The oil and natural gas industry and national development*

A indústria do petróleo e gás natural e o desenvolvimento nacional

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ABSTRACT

This article analyses the Brazilian oil and gas industry in historic, economics and law outlook. Although some factors have launched this sector in downturn, the aim is show how this industry is referential to the economy, focusing on the concessions and local content policy as a national development factor. Through a systematic analysis of the legislation, relevant literature, and official statistics, the article concludes that the local content policy is crucial for industrial, economic and social developments of Brazil.

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KEYWORDS

Administrative and economic law — oil and gas segment — local content and development

RESUMO

O presente artigo analisa a indústria nacional do petróleo e gás natural em seus níveis histórico, econômico e jurídico. Embora alguns fatores contribuam para que o setor esteja em crise, o objetivo é apresentar como esta indústria é referencial à economia brasileira, tendo como enfoque a política de concessão somada ao conteúdo local como um mecanismo para o desenvolvimento nacional. Por meio de análise normativa, revisão bibliográfica e dados oficiais, conclui-se que o conteúdo local é um elo importante para o desenvolvimento industrial, econômico e social do Brasil.

PALAVRAS-CHAVE

Direito administrativo e econômico — indústria do petróleo e gás natural — conteúdo local e desenvolvimento

Introduction

Local content is the undertaking that companies and consortia assume to the Brazilian government when they sign a concession agreement for the exploration and production of oil and natural gas. This is a contractual undertaking to purchase a minimum and maximum percentage of domestic goods and services during the life of the grant. A local content clause has been included in agreements for the exploration of areas with oil-producing potential since 1999, when the Brazilian Oil, Natural Gas and Biofuels Agency (ANP) held its first auction.

The aim of this article is to discuss the strategic importance of the oil and natural gas industry for the Brazilian economy, and as part of the process to highlight the local content policy as an interesting way of developing places which, for various reasons, are unable to attract federal funding for their investments. In this context, I shall cover three regulatory frameworks of Brazil’s oil and gas industry — concession, production-sharing regime
and onerous assignment of rights —, describing concepts and fundamental characteristics. I shall then outline the evolution of the oil sector in Brazil from the normative, political and economic viewpoints, so as to show the importance of this segment for the economy of the country. Finally, the article will discuss the local content policy in an authoritative and critical analysis, to show how it functions as an instrument of control and development.

1. Regulatory frameworks for oil and natural gas

The legal regime for oil and gas in Brazil is governed by the 1988 Constitution of the Federative Republic of Brazil and specific laws. The legislation provides that underground mineral resources belong to the State, including deposits of oil, natural gas and other fluid hydrocarbons on Brazilian territory, which consists of the land area, territorial waters, the continental shelf and the exclusive economic zone.

The entire oil and natural gas chain was a monopoly of the Brazilian State, through Petrobras, from 1953 to 1995, when the rules for exploration, extraction, refining and transporting were made more flexible. Constitutional Amendment No. 9 of 1995 permitted national and foreign companies and consortia to be engaged, in competition with Petrobras, to undertake these activities, provided that: i) these companies or consortia were incorporated under Brazilian law; and ii) their headquarters and management were located in Brazil. The concession regime was effectively created, whereby the State grants to a private party the right to exploit oil in a specific area for its own account and at its own risk.¹

This method of concession was regulated by Law No. 9.478, known as the “Petroleum Law”, which was enacted in 1997. The law created and regulated two bodies which would be references for the segment. The first was the National Council for Energy Policy (CNPE), with the principal function of proposing national policies and measures in the area of energy. This Council reports directly to the Office of the President of the Republic, as an advisory body to the Minister of Mines and Energy. The second is the Brazilian Oil, Natural Gas and Biofuels Agency (ANP), a special body reporting to the Ministry of Mines and Energy, with the responsibility of regulating, contracting

and supervising the activities of the sector. The ANP is directly responsible for auctioning the grants of oil and gas exploration areas in Brazil.²

Law No. 9.478/1997 also defines the objectives of Brazil’s energy policy. They are: i) the preservation of the national interest and the guarantee of the supply of petroleum by-products throughout the country; ii) the fostering of development, with the expansion of the labor market and the country’s competitiveness in the international market, and the profitable use of its reserves of oil; iii) the attraction of investments in the production of energy and the promotion of free competition; iv) the protection of the environment and consumer interests in terms of price, quality and supply of the products.

