THE EFFECTS OF AN OPENNESS TO TRADE FOR BRAZILIAN MEAT IN NATURA

The Brazilian government launched the National Export Plan (PNE) that focused on the strengthening of exports. It should be noted that the PNE 2015-2018 integrates a Brazilian commercial policy, aiming the increasing of economic growth, a diversification and an aggregation of value and technological intensification in Brazilian exports. The elaboration of the plan, according to the Ministry of Development, Industry and Foreign Trade (MDIC), incorporates an idea that Brazilian international trade is a strategic element to increase the country's competitiveness and growth (BRAZIL, 2015).

It is important to emphasize that the promotion of export activity it is related to the promotion of gains in productivity and scale; incentives for innovation and the qualification of labor; and strengthening on competition bases. Therefore, the process of export promotion has the capacity to generate positive externalities for the whole economy and constitutes a strategic activity to increase the competitiveness and insertion of Brazilian companies in the international market.

In addition, the existence of a strong export sector has positive impacts on macroeconomic issues, such as the trade balance and the services account. It is also worth noting that exports can influence the labor market by raising the standards of income and employment.

Based on the "*National Plan for Exports 2015–2018*" (PNE 2015-2018), we can highlight the following countries in terms of high potential market to the Brazilian meat in natura: Angola, Saudi Arabia, Algeria, Chile, China, Colombia, Cuba, Egypt, Germany, Iran, Japan, Paraguay, Russia, South Korea, United Arab Emirates, United Kingdom, United States of America, Uruguay and Venezuela. The National Plan for Exports classifies the countries according to four strategies: market maintenance; market consolidation; market openness and market recovery. The 19 countries are distributed, by the four strategies as follows: a) market maintenance – 6 countries; b) market consolidation – 4 countries; c) market openness – 4 countries and d) market recovery – 5 countries.

It is important to highlight that the potential markets for the Brazilian meat in natura is spread to different regions, leading the Brazilian government do adopt different strategies/scenarios.

Based on the revealed comparative advantage index – *Balassa* index (RCAI) it is possible to measure the relative importance of each economy in the exports of meat in natura. For 2015, for a sample of 177 countries, the RCAI is greater than for 28 countries. Uruguay has the greatest index (66.09), followed by Paraguay (47.56), Nicaragua (32.25) and New Zealand (23.75). Brazil is in the seventh place (8.88).

There are some recent stylized facts that enable us to better understand the movement or perspectives of this external market. The United States is the largest producer and consumer of meat in natura while Brazil is the second largest producer in the world and the largest exporter. In the first half of this 2016, Brazilian foreign sales reached US$ 2.22 billion (or 571.5 thousands of tons), highlighting the sales to Hong Kong (US$ 393 million), China (US$ 365 million), Egypt (US$ 329 million), Russia (US$ 181 million) and Iran (US$ 168 million).

On the other side, the 2016 Brazilian exports, in volume and in revenue, of meat in natura and processed beef fell in comparison with the previous year. According to data from the Ministry of Industry, Commerce and Services (MDIC), 1.350 million tons were exported, 1% less than 2015 (1.361 million tons). In terms of revenue, the decline was 8%, from US$ 5.795 billion to US$ 5.340 billion. Further, if we look to 2014, we can that year was even better; the exports were 1.575 million tons and revenues were US$7.149 billion.

However, the perspectives are optimistic since there are some potential new markets, a more favorable exchange rate, the increase Chinese demand and the opening of the American market for the Brazilian meat in natura. Brazil and United States signed the Letters of Equivalence Recognition of Beef Control, which can lead to an openness of the American market to Brazilian meat and consequently increase the share of the Brazilian economy in other markets and in the international products of agricultural products.

It important to highlight that the bilateral agreement between Brazil and United States is based on import quotas. According to the Bureau of International Agribusiness Relations (SRI) from Agriculture Ministry, Brazil now has the same quota than Central American countries, 64,800 tons per year with a rate of 4% or 10% depending on the cut of the meat. Outside the quota (with no quantity limit), the tariff is 26.4%.

Given this context, this study aims to evaluate the effects of an openness trade for the Brazilian meat in natura, such as an agreement between Brazil and United States, and its systemic effects on the Brazilian economy, which is in in line with the PNE 2015-2018. In order to reach this aim, we explore two comparative scenarios. The first one based on the analysis of the impacts upon the Brazilian economy of the agreement between Brazil and USA; the second based on the idea to measure the impacts of the market opportunities listed in the PNE 2015-2018 for the meat in natura, considering two situations: a) Brazil reached completely the objectives listed at PNE; b) Brazil reached part of the objectives listed at PNE. For this purpose, we used the database and model from Global Trade Analysis Project (GTAP) - version 9, calibrated to the year 2011.

Computable General Equilibrium (CGE) models are well adapted to this type of analysis, firstly because they are able to measure the impact on welfare due to the adoption of different trade policies/scenarios, for example.

Second, given their own structure, CGE models present an integration of bilateral flows of trade and trade protection with an input-output table that maps inter-sectoral interdependence within each economy, leading to projections of impacts on national output of an economy, employment and income, for example.

In general, as emphasized by Ivus and Strong (2012), the structure of CGE models is related to the scale problem, which means that if there is an increase in external trade for the product of a single sector, the magnitude of the impacts will depend, in part, on the structure of productive chains within the economy (i.e, their backward and forward linkages). Thus, the impacts can be of the most diverse, depending on the economy in question, however, can be modeled with the intention of analyzing the changes coming from the most diverse policy alternatives.

In addition, the analysis made using CGE models are related to the ex-ante effects of a change in trade policy (HOSNY, 2013, IVUS, STRONG, 2012). This approach consists of quantifying future effects of a new policy, such as the implementation of a simulation based on a change in trade policy and the projection of future effects on a set of economic variables of interest. In other words, the use of a CGE approach allows the evaluation of policy alternatives using the current economy as a reference. Such an approach is based on the answers to "what if" questions, or in other words, it is based on impact analysis given the changes in the reference economy and therefore helps to better map the possible effects of a unilateral trade liberalization policy, or the likely effects on a given economy of entering into a free trade agreement.