international companies was ultimately $130 million due to the losses they had incurred with nationalization. T. Falola and A. Genova, 2005, p. 52.

[25] D. R. Mares, 2011, p. 37.

same staff and the same business culture. As for the markets, they were in no position to penalize a founding member of OPEC. It was 1975 and they feared a halt in deliveries.[26]

Lastly, another element, related to the leaders themselves, helps explain the fundamental differences between the two nationalization processes. The Mexican, Lázaro Cárdenas, was neither an intellectual nor a learned man. He was a soldier who had pursued his career in the post-revolutionary administrations. He was a man of action, a fervent patriot whose childhood was steeped in stories of battles against French intervention and he dreamed of leading an army "to liberate the homeland." In 1938, exasperated by the foreign companies' attitude, he made the decision alone, within the palace's solitary walls, to proclaim nationalization, marking a brutal break with the past.

The Venezuelan, Carlos Andrés Pérez, was on the contrary a brilliant politician. He was much more pragmatic and ignited intense parliamentary debate around the nationalization bill, bringing in two former presidents and life senators – Rómulo Betancourt and Rafael Caldera – who, moreover, had opposing opinions.[27] The bill was put to the vote and received mixed reactions, though it was finally passed on August 21, 1975.[28] The collective nature and conditions of the decision – intense debate and a vote where there was strong opposition – undoubtedly weakened the content of the nationalization bill; some people, such as Juan Pablo Pérez Alfonso, a renowned expert on defining oil policies, have even gone so far as to call this one a "farce" (*chucuta*).[29]

## Construction of a national industry

Beyond all of these differences, expropriation and nationalization were – in both cases – foundational acts. Mexico and Venezuela had to gradually build their own industry and prove not only to the world but also to themselves that they were capable of successfully managing their subsurface resources. They needed to prove as well – which they did with much less brio – that this new responsibility would enable them to develop a healthy economy and redress existing social inequalities. This second aspect goes beyond the limits of this study; it should just be noted that it was one of the intended goals at the time of nationalization.

What strategies were adopted by each of the two countries for building an oil industry and creating a successful national company and how were these strategies influenced by the way nationalization was carried out?

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[26] A. Silva Calderón, *op. cit.*, p. 119.

[27] Caldera criticized the decision to allow mixed companies, while Betancourt defended it. L. E. Lander, 2006b, p. 104.

[28] Votes in favor came from Acción Democrática and Cruzada Cívica Nacionalista, while the other parliamentary groups voted against.

[29] L. E. Lander, 2006b, *op. cit.*, p. 104.

**Petróleos Mexicanos (Pemex): The Building of a State Monopoly**

In Mexico, three phases characterized the history of Pemex: from 1938 to the mid-1970s, the company "served the nation." As the pillar of the country's industrialization, Pemex provided cheap energy and allowed the country to be self-sufficient energy-wise; from 1977 to 1982, the discovery of enormous reserves in Chiapas and Tabasco, then in the state of Campeche as well as record-high per-barrel prices redirected the country's oil policy. Mexico became a crude oil exporting country and its economy became oil-based;[30] starting in 1982, the government sought to form a "New Pemex." The economic and financial crisis led President Miguel de la Madrid (1982-1988) to promote non-oil exports and to impose on Pemex a rigorous economic adjustment plan as well as more modest administrative changes. Subsequent administrations pursued these measures.

Right from the start, Pemex was entirely under the control of the executive. The president appointed the company's director general (whom he could dismiss at will), senior officials and most of the board members.[31] The executive also set and controlled the company's product prices. The Ministry of Finance determined the budget, controlled company expenses and imposed a stifling fiscal regime that drove Pemex into debt to finance its projects.

The roles assigned to Pemex were very different from those of a private company: "The company's goals were linked to the post-revolutionary administrations' 'nationalism' and policies of industrial and social promotion devised in the 1940s."[32] The new model set up in the 1930s – industrialization by import substitution (ISI) – was an interventionist and protectionist economy where the state played a central role. National investments were encouraged, although international capital could be brought in under certain conditions. Throughout this whole period the organization of the oil industry was perfectly integrated in this economic model. Oil production was directed toward the domestic market to aid industrial and agricultural development. In 1950, Antonio Bermúdez, then the director general of Pemex (1947-1958), summed up the company's goals as follows: "To provide the domestic market with abundant and appropriate oil products, export minimally and after satisfying domestic demand, contribute to public expenses through taxes, improve the cultural and social level of oil workers and create collective benefits in the regions where oil is exploited."[33] For Bermúdez, Pemex was not a profit-oriented company but an extension of the post-revolutionary regime and the industrialization process.

Achieving these goals was not easy, and Pemex had to battle on two fronts. On the one hand, it had to face the boycott called by the expropriated international companies and the United States government. Mexico had lost its export markets, its suppliers of machines and spare parts; there was a lack of qualified technicians and staff and the lack of oil tankers made

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[30] This switch was rooted in two seemingly contradictory beliefs: 1. New sources of energy would soon replace oil on the world market; 2. The per-barrel price of oil would rise constantly and exponentially.

[31] I. Morales, C. Escalante, R. Vargas, 1988, p. 205.

[32] *Ibid.*, p. 20.

[33] *Ibid.*, p. 20.

exports impossible. It also had to retool production facilities left behind by the foreign companies which were strictly oriented toward exporting and did not match the national company's objectives. For example, all of the refineries were on the coast of the Gulf of Mexico, which was not adapted to supplying the domestic market. Furthermore, uniting sixteen companies of various sizes and different business cultures into one company was a complex process. However, at the end of the 1940s, the main problems caused by nationalization seemed to be resolved. Bermúdez was then able to devote himself to consolidating the nationalized industry: exploration was intensified, refinery capacities were increased and the transport system was reoriented toward the domestic market. The end of the Second World War made importing machines easier and less costly.

From 1938 to 1970, Pemex's major challenge was insufficient financial resources: price control policies mainly benefited consumers while taxes financed public expenses, even if the Mexican economy experienced exceptional growth thanks to a GDP of more than 8 % per year ("the Mexican Miracle"). During this period, certain groups within Pemex attempted to increase the national company's autonomy by opening the sector to private businesses. As Isidro Morales remarked, two sides were up against each other: on one side, nationalists wanted to use Pemex to complete Cárdenas's economic and political plan; on the other side, free-market liberals wanted to allow the private sector a role in some of the company's activities. The conflicts between these two groups crystallized around risk contracts.[34] Between 1958 and 1964 under Adolfo López Mateos's administration (Pascual Gutiérrez Roldán was director general of Pemex at the time) – the group of free-market liberals dominated and privileged risk contracts, but in 1964, the group of nationalists got their revenge with Jesús Reyes Heróles, a brilliant intellectual and ideologist from the Institutional Revolutionary Party (PRI) and risk contracts were outlawed on the grounds that they were unconstitutional).[35]

At the end of the 1960s, the state had virtually total control over the oil industry; the nationalist side had been reinforced and contracts with the private sector had been cancelled. But the state's grip on the industry was very costly: on top of traditional financial problems there were the disbursements linked to canceling risk contracts.[36]

As a consequence of this state monopoly in a closed and protected national market, Pemex's "cheap" sale prices, set by political decision, were much lower than those on the international market. Production costs rose considerably, reducing the company's self-financing capacity. In the early 1970s, Pemex's relative obsolescence reached a critical point: for the first time since the birth of its oil industry, Mexico was unable to finance its own production and had to import oil.

Nonetheless, in 1974, Mexico reentered the international oil market as a net exporter. This "outward expansion" was brought about by the discovery in 1972 of new oil reserves in the

[34] The Pemex director general, having a financial background, wanted first to resolve the public monopoly's economic problems

[35] The ban applied both to risk contracts and joint production contracts, the difference between the two residing in the way the third party is remunerated.

[36] I. Morales, C. Escalante, R. Vargas, *op. cit.*, p. 33.

country's southeast (Samaria and Sitio Granda in the state of Chiapas) but also by the need to find money to reduce the budget deficit of Luis Echeverria's administration. This new policy was enlarged in 1977: the new Pemex management (under Jorge Díaz Serrano's leadership) reevaluated oil reserves and the discovery of even more reserves in Tabasco and Campeche put the country in the international spotlight. Mexico became one of the world's main oil producers. In a world shaken up by two oil crises (1973 and 1979) and that feared supplies would become insufficient for industrialized countries' growing needs (the question of depleting this non-renewable resource was already being posed by international companies, certain governments and official agencies), Mexico suddenly appeared as the stabilizer of the crude oil market, capable of weakening OPEC since it had decided to be an independent producer.[37] Given their increasing dependence on oil, the United States, the world's largest oil consumer, was particularly interested in the evolution of the situation.

The government and Pemex decided to increase production sharply and quickly. The Mexican oil industry's international rank had changed: in 1982 Mexico produced 2.75 million barrels per day (bpd) compared to 156,586 bpd in 1976. Pemex raised the total amount of reserves (3P, for proven, probable and possible) from 7 billion barrels to 70 billion barrels. The company became the fourth largest exporter of crude oil in the world, becoming the United States' main supplier ahead of Saudi Arabia and was ranked 5th in terms of reserves.[38] There was a new boom in the refining, transport and distribution capacities for hydrocarbons as well as petrochemicals. However, to finance these transformations, and in particular to develop the crude oil reserves in the country's southeast, Pemex went heavily into debt.[39] Its investments, which amounted to 9.25 billion pesos in 1974 reached 284.7 billion in 1982. Likewise, its federal taxes went from 4.9 billion pesos in 1974 to 341.4 billion pesos in 1982 (an increase due to the exponential increase in the price of oil and Mexican crude oil production).[40] The national company's debt therefore increased exponentially as well: from 9.3 % of the state's total public debt in 1974 to 32.7 % in 1982. Massive hiring of employees (especially in petrochemicals, project management and construction) contributed greatly to the soaring debt, while the STPRM (Union of Oil Workers) gained considerable political and economic power within the company.

During this period, the internal conflict between nationalists and liberals focused mainly on crude oil export policy. The group of nationalists refused all massive export policies because for them it was a symbol of selling off the nation's heritage; the liberals aspired to make Mexico a major producing country capable of playing an important international role. According to Jorge Díaz Serrano, their leader, "the oil industry's transition era" would only last for about twenty years; it was a historic opportunity that Mexico needed to seize.

In 1982, when oil prices collapsed and banking interest rates suddenly skyrocketed, a crisis broke out in this fragile economy that was completely dependent on oil exports. With

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[37] L. Meyer, I. Morales, 1990, pp. 179-180.

[38] *Ibid.*, p. 193.

[39] *Ibid.*, p. 211.

[40] *Ibid.*, p. 211.

more than 100 % inflation, negative growth (-4.3 % in 1983) and an external public debt of 83 billion dollars,[41] Mexico was on the brink of bankruptcy.[42] The nation's virtual bankruptcy marked the end of an era for Pemex.