It is appropriate to mention here that oil production started on an upward trend from the beginning of the 1980s, when Petrobras made its major discoveries in the Campos basin and also in deep waters. However it was in the mid-1990s, after the publication of the Petroleum Law, that domestic oil production really took off, as can be clearly seen in chart 1.

Chart 1
Brazil’s oil production between 1970 and 2015


The regulatory framework introduced by the Petroleum Law was broadened in 2010. The discovery of the pre-salt oil reserves in 2006 led to the creation of new models for oil and gas exploration, governed by Laws No. 12.276/2010 and No. 12.351/2010. Thereafter the regulatory framework in Brazil consisted of three different models: concession, production sharing and assignment of rights.

Under the **concession model**, the right to exercise economic activity is granted by means of a bidding process. This is the standard model used in Brazil, since the others apply to the pre-salt. The exploration risk, in this case, is medium, with the concessionaire assuming all the costs of investment and exploration, and owning the product extracted. The winner of the bidding process is defined during the auction of the blocks, by measuring the value of the signing bonus (the amount paid over when the agreement is signed), the percentage of local content (a policy providing for the purchase of Brazilian goods and services) and the minimum exploration program (work proposal).

In this case, the company or consortium that acquires the right to explore and produce in a specific area will in return pay taxes and government participations (participations and royalties on the value of production from the field being explored), as well as the signing bonus (the sum paid by the company or consortium for exploration rights) for the block granted.

The **production sharing** regime was introduced by Law No. 12.351/2010 for application in the pre-salt areas and strategic areas. The law provides that production sharing is a regime for the exploration and production of oil, natural gas and other fluid hydrocarbons under which the contractor undertakes, for its own account and at its own risk, the activities of exploration, evaluation, development and production. In the event of a commercial discovery, the company or consortium acquires the right to receive, as compensation, the oil cost, the production volume corresponding to the royalties due, and a portion of the oil surplus, in the proportions, on the terms and at the times provided for in the agreement.

As noted by D’Almeida, it was in 2013 that the first auction was held under the production sharing regime: it was for the Libra field, the largest find anywhere in the world in the twenty-first century. The difference in this model is that the State owns the oil, natural gas and hydrocarbons extracted. The system is referred to as sharing because the companies and the State

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divide the surplus oil between them. The companies doing the drilling have the right to reimbursement of the exploration cost and a portion of the profit (called the oil surplus), and the State retains its share of the profit.

Two new concepts are thus brought to light: i) the oil cost (a portion of the production of oil, natural gas and other fluid hydrocarbons that can be demanded only in the event of a commercial discovery, corresponding to the cost and investments made by the contractor in undertaking the exploration, evaluation, development, production and deactivation of the facilities, subject to contractual limits, deadlines and conditions); and ii) the oil surplus (a portion of the production of oil, natural gas and other fluid hydrocarbons to be shared between the State and the contractor, according to criteria set forth in the agreement, resulting from the difference between the total volume of production and the portions of the oil cost, the royalties payable and the State’s participation, if any).

The criterion for judgment is the percentage of oil surplus (the so-called profit oil), in other words, whoever offers the State the largest share in the volume of oil produced will be allocated the exploration agreement. Law No. 12.351/2010 provides that Petrobras will always act as operator, with a minimum interest of 30%. This obligation is currently under discussion in the National Congress.

