



Universidad de
los Andes

Escuela de Gobierno
Alberto Lleras Camargo

No. 20

Abril 2015

ISSN 2215 – 7816

Documentos de Trabajo

Escuela de Gobierno Alberto Lleras Camargo

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Oil and Mining Policy Reform in Colombia in the
2000s*

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Serie Documentos de Trabajo 2015

Edición No. 20

ISSN 2215 – 7816

Edición electrónica

Abril 2015

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The Liberal Rarity of South America: Oil and Mining Policy Reform in Colombia in the 2000s¹

Carlos Caballero Argález²

Sebastián Bitar³

Abstract

Even though Colombia exports minerals and oil, it cannot be considered as an oil or mineral-rich country. Colombia depends largely on this to generate income for the central and subnational governments, but because of the limited availability of these resources, and the comparatively large costs of exploiting them, Colombia has required foreign and domestic private investment to develop the sector. Through an overview of the history of mining and petroleum in Colombia, this paper revises the position of the government towards foreign investment in these sectors. Ultimately, it argues that Colombia has not experienced energy and resource nationalism, at a comparable level to other countries of the region, due to the low capacity of the state to develop these sectors in the absence of private and foreign investment.

Resumen

Aunque Colombia exporta minerales e hidrocarburos, no puede ser considerado como un país rico en estos recursos. Colombia depende en gran medida de estos recursos para generar ingresos al gobierno central y a los gobiernos locales, pero debido a la escasa disponibilidad que tiene a ellos y al alto costo comparativo que representa su explotación, este país ha necesitado inversión privada nacional y extranjera para desarrollar estos sectores. A través de una revisión de la historia de la minería y el sector petrolero en Colombia, este *paper* estudia la posición del gobierno frente a la inversión privada y la inversión extranjera en el sector minero energético. Finalmente se argumenta que Colombia no ha experimentado nacionalismo energético en comparación con otros países de la región, debido a la escasa capacidad del Estado para desarrollar estos sectores sin la inversión privada y extranjera.

¹ This project was made possible thanks to the research assistance of Lucía Forero, Paula Mora, and Christian Medina, and generous funding from the Universidad de los Andes. We also thank Pedro Nel Ospina for his useful comments on previous versions of this document, and Marcela Villa for the rigorous process of editing and publishing.

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1. Introduction

Colombia produces minerals and oil, but it is not a mining or petroleum-rich economy. With a complex geology that is quite distinct from neighbouring Venezuela, extracting, refining and transporting petroleum is much more costly in Colombia than in other countries of the region.

Petroleum was discovered in Colombia at the beginning of the twentieth century. However, the exploitation and exportation of this resource was only made possible thanks to foreign direct investment (FDI). Colombia began to export coal in large quantities in the 1980s, despite the identification of large deposits in the middle of the 19th century. Nickel production and export was centred on a single large project, *Cerromatoso*, located in the north of the country, where, since the 1970s, the concession had been held by a foreign corporation, BHP Billiton, with experience in this mineral. Gold, the principal mineral export of the colonial era, continued to be exploited by both national and foreign companies, as well as by small-scale and artisanal miners. Despite the importance of mining and hydrocarbons for national GDP (8% in 2012), in relative terms, Colombia is not an economy that is rich in these resources, and due to a low capacity to mobilize investment, has not been able to assure the development of the oil and mining sectors by either the state or national capital. Thus, in recent years, it has been necessary for Colombia to attract private investment, both national and foreign, to develop the sector and generate income for the central and subnational governments.

While Venezuela, Brazil, Mexico and Ecuador are within the top twenty countries with the largest proven oil reserves in the world, as Graphic 1 demonstrates, Colombia is ranked 35th, with reserves of 2.2 billion barrels, only 0.8% of Venezuela's (Central Intelligence Agency, 2014b). Oil production in Colombia in 2012 was 969,000 barrels/day. In comparison, Venezuela, Mexico and Brazil produced an average of 2.7 million barrels/day in the same year (Central Intelligence Agency (CIA), 2014a). In this regard, Colombia cannot be considered a petroleum-rich economy. On the other hand, while Colombia is a significant exporter of coal, with a total production of 89 million tonnes in 2012, this figure

is relatively small compared to production in China (3549 Mt), the United States (953 Mt), or India (595 Mt) (World Coal Association (WCA), 2014).

This chapter provides an overview of the principal milestones in the history of mining and petroleum in Colombia, with the object of understanding the position of the government towards foreign investment in these sectors. In the case of petroleum, we focus on the evolution of ECOPETROL and foreign direct investment (FDI) in the country. In the case of mining, we focus on the association contract signed between the Colombian state and Exxon to exploit the coal deposit *El Cerrejón Zona Norte*. We also examine the impact of reforms to the institutional and regulatory regime for the management of petroleum and mining resources.

We argue that Colombia has not experienced energy and resource nationalism at a comparable level to other countries of the region, due to the low capacity of the state to develop these sectors in the absence of private and foreign investment. At the same time, the government of Colombia recognizes the importance of revenue from oil and mining, without which, it would suffer serious fiscal shortfalls and balance of payments disequilibria. Consequently, the state has sought to offer guarantees and advantages to foreign investors with the objective of maintaining exports and revenue flows.

We argue that ECOPETROL could not develop the oil sector in the country as a public company without private investment. Before the 2003 reform, ECOPETROL could not be turned into a capital-rich company with capacity for major investments in oil exploration for three main reasons. First, being counted as part of national accounts, ECOPETROL had no capacity for independent borrowing. Borrowing money from capital markets to increase exploration meant increasing Colombia's international debt, and that was not permitted by the central government. Second, ECOPETROL traditionally did not count with the technical capacity to engage in major exploration projects. The company had neither the human resources nor the technology that foreign companies enjoyed and made them more efficient and profitable. Third, ECOPETROL's only owner until the reform, the national state, did not behave as a private investor, who would want to leave enough money in the

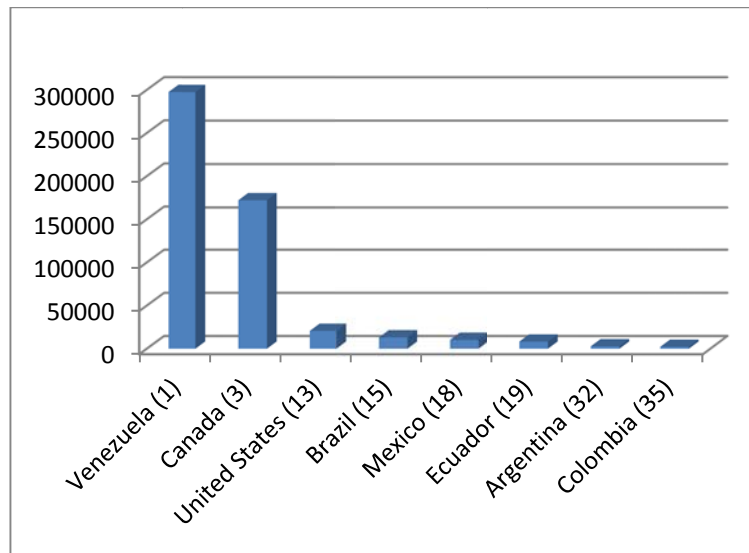
company for investment and growth. Instead, the government sought to extract the maximum possible level of rent from the company to maintain or increase public spending.