### Petróleos de Venezuela, SA (PDVSA): From Nationalization to the Opening up of the Oil Industry

In Venezuela, the enactment of the 1975 organic law on hydrocarbons was the founding act of the oil industry: "It was an act of vital importance comparable maybe to only the 1943 law on hydrocarbons that succeeded in uniting all of the concessions under the same legal framework and unambiguously established the Republic's fiscal sovereignty."[43] Movable and immovable assets present on national territory, property rights, prerogatives and oil revenues were entirely transferred to the state and its national oil company, Petróleos de Venezuela, Sociedad Anónima (S.A.), PDVSA.

Despite the government's ambition to create a state monopoly, it wondered if this monopoly would be capable of managing such a diversified industry since it encompassed three major operators and a few small independent companies.[44] From 1975 to 1979, the government chose first to rationalize the structures of the various national operators, reduced in the end to three subsidiaries: Corpoven, Maroven and Lagoven.[45] Lagoven stemmed from Exxon Mobil, Maroven from Shell and Corpoven brought together most of the small companies. Petróleos de Venezuela became a holding company coordinating these three subsidiaries. At the same time, the government created a research and development center, Intevep. The nationalized subsidiaries followed the Commercial Code very strictly as if they were real commercial enterprises. They modeled their fiscal practices on private companies, inventing mechanisms for paying fewer taxes, thus reducing the oil industry's fiscal contribution.[46] They continued to follow the original management style of the international companies which made it possible to create new generations of professional managers and technicians who were highly qualified and had a true business culture.[47] Furthermore, even though PDVSA senior executives were no longer accountable to their parent companies, the subsidiaries never severed the ties linking

[41] In constant dollars, GDP in 1982 was $173 billion.

[42] 1982 statistics show how serious the recession that the country fell into was: GDP showed a negative growth rate of 0.2 % and unemployment doubled.

[43] L. E. Lander, 2006a, *op. cit.*, p. 104.

[44] Interview, Caracas, December 2009.

[45] D. R. Mares, *op. cit.* p. 37. CVP was not converted into a national oil company but instead a holding company was created, PDVSA. Two years afterward, CVP was brought under Corpoven.

[46] A. Silva Calderón, *op. cit.*, p. 121.

[47] M. Al-Shereidah, 2006, p. 132.

them to the latter (and their native countries).[48] The PDVSA management team did not view themselves as public officials and they always managed to retain a great deal of financial and technical autonomy. Whereas Pemex was financially dependent on the Mexican government, PDVSA retained a great deal of independence from the country's financial authorities. Unlike the Mexican company, its history was marked by a series of conflicts between the state, as owner of the reserves, in particular the Ministry of Energy and Mines, and the directors of the holding company who strove to free themselves from their one and only stockholder, particularly when oil prices fell during the 1980s.[49]

## The Building of a Nationalized Industry in Perspective

Nationalization did not have the same effects on the creation of the oil industry in Mexico and Venezuela. Pemex became an administrative structure answering to the fiscal, industrial and social needs of the government, while PDVSA embarked on a more commercial path.

The building of the Mexican monopoly put Pemex and the oil industry under the state's command: the Ministry of Finance made it an administrative agency with no autonomy whatsoever. On the organizational level, the big "challenge" of the period was to build a vertically integrated industry following the classic state centralization model.[50] Oil operations, which until then were split up into numerous companies with their own criteria, were suddenly put into the hands of a centralized administration. Plus, the new state-owned company had to control every segment of operations from exploration to sales.[51] Even though the institution and its organization evidenced a number of shortcomings, centralization was an efficient means of control, serving mostly political goals.

Although serious conflicts pitted nationalists against defenders of opening up the industry, the former always ended up winning. The rare attempts – with Pascual Gutiérrez Roldán (1958-1964) then with Jorge Díaz Serrano (1976-1981) – to grant Pemex more financial and organizational autonomy ended in failure. Unlike PDVSA, Pemex remained a mere administrative agency subject to control of the executive, the Ministry of Finance in particular. Furthermore, the company operated within a protected economy. Until 1977, it completely disregarded the rules of the international oil market. Its aim was to create a surplus to offset government deficits. When Mexico had to re-enter the international oil market, this economic, commercial and political logic led the country to ruin.[52]

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[48] *Ibid.*, p. 133

[49] A. Benhassine, *op. cit.*, p. 54.

[50] I. Morales, C. Escalante, R. Vargas, *op. cit.*, p. 107.

[51] At the time, only the very large international corporations were integrated in this fashion.

[52] In June-July 1981, Díaz Serrano reduced the price of Maya crude (the main type of crude oil produced in Mexico) under pressure from U.S. companies. This personal decision, made without calling a meeting of the president's energy committee, cost him his job as director general. However, his error was a political, not a technical one. I. Morales, C. Escalante, R. Vargas, *op. cit.*, p. 208.

The situation was radically different in Venezuela. Before nationalization, legislation aimed to reinforce the state's role; as soon as the industry was nationalized, the executive's supervisory and control capacity began to weaken. Design and implementation of public policies gradually shifted from the Ministry of Energy and Mines to the PDVSA management.[53] At the same time, two groups formed that had different visions for the nationalized industry's organization. One group wanted to cater to the country's domestic needs, exports being secondary to national consumption, and the production of oil products taking priority over crude oil production. The other group, who managed to impose their view, wanted to internationalize.[54] Álvaro Silva Calderón points out that, apart from timid attempts, policies aiming to give priority to national needs had never managed to win out, which he believes attests to the pervasiveness of the old extracting-exporter model.[55] Old industrial habits lived on and CVP, designed to be the center of oil-related activities, quickly became an obstacle to the new company management's plans.

Each subsidiary retained its business culture from the concession era and the emblematic colors of the original transnational companies.[56] For some observers, the ex-concession holders continued to operate in the country "without trauma," in the manner of PDVSA associates. The Commercial Code strictly guaranteed the state company's independence in relation to the Ministry of Energy and Petroleum (MEP). PDVSA and the subsidiaries developed and executed their objectives much more as professional actors than as government agents. In stark contrast with Mexico, PDVSA's commercial and financial autonomy released the government from any legal responsibility. On the other hand, constitutionally, PDVSA could not be privatized: the government had to remain the owner of the company's stock,[57] but it had no obligation to hold stock in the subsidiaries, which thus had even more freedom to act. Finally, the constitution authorized PDVSA to buy and sell foreign assets and to undertake joint ventures.

There was also a certain amount of autonomy between the three subsidiaries and the holding company (PDVSA). PDVSA outlined the general strategy, controlled production and sought to maximize profits.[58] Lastly, as regards marketing and sales, the absence of politics in PDVSA – where merit was the only criterion for internal promotion – stood in stark contrast with Pemex's over-politicization. This was one of the keys to the Venezuelan company's success.[59]

53 L. E. Lander, 2006a, *op. cit.*, p. 105.

54 A. Silva Calderón, *op. cit.*, p. 118.

55 *Ibid.*, p. 118.

56 M. Al-Shereidah, *op. cit.*, p. 132.

57 D. R. Mares, N. Altamirano, 2007, p. 39.

58 *Ibid.*, p. 39.

59 Various interviews, Caracas, December 2009.

## Liberalization of the oil industry

The role of Latin American state oil companies in the spiral of debt was mentioned at the beginning of this study, as were the "stabilization" and structural adjustment programs (privatizations, liberalizations) the sector was subjected to throughout the 1980s and 1990s. Pemex and PDVSA were no exceptions. Nevertheless, their policies of opening up their industries and privatization were, like their nationalization processes, extremely different.

### The Administrative Reorganization of Pemex

In Mexico the question was the following: in the face of recession, how could Pemex become a competitive firm that took part more effectively in the modernization and internationalization of the country's economy without violating key principles of the Constitution or encroaching on national sovereignty, still a very sensitive issue? How could a viable balance be achieved between the two guiding principles – national and entrepreneurial – and how could the necessary transition from the status of protected publicly-owned business to that of an oil company capable of generating the highest revenues possible and resisting international competition be implemented smoothly?

In the late 1980s, Pemex's successive managements decided that company restructuring alone would enable it to meet this challenge. The search was on to find the new organizational modalities that would allow Pemex to retain its state-owned status while being run according to private sector methods and criteria, which supposedly guaranteed better corporate governance.

At first – from 1982 to 1988 – the new administration chaired by Miguel de la Madrid faced an enormous crisis which was the consequence of the previous administration's oil policy. Determined to turn things around, the new government strove to rebuild Pemex; but in fact, it settled for fixing only the financial aspects of the state company.

#### • The new Pemex: 1982-1988

The weakening of the international crude oil market and the financial crisis that shook the country crushed all hope for Mexico to return to the export market. The 1980s were a period of transition during which efforts were made to cut the financial and political costs of the "administration of abundance." The urgency of crisis forced Miguel de la Madrid's administration to attack the financial problem and postpone organizational reform. The radical turn of the new government's economic plan and the commercial opening up that accompanied it (joining the GATT, then signing multiple agreements, the main one being NAFTA) necessarily had

repercussions on the organization of a company that was strategic for the country.[60] With more or less hidden intentions of privatization and an obvious inclination toward internationalization, policy-makers strove to transform Pemex into a productivity- and profit-oriented company. Seriously calling into question former management choices, they decided to promote non-oil based exports and at the same time set out to build a "New Pemex" by implementing a rigorous financial stabilization plan. Budget cuts greatly affected oil investments.[61] In addition to an import substitution program that saved the country a substantial amount of foreign currency,[62] they rescheduled external debt payments on loans that for the most part had been contracted for the short term.[63] The financial structure improved considerably but this austerity program had negative consequences on the company's ability to respond to future energy needs and to undertake basic, medium and long-term production investments. The decrease in exports combined with a dramatic drop in international prices starting in 1986 adversely affected the injection of foreign currency. The increasing tax burden – quickly reaching 80 % of sales revenue – suffocated the company. Although it is true that at the end of Miguel de la Madrid's term, oil as an export product was no longer the basis for economic growth, hydrocarbon revenues remained one of the main instruments for servicing external debt and financing public expenditure.

On the other hand, there were few changes in the company's organization and in the oil industry: Pemex had no freedom to increase its autonomy (be it financial or administrative) with respect to the executive, which tightened its grip by creating a foreign oil trade commission associating various ministries and analyzing the company's sales and marketing policy to prevent Pemex from attempting to assert control over this aspect.

**• Between state monopoly and the market rationale (1989-1992)**

It was not until the early 1990s under President Carlos Salinas de Gortari's administration that restructuring Pemex really became subject to debate. Different visions were confronted, ranging from the *status quo* to privatization. The government finally opted for the middle road.

It decided to re-center the company, giving priority to its core business (hydrocarbon exploration and production) over industrial processing activities. Pemex had to give up its peripheral operations, those that were not strictly part of the core business of the oil industry (such as its construction company, engineering institute and other service and logistics

[60] According to Miguel de la Madrid, the crisis was the product of misguided economic policy. In opposition to the protectionism shielding the production apparatus and the predominance of the public sector, this administration suggested radical changes to overcome the crisis, recover a capacity for growth and achieve steady development without causing inflation.