The law also provides for a Social Fund, the purpose of which is to ensure that the proceeds are available for the generations to come. The fund is of an accounting and financial nature, and its purpose is to set up a source of funds for social and regional development, in the shape of programs and projects in poor and underdeveloped areas. Seven areas are nominated for development with resources from the Social Fund: (I) education, (II) culture, (III) sport, (IV) public health, (V) science and technology, (VI) the environment, (VII) mitigation of and adaptation to climate change. The objectives of the Fund are outlined in Art. 48 of the law: (I) to create long-term public savings with the revenues received by the State; (II) to offer a source of funds for social and regional development, in the manner provided for in Art. 47; and (III) to mitigate fluctuations in income and prices in the domestic economy arising from income variations due to the production and exploration of oil and other non-renewable resources.

Finally, the discovery of the pre-salt also motivated the introduction of further regulatory reform, increasing State control of the exploration and production of oil and gas. Law No. 12.276/2010 created the onerous assignment. This law authorized the State to assign to Petrobras, in return for consideration,
the exercise of the activities of prospecting and drilling for oil, natural gas and other fluid hydrocarbons, up to a volume of 5 billion barrels, in pre-salt areas not already being explored under the concession model (so as not to breach existing agreements).

This assignment (of direct administration) to the Brazilian state company (under indirect administration) is an exception to the bidding rule: contracting is direct and the costs and risks are borne by Petrobras. Art. 3 of Law No. 12.276/2010 provides that the payment owed by Petrobras for the assignment must be made primarily in government securities priced at market value. The criteria for defining the value of the production rights under this assignment are based on reports issued by international certifying agencies and are agreed between the interested parties (the Federal Government and Petrobras). The agreement is for 40 years, and can be extended for a further five years.

2. The growth of the oil and natural gas industry in Brazil and its strategic importance

While the oil and natural gas industry came into being in the middle of the nineteenth century in the United States, in Brazil most of the development of the sector was in the twentieth century. The heyday of the discovery of oil in Brazil was at the time when Petrobras was incorporated, although the exploration of minerals under the ground had been discussed as early as imperial times. Gilberto Bercovici, in his book Direito econômico do petróleo e recursos minerais, recalls that the search for precious stones was one of the key reasons why Brazil remained a colony of Portugal. The legislation in force at the time was based on the Philippine Ordinations, which set up the monarchic system, and granted the right to exploration on condition of payment of a “royal fifth”, a percentage of the product of the mining.

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4 Melissa Mathias, in her history of the oil industry, recalls that from 1857 to 1883, the United States accounted for practically all the world’s production. Even during the First World War that country had 65% of the production under its control, exporting oil to its allies who needed supplies to fuel their navies. After the war the Netherlands, France and England started to operate in places with high production potential, such as the Middle East, Venezuela and Mexico. MATHIAS, Melissa Cristina Pinto Pires. A formação da indústria global de gás natural. Rio de Janeiro: Interciência, 2010. pg. 48-50.

After independence and the subsequent proclamation of the Brazilian Republic, the legislation evolved so that in time Petrobras could be incorporated and the industry developed. The Mining Code (Decree No. 24.642) was published in 1934 by president Getúlio Vargas, and it included a section on the ownership of the soil and the subsoil. The main section of Art. 4 of the decree stated that “a mineral deposit is a fixed asset and is held to be something distinct from and not an integral part of the soil in which it is embedded. Thus the ownership of the surface shall include that of the subsoil in the form of a common right, except, however, for mineral or fossil substances of use to industry”. The right of ownership of the soil over the deposit was limited to a right of preference in respect of the “concession of mining rights or co-participation” (Art. 6). These regulations followed the precepts of the later Constitution of 1934, which reserved to the State the right to authorize or concede the exploration of the mineral deposits.

The Mining Code of 1934 was overturned by Decree No. 585 of 1936, but it had its effects “re-established”. Originally, the Code did not apply to oil, but a new chapter was added by Decree-Law No. 366 of 1938. Art. 97 said that “deposits of oil and natural gases, if there are any in the national territory, belong to the States or to the State, in the form of inalienable private domain”. The rule, therefore, was that the deposits belonged to the State, unless they had been disposed of by the states with an express or tacit reservation of mineral ownership.