The general trend from 1974 to 2003 shows that the policy followed by the different governments of Colombia looked to promote private investment in circumstances in which oil production and reserves were low and to tighten the conditions when important discoveries were made.

In 1974, one year after OPEP power was asserted and international prices of oil went up substantially, Colombia adopted the 'association contract'. At the time, Colombia imported oil and the concessions granted to foreign oil companies in the past had not resulted in an increase of the exploration for oil in the country. The new rule was a participation of 50.50% between the State and the oil company for a specific area (less the 20% royalty payment) but the exploration risk was totally bearded by oil company partner. With the discovery of the Caño Limón field near the border with Venezuela in 1983, the Barco Administration (1986-1990) tightened the conditions and, even though the Cusiana-Cupiagua fields were discovered by 1989, incentives for private investment were diminished and exploration activity came down dramatically.

At the beginning of the nineties conditions started to be relaxed and in 1998/99 the decision to attract foreign investment and avoid the loss of self-sufficiency in oil was taken. However, even though important changes were made to reduce the government take and the royalties, these were not enough to guarantee the arrival of new foreign investment in the sector and some of the competitors of Colombia moved more swiftly.

Graphic 1. Proven Oil reserves (millions of barrels)



Source: Central Intelligence Agency (CIA) (2014b). The numbers in parentheses indicate the world ranking of the country in terms of proven reserves. Compiled by the authors.

2. Private investment in Colombia

*The distinctive history behind the founding of the state oil company*⁴

Colombia has a long tradition of honouring contracts with foreign investors. The most notable case in the twentieth century was the oil exploitation contract for the Mares concession, which was granted in the first half of the century to the Tropical Oil Company, a subsidiary of Standard Oil Company of New Jersey (ESSO).

In 1905, the Colombian government granted a concession to exploit petroleum to Roberto de Mares, who later ceded his rights to the Tropical Oil Company in August 1919. The operation was approved in June 1921 through a resolution that established that the concession would last thirty years from the date at which exploitation activities commenced – 25 August 1921. However, this wording, which failed to define “commencement of exploitation”, led to a lengthy legal struggle of over twenty years between Tropical Oil and the Colombian state (Santiago, 1986, p. 71).

⁴ Part of this section, including quotations from speeches made at the ceremony for the reversion of the Mares concession to the *Empresa Colombiana de Petróleos* (ECOPETROL) on the 25 August 1951, are based on work by Caballero and Amaya (2011), and Santiago (1986).

In April 1941, the government notified the Tropical Oil Company that the concession would expire on 25 August 1946. This notice was rejected by the company, and as a result, the government decided to send the issue to the Supreme Court, which would decide the termination date of the concession. The final judgement of the Court was hand down in September 1944 and established that the concession would expire on 25 August 1951(Caballero & Amaya, 2011).

The government conformed to the ruling and subsequently began the process of studying what to do with the concession at its termination date, in a context of significant union and political mobilization in favour of nationalization. Diverse options were explored, among them the possibility of creating a state-owned enterprise and of operating with the participation of private capital, both national and foreign. When no agreement was reached with private investors, the government decided to constitute ECOPETROL as a wholly state-owned enterprise. Tropical Oil was required to turn over all its equipment and assets used in the operation of the Mares concession on 25 August 1951, at twelve midnight.

ECOPETROL was created in January 1951, and began to operate in February. One of the articles of the governmental decree that gave birth to the company established that it had the right to associate with private capital in the future (Ministerio de Minas y Energía, 1950, p. 475).

At midnight on the 25th of August, 1951, in a festive atmosphere, the De Mares concession was transferred to ECOPETROL. At the hand-over ceremony, the president of the International Petroleum Co. of Toronto, a subsidiary of Standard Oil, who represented the outgoing foreign investor, made the following statement:

“As far as I am aware, this is the first time in the history of the oil industry that such an important property, developed by private capital under concession, returns to state-ownership due to the legal expiration of the concession period as specified in the original contract. The reversion of the De Mares concession has occurred in conformity with terms agreed many years ago, between representatives of the government of Colombia, and people from outside who committed their capital and efforts to achieve,

cooperatively, a vast and difficult assignment. This fact demonstrates that the terms of the De Mares concession have been fulfilled by all parties involved.”

In turn, the Colombian minister responsible for mines and petroleum responded:

“[...] the event that we are celebrating today is of worldwide importance. In other countries, the history of petroleum exploitation contracts has been different. A misguided nationalism, and an overestimation of the capacity to manage a complex industry, have caused international commotion and political crisis in other hemispheres, in order to achieve the same goal that Colombia has achieved by strictly respecting the commitments it assumed. In this pacific and legal way, we have incorporated this great petroleum resource into the common wealth of the nation, where henceforth, it will be managed by the newborn Empresa Colombiana de Petróleos.”

The history of the De Mares concession and the creation of ECOPETROL clearly demonstrate the pragmatism of Colombian leaders with regard to foreign investment, as well as the distinctiveness of the Colombian approach to petroleum policy, in comparison to other countries in Latin America.

3. From the concession model, to association contracts, and back again

Until 1974, Colombia used a concessions regime for investors, who were principally foreign. However, the likelihood of finding oil in Colombia was low. In fact, outside the De Mares concession, few significant petroleum discoveries were made over a fifty-year period.

The relationship between exploratory wells and commercially viable discoveries was only 13 to 1 until 1969 (Segovia, 2011, p. 462). Nonetheless, the perception endured that Colombia should have large oilfields, due to its proximity to Venezuela, and foreign companies were blamed for freezing their activities in concession areas, given that the contracts envisioned little state oversight to encourage effective exploration activities. However, the reality was different as low international prices at the time made it unattractive to invest in exploration given the reduced likelihood of discovering a commercially viable reserve. At the end of the sixties, Colombia’s oil reserves were very low, and with the scarcity of foreign exchange, the capacity to import fuels was effectively

zero. This situation led the government of the day to send a law to Congress (Law 20 of 1969), which stipulated that the state would prioritize the delivery of areas with potential to ECOPETROL, which could explore “directly, or in association with public or private capital, either national or foreign” (Segovia, 2011, p. 466).

This was the genesis of the Association Contracts, which were formalized in October of 1974, establishing that hydrocarbon exploration in Colombia was under the control of ECOPETROL. The state-owned enterprise could pursue this goal “directly, or by means of association contracts, service delivery, or of any nature, different from a concession, used by natural or legal persons, either national or foreign” (Segovia, 2011, p. 476). Principally, this meant a contract between ECOPETROL and a contracting private company, by which the latter committed to explore and exploit hydrocarbons in a specific and clearly delimited area of the Colombian territory, during a period of six years. If ECOPETROL determined that a sufficient volume of petroleum had been discovered, it would assume half of the cost of the exploratory wells that became commercially viable, and would receive 50% of the product after royalties had been paid to the state (royalties were set at 20%). Consequently, the risk of exploration was entirely assumed by the private contracting company.

It is important to remember that overproduction of oil had already begun in the early seventies and as, a result, international oil companies were obliged to cede part of their participation in the oil rent to the national governments of those countries. In 1973, a fundamental political change in the oil industry occurred when OPEP, the organization petroleum exporting countries, entered into action and bargaining power passed from the large multinational companies to the producing countries.

