

Premium II (no Maranhão) são a suspensão da segunda unidade de Abreu e Lima, já com 91% das obras concluídas, e as incertezas em relação ao Comperj, no Estado do Rio. Segundo esse especialista, com essas interrupções, o Brasil aumenta suas importações não só de gasolina e diesel, mas de nafta petroquímica e querosene de aviação. E, com isso, corre o risco de se tornar como o México ou o Irã, permanecendo como grande exportador de um bem primário – o petróleo – e importador de de-

rivados, de mais alto valor adicionado<sup>4</sup>, assim como importador de bens e serviços utilizados na produção de P&G. Desse modo, voltaríamos à situação do passado quando o País passou 33 anos sem novas refinarias.

A atual crise do setor, contudo, não pode implicar no abandono de uma mensagem que unificou os mais diversos grupos sociais no País há mais de 50 anos atrás: a campanha “O Petróleo é nosso”, quando então políticos dos mais diversos partidos, militares, as-

sim como civis de vários segmentos da sociedade se engajaram em manifestações que incentivaram o presidente Getúlio Vargas a criar uma companhia estatal encarregada da exploração do petróleo brasileiro, a Petrobras. Há que se ter presente que os negócios do petróleo são de longo prazo!

Em síntese, a manutenção de políticas, que até o presente propiciaram a implantação de centros de pesquisa autônomos no País assim como estabeleceram medidas de incentivo à

indústria fornecedora de bens e serviços ao setor, tem que ser preservada, pois são essas etapas da cadeia produtiva as que garantem os maiores efeitos multiplicadores econômicos. Regredir e permanecer como mero fornecedor de produto de baixo valor adicionado exportando óleo bruto e tendo a dinâmica do setor determinada externamente poderá significar um futuro para o País sob o desígnio da “maldição dos recursos naturais”.

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#### NOTA

<sup>1</sup>A participação das empresas estrangeiras no grupo das maiores empresas brasileiras foi crescente ao longo dos anos. Enquanto em 1989 as estrangeiras eram apenas 30% das 500 maiores empresas no Brasil, em 2000 atingiam 46%. (SARTI E LAPLANE, 2003).

<sup>2</sup>O parque brasileiro fabricante de materiais e equipamentos e prestador de serviços para a área de petróleo e gás é, hoje, constituído por cerca de 70 mil empresas, das quais 30 mil são fornecedoras frequentes, distribuído por vários estados do Brasil, embora aproximadamente 70% esteja localizado no eixo Rio de Janeiro-São Paulo (RAPPEL, 2011).

<sup>3</sup>Informação obtida junto ao Parque Tecnológico da UFRJ em visita técnica realizada em 04/05/2015.

# The challenges of the competitive development of the Brazilian Oil and Gas sector in the context of pre-salt - Part II

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#### Abstract:

In the first part of this series of three articles published in the 44th edition of this Bulletin, in June 2014, it was presented the dilemma represented, on the one hand, by the opportunities offered by the Brazilian Oil and Gas (O&G) sector, headed by the discovery of large reserves of the pre-salt, and, on the other hand, by huge competitive gaps of the Brazilian supply companies in this sector, which may

limit the generation of wealth for Brazil. In this article, from the use of strategic prospective analysis tools, it will be presented the main influence factors of the context of the competitive development of the Brazilian O&G sector.

**Key-words:** Oil and Gas. Brazil. Competitive development.

## Introduction

The context approached involves the capacity of the Brazilian supply companies of O&G sector seize the opportunities offered by the discoveries of large reserves of oil and gas in the pre-salt layer in Brazil. There is an important perspective to the generation of wealth, but it must be considered technical challenges in the exploration of hydrocarbons in ultra-deep waters aggregated to the competitive bottlenecks of the national supply companies. This way, the possibility of the domestic supply companies does not meet the demands of the pre-salt appears as a major threat.

The Brazilian government, taking into account the relevance of the O&G sector to the Brazilian economy and the range of interests, has been implementing actions aiming a better improvement of the national industry for the challenges ahead. It must be highlighted that due to the complexity involved in the presented context, in addition to government actions, there is also the need to involve a variety of actors, from many different fields and sectors, whether public or private.

So, it becomes pressing the engagement of a range of actors interested in the competitive development of the O&G national

industry, seeking to work jointly in a collective action process. Among these actors may be cited, universities, national and transnational supply companies, operators, regulatory agencies, research centers, representatives of various governmental levels, supporting entities for the competitive and technological development, among others.