Still in the Vargas period, the Constitution of 1937 maintained the provisions of its predecessor (1934), stating that “the law shall regulate the progressive nationalization of the mines, mineral deposits and waterfalls or other sources of energy, as well as of the industries considered basic or essential for the economic or military defense of the Nation” (art. 144). In 1938, Decree-Law No. 395 set up the National Petroleum Council (CNP), a body reporting to the president of the Republic and responsible for the regulation and control of the entire petroleum chain (imports, exports, distribution and trading). This whole campaign of nationalization of oil by Getúlio Vargas, in particular in the year of 1938, took place before it was actually discovered, which happened for the first time in Bahia, in 1939.

Thus a combination of government efforts and prospecting contributed to the fact that, in 1953, Getúlio Vargas, who had returned to the Presidency of the Republic “in the arms of the people”, would enact Law No. 2.004, incorporating Petrobras and creating a state monopoly over oil in Brazil. The authorizations for the refineries installed and functioning as at June 30,
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1952, were maintained, but the law introduced criteria which meant that the companies would not prosper: in the first place, because they would not be given permission to expand their capacity (art. 45) and, secondly, because Petrobras was empowered to take a majority interest in all the refineries installed in the country, making them subsidiaries of the state company (Art. 46 and sole paragraph).

The expansion of Petrobras occurred at the time of the military government, which issued decree-laws granting it administrative autonomy. At this time some subsidiaries were also created, such as Interbras (which handled foreign trade for Petrobras and was closed in 1990 during the presidency of Fernando Collor), Petromisa (its business was the extraction of potassium chloride; it too was closed during the Collor government), and BR Distribuidora (which distributes and markets fuels derived from oil, biofuels, lubricants, chemical products and asphalt emulsions).

At this time oil was already the second most important component of the energy matrix in Brazil. The first was firewood and coal, which accounted for almost half the domestic supply of electricity. Hydraulic power represented a mere 5% of Brazil’s entire supply of power.

Chart 2
Domestic supply of energy in Brazil, in 1970

![Chart 2](image)

Source: Prepared by the author. The data was taken from: Brazil, Empresa de Pesquisa Energética, Balanço energético nacional 2016, op. cit.
The entire logistical apparatus and the growth resulting from investments made by the Brazilian government enabled the company to make its major finds. Bercovici\textsuperscript{6} recalls that, back in the 1960s, the company was focusing on the continental shelf, and it had its first success in 1968 in the Guaricema Field, in the state of Sergipe. Six years later, the Garoupa Field was discovered, the first find in the Campos basin. The exploration of this immense reservoir brought the challenge of prospecting at a depth of more than 100 meters. As it perfected this technology, Petrobras opened the way towards other important finds, since almost all the oil reserves are located in the deep sea (the principal fields found by the company in deep waters were Albacora, Marlim, Roncador, Barracuda and Caratinga). Following the trend of the previous decades, oil became the key source of domestic energy.

A comparison between the last chart and the next one shows that the sector maintained its strategic importance, in spite of the fact that the matrix as a whole was substantially different. In 1970, it was firewood and charcoal that dominated in terms of production and consumption, while in 2015, they accounted for only 8\% of total supply in Brazil. Of particular note is the increase in hydroelectric power, and the use of natural gas and derivatives of sugarcane.

**Chart 3**

Domestic supply of energy in Brazil, in 2015

\begin{figure}
\centering
\includegraphics[width=0.8\textwidth]{chart3.png}
\caption{Domestic supply of energy in Brazil, in 2015}
\end{figure}

Source: Prepared by the author. The data was taken from: Brazil, Empresa de Pesquisa Energética, Balanço energético nacional 2016, op. cit.