In the 1980s, the association contracts began to bear fruit. The US company Occidental Petroleum (Oxy) discovered the Caño-Limón deposit in the Llanos Orientales region, and requested its commercialization in 1983. With the contribution of Caño-Limón crude, Colombia became again self-sufficient in petroleum, a status which it had lost twenty years earlier, and began to export oil again in December 1985 (Segovia, 2011, pp. 486-487).

The Caño-Limón discovery, which is predicted to produce close to 1.4 billion barrels during its lifetime (and which has produced more than 1 billion at the time of writing) also inflamed nationalist sentiment in the country. Political leaders, the oil industry union (la Unión Sindical Obrera, USO) and public opinion embraced the belief that the country was rich in petroleum, and consequently, should demand more from the association contracts. The first changes to contract clauses occurred in November 1989 in what is known as the “stepped” production model. The participation of ECOPETROL continued to be 50% of the output, but it started to increase when production went above 60 million barrels reaching 70% when output reached more than 150 million barrels.

In 1993 a series of interconnected deposits were discovered in Cusiana, Cusiana Sur and Cupiagua, in the piedmont region of the Llanos Orientales by BP (UK), Total (France) and Triton (Australia).⁵ The discovery was estimated at 2.2 billion barrel equivalents, as the deposit contained both crude and gas. However, it was a high-cost deposit to exploit, due the geological characteristics of the piedmonte: the hydrocarbons were located at “five or six km below the surface, twice as deep as in Caño Limón and five times deeper than the De Mares concession in Barrancabermeja” (Segovia, 2011, p. 495).

These factors, combined with the financial weakness of ECOPETROL, and the increase in guerilla activity in the exploration zone, led the Colombian government to introduce the so-called “R Factor”, which calculated the distribution of production taking into account income and spending of the associated company during the length of the contract (López et al. 2012, p. 27). The R Factor required that “if the production of a contract exceeded 60 million barrel equivalents, the scale affecting the portion of the petroleum available to the associated partner, would not be applied until the partner had recuperated his investment” (Segovia, 2011, p. 501).

The international oil industry was not enthusiastic about the new contract terms and as a result there was a marked decline in the number of wells drilled in the second half of the

⁵ This discovery was made within the Santiago de las Atalayas concession contract between ECOPETROL and these foreign firms, which took eleven years to explore this area in order to delay paying fees to the state firm, with which they were in extended bargaining over that period.

1990s, in comparison to the first. Furthermore, the incumbent government prioritized the monetary transfers from ECOPETROL to the Treasury, over promoting new investments.

By the end of the twentieth century, the conditions for foreign investment in hydrocarbons were not favourable.⁶ For this reason, some multinational mining companies ceded their contracts to other companies already operating in Colombia; such was the case with Texaco in 1995, and Exxon between 1995 and 2000. In addition, half way through this latter year, the Cusiana and Cupiagua oilfields reached their peak level of production, declining rapidly afterwards. In this context, the government began to favour the associated companies, offering them the possibility of reducing the participation of ECOPETROL to 30% in the development of new discoveries and using a more favourable formula to calculate the “R Factor.” Simultaneously a new royalty regime was designed to promote production in small oilfields, and the former fixed royalty of 20% was eliminated. Instead, the new royalty was variable and could oscillate between 8 and 25% depending on the production volume of the oilfield.

In 2002, it was evident that the model of association contracts had lost legitimacy and attractiveness to foreign investors. The international petroleum industry had undergone profound changes and Colombia lagged behind, running the risk of once again losing self-sufficiency in oil production in the first decade of the twenty-first century. This reality opened the way for the 2003 institutional reform.

Colombia returned to the concession model with the 2003 reform. In 2003 two kinds of concession contracts were introduced: An exploration and production (E & P) contract and the technical evaluation contract (TEA) (Benavides, 2001, p.541). The former has a time period of six years and can be renewed for four more years; the latter’s time period is of two years and can be renewed for two more additional years. Royalties are flexible starting in 8% for oil wells producing 5.000 barrels per day and going to 20% in the case of wells

⁶ According to Yanovich (former president of ECOPETROL) calculations (2003), the *government take* was 78.9% between 1974 and 1989, and rose to 81.3% in the “stepped” production model, then falling to 62.8% in 2000 under the 70-30 model.

with production between 400.000 and 600.000 barrels per day, and to 25% for higher productions (See graph 3).

4. The petroleum reform of 2003

In July 2003, the National Hydrocarbon Agency (Agencia Nacional de Hidrocarburos - ANH) was created in order to manage Colombia's subsoil hydrocarbon wealth.

The institutional reform in the oil sector in Colombia was undertaken by issuing a Presidential Decree, with a previous authorization by the National Congress of the country (Decree No 1760 of 2003). This Decree ruled that the Ministry of Mines and Energy would have the responsibility for the hydrocarbons policy making, the ANH would manage independently the areas and the oil and natural gas resources by opening bids to energy companies which did not have any longer the requirement of associating with ECOPETROL. Thus the historical conflict of interest existing in ECOPETROL, that of a state oil company which simultaneously made the policy and performed according to that policy, was eliminated.

Henceforth, ECOPETROL was to be a state-owned oil company without responsibility for either the design of petroleum policy, or for managing contracts with private foreign or domestic investors. As a result, ECOPETROL today competes on a level playing field with private companies (national or foreign) for contracts issued by the ANH.

Before 2003, ECOPETROL was not only the state's oil company, but it also had the authority to regulate the oil sector, design the country's petroleum policy, and manage all contracts with private foreign or domestic investors. The reform stripped ECOPETROL from all these functions and gave them to the ANH, a new proper regulatory body which does not participate in the oil market.

With the creation of ANH, the role of ECOPETROL had to change. In order for this company to compete with private companies, grow and indebt itself, it had to be taken out of the national budget, and run itself according to corporate principles. In 2007