In terms of the backdrop of uncertainty about the future of the O&G national industry, it is important to identify the main factors that influence the competitive development of the national companies in this sector, and how these factors relate to the evolution of the dynamics' of the presented context. In addition to the influence of factors, it is essential to identify the actors involved in the improvement of this sector, in order to understand more deeply the actions that are being implemented and the interactions between actors for the sake of the competitiveness of the O&G Brazilian supply park.

Because of its representative to the Brazilian O&G sector, responsible for about 74.4% of national production in 2012 (ANP, 2012), the O&G Cluster of the Campos Basin was selected as the research unit. Despite the referred O&G Cluster spreads across several cities in the state of Rio de Janeiro, close to the operational areas of the Campos Basin, Macaé, located

in the North Fluminense region, is the city where there is a greater concentration of companies and actors. So, the research was restricted to this location.

In order to enable the purpose of this study, it was adopted as methodology the strategic prospective analysis due to its suitability concerning the context of uncertainty of the future of O&G Brazilian sector. The prospective tools also allowed contemplating the influence of factors and actors involved in the process of collective action. The strategic prospective has tools that allow certain crucial flexibility for decision making about the future, even in business environments increasingly globalized and turbulent.

Among the methods of strategic prospective, one that deserves more attention is the Scenario method (*La prospective*) proposed by Godet (1993). This method considers a scenario as a form of representation of the future in order to illuminate the present action, taking into account the possible and desirable future.

The Scenario method proposed by Godet organizes the prospective exercise, in order to define strategies and clarify the means of implementation. The implementation of the cited method is conducted in two stages: the construction of the base and the scenario building, with their compositions, as shown in Figure 1.

As the purpose of this work does not consider the proper scenario development, it will only be carried out the construction of the basis to meet the aimed objectives. Thus, the first phase of the method is performed based on the delimitation of the system that allows an oriented diagnostic for identifying and characterizing the factors that influence the context analysis. After an extensive literature review it was conducted a survey with O&G sector experts which were identified fifty-eight (58) factors that influence directly the competitiveness of the Brazilian supply companies located in the O&G Cluster of the Campos Basin.

Despite the identification of 58 influence factors, the Scenario method provides a tool that enables a better determination of which may be the main factors that influence the approached context. From the application of Structural analysis<sup>2</sup>, it is possible to identify factors that can be considered as the most influential and thus, direct the investment of more efforts to understand its causes and effects. Through the application of Structural analysis, six (6) macro factors that, according to this research, can be considered as the main influencers of the context of the competitiveness of the Brazilian supply companies of the Campos Basin were identified. These factors are presented below:

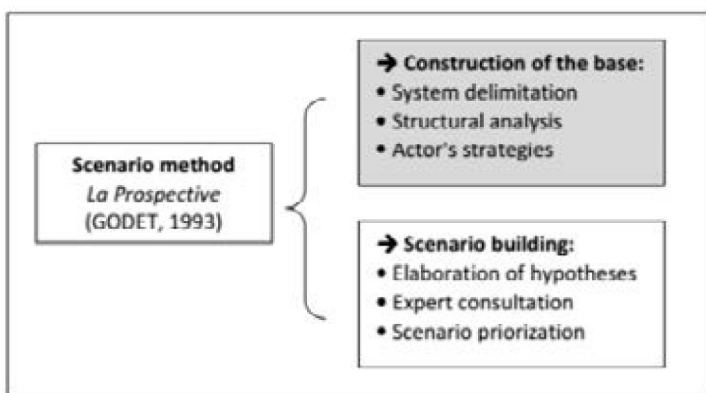


Figure 1: Stages of the Scenario method.  
Source: Adapted from Godet (1993).

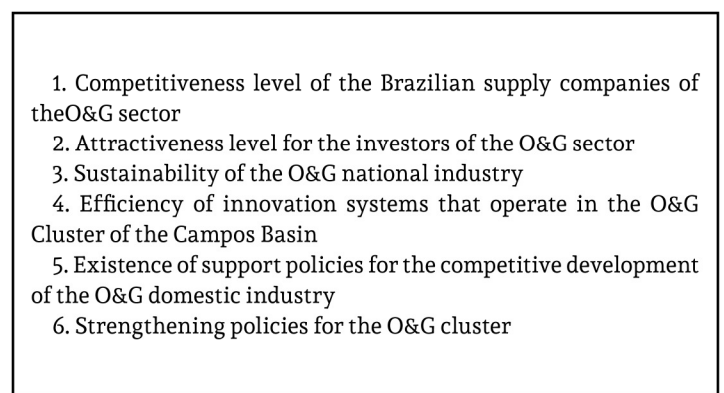


Figure 2: The most competitiveness influential factors of the O&G Brazilian sector. Source: Elaborated by the authors.