[61] In real terms, total investment in the oil industry declined; in 1989, it was only one-quarter of what it had been in 1981 (primary production was the most affected). Prices were also set higher and subsidies reduced to lower domestic demand and narrow the gap with international prices. Bottlenecks in the storage and transport of hydrocarbons were eliminated, and the government attempted to curb the rampant corruption that had poisoned the state and its close circles.

[62] Imported capital goods went from 60 % in 1982 to 15 % in 1985.

[63] The amount dropped from $19.2 billion in 1982 to $15.7 billion in 1985.

activities) and outsource them to private companies. This measure had a strategic and political value whose scope was less important than if it had consisted in selling part or all of the company's main assets. The 1992 reform divided Pemex into a "corporate center" (*el corporativo*) and four subsidiaries[64] and instituted a management focused on lines of business. The subdivision of the company decentralized its power structures. Each subsidiary was assigned its own responsibilities in the financial, political, legal domains, etc.[65] The aim was also to identify and separate profitable entities from those that were not.[66] This restructuring was written into the organic law of Pemex and its subsidiaries in July 1992 to make it more difficult to reverse course.

The division into subsidiaries took into account "transaction costs" and also international prices, which was new. At the same time, a price structure was devised with "opportunity costs" in order to eliminate state subsidies. The idea was to simulate a market environment within a company that still retained its monopoly status. This system of inter-subsidiary prices favored the Pemex Exploration and Production (PEP) subsidiary to the detriment of the processing entities (refineries and petrochemicals) which, because of this, recorded losses on their balance sheets.

At the same time, two types of rules, general and specific, were set up, introducing competition: the Federal Economic Competition Law (LFCE) and the Federal Competition Commission (CFC) were part of the first type; as such they were applied in the exact same way to all sectors of activity and aimed to supervise administrative behavior (not only in the field of public works and purchases but also among government officials). Various regulations and laws applied to natural gas; the Energy Regulation Commission (CRE) was in charge of regulating segments that fell under the umbrella of the private sector in the natural gas industry and thus was part of the second type of rules. Their goal was to fix prices for natural gas according to market conditions in southern Texas (the Houston Ship Channel) and create a stable and attractive environment for private investments.

Pemex's new management also showed keen interest for the international oil market and created a public company having its own legal identity – PMI, Pemex Internacional – which would market Mexican oil products abroad and face the challenges of a volatile international oil market.[67] It also maximized profits in commercial transactions at all levels – production, refining and distribution. Furthermore, PMI was conceived as a pilot center ushering in a new management style and promoting a different business culture through extremely fluid and flexible "Profit Centers" with horizontal relationships among the various categories of workers, excluding all labor unions.

This far-reaching administrative reform was carried out according to economic criteria and in the perspective of putting the company's accounting in order while preserving Pemex's

[64] These were Pemex Exploration and Production (PEP), Pemex Refining, Pemex Gas and Basic Petrochemicals (PGPB) and Pemex Petrochemicals. See appendix.

[65] Each had its own board of directors. A central strategy department, which had its own board of directors, ensured coordination and supervision of the subsidiaries' activities.

[66] This was impossible to ascertain, however, due to the company's vertical structure.

[67] PMI was set up as a limited liability company with Pemex holding 85 % of the share capital, BANCOMEXT, the foreign trade bank, holding 7.5 % and Nacional Financiera (NAFIN) 7.5 %.

fiscal and social role. This reform was not seriously called into question until Vincente Fox's administration (2000-2006). However, it did not touch on any fundamental aspects inherited from the expropriation and nationalization phases: the state's monopoly and the union's power over the company remained unaffected, as did Pemex's answerability to the government (the President and the Ministry of Finance).

## The Opening up of the Venezuelan Oil Industry (the Apertura Petrolea) (1989-1998)

### • The starting point: the internationalization of refining operations

Unlike in Mexico, nationalization in Venezuela marked the beginning of conflict not only between the PDVSA management and the state, but also between the state company and the Ministry of Energy and Mines.[68] With ups and downs, PDVSA gradually won out: not only did PDVSA become powerful due to the oil windfall but the company was also considered a model of efficiency. During oil boom periods (from 1973 to 1981), the conflicts were not visible: high prices allowed the operators as well as the owner to achieve their respective goals. However, conflict became obvious when prices started to fall in 1981-82.[69] Herrera Campins's administration intervened more and more in the oil holding company's area of expertise even though it did not have the know-how or the necessary technological information. It took away the company's financial autonomy and imposed a growing economic and social role (national missions) on the company in order to promote development and social stability. The results were mixed for the holding company: on the one hand, there was a major renewal of oil reserves and refining capacity increased significantly; on the other hand, the volume of production, exports and the evolution of the price structure suffered. Moreover, for political reasons (subsidies for oil products on the domestic market), sale prices were well below international prices, causing serious losses for the holding company which were barely offset by export profits:[70] in 1983, PDVSA's net income was lower than in 1977. In the face of this impasse – but also in the aim of bringing their heavy crude oil to the market – the PDVSA management undertook an international expansion strategy to reclaim the company's financial and operational autonomy. They developed refineries outside of the country.[71] This joint venture strategy with refineries in the major markets

[68] A. Benhassine, *op. cit.*, p. 75.

[69] *Ibid.*, p. 76.

[70] D. R. Mares, *op. cit.* p. 38. Luis Herrera Campins' administration forced PDVSA to convert $5 billion in overseas accounts into bolivars at the Central Bank. Repeated devaluations, however, cost PDVSA a lot of money. Furthermore, erratic exchange rates also permitted the government to manipulate PDVSA's balance sheets and maximize transfers to the national treasury, weakening the company's self-financing ability. B. Mommer (2008) and J. C. Boue, *op. cit*. Moreover, OPEC's quota strategy that vainly attempted to slow the drop in prices also affected PDVSA.

[71] At first, PDVSA entered into partnerships with small European refineries (VEBA OEL and RUHR OEL), then bought shares in CITGO Petroleum Corporation in the United States. A. Benhassine, *op. cit.*, p. 110.

was carried out gradually. First of all, in order to integrate the refineries vertically to sell its heavy crude, PDVSA created a new entity grouping together all of the holding company's subsidiaries located outside of the country. Given the need to stabilize public revenues affected by turmoil of international oil prices, the government looked the other way. Thus, PDVSA acquired a great deal of operational autonomy from its sole stockholder, even as its dependence on its joint venture partners and international consumers increased at the same time: the company had to honor its supply commitments. However, inside the company a power struggle developed between the upstream and downstream subsidiaries.[72] Through this strategy, PDVSA increased its refining capacity, won markets abroad for its heavy crude oil and gained assets that the government would have a hard time confiscating or controlling. In light of this success, the nationalists became increasingly worried: for them, PDVSA was merely an instrument to maximize revenues that fueled economic and social development; it was in no way a company that should give priority to increasing its value. The internationalization of refining operations was therefore the first step in what was called during the 1990s, "*la apertura petrolera*."

**• Implementation (1989-1998)**

In reality, it was not only the holding company's desire for emancipation that led to the opening up of the oil industry, but also the deplorable state of the Venezuelan economy and the drop in the price of crude oil (1986).[73]

To face increasingly high current expenditure and avoid aggravating the social crisis, the government turned to the International Monetary Fund (IMF). The organization agreed to open a credit line under two conditions: Venezuela had to commit to reimbursing its external debt to various creditors and had to completely overhaul its economic policies and institutions. The structural adjustment plan of Carlos Andrés Pérez's administration was in line with the policies recommended by the Washington Consensus. This period is known as the "*Gran Viraje*" (the Big Turnaround). Within this framework the oil industry was also reformed with a view to reversing the downward trend of national oil indicators. PDVSA elaborated a medium term "Expansion Plan" aiming to double production in ten years (from 1990 to 2000).[74] This new political impetus – to bolster financing capacity, acquire advanced technology and develop niche markets (especially those concerning extra-heavy crude oil) – implied increasing the national operator's investment capacities (therefore lowering its taxes) and to bring in private, national and foreign capital.[75] The transformation took place gradually: it began with downstream activities and natural gas, then with the upstream sector of the oil industry. PDVSA kept the

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[72] *Ibid.*, p. 137.

[73] In January 1989, when Carlos Andrés Pérez was elected president for the second time, the main economic and financial indicators were all at a low point.

[74] At the time, PDVSA was producing 1.6 million bpd. It aimed for a production of 7 million bpd.

[75] This model had been implemented by other oil-producing countries.

same management team in place, which contributed to the success of this new approach,[76] making PDVSA became a true market leader.

To avoid offending Venezuelan sensitivity and patriotism, the PDVSA management decided to begin by liberalizing the natural gas industry.[77] This precedent was also a way to establish and legitimize the concept of liberalizing the oil industry. In 1991, they tackled the oil fields. Depending on the nature of the oil field, three types of association contracts were proposed. For marginal fields, operational contracts were offered (*Contratos Operativos de Asociación*). Subscribers would be the operators but the oil and the market would remain in PDVSA's hands.[78] At the end of the 1990s, more than thirty operational contracts were in activity producing more than 500,000 bpd. The second type of contract, strategic associations, concerned the Orinoco Belt (*Faja del Orinoco)*, which was known to contain enormous reserves of extra-heavy crude oil (an estimated 100 to 270 billion barrels). To exploit these reserves PDVSA needed to attract big international companies with the necessary capital, technology and expertise. Between 1998 and 2002, four associations were created – Petrozuata, Sincor, Cerro Negro and Hamaca – which produced 600,000 bpd.[79] International companies were granted attractive conditions so that they would agree to invest massively in the Orinoco Belt. PDVSA also offered risk contracts for the exploration and exploitation of new oil fields. This offer, however, did not have many takers.

The conditions stipulated by the international companies sometimes went against the fiscal and legal framework in place as well as against certain traditions in the industry. Regarding fiscal matters, the companies demanded exemptions from paying royalties and taxes for hydrocarbon exports and a similar tax status to that governing companies that did not produce hydrocarbons (30 % instead of 67.7 %) to exploit less profitable oil fields. For some observers of Venezuela, this was a return to the first 1920 hydrocarbon law.[80] On the legal level, the companies demanded that disputes be resolved in an international court. Members of the opposition claimed that strategic associations challenged the foundation of the 1975 organic hydrocarbon law regarding extraction and the development of non-conventional oil (extra-heavy crude oil). At the same time, the PDVSA management decided to open the domestic hydrocarbon market, bringing domestic prices closer to export prices, and partially privatized Pequiven, the petrochemical subsidiary, and the natural gas industry through new regulations.

The constitutional issue remained to be resolved. To do so, they used the famous article 5 of the organic hydrocarbon law which left the door open to associations with third parties. The PDVSA management played on several fronts: first of all, they took advantage not only of

[76] Interview with Francisco Monaldi, researcher at IESA, Caracas, December 2009.

[77] This was the Cristobal Colón project.

[78] There were three successive series of operational contracts during the 1990s.