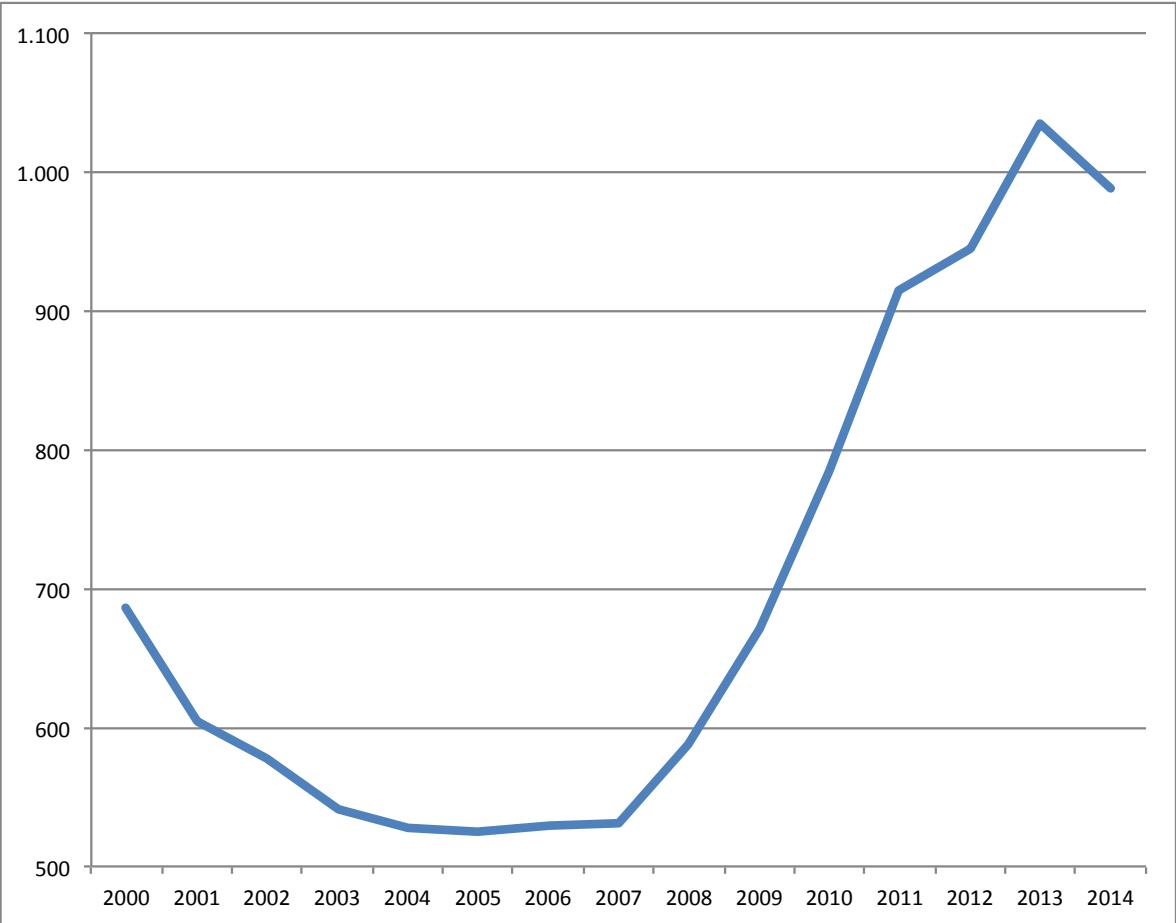
ECOPETROL went public with a share offering to national and foreign investors, which reduced the ownership stake of the state from 100% to 88.5%. This change was made possible by legislation that allowed the company to reduce state ownership down to 80%. Beginning in September 2008, shares of ECOPETROL were listed on New York Stock Exchange.

The reform occurred without crisis or violent protest. As one expert noted:

“The spirit of the times was different than during the great international nationalizations; the president of the company had a clear vision of the content and strategy to force change, which corresponded with the minister’s position, and which had the support of the executive power. The coalition of interests that could have opposed the change found no echo, and in practice was limited to the company’s union, the reaction of which was anticipated and neutralized. The change was not possible previously, limited by the lack of independent intellectual arguments about its usefulness. (Benavides, 2011, p. 541).

The production of oil increased considerably in Colombia after the reform. In 2002 Colombia produced 578,000 barrels/day, while in 2013 it had attained slightly more than a million barrels/day. Graphic 2 shows the evolution of oil production in Colombia.

Graphic 2. Average Annual Oil Production in Colombia (1000s barrels/day)



Source: Agencia Nacional de hidrocarburos (ANH) (2014). Compiled by the authors.

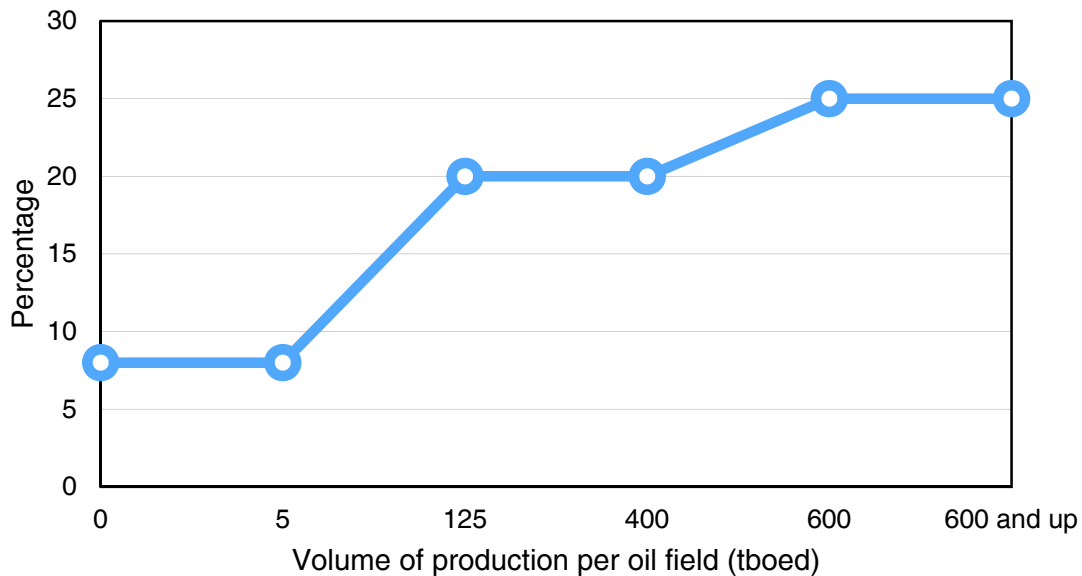
The reform of 2003 was highly successful. It not only had as a consequence an increase in production and exports of oil during a period of high international prices of oil but an increase in foreign investment in the oil sector in Colombia. And allows the country to face a period of low international prices – as the one the world is experiencing in the first months of 2015 when this chapter is written – since the government take is lower than in the association contract and the oil company can get positive returns on its investment.

Table 1: The ECOPETROL Reform

The Effects of the ECOPETROL Reform on the Petroleum Sector	
Government Take	In 2011 the Government take was 43%
Concession Contracts for Exploration and Exploitation	Duration: 6 years, extendible for 4 years more Evaluation period: 1 to 2 years The company has the right to exploit discoveries and keep profits after payment of royalties
Royalties	<ol style="list-style-type: none"> 1. Calculated according to the volume of production, by Thousands Barrels Oil Equivalent per Day (TBOED) <ul style="list-style-type: none"> • 8% between 0-5 TBOED and escalating progressively up to 125 • 20% between 125-400 TBOED and escalating progressively up to 600 • 25% over 600 TBOED 2. Windfall Royalties: are paid when the accumulated production exceeds 5 million barrels, and the price of petroleum exceeds a base reference price.
Revenue to the Colombian government from the petroleum sector	<ol style="list-style-type: none"> 1. Distribution of profits from ECOPETROL via dividends 2. National Taxes <ul style="list-style-type: none"> • (2013) 25% Income tax • 9% Income tax for CREE (Contribución Empresarial para la Equidad) • 3% VAT and assessment on financial transactions of 0.4% (4x1.000) 3. Local Taxes <ul style="list-style-type: none"> • Industry and trade property tax, among others
	Revenue that the state receives from corporate income tax (for this sector) rose from 0.5% of GDP in 2002 to 1% of GDP in 2007. Profits from ECOPETROL increased along the same lines.

Source: Benavides (2011); López, Montes, Garavito, and Collazos (2013); Rincón, Lozano, and Ramos (2008). Table compiled by the authors.

Graphic 3: Royalty percentages according to production levels.



Source: Information Compiled by the authors.

5. Coal: “A good deal to quit a bad business!”

Since the middle of the 19th century, it was known that large deposits of thermal coal existed on the La Guajira peninsula in the north of Colombia. Although these deposits were shallow and located close to the Caribbean Sea, their exploitation and exportation required large investments, particularly in transportation and specialized port infrastructure. For this reason, it was only in the 1970s, as a result of increases in the international price of petroleum, that multinational corporations began to show interest in alternative sources of energy, including coal, turning their gaze to countries with interesting reserves.