## 1. Competitiveness level of the Brazilian supply companies of the O&G sector

Although Brazil presents a bulky industrial plant in the O&G sector, it offers mostly solutions and products with low technological complexity. Besides, it presents overprice of 10-40% compared with the main foreign suppliers (RAMOS; PIGORINI, 2009).

It can also be cited among the factors that contribute to the competitiveness gaps the following: low-skilled human resources and high capital and tax costs. There are also presented, as possible solutions for this problem, the offering of specific courses and the

formation of partnerships with educational institutions, the offering of more affordable credit lines and support for the tax planning of the companies.

## 2. Attractiveness level for the investors of the O&G sector

Among the actions implemented by the Brazilian government, there is the requirement of minimum levels of Local Content (LC) of the prod-

ucts and services used by operators for the exploration of oil and gas. It must be highlighted that the LC policy acts as an industrial policy instrument that aims the strengthening of the competitiveness and sustainability of the productive chain of the domestic supply companies.

In this sense, despite the importance of the operators for the successful implementation of LC rules, the process causes a lot of controversy because if the requirements are not met, these companies will suffer penalties, which will affect their competitiveness.

Sector experts fear that, if the LC requirements do not be relaxed, despite these rules are important for national development, they may scare off potential investors of the O&G sector, among these organizations as operators and national and transnational suppliers.

## 3. Sustainability of the O&G national industry

One of the most important objectives of the actions implemented by the Bra-

zilian government regards the sustainability of the domestic industry, after all, how to take advantage of the opportunities offered by O&G sector and escape from the natural resource curse? What to do when the oil runs out? This

is an important question.

An important positive effect expected with the actions taken by the Brazilian government is the opportunity of national companies to achieve competitive levels of development that allow

them, for example, to become global players and to search opportunities in the O&G sector around the world, perpetuating their sustainability.

## 4. Efficiency of innovation systems that operate in the O&G Cluster of the Campos Basin

The North Fluminense region has an immature innovation system, taking

into consideration the aspects related to innovation and competitive development. This way, it is presented a scenario that makes this region less favorable to receive businesses that require a scientific and technological content to drive greater value and compete in more competitive markets (MARTINS, 2010).

The innovation systems are designed as dynamic structures that offer, to the companies, favorable conditions for innovation. Thus, among the approaches proposed for the generation of innovation, it can be highlighted the model of the Triple helix (ETZKOWITZ, 2008), which suggests that the interaction

between the actors university - industry - government may be the key to improve the conditions for innovation in a knowledge-based society. So, checking the level of relationship between these actors is essential.

## 5. Existence of support policies for the competitive development of the O&G domestic industry

The existence of inducing policies, as the LC policy, is not enough. As mentioned, the development process is complex and involves many actors and resources. In order to support the deve-

lopment of domestic industry, it must be established an industrial policy able to harmonize the adequacy of the LC requirements to the level of competitive development of the national companies

of the O&G sector. It must be considered that, as the competitive gaps are quite considerable, it is essential to have a support for the development of these domestic companies.

## 6. Strengthening policies for the O&G cluster

An important issue that cannot be neglected is the existence of policies to strengthen the cluster. Among the actions that favor the development of the

cluster, it can be cited the importance of the role of governance in order to provide more favorable conditions for the competitive development of the companies that are part of this cluster.

It was possible to identify six factors that can be considered as the most influential from the application of the

strategic prospective tools as shown in Figure 2. The importance of identifying those factors is the opportunity to devote more attention to the questions that most affect the context and influence the dynamics of the Brazilian O&G sector.

In the Part III of this work, it will be presented the continuity of the imple-

mentation of the Scenario method, in particular the Actor's strategies, in order to identify the main actors involved and also which are the main dynamics that involve the context of competitive development of the Brazilian supply companies located in the O&G Cluster of the Campos Basin.

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