[79] Only Petrozuata was founded when Luis Giusti was at the helm of PDVSA. The three others were formed during the early years of the Chávez administration, but retained the strategic association format set up under the previous administration.

[80] A. Benhassine, *op. cit.*, p. 161

flaws in article 5 but also of the opportunities it offered; going over Congress' head (Chamber of Deputies and Senate), they then submitted contracts of association to the Supreme Court of Justice for its advisory opinion;[81] finally, they called in national and international experts and legal advisors who determined that the contracts were authentic service contracts even though they were so only marginally (1991).

This rather radical liberalization policy led to a notable increase in reserve levels as well as growth in domestic oil production, which rose from 1.6 million bpd to 3.5 million bpd between 1989 and 1998. A quarter of the production came from private investors who operated in association with PDVSA. But, at the same time, expenses doubled (from 3 to 6 billion dollars). Furthermore, the policy of opening up the industry reinforced the role and political influence of the PDVSA management, thereby diminishing the Ministry of Energy and Mines's authority.[82] Venezuela blatantly circumvented OPEC rules: PDVSA maximized production volumes, disregarding OPEC quotas and target prices.[83]

## Oil Liberalization in Perspective

Although both Mexico and Venezuela opened up their oil industries during the 1990s, the concept of liberalization took on very different, almost opposite, dimensions in the two countries. The difference in paths taken flowed from the nature of the institutions set up at the time of nationalization and subsequently.

However, similarities do exist. Nationalization was not revoked and the companies were not privatized. Furthermore, in Mexico as well as in Venezuela, the process was a gradual one. The groundwork for opening up both industries was laid in place during the 1980s. While the Mexican government made Pemex repay its debts by imposing extreme austerity, PDVSA turned toward internationalization creating a large network of refineries in Europe and especially in the United States (CITGO). In the 1990s both companies started the liberalization process with the natural gas industry, a resource that had less symbolic significance than oil. This clearly shows the weight that nationalization still had and the political importance of the nationalist group in both countries.

The similarities end there. Pemex remained a state monopoly and was subject to increasingly strong fiscal pressure due to the lack of political will on the part of the various administrations to completely reform the federal tax regime. The company's budget was subject to decisions

[81] This was the case of Lagoven in 1990 for its contract of association with Exxon, Shell and Mitsubishi. According to F. Monaldi, B. Mommer aptly described this process of sideling Congress. Interview with F. Monaldi, cited.

[82] In an unstable political and economic context, PDVSA appeared as a national symbol. Its ability to generate revenue made it an object of national pride and a sort of lifebuoy. D. R. Mares, *op. cit.*, p. 40. Through the various interviews conducted during the months of December 2009 and September 2011, it became clear that the Ministry of Energy and Mines was drained of its most competent staff, who were drawn by the high salaries offered by PDVSA and the prestige associated with the company name.

[83] Venezuela's low production in the late 1980s was in fact partly due to quotas imposed by OPEC.

made by the Ministry of Finance, which paid little heed to the investment needs outlined in the company's annual business plan. The nation's president continued to appoint senior executives and imposed political criteria on Pemex's management in step with the pace of presidential terms. Changes in the company's institutional framework were minor: management along lines of business, setting prices in line with international prices, taking into account transaction costs and opening up natural gas downstream. Within the same monopolistic framework, the new structure could not really accomplish its target goals: to stimulate competition, create greater transparency and simulate a market environment. The natural gas (and electricity) regulator – the Energy Regulation Commission (CRE) – which should have been a check on the power of the Ministry of Energy and the national operator – remained isolated between two monopolies, Pemex and the Federal Electric Company (CFE). It was granted little room to maneuver: it had few employees, insufficient funding and little power to sanction. Paradoxically, the most significant opening came in terms of outsourcing oil and para-petroleum services. Since the government wanted to refocus the state company on its core business and was unable to privatize midstream activities (refineries and petrochemicals), the authorities opened up services to outsourcing. By doing this they allowed U.S. companies (and to a lesser extent Canadian companies) to overrun the market: service companies (Schlumberger and Halliburton in the lead) were thus able to consolidate their positions. But a service company offers very different skills than an operator. Opening up to outsourcing was done to the detriment of the IMP (Mexican Institute of Petroleum), which gradually became a mere educational training center. The small dose of liberalization had no impact on reserves, which declined, or on hydrocarbon production.

By comparison, at the end of the 1990s, the Venezuelan oil industry was extremely open; it attracted international companies in great numbers due to favorable legal and contractual conditions. Major changes came about: OPEC quotas were no longer respected, new contracts reintroduced forms of association with international companies that had previously disappeared (even though they were authorized by article 5) and differences could be resolved by an international court. Unlike the Mexican oil industry, which remained closed off from the world and governed by a national legal and contractual framework and which had only opened up downstream (natural gas) and services, the Venezuelan oil industry rejoined the international oil trade.

Why made it possible for the oil industry in Venezuela to open up this way? As mentioned previously, PDVSA never lost the management style it had modeled after international oil companies. Because of this, the company had no problem entering into association with international operators. Pemex, on the other hand, had not developed management skills or a business culture. Other factors came into play as well. Nationalization was a much more recent process in Venezuela (it took place nineteen years after Mexico's) and was much less traumatic. Furthermore, article 5 left a loophole in Venezuela's constitution, making special arrangements possible. It was therefore much easier to call certain past legacies into question. Lastly, there is no doubt that the country's enormous geological potential, besides the interest it sparked among IOCs (International Oil Companies), has always led Venezuela to adopt a much more pragmatic approach.

## The 2000s: The new oil nationalism

At the beginning of the 21st century, a number of Latin American governments experienced a shift to the left: Argentina, Bolivia, Brazil, Chili, Ecuador, Honduras, Nicaragua and Venezuela, among others. Even though these administrations were elected on very diverse platforms, this return to power delivered a clear message: it was time to counter the multiple negative effects of the "neo-liberalist" wave during the previous decade.

At the same time, in 2002, the international price of oil rose spectacularly, compensating for the low prices at the end of the 20th century. Most of the crude oil (and gas) producing countries – whose economies were often oil-dependent – were tempted to regain control of their natural resources. They restricted or put conditions on foreign companies' access to mineral resources (upstream oil and gas) and increased their stake in the share capital of this segment of the industry.[84] However, the methods used in the process varied from one country to the next. Furthermore, certain states, such as Mexico, experienced a shift to the right. After this third oil boom, reorganization of the energy sector therefore took different routes.

What organizational changes were experimented by the Mexican and Venezuelan oil industries at the beginning of the 2000s? And to what extent did these new structures help them overcome the sector's numerous challenges on an international level: the end of easy oil, the rise in exploration and production costs, acquisitions, financing cutting-edge technology, etc.?

### The Mexican Oil Industry's Faint-Hearted Reforms

In Mexico, in July 2000, the Partido Revolucionario Institucional (Institutional Revolutionary Party - PRI) in power for more than seventy years, was ousted by the Partido de Acción Nacional (National Action Party - PAN). This rather Christian democratic and economically liberal political party was rather favorable to entrepreneurs and to the United States. Nonetheless, the reforms of the successive PAN administrations in the oil sector were not influenced by the wave of what was called "new oil nationalism."

The political changeover took place under a Congress dominated by three political forces of equal importance, which had major repercussions on the oil sector. Indeed, the slightest restructuring of the industry, the opening up of one of its segments, or instance, made it necessary to modify article 27 of the Constitution, which required not only the majority in local parliaments but also the approval of a two-thirds majority of Congress where, during this period of "divided government," no single political force had enough power to impose their will. The need for a broad consensus among all of the political parties delayed any reform in the sector.

[84] This practice differs from "expropriation" in which *all* the existing companies' assets were seized.

At the end of the year 2000, Vincente Fox's administration (2000-2006) attempted in vain to cultivate an "entrepreneurial" mindset, which was the complete opposite of the economic philosophy that had guided the restructuring of Pemex in 1992 and over the following years. Fox appointed Raúl Muñoz Leos, who had shown his managerial skills as the president of Dupont in Mexico, to head of the company. Most of the company's other senior officials came from the private sector. The goal was to apply an orthodox "entrepreneurial" approach to a state company to bring it up to the level of the IOCs. However, the various attempts at reform undertaken by Muñoz Leos's team ended in complete failure: the appointment of four important Mexican entrepreneurs to the Board to bring technical criteria into the decision-making process; the administrative grouping of the four subsidiaries (Pemex Exploration and Production, Pemex Refinery, Pemex Gas and Basic Petrochemicals and Pemex Petrochemicals) under a strong centralized management to define common goals and foster better coordination and cooperation; the development of the national oil industry via the El Fenix project to build two new large petrochemical complexes with joint Pemex and private investments. The plan to improve interaction between Pemex and private national companies in the construction sector and capital assets never even got off the ground.[85] As for the reform of Pemex's tax regime, approved at the last minute (the end of 2005), it proved to be largely insufficient.

The changes were therefore minimal, despite the government's numerous promises. The hype over change also posed problems, as intentions to implement change were continually trumpeted, sending worrying messages especially to investors and industrialists. In the end, the state-run company remained completely dependent on the vagaries of politics.

In fact, it was only with the arrival of a new president, Felipe Calderón Hinojosa, also a PAN member, that oil reform was launched in October 2008. As soon as he took power in 2006, the new head of state was alarmed by the massive and abrupt decrease in crude oil production. The drop was admittedly due to the natural decline – although greater than planned – of the huge Cantarell oil field (one of the largest in the world), which for years had provided 62 % of Mexico's crude oil production. For a country whose tax revenue was largely dependent on the oil rent, this situation was extremely dire, especially since Pemex had hardly invested in exploration over the previous twenty-five years. In March 2007, different study groups – in Pemex as well as in the Ministry of Energy (Sener) – worked on this topic. Together, they decided that Pemex had to be turned into a public company and no longer managed like a government agency.

On April 2008, Felipe Calderón, introduced five bills, specifying that they were to reinforce Pemex without privatizing the company or taking away its control over hydrocarbons or ownership of its assets. These bills aimed to reinforce certain areas: The Board of Directors, with four new members as "independent professional advisors" whose presence was intended to balance out the number of union members and the influence of technical commissions in relation to members of the board; Pemex's autonomy with respect to the Ministry of Finance (in terms of debt); public works specifically geared to the industry's needs as well as new "integral contracts" (*incentivados*), a sort of intermediary between risk contracts (forbidden

[85] The multiple service contracts (CSM) were designed for the oil majors, not small companies. Unlike joint ventures, they did not encourage training of Mexican staff.

by the Constitution) and traditional service contracts; lastly, in a minor way, Pemex's tax regime, by lowering taxes on difficult or not very productive oil fields. The creation of a regulatory body – The National Hydrocarbon Commission (CNH) – was to reinforce the Ministry of Energy by offering technical criteria on the state of reserves and production, the feasibility of Pemex's projects, the technology used and issues related to industrial safety. The opening up of new construction projects and refining operations, transport and distribution of oil products to the private sector was also envisaged (without this affecting control over resources). After a long period of debates (those organized by the Senate had the most impact), the opposition parties presented their own proposals.[86] Finally, on October 28, 2008, after long negotiations, the law on oil reform was passed. It went beyond hydrocarbons because it was accompanied by two laws (proposed by the PRI): one concerned energy transition and the other renewable energies.