In the first half of the 1970s, the Colombian government held negotiations with a foreign company, Peabody Coal Company, to develop the Guajira deposits, without results. Simultaneously, a state-owned enterprise was constituted, CARBOCOL (Carbones de Colombia), and charged with exploring and exploiting the coalfields in the country, and in particular, developing the deposit at Cerrejón, in La Guajira, which had estimated reserves of 3.5 billion tonnes (Poveda, 2005, p. 623). By the end of the decade, CARBOCOL negotiated an association contract with INTERCOR (a subsidiary of Exxon created

exclusively to exploit Colombian coal) to develop the coalfield known as El Cerrejón Zona Norte.

The association between the state and Exxon was widely debated in the political sphere; some members of Congress argued that it was not necessary to collaborate with a multinational energy company in order to exploit the deposit. Nonetheless, the government's position was that an association contract was necessary because of the size of the deposits and the lack of experience in Colombia regarding that type of development won the day.

Both companies participated equally in the contract, and INTERCOR was designated as the project operator. The value of the initial investment was \$US 3,360 million, of which, the Colombian state was responsible for \$US 1,680 million, obtained in loans through private international banks. The project began to operate in 1984, in the depths of the debt crisis in Latin America. As a result, Colombia became a net exporter of coal.

At the signing of the contract in 1979, it was projected that coal prices would rise to \$US 250/tonne by the year 2000. These prices never materialized, but the investment continued. For this reason the project also produced important losses for the state, which had guaranteed the debt taken by CARBOCOL from private international banks, and which had to be paid annually.

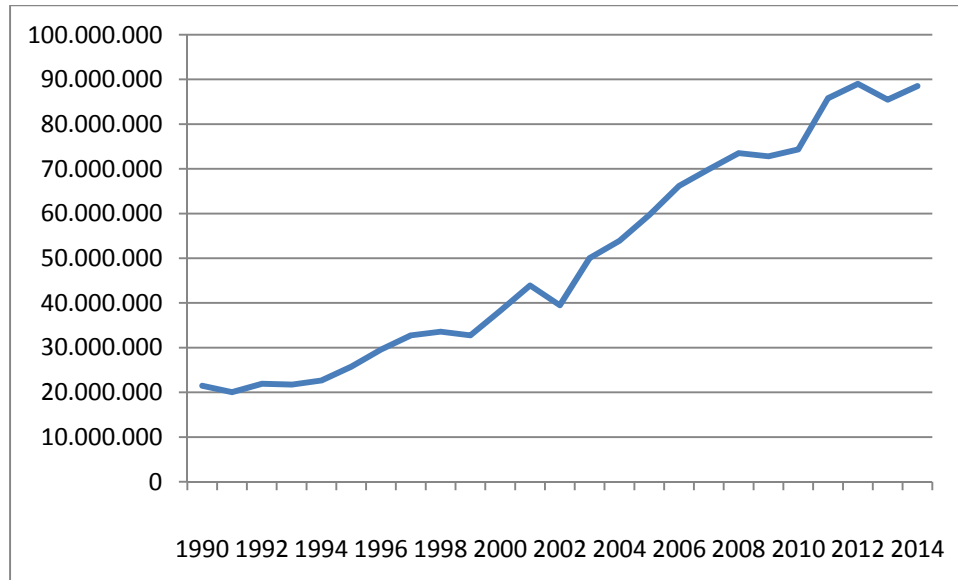
In the early 1990s, the government began considering the possibility of selling its participation in the project. This approach gathered steam under subsequent administrations, which gradually designed the terms and steps necessary for realizing the sale. These steps included opening the railway and port facilities to third party producers of coal located near the central and southern part of the mine (and which were not included in the CARBOCOL-Exxon association contract), and extending the original production agreement with Exxon until 2034. It was a unique case in Colombia of “continuity and coherence between administrations and their ministers” (Caballero, 2007, p. 315).

The sale of the state's participation in the venture, which only recuperated US \$560 million of the total investment, opened a national political debate that extended to the National Congress, and involved investigations by the institutions responsible for fiscal and administrative oversight and control. The reality, however, was that the international price of coal was, at the moment of the transaction, only \$US 28/tonne, far from⁷ the World Bank projections that had been used as the basis of the original investment decision.

In addition, the project was unable to expand due to the lack of resources available from the state, which further doomed the project to continued economic losses. By selling the state's ownership stake to private foreign investors with experience and technology in coal extraction, it was expected that the state would receive more taxes and royalties. For this reason, the government of the day considered that it had made a "[...] a good deal to quit a bad business!" (Caballero, 2007, p. 313). Statistics bear out this decision, as coal production from El Cerrejón Zona Norte increased substantially rising to 40 million tonnes, and Colombia's overall production to 90 million tonnes in 2010 (see Graph 4). At present, coal is currently the second most important Colombian export after oil.

⁷ Shortly after concluding the sale of the state's ownership stake, Exxon also sold its share of the enterprise to the same group of investors (a Swiss-Australian consortium), although the value of the latter transaction is not publicly known.

Graphic 4: Coal production in Colombia (tonnes)



Source: Sistema de Información Minero Colombiano (SIMCO) (2014). Information compiled by the authors.

Table 2: Current Regulation of FDI in the Mining Sector, Colombia

Regulation of foreign investment in the mining sector	
Legislation	Mining Code, 2001
Type of Contract	Concession
General Characteristics	<ol style="list-style-type: none"> 1. Minerals of any class (ground or underground) belong to the state, regardless of land ownership, including the presence of indigenous groups; 2. Some zones may be declared indigenous or afro-descendent mining zones, conferring special rights on those communities; 3. Extraction is forbidden in areas that are environmentally protected, or which do not have adequate security conditions; 4. Foreign and national firms are to be treated equally.
Concession Period	Up to thirty years, with exploration rights for three years
Legal Stability	<p>Alterations to the mining regime are not to be applied retroactively to concessions already granted:</p> <ol style="list-style-type: none"> 1. Royalties paid on production cannot be increased; 2. There will be stability in the regulatory framework governing operations.
Royalties	<p>Coal (by volume of annual extraction)</p> <ul style="list-style-type: none"> • 10% when greater than 3 million tonnes • 5% when less than 3 million tonnes <p>Copper and Iron</p> <ul style="list-style-type: none"> • 5% of the mine-head value of the product extracted <p>Gold and Silver</p> <ul style="list-style-type: none"> • 4% of the mine-head value of the product extracted • 6% on alluvial gold <p>Platinum</p> <ul style="list-style-type: none"> • 5% of the mine-head value of the product extracted <p>Salts</p> <ul style="list-style-type: none"> • 12% of the mine-head value of the product extracted
Payroll	<p>Companies should privilege national workers and inputs. The majority of the payroll should be composed by Colombian workers:</p> <ul style="list-style-type: none"> • 70% of specialized workers • 80% of unskilled workers

Source: Departamento Nacional de Planeación (DNP), 2007. Table compiled by the authors.

