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Brazil:

exploring new paths with the European Union

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Brazil:
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SUMMARY AND CONCLUSIONS

The negotiation of a preferential agreement between Mercosul and European Union is facing a critical moment. New facts are changing dramatically the international scenario: the creation of mega-trade-agreements, the surge of China as a new geopolitical power confronting the old order stablished by the United States and the European Union and a political crisis in the World Trade Organization that is blocking the conclusion of the Doha Round or even its survival.

The moment is also critical for Brazil, now facing a serious crisis, with political and economic factors. The model of economic development based on the enlargement of the consumer market by programs of income distribution and reduced credit, implemented by the last two presidents, reached its limits. Now Brazil is facing the reality on how to balance the political, economic and social costs imposed by a significant fiscal adjustment.

For Brazil, one important consequence of this new international scenario is the recognition that not only its Economic Policy has to change but also that its International Trade Policy needs a shift of orientation. The adopted South – South Strategy has produced some results, but challenged by the new international challenges, Brazil has to change direction in search of a new South – North Strategy.

In this context, the conclusion of the long delayed preferential agreement between Brazil and the European Union is critical, not only for Brazil, but also for the European Union.

Challenges for the EU and Brazil

There are new facts in the global trade scenario. On October 4, 2015, the 12 countries that were negotiating the Trans-Pacific Partnership (TPP) – Australia, Brunei Darussalam, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, United States and Vietnam – announced the conclusion of a final version of the Agreement. The TPP is the largest and deepest preferential trade agreement adopted since the end of the Uruguay Round in 1994. The Partnership encompasses a market of approximately 800 million people, a combined GDP of US$ 28.5 trillion that will cover 40% of the world economy.

More than tariffs, the TPP establishes the international trade rules for the XXI Century. The Agreement includes topics such as: trade in agricultural and industrial goods; textiles and apparel; rules of origin; customs administration and trade facilitation; sanitary and phytosanitary (SPS) measures; technical barriers to trade (TBT); trade remedies; investment; cross-border trade in services; financial services; temporary entry for business persons, telecommunications; electronic commerce; government procurement; competition policy; state-owned enterprises (SOEs) and designated

monopolies; intellectual property; labor; environment; regulatory coherence; transparency/anti-corruption; and dispute settlement. The TPP also constitutes the legal and institutional framework that will regulate the creation of global value chains in the Asia-Pacific Region led by the North American multinationals companies.

The Trans-Pacific Partnership reaffirms the US position as the biggest player and rule maker in the global trade. The Agreement is the first concrete evidence of the North American pivotal shift from the Atlantic toward Asia and the Pacific Ocean. It indicates the US commitment to the region and its reluctance to cede its primacy to China.

China is not being left behind in this new trade negotiations dynamics. On the contrary, the country is also putting into practice its own strategies. Currently, China is leading the negotiations of the Regional Comprehensive Economic Partnership (RCEP), a Mega Regional Agreement that will connect 15 countries from Asia and the Pacific to its economy.[1] The RCEP initiative is a clear reaction of the Chinese government to the TPP initiative. In addition to the RCEP, the Chinese government also announced the Silk Road Economic Belt and the 21st Century Maritime Silk Road projects. These proposals aim to push the need to export China´s production capacity to countries in Euroasia. There are already some Chinese production chains that are being deployed to this region that will connect China to the European market. Thus, China is expanding its commercial power in the East and West fronts.

It is also worth highlighting the increasing importance of China in Latin America and the Caribbean. For many South American and Caribbean countries, Brazil is no longer its main economic partner. This place has been occupied by Chine through its attractive investment projects and exports of competitive products. There is a clear damaging effect especially for the Brazilian manufacture exports that always have had South America as an important market. Currently, the Latin American countries are turning their back to Brazil and looking at the Pacific as a more interesting economic zone. It is now clear that China is redrawing the old Treaty of Tordesillas between Portugal and Spain, re-dividing the continent into two parts: the Atlantic and the Pacific.

These new realities put pressure on several layers of the international trade governance. In the multilateral level, the adoption of TPP may produce two different and opposing scenarios facing the WTO: (i) the unlocking of the Doha Round or (ii) the abandonment of far-reaching negotiations based on the single-undertaking.

On the one hand, the TPP may inspire other countries to strike a deal on a broad and complex trade agreement if political will and determination are present. According to the WTO Director-General, “reaching agreement on difficult range of issues proves that complex trade deals can be reached” He called on WTO members to accelerate their work so that agreements on negotiated outcomes can be achieved by the organization´s 10th Ministerial Conference in Nairobi (15-18 December).” On the other hand, the conclusion of TPP may have an adverse effect and impeding the endeavors of great trade powers, such as the US to achieve an extensive agreement in Nairobi, since its interests has already been reached in the TPP. There is a concern that the US government may endorse *la politique de la chaise vide* in the WTO negotiations fora from now on.

[1] The RCEP negotiations are composed by: Australia, Brunei, China, Myanmar, Cambodia, Indonesia, Laos, Malaysia, Philippines, Singapore, Thailand, Vietnam, India, Japan, South Korea and New Zealand.

In the preferential level, the TPP´s conclusion urges the completion of another Mega Regional Agreement negotiated between the US and the EU: the Transatlantic Trade and Investment Partnership (TTIP). The consultations between the two Parties were occurring in a quick pace until the European civil society protested for more transparency in the negotiation of issues such as Investor-States Dispute Settlement (ISDS) and Genetically Modified Organisms (GMOs). It is conceivable that with the conclusion of the TPP´s final next, the TTIP negotiations gain new force and impetus to be concluded.

The negotiation EU - Mercosul

Also in the preferential scenario, the TPP´s outcome is raising the interests of private actors and governments to achieve the conclusion of the Trade Agreement between Mercosul and EU.

The negotiations have been dragging on for 17 years without any substantial result. Recently, however, there has been a significant change among the main interested players from both sides of the Atlantic on the matters discussed between the Parties.

Mercosul and EU have decided that they will not discuss only tariff reductions but also non-tariff barriers. The negotiations acquire a higher level of commitments that also encompasses the adoption of common rules. More than tariffs, antidumping and rules of origin, the negotiation of test equivalence, agreements on mutual recognition, accepted list of certification institutes and accreditation process are much more relevant in any negotiation. Nowadays, the most relevant points to be discussed in any new preferential agreement are related to rules concerning regulatory coherence among parties.

Brazil´s tree dilemmas

In the present context, Brazil is facing three dilemmas. The first is that the country has opted to prioritize multilateral negotiations and to concentrate its preferential options with the expansion of Mercosul (Argentina, Brazil, Paraguay, Uruguay, Venezuela (in a transition phase) and Bolivia (whose accession waits the approval of the other Members´ Parliament) to integrate South America. Brazil had also some agreements with other developing countries, under its South – South strategy, but these agreements have small economic impact. The priorities of its International Trade Policy have been directed toward South America and Africa. As a consequence, this policy had isolated Brazil from one of the most important trends of global trade, the one related to the construction of a network of preferential agreements.

The second dilemma faced by Brazil is the choice to base development on a consumer-led model, prioritizing its internal market with the expansion of credit and several programs of income distribution. This option raised a significant portion of the Brazilian population to the middle income level. Services areas boomed and industry was protected from competition through tariffs and incentives to compensate increasing costs in infrastructure, labor costs and tax burden. This policy delayed Brazil in incorporating a new trend in global trade: the integration of its industry and services into global value chains. The option to implement an industrial policy that supports the imports of intermediary goods with technological content that adds more value mainly

through services and then export the final product to the World was not considered as priority by Brazil. The consequence is that Brazil is one of the less integrated countries in the global chains network.

The third dilemma faced by Brazil is a result of the previous two issues. Due to the countries isolation in the negotiation of new preferential trade agreement and its exclusion of the global value chains, Brazil is turning into a mere rule-taker instead of an influent rule-maker at the international arena. The country is no longer influencing the priorities and direction that the international trade regulation is taking.

Another question under scrutiny is that facing the serious impasse confronting the WTO, Brazil has a leading role in redirecting the WTO to explore new paths, such as plurilateral agreements and the restructuring of its decision process. It is important to rethink its role in rescuing the Organization from irrelevance in the multilateral system. Some of the new priorities of the WTO should be the creation of a new mechanism to supervise the impacts of preferential and mega-agreements on third countries and the introduction of a mechanism to understand the impacts of global chains on the traditional trading rules and to propose the negotiation of new regulatory framework.

The new challenges confronting the international trading system will impact Brazil seriously: its isolation from the network of trade agreements and its non-integration in the global or regional value chains networks. These challenges are already significantly affecting Brazil competitiveness.

The year of 2016 will be a year of new options and definitions. The numbers and evidence are clear in showing that the economic model adopted by Brazil will be revisited. In terms of its International Trade Policy and its Industrial Policy, the three challenges already mentioned are already being analyzed and new solutions are under examination.

The Report

The main objective of this Report is to explore new paths that Brazil and the European Union could follow in order to improve their economic and trade relations. Considering the Brazilian isolation in the network of preferential agreements and the country´s low integration in the global chains network, it is important to highlight that Brazil has not only the possibility to expand its trade toward South America but also to explore new pathways through preferential agreements.

The first option is to accelerate the conclusion of the preferential agreement between Mercosul and the European Union. Started in 1995, this negotiation has lost momentum, not only because of the political will of the EU facing a deep economic crisis, but also because of Brazil, more interested in South America. The complex situation of Argentina offers a sensitive question to be solved, but if Brazil, Paraguay and Uruguay regain impetus to negotiate, Argentina can be accommodated through negotiated flexibilities. Venezuela is still in a transition phase to Mercosur. The complete Membership of Bolivia still waits the approval of the other Member's Parliament. Facing refusal of any parts involved, Brazil can always choose the alternative to negotiate as a single country. The necessary step will be to renegotiate the Mercosul

Decision 32/00 that impedes any part to negotiate new agreements without the other Members.

The second option derives as a consequence of a highly probable agreement between the US and the EU, under the mega-agreement TTIP. With the materialization of this agreement, the challenge facing Brazil is whether it makes any sense to make an agreement with the EU and not with the US. For Brazil, in the present World scenario, there is no much trade logic in negotiating an agreement with the EU without negotiating another one with the US, since both countries will be negotiating with the TTIP framework in mind. The gains and costs to implement the rules and instruments negotiated with the EU will certainly reinforce the gains and dilute the costs of implementing the new rules and instruments negotiated with the US.

This report presents two sections:

Section I will enable a greater understanding of the complexity of the issues related to trade negotiations. The standpoint is the present trade position of Brazil and the EU in the international trade. In this first Section, the main features of Brazil and EU regarding trade flows and their main products are analyzed, followed by the trade instruments, such as tariff profiles, trade defense and regulatory barriers. Finally, the so-called new generation preferential trade agreements will be compared and some regulatory challenges will be explored, discussing new characteristics from the mega-agreements.

Section II will present the results of the simulation modelling, analyzing possible outcomes offered by the conclusion of PTAs between Brazil (with or without Mercosul) with US, EU and China. The impacts of the TPP and TTIP on Brazil will be also calculated.

In more details:

Chapter I gives a brief introduction of the new trends in external trade policies and the position of Brazil: the multiplication of preferential trade agreements and the integration of global or regional chains.

Chapter II sets out the tariff profiles of the countries analyzed. Except for a few sectors, applied tariffs are already low, which indicates that the greatest barriers to trade nowadays are not directly related to tariffs, but to the adoption of other non-tariff barriers.

Chapter III shows the importance of EU in the Brazilian trade agenda, examining trade flows with emphasize to the main sectors.

Chapter IV contemplates the performance of Brazil and the EU with regard to regulatory barriers, especially technical, sanitary and phytosanitary ones. On the one hand, the EU has been active in deploying non-tariff measures and in raising questions against these measures in the WTO Committees on TBT and SPS. These specific trade concerns are related to measures adopted by countries, particularly with respect to foods, chemicals, and electric and electronic equipment; animal health and food safety. On the other hand, Brazil had a more discrete participation in the activities of the committees, with notifications concentrated on its major imported products, as

chemicals, mechanical equipment, electrical and electronic equipment, motor vehicles and parts, and food safety.

Chapter V deals with trade defense strategies adopted by the EU and Brazil. The most used mechanism is antidumping, followed by subsidies and countervailing measures, and finally safeguards.

Chapter VI summarizes the picture for investments, considering flows and stocks of foreign direct investments.

Chapter VII explores the main issues negotiated by the new generation of preferential agreements. It shows that the EU has been noticeable in defending their interests in various new topics related to international trade. By including mechanisms that advance the liberalization of topics WTO-plus and WTO-extra in preferential trade agreements with the most diverse array of partners, the EU strengthen its role as rule makers for the new international trade framework.

This study is intended, therefore, to highlight the advantages and potential bottlenecks that Brazil may have to handle with, when negotiating with the EU.

The results

The main results can be summarized in the following points:

1 – Different scenarios analyzed in the simulation demonstrate that the adoption of a PTA between the EU and Brazil is positive with important gains in both GDP and trade flows for all parts. For specific agricultural and industrial sectors there are gains and losses that will call for flexibilities in the negotiations, adaptation and search for more competitiveness. However, it is also true that many sectors would perceive immediate benefits arising from this agreement, and the potential to increase the long-term advantages should not be neglected.

2 – The PTA with the EU is overall positive, bringing a concentration of gains in the agricultural sector, impacting the exchange rate and bringing some negative effects over the Brazilian industry. These losses can be neutralized with the inclusion of flexibilities in the negotiation, such as differential tariff cuts, transition periods and adequate rules of origin.

3 – These results have important messages to the Policy on International Trade of Brazil. The trade agreement with the EU, so many years on the table, should be concluded. In the negotiations, importance should be given not only to tariffs and quotas, but also to regulatory barriers as the ones included in TBT, SPS and private standards, with special emphasis to equivalence and mutual recognition arrangements.

4 – The PTAs negotiated by the EU usually have some flexibility regarding the level of development of its partner, even incorporating asymmetric provisions that may result in exclusions for sensitive sectors or products, preferential access to the EU market, long transition periods and financial assistance. These points should be on the table.

To explore these new trade issues, the Report analyzes the FTAs signed by Korea with both the US and the EU. Some interesting points are revealed regarding the agriculture, the textile and the automotive sectors. These countries negotiated the use of safeguard measures in order to protect these sectors and negotiated a series of flexibility points.

5 – The success of trade negotiations depends heavily on the Brazilian side. Brazil has no more time to wait for internal reforms until be ready to make these agreements. It has no other choices than to face the implementation of these agreements at the same time that it accomplishes some important internal tasks, involving both industry and Government: the Brazilian industry should concentrate efforts to promote its competitiveness, and the Government should implement policies to support this goal, such as the reduction of the tax burden, the reduction of energy costs, the qualification of the labor force, and a more conservative fiscal policy in order to promote a more competitive real exchange rate.

6 – In relation to the mega-agreements, considering the TPP, the simulation demonstrates that its adoption will cause negative impacts on the Brazilian economy. These impacts can be more significant with the competitiveness gains achieved by the TPP partners. Overall, the Brazilian exports will have a decrease. The sectors that will suffer the biggest losses in their GDP due to the decline of exports are: animal products, food products, meat products, gas, and transport equipment.

7 – In relation to the TTIP, considering only the elimination of tariff barriers, the simulation shows that the impacts on Brazil are not so expressive. However, when the elimination of non-tariff barriers between EU and US is taken into account, the negative impact to Brazil is significant, regarding sectorial GDP and trade flows. More than tariffs, the trade gains of TTIP will be obtained through negotiations of non-tariff barriers including technical barriers, sanitary and phytosanitary measures, trade facilitation, investments among others, which are, nowadays, the real barriers to trade.

In synthesis, the most important messages revealed by this Report can be so summarized:

Facing the new challenges on global trade such as the multiplication of preferential trade agreements with the mega-agreements and the integration of trade in the global value chains, a new Policy on International Trade should be implemented for Brazil. The economic interests of Brazil cannot be restrained to South America and Africa. The negotiations with important players such as the EU and the US should receive a new attentive examination. The objective is not only to improve access in these large markets, but also to integrate Brazil in the global chains of production and trade through imports of intermediaries with more technological content.

The gains for agriculture with the adoption of agreements with the EU and the US can be significant. However, because they involve very sensitive areas, they should be reached by steps. These implementation periods will be essential for the necessary reforms in the Brazilian industrial sectors in search for a new level of competitiveness.

The gains through negotiation with Mercosur as a bloc are not so relevant to justify the costs of its present inertia. Mercosur should not impede the re-articulation of Brazil in the global economy through new trade agreements and its integration in global chains.

Brazil should support the formation of these chains in South America for the competitive sectors, but sectors with higher level of technological content should be integrated with the EU and the US.

The conclusion of TTIP by EU and US will represent a serious threat to Brazil. Not only Brazil will be left behind in the new trends of international trade, but will lose its role as a participant in the rules making process. Even if the conclusion of TTIP is postponed, private actors in the EU and the US are already negotiating among themselves to approach their positions and advance complementary decisions. What is new, to explain their cooperative intentions, is China and its huge conquest of their respective markets.

The present Report advocates that Brazil not only has to deepen its integration of Mercosur and expands its preferences toward South America, but also to give priority to the negotiation of the preferential agreement with more developed countries as the EU and the US, because they are still, important markets for Brazilian exports, but also sources of innovations and technologies, essential factors to integrate Brazil in the global chains networks. Facing the new challenges represented by the mega-agreements and engagement between the EU and the US to create a Trans-Atlantic mega agreement, there is no other choice available to Brazil than conclude immediately the negotiations of a preferential agreement with the EU. Moreover, Brazil cannot stop there. There is no economic and trade logic for Brazil to negotiate an agreement only with the EU. In due time, an agreement with the US must be considered.

A complementary action should also be contemplated. It is a new phase of economic partnership in the business areas, with the support of their governments. There is a whole positive agenda to be negotiated by business leaders to improve economic partnerships between Brazil and the European Union. Among the issues to be contemplated: innovation and technical cooperation, regulatory cooperation in the area of technical, sanitary and phytosanitary measures, and private standards. These can be accomplished by mutual recognition arrangements between business sectors, equivalence assessment in standards settings, arrangements between private laboratories, among others. These barriers are becoming much more relevant than tariffs and can be negotiated by private entities.

Another concrete alternative is to engage in a planned program of integration to the European global value chains, importing intermediary goods to be re-exported to other markets. This option will encourage a new search for innovation and competitiveness.

Facing the new reality that is shaping international trade, the present lack of a proactive agenda by Brazil can represent a serious risk for its own future development.

It is a time for action!

SECTION 1

I. INTRODUCTION

International trade has been marked by two important and powerful trends.

The first one is the multiplication of preferential agreements in bilateral and regional level. As of 7 April 2015, the WTO has been notified by 612 PTAs, of which 406 are in force. Currently, there are no more countries that are not yet part of these agreements. With the successive impasses of the Doha Round of the WTO negotiations, the alternative envisaged by major World economies like the US, EU, China and India has being to seek the conclusion of PTAs with numerous partners as a way to consolidate and gain access to new markets in the areas of goods, services and investments.

The second one is the integration of production and trade in global value chains. With the progress of new technologies, countries are concentrating in importing intermediaries goods and exporting final products through the addition of value by services or components of high technological content. The era of production and trade of complete goods is being substituted by the era of integrated production and trade of intermediaries, innovation, design, logistic, marketing and distribution.

Going against these trends, Brazil and its Mercosul partners opted to continue favoring the WTO as the principal forum for trade negotiations and concentrated their efforts on completion of the Doha Round. In the case of Brazil, its international trade policy has been clearly marked by the support of the strategic importance of preferred alliances with developing countries (South America and Africa) at the expense of diversification and the promotion of deep integration agreements with large trading partners such as the EU and the US, sources of high technologies and innovations.

Brazil is a latecomer to the global chains strategy, figuring as one of the least integrated countries in the trend. With the exception of some sectors as aerospace and automotive, the last one considered a regional chain, Brazil is still pursuing a path of importing to export, the core of global chains.

The present study aims to shed some light on the importance of negotiating a PTA with the European Union that includes non-tariff barriers. This Agreement would compromise a large number of Brazilian trading partners, mainly those possessing technological potential to help the country to achieve a more competitive economy and to integrate its economy not only to the World of preferential agreements, but also to the World of global value chains.

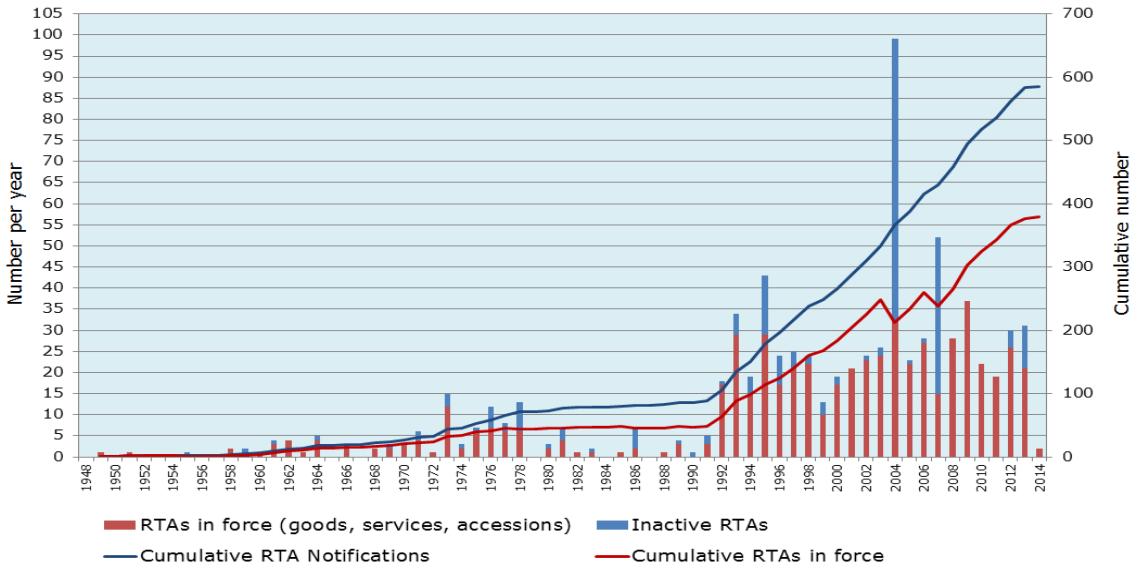
The present study advocates that Brazil not only has to deepen its integration of Mercosul and expands the preference to South America, but also to give priority to the negotiation of the preferential agreement with the EU. However, facing the facts of new engagements between the EU and the US to create a Trans-Atlantic mega agreement, to rebalance the expansion of China, there is no economic and trade logic not to enter in a new negotiation to create a preferential agreement with the US at a proper moment.

PTA Proliferation

International trade is under a significant and complex change process. It represents a great challenge to Brazil. The low speed of trade rules negotiation dead-locked in multilateral negotiations under the WTO has lead major players in international trade, notably the US and the EU to focus on the negotiation of preferential trade agreements where they could advance trade rules, lower trade barriers and promote integration with their partners, signalizing the rules they want for the present century.

As the WTO graphic shows, there has been a huge increase in the number of preferential trade agreements in the past years, pointing to the importance that these agreements have acquired in the regulation of international trade flows.

Figure 1 – Preferential Trade Agreements notifications (1948-2014)



Source: WTO Secretariat.

The first generation of PTAs had as objective the reduction or the elimination of tariffs in goods between its partners. The following generation of PTAs has promoted, besides tariff reductions, the negotiation of rules on subjects not fully dealt by the multilateral system, establishing a relevant framework of trade regulation on the preferential level, that affected not only the partners of the respective PTA, but also influenced multilateral negotiations. The current generation of PTAs keeps the trends of the previous agreements, but in a deeper process. These deep-integration PTAs promote a greater coordination and harmonization between trade partners, facilitating the establishment of production chains on the regional level, contributing to establish the regulatory framework the major phenomenon of trade in recent times: the expansion of trade through regional and global value chains.

In the new generation preferential agreements, tariffs are not the main target. They have become genuine hubs for the regulation to support global trade, in pursuit of an increasingly deep integration. Their proliferation has resulted in the creation of differentiated regulatory regimes that despite reproducing basic rules of the WTO (trade defense, technical barriers, sanitary and phytosanitary measures (composing the term

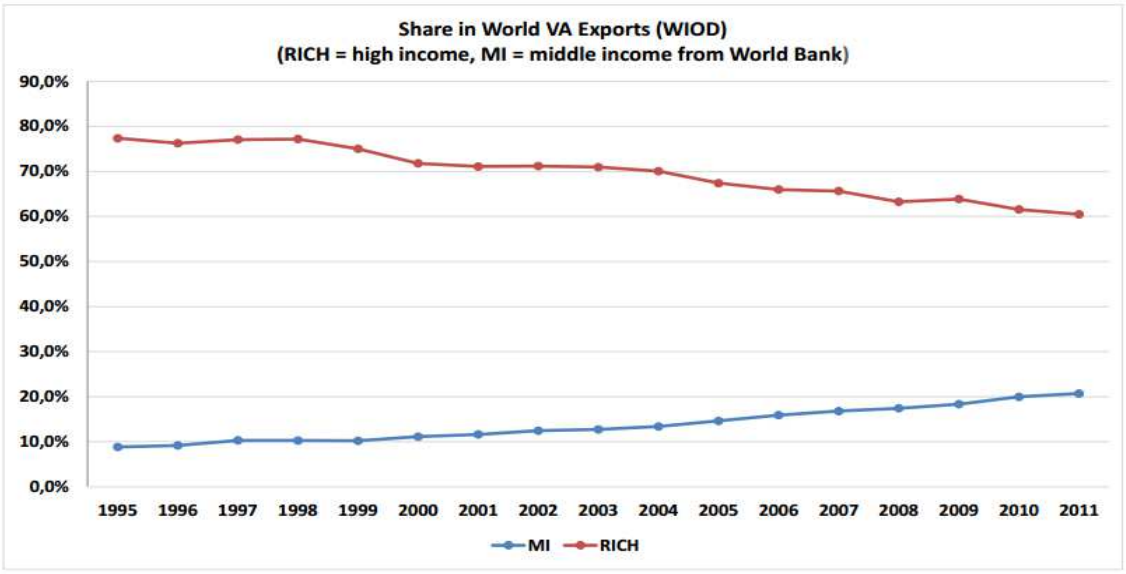
"WTO in"), contain other regimes that makes stricter provisions relating to intellectual property and gives a more liberalizing bias to negotiations on trade in services (WTO plus). These PTAs also deal with areas not covered by the WTO, such as rules of promotion and protection of foreign investment, competition (antitrust and cartels), regulatory coherence, environment, climate change, e-commerce and labor standards (WTO extra).