The reform was the product of a consensus among the different political forces in the country. Given the difficulties since the 1990s to transform the workings of the hydrocarbon industry, it was a genuine success. Indeed, this reform indisputably cleared the horizon: the new tax regime would make it possible to intensify exploration in certain complex areas (Chicontepec and deep offshore sites); the extremely costly Pidiregas scheme was eliminated[87] and adoption of numerous recommendations inspired by international models could only improve the state-run company's management. It was also hoped that the laws on energy transition, renewable energies and energy efficiency would have a positive impact on sustainable development.

Yet, all of these transformations did not remove the major obstacles hindering the smooth functioning of Pemex: The state monopoly, which was the source of numerous problems, remained intact. For obvious political reasons, the oil workers union (STPRM) was spared, even though it was a major obstacle to promoting a true business culture. The issue of retirement pensions had not been addressed either. Whereas a complete overhaul of the system was essential because "*los pasivos laborales*" accounted for a large part of Pemex's astronomical debt. The subject of midstream activities (refineries built and managed by private companies as well as transportation and distribution of refined and petrochemical products) was not even broached. The situation was completely contradictory since on the one hand, one segment – natural gas – had been opened to the private sector since 1995, and on the other, an uneconomic situation imposed shipping by truck which was much more expensive than using pipelines.[88] Other measures also tended to reinforce the reigning bureaucracy. For instance, certain committees on the Board (Transparency and Audits, Evaluation) seemed to

[86] From May 8 to July 22, the president's various proposals were examined and amply criticized during 22 forums organized by the Senate and in which the countries' main experts took part (170 in all). In July and late August 2008, the PRI and then the Partido de la Revolución Democrática (Party of the Democratic Revolution - PRD), which had then taken the name of Frente Amplio Progresista (Broad Progressive Front - FAP), made their own projects known.

[87] *Pidiregas* was a form of third-party financing with private capital which was legal within a prohibitive constitutional framework, but the extensive use of them contributed to putting Pemex further into debt.

[88] The reasons were of course political, as a handful of mafia-like families have a monopoly on the road transport of LPG.

be redundant given existing agencies (internal control agencies in Pemex and the Superior Audit Office, a congressional agency). It was therefore hard to know exactly who did what. Moreover, it was not at all sure that new contracts – with their restrictions – would attract international operators since they barred companies from including discovered reserves and effective production in their balance sheets; the companies would be regulated by Pemex (at once judge and party) and not by the CNH, an independent agency, which contravened international rules.

Basically, these reforms were wishful thinking: secondary laws of article 27 in the Constitution were modified to avoid changing the article itself, losing sight of the internal logic that linked them. It was not a coincidence that Felipe Calderón announced in October 2010, that new hydrocarbon reform was advisable.

Implementation of reform was a long, drawn-out process. The Board's new independent and professional advisors and the CNH commissioners took time sizing up roles which were new for everyone. It took close to a year for these new organizations to begin working. The new commission was particularly small (less than 50 employees) and had a very small budget to supervise the huge Pemex machine. The new "integral contracts" did not become official until August 18, 2011, close to three years after the reform. And they only dealt with the oldest, least sought-after and least productive oil fields. What about the deep offshore reserves in the Gulf of Mexico that all the international operators are eying impatiently? Today there is great skepticism among observers, especially since the Ministry of Finance continues to exercise its authority over Pemex and the company still cannot use its annual budget as it sees fit. The reform in no way applied to the agencies at the heart of oil nationalism.

## The New Bolivarian Nationalism in the Hydrocarbon Industry

On December 1, 1998, after an unprecedented crisis, Commander Hugo Chávez – a candidate not backed by a party – won the presidential election with 70 % of the votes. For a large portion of the population, weary of the traditional two-party system (ADECO, Accíon Democrática) and COPPEI (Partido Social Cristiano de Venezuela) and most of all socially and economically battered by the excessive market liberalism of the 1990s, Chávez embodied hope for change.

The new government thus launched a policy of "re-nationalization" which gave the government the initiative in economic development. This turnaround primarily applied to the hydrocarbon sector. PDVSA for its part was in a complicated situation because a major internal overhaul, decided during a congress among executives held in July 1997, had been going on since January 1, 1998: given the deficiencies of the previous company organization, Luis Guisti's administration had been determined to remodel the state-owned company. Therefore, the three subsidiaries (Maroven, Lagoven and Corpoven) were changed into an organization by lines of business (exploration, production and refining) This change was extremely de-motivating for employees who had spent their whole lives working in one of these companies and were used to a specific management style. This was the particular situation that Chávez's new team inherited at the beginning of 1999.

In December 1999, the elected Venezuelan National Assembly (formerly Congress) adopted a new so-called Bolivarian Constitution that put an end to the Pact of Punto Fijo and marked the advent of a Fifth Republic. The new Republic reaffirmed the foundations of hydrocarbon nationalization, the control of national oil resources and the management of operations by PDVSA without necessarily calling into question its opening-up policy. In Venezuela, the oil industry is at the heart of the nation's economy: PDVSA is the nation's largest employer; oil represents three-quarters of export revenues, half its tax revenues and 33 % of the GDP. Hugo Chávez was completely aware of the sector's strategic value: if he wanted to implement his ambitious Bolivarian program, he needed to control PDVSA to turn a company concentrated on making profits into a rent-generating tool.[89]

First of all, the government reverted to OPEC discipline because prices at that time were not favorable to producing countries, especially in light of the Asian financial crisis which caused the price of crude oil to plummet. At the same time, the government set two major orientations for its oil policy: the first was to privilege high value-added activities by developing a domestic hydrocarbon processing industry; by doing so, the government intended to reclaim the entire oil chain and break with the previous policy which was focused on crude oil production;[90] the second aimed at promoting exploration, production and sales of natural gas, which was not very developed in spite of Venezuela's abundant reserves.

In the new Constitution a whole series of articles re-established the state's prerogatives enshrined in the 1975 law. Two measures were particularly significant: the re-establishment of article 127 from the 1936 Constitution stipulating that disputes would be resolved in Venezuelan courts and the repeal of article 123 from the 1961 Constitution that had re-authorized national private actors to invest in hydrocarbons.[91] However, at the same time, the Constitution did not exclude the active participation of private oil companies. In 1999 (decree-organic law on gas), then in 2001 (decree-organic law on hydrocarbons), the government enacted a new legal and regulatory framework for these industries. These texts redefined the range of activities open to private investors and the conditions for access to the oil and gas rent. Two categories of activities were differentiated: those reserved for the state or accessible to the private sector only under certain conditions, and those that were completely free and open to competition. The first concerned segments where the profit margins were the largest (crude oil and even extra-heavy crude oil); the second group concerned segments where the profit margins were the lowest (non-associated natural gas) and where investments were too high compared to anticipated returns and where PDVSA lacked experience. In the case of non-associated gas, private companies could have exclusivity (100 %) and benefit from a tax system (income and royalty taxes) that was much lower than the system applied to crude oil. This opening up of the industry applied to all levels of the gas chain. However, to avoid the creation of private monopolies over certain segments, the government created a specific regulatory body for natural gas: Enagas.

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[89] D. R. Mares, *op. cit*., p. 42.

[90] Interview with Eulogio del Pino, Caracas, September 2011.

[91] A. Benhassine, *op. cit*., p. 219.

For oil, the new law in 2001 eliminated the three forms of association in effect during the 1990s and redefined operating conditions for third parties. These activities were now reserved for the state but were accessible to private oil operators. The private operators had to work with PDVSA in a mixed-company framework provided that prior agreement was granted by the government and the members of the constitutive assembly. PDVSA retained at least 50.1 % of the share capital of these companies which also had to respect international treaties to which the Venezuelan state was a signatory. It was planned that the 2001 law would be effective immediately for PDVSA but would be effective for private companies only once they had converted into mixed companies, the decision to convert being left entirely up to the private operators. The minimum state-control requirement clause that was annulled in 1993 with the law on heavy oil was thus re-established, while the clause pertaining to international treaties disappeared. The new law also required public and private companies to publish their annual financial reports separately according to the various development phases of the blocks awarded.

The new hydrocarbon regulations, the internal reorganization of PDVSA by lines of business and most of all Chávez's growing interventionism in company and industry management (in particular the fact that he appointed trusted but inexperienced chief executives) sent out a negative image of the way the oil company was functioning. In 2001, PDVSA's chief executive, General Guaicaipuro Lameda, openly criticized the Chávez administration's actions: he became the spokesperson for the holding company's executives and their demands, lending him political weight. In February 2002, President Chávez appointed a new chief executive of PDVSA and from then on chose people who were indebted to him. The situation quickly took on a national political dimension: several opposition demonstrations against the government and a putsch overthrowing the president (for two days) were the most remarkable events. On December 2, 2002, oil workers declared an unlimited strike and totally stopped work. Production collapsed (from 3.3 million bpd in November 2002, down to 700,000 bpd in January 2003) provoking an estimated loss of $7.5 billion. However, the President did not give in and called out the army to take control of all production and refining facilities. After a 69-day strike, work resumed. Hugo Chávez won the showdown. This acute crisis even reinforced his determination to control every aspect of the industry. In accordance with the labor code in effect at the time, he fired about 20,000 PDVSA employees, executives as well as workers, for unjustified absences in the workplace, which was half of the staff: the company, bled dry, remained weakened for several years.[92]

Starting in February 2003, major changes were made in the organization and functioning of the holding company, which became the "*Nueva PDVSA*." Chávez united the company's management and the Ministry of Popular Power for Energy and Mines (which later became the Ministry of People's Power for Energy and Oil) into a single entity under Rafael Ramírez Carreño's control.[93] PDVSA's internal structure was also reorganized: the gas industry, under

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[92] Interview with Carlos Figueredo, Caracas, September 2011.

[93] Ramírez was a classmate of Chávez's brother. A mechanical engineer by education, he was active in the PPT (Partido Popular de los Trabajadores). In the aborted coup of April 2002, he gave Chávez his staunch support, thereby earning the president's complete confidence. D. R. Mares, *op. cit.*, p. 56.

a new, more complex setup,[94] was separated from the oil industry, which was then divided into geographic areas (Western, Eastern and Southern). This new structure, which seemed to re-establish the organizational flaws addressed during the 1997 congress (doubling costs and not respecting economies of scale), apparently has never really functioned.