6. Why does Colombia seek to attract and respect foreign investment?

6.1 A country with oil, but not an oil-rich country

The relative scarcity of large hydrocarbon and mineral reserves in Colombia has determined the state's policy for exploiting these natural resources. In significant part, this explains the absence of energy nationalism, although there has been a recurrent political debate about the control of these resources throughout the history of the country. In the 1920s, for example, a powerful oil workers' union was created (la Unión Sindical Obrera), which advocated for the exploitation of petroleum by the state, instead of multinational oil companies. This union has continued to exist despite the structural changes to the institutional role of the state in the hydrocarbon sector, albeit with reduced power.

In historical perspective, two cultures have existed in ECOPETROL: one of capitalism, with an international view and pro-democracy represented by the shareholders and the administration of the company, and one of socialist ideology, against imperialism and pro-state ownership, represented by the union (Urrutia, 2011, p.273). The coexistence of these two cultures generated conflicts which, at times, resulted in strikes, stoppages and different degrees of violence. However, with the passing of time and the political changes at the national and international level, both cultures have shown some degree of convergence, which have made easier the management of industrial relations in the company.

Before the creation of ECOPETROL, the union asked for better conditions for the workers, in terms of wages and improvements in housing education and health. After that, and especially in the 1970's and 1980's of last century, the union was politically active justifying the communist strategy of "all forms of fighting". However in this century, in spite of a strike in 2004, the relationship between the administration of the company and the union has been better and cordial.

As was indicated at the beginning of this chapter, in comparison to Venezuela, Mexico, Ecuador and Brazil, Colombia has not found big reserves of petroleum. The country has reserves that will last for only seven years of production given increasing rates of exports and domestic consumption of fuels. Furthermore, the likelihood of finding more petroleum in Colombia today is low, about one in 10 exploration wells, and exploration in Colombia is considered a high-risk business. In the second half of 2014 the international price of oil decreased from USD \$115 to USD \$45, making it even less attractive for foreign companies to explore in Colombia.

Despite these problems, petroleum and its derivatives remain, in the second decade of the twenty-first century, the principal export of Colombia: representing 56% of the total value of sales abroad. In fiscal terms, taxes and dividends generated by ECOPETROL, and royalties, constitute 20% of the current income of the country. Coal exports account for 11% of the total. In this respect, Colombia is very dependent on hydrocarbon and coal in its external accounts (trade and investment accounts).

The history of the management of energy resources in Colombia clearly signals that the country has not had the economic, administrative or technological capacity to take on, by itself, exploration and exploitation projects in hydrocarbons. It has always needed the contributions of foreign capital and has needed to attract FDI by offering advantageous conditions in comparison to other areas of the world. When Colombia did not offer such incentives, due to the belief that the geology of the country was similar to Venezuela's, foreign companies did not have the incentives for oil exploration, and production suffered.

ECOPETROL never had, since its creation in 1951 until the reform of 2003, the financial strength to invest in oil exploration, due in part to the fact that as a state-owned enterprise, its net earnings and financial debt were treated as part of the consolidated national accounts of the government. In this context, the government sought to maximize transfers from the company to the national Treasury in order to cover the ongoing expenses of the state, and never assigned sufficient financial resources to investment in exploration. On the other hand, the drilling of wells in some prospective areas implied significant investments by

ECOPETROL running the risk of failing to find petroleum, while these same operations could be done by foreign partners, either through concession or association contracts.

The development of coal shares some similarities with hydrocarbons. One very important similarity is that the exploitation of large-scale mines required massive investments in transportation infrastructure and machinery, which could not be invested by the state because of its size and also of the priorities of public spending in the country in favor of social projects. Furthermore, when the state tried to partner with the multinational Exxon to develop the El Cerrejón Zona Norte mine, it had to take on foreign debt, which, given the volatility of international coal prices led to large economic losses for the country and to the sale of its stake in the joint-venture in 2000.

As was explained in section 2.3, with the reform of 2003, ANH was created and charged with managing hydrocarbon resources (oil and gas), and writing contracts with both national and foreign oil companies – taking over these tasks from ECOPETROL. With the reform, ECOPETROL was released from the constraints of the national accounts, and acquired the financial autonomy which permitted it to invest in exploration and exploitation projects.

Nonetheless, both the ANH and ECOPETROL face critical challenges. The ANH must maintain attractive conditions to incentivize national and foreign firms to invest in oil exploration, which is particularly important due to the low levels of proven reserves in the country. This objective is crucial for the Colombian macro economy: if there is a failure to locate new reserves, the country will not only face a balance of payments crisis, but also a fiscal crisis for the national government, as well as the subnational governments.

ECOPETROL, in its turn, must establish a structure of corporate governance that gives the company autonomy and independence from its principal shareholder – the state. Autonomy is needed to ensure both efficient management, and the investments that are necessary to survive in the long run as a company. The problem is that with 88.5% of the company's capital in state hands, and with only limited representation of the minority private

shareholders on the board of directors, the national government is commonly tempted to extract financial resources from the company to meet the needs of the Treasury. Such a situation could lead to an increase in company debt, without making the needed investments in oil exploration.

6.2 Investor confidence

One of the principal objectives of the Álvaro Uribe Vélez (2002-2010) and Juan Manuel Santos (2010-2018) administrations has been to increase investment in the country by creating attractive conditions for private investment, both national and foreign. During the Uribe government, investment increased from 13 to 28% of GDP (Bernal-León, 2014). Even during the crisis of 2008-9, international markets remained open for the purchase of ECOPETROL and Colombian public debt. Various elements have contributed to the success of Colombia in encouraging investment, such as responsible fiscal policy, a floating exchange rate, and the independence of the Central Bank (Junguito, 2009). In addition, the Uribe government granted tax breaks, signed tax stability agreements, created free trade zones, and gave other benefits in exchange for large investments (Galán, 2006). Uribe constantly reiterated his commitment to an economic model that was friendly to investment, and criticized the nationalizations that had occurred in other countries of the region (Dinero, 2009).

At the same time, the improvement of the security situation in Colombia facilitated the arrival of foreign direct investment. The principal pillar of the Uribe administration was to establish public security after the state had been displaced from large zones of the country by the FARC (Fuerzas Armadas Revolucionarias de Colombia) and paramilitary groups. Attacks on oil infrastructure had been common for decades. Nonetheless, Colombia managed to reverse this deterioration of public security and provide better conditions for investment as a result of the professionalization of the armed forces and the renewed presence of the state in peripheral areas, in part thanks to a military assistance package from the United States.⁸

⁸ For a discussion of the re-establishment of public security in Colombia, see Feldmann (2012)