Brazil and the Global Value Chains

Global value chains can be defined as the full set of activities required to produce and deliver the product to the final consumer. The qualification of this process as a value chain stems from the fact that production takes place in stages that aggregate value added. At each stage of production, each firm acquires its inputs and employs factors of production (capital, land and labor). The remuneration of these factors will compose the value added. This process is repeated at the next stage in such a way that the value previously added is transformed into cost to the next producer. The set of steps may be performed within a firm or between firms. If the set of linked firms are located in more than one country, a value chain that is global is formed.

The recent interest in the economics literature by this new production paradigm has occurred for two main reasons: i) because trade flows arising from the outsourcing of production stages are intensifying; and ii) because such flows are occurring between developing and developed countries. In this context, there is an indication that this new relationship has been beneficial to developing countries, as there is an increase in the World income and exports share earned by emerging economies in recent decades.

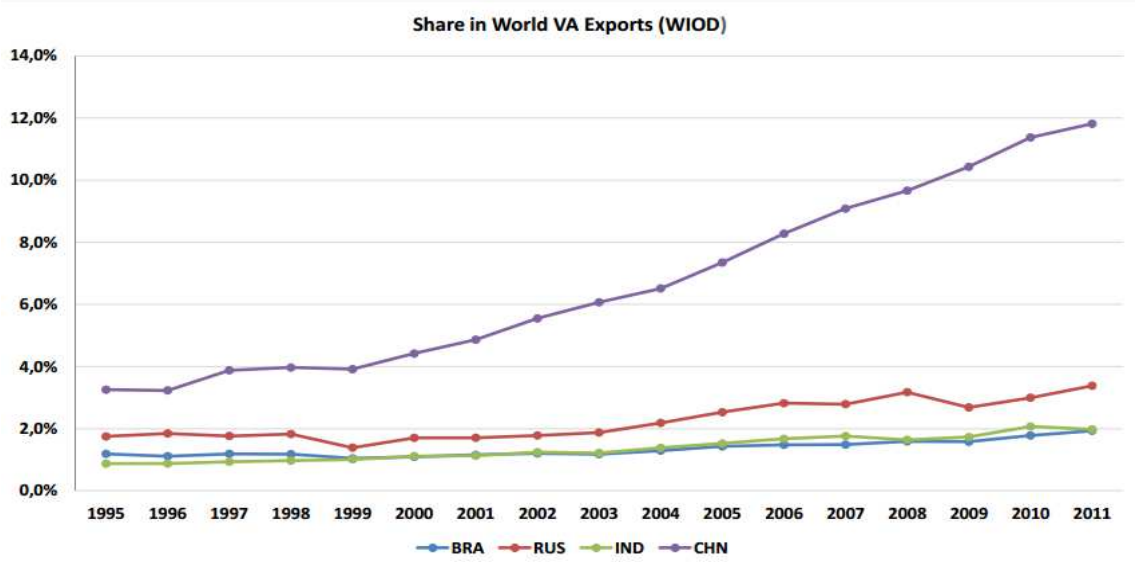
Figure 2 – Share in World Value Added



Source: WIOD

This result suggests that the fragmentation of trade has been beneficial to developing countries. If the case of the BRIC, and if we consider Brazil, it is evident that Brazil presents the worst result in this group.

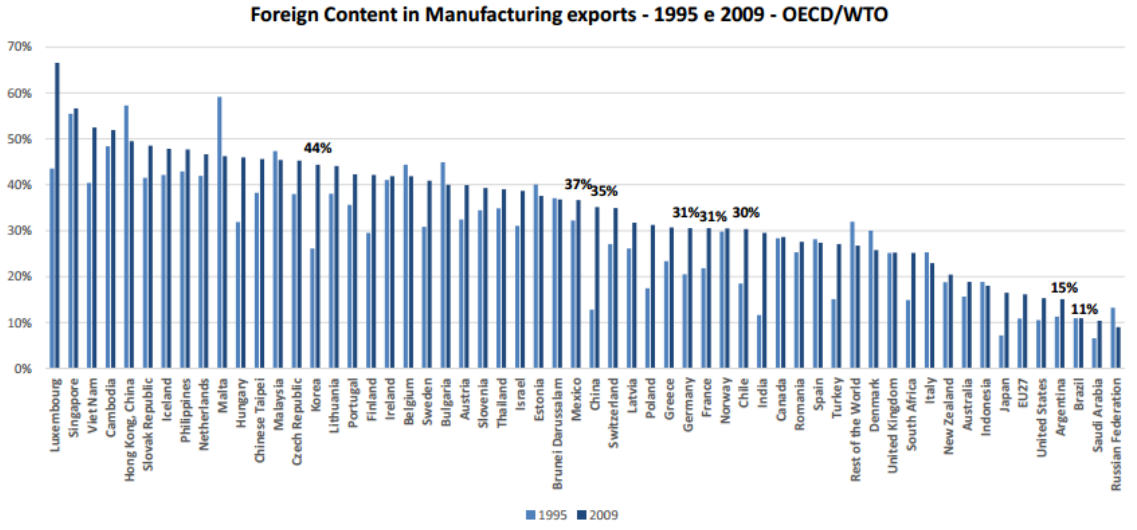
Figure 3 – Share in World Value Added Exports



Source: WIOD

Observing these numbers, one conclusion is that Brazil is not following the direction of a greater fragmentation of production in the last decades. In accordance with this path, Brazil is the one showing the weakest backward linkages in a sample of countries studied by OECD, suggesting its low levels of connection to international supply chains.

Figure 4 – Foreign Content in Manufacturing Exports



Source: OECD/WTO

In summary, the global trade has underpinned a growing fragmentation of productive activity. However, Brazil does not seem to be inserted in this movement. This should be a great concern for the country since, nowadays, goods are bundles of many nation inputs and competitiveness is no longer derived only within the domestic border.

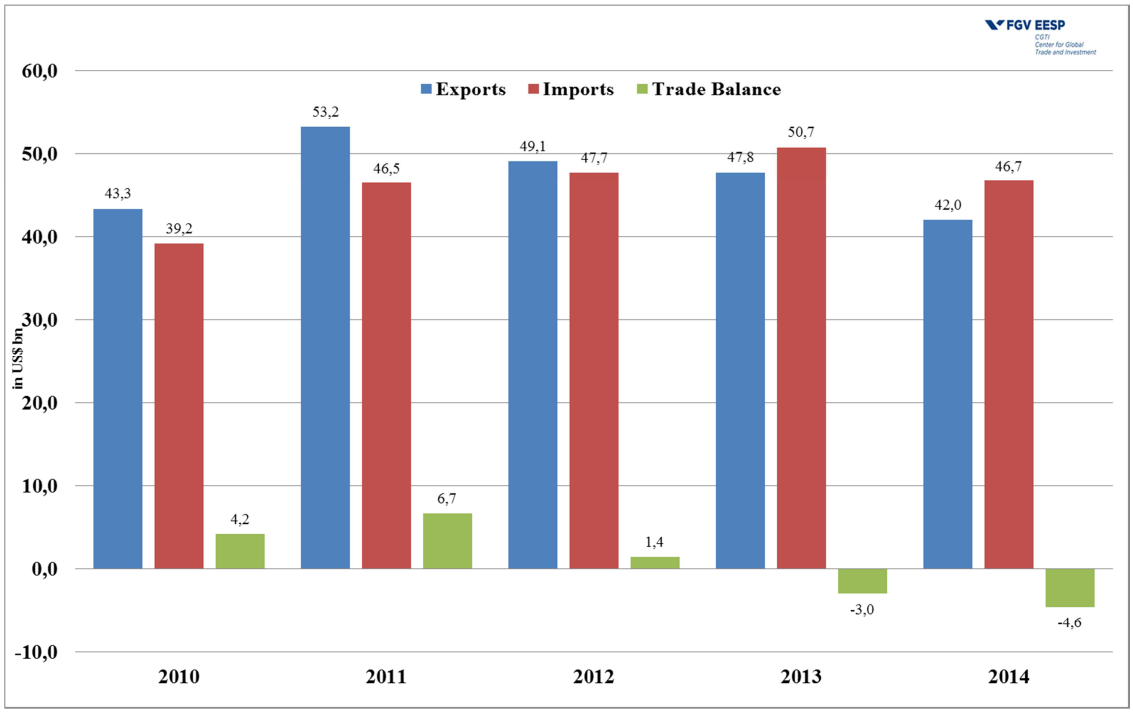
In this sense, Brazil is losing a great development opportunity as can be seen comparing Brazil with the Asian and East-European countries.

II. TRADE PROFILE

In order to understand the new paths that Brazil and the European Union could follow, it is first necessary to analyze the current trade flows involving the two partners. In this regard, the EU is historically one of the top five trade partners of Brazil[2].

In the past five years, the EU remained an important market for Brazil. Figure 5 below shows that our exports to the EU in 2010 were US$ 43.3 bn and US$ 42,0 bn in 2014. However, the rise of imports from US$ 39.2 bn in 2010 to US$ 46,7 bn in 2014 has reversed the trade balance in favor of Europeans. In 2010, Brazil had a positive trade balance of US$ 4.2 bn and, in 2014, a deficit of US$ 4.6 bn with the EU.

Figure 5 – Trade Flow: Brazil and the EU (2010-2014) in US$ Billion



Source: MDIC/SECEX. Elaborated by CGTI.

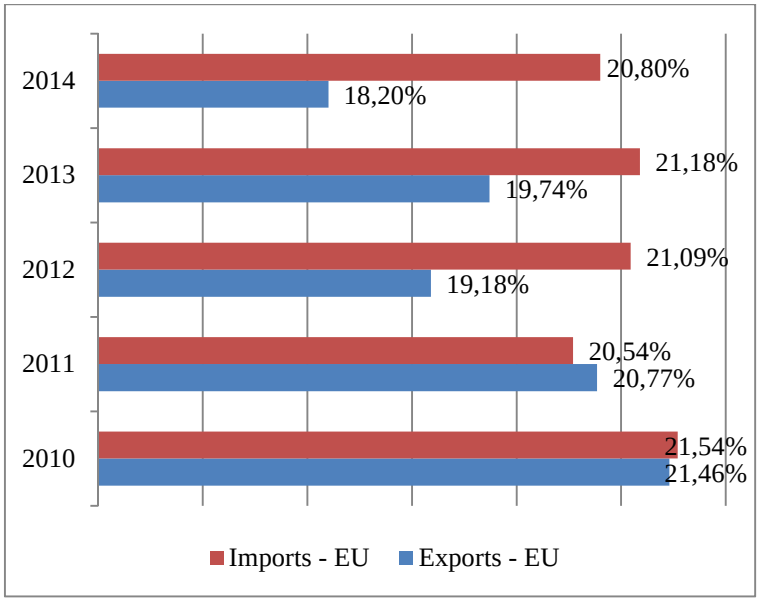
[2] Other examples are Argentina and Untied States.

Figure 6 – Trade Flow: Brazil and the EU in 2015 (January -September) in US$ Billion

Source: MDIC/SECEX. Elaborated by CGTI.

The EU participation in Brazilian exports and imports is extremely relevant. Nevertheless, it can be observed a small decline in the EU participation in the Brazilian exports. In the last five years, the EU reduced its participation from 21.46% to 18.24%. For imports, the pressure has been higher. The EU was responsible for 20,80% of all Brazilian imports in 2014, broadening the gap between its exports and imports participation (Figure 7).

Figure 7 – Participation of the EU in Brazilian exports and imports (2010-2014)



Source: MDIC/SECEX. Elaborated by CGTI.

In general terms, these numbers are of concern for Brazil. The next subsections will show how these deficits in the trade balance are construed and what Brazilian exports and imports profiles are by aggregate factors (commodities, semi-manufactured, and

manufactured). It will be possible to identify some points for the trade policy of Brazil and point to some aspects to be considered.

II.1. Trade flow: aggregate factor

The analysis of general trade flows between Brazil and the EU is only part of the big picture. To provide a more accurate characterization of the trade relationship between these actors it is necessary to examine exports and imports by aggregate factor.

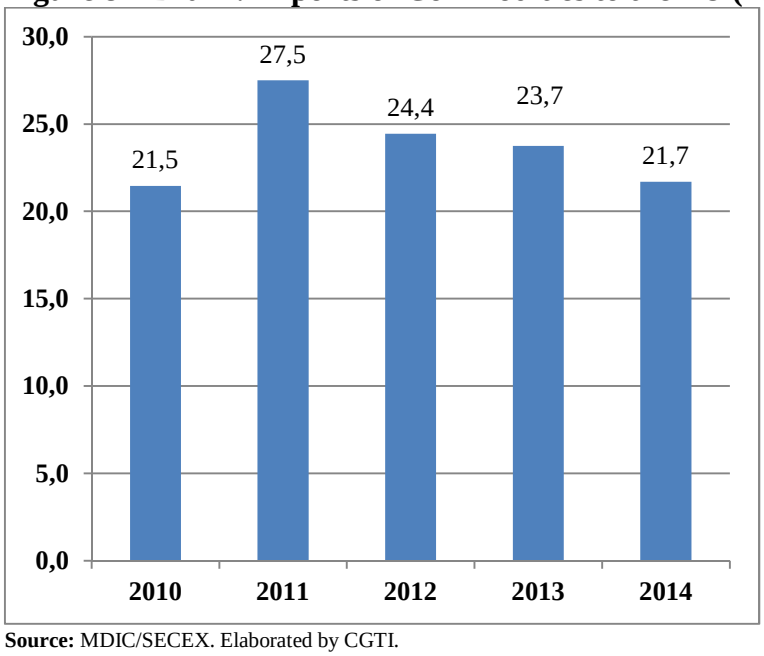
Brazil Ministry of Development, Industries and Foreign Trade (MDIC) established four categories, which are explored here: commodities (primary products such as coffee in grain, soybeans in grain, meat *in natura*, etc); semi-manufactured (products that are not in their final form of use to the consumer or even as an intermediary product –, i.e. they demand another transformation process such as raw sugar; crude soybean oil; cellulose, etc.); manufactured (products in their final form of use such as refined sugar; refined soybean oil; paper, etc.).

Main products exported and imported to and from the EU can be found in Annex I at the end of this paper. The results are presented in the next subsections.

II.1.1. Commodities

Brazil is one of the largest economies in the World and well-known for its agriculture and exports of commodities. Recently, commodities prices in international markets have decreased. This movement might be one of the causes for the reduction of exports to the EU.

Figure 8 – Brazil: Exports of Commodities to the EU (2010-2014) in US$ Billion



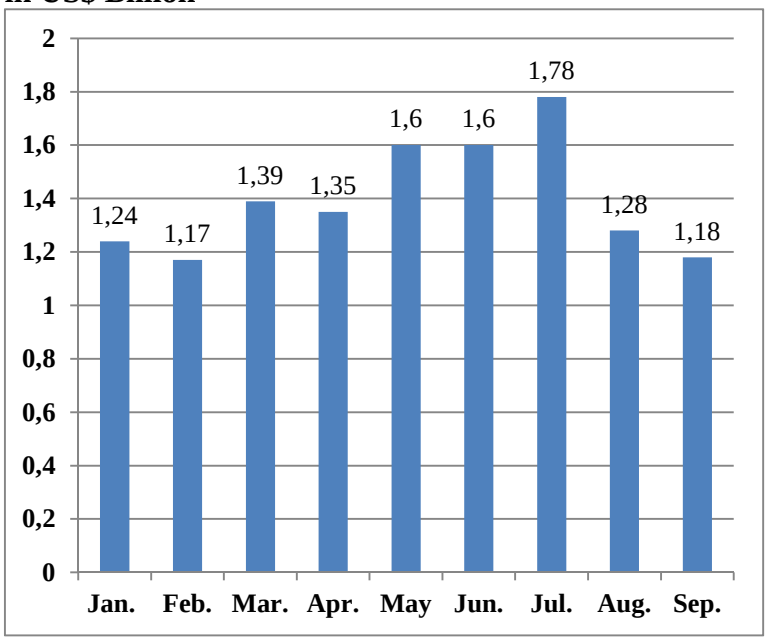
Source: MDIC/SECEX. Elaborated by CGTI.

Exports of commodities to the EU in 2014 amounted to US$ 21,7 bn. This result demonstrates a decrease of US$ 2 bn as compared to the previous year.

Another conclusion can be drawn from Figure 8: since 2011 commodities exports in value have decreased to the market analyzed returning to the level of 2010. From 2011 to 2014 the decrease was about US$ 5.8 bn for the EU.

From January to September 2015, the exports of commodities from Brazil to the EU amounted to US$ 12.64 bn. This results shows a decrease of 24,7% in Brazilian commodities exports to the EU in comparison with the same period of time in 2014.

Figure 9 - Brazil: Exports of Commodities to the EU in 2015 (Jan. – Sep.) in US$ Billion

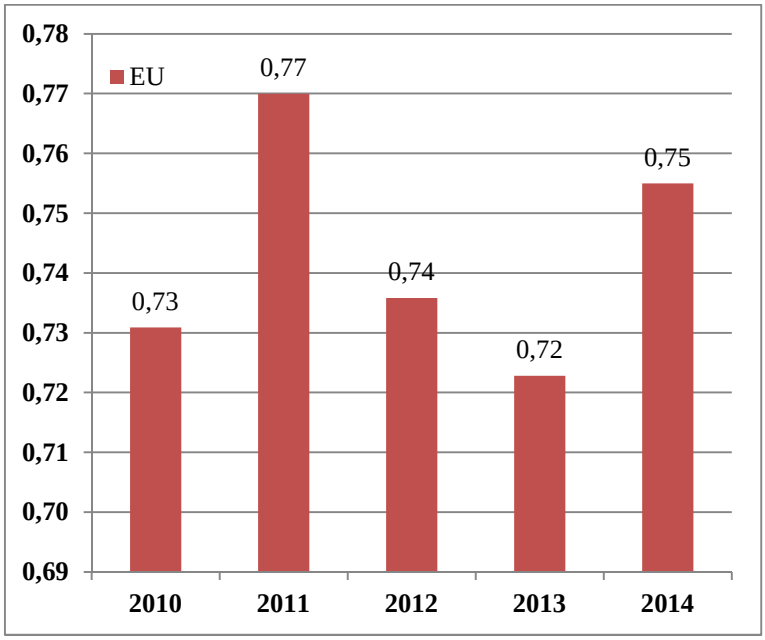


Source: MDIC/SECEX. Elaborated by CGTI.

A more modest amount of commodities exports reflects directly in Brazil trade balance performance with the European Union (see subsection III.2 below).

The main Brazilian commodities exported to the EU are: iron ore, soybeans, coffee and crude petroleum oils.

Figure 10 – Brazil: Imports of Commodities from the EU (2010-2014) in US$ Billion

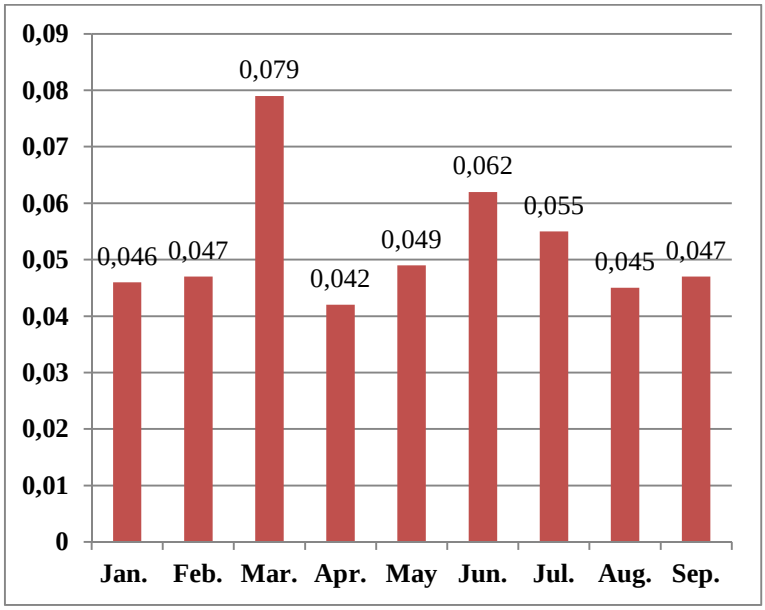


Source: MDIC/SECEX. Elaborated by CGTI.

For imports, there is little or none variation from the EU. It remains as US$ 0.7 bn since 2010. In the last five years, 2011 and 2014 were the periods were there were the higher pics of commodities importation from the EU, amounting, respectively to US$ 0.77 bn and US$ 0.75 bn. (Figure 10).

From January to September 2015, the imports of commodities from the EU to Brazil amounted to US$ 0.47 bn. This result represents a decline of 11.91% in the commodities imports from the EU to Brazil in comparison with the same period in 2014.

Figure 11 - Brazil: Imports of Commodities from the EU in 2015 (Jan. – Sep.) in US$ Billion



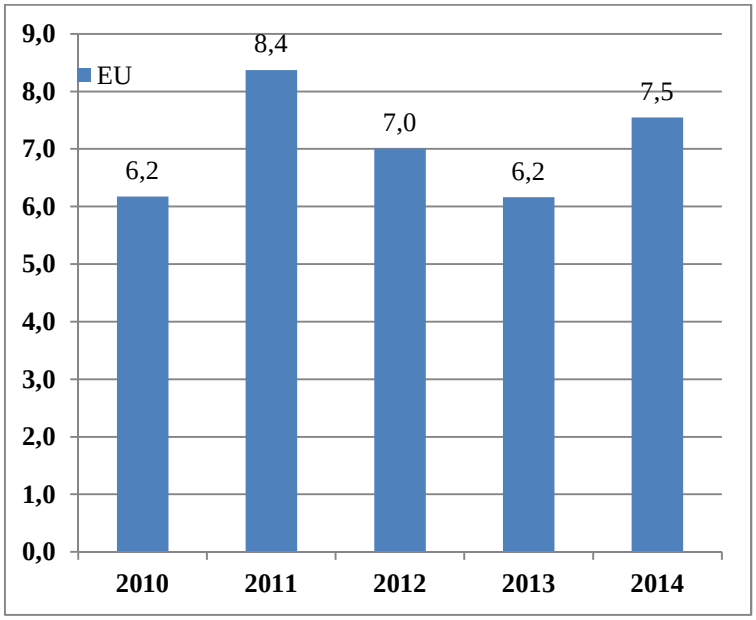
Source: MDIC/SECEX. Elaborated by CGTI.

II.1.2. Semi-Manufactured

Exports to the EU in 2014 were of US$ 7.5 bn, representing an increase of US$ 1.3 bn when compared to the previous year. However, from 2011 to 2013 semi-manufactured exports have lessened from US$ 8.4 bn to US$ 6.2 bn. Hence, there was a small recovery of the Brazilian semi-manufactured exports to the EU in 2014.

One preliminary conclusion is that the exports of semi-manufactured products to the EU have grown when compared to levels of 2010. Even though there have been no increase of exports in 2013, there is a modest development of the semi-manufactured products to EU.

Figure 12 – Brazil: Exports of Semi-Manufactured Goods to the EU (2010-2014) in US$ Billion

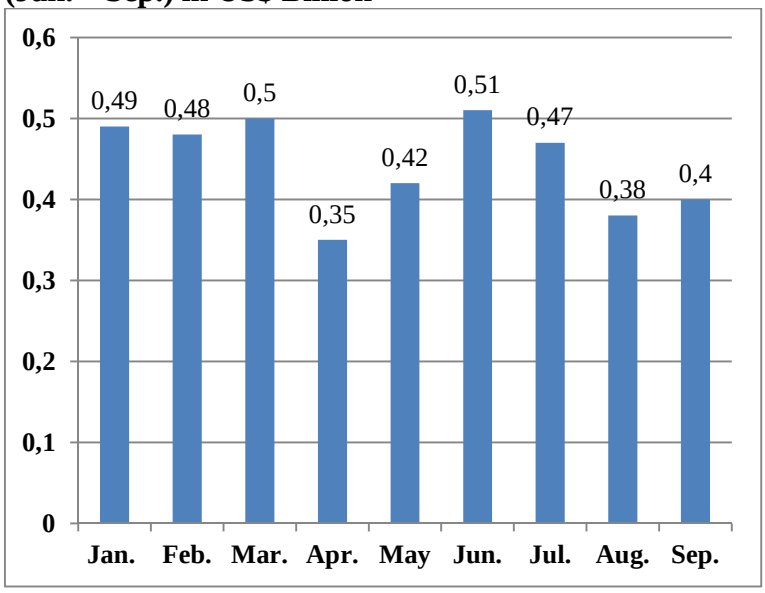


Source: MDIC/SECEX. Elaborated by CGTI.

From January to September 2015, the exports of semi-manufactured goods from Brazil to the EU added up to US$ 4 bn. This outcome demonstrates a contraction of 8.92% of the Brazilian exports of semi-manufactured goods to the EU in comparison with the same period of 2014.

The main Brazilian semi-manufactured goods exported to the EU are: wood pulp, niobium and ferronickel.