\textsuperscript{6} BERCOVICI, Gilberto. Direito econômico do petróleo e dos recursos minerais, op. cit., pg. 196-197.
It is important to remember that in this period the Brazilian economy was growing and diversifying. Both the production and the consumption of energy saw substantial growth. In 2015, for the first time, the production of oil and its by-products was greater than that of the renewable types of energy.

![Chart 4](image)

Source: Prepared by the author. The data was taken from: Brazil, Empresa de Pesquisa Energética, _Balanço energético nacional_ 2016, op. cit.

In 2007, the discovery of the pre-salt, a gigantic deposit in an area of around 800 x 200 kilometers, stretching from the shore of Espírito Santo down to Santa Catarina, gave rise to the issue of the new regulatory frameworks for Brazilian industry that I have referred to earlier (production sharing and onerous assignment). The reason for the government to seek to maximize production in the pre-salt areas is very simple, and is summarized by Scaff: 7 since it was a scarce product and in the absence of a world map of all existing reserves, new exploratory blocks might be discovered, which would affect the price of oil on world markets.

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3. Local content as a mechanism for development

The discovery of large areas for exploration in recent decades has made South and Central America a region of extreme interest for the oil E&P companies. According to a study by BP (2015), in 1994 the region held only 7.3% of proven reserves (it was second to last in terms of the amount of reserves). Twenty years later, the percentage was up to almost 20%, behind only the Middle East. This exponential growth can be seen on the following chart.


As mentioned, large reserves of oil and natural gas have been found on Brazilian territory since the mid-1970s. With the end of Petrobras’ E&P monopoly, though it still has a monopoly on refining, ANP has started to hold periodical auctions of areas with some potential for oil exploration and production. First an invitation to bid is published listing the requirements (technical, legal, financial and tax-related) for companies and consortia to take part in the bidding round. During the auction, they submit a proposal in a sealed envelope containing the three fundamental requirements: the signing
bonus, the minimum exploration program and the local content. In view of the purposes of this paper, I shall focus particularly on the local content requirement.

The signing bonus is basically the amount the company or consortium is offering to win the bidding and obtain the concession of the block on offer. The proposal cannot be lower than the minimum amount which ANP has defined in the tender document. The winning company or consortium must pay the signing bonus in a single amount on the date indicated by ANP.

This criterion has a 40% weighting in the makeup of the offer, although it is the only one which is used to define the winning bid at the public session when offers are submitted. In general terms, this means that it is not enough for the proposers to offer the largest sum for the block, since there are two other criteria to be analyzed and weighted in respect of the bid.

The minimum exploration program (PEM) is represented by units of work to be converted into exploratory activities such as 2D and 3D seismic surveys, potential methods and exploratory wells. According to Luiz Antonio Maia Espínola de Lemos and Gustavo Pequeno Peretti Mattos,

[...] the PEM is calculated as Units of Work, which are computed by the commitment to undertake certain activities in proposed quantities and multiplied by factors determined by ANP in the invitation to bid. Thus different rates are set for each sector and according to the type of activity proposed. However, the bidders in the round must be aware that failure to fulfill the PEM may result in various contractual and administrative penalties being imposed by ANP. The former are payable based on percentages fixed in the concession agreement and calculated on the difference between what the concessionaire undertook to do and what it actually performed. For this purpose the ANP may execute the letter of credit, the bid bond or the performance bond delivered by the concessionaire when the concession was granted.\(^8\)

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And, finally, the local content, which is a commitment to purchase Brazilian goods and services for part of the E&P process. Art. 2, VIII, of Law No. 12.351 defines local content as follows: the proportion of the value of goods produced and services provided in the country for the execution of the contract to the total value of goods produced and services provided for the purpose. Still, ANP Resolution No. 36 does not provide a definition of local content at the exploration stage or the development stage, leaving it to be defined in the concession agreements entered into with the operators.