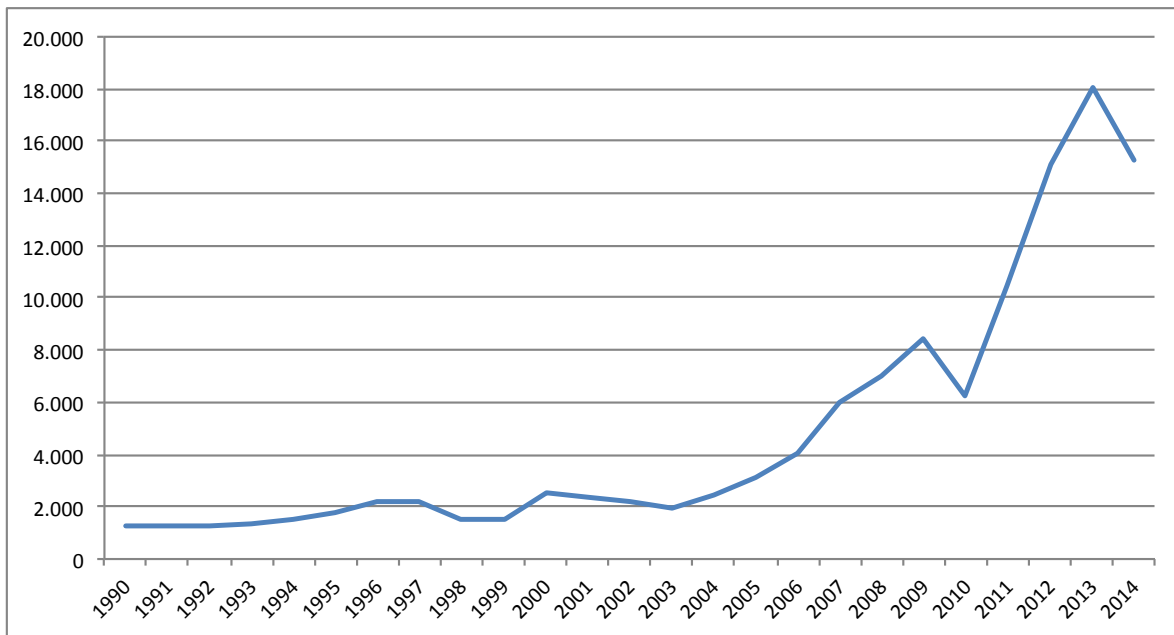
Although its principal objective was the struggle against drug production and trafficking, part of the US military and economic support to Colombia aimed, specifically, to protect American investments in the petroleum sector. On the 5th of February, 2002, the Bush government announced that it would allocate an additional \$US 98 million to Plan Colombia for the protection of the Caño Limón-Coveñas pipeline which was partially owned and operated by Occidental Petroleum. Between 2002 and 2003, a program was established to locate 70 US military personnel in Arauca in order to train 2000 troops from the XVIII Brigade of the Colombian army for the protection of the pipeline (Dunning & Wirpsa, 2004).

In this regard, the attraction of foreign investment by means of fiscal incentives and guarantees of security continues to be a priority for the current government of Colombia in 2015.

7. Mineral and Energy rents in Colombia

The Colombian state has traditionally taken a rentier approach to ECOPETROL. Before the reform of 2003, the state managed oil policy with the intention of maximizing its revenue and financing public spending (Benavides, 2011). Beginning with the reform, the state let companies to make all the decisions about production, investment and exports (Goodwin, 2009, p. 9) and allowed private companies, both national and foreign, to exploit petroleum resources without the participation of the state-owned enterprise. With this change, the state ceased controlling the planning and profits of the sector. Nonetheless, through taxes and royalties, private companies continued contributing to both state revenue and an important share of public spending.

Graphic 5: Total transfers from ECOPETROL to the Colombian state (USD millions)

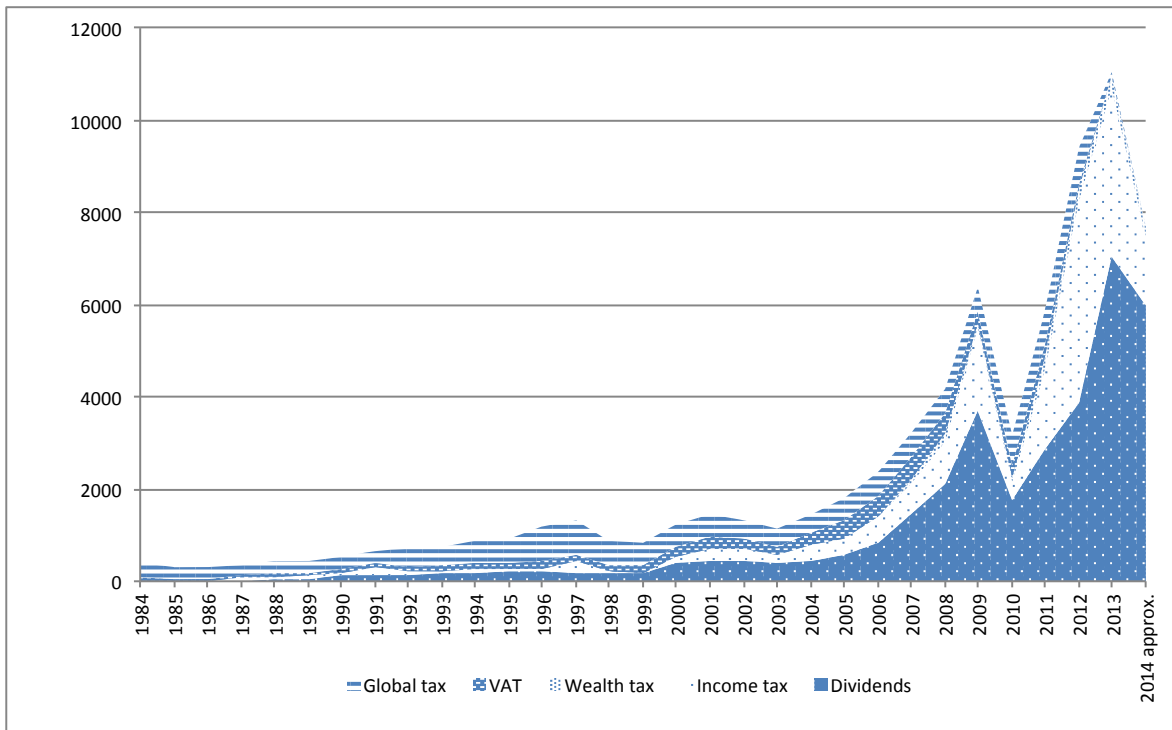


Source: ECOPETROL. Compiled by the authors.

We can see from Graph 5 that revenue to the state from ECOPETROL increased six times between 2003 and 2013. Although the government is no longer the owner of 100% of the capital of the company, total state revenue increased to USD \$18 billion. This includes transfers to the central government as well as royalties paid to subnational governments.

The largest beneficiary of the rents generated by ECOPETROL is the central government, which receives 88.5% of its dividends, as well as national taxes (income, wealth, VAT and others). Dividends originating from ECOPETROL and managed by the central government have increased from USD \$375 million in 2003 to USD \$7,059 million in 2013. With regards to income tax, government receipts have increased from USD\$ 187 million in 2003 to USD\$ 3,657 million in 2013. Total national government income from ECOPETROL increased six times in ten years: growing from USD \$1,969 million in 2003 to USD \$18,059 million in 2013.