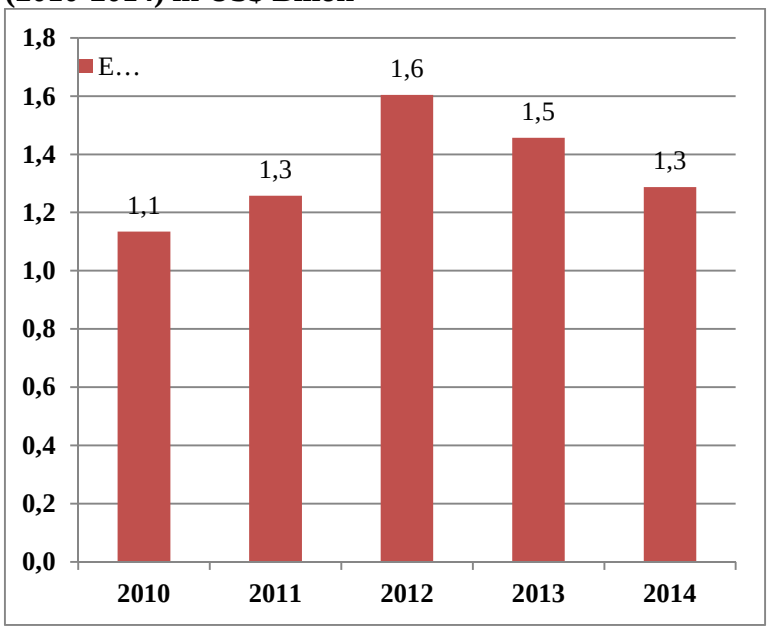
Figure 13 - Brazil: Exports of Semi-Manufactured Goods to the EU in 2015 (Jan. – Sep.) in US$ Billion



Source: MDIC/SECEX. Elaborated by CGTI.

Imports are relatively lower when compared to exports of semi-manufactured goods as Figure 14 shows:

Figure 14 – Brazil: Imports of Semi-Manufactured Goods from the EU (2010-2014) in US$ Billon

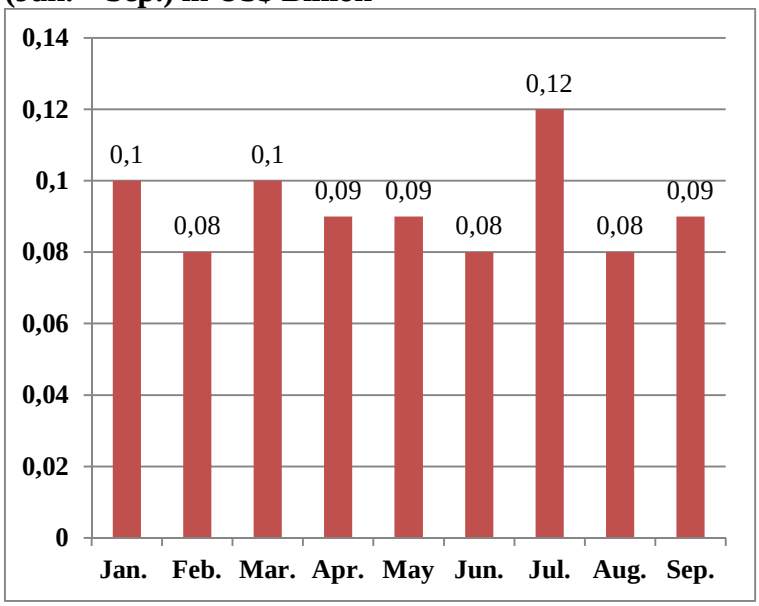


Source: MDIC/SECEX. Elaborated by CGTI.

The same way as it is for commodities imports from the EU, imports of semi-manufactured goods from the EU are approximately the same since 2010, around US$ 1.4 bn.

From January to September 2015, the imports of semi-manufactured goods from the EU to Brazil totaled US$ 0.89 bn. This sum is 6.09% lower than the same amount of semi-manufactured goods imported from the EU in the 2014.

Figure 15 - Brazil: Imports of Semi-manufactured Goods from the EU in 2015 (Jan. – Sep.) in US$ Billion



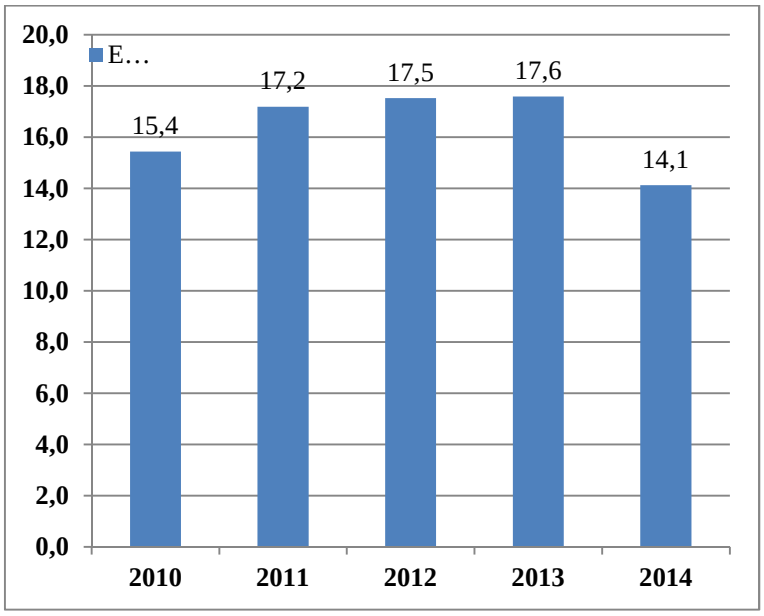
Source: MDIC/SECEX. Elaborated by CGTI.

In the semi-manufactured goods, Brazil has an expressive positive trade balance of US$ 6.2 bn with the EU.

II.1.3. Manufactured

In the manufactured sector, exports to the EU have increased from US$ 15.4 bn in 2010 to US$ 17.6 bn in 2013 (see Figure 16). However, in 2014 there was a decline on the Brazilian manufactured exports to the EU of US$ 3.5 bn. In that year, manufactured exports to EU accounted for US$ 14.1 bn. This last result contrasts with constant growth experienced by the manufactured Brazilian exports to the EU.

Figure 16 – Brazil: Exports of Manufactured Goods to the EU (2010-2014) in US$ Billion

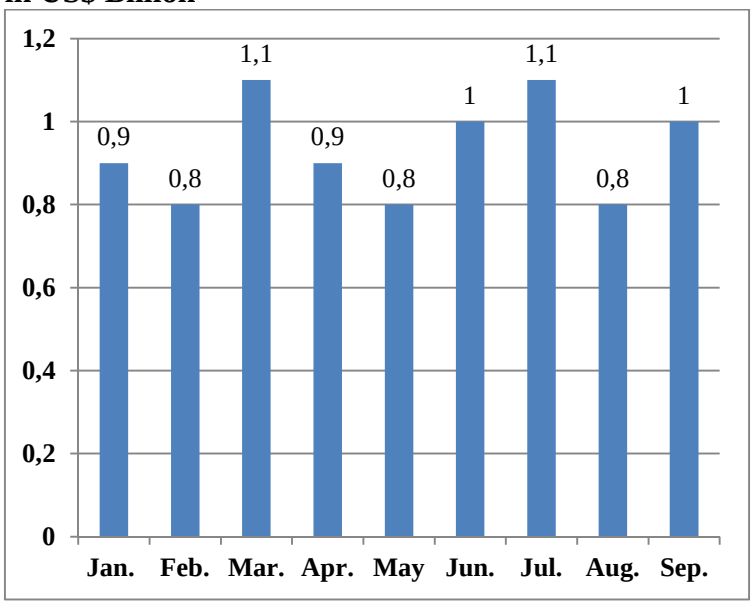


Source: MDIC/SECEX. Elaborated by CGTI.

From January to September 2015, the exports of manufactured goods from Brazil to the EU amounted to US$ 8.75 bn. This result indicates a decline of 19.65% in the Brazilian exports of manufactured goods to the EU in comparison with 2014.

The main Brazilian manufactured goods exported to the EU are: fuel oil, mechanical machines and orange juice.

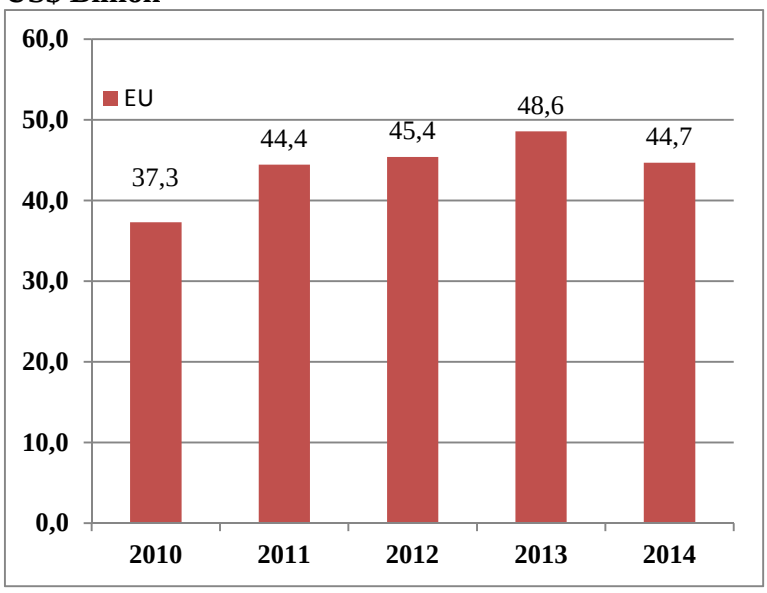
Figure 17 - Brazil: Exports of Manufactured Goods to the EU in 2015 (Jan. – Sep.) in US$ Billion



Source: MDIC/SECEX. Elaborated by CGTI.

In spite of this, imports of manufactured goods are much higher and they are responsible for the great deficits Brazil has experienced in the last five years with the EU.

Figure 18 – Brazil: Imports of Manufactured Goods from the EU (2010-2014) in US$ Billion



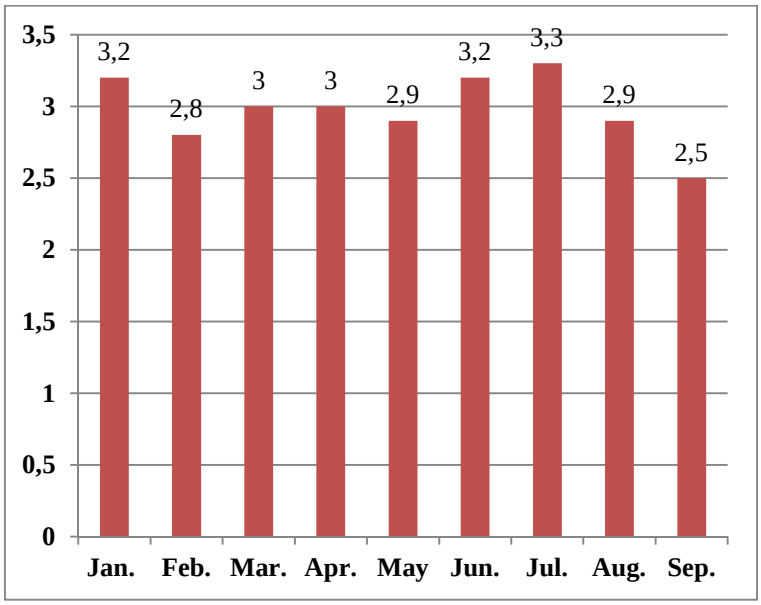
Source: MDIC/SECEX. Elaborated by CGTI.

For the EU, in 2010 imports were of US$ 37.3 bn and US$ 44.7 bn in 2014. This means a growth of 19.8% in five years. It is also worth noting that imports of manufactured goods from the EU achieved a peak of US$ 48.6 bn in 2013, representing a growth of 29.8% in comparison with 2010.

From January to September 2015, the imports of manufactured goods from the EU to Brazil added up to US$ 27.1 bn. This result suggests a decline of 21.42% of the Brazilian imports of manufactured goods from the EU in comparison with 2014.

The main manufactured goods imported from the EU to Brazil are: mechanical and electrical machinery, cars and pharmaceutical products.

Figure 19 - Brazil: Imports of Manufactured Goods from the EU in 2015 (Jan. – Sep.) in US$ Billion

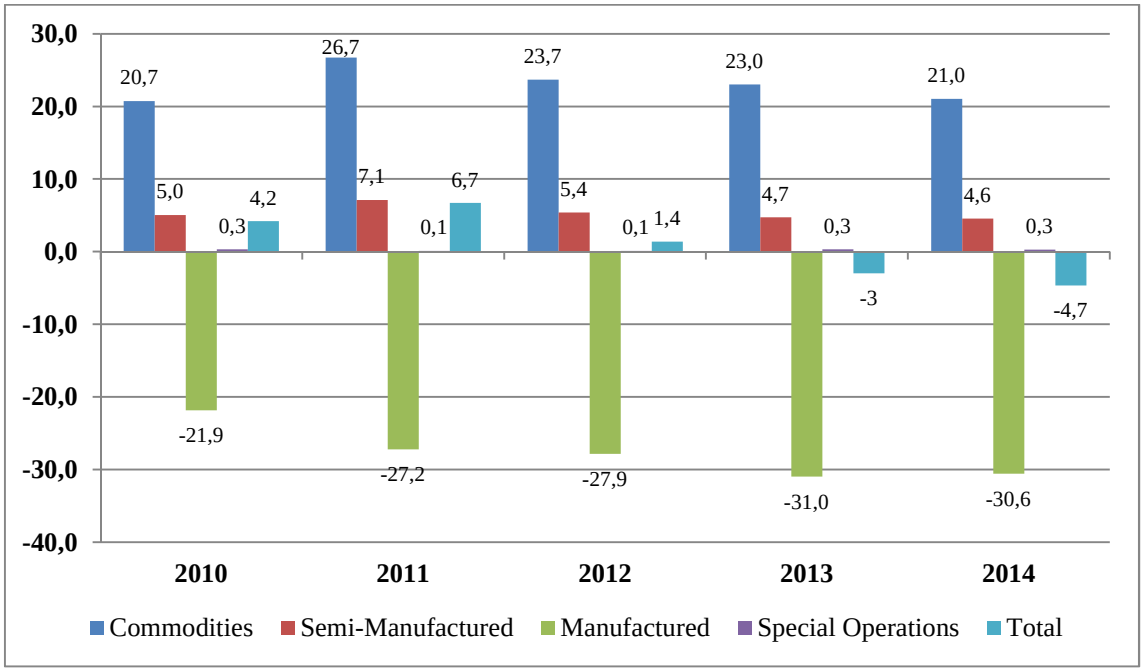


Source: MDIC/SECEX. Elaborated by CGTI.

II.2. Trade Balance

In terms of trade balance, commodities have been responsible for positive results while manufactured goods have reached an important and progressive deficit.

Figure 20 – Trade Balance of Brazil with the EU, by aggregate factor (2010-2014) in US$ Billion



Source: MDIC/SECEX. Elaborated by CGTI.

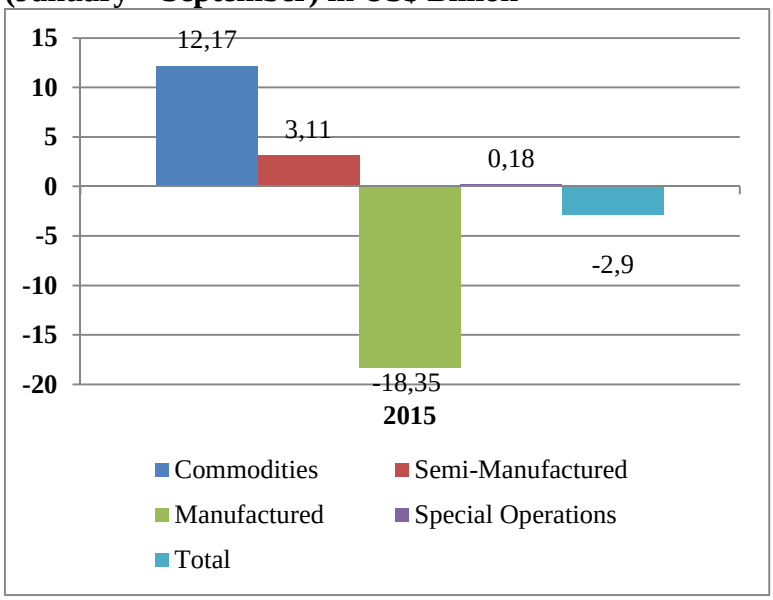
In 2013, for the first time in the last four years, Brazilian trade balance result was negative in US$ 3.0 bn. This trend repeated in 2014, when the Brazilian trade balance result was again negative in US$ 4.7 bn. These results were due to the increasing deficit

in manufactured goods trade between Brazil and the EU. In brief, manufactured goods deficit rose from US$ 21.9 bn in 2010 to US$ 30.6 bn in 2014.

Trade in commodities and semi-manufactured were not enough to produce a positive result for Brazilian trade balance in goods. Commodities exports to the EU attained US$ 26.7 bn in 2011 but since then it has decline to US$ 21.0 bn in 2014. The same thing happened in semi-manufactured goods sector. In 2011, it had a surplus of US$ 7.1 bn while in 2014 it has decreased to US$ 4.6 bn (see Figure 20).

By analyzing the evolution of the trade balance of Brazil with the EU from January to September 2015, it can be observed that tendency of a negative result from Brazil has been confirmed. In September, the trade balance amounted to a deficit of US$ 2,9 bn for Brazil. The patters of the distribution by aggregate factor have not changed when compared to the previous years.

Figure 21 – Trade Balance of Brazil with the EU, by aggregate factor in 2015 (January – September) in US$ Billion



Source: MDIC/SECEX. Elaborated by CGTI.

The sector of manufactured goods is mainly responsible for negative results Brazilian trade balance has experienced in recent years. This sector is undoubtedly the most sensitive sector for Brazil in its exchanges of goods with the EU. Even the bilateral trade in commodities is not doing very well compared to the previous years. It can be partially explained by the decline of the commodities' prices internationally. This is something to be taken as a serious concern by Brazilian authorities.

III. TARIFF PROFILES

III.1. Brazil

Import Tariffs

According to the WTO Word Tariff Profiles of 2014[3], Brazil has bound 100% of its tariff lines, and all its concessions are already implemented. Moreover, Brazil has all its tariff lines charged *ad valorem*.

Table 1: Brazil Tariff Profile (2014) (%)

	Bound	Applied
Simple Average	31,4	13,5
Maximum duty	55,0	55,0
Non-*ad valorem*	0	0
Duty-free	1,0	5,9

Source: WTO; ITC; UNCTAD. **Word Tariff Profiles**, 2014

Regarding all the 10.032 tariff lines, the average bound tariff rate is 31.4%, while its average applied tariff rate is 13.5%, representing 17.9 percentage points below the bound level. The maximum bound tariff for agricultural goods is 55%, and the maximum import tariff for non-agricultural goods is 35%.

Brazil's trade regime in agriculture, where it is highly competitive as a producer and an exporter for World markets, is more open than that of its partners. Nonetheless, the difference between the bound and applied tariffs can be used as negotiating elements if protection is needed for the agricultural sector. Although the maximum bound tariff for agricultural products is the highest possible for Brazil, 55%, the average applied tariff for the same sector is 10.2%, below the average applied for all products.

When analyzing the agricultural subsectors, it is possible to understand the tariff profile used by Brazil. Of the 10 subsectors that form the agriculture sector, half of them present average applied tariffs below the average for the sector. The cotton sector deserves consideration. Although its final bound duties are of 55%, the highest tariff for the agricultural sector, it has the lowest average applied tariff, of only 6.9%. On the other hand, the subsectors related to dairy products, beverages and tobacco, and sugars presented the highest average applied tariffs between the agricultural products, of 18.3%, 17%, and 16.5% respectively. Although higher than the rest, the average applied tariffs of these sectors do not show major deviations from the average rate applied for the agricultural sector. This indicates that Brazil do not applies tariffs with relevant peaks for agricultural products.

The Brazilian non-agricultural market is more restrictive than the agricultural one. The average applied tariff for non-agricultural products is 14.1%, but still significantly below the average bound tariff of 30.8%. The maximum bound tariff verified for all non-agricultural products is 35%, lower than the one verified for agricultural products. As regards the applied tariffs, some subsectors reach the maximum percentage allowed.

[3] WTO; ITC; UNCTAD. **Word Tariff Profiles**, 2014, p. 48.

This can be seen in the clothing sector, whose applied tariff is the same as the bound one, 35%. To a certain extent, other subsectors also count with tariff protection, as shown by the average applied tariffs of the following sectors: textile (23.3%), transport equipment (18.6%), and leather and footwear (16%).

Six of the twelve non-agricultural subsectors present average applied tariffs below the average applied for the sector, as can be seen in Table 2 below. The petroleum sector has the lowest average applied tariff, 0.1%. This is explained by the fact that most of the HS six-digit subheadings in this sector is duty free (99.5%).

It is important to have in mind that although these subsectors' average tariffs present some difference when compared to the average bound tariffs, some tariff lines within these sectors already reached the maximum tariffs possible, as can be seen in clothing subsector in the non-agricultural product group.

Table 1: Import tariffs by product groups (2014) (%)

Product Groups	Bound tariffs			Applied tariffs	
	Average	Max	Binding (%)	Average	Max
Agricultural Products					
Animal products	37.8	55	100	8.2	16
Dairy products	48.8	55	100	18.3	28
Fruit, vegetables, plants	34.1	55	100	10.2	55
Coffee, tea	34.1	35	100	13.3	20
Cereals & preparations	42.9	55	100	10.6	20
Oilseeds, fats & oils	34.6	35	100	7.9	30
Sugars and confectionery	34.4	35	100	16.5	20
Beverages & tobacco	37.7	55	100	17.0	27
Cotton	55.0	55	100	6.9	10
Other agricultural products	28.8	55	100	7.8	20
Non-agricultural products					
Fish & fish products	33.6	35	100	10.3	32
Minerals & metals	32.9	35	100	10.0	35
Petroleum	35.0	35	100	0.1	6
Chemicals	21.1	35	100	8.2	18
Wood, paper, etc.	28.4	35	100	10.6	18
Textiles	34.8	35	100	23.3	35

Clothing	35.0	35	100	35.0	35
Leather, footwear, etc.	34.6	35	100	16.0	35
Non-electrical machinery	32.4	35	100	12.9	35
Electrical machinery	31.9	35	100	14.1	25
Transport equipment	33.1	35	100	18.6	35
Manufactures, n.e.s.	33.0	35	100	15.2	35

Source: WTO; ITC; UNCTAD. **Word Tariff Profiles**, 2014

Export tariffs

Brazilian Government imposes export tariffs on mainly three products: (i) cigarettes containing tobacco; (ii) wet blue leather; and (iii) arms and ammunition. The exportation of cigarettes containing tobacco is subjected to the payment of an export tariff of 150% when destined for Latin and Central America. This measure was adopted in 1998 (Decree n^{o}. 2.876/1998) with the aim of avoiding tax evasion through triangulation in neighboring countries. Regarding the exportation of skins and leather products, the imposition of an export tariff of 9% on wet blue leather has the aim of stimulate the export of products with higher added value (Camex Resolution n^{o}. 42/2006). Finally, arms and munition to Latin America are also subject to an export tariff of 150% due to security issues (Camex Resolutions n^{o}. 17/2001 and 88/2010).

Preferential tariffs

As a member of Mercosul and due to the Common Market Council Decision n^{o} 32/2000, Brazil only has bilateral preference trade agreements or preference programs towards developing or least developed countries within Mercosul and Latin American Integration Association (LAIA).

With Mercosur, Brazil's main vector of regional integration, the country has signed free trade agreements with Israel, Egypt, and Palestine, and preferential trade agreements with India and Southern African Customs Union (SACU).

It should be emphasized that these agreements are far from ambitious, often covering only a small number of tariff lines subject to margins of preference, as occurs in the PTA with India, and restricted to trade in goods. The PTA with Israel and Egypt predicts the liberalization of trade in services to be implemented in the future, but there is no set deadline.

Within LAIA, Brazil has signed a Regional Preferential Trade Agreement (APTR-04) and Economic Complementation Agreements (ECA) with many Latin American nations, as Chile, Bolivia, Mexico, Peru, Colombia, Ecuador, Venezuela (which recently accessed Mercosur), Cuba, Guyana and Suriname. However, these agreements, although representing relevant tariff preferences for Brazilian exports, are not innovative in the regulation on bilateral trade. There are only rules that reproduce the provisions of WTO without addressing issues and themes that challenge the current international trade.

Among them, only the agreement with Chile provides for the liberalization of the services sector, while the agreements with Bolivia, Colombia, Ecuador and Venezuela only predict the future trading of the subject. In a scenario of global value chains, which increasingly trades services instead of products, the service industry is of great importance. Lack of liberalization in this area reduces the effects that a PTA can bring to Brazil commercial insertion.

In general, Brazil agreements have rules on trade defense measures, technical barriers and sanitary and phytosanitary barriers resuming the provisions of the WTO agreements, while regulation of matters such as intellectual property, investments and so-called new issues, namely, competition, environment, social and government procurement clauses, is almost nonexistent.

The preference margins agreed by Brazil within APTR-04 are presented in the following table. All signatory countries have presented a List of Exceptions with the products that are excluded from the preferences granted.[4]

Table 2: Preferential tariffs within APTR-04

	Bolivia, Paraguay	**Ecuador**	**Colombia, Chile, Cuba, Uruguay , Venezuela**	**Peru**	**Argentina, Mexico, Brazil**
Brazil	48%	40%	28%	14%	20%

Source: MDIC.

The ECAs have the aim of enhancing 'economic development of the Aladi members through complementarity of production systems in the region. Among the ECAs, the highest tariffs are applied to Mexico (ECA 53 and 55), Cuba (ECA 62), and Peru (ECA 59), and the lowest ones are applied to Mercosur countries (ECA 18).

