## The Brazilian Chemical Industry

The Brazilian chemical industry reached sales of US\$ 158 billions in 2011. Such figure places Brazil in the seventh position in the world ranking of chemical product manufacturers.

The chemical industry is known worldwide for its strong added value, capillarity and positive multiplier effect on the economy, contributing to the development of the country. Chemical products have a strong presence, either direct or indirect, in practically all industrial chains. Based on its transformation power, chemical products are present in the different solutions offered to society, decisively contributing to the improvement of the quality of life. In addition, it offers a range of products that goes from the complex of health and personal care, covering the possibilities of improvement of the environment (CO<sub>2</sub> emission reduction), energy saving, civil construction, among others. That is why there is no developed country without a strong chemical industry.

The chemical industry activity is highly dependent on investments in research and development and its progress is directly related to innovation. In the US, the average investment in R&D is about 2 to 3% of sales. In Europe, specialty chemicals producers invest, in R&D, close to an average of 4%. The Brazilian chemical industry, in spite of its great effort, still invests too little, about 0.6% of sales, in R&D. But the expectation is that, in a 10 year period, Brazil will raise that investment percentage to 1.5% of sales.

Despite its vitality, importance and opportunities, the Brazilian chemical industry has been increasingly losing share in the internal market. Brazil is currently importing all kinds of products, including commodities, which could be produced here and high added-value products, such as pharmaceuticals and agrochemicals. In reality, all chemical industry segments have a high trade deficit. In the early 90's, the deficit was about US\$ 1.5 billion, but it came to US\$ 26.9 billions in 2011 and the prospects for the present year are not optimistic at all, for a new deficit record is expected. Nowadays, importation represents more than a third of the Brazilian consumption of chemicals. In the early 90's, it represented less than 7%.

The increase of the amount imported, detrimental to the local production, can not be explained only by circumstantial problems, such as the world crisis, which has generated a large surplus in the international market or the real appreciation in relation to dollar. The Brazilian chemical industry has been affected by structural problems, which prevent it from benefiting with the increase of the domestic demand.

Such increasing deficit scenario and the lack of local competitiveness led the Brazilian Chemical Industry Association - Abiquim, in 2010, to prepare a document called "National Pact of the Chemical Industry", with the objective to analyze the situation of the industry, to project its demand for the following years and to propose possible solutions. Its strategic goals were to have Brazilian chemistry among the five greatest in the world till 2020, turning Brazil into a surplus country in chemicals and a leader in green chemistry. According to the Pact conclusions, valid to this day, the chemical industry could be able to attract investments of US\$ 167 billions over the next 10 years. Such investments would result from (a) the economic growth expected for the period, (b) the attempt to overcome the trade deficit, by substantially increasing exports while reducing the imports of products Brazil can offer to the market, (c) the growth of the renewable-basis chemistry and (d) the addition of value to the raw-material that will be available in the near future, due to the Pre-salt.

The fulfillment of the Pact foreseen opportunities would require the triple of the current level of investments in the sector. The annual average of investments in chemistry has lately been about US\$ 4 to 5 billions. Though substantial, such amount is insufficient to contain and reverse the progression of importations. However, to have those opportunities fulfilled, some structural and specific chemical industry problems would have to be solved: (a) the access to more competitive basic raw-materials; (b) the tax system distortions, with tax reductions for all the productive chain; (c) the conditions of the infrastructure logistics, with emphasis on the gas distribution and the availability of ports, highways and other modal solutions; (d) the State support to the technological development and to innovation; (e) the access to credit, mainly for small and medium-sized companies, in order to strengthen the productive chain.

The Pact has served as a basis for the diagnosis of the sector by the "Chemistry Competitiveness Council" for the "Plano Brasil Maior". The final agenda for the chemical industry was formulated by Government representatives, workers and industry. All the main problems affecting the sector were treated and for each of them one or more correction actions were identified. The main measures aim at increasing the fixed investment, reducing the costs of raw-materials, encouraging the diversification of the chemical production in Brazil, increasing the qualification of the human resources, stimulating the local production of imported products, encouraging companies to invest in innovation as well as in renewable-basis chemical products, improving the industrial infrastructure and increasing the international presence of Brazilian companies.

In a medium-and-long-term horizon, Brazil presents some of the main conditions to have a strong chemical industry: the size of its market, economic and political stability, strong companies, technically qualified and interested in investing. In the medium term, Brazil is achieving one of the most important conditions to become competitive in this sector, that is, an abundant supply of basic raw-materials. The opportunities brought by the Presalt oil and Pre-salt natural gas exploration as well as the recent discovery of on-shore gas, places Brazil in a new condition, unprecedented in its history. In addition, Brazil can still explore unconventional gas resources, which, is already happening in the São Francisco Basin. Besides the traditional raw-materials, Brazil is in a favorable situation concerning the production of renewable-source chemicals.

However, Brazil needs to eliminate the existing obstacles so that the chemical industry can overcome the current lack of competitiveness. The path has been very well traced and the proposals are already known through the action of the Competitiveness Council. The industry hopes that the agenda presented to be put in practice as soon as possible and that the Government gives the necessary signals so that investments in the chemical industry return, which will in turn reinforce the companies' investments in innovation, something indispensable to ensure their future. Chemical industry can come to be the engine of the Brazilian industry rebirth.

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