The leap in oil prices reinforced the President's decisions and encouraged him to strengthen PDVSA's social, economic and diplomatic role. The state company quickly absorbed different sectors unrelated to its core business. New subsidiaries appeared dealing with non-oil activities (PDVSA Agriculture, PDVSA Industrial, PDVSA Communal Gas, PDVSA Naval and the PDVAL food subsidiary) not to mention the numerous social missions that placed a considerable burden on the company's budget and increased its staff enormously: at the time of the strike the company had 20,000 employees, in 2010, there were 99,867.[95] This expansion in every direction was the consequence of a new development plan for the company and the industry, the Siembra Petrolera (sowing oil) plan started in August 2005. It redesigned PDVSA's goals and actions – "to participate in the country's social and economic development process" – but these external activities delved deep into the company's capital, jeopardizing the maintenance of oil infrastructure and reducing production.

From 2002 on, with the third oil boom, Chávez's government became aware of the new power struggle defining relations between national and international companies. The government was tired of international companies postponing implementation of the 2001 law and making the switch to a mixed company structure, so it decided to "twist their arms." The switch became compulsory and no longer voluntary and established new bases which were much more severe for IOCs.[96] A new decree modifying the 2001 law increased PDVSA's interest in mixed companies from 50.1 % to 60 %. The government also raised the royalty rate in the Orinoco Belt from 16 % to 30 %. This process was implemented through mediation by the Asociación Venezolana de los Hidrocarburos (AVHI) with which most of the IOCs were affiliated. The first switches went rather smoothly: only Exxon Mobil and Conoco Philips refused the new contracts and appealed to the World Bank's arbitration tribunal, the ICSID, for compensation.[97] It is difficult today to assess these new mixed companies: official information is hardly reliable since it is not verified by any independent organization. As for international operators, they keep their information well guarded, fearing that a leak could affect their relationship with the government. It seems, however, that the new structure of these associations between PDVSA and IOCs leaves little room for maneuver for international operators. International companies are weathering it out, but they are barely investing. They will

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[94] The new gas industry structure distinguishes non-associated gas from oil-associated gas as well as the downstream and upstream aspects. Upstream non-associated gas can be entirely developed by private companies. Upstream associated gas activities, which remain in the hands of PDVSA, have been divided up geographically (PDVSA Western and PDVSA Eastern and Southern). The downstream and LNG segments are handled by PDVSA Gas.

[95] PDVSA Annual Report, 2010.

[96] This was the first departure from legal security. Interview with Luis Xavier Grisanti, president of the Asociación Venezolana de los Hidrocarburos (AVHI), Caracas, September 2011.

[97] The International Centre for Settlement of Investment Disputes (ICSID), established in 1965, seeks to provide international investment flows with greater legal guarantees. At the time of this writing, the ICSID had not handed down its decision. The French firm TOTAL and Italian firm ENI also refused to convert its Operating Service Agreement (OSA) (Jusepín, for TOTAL). They nevertheless kept a low profile and negotiated with the government, which compensated them for an amount deemed acceptable.

probably wait: the Orinoco Belt is today the most promising oil basin in the world (more than 276 billion barrels of crude oil reserves according to official estimates) and there is good reason to believe that Chávez, even though he is seriously ill, has not designated a successor.

Other agreements have also been in the works since 2008. Chevron and Repsol have created mixed companies with PDVSA who has also built bi-national agreements. The latter involve forging new joint ventures with state-owned companies in friendly nations (Russia, China, Vietnam, Portugal, etc.). But as the situation remains unclear, none of the companies have invested their portion yet (40 % is required) and PDVSA is allegedly dragging its feet as well. Indeed, it is difficult for PDVSA to finance its new subsidiaries and its majority interest (at least 60 %) in the new mixed companies on the one hand, and on the other fund its social missions while carrying out an expensive diplomatic policy (Petroamérica) with its poorest neighbors. Even though oil prices remain high, PDVSA's means can hardly be stretched any more as the company is in debt for the first time (30 % of its assets). The challenges are therefore daunting, and the new PDVSA – over-extended and hardly profitable – is not necessarily well armed to take them on successfully. It is true that instead of reducing company expenses, Chávez's strategy was to play on oil prices, reinforcing OPEC's policy, being one of the organization's most ardent players today. Yet this tactic has its limits.

Chávez has developed extremely active oil diplomacy since 2005. He created Petroamérica, an oil-centered energy integration program in the region that includes the Bolivarian Alternative countries. At first it was intended to counter the American neoliberal-styled project known as the Free Trade Area of the Americas (FTAA).[98] Petroamérica comprises three entities: Petrosur, Petrocaribe and Petroandina. Each one offers solutions adapted to the needs of each zone and the specific demands of member states. These cooperation agreements between PDVSA and the state companies in these countries vary greatly, though they are concentrated on delivering crude oil and refined oil products at attractive prices for member states (-25 %) and with easy terms of payment.[99] Starting in 2007-2008 these initiatives were expanded to include other countries, such as China, Iran and Qatar for natural gas exploitation; Nigeria for oil exploitation as well as India, Russia and Libya.[100] By diversifying its markets, Venezuela is attempting to reduce its dependence on a single client.[101] Although, Chávez's administration wants to continue exporting to the United States, it also wants to increase exports to China, where it expects to deliver 1 million bpd by 2015.[102] Chávez, ever the strategist, believes these numerous agreements serve as solid protection against possible attempts to destabilize him.

[98] The goal is to reduce the negative effects of the cost of fossil fuel energy in poor countries with a fragile economic situation.

[99] These initiatives also integrate joint construction and exploitation of refineries, marketing and sales of crude oil and refined oil products, propane gas, asphalt and lubricants as well as transport and logistics, petrochemicals, promotion and production of eco-fuels.

[100] A. Benhassine, *op. cit.*, p. 354

[101] More than 80 % of its crude oil exports supply the U. S. market.

[102] Interview with Eulogio del Pino, cited. Projects involving China are the most ambitious and are developing rapidly. In March 2007, PDVSA and China National Petroleum Corporation (CNPC) agreed to produce jointly 400,000 bpd in the Orinoco. In exchange, PDVSA is slated to invest in three refineries in China. The two countries also have a joint plan to remodel two obsolete refineries in Cuba and build a third.

**New Oil Nationalism In Perspective**

At first glance, it might appear that the two giants of the Latin American oil industry were swapping directions at the beginning of the 21st century, with Mexico, governed by the right, wanting to open up its oil industry and put a damper on its traditional and well-known energetic nationalism, and Venezuela, under a left-wing populist caudillo, deciding to bolster a nationalization that has been flawed since its inception in 1975.

Since the PAN has taken power in Mexico, new types of contracts have been implemented to the dismay of the nationalist group: first under Vincente Fox's management with multiple service contracts granted to foreign companies (Repsol and Brazil's Petrobras in particular) exploring and developing natural gas fields in the Burgos Basin in the country's north; then with the "integral contracts" that came out of the 2008 reform, the first three of which were awarded on August 18, 2011. The international press views this as a real turnaround because Mexico is finally opening its upstream oil sector to foreign operators. At the end of August 2011, Pemex acquired an additional 4.9 % stake in Repsol, and struck an agreement with Sacyr, a Spanish construction company, so as to have more influence over the company's general policy (together Pemex and Sacyr hold 29 % of Repsol stock). This was a big first, even if the decision was made without consulting Pemex's board or Congress. Senior Pemex officials explained that they had decided to follow the example of Petrobras and play an international role. By buying a stake in Repsol – a major company present all over Latin America – Pemex would acquire technology and expertise. Unable to lift constitutional restrictions as easily as it would like to, Pemex chose an alternative path.

The 2008 reform also included certain recommendations made by the OECD under the title of "best practices of public companies." The reform also used Brazil and Norway as models by creating the CNH which was supposed to prevent Pemex from regulating itself: a necessary measure not only to build confidence among foreign operators, but also to simulate market conditions, even within a monopoly environment.

As for the Venezuelan government, it took back control of the entire hydrocarbon chain (from exploration to sales), and PDVSA was entrusted with a social mission that went far beyond its oil activities. At the same time Venezuela recovered its dominant position in OPEC that it had neglected during the 1990s. For the first time in its history, it also departed from the basic oil industry rule of never unilaterally canceling an oil contract with a third party. The 2001 hydrocarbon law as regards oil, modified by decree in 2006, broke with this principle: neither the "fifty-fifty" rule nor the reversion law had led to such practices. PDVSA also went into debt for the first time, even if its debt may seem minor compared to many oil companies. It must not be forgotten either that 50 % of the company's employees are new. Most of them have no oil expertise; they are merely people loyal to President Chávez or to the chief executive of PDVSA and the Minister of Energy and Oil, Rafael Ramírez. Going against custom and tradition, politics made its way through the company's doors. It can even be said, without exaggerating, that politics has completely taken over the state-run company.

Following these changes, PDVSA lost the aura it had as a model company in the international oil industry. The statistics speak for themselves, although they are not very reliable since they have

not been verified by an independent organization. If it is true that with the recent certification of the Orinoco Belt, Venezuela now has the largest reserves in the world (276 billion barrels), crude oil production has more than leveled off in the last ten years: 2.9 million bpd in 2010 according to official statistics,[103] whereas it had reached 3.2 million bpd in 1998. The current production of mixed companies is lower than that of OSAs and strategic associations at the end of the 1990s. And foreign operators' investments are at their lowest point. The natural gas industry did not take off in spite of the various plans devised: the country continues to import gas from Columbia while it possesses by far the largest reserves in Latin America. The extreme politicization of the decision-making process, the lack of highly qualified staff, spreading the company thin without focusing on its core business and the absence of real legal guarantees explain, for the most part, these less than encouraging results.

But we should not be mistaken, the reality is more complicated.

Pemex has not become an oil company which, freed from its many constraints, today enjoys a decision-making, budgetary and management autonomy and maximizes the oil rent while preserving energy safety (3P reserve replacement), industrial safety and sustainable development. Far from it: the state monopoly is firmly in place and the Ministry of Finance continues to direct the state company and impose financial criteria on its operations that are at odds with the smooth running of an oil company. Lastly, article 27 of the Constitution remains impossible to change: the Pemex management has to bend over backwards to find ways of circumventing and avoiding it (always with the likelihood of perverse effects) to open up segments to private investors which remain legally closed ("integral contracts," for instance).

PDVSA, on the other hand, remains a company that is largely open to foreign investment despite new restrictions. In fact, President Chávez's and Rafael Ramírez's entourage is much more moderate than the president's radical speeches suggest: they know that exploration and production are capital-intensive and high-risk activities. They also recognize their own limits in this field: they cannot certify or develop the extra-heavy crude oil in the Orinoco Belt on their own, for instance. This realism leads them to adopt much more pragmatic behavior than one might expect and places considerable limits on their apparent nationalism. This makes it possible to understand for example why during the first generation of conversions to mixed companies, an organization such as AVHI – which all of the major IOCs are affiliated with – was able to play skillfully and reconcile the interests of CVP and private company representatives. Even though Chávez's administration very recently sold off the PDVSA refinery Ruhr OEL in Germany to Russian companies, the majority of its refining capacity remains abroad (especially in the United States). Chávez's rhetoric about evil forces (read the United States) may be virulent, but today Venezuela has jumped ahead of Mexico and has become, just behind Canada, the second largest crude oil supplier to the United States.