III.2. EU

Import Tariffs

The EU binds 100% of its tariff lines in the WTO and all its concessions are implemented. Most of its tariff lines are charged *ad valorem*, still 4.8% of its bound tariffs and 5.0% of its applied tariffs are subject to *non-ad valorem* duties.

Countries that are not qualified for a special duty rate have normal trade relations status with the EU and the general duty rates apply. It should be noted that 26.9% of the EU total applied tariff lines are duty free for all countries, regardless of tariff preferences programs or agreements.

[4] MDIC. **ALADI**. Available at: <http://www.mdic.gov.br/sitio/interna/interna.php?area=5&menu=412>. Accessed in: 24, August 2015.

Table 4: EU Tariff Profile (2014) (%)

	Bound	Applied
Simple Average	5.2	5.5
Maximum duty	605	605
Non-*ad valorem*	4.8	5.0
Duty-free	28.9	26.9

The European average bound tariff for all imported products is 5.2%, and the average applied one is 5.5%, covering a universe of 10.453 MFN applied tariff lines.

For agricultural products, the average bound tariff is 13.5%, and the average applied one is 13.2%. The sector also concentrates the greater part of the non-ad valorem duties, approximately 32%. In 50% of the product groups the average applied tariffs are higher than the one observed for all agricultural products, as can be seen in the following sectors: dairy products (52.8%); sugars and confectionery (29.7 %); animal products (20.0%); beverages and tobacco (20.8%); and cereals and preparations (17.1%).

It is also the agriculture sector that has the most significant tariff peaks. Six of its product sectors present tariff lines which have tariffs higher than 100%, and in the subsector related to dairy products it may take up to 605%.

The non-agricultural sector has lower tariffs than the agricultural one. The average bound tariff is 3.9%, and the average applied one is 4.2%. The maximum MFN applied duties are considerably lower than the ones perceived when analyzing the agricultural sector.

Table 5: Import tariffs by product groups (2014) (%)

Product Groups	Bound tariffs			Applied tariffs	
	Average	Max	Binding (%)	Average	Max
Agricultural Products					
Animal products	23.2	133	100	20.0	133
Dairy products	53.9	597	100	52.8	511
Fruit, vegetables, plants	10.2	154	100	10.7	154
Coffee, tea	6.2	21	100	6.2	21
Cereals & preparations	21.9	60	100	17.1	60
Oilseeds, fats & oils	5.6	86	100	6.1	86
Sugars and confectionery	30.6	131	100	29.7	117
Beverages & tobacco	21.2	165	100	20.8	162
Cotton	0.0	0	100	0.0	0
Other agricultural products	4.1	101	100	4.4	98

Non-agricultural products					
Fish & fish products	10.9	26	100	11.8	26
Minerals & metals	2.0	12	100	2.0	12
Petroleum	2.0	5	100	2.8	5
Chemicals	4.6	17	100	4.6	17
Wood, paper, etc.	0.9	10	100	1.0	12
Textiles	6.5	12	100	6.6	12
Clothing	11.5	12	100	11.5	12
Leather, footwear, etc.	4.2	17	100	4.2	17
Non-electrical machinery	1.7	10	100	1.9	10
Electrical machinery	2.4	14	100	2.8	14
Transport equipment	4.1	22	100	4.3	22
Manufactures, n.e.s.	2.5	14	100	2.6	14

Export tariffs

The EU does not apply export taxes to its products. On the contrary, as an economy highly dependent on imported raw material supplies, the EU is therefore trying to discipline developing country use of export taxes and restrictions at the World Trade Organization (WTO) and in its FTAs.

Preferential tariffs

Currently the EU has the greatest number of FTAs in force. EU PTAs are usually open with respect to industrial goods and defensive on agricultural goods. Moreover, the EU provides enhanced market access for a large number of developing countries unilaterally, mostly within the framework of its Generalized System of Preferences (GSP).

The European GSP currently running has a three-tier structure: (i) a standard scheme, open to the broadest group of developing countries; (ii) a 'GSP+', which provides lower tariffs to 'vulnerable' countries that implement 27 specific labor and human rights agreements; and (iii) 'Everything But Arms' (EBA), a mechanism available to LDCs only, which gives duty and quota-free access for almost all goods exported to the EU (except for armaments).[5]

The exam of the tariff profile of the EU demonstrates that applied tariffs presented by the economic bloc are already low, except for some agricultural goods protected by

[5] TOWNSEND, Ian. **EU trade preferences for developing countries**: the GSP & 'Everything But Arms. SN/EP/3369, December 2008.

quotas. The tariff profile of Brazil is high in terms of its bound tariff but relatively low for its applied ones. Except for some sensitive products, the reduction of tariffs can be accommodated in an extended period in a preferential negotiation.

IV. REGULATORY BARRIERS

During the GATT era, several Codes were developed and adopted. One code was dedicated to Technical Barriers to Trade, and came to be the TBT Agreements at the creation of the WTO. During the Uruguay Round, the issue of agricultural was negotiated together with a specific agreement on sanitary and phytosanitary measures, the SPS Agreement.

IV.1. Technical Barriers to Trade

According to WTO's definition, technical barriers are those derived from the use of technical standards or regulations which are neither transparent nor grounded in internationally accepted standards, or even from the adoption of conformity assessment procedures that are either not sufficiently transparent and/or too expensive, as well as from excessively stringent inspections.

The Agreement on Technical Barriers to Trade (TBT) was adopted at the WTO with the aim of regulating the subject, assisting members in identifying the best course for implementing standards and technical regulations, and avoiding the adoption of procedures that would unnecessarily restrict international trade. TBT rules apply to both the product and its related processes and production methods (PPMs), seeking to avoid the imposition of unnecessary or discriminatory technical barriers based on the manner in which a good is produced.

TBT also applies to the imposition of labels that aim to provide consumers with information about products sold, which may influence their preferences and thus modify the conditions of competition within the market.

In general, the adoption of technical barriers related to trade and the proliferation of measures taken under the exceptional circumstances provided in the TBT and in accordance with the exceptions set out in Article XX of the GATT 94 represents a source of uncertainty for the international community. These rules may affect the trade flow of goods, primarily through measures to ensure environmental safety and to protect human health. In addition, technical requirements, whether voluntary or mandatory, can be used as a disguised means of protecting domestic markets, which proves to be an important factor for limiting the free movement of goods and services.

In order to avoid the multiplication of technical rules that rely on different scientific bases and hinder trade flows, TBT encourages the use of international standards as a basis for technical regulations and standards applied by members, as stated in the Code of Good Practice (henceforth the Code). However, if these standards do not achieve the appropriate level of protection that a WTO member determines to be necessary in order to achieve its objectives, such as protection of human health or national security, such member is allowed to establish a rule or technical regulation that goes beyond internationally established standards.

The gray area between possible harm and lack of international legislation that offers an appropriate level of protection brings forth the use of the precautionary principle. Accordingly, discussions are held on the impact that can be caused by the implementation of technical standards and regulations that exceed those set internationally, since adaptation to imposed rules can be highly costly and can influence changes in regulations for the admission in other countries as well.

The rise of TBT measures

The erosion of classic barriers to trade means that the WTO has been successful in its main goal: reducing the barriers of international trade. Now that the classical obstacles to trade are vanishing, the WTO is trying to adapt itself into a World where economies are integrating one another at full speed. According to Subramanian and Kessler's concept of hyperglobalization[6], the new economic dynamics are visible through Global Value Chains where imports of parts and spears and the export of items that absorbed those parts are a sign of a healthy economy. In this World, tariffs should be eliminated and the new tools used to protect one's own market are the so-called non-tariff barriers (NTBs). The international trade law is moving toward protecting the consumer, not the producer, and measures are evermore based on precaution. Mr. Pascal Lamy, in recent event in Brazil, said: *"We're moving from protection to precaution. This movement cannot be countered or halted"*[7].

The immediate consequences of this proliferation of TBTs by developed countries such as US and EU are that the actual tools for developing countries to work with at the WTO – the maneuver gap between bounded and consolidated tariffs – are rendered ineffective. Raising the applied tariff level of a product until it reaches de bounded tariffs will not grant developing countries' exporters all the required certifications to export their labor intensive, lower added value goods to developed countries. Nonetheless, the same specific requirements that creates demand and generates feedback from the consumers, when applied to capital intensive goods, to higher added value goods, differentiates their product from competition. Once the consumer market establishes higher grounds, it will not settle for less.

Along with the continuous tariff reductions round after round of negotiation, some authors confirm that TBTs are stepping up into the protectionism void created by the effectiveness of WTO. Bhagwati affirmed that countries obey the "Constant Protectionism Law"[8], not intending to leave its markets unprotected. Bagwell[9] points the incidence of the race-to-the-bottom effect, surely negative as it clashes with the precautionary principle, in case countries try to stimulate exports of certain national sector by cutting off TBTs costs through more lenient tariff regulations. Meaning that, instead of competitiveness, the country will be creating environment for less

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[6] SUBRAMANIAN, Arvind; KESSLER, Martin. **The Hyperglobalization of Trade and its Future**. Peterson Institute for International Economics Working Paper No. 13-6. July 24, 2013. Available at:< http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2297994>.

[7] LAMY, P. In: International Conference on the Future of WTO with Mr. Pascal Lamy, 2014, São Paulo School of Economics at Getulio Vargas Foundation. Minutes available at http://ccgi.fgv.br/ptbr/international-conference-future-wto-multipolar-world-mr-pascal-lamy

[8] BHAGWATI, J. "More on the Equivalence of Tariffs and Quotas". In: American Economic Review, 58(1), 1968, p. 142-146.

[9] BAGWELL, K.; MAVROIDIS, P.; STAIGER, R. "It's a Question of Market Access". In: American Journal of International Law, 96(1), 2002, p. 67

requirements along the value chain. Staiger noted that the country will enforce and restrict TBTs if the sector has a marginal cost relatively lower than the rest of the World to adapt to new standards, even if it has to do it indirectly, through stimuli to civil society and adoption of technical standards, voluntary or not[10]. The consequence is competitive advantage on the competition into a range of already more selective consumers.

The TBTs epidemic is also confirmed by Kee. The Non-Tariff Measures (NTMs) tarification data showed that the ad valorem tariff average of TBTs is higher on countries with higher GDP[11] per capita, shedding light on the fact that tariff measures can be replaced in equal effectiveness of protection by NTMs. He also noted that TBT and SPS measures can be used as "escape clauses", granting the members opacity and flexibility to protect their markets and increase bargain power[12]. The voluntary standards have a prestigious position in articulating opacity to policy making.

IV.1.1. The CTBT

The Committee on Technical Barriers to Trade (CTBT) functions under Article 13 of the TBT Agreement and is a valuable tool for members to discuss standards or measures taken by other members that may affect the international trade. Its structure and functioning is available at *Decisions and Recommendations Adopted by the WTO Committee on Technical Barriers to Trade Since 1 January 1995*[13].

The TBT Committee in general holds three meetings every year in which members can discuss, among other themes, aspects of the implementation of the Agreement, notifications received, and raises specific trade concerns (STC).The CTBT works in cooperation with governments and technical organisms, compiling, analyzing and overseeing technical barriers to trade. Raising a specific trade concerns (STCs) in the Committee, a member can formally question another member's measures relating to the Agreement on TBT, both in progress or already adopted. During the Committee's regular meetings or in informal discussions between members, the STCs afford members the opportunity to review trade concerns in a bilateral or multilateral setting and to seek further clarification. Through dialogue and exchange of information for STCs raised it is possible, many times, to solve the matter without resorting to the WTO dispute settlement system[14].

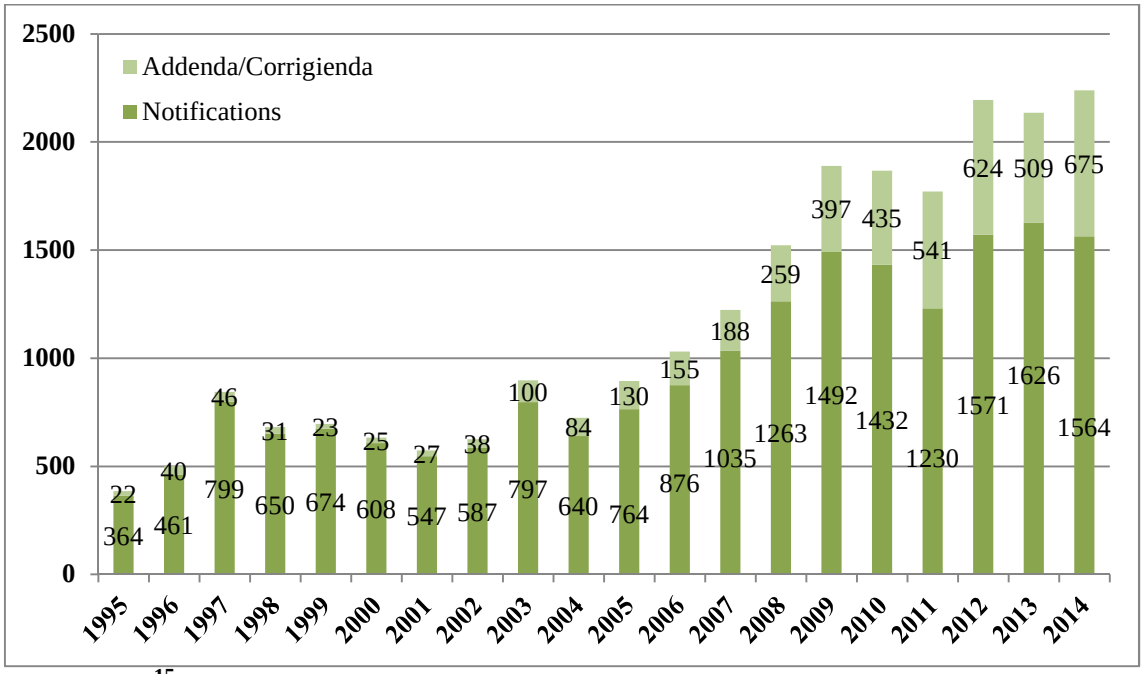
Analysis of CTBT Notifications and STCs

In accordance with the raise of TBT measures, there is an unmistaken growth pattern on notifications to the Committee. Since its entry into force in January 1995 up to December 2014, 126 members submitted 18,886 new notifications (including 148

[10] STAIGER, R. W. "Non-tariff measures and the WTO". Working Paper ERSD-2012-01, Geneva, WTO, 2012, p. 6.
[11] KEE, H.; NICITA, A.; OLARREAGA, M. "Estimating trade restrictiveness indices". In: Economic Journal 119(534), 2009, p. 191.
[12] WTO. World Trade Report 2012, p. 72
[13] WTO. Decisions and Recommendations Adopted By the WTO Committee on Technical Barriers to Trade Since 1 January 1995, Note by the Secretariat, Revision, 9 de junho de 2011, G/TBT/1/Rev.10
[14] HORN, H.; MAVROIDIS, P.C.; WIJKSTRÖM, E.N. **In the Shadow of the DSU**: Addressing Specific Trade Concerns in the WTO SPS and TBT Committees. IFN Working Paper No. 960, 2013, p. 24.

revisions) of technical regulations and conformity assessment procedures along with 4,379 addenda and corrigenda to notifications.

Figure 24 - Number of TBT Notifications from 1995 to 2014

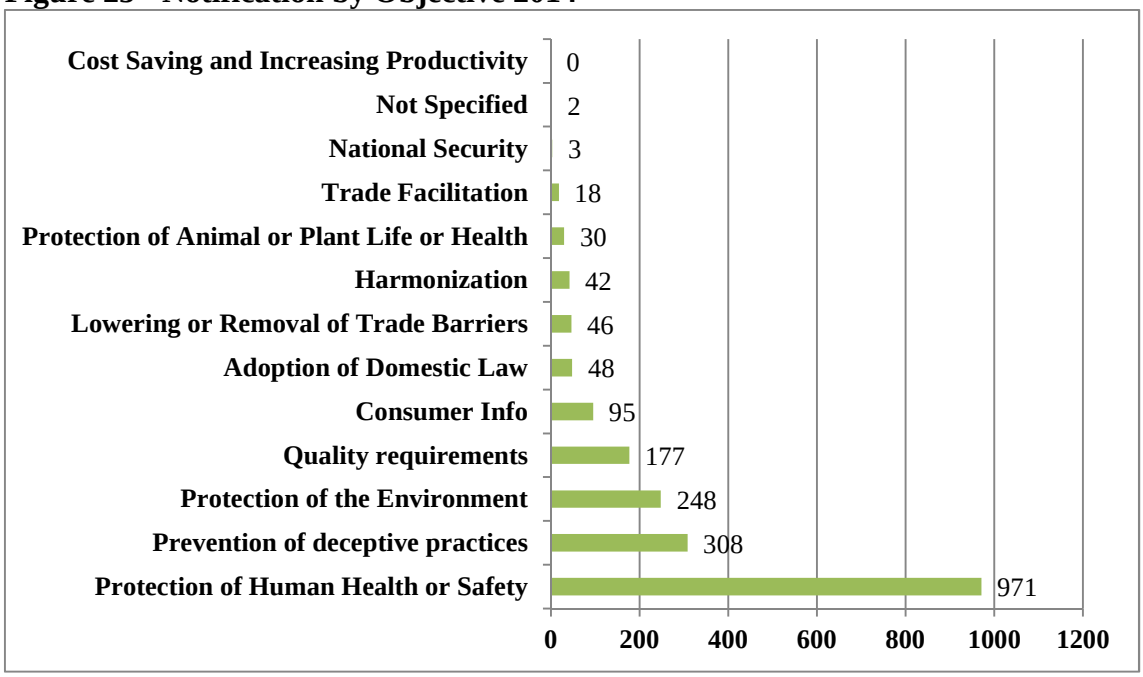


Source: WTO[15]

According to the 2015 Annual Review of the CTBT, among the 1,535 notifications received in 2014, protection of human health or safety; prevention of deceptive practices; protection of the environment; quality requirements and quality requirements were the objectives most frequently mentioned.

[15] WTO. Nineteenth Annual Review of the Implementation and Operation of the TBT Agreement, Note by the Secretariat, 7 March 2014, G/TBT/34, p. 3.

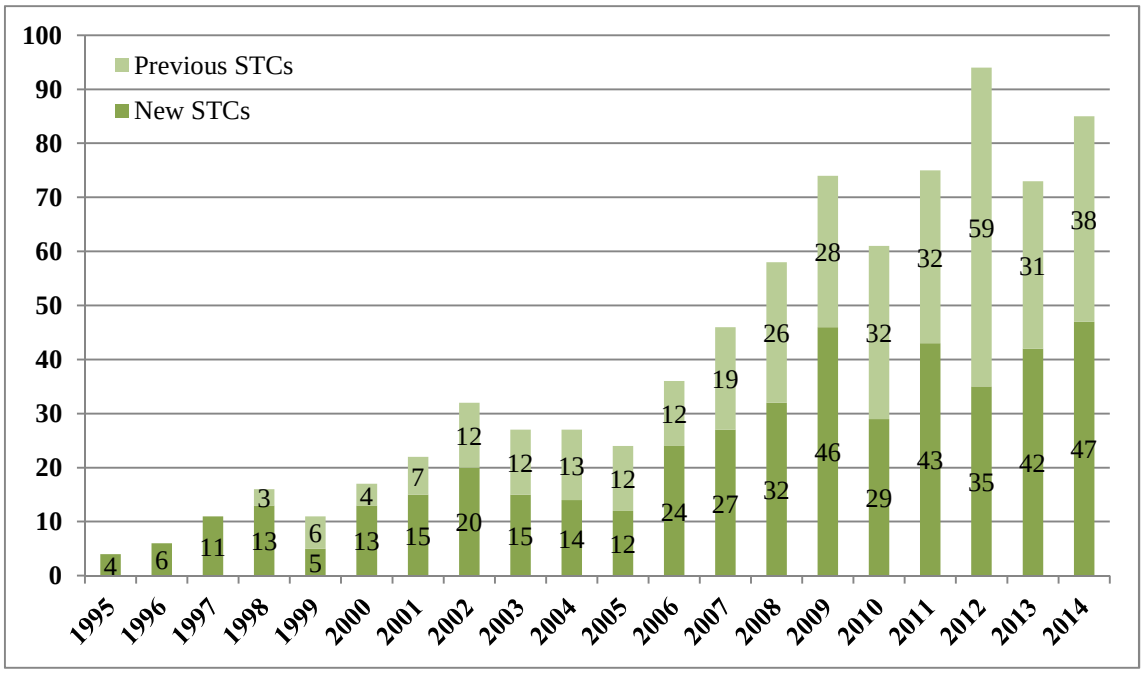
Figure 25 - Notification by Objective 2014



Source: WTO

The Annual Meeting also highlights that exactly the same pattern can be observed on STCs. In 2014, 47 new concerns were raised and 38 previously raised concerns were discussed. It is worth noting that the number of new specific trade concerns is the higher in any given year since 1995.

Figure 26 - Number of STCs on TBT from 1995 to 2014

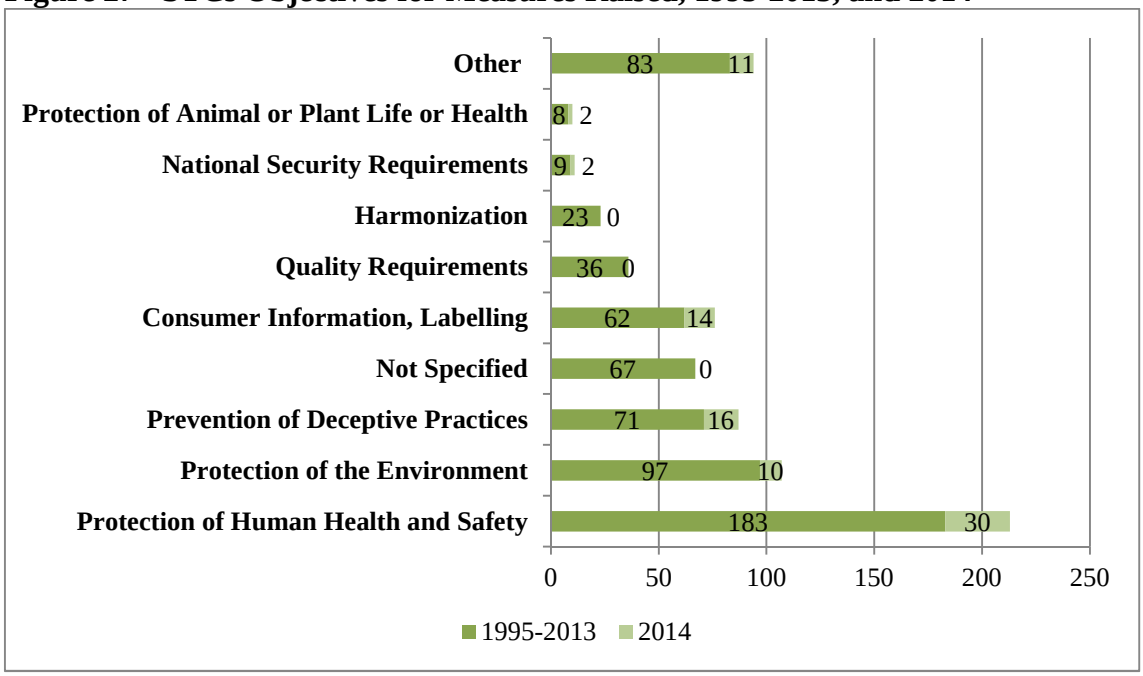


Source: WTO

In spite of the total decrease, it remains clear that the number of new STCs rose, while those cases pending resolution decreased, which may indicate the parties were convinced of the legality of the measure or decided not to pursue the matter further.

This might point to a rise in CTBT's efficiency to solve issues concerning measures taken by members. It is interesting to notice that the objectives also reflect those concerns on Notifications, with a curious twist: the category 'other' covers a wide range of stated objectives including trade facilitation and cost saving. STCs that do not have clear objectives have been classified as "not specified":

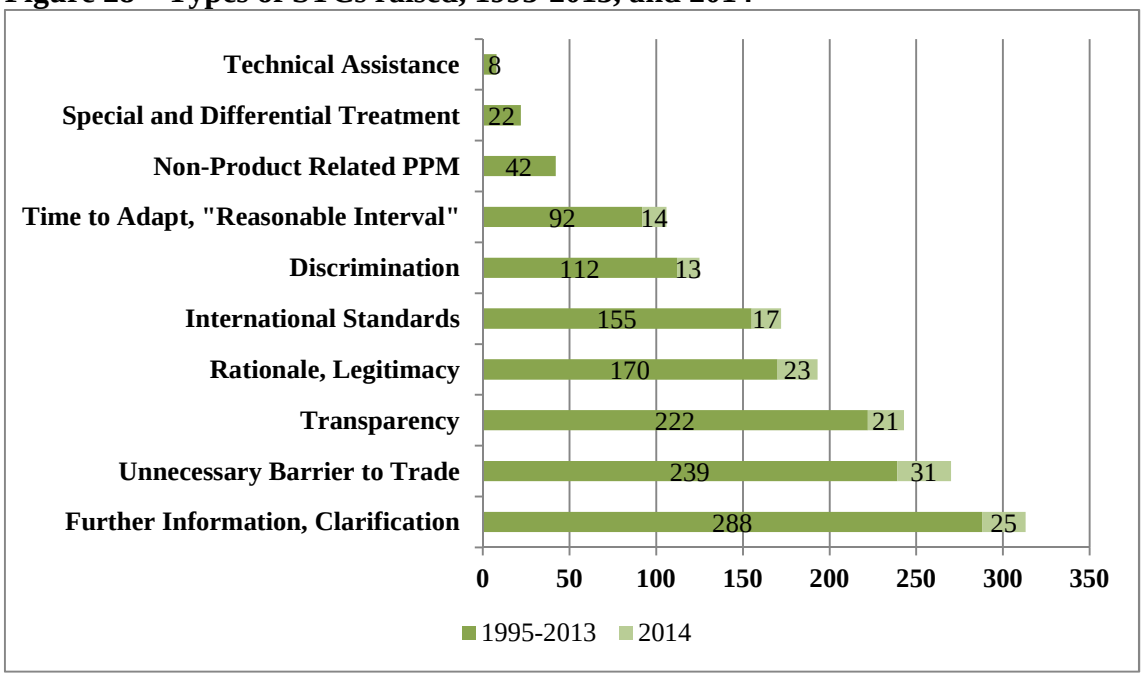
Figure 27 - STCs Objectives for Measures Raised, 1995-2013, and 2014



Source: WTO

Since 1995, the most frequent stated objectives of measures raised as STCs relate to the protection of human health and safety. This is also true for 2014, when 30 STCs on this objective were raised. It is worth clarifying that the category "other" encompasses a wide range of stated objectives such as trade facilitation, enhancing the effectiveness of conformity assessment, or avoiding entry of illegal products.

