

THE EVOLUTION OF BRAZILIAN OIL INDUSTRY: THE RELATIONSHIPS WITH OIL PRODUCERS AND IMPORTERS

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Overview

In the last century, oil has become a strategic resource for all economies, since it is the main fuel used by the military forces, is at the center of the transport matrix and has widespread and diversified use in the most different production chains. According to the International Energy Agency (IEA, 2016a), more than 30% of the global energy needs are met by oil fuel. As presented in the World Energy Outlook WEO 2016 (IEA, 2016b), despite the growth of renewables and nuclear energy in the world energy matrix, global oil demand continues to grow until 2040, mostly because of the lack of easy alternatives to oil in road freight, aviation and petrochemicals.

Security of supply remains as a major policy concern for all countries. Geopolitics of oil is predominantly characterized by the natural asymmetry of oil allocation between countries and by the national economic needs in using it, as oil is a scarce and non-renewable resource, which reserves are very limited and located in a few countries in the world, such as the Middle East. This has an important bearing on international relations, as oil is widely used in the "diplomatic game" as a weapon of deterrence, responding to geopolitical disputes. That explains why energy security is an important goal in many countries, especially after the 1970s oil shocks (BLUM & LEGEY, 2012).

The concept of energy security appeared in the early 1970s, after the Arab-Israeli War and the Arab oil embargo. The oil crises had a negative impact on the global economy, and exposed the economic vulnerability of major countries in front of a lack of supply and high prices of petroleum products. The crisis also strengthened the concept of energy security, advocating a more comprehensive operational definition of energy security, along with a workable framework for analysis of the current dynamics of international system (VAYRYNEN et al, 1995), (BUZAN et al, 1998), (HAFTENDORN, 1991).

Brazil is not an exception in this scenario. The security of oil supply has been a major concern of Brazilian energy policy, as different Administrations in the last decades have enhanced the political, economic and institutional conditions in order to strengthen energy security. After the two oil shocks, Brazil established a consistent commercial strategy based specially on countertrade agreements with OPEC countries focused on the need to reduce dependence from oil producers.

Brazil also focused on the development of national oil production, with the creation of the state-owned company Petrobras in the 1950's, and on the development of technological expertise of Petrobras in offshore fields (GOBETTI, PINTO JUNIOR, SARDINHA, 2012) (PINTO JUNIOR et al, 2016). After four decades, the results of the search are quite impressive and Brazil is now a net exporter oil country. Brazilian current production is around 2.5 millions barrels (MMbbl) per day (ANP, 2017a). However, the country continues to import oil. Given the technical characteristics of Brazilian refineries and the quality of domestic oil, exports and imports attained respectively 798.2 and 178.5 thousand barrels (Mbbbl) per day in 2016 (ANP, 2017b).

Under such circumstances, Brazilian government guidelines for energy and foreign policies have to deal not only with OPEC and NOPEC countries, but also with oil importers. How has the growth of oil production affected the development of trade agreements? This paper looks at the new oil policies in Brazil and shows that a new mind set is necessary in order to consolidate country position in the geopolitical oil context.

Methods

This paper seeks to demonstrate quantitatively how much Brazil remains dependent on oil imports from OPEC producing countries. For this, this paper focuses on tools of analysis of market structure, used in the area of the Industrial Economy. The market concentration index are intended to provide an indication of the existing competition in a given market. They capture how economic agents exhibit a dominant behavior in a market.

In order to verify the participation of a firm (or country) in a market, the different indicators of industrial concentration consider, for example, the participation of each agent in the total sales of the sector. The Concentration Ratio (CR) is an index that demonstrates the market share of the largest agents in a specific market. Based on the participation of each OPEC member in Brazilian oil imports, the level of market concentration can be calculated by this index. We use in the paper the Concentration Ratio index in order to examine the degree of dependence of imports from OPEC countries; and to analyse the Brazilian commercial strategies to export oil.

Results

This paper shows some results concerning the concentration on Brazilian oil imports from OPEC between 1995 and 2015. In this period, Brazilian oil industry has passed through a relevant change, in which has successfully reduced oil dependence and became a net exporter. On one hand, Brazilian oil imports decreased from 500 Mbbl/day in 1995 to 324 Mbbl/day in 2015. Brazil imported oil mainly from OPEC countries, which represented the vast majority of Brazilian oil purchases. NOPEC countries had very little participation in the Brazilian oil trade balance

CR-4 index shows that Brazilian imports remains very concentrated among some OPEC member countries, and this concentration is increasingly over the time. Brazilian oil imports come predominantly from Nigeria. Apart from Nigeria, Brazilian oil purchases are still concentrated in Saudi Arabia and Algeria, and more recently in Angola and Iraq. The only exception are Venezuela and Iran, which were relevant exporters in the 1990s and then lost share in Brazilian oil purchases from OPEC.

On the other side, Brazil's oil exports grew enormously from 19.5 Mbbl per day in 2000 to 736.7 Mbbl per day in 2015, mainly located in the American continent, as United States, Chile and Saint Lucia, except for China and India. China is the main buyer of oil from Brazil, having exported more than twice as the United States in 2015.

Conclusions

This paper concludes that Brazil has successfully reduced oil dependence and became a net exporter. However, oil trade movements remain quite important. In the last decade, the position of Brazil in the international oil market has radically changed. The recent discoveries in the Pre-Salt areas should lead the country to a more relevant position as an exporter in the international market.

On the one hand, it seems that Brazilian oil exports are looking for the following priorities: i) to consolidate a key position as an oil supplier to Latin American countries and ii) to establish special conditions for the pre-salt oil with Asian countries, in particular China and India.

However, on the other hand, due the characteristics of its refineries, Brazil is still an importer country. Thus, the relations of Brazil with OPEC countries will be oriented to two different and peculiar goals: i) as a competitor, which will try to attract oil importers, and ii) as a traditional oil importer. Once 90% of total imports come from OPEC countries, the economic and political relations with OPEC remain crucial to Brazilian foreign policy.

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