The local content clause has been included since the first bidding round. Until the fourth round (2002), the only obligatory factor was the signing bonus. The minimum exploration program became one of the conditions when submitting a bid in the fifth round (2003). This round also saw the adoption of a minimum undertaking for local content, with a significant weighting for the definition of the winner (signing bonus = weight 30; minimum exploration program = weight 30; minimum undertaking to purchase local goods and services = weight 40, in the proportion of 15 points for the Exploration Phase and 25 points for the Development Stage).

Since the seventh round (2005), ANP has set criteria for the minimum and maximum amounts of local content to be observed. In the twelfth round, for example, only land areas with the following percentages were put out for bid: exploration phase with a minimum of 70% and maximum of 80% of local content; development stage: minimum of 77% and maximum of 85%. In practical terms, the company or consortium will establish criteria for local content (75% for instance), and this will be the minimum that it must apply during exploration and development.

To make it easier for concessionaires to identify companies that use local products and services, and thus meet the local content element established in the proposal and the agreement, ANP created a system of certification of national companies to be contracted. The certificate of local content is a document issued by the Certifier, according to a model issued by ANP, confirming the percentage of local content of the goods or services measured. Suppliers wishing to obtain certification have to register with ANP. They

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9 This definition is taken from ANP Resolution No. 36, of November 13, 2007. The document became known as Cartilha do Conteúdo Local [the Local Content Primer], since it deals with this specific subject in an appendix.
can register as suppliers of goods, services, subsystems, systems or sets of systems. After verification, the company is given a certificate stating that it uses local content, and may be contracted by the operators.

ANP monitors the operator of the exploration block at three junctures: i) on completion of the exploration phase; ii) at the end of the production development stage; iii) when the concession terminates. A fine is imposed as a penalty for not complying with the minimum local content stipulated at the auction. Concessionaires must send tax documents and investment agreements to ANP within 30 days of being requested to do so. Since the seventh round the fine has been fixed at 60% of the value of local content not purchased, in the event that less than 65% of the agreed amount has failed to be used. If more than 65% of the agreed local content has not been used, the fine will range from 60% to 100%.

The local content requirement has been adopted as an instrument of development by a number of countries, in each case adjusted to the country’s specific needs. Rabiu Ado published an article in the International Journal of Business and Management Studies in 2013, describing the different models used since the 1970s.

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10 A system is the coordinated grouping of materials (equipment and machinery) and associated services.

Table 1
Different models of local content

<table>
<thead>
<tr>
<th>Country</th>
<th>Legislation/Policy</th>
<th>Year</th>
<th>Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK</td>
<td>Policy</td>
<td>1970</td>
<td>In-country procurement</td>
</tr>
<tr>
<td>Norway</td>
<td>Local content Law (art. 54 of the Royal Decree of 1952)</td>
<td>1972</td>
<td>Indigenous participation</td>
</tr>
<tr>
<td>Malaysia</td>
<td>Petroleum Development Act</td>
<td>1974</td>
<td>Licensing</td>
</tr>
<tr>
<td>Brazil</td>
<td>Local Content Legislation</td>
<td>2003</td>
<td>Oil concession</td>
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<tr>
<td>Trinidad &amp; Tobago</td>
<td>Local Content &amp; Local Participation Framework</td>
<td>2004</td>
<td>In-country fabrication</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>Law of the Republic of Kazakhstan; 223-IV</td>
<td>2009</td>
<td>Procurement &amp; services</td>
</tr>
<tr>
<td>Indonesia</td>
<td>Local Content Rules</td>
<td>2009</td>
<td>Procurement of domestic inputs</td>
</tr>
<tr>
<td>Nigeria</td>
<td>Local Content Act</td>
<td>2010</td>
<td>Indigenous participation and domiciliation of oil and gas activities</td>
</tr>
</tbody>
</table>

Source: Rabiu Ado, Local content policy and the two rules of trade related investment measures (trims), op. cit.

The table shows that the focus of the policy varies between guarantees of indigenous participation (Norway and Nigeria), procurement (UK, Kazakhstan and Indonesia), licensing (Malaysia) and as a condition for the grant of exploration rights (Brazil).