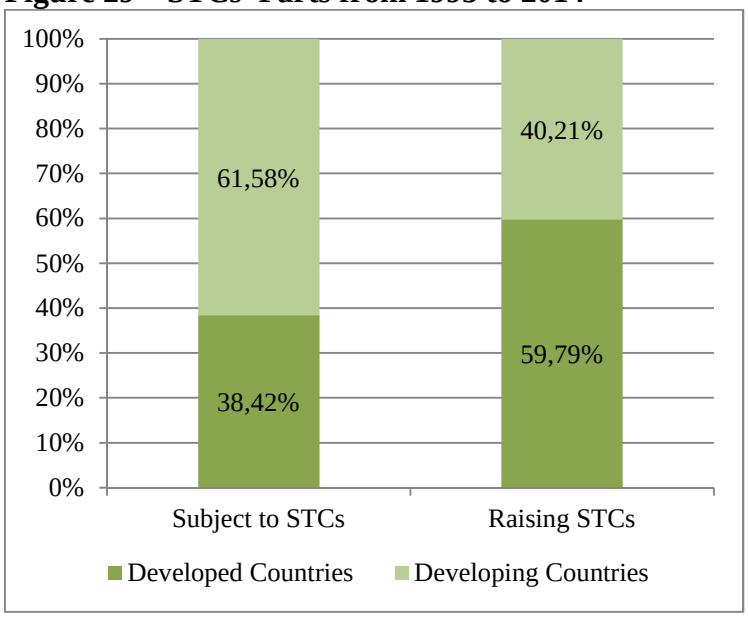
Figure 28 – Types of STCs raised, 1995-2013, and 2014



Source: WTO

The most frequent concern raised was, by far, transparency-related, where members asked for more information or clarification. Avoidance of unnecessary barriers is also a concern usually invoked.

Figure 29 – STCs Parts from 1995 to 2014



Source: WTO

One interesting point of the Review is that developed country normally raises normally more STCs than suffers them.

From all general data gathered, one can infer that there has been a steady raise in technical barriers adopted and notified by members that these measures are being

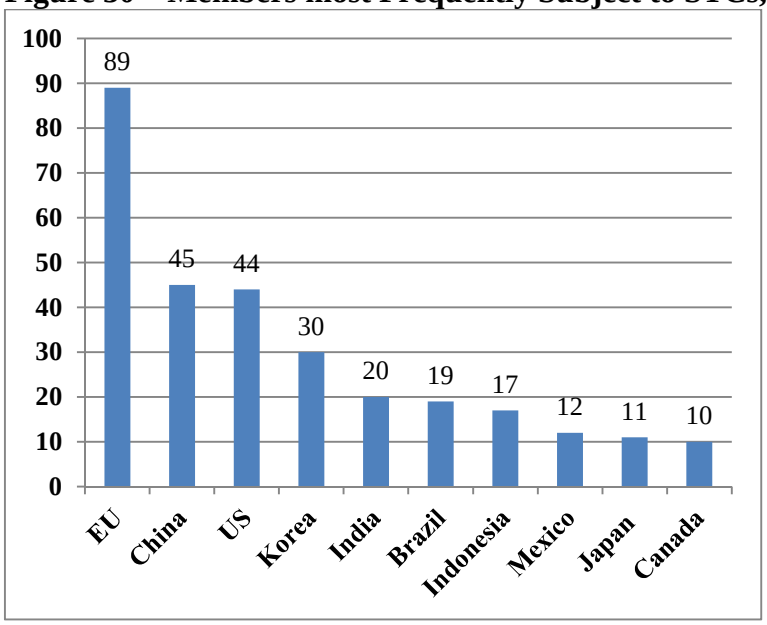
discussed in the CTBT and those making more use of this mechanism are the developed countries.

According to the WTO World Trade Report 2012 on Non-Tariff Measures, the majority of non-tariff measures are destined to agriculture. The weighted average of NTMs on agriculture is of 62.5% and of 45.1% on manufactured goods. The users of such measures should also be highlighted[16].

Main actors

From 1995 to 2013, the top 10 members whose measures have been most frequently discussed at the CTBT are the EU (89), China (45), US (44), Korea (30), India (20), Brazil (19), Indonesia (17), Mexico (12), Japan (11), and Canada (10).

Figure 30 – Members most Frequently Subject to STCs, 1995-2013

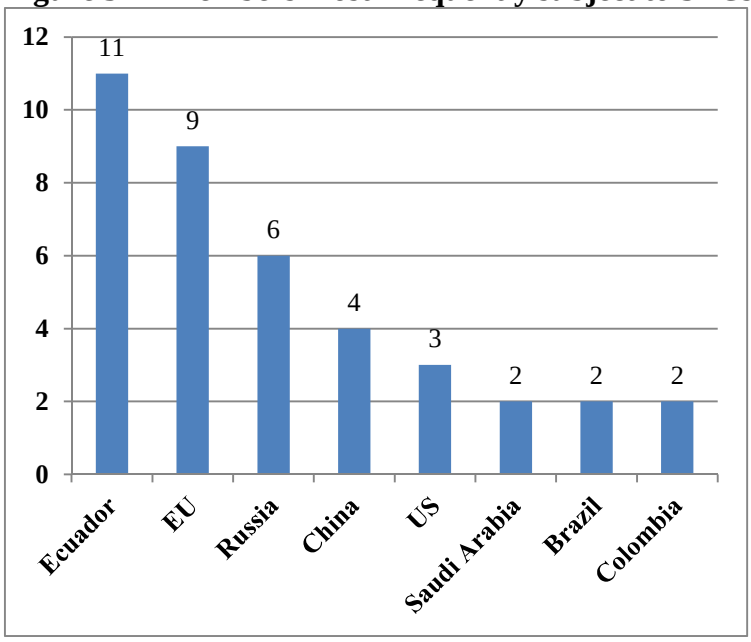


Source: WTO

In 2014, the members most frequently subject to STCs were, respectively, Ecuador (11), EU (9), Russia (6), China (4), US (3), Saudi Arabia (2), Brazil (2), and Colombia (2).

[16] Idem, p. 115-116

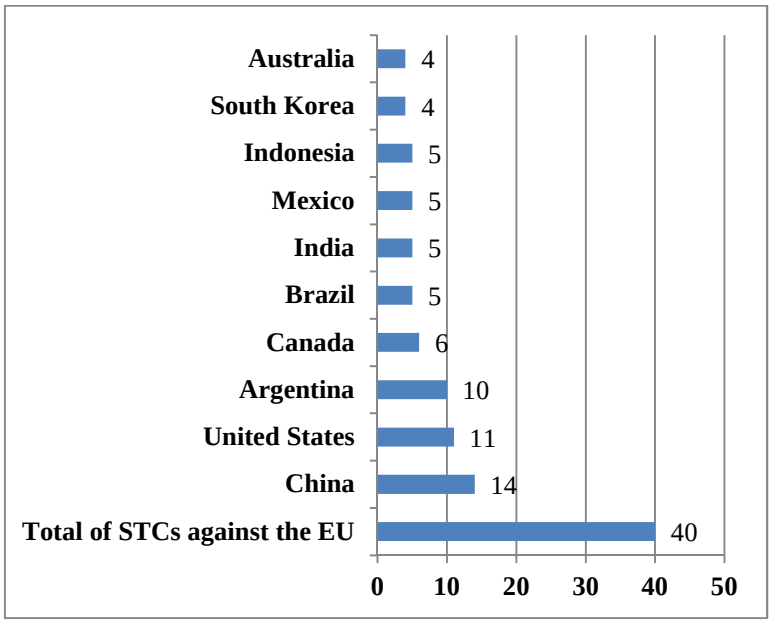
Figure 31 – Members most Frequently subject to STCs, 2014



Source: WTO

From January 2010 to July 2015, observing the behavior of Brazil and the EU in terms of STCs, the EU rose, alone or accompanied by other members, 8 of 10 STCs against Brazil. Brazil, in its turn, raised 5 STCs against the EU.

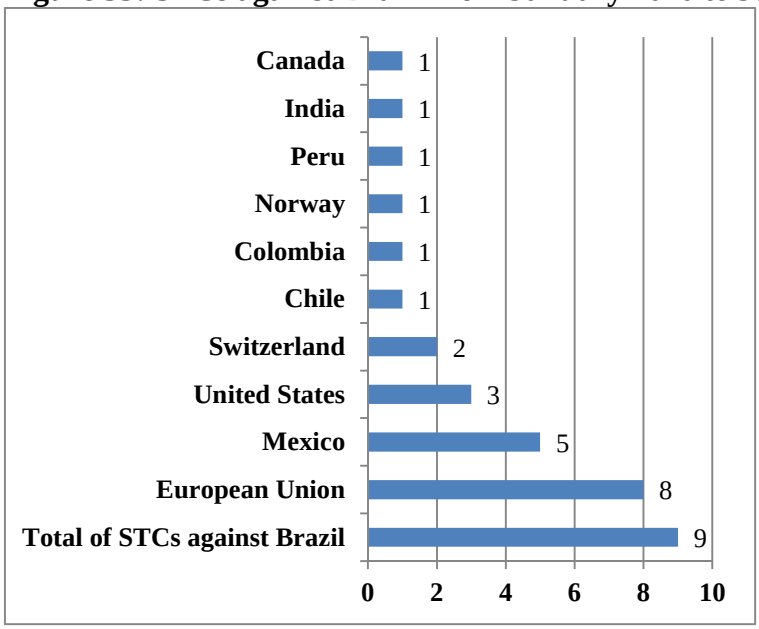
Figure 32: STCs against the EU from January 2010 to July 2015



Source: WTO

From January 2010 to July 2015, 40 Specific Trade Concerns were raised against the European Union. China was the most active country, raising 14 STCs. Subsequently, there were United States (11), Argentina (10), Canada (6), Brazil (5), India (5), Mexico (5), Indonesia (5), South Korea (4), and Australia (4).

Figure 33: STCs against Brazil from January 2010 to July 2015



Source: WTO.

From January 2010 to July 2015, 9 Specific Trade Concerns were raised against Brazil. The European Union was responsible for the majority of them (8). Others relevant actors in raising STCs against Brazil were Mexico (5), Unitedes States (3), and Switzerlanda (2).

Main products notified by Brazil

Brazil presented 305 new notifications from January 2010 to July 2015. The main products notified by Brazil were machinery and equipment, medical and pharmaceutical material (emphasis in cosmetics) foods and beverages and chemicals.

Brazilian notifications concentrate on the top 10 imported products by Brazil, according to MDIC: chemicals (especially fuel, oils and fertilizers), mechanical equipment, electrical and electronic equipment, motor vehicles and parts, plastics and its products, pharmaceuticals, and optical and precision equipment.[17]

Main Products Notified by EU

The EU made a few improvements in its internal regulatory system. The Regulation (EC) nº 764/2008 establishes procedures relating to the application of member States' technical requirements, and enforces the legislative coherence aimed by Directive 98/34/EC, that regulates notifications, harmonization and mutual recognition among members. From January 2010 to July 2015 the EU notified 415 new technical regulations to the CTBT, covering household appliances, electric and electronic equipment, biocidal products, machinery, motor vehicles and parts, measuring devices, chemicals, food, cosmetics and textile products.

It is quite interesting that foods and chemicals, responsible for 17,4% total imports of EU in 2013, are also the focus of a large share of the notifications. Machinery, motor

[17] MDIC, Brazilian Trade Balance Consolidated Data 2013, p. 27

vehicles and parts, also subject to notifications, correspond to 24,1% of the total imports[18].

Main STCs Brazil Endured

Since January 2009, out of 138 STCs raised against the 10 aforementioned members, Brazil joined as a concerned party in only 11 cases. Seven against EU, about seal products, poultry meat, Grenelle 2 Law, honey containing pollen from genetically modified maize, prevention of legal supply chains of falsified medical products for human use, and wine and grape juice. Also, tobacco against Canada, Requirements for Information Security Products and encryption against China and, against Indonesia, one STC on the inclusion of sugar, salt and fat content information, as well as health messages on the label of processed foods, and other on halal food.

IV.1.2. TBT and the DSU

Fifty cases under the WTO's Dispute Settlement Body have cited the TBT Agreement in their request for consultations.[19] The following articles are the ones in which there is most disagreement among members: Article 2 (Preparation, Adoption and Application of Technical Regulations by Central Government Bodies), followed by Article 2.2, Article 2.1, and Article 5 (Procedures for Assessment of Conformity by Central Government Bodies).

IV.1.3. Precautionary Principle

The EU adopts forms of consumer protection by applying the precautionary principle as a base for many regulations. The European precautionary logic permeates its whole normative system. The application of the principle on technical requirements is based on the Regulation (EC) 764/2008. It establishes mutual recognition among member states, and it also regulates imports from outside the EU under the technical harmonization.

Under the new approach to technical harmonization launched in the mid-1980s, legislation adopted contains requirements expressed in terms of performance-based indicators or objectives. Essential requirements define the results to be attained, or the hazards to be dealt with, without specifying any particular technical solution. This approach covers a wide variety of products, including electrical and electronic products, pressure equipment and gas appliances, toys, machinery, medical devices, radio and telecom equipment, elevators, personal protective equipment, equipment for use in explosive atmospheres, and recreational craft. Goods that are covered by new-approach technical regulations are subject to conformity assessment procedures commensurate with the level of risk associated with them. Large product sectors considered low to medium risk are subject to a supplier's declaration of conformity. For certain categories of products deemed high risk, third-party conformity assessments conducted by notified bodies are required beforehand. These high-risk goods include high risk medical

[18] Data extracted from Trade Export Helpdesk, available at http://exporthelp.europa.eu/thdapp/display.htm?page=st%2fst_Estatisticas.html&docType=main&languageId=pt

[19] WTO. **Disputes by agreement**. Available at: < http://www.wto.org/english/tratop_e/dispu_e/dispu_agreements_index_e.htm?id=A22>.

devices, certain types of pressure equipment, lift, cableways, gas appliances, and most types of equipment for use in explosive atmospheres.

IV.2. Sanitary and Phytosanitary Measures

Sanitary and phytosanitary measures are usually taken by a member in order to protect its territory against risks linked to food safety, animal health and plant protection or to prevent or limit damage from the entry, establishment and spread of pests[20].

The Sanitary and Phytosanitary Measures Agreement (SPS) was negotiated with the purpose of establishing clear rules and a level playing field so that members would be able to set sanitary and phytosanitary standards that reflect their national interest without becoming unnecessary obstacles to trade.

The SPS Agreement recognizes the right to adopt sanitary and phytosanitary measures necessary for the protection of human, animal or plant life or health as long as there are scientific principles that may well support such regulation and do not represent a unjustifiably discrimination or disguised trade restrictions regarding foreign products. Members are allowed to set higher standards based on appropriate assessment of risks if the approach is consistent, not arbitrary. As in the TBT Agreement, it is also possible to apply the precautionary principle.

Furthermore, members are encouraged to use international standards, guidelines and recommendations as a means of harmonizing their regulations, such as the FAO/WHO Codex Alimentarius Commission for food; the International Animal Health Organization for animal health; and the FAO's secretariat of the International Plant Protection Convention for plant health.

IV.2.1. The SPS Committee

The Committee on Sanitary and Phytosanitary Measures was established as a means of guaranteeing transparency and overseeing the implementation of the SPS Agreement by providing a forum for the exchange of information and consultation on aspects related to food safety and animal and plant health measures. Members shall make notifications when introducing new or changed import requirements with a suitable time so that the other countries may provide comments.

The SPS Committee in general holds three meetings every year in which members can discuss, among other themes, aspects of the implementation of the Agreement, notifications received, and raise specific trade concerns (STC). These mechanisms are useful for many countries insofar as they can lead to exchanges of information or bilateral consultations and often resolve problems without resorting to the DSB.

From 1995 to 2013, 368 STC were raised in the SPS Committee.

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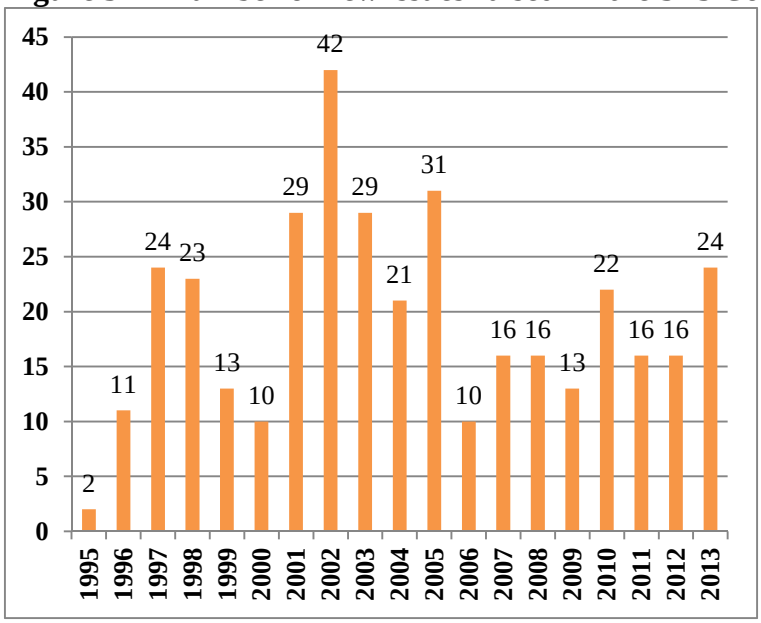
[20] WTO. **Sanitary and Phytosanitary Measures**. Available at: < http://gtad.wto.org/trta_subcategory.aspx?cat=33113 >.

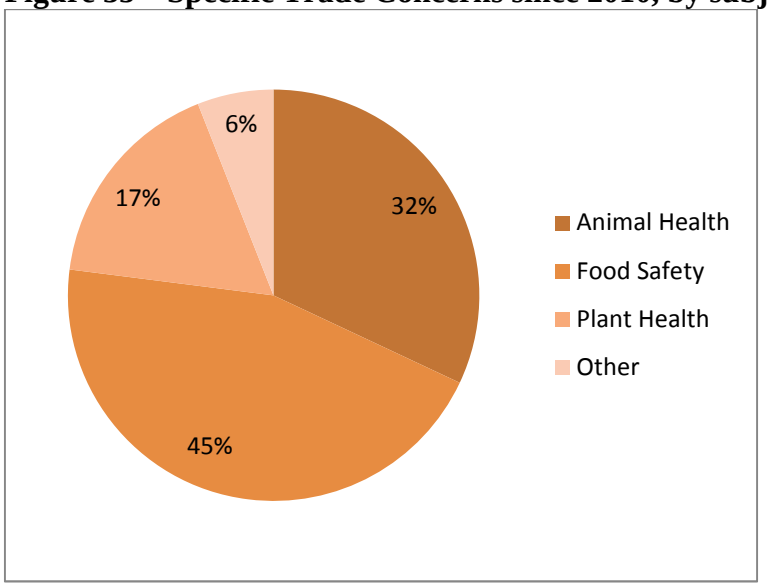
Figure 34 – Number of new issues raised in the SPS Committee 1995-2013



Source: WTO, 2014.

Animal health and zoonosis is the most questioned theme, representing 45% of all the trade concerns raised since 2010. Among the concerns raised, 24% were related to transmissible spongiform encephalopathies, while issues related to foot-and-mouth disease account for 24%, and avian influenza represent 8%.[21] Food safety, plant health and other issues count for 45%, 17%, and 6% respectively.

Figure 35 – Specific Trade Concerns since 2010, by subject

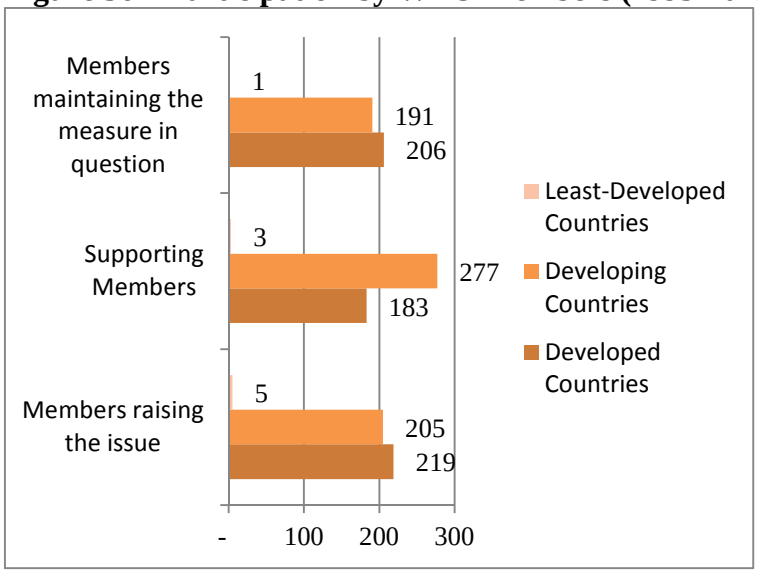


Source: WTO, 2014

Developed countries are the main actors both raising issues and maintaining the measures questioned, while developing countries act predominantly as supporting members.

[21] WTO. **Specific Trade Concerns**. G/SPS/GEN/204/Rev.14, March 2014, p. 6.

Figure 36 – Participation by WTO Members (1995-2013)



Source: WTO, 2014

In the past few years developing countries have shown greater activity regarding the proposition of new trade concerns and, especially since 2008, they even surpassed the performance of developed countries. In 2013, developing members raised 16 trade concerns, while developed ones raised 8 (least-developed countries did not raise any STC in the same year).[22]

Among the members that most frequently launch SPS trade concerns are US (1st), EU (2nd), and Brazil (5th). These countries also are amidst the Members that most frequently face SPS STC: EU (1st), US (4th), and Brazil (10th).[23]

The EU and the US undoubtedly are protagonists in the SPS Committee.

During 2013, the EU raised concerns about import restrictions due to Bovine Spongiform Encephalopathy (BSE); ban of offal; pork import restrictions; Brazilian import requirements for wine; restrictions related to avian influenza; and certification requirements for imports.[24]

Brazil, in the same year, raised issues mostly on import restrictions on beef due to BSE and on poultry meat; European restrictions on the importation of fruits and fruit juices; and Korean and Chinese application of regionalization requirements on imports.[25]

IV.2.2. SPS and DSU disputes

Specific trade concerns related to SPS do not constitute a prior mechanism to the dispute settlement system as stablished by the WTO. Nevertheless, STC frequently express divergences of views between members regarding the consistency of SPS measures adopted within the territory of a certain member. Questioning national

[22] WTO. **Specific Trade Concerns**. G/SPS/GEN/204/Rev.14, March 2014, p. 7.
[23] HORN, H.; MAVROIDIS, P.C.; WIJKSTRÖM, E.N. **In the Shadow of the DSU**: Addressing Specific Trade Concerns in the WTO SPS and TBT Committees. IFN Working Paper No. 960, 2013, p. 9.
[24] WTO. **Specific Trade Concerns**. G/SPS/GEN/204/Rev.14, March 2014, pp. 28-31.
[25] Ibid.

regulations is a means of demonstrating that a given member has reasons to believe that certain obligations under the SPS Agreement are not being implemented.

There is strong evidence that the SPS Committee effectively contributes to defusing or preempting conflicts between WTO members. From all the STC previously raised within the Committee, only 6 led to formal proceedings under the WTO dispute settlement system.

Altogether, SPS Agreement is mentioned in 43 dispute cases since 1995.[26] The most mentioned article is Article 5 (Assessment of Risk and Determination of the Appropriate Level of Sanitary or Phytosanitary Protection), followed by Article 2 (Basic Rights and Obligations), Article 7 (Transparency), and Article 8 (Control, Inspection and Approval Procedures).

Conclusion

It is possible to conclude that for the EU and Brazil, the regulatory measures notified by these members to the WTO Committees are concentrated on their main trade sectors.

Those measures, notified or not to the CTBT or CSPS, are frequently raised as STCs against the member maintaining it, and the questions surrounding them are formally discussed in bilateral or group negotiations. The main objectives of STCs are to discuss and enlighten technical details, postpone the entry into force of the measure in question, and recommend members to attain to international guidelines according to the TBT and the SPS Agreements instead of using more restrictive measures such as panels in the DSB.

The increasing use of voluntary standards by the EU demonstrates a sophistication of their normative system and customary use of voluntary standards. It is difficult to understand, however, why the European Union is refusing to discuss the impacts of these standards in their related Committees, an action that is distorting trade and causing great concern from other partners.

This is an odd posture, since that the data selected clearly shows that the EU is actively engaging in the meetings, both as member maintaining mandated regulations, raising them to discussions, meaning that it is not only concerned with regulatory barriers to trade, but also seeking to influence the discussions and the decisions of other members.

[26] WTO. **Disputes by agreement**. Available at: <http://www.wto.org/english/tratop_e/dispu_e/dispu_agreements_index_e.htm?id=A19>.

V. TRADE DEFENSE

The use of trade defense instruments is based on rules set out by the World Trade Organization (WTO).

V.1. Antidumping

Antidumping measures are often used against a situation of international price discrimination, where the price of a product when sold in the importing country is lower than the normal value found in the market of the exporting country for the like product.