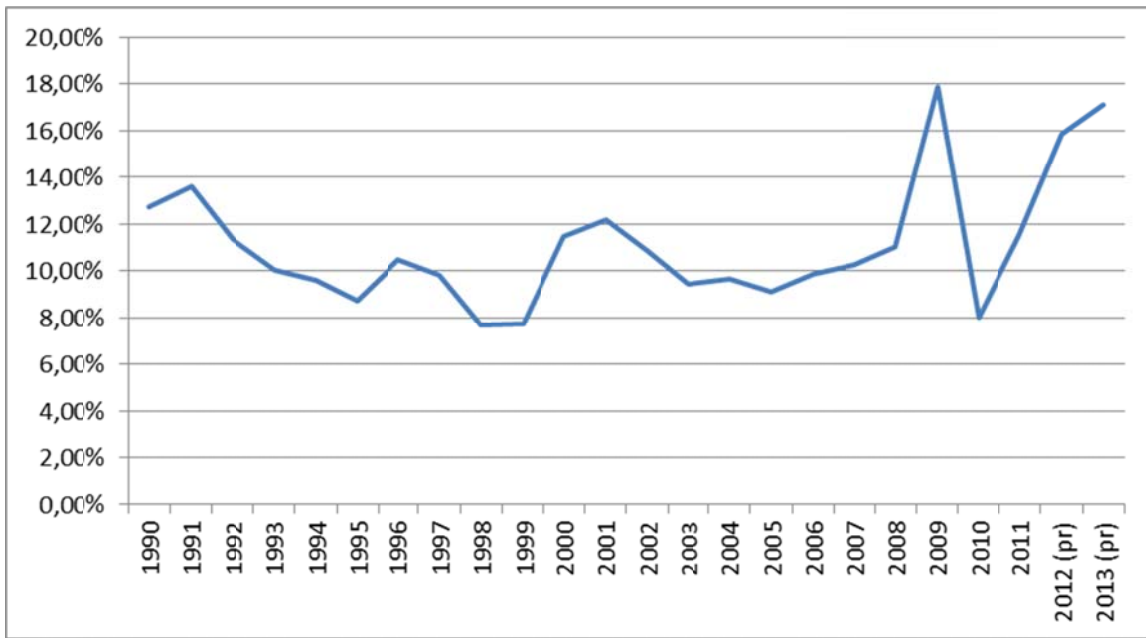
Graphic 6: Central government income originating from ECOPETROL (USD millions)



Source: ECOPETROL. Compiled by authors.

Graph 6 shows the evolution of the importance of the financial resource transfers from ECOPETROL within the total revenue of the central government. In 2013, total revenue was close to USD \$64 billion, of which USD \$10.9 came from ECOPETROL. This means that the oil company generated 17.1% of the revenue appropriated by the central government. Consequently, it is evident that public spending in Colombia is highly dependent on the petroleum sector. This is cause for concern in so far as international prices came down, known oil reserves are low, and there is little expectation of new discoveries.

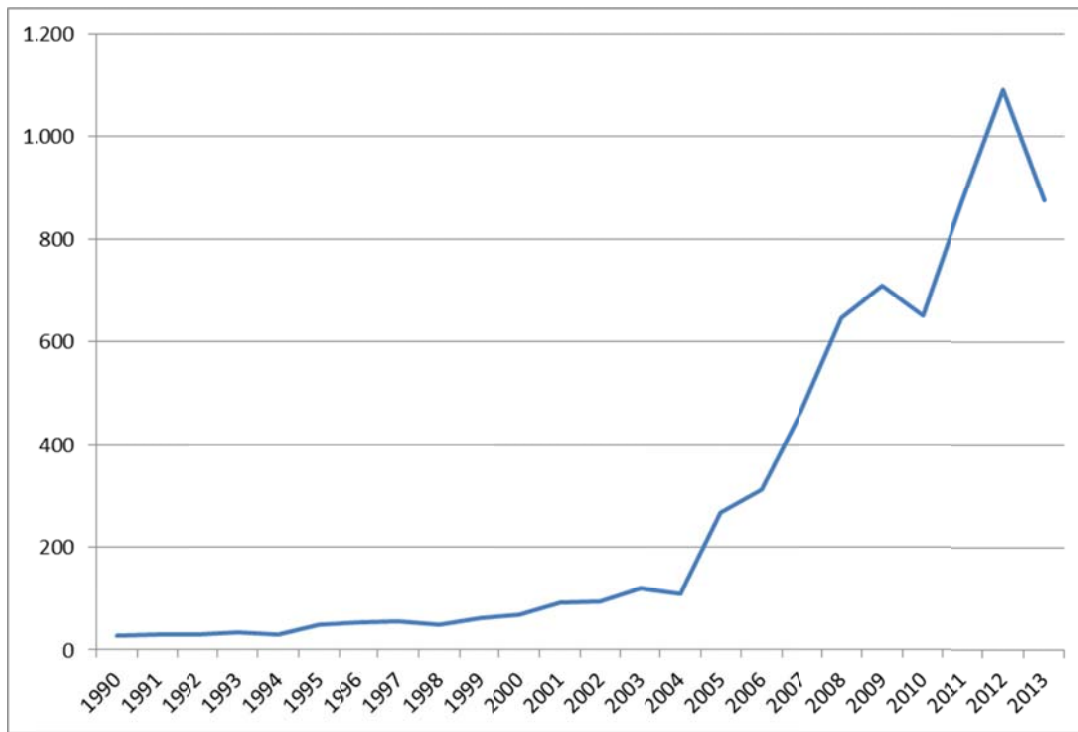
Graphic 7. Percentage of central government income derived from ECOPETROL



Source: ECOPETROL and Central Bank. Compiled by the authors.

If the sustainability of revenue derived from petroleum is questionable, it should also be noted that the mining sector is growing in Colombia thanks to foreign direct investment. Consequently, state revenues from royalties and taxes on this sector have also become important sources of public sector financing, as well as having a positive impact on the balance of payments (through exports and capital inflows). Graph 7 shows the evolution of state income from royalties and taxes in the Colombian mining sector.

Graphic 8. Taxes and royalties collected from principal minerals (USD millions)



Source: UPME (Unidad de Planeación Minero Energética). Compiled by the authors.

8. Conclusion

Colombia: Not an oil country

While episodes of oil nationalism did certainly take place during the twentieth century, which were reflected in union mobilization and political debates, these facts did not give rise to the adoption of policies that could have led to a rejection of foreign investment in the sector, as occurred in other countries of the region. The use of “association contracts” between state and private companies was a political solution that went half-way, and which did facilitate exploration for hydrocarbons in Colombia, although the arrangement eventually outgrew its usefulness.

Currently, with only seven years of petroleum reserves remaining, and given the importance of hydrocarbons to state coffers, Colombia is at risk of an energy and economic crisis. It is clear that the sustained growth of Colombian GDP depends at present on the mining and energy sector. Without an increased commitment to exploration which yields

new deposits, the Colombian economy is at serious risk of lowering its rate of economic growth in the near future. Signs of economic hardship are already appearing in 2015 due to the recent fall of oil prices.

On the other hand, fiscal fragility generated by the scarcity of petroleum may require that the government increase taxes, reduce public spending, and cut social programs and subsidies. Due to projections of less revenue from ECOPETROL in 2015, the national government has already increased other taxes (Portafolio, 2014). Higher taxes and reduced spending may induce a worsening of the economic crisis, while reduced social expenditures might bring social unrest in the future.

For this reason, Colombia must attract private investment, both national and foreign, to petroleum exploration, as well as strengthen ECOPETROL's capacity to invest. In the last two rounds of contract distribution in 2014, the ANH opened 95 areas to petroleum exploration, but only received 27 offers, which were accepted. Foreign and national investors are no longer responding to the incentives offered by Colombia, and instead, are looking at the Mexican market, as well as other countries with greater prospects and fewer environmental, social and security restrictions. In the mining sector similar problems and restrictions exist, in addition to the particular challenge of illegal mining and environmental damage.

Although it would not be popular with Colombians, this serious situation may require the reduction of the government take, as well as re-evaluating the processes already established for issuing environmental permits and consulting with local communities, and prioritizing the physical defence of oil wells and pipelines.

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