So although some have criticized local content as being a protectionist policy, it can be seen that a number of countries have adopted the practice with a view to developing specific sectors of their O&G industry. According to ANP data, between 2009 and 2013 27 billion Reais were invested in local content, with 40% of the total being related to the purchase of drilling rigs. Its strategic importance is therefore undeniable, although adjustments to the legislation are needed from time to time as changes occur in the global industry.
4. Crisis in the sector and political-governmental alternatives

The oil and gas sector is crucial for the development of Brazil. It accounts for 15% of the country’s GDP and creates millions of direct and indirect jobs. The Brazilian Institute of Oil, Gas and Biofuels (IBP) estimates that BRL 950 billion will have been invested by 2020 in the goods and services industry. Recent studies indicating the potential of the pre-salt (176 billion barrels of oil) demonstrate the strategic role that this industry will play in Brazil’s development over the next decades. According to a forecast by BP, the consumption of oil in Brazil will increase 16% by 2035, at a rate of almost 1% a year. The production of energy, as a whole, will grow by 68%, and the country will become an exporter of oil, gas and electricity (produced by hydroelectric and nuclear power, and by renewable fuels in general).

The outlook is for a steady increase in the share of the oil sector in Brazil’s GDP, continuing the trend of the last 20 years. In 1998, the sector accounted for 3% of GDP. In 2010 it was 12%, and it could reach nearly 20% by 2020, according to a forecast by the Ministry of Mines and Energy. The country’s dependence on imported oil, at least, has been decreasing, although the need for natural gas has been rising.

Chart 6
Dependence on energy from abroad, between 1970 and 2014


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Nevertheless, the oil and gas segment is going through a period of uncertainty. Having got over the euphoria of the discovery of the pre-salt (the result of a major investment in prospecting led by Petrobras), it is now necessary to face up to the limitations imposed by Brazil’s political, economic and regulatory environment.

First of all, the international scenario affects the price of oil. Production in the pre-salt areas is high-cost and requires investments in dollars, which eats up the capital of the local companies. In 2006, when the pre-salt was discovered, a barrel of oil was quoted at around USD 70, and it reached a peak of USD 140 in June 2008. In the first months of 2017, Brent crude has ranged between USD 50 and USD 55, significantly higher than in 2016 but far below the prices of ten years ago.

Apart from the oil price, a further obstacle is created by Brazil’s structural gaps. The lack of infrastructure, planning and transparency is a problem that the sector has to cope with every day.

Finally, political problems have had a direct impact on the whole sector, for instance the ramifications of Operation Carwash (Lava Jato) which have struck at the heart of Petrobras, the center of Brazil’s O&G industry. Company executives have done their best to recover the confidence of investors, but much still needs to be done to prevent politicians using state-owned companies for their own purposes.

In the midst of all the tension in the sector, the local content policy can be seen as an important element of support for the development of Brazilian industry and related sectors. In January 2016 The federal government went some way to meeting the segment’s criticisms that the local content model was merely punitive, when it issued Decree No. 8.637 of January 15, 2016 (Federal Gazette of January 18, 2016), which introduced the Program for Stimulating Competition in the Production Chain and the Development and Enhancement of Suppliers to the Oil and Natural Gas Sector (Pedefor). Pedefor represents an important step in transforming a model that penalizes companies for not respecting the minimum percentages into another providing incentives.14

The aims of the program are: I — to elevate the competitiveness of the production chain of suppliers in the country; II — to stimulate national

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engineering; III — to promote technological innovation in strategic segments; IV — to widen the chain of suppliers of goods, services and systems produced in Brazil; V — to expand the level of local content of existing suppliers; and VI — to encourage the creation of technology-based companies. The focus of this program is to reduce the bottlenecks in the production capacity of the entire chain and thus enhance the competitiveness of the national O&G industry.