According to the Antidumping Agreement of the WTO, the practice of dumping is condemned whenever cause or threaten to cause injury to a domestic industry, or materially retards the establishment of a domestic industry. Besides the existence of dumping and injury, it is also required the demonstration of a causal relationship between the dumped imports and the injury to the domestic industry.

In a few words, the first step to be taken in an investigation that aims the application of antidumping measures is the determination of the so-called normal value of the product for the subsequent determination of the dumping margin. The dumping margin is calculated from the difference between the normal value of the product and the export price for the like product. Then it must be determined the material injury, the threat of material injury, or material retardation of the establishment of a domestic industry and it must be established the causal link between dumped imports and material injury.

Brazil

From 1995 to 2014, 122 investigations have been initiated against Brazil, which resulted in 89 antidumping measures applied. The EU initiated 9 and applied 3 measures. The sectors most affected were base metals and articles (38 investigations initiated and 38 measures applied); machinery and electrical equipment (21 investigations initiated and 12 measures applied); and resins, plastic and rubber (12 investigations initiated and 10 measures applied).

In the same period, Brazil initiated 369 investigations and applied 197 measures. Amid the initiated investigations, were 4 against the EU; and 5 measures were applied against the EU. The sectors most impacted were base metals and articles (75 investigations initiated and 43 measures applied); resins, plastic and rubber (98 investigations initiated and 28 measures applied); and chemicals (62 investigations initiated and 28 measures applied).

EU

In the analyzed period, 108 investigations have been initiated against the EU, which lead to the implementation of 74 antidumping measures. Brazil was among the countries that initiated investigations and applied measures against the EU. It has initiated 4 and applied 5 measures. The following sectors are among the most affected ones: chemicals (55 investigations initiated and 38 measures applied); resins, plastic and rubber (18 investigations initiated and 14 measures applied); and base metals and articles (10 investigations initiated and 7 measures applied).

During this time, the EU initiated 468 investigations and applied 298 measures. Amid the initiated investigations, 9 were against Brazil, and 3 were effectively applied. The sectors most impacted were base metals and articles (160 investigations initiated and 111 measures applied); chemicals (85 investigations initiated and 61 measures applied); and machinery and electrical equipment (58 investigations initiated and 32 measures applied).

Table 3: Antidumping - Investigations initiated and measures applied against Brazil and EU (1995-2014)

	1995		1996		1997		1998		1999		2000		2001		2002		2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		2013		2014		**Total**	
	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	**I**	**M**
Brazil	8	9	10	10	5	7	6	6	13	5	9	8	13	2	3	6	3	4	10	3	4	5	7	5	2	2	3	2	12	3	3	4	3	2	2	0	6	3	0	3	**122**	**89**
EU	0	0	1	0	2	1	4	1	7	4	9	4	9	8	10	6	10	7	3	6	5	3	3	3	2	1	4	3	6	1	9	4	3	4	5	8	8	4	8	6	**108**	**74**

Source: WTO
Obs: I = Investigations initiated; M = measures applied

Table 4: Antidumping - Investigations initiated and measures applied by Brazil and EU (1995-2014)

	1995		1996		1997		1998		1999		2000		2001		2002		2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		2013		2014		**Total**	
	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	**I**	**M**
Brazil	5	3	18	6	11	2	18	14	16	5	11	9	17	13	8	5	4	2	8	5	6	3	12	0	13	9	24	11	9	16	37	5	16	13	47	14	54	30	35	32	**369**	**197**
EU	33	15	25	23	41	23	22	28	65	18	32	41	28	13	20	25	7	2	30	10	24	20	35	12	9	12	19	15	15	9	15	5	17	11	13	3	4	12	14	1	**468**	**298**

Source: WTO
Obs: I = Investigations initiated; M = measures applied

Table 5: Antidumping - Investigations initiated and Measures applied: Reporting Member vs Exporting Country (1995-2014)

	Brazil		EU	
	I	M	I	M
Brazil	-	-	4	5
EU	9	3	-	-

Source: WTO
Obs: I = Investigations initiated; M = measures applied

Table 6: Antidumping - Investigations initiated / measures applied against Brazil and the EU (1995-2014)

	Brazil		EU	
Sector	**I**	**M**	**I**	**M**
Live animals and products	5	2	1	1
Vegetable products	0	0	2	1
Animal and vegetable fats, oils and waxes	3	0	0	0
Prepared foodstuff; beverages, spirits, vinegar; tobacco	2	1	1	0
Mineral products	2	2	1	1
Products of the chemical and allied industries	10	8	55	41
Resins, plastics and articles; rubber and articles	12	10	18	15
Hides, skins and articles; saddlery and travel goods	0	0	0	0
Wood, cork and articles; basketware	6	1	0	0
Paper, paperboard and articles	9	6	7	3
Textiles and articles	8	4	2	1
Footwear, headgear; feathers, artif. flowers, fans	0	0	0	0
Articles of stone, plaster; ceramic prod.; glass	4	3	0	0
Pearls, precious stones and metals; coin	0	0	0	0
Base metals and articles	38	39	10	9
Machinery and electrical equipment	21	12	1	0
Vehicles, aircraft and vessels	1	0	0	0
Instruments, clocks, recorders and reproducers	2	1	2	2
Miscellaneous manufactured articles	0	0	0	0

Source: WTO
Obs: I = Investigations initiated; M = measures applied

Table 7: Antidumping - Investigations initiated and measures applied by Brazil and the EU (1995-2014)

	Brazil		EU	
Sector	**I**	**M**	**I**	**M**
Live animals and products	5	4	7	4
Vegetable products	1	2	2	2
Animal and vegetable fats, oils and waxes	0	0	0	0
Prepared foodstuff; beverages, spirits, vinegar; tobacco	1	1	2	1
Mineral products	7	5	6	6
Products of the chemical and allied industries	62	32	85	61
Resins, plastics and articles; rubber and articles	98	44	35	19
Hides, skins and articles; saddlery and travel goods	0	0	4	2
Wood, cork and articles; basketware	1	0	9	9
Paper, paperboard and articles	13	12	1	1
Textiles and articles	24	20	43	23
Footwear, headgear; feathers, artif. flowers, fans	1	1	9	7
Articles of stone, plaster; ceramic prod.; glass	20	16	11	7
Pearls, precious stones and metals; coin	0	0	0	0
Base metals and articles	75	45	160	111
Machinery and electrical equipment	8	8	58	32
Vehicles, aircraft and vessels	0	0	9	8
Instruments, clocks, recorders and reproducers	4	2	1	2
Miscellaneous manufactured articles	14	5	12	3

Source: WTO
Obs: I = Investigations initiated; M = measures applied

V.2. Subsidies and countervailing measures

According to the WTO Agreement on Subsidies and Countervailing Measures (SCM), the definition of the term "subsidy" comprises three main elements that must be satisfied in order for a subsidy to exist: (i) a financial contribution, (ii) by a government or any public body within the territory of a Member, (iii) which confers a benefit. In order for a financial contribution to be a subsidy, it must be made by or at the direction of a government or any public body within the territory of a Member. These two categories of subsidies are prohibited because they are designed to directly affect trade and thus are most likely to have adverse effects on the interests of other Members.

The agreement also defines two categories of subsidies: prohibited and actionable. There are two types of prohibited subsidies: the first type consists of subsidies related to the export performance; the second comprises the so-called local content subsidies, giving preference to the use of domestic goods over imported ones. Because they directly affect trade and thus are most likely to have adverse effects on the interests of other Members, the use of these two categories of subsidies are prohibited among the members of the WTO.

Actionable subsidies are not prohibited, and most of the existing subsidies fall in this category. In order to challenge a given subsidy, the complaining country has to show that the subsidy has an adverse effect on its interests, otherwise the subsidy is permitted. The SCM lists three types of adverse effects that can be alleged by the party: (i) injury to a domestic industry caused by subsidized imports in the territory of the complaining member; (ii) serious prejudice that usually arises as a result of adverse effects in the market of the subsidizing member or in a third country market; and (iii) nullification or impairment of benefits, which arises most typically where the improved market access presumed to flow from a bound tariff reduction is undercut by subsidization.

If domestic producers suffer damages caused by imports of subsidized products, countervailing duty can be imposed. Countervailing duty can only be charged after the importing country has conducted a detailed investigation similar to that required for antidumping action.

Brazil

Countervailing duties are used less frequently than antidumping measures. From 1995 to 2014, Brazil has been submitted to 7 countervailing process investigations, and 8 measures were applied. The EU have initiated any investigations against Brazil. Almost all the investigations initiated and all the measures applied are concentrated in the base metals and articles sector (6 initiated; 8 applied).

In its turn, Brazil has initiated 10 investigations and has applied countervailing measures 7 times. Although the country did not initiate any investigation in the vegetable products sector, this is the one that show the greatest number of measures applied: five out of seven.

EU

In the analyzed period, the EU was subject to 14 investigations and to the implementation of 12 countervailing measures. The main sectors affected were prepared foodstuff; beverages, spirits, vinegar; tobacco (7 initiated; 7 applied); and animal and vegetable fats, oils and waxes (3 initiated; 3 applied).

The EU initiated 74 investigations and applied 35 measures, and none of them were against Brazil. The investigations and measures were mainly distributed between the following sectors: base metals and articles (20 initiated; 10 applied); resins, plastics, rubber and articles (16 initiated; 8 applied); and textile and articles (13 initiated; 5 applied).

Table 11: Countervailing measures - Investigations initiated and measures applied against Brazil and the EU (1995-2014)

	1995		1996		1997		1998		1999		2000		2001		2002		2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		2013		2014		**Total**	
	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	I	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	**I**	**M**
Brazil	0	4	0	0	1	0	1	0	1	0	1	2	2	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**	**8**
EU	3	1	1	2	1	0	1	2	1	0	0	1	0	0	1	0	2	1	0	1	0	1	0	0	0	0	0	0	1	0	1	1	0	1	1	0	1	0	0	1	**14**	**12**

Source: WTO
Obs: I = Investigations initiated; M = measures applied

Table 12: Countervailing measures - Investigations initiated and measures applied by Brazil and the EU (1995-2014)

	1995		1996		1997		1998		1999		2000		2001		2002		2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		2013		2014		**Total**	
	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	I	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	**I**	**M**
Brazil	0	5	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2	0	0	0	0	1	0	0	1	0	0	0	0	3	0	1	0	2	0	1	0	**10**	**7**
EU	0	0	1	0	4	1	8	2	19	3	0	10	6	0	3	2	1	3	0	5	3	1	1	0	0	0	2	0	6	1	3	3	4	2	6	0	5	3	2	2	**74**	**35**

Source: WTO
Obs: I = Investigations initiated; M = measures applied

Table 13: Countervailing measures - Investigations initiated and Measures applied: Reporting Member vs Exporting Country (1995-2014)

	Brazil		**EU**	
	I	M	I	M
Brazil	-	-	0	0
EU	0	0	-	-

Source: WTO
Obs: I = Investigations initiated; M = measures applied

Table 14: Sectoral distribution of countervailing measures - Investigations initiated and measures applied against Brazil and the EU (1995-2014)

	Brazil		EU	
Sector	**I**	**M**	**I**	**M**
Live animals and products	0	0	1	1
Vegetable products	0	0	2	2
Animal and vegetable fats, oils and waxes	0	0	3	3
Prepared foodstuff; beverages, spirits, vinegar; tobacco	0	0	7	7
Mineral products	0	0	0	0
Products of the chemical and allied industries	0	0	1	1
Resins, plastics and articles; rubber and articles	0	0	0	0
Hides, skins and articles; saddlery and travel goods	0	0	0	0
Wood, cork and articles; basketware	0	0	0	0
Paper, paperboard and articles	0	0	0	0
Textiles and articles	0	0	0	0
Footwear, headgear; feathers, artif. flowers, fans	0	0	0	0
Articles of stone, plaster; ceramic prod.; glass	0	0	0	0
Pearls, precious stones and metals; coin	0	0	0	0
Base metals and articles	6	8	0	0
Machinery and electrical equipment	0	0	0	0
Vehicles, aircraft and vessels	1	0	0	0
Instruments, clocks, recorders and reproducers	0	0	0	0
Miscellaneous manufactured articles	0	0	0	0

Source: WTO
Obs: I = Investigations initiated; M = measures applied

Table 15: Sectoral distribution of countervailing measures - Investigations initiated and measures applied by Brazil and the EU (1995-2014)

	Brazil		EU	
Sector	**I**	**M**	**I**	**M**
Live animals and products	0	0	2	1
Vegetable products	0	5	0	0
Animal and vegetable fats, oils and waxes	0	0	0	0
Prepared foodstuff; beverages, spirits, vinegar; tobacco	0	0	0	0
Mineral products	0	0	4	1
Products of the chemical and allied industries	0	0	6	2
Resins, plastics and articles; rubber and articles	5	1	16	8
Hides, skins and articles; saddlery and travel goods	0	0	0	0
Wood, cork and articles; basketware	0	0	0	0
Paper, paperboard and articles	0	0	1	1
Textiles and articles	4	0	13	5
Footwear, headgear; feathers, artif. flowers, fans	0	0	0	0
Articles of stone, plaster; ceramic prod.; glass	0	0	4	2
Pearls, precious stones and metals; coin	0	0	0	0
Base metals and articles	1	1	20	10
Machinery and electrical equipment	0	0	7	5
Vehicles, aircraft and vessels	0	0	1	0
Instruments, clocks, recorders and reproducers	0	0	0	0
Miscellaneous manufactured articles	0	0	0	0

Source: WTO
Obs: I = Investigations initiated; M = measures applied

V.3. Safeguards

The adoption of safeguards measures, also understood as a restriction of imports of a product temporarily, is permitted if the domestic industry of a given member is injured or threatened with injury caused by a surge in imports. Unlike the practices previously discussed (antidumping e countervailing measures), safeguard measures do not aim to respond to a condition of unfair competition; instead, they aim to the emergency protection from an import surge.

There are two kinds of import "surge" that justify the adoption of safeguard measures: (i) a real increase in imports (an absolute increase); or (ii) an increase in the imports' share of a shrinking market, even if the import quantity has not increased (relative increase). Moreover, the injury must cause or threaten to cause serious injury to the domestic industry. The Safeguard Agreement (SA) of the WTO defines the term "serious injury" as a significant overall impairment in the position of a domestic industry, while the "threat of serious injury" shall be understood to mean serious injury that is clearly imminent and based on facts.

The SA also sets out criteria for evaluating whether "serious injury" is being caused or threatened, and the factors which must be considered in determining the impact of imports on the domestic industry. When imposed, a safeguard measure should be applied only to the extent necessary to prevent or remedy serious injury and to help the industry concerned to adjust. Where quantitative restrictions (quotas) are imposed, they normally should not reduce the quantities of imports below the annual average for the last three representative years for which statistics are available, unless clear justification is given that a different level is necessary to prevent or remedy serious injury.

In the last nineteen years (1995-2014), Brazil has initiated safeguards investigations 4 times and applied it in 2 of them. The sectors in which the safeguards were applied were vegetable products (1) and miscellaneous manufactured articles. The EU initiated 5 investigations and applied safeguards 3 times. The sectors protected by safeguards measures were live animals and products (1); base metals and articles (1); and beverages, spirits and tobacco (1).

Table 16: Safeguard initiations and measures applied by Brazil and the EU (1995-2014)

	1995		1996		1997		1998		1999		2000		2001		2002		2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		2013		2014		**Total**	
	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	I	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	**I**	**M**
Brazil	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	**4**	**2**
EU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	**5**	**3**

Source: WTO
Obs: I = initiations; M = measures applied

Table 17: Safeguard initiations and measures applied by Brazil and the EU by sector (1995-2014)

	Brazil		EU	
Sector	**I**	**M**	**I**	**M**
Live animals and products	0	0	1	1
Vegetable products	1	1	1	0
Animal and vegetable fats, oils and waxes	0	0	0	0
Prepared foodstuff; beverages, spirits, vinegar; tobacco	1	0	1	1
Mineral products	0	0	0	0
Products of the chemical and allied industries	0	0	0	0
Resins, plastics and articles; rubber and articles	0	0	0	0
Hides, skins and articles; saddlery and travel goods	0	0	0	0
Wood, cork and articles; basketware	0	0	0	0
Paper, paperboard and articles	0	0	0	0
Textiles and articles	0	0	0	0
Footwear, headgear; feathers, artif. flowers, fans	0	0	0	0
Articles of stone, plaster; ceramic prod.; glass	0	0	0	0
Base metals and articles	0	0	1	1
Machinery and electrical equipment	1	0	0	0
Vehicles, aircraft and vessels	0	0	1	0
Instruments, clocks, recorders and reproducers	0	0	0	0
Miscellaneous manufactured articles	1	1	0	0

Source: WTO
Obs: I = initiations; M = measures applied

In summary, the exam of the instruments of trade defense between Brazil and the European Union demonstrates that in the present time, these instruments are not being used with the frequency that would characterize an inappropriate utilization. Hence, it can be asserted that there is no abusive use of the so-called unfair trade among these partners.

VI. INVESTMENT

VI.1. Investments

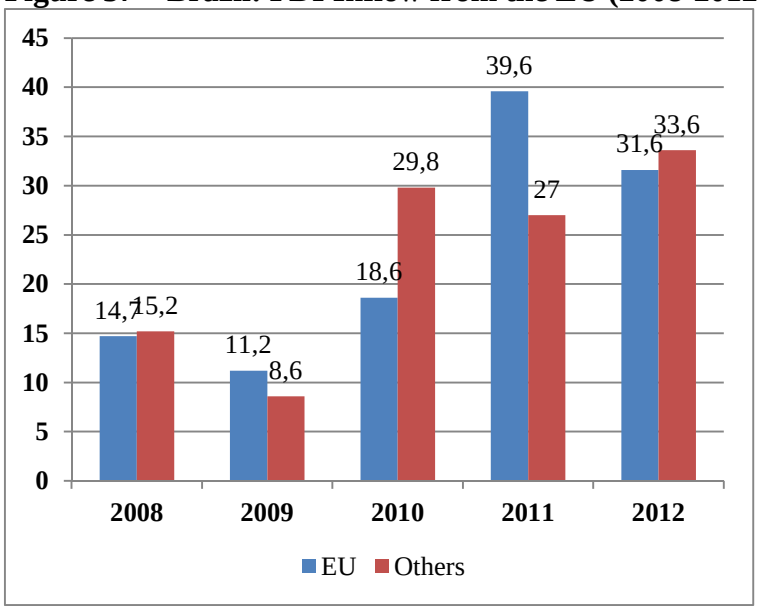
There are two main categories of Foreign Direct Investment (FDI) as defined by UNCTAD: FDI flows and FDI Stock.

UNCTAD defines FDI Stock as *the value of the share of associate and subsidiary enterprises capital and reserves (including retained profits) attributable to the parent enterprise (this is equal to total assets minus total liabilities), plus the net indebtedness of the associate or subsidiary to the parent firm. For branches, it is the value of fixed assets and the value of current assets and investments, excluding amounts due from the parent, less liabilities to third parties*[27].

FDI flows are composed of net sales of shares and loans from associates and subsidiaries to the parent company and its share of the affiliate's reinvested earnings plus total net intra-company loans provided by the parent company.

It is possible to have reverse flows, which consists of a negative result in one of the above-mentioned components superseding the positive amounts of the others.

Figure 37 – Brazil: FDI Inflow from the EU (2008-2012) in US$ Billion



Source: UNCTAD.

Brazil FDI inflow from the EU has progressively grown in the last years ranging from US$ 14.7 bn in 2008 to US$ 31.6 in 2012. This result shows that FDI inflow from the EU to Brazil more than doubled in five years. For the EU, from 2010 to 2011 the FDI inflow doubled and reached US$ 39.6 bn. The EU represented 50.3% of all Brazil FDI inflow in the last five years.

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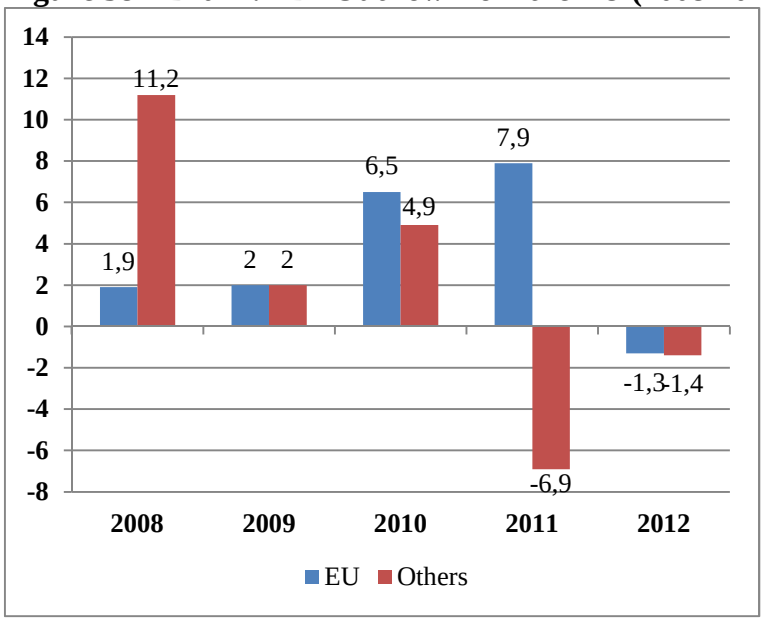
[27] *Cf.* UNCTAD. **Sources and Definitions**. Available at <http://unctad.org/en/Pages/DIAE/FDI%20Statistics/Sources-and-Definitions.aspx> (Accessed on 24 October 2015).

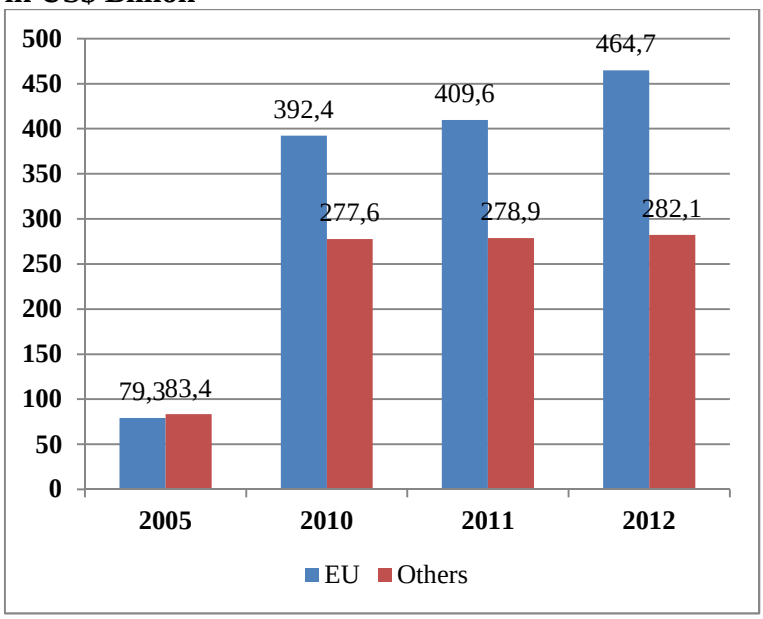
Figure 38 – Brazil: FDI Outflow from the EU (2008-2012) in US$ Billion



Source: UNCTAD.

Brazil FDI outflow to the EU has progressively increased from 2008 to 2011. There was a rise of US$ 1.4 bn from 2010 to 2011 but it has reduced since 2012. Brazil has prioritized investments in other countries following on its external policy of strengthening South-South integration and cooperation.

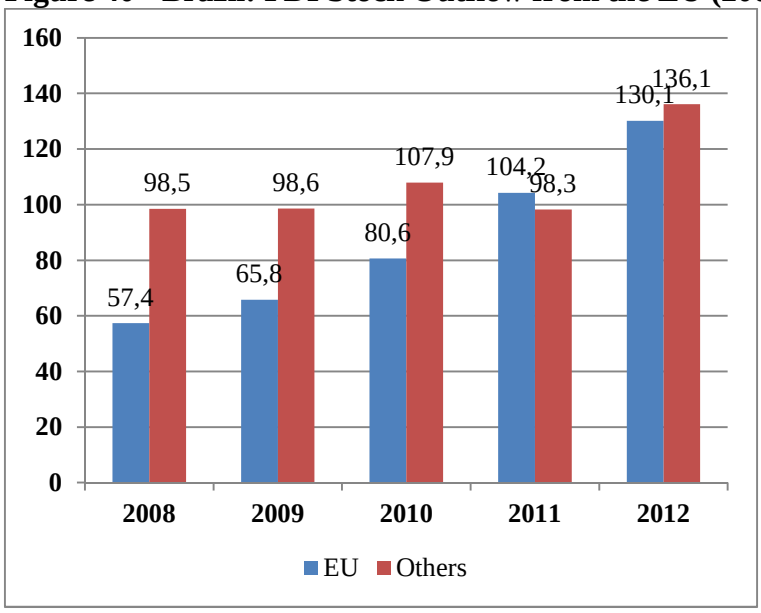
Figure 39 – Brazil: FDI Stock Inflow from the EU (2005 and from 2010 to 2012) in US$ Billion



Source: UNCTAD.

In terms of FDI stock inflow, the EU has significantly invested in Brazil when compared to other trade partners. In 2012, EU FDI stock in Brazil was of US$ 464.7 bn while other countries amount was only of US$ 282.1 bn. Hence, the EU members are responsible for more than 50% of FDI stock inflows for Brazil.

Figure 40 - Brazil: FDI Stock Outflow from the EU (2008-2012)



Source: UNCTAD.

For FDI stock outflows, the majority of Brazilian investments are focused in the EU. From 2010 to 2012, total amount of Brazil FDI stock outflow to the EU has raised US$ 72.7 bn or 126.6% in five years. It is worth to highlight that Brazilian FDI stock outflows are growing towards other trade partners, following the external policy of strengthening South-South integration and cooperation aspects.