[103] Much less if foreign observers are to be believed. OPEC puts it at 2.7 while BP and Exxon give it 2.3 million bpd, all producers included (PDVSA and foreign companies).

## Conclusion

Observation and comparison of the long historic processes experienced by two Latin American oil companies, from their beginnings to the present day, offers multiple lessons. At the start, the Mexican oil industry and the Venezuelan oil industry seemed to have many things in common. Both countries had major hydrocarbon resources and attracted international companies at the same time. Likewise, both had to learn the ropes of being subsoil resource owners, in other words, supervise foreign operators – without chasing them off – to make sure they paid taxes in accordance with their production and its costs and so they would invest in future production. What can explain the diverging paths they took afterwards? Several aspects related to the different national contexts – history, political regime, geography and the nature of their resources – seem to have played a significant role and set in motion different nationalization processes.

The 1910-1917 Revolution was a determining factor in the birth of the Mexican oil industry. Many authors (Adolfo Gilly in particular)[104] consider that the nationalization of the oil industry in 1938 was the concluding act to the Mexican Revolution. The Revolution, as a process of building the Mexican nation, was implicitly identified with oil. This event explains more than any other the radicalism that presided over the expropriations and the almost final break with foreign operators.

Venezuela, on the other hand, was striving most of all to free itself from dictatorships and to establish political democracy. Free from the weight of ideology, this country at the limits of the Andes and the Caribbean was able to be extremely pragmatic. Geographical proximity or distance to the United States was undoubtedly another important factor for countries hosting essentially American oil companies. As many historians have pointed out in regard to the oil issue, the pressure its powerful Northern neighbor put on Mexico to defend its companies at the end of the Revolution fueled and exacerbated radicalism in post-revolutionary regimes, a radicalism that for them was the only way to survive. Farther away, Venezuela, on the contrary, maintained a cordial relationship with the United States (except for recently with Chávez) and had been their main hydrocarbon supplier since 1923. The geographical factor also explains why Mexico – unlike Venezuela – always remained independent from OPEC and did not want to join the organization despite numerous entreaties. This decision –understandable as it may be – without a doubt weakened Mexico at certain moments in its history.

Geology is an essential aspect as well. In Venezuela the quality and especially the quantity of underground oil fields largely explains and justifies the fundamentally pragmatic attitude that PDVSA adopted and maintained – even today with President Chávez.

To end, the importance of what economists and sociologists and political scientists call "path dependency" should be pointed out. In the cases at hand here, the *process* by which the national oil companies were established was fundamental and influenced their future dynamics.

[104] A. Gilly, 2001, p. 383.

In Venezuela, nationalization never chased away foreign operators (article 5 of the Constitution) and PDVSA continued to be run according to the principles and the business culture of a private company. Pemex, on the other hand, was born and came of age sheltered from the rules governing the workings of international oil markets. The company tucked itself into this cocoon, overprotected by a state that exerted on it a pressure to turn a profit that was equal to the protection it received. The various *habitus* forged right from the start are, just like in an individual, extremely difficult to change. PDVSA is a company of international caliber with a feel for and a taste for freedom (i.e. organizational and financial autonomy). It is for that very reason that President Chávez had to fire half of the staff in order to control it. Furthermore, many of those employees are prepared to come back as soon as there is an opportunity: with the approach of the presidential election in December 2012, one of the main proposals of Mesa de Unidad – a coalition of parties opposed to Chávez – is to reinstate the employees fired in January 2003.[105]

Pemex is timorous and has never become emancipated. Many foreign observers note that the company's senior officials – contrary to what they say – are afraid of opening up their company for fear of revealing their weaknesses in management and expertise. Moreover and for the same reason, foreign operators also voice fears about working together with the Mexican company.

Of course, it is essential not to lapse into simplistic determinism, but it must be said that the current trajectories of Pemex and PDVSA make plain a reality that unfortunately is constraining: the past can never be completely swept away.[106]

Translated by **Cynthia Schoch**

[105] Interviews with members of Mesa de la Unidad, Caracas, September 2011.

[106] I would like to thank all those in Venezuela, who met with me and granted me some of their precious time to explain the workings of the oil industry in their country in detail. Likewise, my warm thanks goes out to the senior oil industry officials in Mexico, representatives of foreign oil companies in Mexico and the many observers (journalists, consultants, industrials, academics, etc.). I am also grateful to Juan-Carlos Domínguez, Alberto and Yolia Elizalde, Jacques Salètes and Emiliano Zepeda for their support in the course of this study. Financial support from CONACyT in Mexico was essential to develop the research on Pemex. The CERI provided funding for the two research missions done in Venezuela.

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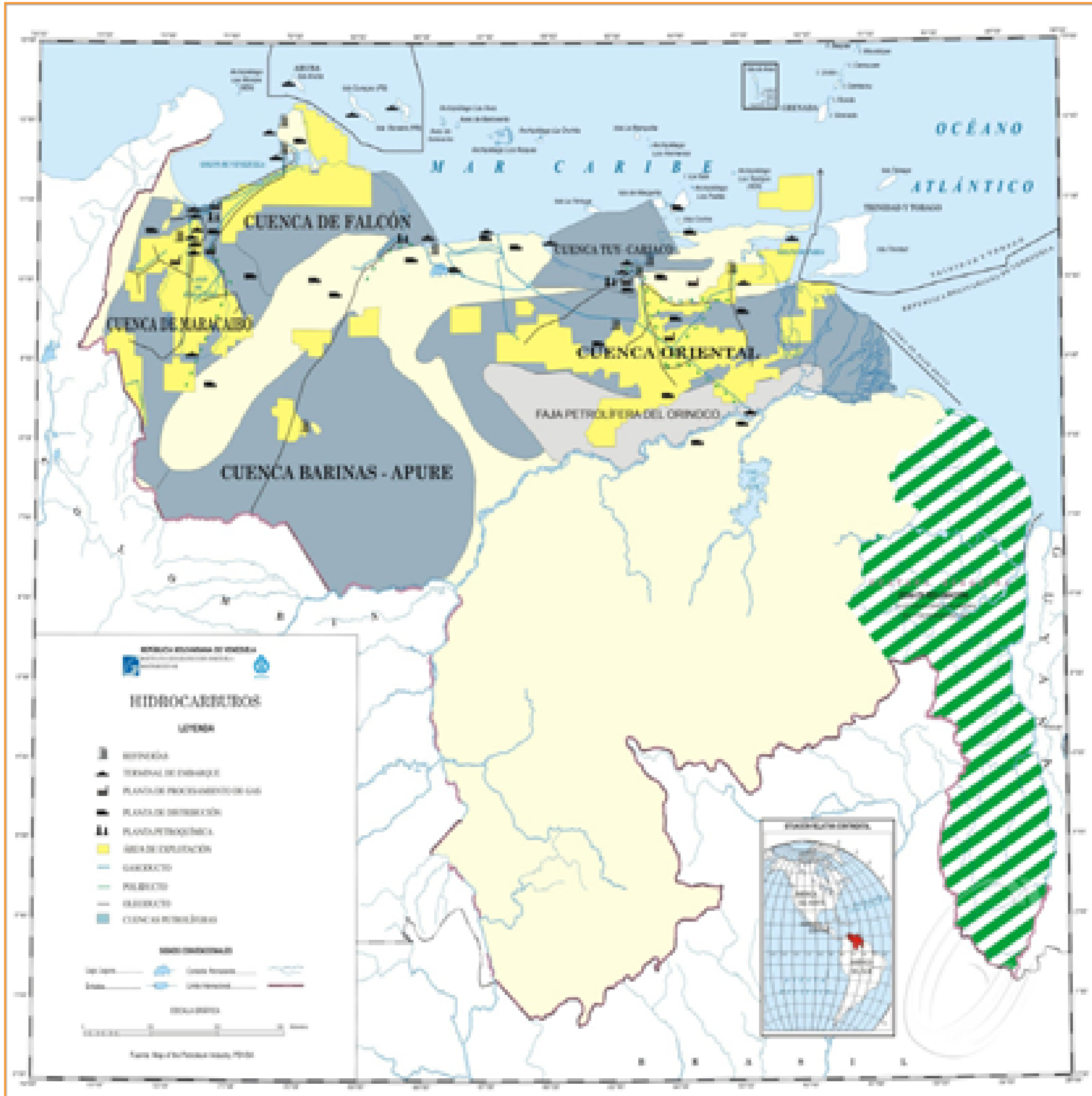
# Appendices

## Appendix I
## Map of Mexico's Oil Industry

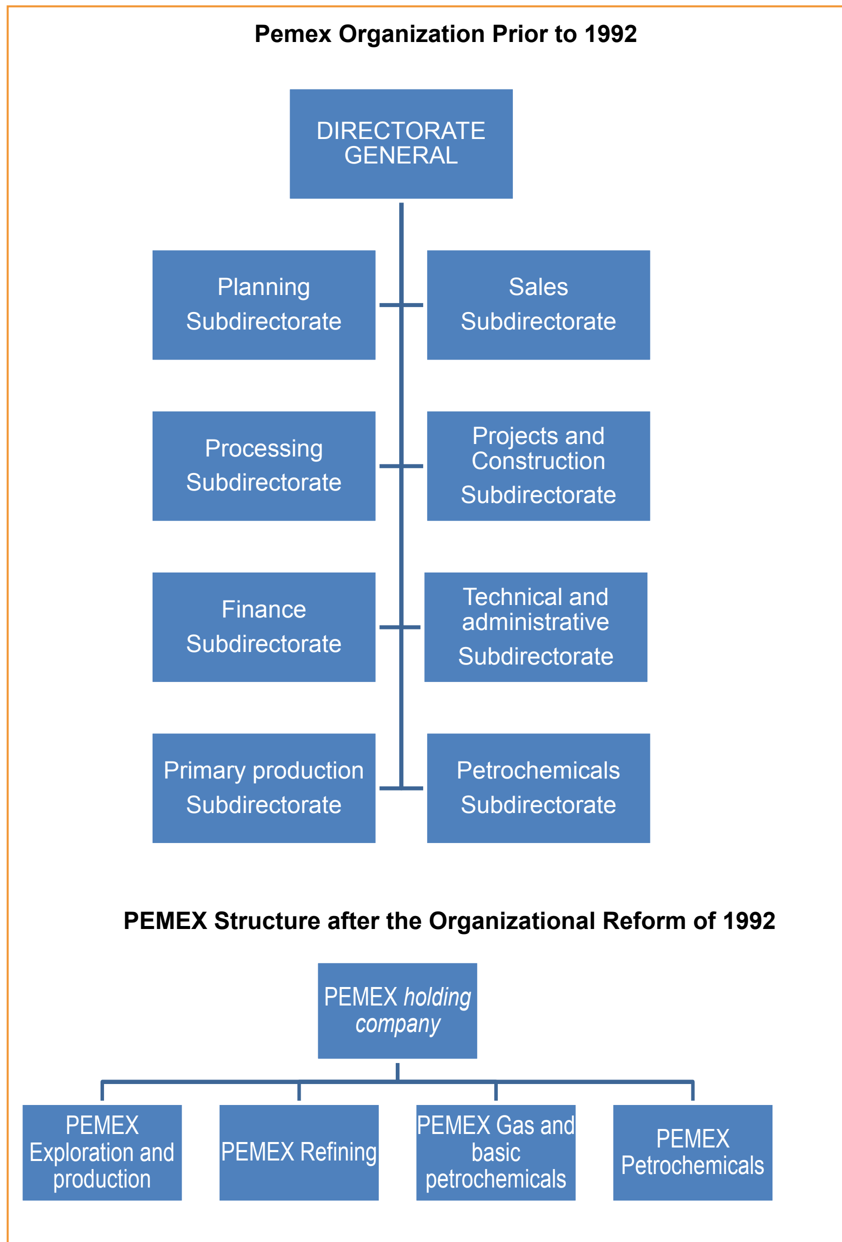
***Source :*** R. Osorio Simpe, "Cuencas productoras", **http://www.petroblogger.com**