With Pedefor, new types of investment will be classified as local content, significantly broadening the rule in force till now which took into account only the purchase of local goods and services. The program will benefit the industries that achieve a percentage of local content higher than that currently existing for goods, services and systems of a strategic nature, including: i) engineering performed locally; ii) technical development and innovation carried out in the country; iii) high potential for creating skilled jobs; iv) promotion of exports.

The decree also provides for bonuses to consortia and companies responsible for: i) executing contracts for the purchase of goods, services and systems that lead to new suppliers opening for business in the country; ii) direct investment in expanding the production capacity of suppliers; iii) direct investment in the process of technical innovation by suppliers; iv) the purchase of goods and systems in the country, with local content, for use in overseas operations; v) the first purchases of new goods and systems developed in Brazil. This bonus can be used if a concessionaire has not been able to meet the target for local content established in the concession agreement.

The system of incentives and bonuses compensates companies that set up partnerships with Brazilian industry with a view to its development, since they are contributing to the competitiveness and internationalization of the domestic sector. All this is to be allied to incentives for research, which will boost the development of the production chain and satisfy the demands of the sector. It should be mentioned that this is the essence of the Norwegian model, which does not impose minimum local content but provides incentives to use it. Tomalsquim and Pinto Junior\(^\text{15}\) comment that the Norwegians have managed to sustain the impressive rate of 24% annual growth in oil production over three decades. This constant growth allied to the perception that the oil

belongs to the people (and so should be used to maximize their wellbeing, now and in the future) have made the Norwegian model for local content a benchmark in terms of development: this policy has been responsible for the development of local industry and the maintenance of a sovereign fund which today holds almost a trillion dollars.

It is thought that this will be an important change in the oil and gas sector in Brazil. The companies that have entered into partnerships with local industry with a view to developing it will be compensated for their contribution of competitiveness and internationalization. All this is to be allied to incentives for research, which will boost the development of the production chain and satisfy the demands of the sector. The government realized that without a frank debate on the existing distortions, progress stops and money is wasted, both things of great value to the industrial sector.

Final considerations

The local content policy is intended to encourage industrial activity in Brazil, through a contractual requirement to purchase national products and services for the exploration and development of oil and natural gas. Since these investments are geographically decentralized, benefiting different locations where operations are carried on, the local content policy has created jobs and social development.

As mentioned earlier, a discussion of minerals and hydrocarbons in Brazilian law dates back to the Mining Code of 1932, which was the embryo from which the industry has sprung. At the peak of the “The Oil is Ours” campaign, Petrobras came into being. Its expansion occurred chiefly in the 1960s and 1970s, when it acquired administrative autonomy and the first finds were registered on the continental shelf, the most important being in the Campos basin. The relaxation of the monopoly, during the 1990s, introduced more competition and innovation to the segment, leading to the construction of an industry that goes beyond Petrobras alone.

During the 20-year period starting in 1995, the oil and natural gas sector saw unprecedented growth, with countless important finds that have put Brazil among the foremost countries in terms of E&P. Between the sector’s riches and its weaknesses, it is necessary to reevaluate the system adopted in Brazil so as to align it with the new global dynamic. In the case of Brazil, more
private participation is needed in the sector, to reinforce the role of regulator and supervisor.

The Pedefor, introduced a year ago, offers more encouragement to the competitiveness of the production chain and to the development and upgrading of suppliers. This means that private sector players will be invited to work in partnership with the State. This is necessary, because the energy matrixes that use oil will not exist for ever. This does not mean that we shall be handing Brazil’s oil over to foreign interests: the State will have to work in partnership with private agents, since there is no need for its presence in every sector of the economy.

With this measure, the local content policy will continue to be an important factor for structural development in the national oil industry. Its expansion is a direct result of the strengthening of the entire chain, leading to more jobs, local development and greater social wellbeing.

References


____. Boletim da produção de petróleo e gás natural, Rio de Janeiro, No. 60, Aug. 2015.