VI.2. Regulatory Aspects

Investment is a key-topic in the current international trade dynamics. The technological evolution gave international capital flows the necessary fluidity to easily transpose the states' borders. This phenomenon provoked a significant change in how countries regulate and encourage investment internally and externally as well as how they coordinate their actions.

Brazil is a good example in the international investment changing landscape. According to the World Investment Prospects Survey 2013-2015, the country is the 5th most attractive country for future foreign investment in the World.[28] As reported by the Economic Commission for Latin America and the Caribbean (ECLAC), FDI inflows in Brazil reached U$ 62.495 billion in 2014.[29] In Latin America, the country is the primary destination for FDI as well as the main source of it since World War II.[30]

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[28] UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT. World Investment Prospects Survey 2013-2015. **UNCTAD**. Available at: < http://unctad.org/en/PublicationsLibrary/webdiaeia2013d9_en.pdf>. Accessed in: 10 Oct. 2015.

[29] ECONOMIC COMMISSION FOR LATIN AMERICA AND THE CARIBBEAN. Foreign Direct Investment in Latin America and the Caribbean 2015. **ECLAC**. Available at: < http://www.cepal.org/publicaciones/xml/8/52978/foreigndirectinvestment2013.pdf>. Accessed in: 27 oct. 2015.

[30] AGÊNCIA BRASILEIRA DE PROMOÇÃO DE EXPORTAÇÕES E INVESTIMENTOS. Investimento Estrangeiro Direto. **ApexBrasil**. Available at: < http://www2.apexbrasil.com.br/atrair-investimentos/investimento-estrangeiro>. Accessed in: 22 Oct. 2015.

In this aspect, it is important to highlight the growing importance of the country´s role not only as an investment receiver, but also as an investment promoter. In last years, the country is gaining more space as a capital exporter. As reported in the Census of Brazilian Capital Abroad presented by the Brazilian Central Bank, the total of Brazilian assets in foreign lands reached US$ 394.2 billion in 2014. This amount shows an increase of 0.7% compared to the year 2013. Regarding Brazilian foreign direct investment, the Census reported a decrease of 0.5% in the same comparison basis, achieving the figure of US$ 294 billons. [31]

A sensitive issue regarding the national policy on foreign investment concerns the Investor-State Dispute Settlement Mechanism, presented in the significant number of preferential agreements. The Investor-State Clause enables the foreigner investor to choose between the domestic jurisdiction and the international arbitration to settle any controversy arising during the execution of the Investment Agreement. It is argued that this provision would be in disagreement with article 1, I (national sovereignty principle) and article 5, XXXV (right of action) of the Brazilian Federal Constitution. The theme is controversial, attracting both criticism and support from different stakeholders.

The United States has a consolidated position regarding the adoption of the Investor-State Clause. The country encourages and promotes the endorsement of this dispute resolution device in the majority of its investment agreements. In contrast, the European Union demonstrates a more flexible attitude toward Investor-State dispute settlement.

Giving the strong public interest in the issue, the European Commission decided to launch a public consultation on a possible approach that could serve as the basis for its negotiations.[32] The public hearing took place from March to July 2014 and involved the participation of approximately 150.000 persons. In the past months, the European Commission analyzed the collected data and, on January 2015 disclosed the outcome of the consultation.[33]

The Report on the consultation identified four areas where further improvements should be explored: (i) the protection of the right to regulate; (ii) the supervision and functioning of arbitral tribunals; (iii) the relationship between ISDS arbitration and domestic remedies; and (iv) the review of ISDS decisions for legal correctness through an appellate mechanism.[34]

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[31] BANCO CENTRAL DO BRASIL. Censo de Capitais Brasileiros no Exterior (CBE): ano-base 2014. **BCB**. Available at: < http://www4.bcb.gov.br/rex/CBE/Port/ResultadoCBE2014p.pdf >. Accessed in: 27 oct. 2015.

[32] EUROPEAN COMISSION. Preliminary Report: Online Public Consultation on Investment Protection and Investor-to-State dispute Settlement (ISDS) in the Transatlantic Trade and Investment Partnership Agreement. **EC.** Available at: <http://trade.ec.europa.eu/doclib/docs/2014/july/tradoc_152693.pdf>. Accessed in: 25 Oct. 2015.

[33] EUROPEAN COMISSION. Consultations: Online Public Consultation on Investment Protection and Investor-to-State dispute Settlement (ISDS) in the Transatlantic Trande and Investment Partnership Agreement. **EC**. Available at: <http://trade.ec.europa.eu/consultations/index.cfm?consul_id=179>. Accessed in: 25 Oct. 2015.

[34] EUROPEAN COMISSION. Report on the Online Consultation on Investment Protection and Investor-State dispute settlement in the Transatlantic and Investment Partnership Agreement. Strasbourg, 13 January 2015. **EC**. Available at: <http://europa.eu/rapid/press-release_MEMO-15-3202_en.htm>. Accessed in: 13 Oct. 2015.

Nevertheless, this report is only a first step. During 2015, the European Commission intends to further consult EU stakeholders, EU Member States and the European Parliament as part of a wider debate on the approach to Investor State Dispute Settlement. Until then, no negotiations are currently taking place on ISDS issues.[35]

Hence, in the case of a future Brazilian negotiation on investment, the Investor-State Clause should not pose a problem to the European Union, but it may pose one for the United States.

VII. NEW GENERATION PREFERENTIAL TRADE AGREEMENTS AND MEGA-AGREEMENTS

The so-called new generation trade agreements negotiated by the EU reflect its economic priorities and values, and the aim of address the 21st century trade issues. As an important trade partner for Brazil, it is essential to identify trends in the new trade agreements negotiated by the EU in order to examine what impacts similar agreements would affect the Brazilian trade policy and which trade instruments should be negotiated.

The EU has 37 PTAs in force. These agreements have a dense regulatory framework with WTO-plus and WTO-extra rules, i.e., more ambitious regulation than the ones already included in the WTO or innovative rules not addressed by the Organization. The European PTAs have been updated and improved in order to meet the current needs of international trade.

EU PTAs normally excludes a short list of sensitive industrial goods in its schedule, representing less than one per cent of tariff lines. On the contrary, sections of the EU agricultural schedule have been excluded from reduction or liberalization, allowing for the protection of key EU agricultural products such as beef, poultry, dairy, olive oil, rice barley, wheat, rye, sugar and wine.[36]

The content of EU agreements generally takes into consideration a number of factors which reflects a relative degree of flexibility, including a policy of differentiation between agreements with developed economies, emerging market developing countries, middle-income developing countries and small states and less developed economies. According to the EU, this is relevant for all elements of PTAs but especially with regard to commitments in tariffs for agricultural goods and services, such as establishment of service providers, cross-border supply of services and government procurement, reflecting flexibility in the completion of PTAs.[37] This tendency for incorporating asymmetric provisions may result in exclusions of sensitive sectors or products, preferential access to the EU market, long transition periods, financial assistance etc. Furthermore, the EU encourages regional integration and multilateral liberalization as a

[35] Ibid.

[36] AHEARN, Raymond J. **Europe's Preferential Trade Agreements**: Status, Content, and Implications. Congressional Research Service. March 2011, p. 28. Available at: < http://fas.org/sgp/crs/row/R41143.pdf>.

[37] HEYDON, Kenneth; WOOLCOCK; Stephen. **Comparing international trade policies:** the EU, US, EFTA and Japanese PTA strategies. European Parliament's Committee on International Trade. February 2014. Available at: < http://www.europarl.europa.eu/RegData/etudes/etudes/join/2013/433753/EXPO-INTA_ET(2013)433753_EN.pdf >.

means to foster complementarity between PTAs, regions and the multilateral trading system.

The analysis of the PTAs signed by the EU highlights some important characteristics of the trade policies pursued by it. The following table sheds light on some of the main topics observed in the PTAs signed by the EU.

Table 18 – General Content of the EU new generation PTAs

	EU
Tariffs*	Less than full coverage of tariffs
Services	Positive list approach to establishment and cross border services commitments
Rules of Origin	Simplified system applied to least developed and some developing countries; Specific rules applied to developed economies. Strict rules applied to sensitive sectors.
Trade Remedies**	General provisions according to WTO rules. Adopts the lesser duty rule for dumping.
Investment	Establishment of EU exclusive competence for Foreign Direct Investment (FDI)
Government Procurement	Government Procurement Agreement (GPA) like provisions with some differentiation according to the level of development of the PTA partner on rules as well as asymmetric commitments in the schedule of entities covered.
Competition Policy	Establishes a framework for cooperation between competition authorities from the parties. EU-Korea identifies specific anti-competitive practices as being incompatible with the agreement.
Trade Facilitation	Framework for cooperation that seeks to ensure that the Parties comply with their respective customs laws and regulations and with relevant international agreement
Intellectual Property	The EU tend to match the US PTAs commitments in terms of substantive provisions, the major difference being the recognition of developing country interests and needs on topics such as genetic resources and traditional knowledge.
TBT and SPS	Cooperation on standards and regulatory issues, transparency; marking/labelling. Specific commitments with considerable practical relevance for sensitive sectors.
Labor and Environmental Standards	Standard human rights clause in all PTAs

Sources: European Policy Department. Made by: CCGI

* The EU policy has close to 100% coverage of industrial tariffs either immediately or after a short transition period (6 years average, with room for exceptions), but excludes more tariff lines in agriculture. The EU PTAs also allows developing countries policy space in their sensitive sectors.

**Trade remedies provisions adopted by the EU in general incorporates the rules established in the multilateral system. However, the EU includes the lesser duty rule, the public interest criteria is applied (for the EU), and provides for a longer maximum period for bilateral safeguards, allowing for another 2 years up to a maximum of 4 years).

VII.1. WTO-plus and extra rules

As stated above, amidst the content of EU PTAs there are innumerous WTO-plus and WTO-extra provisions. WTO-plus provisions can be defined as provisions of PTAs that come under the current obligations and rules of the WTO, where the parties undertake commitments that build on or deepen commitments they have already made at the multilateral level. A WTO-extra provision refers to commitments in policy areas not currently covered or regulated by the WTO.[38]

The following tables describe a non-exhaustive list of WTO-plus and extra provisions that have been incorporated into EU PTAs.

Table 19 - Description of WTO-Plus Provisions

Provision	Content
FTA industrial goods	Tariff liberalization; elimination of non-tariff barriers
FTA agricultural goods	Tariff liberalization; elimination of non-tariff barriers
Customs Administration	Provision of information; publication on the internet of new laws and regulations; training
Export taxes	Elimination of export taxes
Sanitary and Phytosanitary (SPS) measures	Affirmation of rights and obligations under the SPS agreement; harmonization of SPS measures
Technical Barriers to Trade (TBT)	Affirmation of rights and obligations under the TBT agreement; harmonization of regulations; mutual recognition agreements
State Trading Enterprises (STE)	Establishment or maintenance of an independent competition authority; non-discrimination regarding production and marketing conditions; affirmation of Article XVII GATT provisions
Antidumping (AD)	Retention of AD rights and obligations under WTO agreement
Countervailing Duty measures (CVD)	Retention of CVD rights and obligations under the WTO agreement
State aids	Assessment of anti-competitive behavior; annual reporting on the value and distribution of state aids provided; provision of information
Public Procurement	Progressive liberalizations; national treatment and/or non-discrimination principle; publication of laws and regulations on the internet; specification of public procurement regime
Trade-related Investment Measures (TRIMs)	Provisions concerning requirements for local content and export performance on foreign direct investment
Trade in Services Agreement (GATS)	Liberalization of trade in services
Trade-related Intellectual Property Rights (TRIPs)	Harmonization of standards; enforcement; national treatment and most-favored nation treatment

Source: "Beyond the WTO? An Anatomy of EU and US preferential trade agreements," Bruegel Blueprint Series VII, 2009.

[38] HORN, Henrik; MAVROIDIS, Petros C.; SAPIR, André. **Beyond the WTO?** An Anatomy of EU and US preferential trade agreements. Bruegel Blueprint Series, Volume VII, 2009, p. 4.

Table 20 – Description of WTO-Extra Provisions

Provision	Content
Anti-corruption	Regulations affecting criminal measures relating to international trade and investment
Competition policy	Harmonization of competition laws; establishment or maintenance of an independent competition authority
Consumer protection	Harmonization of consumer protection laws; exchange of information and experts
Data protection	Exchange of information and experts; joint projects
Environmental laws	Development of environmental standards; enforcement of national environmental laws; establishment of sanctions for violation of environmental laws
Investment	Development of legal frameworks; harmonization and simplification of procedures; establishment of mechanisms for settlement of disputes
Movement of capital	Liberalization of capital movements; prohibition of new restrictions
Labor market conditions	Regulation of the national labor market; affirmation of International Labor Organization (ILO) core commitments
Intellectual property rights (IPR)	Accession to international treaties not referenced in the TRIPs Agreement
Human rights	Respect for human rights
Illicit drugs	Joint projects on reduction of supply and demand
Money laundering	Harmonization of standards; technical and administrative assistance
Social matters	Coordination of social security systems; non-discrimination regarding working conditions
Terrorism	Exchange of information and experience; joint research and studies
Visa and asylum	Exchange of information; drafting legislation; training

Source: "Beyond the WTO? An Anatomy of EU and US preferential trade agreements," Bruegel Blueprint Series VII, 2009.

The following items will more closely consider some of the PTAs that reflect the new trade policies adopted by the EU and the provisions that are currently being negotiated under the so-called Mega-Agreements.

VII.2. Korea-US FTA and Korea-EU FTA

In order to assess the main regulatory models that have been adopted in the preferential level, the following agreements between the US and Korea (KORUS) and EU and Korea (KOREU) are analyzed, once they are considered the most advanced models of PTAs of each of these two major international trading partners and should serve as a basis for negotiations of new agreements with the UA or the EU.

It appears that both KORUS and KOREU have a large number of rules that go beyond the WTO framework and expand the regulatory frontier of international trade. Although both FTAs share many similarities, there are various differences between these FTAs that must be highlighted.

KORUS

Among the topics regulated in KORUS, we highlight the transparency measures in the areas of technical barriers to trade, services and financial services.

Regarding regulatory barriers, the PTA allows the presence of representatives of the government partner in the development of standards, technical regulations and conformity assessment procedures. In the context of services, it is envisaged justification in writing of action taken if this is not preceded by discussions with the other party. Other topic relates to the facilitation of e-commerce, with the prohibition of discrimination to digital products and the elimination of tariffs on these products.

With respect to intellectual property, the KORUS exhibits increased protection compared to the rules of TRIPS. The protection of copyright is extended to 70 years; there is an intensification of the fight against piracy; patent revocation for non-use is prohibited, among other measures. The agreement also regulates investments, including the inclusion of the investor state arbitration.

The following tables describe the major characteristics among the trade agreement analyzed regarding its provisions to preferential agreements.

Table 21 – Description on KORUS Provisions

Theme	Content		
Market access	Agriculture	Tariffs will be eliminated immediately for two thirds of American farm exports. Tariffs and import quotas applied to most other agricultural goods will be eliminated in 10 years; rates applied to commodities and other products should be eliminated within 23 years from the entry into force of the agreement. Korea has the safeguards applied to 30 agricultural products, e.g., beef, pork, sugar and alcohol.	
		Beef: total reduction of tariffs by Korea in 15 years.	
		Pork: tariff reduction within 10 years after the implementation of the agreement - with safeguards.	
		Chicken meat: tariff reduction in 10-12 years.	
		Dairy products: total reduction of tariffs on cheese, milk and butter in 15 years.	
		Fruits, vegetables and nuts: significant tariff reduction (tending to zero) on most products within 10 years.	
		Grains: elimination of all tariffs applied.	
	Motor vehicules	Total tariff reduction within 10 years.	Safeguard for the American automotive industry.
	Textiles and clothing	Immediate tariff elimination on 52% of Korean exports to the USA (in value); 21% within five years and the remaining 27% within 10 years. There is a provision of a special safeguard mechanism for the textile sector	
	Nontariff barriers	Promotion of transparency, allowing nationals of the other party to participate in the development of standards, technical regulations and conformity assessment procedures. Mutual recognition to US standards; accepts US safety regulations for imported US cars.	
	Sanitary and Phytosanitary Measures	Although South Korea presents some sensibilities regarding health issues, as requirements related to the import of American beef cattle, the KORUS Agreement does not include any SPS clause with content related to specific commodities, despite American efforts towards Korean full market liberalization for SPS measurements. The Committee on SPS measures established under the KORUS will serve as a forum to implement the terms of the WTO SPS Agreement.	

	Rules of Origin (ROO)	Rules of origin based on different criteria: • Goods wholly obtained in one particular country; • substantial transformation (the origin of the good is determined to be the last place in which it was substantially transformed into a new and distinct article of commerce); • tariff shift; • technical test (for certain chemicals: requires that certain production or sourcing processes be performed that may - positive test - or may not - negative test - confer originating status); • local content/ regional value content test; • value added; Special ROO for textile or apparel goods: "yarn forward principle" (it is a type of tariff shift test that requires, through a tariff shift, that textile and apparel products must originate in an FTA country from the yarn stage forward; (fibers may come from anywhere) (Annex 4-A) Special ROO for automotive products: 35% of the components used for manufacturing or 55% of the components of the final product must be originated in either of the two signatory countries to benefit from tariff reduction.
	Trade Facilitation: e-commerce	Prohibition of discrimination against digital products and of imposing tariffs on these products.
	Environmental Goods	Total tariff elimination within five years[39].
Services (Partial liberalization – negative list)	Financial Services	American companies in Korea will receive the same treatment given to Korean companies.
	Audiovisual Services	Greater market access for American companies that provide audiovisual services; less restricted local content; liberalization of restrictions relating to the ownership of broadcasters and film companies by completely foreign companies.
	Entertainment	Reduction of quotas related to television programs.
Transparency	Increased transparency in TBT and financial services.	TBT: (i) allows for the presence of representatives of the government partner in the development of standards, technical regulations and conformity assessment procedures; and (ii) provides a minimum of 60 days for

[39] The definition of environmental goods used is based on the *Environmental Goods Convergence List* presented as a non-paper at WTO, covering products from HS Chapters 39, 44, 69, 70, 73, 76, 84, 85, 89, 90 and 95. It should be noted that this list does not include ethanol in the list of environmental goods.

		notification.
		Services: if there is no prior notice or opportunity for discussion of a proposed regulation, one must justify the act by written .
		Financial services: regulation authorities must decide within 120 days on the request of an investor or financial institution.
Intellectual Property	TRIPS plus provisions. Increases intellectual property protection, including for software, music, movies, videos and text.	
	Copyright: • Copyright protection was extended to 70 years after the author's death ; • Criminalizes the recording of films in movie theaters; • Intensify the fight against piracy on the Internet ; • Prevents manipulation of technical protection measures – TPM Patents: • Cancel the patente revocation for non-use; • Establishes a compensation for unreasonable delays that occur in granting the patent Trademarks: • Requires seizure, confiscation and destruction of counterfeit and pirated goods and the equipment used for its production; • Prevents violators of intellectual property rights of dispatching counterfeit goods through ports and Korean free trade zones through new customs legislation; • Protection of sound and scent aspects of a trademark; • Protection of domain names on the internet. • Protection of encrypted program-carrying satellite and cable signals	
Dispute Settlement	Designation of contact points in order to facilitate communication and bilateral cooperation among the Parties.	
Labor Clauses	Since 2007, the US has a policy aimed at implementing labor clauses in preferential agreements in which they are party[40]. This policy includes mainly the adoption of labor standards established by the ILO and coercitive rules aiming to force the application of these standards.	
Government Procurement	Reaffirms WTO GPA and expands the criteria aiming to cover more contracts. The provisions of KORUS apply to contracts with a value equal to or greater than $ 100 000, while the GPA applies to contracts equal to or greater than $ 193 000.	
Environment	Environmental clauses are subject to hard law, subject to the resolution of disputes between the parties and to trade sanctions mechanism.	
Investiments	Protection to foreign investors based on the principle of national treatment; Exceptions to the principle of national treatment must be listed in annexes to the agreement; Application of the MFN principle to foreign investors; It must be ensured for foreign investments the application of minimum standards internationally agreed, such as fair and equitable treatment; Setting limits on government expropriation of investments covered by the	

[40] The New Trade Policy for America. Available at: <http://waysandmeans.house.gov/media/enewsletter/5-11-07/07%2005%2010%20new%20trade%20policy%20outline.pdf >.

	agreement; Free transfer of financial capital pertaining to investments of both parties covered by the agreement; Prohibition of performance requirements to investments from the other party; Establishing procedures for resolving investor-State disputes;

Source: PTAs KORUS, KOREU. Elaborated by CCGI.

KOREU

The EU PTA with Korea liberalizes almost all tariffs across the board within a transition periods of less than 7 years. But his may not be an indicator of future trends given that Korea exports few agricultural products.

In KOREU stands out Korea's commitment to recognize the standards set by the United Nations Economic Commission for Europe as equivalent to Korean standards for sanitary standards considered essential, as well as harmonization of other 29 patterns.

As regards intellectual property, strong protection is afforded to geographical indications, as well as to copyrights, extending the term of protection to 70 years after the author's death. The theme of regulatory transparency is also discussed.

The following table describes the major characteristics regarding provisions in this agreement.

Table 22 – Description on KOREU Provisions

Theme	Contenten		
Market access	Manufactured and agricultural products	Substantial elimination of tariffs progressively: prediction of 98.7% elimination of tariffs in terms of commercial value in the first five (5) years of implementation of the agreement. Certain agricultural products and sensitive fish will have a period of greater than 7 (seven) years transition. Only a small number of agricultural products are excluded from elimination rate, as rice. There are also provisions related to bilateral safeguards.	
	Non-Tariff Barriers Sector-specific annexes	Electrical and electronic equipments	Eliminates third party certification by establishing a “supplier’s declaration of conformity”; Use of international standards
		Motor vehicles and parts	Regulatory convergence approach based on the United Nations Economic Commission for Europe (UNECE) standards over a 5 year period.
		Pharmaceutical products/ medical devices	Strong transparency rules for Korea’s regulatory system, especially regarding pricing and reimbursement rules.

			Enhance transparency and regulatory cooperation.
		Chemicals	Ensure transparency and enhance cooperation
	Rules of Origin (ROO)	ROO based on different criteria or on a combination of these rules: • Goods wholly obtained in one particular country; • Sufficient transformation in a Party; • Tariff shift; • Technical test; • Local content/ regional value content test; • Value added. The originating good should be accompanied by an origin declaration made out by: (i) an approved exporter; or (ii) any exporter for any consignment of originating products whose total value does not exceed 6000 Euros There is also different types of rules regarding specific products, including more strict rules in sensitive sectors: • Machines: for most products, non-EU parts /materials should not represent more than 45% of ex-works price of the machine; • Cars: moderate increase of levels of permissible foreign content from 40% to 45%; • Articles in base metal: for most products, the base metal itself could be imported, as long as non-EU inputs don't represent more than 50% of the ex-works price of the final product; • Clothing: for most products, a double transformation should take place in the EU or in Korea.	
	Textiles and clothing	Immediate elimination of 92% of tariffs; the remaining tariffs will be eliminated within 5 years.	
	Antidumping	Lesser duty obligation in the application of anti-dumping measures.	
Services (positive list)	Telecommunication	Satellite broadcasters can operate directly cross-border into Korea, without the obligation to establish a relationship with a Korean operator; Allows 100 percent indirect ownership;	
	Environmental	Among the liberalized environmental services are: (i) Waste Water Services; (ii) Solid/hazardous waste management, excluding cross-border transport of hazardous waste; (iii) Protection of ambient air and climate; (iv) Remediation and clean-up of soil and waters; (v) Noise and vibration abatement; (vi) Protection of biodiversity and landscape; e (vii) Other environmental and ancillary services.	
	Express delivery	EU providers of international express delivery services would have access to the Korean market.	
	Shipping	Full market access and the right of establishment in South Korea for EU shipping firms; non-discriminatory	

		treatment in the use of port services and infrastructure.
	Financial	Full market access for EU financial firms.
	Legal	EU lawyers would be allowed to use their home titles. European law firms will be allowed to open offices in South Korea to advise foreign investors or Korean clients on non-Korean law. Law firms will also be able to form partnerships with Korean firms and recruit Korean lawyers to provide multijurisdictional services
SPS	The Agreement contains commitments relating to transparency, consultation and working together toward a common understanding of international standards. Korea agrees to recognize the standards set by United Nations Economic Commission for Europe (UNECE) as equivalent to Korean standards for sanitary standards considered essential. Korea also pledged to harmonize regulations concerning the other 29 patterns according to UNECE within a period of five years. For other standards not subject to harmonization, Korea undertook not to apply them so that you can limit access to markets. Finally, the Agreement provides that any new standards on SPS measures adopted by Korea should be based on European standards.	
Competition	Ban and sanction of anti-competitive practices such as cartels, abuse of companies with dominant market position and anti-competitive mergers (hard law).	
	The parties agree to remove distortions of competition caused by subsidies to the extent that affect international trade.	
Government Procurement	It is possible to expand procurement opportunities to public works concessions and "Built-Operate-Transfer" (BOT) contracts not yet covered by the Government Procurement Agreement (GPA) commitments.	
Intellectual Property	Higher level of protection for EU geographical indications such as: Champagne, Prosciutto di Parma, Feta cheese, Rioja, Tokaji wine or Scotch whisky; In case of conflict between the registration of a trademark and the registration of an existing geographical indication, the latter shall prevail.	
	Copyright: adequate remuneration for European holders of related music and other artwork rights, copyright protection for 70 years after the author's death etc.	
	Provisions regarding the protection of designs, including unregistered ones.	
Transparency of the regulatory environment	The Agreement ensures horizontal commitments to transparency of regulations affecting matters subject to the agreement.	
Sustainable Development	• Social Clauses: ratify and implement the updated ILO conventions; • Environmental Standards: implement the provisions of all multilateral agreements on the environment in which they participate. • Total tariff reduction for environmental products within three years from the date of entry into force of the Agreement; • Open access to markets for environmental services.	
Investments	No provisions.	