**Appendix II**
**Map of Venezuela's Oil Industry**



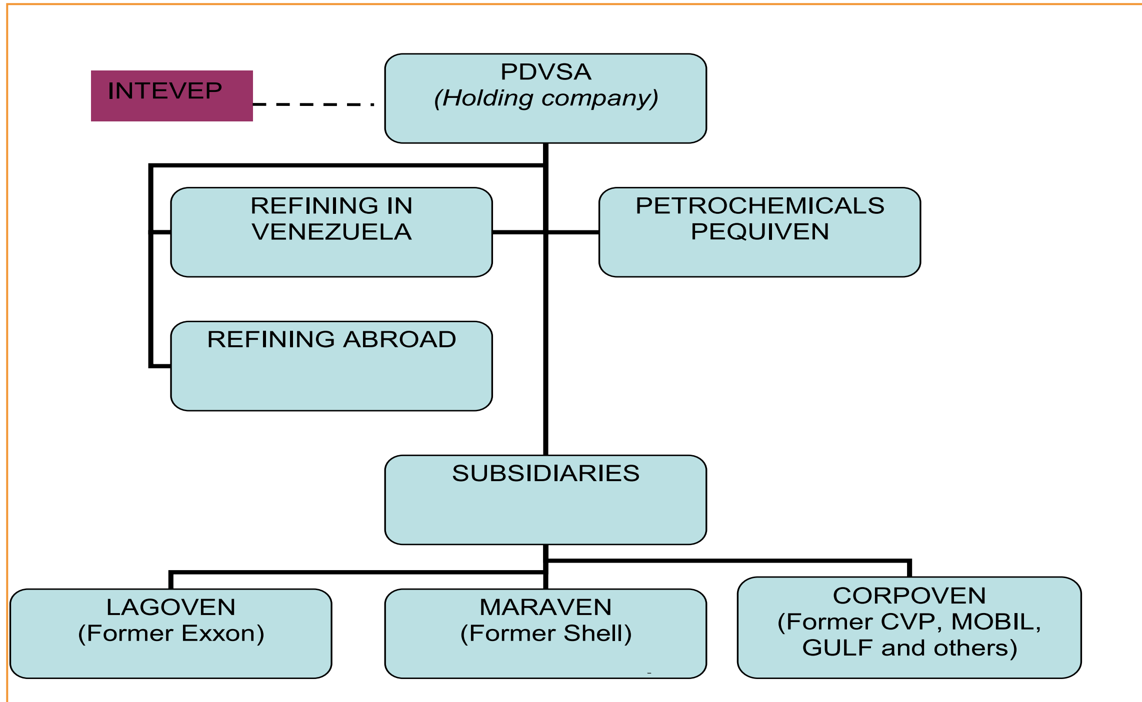

*Source :* **http://www.mipunto.com/venezuelavirtual/mapas/mapa_hidrocarburos.html**

**Appendix III**



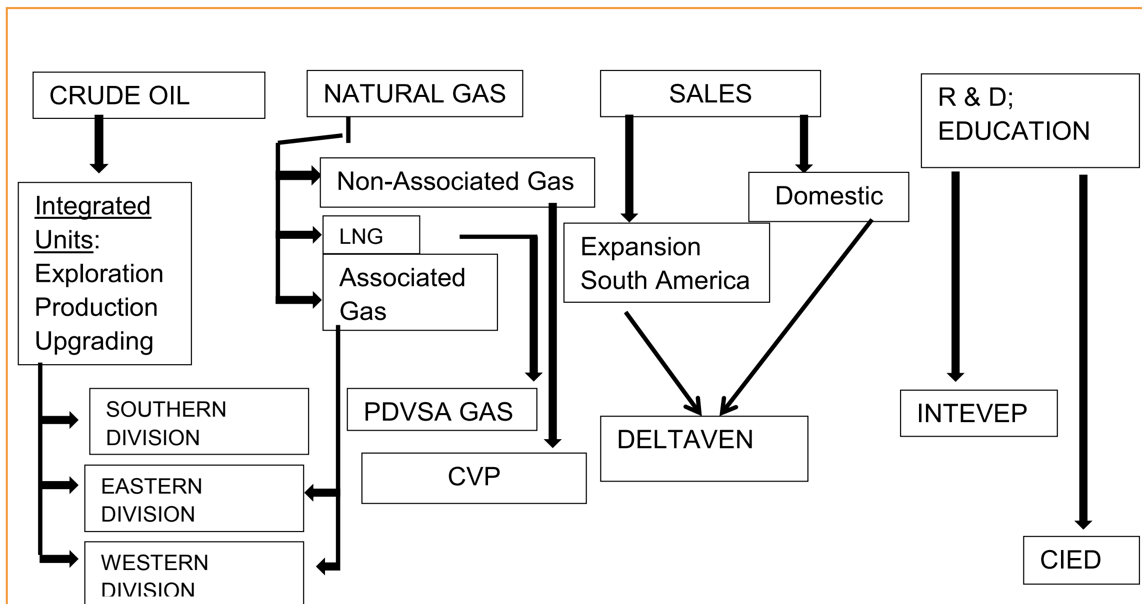

***Source :*** Isabelle Rousseau, "A la recherche d'une meilleure gouvernance d'entreprise : Petroleos Mexicanos (Permex)", *Les Etudes du CERI*, no. 136, July 2007. Annexes, graphique 2, "Les structures organisationnelles de Pemex", p. 40

**Appendix IV**
**Organization of PDVSA in the late 1980s**



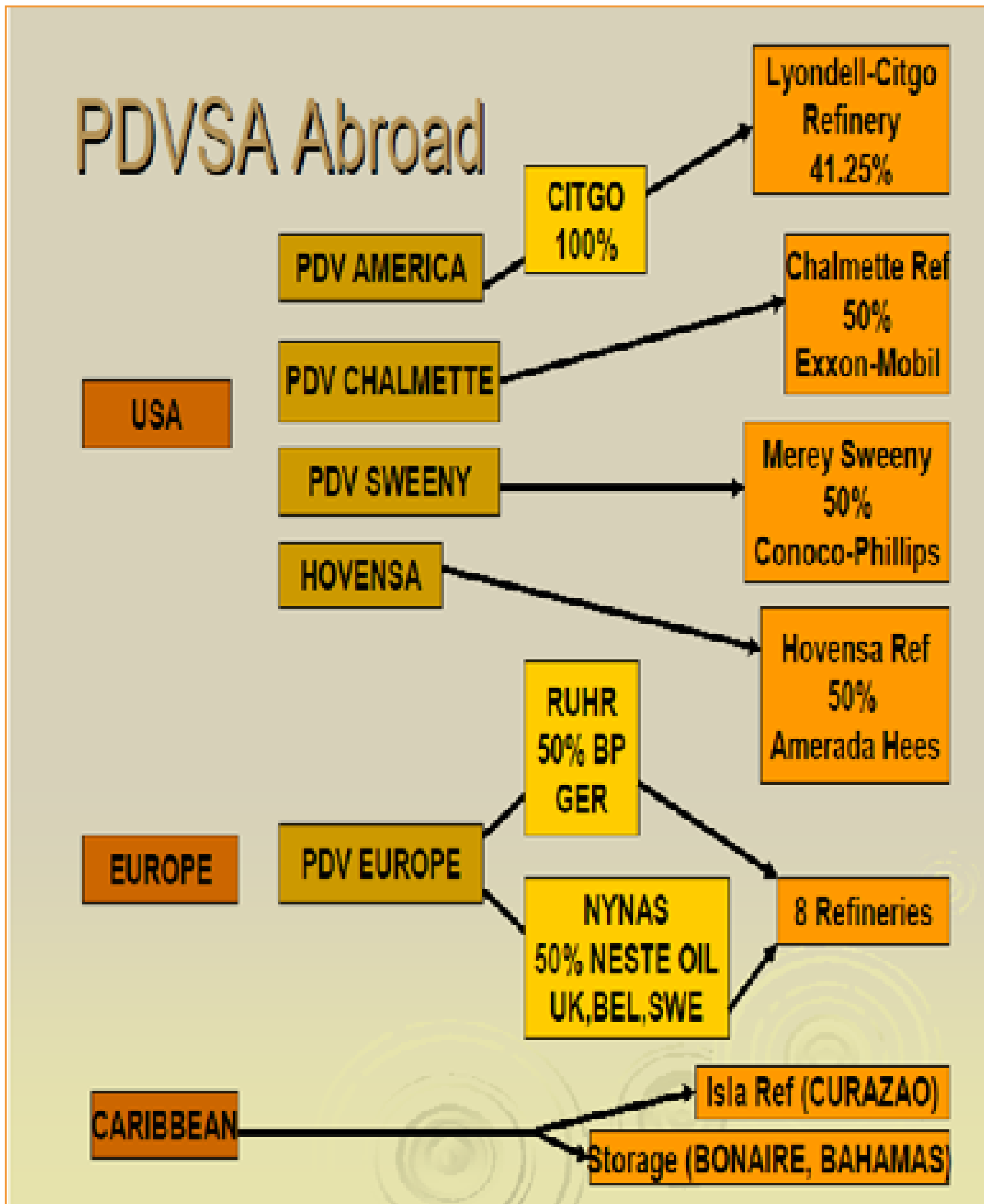

***Source:*** Organization chart by the author

**Appendix V**
**Organization of the New PDVSA (2005)**




***Source:*** David Mares & Nelson Altamirano, "Venezuela's PDVSA and World Energy Markets: Corporate Strategies and Political Factors Determining its Behavior and Influence," The James A. Baker III Institute for Public Policy, Rice University, 2007

**Appendix VI**
**The New PDVSA Organization Abroad (2005)**




***Source:*** David Mares & Nelson Altamirano, "Venezuela's PDVSA and World Energy Markets: Corporate Strategies and Political Factors Determining its Behavior and Influence," The James A. Baker III Institute for Public Policy, Rice University, 2007