Source: PTAs KORUS, KOREU. Elaborated by CCGI.

Both US and EU agreements with Korea deal with the so-called Singapore issues and more: government procurement, competition, investment, trade facilitation, and labor and environmental standards. In government procurement, both agreements go beyond the agreed in the multilateral level. On environmental issues, the KORUS enforce clauses of hard law, while KOREU uses sustainability standards and liberalization of green goods.

In general, the two deals bring an extensive regulatory framework that goes beyond the provisions of the WTO and imposes new rules for bilateral trade. Measures relating to harmonization of standards, transparency and liberalization in services facilitating trade between the Parties by promoting greater integration between the economies of the agreements

VII.3. EU-Canada FTA

The consolidated text of the Canada-EU Comprehensive Economic and Trade Agreement (CETA) is worth noting.

The current version of CETA's consolidated text[41] follows the new framework set by KOREU, covering topics already agreed at the multilateral level and including new topics, as electronic commerce, sustainable development, labor, environment, regulatory cooperation, mutual recognition of professional qualifications etc.

The agreement establishes full tariff elimination on all non-agricultural goods on the date of its entry into force. Regarding industrial goods, 99 per cent will be duty free immediately (100 per cent after seven years), including forestry, chemical and plastic products that will be duty free on Day 1. About 95.5 per cent of fish and seafood products will be duty free immediately (100 per cent after seven years). On the subject of agricultural products, 94 per cent of agricultural tariffs will be eliminated, with tariffs immediately eliminated from items including maple syrup, fresh and frozen fruits, cherries, fresh apples and cat and dog food. Canadian producers will be able to sell a significant higher amount of beef and pork, and there will also be duty free - quota free access to the EU dairy market.[42]

In general, the rules of origin applied to the agreement follow the wholly obtained and sufficient production methods. There are some exceptions regarding products with a higher proportion of imported inputs, which are listed in an annex designed to product-specific rules of origin, such as automobiles, textiles and apparel, processed foods, among others.

The automobiles sector presents some sensibilities that are addressed throughout the agreement. The main rule of origin have a 50% limit on non-originating materials, decreasing to 45% after seven years, presenting an accumulation provision in the case of an EU-US FTA. Canada also agrees to incorporate several United Nations Economic Commission for Europe (UNECE) standards within its regulatory regime in order to meet European technical standards for motor vehicles.

The chapter designed to address regulatory cooperation stands out for creating, for the first time, a formal mechanism aiming to facilitate joint initiatives between Canadian and EU regulatory authorities. In the field of non-tariff barriers, there are procedures through which technical regulations from both parties may be requested to be

[41] EUROPEAN COMMISSION **Note for the attention of the Trade Policy Committee**: CETA Consolidated text. Brussels, 5 August 2014.

[42] **Technical Summary of Final Negotiated Outcomes**: Canada-EU Comprehensive Economic and Trade Agreement. Available at: < http://www.actionplan.gc.ca/sites/default/files/pdfs/ceta-technicalsummary.pdf>.

considered as equivalent. In the same way, a protocol will provide for the acceptance by Canada and the EU of conformity assessment test results and product certification by recognized bodies in the other party.

The investment chapter contains provisions on expropriation (direct and indirect) and provides for a detailed investor-state dispute settlement mechanism. CETA's services chapter guarantees great market access, labor mobility (including mutual recognition of professional qualifications) and commitments regarding temporary entry.

Some provisions related to intellectual property, as copyright provisions, trademark and industrial design, only enforces compliance with international conventions on the topic and do not expand the terms of protection already provided. On the contrary, geographical indications have detailed provisions, following the European policy agenda already established in other agreements.

VII.4. TPP Agreement and TTIP negotiations

Within the proliferation of APCs, two initiatives stand out among the agreements under negotiation: the Trans-Pacific Partnership – TPP, signed in October 2015, and the Transatlantic Trade and Investment Partnership – TTIP, in negotiation. The TPP is an initiative launched by the US to ensure access to markets in the Pacific region and to hinder China's influence in the region. Parts of the agreement are Australia, Brunei, Canada, Chile, Singapore, USA, Japan, Malaysia, Mexico, New Zealand, Peru and Vietnam. Negotiations of TTIP, on the other hand, seek an agreement in the Atlantic region, between the U.S. and the EU, aiming to lay the basis of trade rules for the current century.

These Agreements are named mega due to de fact that they cover a substantial part of international trade and they aim to promote a substantial reduction of tariffs and non-tariff barriers. In addition, they intend to establish the regulatory framework for the new themes of contemporary trade as investment, competition, environment and climate, private standards and, especially, regulatory coherence, perhaps the most important point of the whole initiative.

E-commerce, digital media trade, regulatory coherence, state enterprises, small and medium enterprises, global value chains, among others, are brand new themes that should be addressed by those agreements.[43].

TPP

After 19 formal rounds and several official meetings, the Trans-Pacific Partnership (TPP) negotiations were concluded in Atlanta (USA) on October 4, 2015. Due to the great number of participants with different levels of economic development and diverse interests, reaching a final consensus was no easy task.

[43] FERGUSSON, I.; COOPER, W.; JURENAS, R.; WILLIAMS, B., **The Trans-Pacific Partnership Negotiations and Issues for Congress**. Congressional Research Service Report for Congress, june 2013, p. 47-48 e AKHTAR, S. JONES, V., **Proposed Transatlantic Trade and Investment Partnership (TTIP):** In Brief. Congressional Research Service, July 2013

The exact wording of the full agreement is now available and in order to enter into force, the Agreement needs first to be ratified in the legislature of each Member-State.

The Agreement seeks to address issues that promote comprehensive market access, the development of production and supply chains among TPP members, and regulatory coherence through the elimination of tariff, quotas and non-tariff barriers and the regulation of telecommunications, e-commerce, textiles, services (including financial services), customs, rules of origin, government procurement, environment, trade capacity building, investments, competition, intellectual property, labor standards, and state-owned enterprises.

One of the group's major achievements is the negotiation of regulatory coherence among the parties. This aspect will surely benefit its parts but, at the same time, will create an uncertain scenario for all other trade partners, because, due to their size, they will establish a new system of rules, probably in conflict with WTO because it will discriminate parts-in from parts-out of the PTA.

The Intellectual Property Rights and the Environmental chapters of the TPP is the most challenging one. Some of the provisions relating to the enforcement of patents and copyrights provide intellectual property restraints beyond those set in the KORUS agreement.

The environmental chapter mostly reflects the way the US addresses environmental issues and climate change challenges in its PTAs. A key element of this chapter is the commitment by the parties to adopt and implement laws and regulations to fulfil their obligations under Multilateral Environmental Agreements (MEAs) already in force. The chapter also contains provisions on environmental goods and services and encourages the adoption of voluntary mechanisms to enhance environmental performance. Furthermore, provides a detailed dispute resolution mechanism regarding environmental issues.

Regarding investments, there was a lot of controversy surrounding the issue of investor-State dispute settlement (ISDS) system during the TPP negotiations.[44] On the one hand, the US demonstrated no flexibility on the topic, since this clause already exists in other PTAs in which they are part and it was unlikely they were going to deviate from the main points in its previous PTAs. On the other hand, the other parties tended not to agree with this clause as it could mean great juridical instability within its territories, since it is natural that investors will choose to take up cases in the international tribunal where their chances of success and the payout are higher than in local courts.

At last, the TPP´s Chapter on Investment adopted the Investor-State Dispute Settlement (ISDS) mechanism that provides access to an independent, fair and transparent dispute resolution, subjected to appropriate safeguards. Hence, the TPP´s Investment Chapter preserves the rights of governments to legislate and regulate in the public interest, including for public health and environmental reasons.[45]

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[44] **TPP State of Play after Salt Lake City**. 19-24 November 2013 Round of Negotiations. Available at: < https://wikileaks.org/IMG/pdf/tpp-salt-lake-extracts-.pdf>.

[45] GOVERNMENT OF CANADA. Trans-Pacific Partnership (TPP) Investment Chapter. **CA**. Available at: <http://www.international.gc.ca/trade-agreements-accords-commerciaux/agr-acc/tpp-ptp/understanding-comprendre/08-Investment.aspx?lang=eng>. Accessed on: 28 Oct. 2015.

The TPP was the first Mega Regional Agreement to have its negotiations concluded. Its adoption was received with surprise by the majority of the international community that did not expect the acceleration of the last negotiations rounds. Even though the Agreement still needs to be ratified by the legislature of the 12 members in order to enter into force, its conclusion has already affected the negotiation of other international trade agreements, putting pressure, for example, on the conclusion of the TTIP and the Agreement between Mercosur and European Union.

TTIP

The conclusion of an agreement of major proportions such as TTIP may cause a significant transformation not only for the parties involved in the negotiations, but for all partners that have trade relations with these countries. This is because the TTIP aims to be a new generation trade agreement, one that moves away from the traditional mutual elimination of tariffs in order to address regulatory barriers that are not fully encompassed at the multilateral level.

Both parties deem regulatory diversion may affect trade by creating unnecessary barriers, unnecessary expenses and unnecessary duplication of rules.[46] The search for regulatory compatibility among US and EU aims to bring down additional costs, while achieving the levels of health, safety, consumer, labor, and environmental protection that each side believes appropriate. It is worth noting that this regulatory convergence may comprise the entire range of new themes based on principles of equivalence and mutual recognition, but third countries not involved in the negotiations, as Brazil, may find themselves excluded from the rule making and forced to prove compliance.

Discussions over the content of TTIP provisions are still recent and the details have not yet been published. Nonetheless, according to the European Commission paper on the State of Play of TTIP negotiations[47], it is possible to infer that regulatory coherence is a major topic, as well as technical barriers regarding some specific sectors as textiles, chemicals, pharmaceuticals, cosmetics, medical devices, motor vehicles, information and communication technologies, engineering, and pesticides.

There are two issues that are sensitive to many possible partners of the EU and the US. They are the propositions on intellectual property rights and the provision investments.

To exam the alternatives already available, the following tables describe the major characteristics among the trade agreements analyzed in the present paper regarding provisions on Intellectual Property Rights and Investment.

[46] EUROPEAN COMMISSION. **Transatlantic Trade and Investment Partnership**: The Regulatory Part. Available at: < http://trade.ec.europa.eu/doclib/docs/2013/july/tradoc_151605.pdf>.
[47] EUROPEAN COMMISSION. **State of Play of TTIP negotiations ahead of the 6th round of the negotiations**. 11 July 2014.

Table 23 – Major characteristics of the Agreements regarding provisions on Intellectual Property Rights

	WTO	KORUS	KOREU	TTIP[48]	TPP[49]
Copyright and Related Rights	General work: no less than **50 years** from the end of the calendar year of authorized publication, or, failing such authorized publication within 50 years from the making of the work, 50 years from the end of the calendar year of making. Performers and producers of phonograms: shall last at least until the end of a period of **50 years** computed from the end of the calendar year in which the fixation was made or the performance took place Broadcasting: at least **20 years** from the end of the calendar year in which the broadcast took place	Terms of protection: (a) on the basis of the life of a natural person, the term shall be not less than the life of the author and **70 years** after the author's death; and (b) on a basis other than the life of a natural person, the term shall be: (i) not less than **70 years** from the end of the calendar year of the first authorized publication of the work, performance, or phonogram; or (ii) failing such authorized publication within **25 years** from the creation of the work, performance, or phonogram, not less than **70 years** from the end of the calendar year of the creation of the work, performance, or phonogram.	Terms of protection: shall be not less than the life of the author and **70 years** after the author's death Broadcasting: no less than **50 years** after the first transmission of a broadcast	**Intellectual Property Rights/Geographical Indications** As regards IPR, the two sides are currently engaged in discussions aiming to define the architecture of the chapter and identify potential topics to be addressed. The EU has provided an indication of the issues it prioritizes. On GIs, discussions were held on both the EU and US objectives	Terms of protection: (a) on the basis of the life of a natural person, the term shall be not less than the life of the author and **70 years** after the author's death; (b) on a basis other than the life of a natural person, the term shall be: (i) not less than 70 years from the end of the calendar year of the first authorized publication of the work, performance, or phonogram; or (ii) failing such authorized publication within 25 years from the creation of the work, performance, or phonogram, not less than 70 years from the end of the calendar year of the creation of the work, performance, or phonogram.
Trademarks	Term of protection: no less than **7 years;** the registration of a trademark shall be renewable indefinitely.	Term of protection: no less than **10 years** Includes detailed provisions for the creation of an efficient and transparent trademark registration process, comprising electronic applications, refusals of protection to be written and reasoned, and the opportunity for interested parties	There is no extension from the TRIPs 7 years Includes provisions for the creation of an efficient and transparent trademark registration process, comprising electronic applications, refusals of protection to be written and reasoned, and the opportunity for interested parties		Term of protection: no less than **10 years**

[48] According to the paper published by the European Commission on the State of Play of TTIP negotiations ahead of the 6th round of negotiations. July 2014.
[49] According to the negotiating positions on Intellectual Property released by Wikileaks in November 2013.

		to contest decisions. Trademark protection is also used to cover Geographic Indications	to contest decisions	
Geographical Indication	Special provision for wines and spirits		Requirement of 'reciprocal' or 'mutual' protection for GIs Specific geographical indications for wines, aromatized wines and spirits	Provisions to recognize and protect Geographical Indications .
Domain names on the Internet	–	Appropriate procedure for the settlement of disputes in order to address the problem of trademark cyber-piracy		Appropriate procedure for the settlement of disputes in order to address the problem of trademark cyber-piracy
Industrial Designs	Protection for at least **10 years**		Protection for at least **15 years**	Provision on the protection to industrial design
Patents	Term of protection: 20 years from the filing date Article 27(2) Members may exclude from patentability inventions, the prevention within their territory of the commercial exploitation of which is necessary to protect *ordre public* or morality, including to protect human, animal or plant life or health or to avoid serious prejudice to the environment, provided that such exclusion is not made merely because the exploitation is prohibited by their law Article 27(3): Members may also exclude from patentability: (a) diagnostic, therapeutic and surgical methods for the treatment of humans or animals; (b) plants and animals other than micro-organisms, and essentially biological processes for the	Plants and animals other than micro-organisms, and essentially biological processes for the production of plants or animals other than non-biological and microbiological processes are not excluded from patenteability. Article 6(a) compensation for unreasonable delays that occur in granting the patent (more than 4 years in registration). Special measures related to certain regulated products (Article 18.9): pharmaceuticals and agricultural chemical products: period of protection of **5 years** for undisclosed data concerning pharmaceutical products and **10 years** for agricultural chemicals. Prohibits the registration of any	The Parties shall extend patent life for up to 5 years, on application, to compensate for protection lost during approval procedures, such as for new pharmaceutical products. Provision for data exclusivity: at least **5 years** for pharmaceuticals and at least **10 years** for new plants. The Parties recognise the importance of the Declaration on the TRIPS Agreement and Public Health	General Provisions relating to Pharmaceutical Products and Agricultural Chemical Products The Parties recognize the importance of the Declaration on the TRIPS Agreement and Public Health If there are unreasonable delays in a Party´s issuance of patents, that Party shall provide the means to, and at the request of the patent owner shall, adjust the term of the patent to compensate for such delays.

	production of plants or animals other than non-biological and microbiological processes. However, Members shall provide for the protection of plant varieties either by patents or by an effective sui generis system or by any combination thereof. The provisions of this subparagraph shall be reviewed four years after the date of entry into force of the WTO Agreement. Compulsory licensing of pharmaceuticals: Compulsory licensing is when a government allows someone else to produce the patented product or process without the consent of the patent owner. It is one of the flexibilities on patent protection included in the WTO's agreement on intellectual property. What has changed is a provision that used to say that compulsory licences must be granted mainly to supply the domestic market (paragraph (f) of Article 31). The 2001 Doha Ministerial Conference decided that this should be changed so that countries unable to manufacture the pharmaceuticals could obtain cheaper copies elsewhere if necessary. OBS: both the EU and the US announced that they will not use the compulsory licence mechanism to import.	pharmaceutical product that uses clinical data from a protected supplier for **3 years**, or **5 years** for other data, and **10 years** for new agricultural chemicals. The Parties recognise the importance of the Declaration on the TRIPS Agreement and Public Health		

Genetic and Traditional Knowledge and Folklore	–	–	The Parties shall provide for the protection of plant varieties. Also, they shall respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the involvement and approval of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilisation of such knowledge, innovations and practices.	Provisions on Traditional Knowledge, Traditional Cultural Expressions and Genetic Resources
Layout-Designs of Integrated Circuits	Term of protection: no less than **10 years** counted from the date of filing an application for registration or from the first commercial exploitation wherever in the World it occurs.		–	
Protection of Undisclosed Information			–	Provisions related to the protection of undisclosed data. Protection of at least 10 years for agricultural chemical products; 5 years for pharmaceutical products; and 8 years for pharmaceutical products that is or contain biologic, from the date of marketing approval in the territory of the Party.
Protection of Encrypted		Each Party shall make it a criminal	–	Each Party shall make it a criminal

program-carrying satellite and cable signals	offense: (a) to manufacture, assemble, modify, import, export, sell, lease, or otherwise distribute a tangible or intangible device or system, knowing or having reason to know that the device or system is primarily of assistance in decoding an encrypted program-carrying satellite or cable signal without the authorization of the lawful distributor of such signal; and (b) willfully to receive and make use of, or further distribute, a program-carrying signal that originated as an encrypted satellite or cable signal knowing that it has been decoded without the authorization of the lawful distributor of the signal, or if the signal has been decoded with the authorization of the lawful distributor of the signal, willfully to further distribute the signal for purposes of commercial advantage knowing that the signal originated as an encrypted program-carrying signal and that such further distribution is without the authorization of the lawful signal distributor.		offence to: (a) manufacture, assemble, modify, import, export, sell, lease or otherwise distribute a tangible or intangible device or system knowing or having reason to know that the device or system meets at least one of the following conditions (i) it is intended to be used to assist; (ii) it is primarily of assistance; or (iii) its principal function is solely to assist in decoding an encrypted program-carrying satellite signal without the authorization of the lawful distributor of such signal, and (b) with respect to an encrypted program carrying satellite signa, willfully: (i) receive such a signal; or further distribute such signal, knowing that is has been decoded witouth the authorization of the lawful distributor of the signal.
Control of Anti-Competitive Practices in Contractual Licences			

Table 24 – Major characteristics of the Agreements regarding provisions on Investments

	WTO	KORUS	KOREU	TTIP[50]	TPP
Investment and Related Rights	There is no specific multilateral investment agreement under the WTO Framework. The only relevant issue treated in the TRIMS is the prohibition of certain investment measures that may have trade-restrictive and distorting effects on trade in goods; and GATS includes investment in the definition of mode 3 of service supply.	Protection to foreign investors based on the principle of national treatment; Exceptions to the principle of national treatment must be listed in annexes to the agreement; Application of the MFN principle to foreign investors; It must be ensured for foreign investments the application of minimum standards internationally agreed, such as fair and equitable treatment; Setting limits on government expropriation of investments covered by the agreement; Free transfer of financial capital pertaining to investments of both parties covered by the agreement; Prohibition of performance requirements to investments from the other party; Establishing procedures for resolving investor-State disputes.	There is no investment provisions in the KOREU.	Guarantees of protection against expropriation; Free transfer of funds; Fair and equitable treatment; Level of playing field for investing companies; Investment protection; Investor-state dispute settlement; Safeguards and right to regulate.	Investment protection, ensuring non-discrimination; A minimum standard of treatment; Rules on expropriation; Prohibitions on specified trade distortive performance requirements; Investor-state dispute settlement subject to safeguards to protect rights of countries to regulate in public interest.

Conclusion

The European Union has its own model of preferential agreements. The EU is more flexible in terms of the tariff reduction program, positive list for the liberalization of services and intellectual property rights. However, there is a mounting pressure from consumers to negotiate precautionary principles for TBT and SPS, private stands, climate change and to enforce labor standards.

It will depend on Brazil and the ability of its diplomacy to achieve a successful agreement balancing gains and costs for the country.

[50] According to the paper published by the World Economic Forum on Mega-regional Trade Agreements: game-changers or costly distractions for the World Trading System? July 2014.

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SECTION 2

Section two is divided into two parts. In the first one, the construction of different scenarios is simulated, considering the agriculture and industry sectors of possible PTAs of Brazil (with or without Mercosul) with the United States (US), European Union (EU) and China. In the second part, this study develops an analysis of the TTIP and TPP's impacts on Brazil.

I. MODELING ISSUES

The GTAP computable general equilibrium model was used in the present simulations in order to evaluate the first round effects of alternative preferential trade agreements involving Brazil and each of the possible partners: US, EU a China. Likewise, the model was used to evaluate the first round effects of the costs and opportunities for Brazil of the conclusion of the TTIP and the TPP. For a description of the standard GTAP model, see Hertel (1997).

The GTAP model is a global comparative static applied general equilibrium model. The model identifies 57 sectors in 153 regions of the world. Its system of equations is based on microeconomic foundations providing a detailed specification of household and perfect competitive firm behavior within individual regions and trade linkages between regions. In addition to trade flows the GTAP model also recognizes global transportation costs.

The GTAP model qualifies as a Johansen-type model. This model estimates the impacts of external shocks (gains and losses of a PTA) through a comparative static modeling (before and after the shock). The solutions are obtained by solving the system of linearized equations of the model. A typical result shows the percentage change in the set of endogenous variables (GDP, exports and imports, exchange rate and land value) after a policy shock is carried out, compared to their values in the initial equilibrium, in a given environment. The schematic presentation of Johansen solutions for such models is standard in the literature (see Dixon et al (1992) and Dixon and Parmenter (1996)).

For the modeling of the reduction of non-tariff barriers, this project used the same methodology presented in Ecorys, 2009.

II. DATA BASE

The GTAP 8 database combines detailed bilateral trade, transport and protection data characterizing economic linkages among 129 regions, together with individual country input-output data bases which account for inter-sectorial linkages within regions. The dataset is harmonized and completed with additional sources to provide the most accurate description of the world economy in 2007 (the last available data base for GTAP).

The main applied protection data used in the GTAP 8 data base originates from ITC's MacMap database, which contains exhaustive information at the tariff line level. The ITC database includes the United Nations Conference on Trade and Development's (UNCTAD's) Trade Analysis and information system (TRAINS) data base, to which

ITC staff added their own data. The model transforms all specific tariffs in ad valorem tariffs.

In order to capture the first round effects, the simulations were carried out using a standard GTAP hypothesis, which considers perfect factor mobility for labor and capital and imperfect factor mobility for land and natural resources. National aggregate supply of factors of production is exogenous and production technology for firms is given.

The way the economy variables are affected by horizontal reductions in bilateral import tariffs of the TTIP and TPP partners will depend on the resulting behavior of domestic relative prices. Domestic relative prices of the TTIP and TPP partners will be altered in such a way that import competition from the PTA partner will be favored, as the economy becomes more preferentially open to trade. Overall efficiency in resource allocation tends to be improved and, by the same token, possible gains from trade may take national welfare a step up.

Notwithstanding the aggregate benefits from improved resource allocation, regions might be adversely affected through re-orientation of trade flows – trade diversion – as relative accessibility changes in the system. Thus bilateral aggregate gains from trade are not necessarily accompanied by generalized regional gains in welfare. This issue of trade diversion versus trade creation has been an important one in the international trade literature, especially in the case of welfare evaluations of preferential trade agreements.

III. RESULTS OF THE SIMULATIONS

The results in these simulations present the impacts for exports and imports, as well as the gains and losses for the sectorial GDP, in order to evidence the sensitiveness of each sector of the Brazilian economy in relation to a possible PTA negotiation as well as in relation to the TTIP and TPP.

The choice for impacts on sectorial GDP can be explained as an attempt to explore the global effect of each PTA in a more complete evaluation since GDP includes the impacts on production, exports and imports.

IV. BRAZIL – COMPARATIVE PTAs SCENARIOS

In this first part the construction of different scenarios are simulated, considering the agriculture and industry sectors.

Simulation 1 compares the impacts on Brazil of PTAs with US, EU and China. The hypothesis assumed in this exercise is, on the one hand, a partial liberalization for agriculture, with a 50% reduction of tariff barriers, in the agreements with the US and EU and a full liberalization for industry; on the other hand, in the agreement with China, it has been envisage a full liberalization for agriculture and a partial liberalization for the Brazilian industry sector, with a 50% reduction of tariff barriers.

Simulation 2 compares the impacts on Mercosul (including its 5 members) of PTAs with US and EU. Again the hypothesis assumed in this exercise is a partial liberalization

for the US and the EU for agriculture with a 50% reduction of tariff barriers, and a full liberalization for industry.

Simulation 3 explores the impacts on Brazil in PTAs both by Brazil and Mercosul with US, EU and China but under the hypothesis of full liberalization, that means no tariff barriers amongst the partners. This scenario is a good exercise to explore the gains and costs of a full liberalization on the all economic sectors.

Simulation 1– Brazil x US – EU – China

This simulation compares benefits and costs for Brazil after the negotiations of PTAs with the US, the EU and China.

The hypotheses assumed for the US and the EU are a partial liberalization on agriculture with a tariff reduction of 50%, and a full liberalization on industry. For China, the hypothesis is a full liberalization for agriculture and agribusiness and a partial liberalization on Brazilian industry, with a 50% reduction of tariff barriers.

Results

Comparing the four agreements, Brazilian exports increase by 20% for the PTA with the EU, 10% for the PTA with the US, 12% for the PTA with China. Brazilian imports increase by 43% for the PTA with the EU, by 43% for the US, by 36% for China.

Considering the values given by Secex for the year of 2012 (US$ F.O.B.), this would correspond to an increase of: US$10.0 billion in exports to the EU; US$2.6 billion in exports to the US; and US$4.8 billion in exports to China. Regarding imports, the increase would be of US$20.4 billion in imports from the EU; US$13.9 billion in imports from the US; and US$12.4 billion in imports from China.

With a PTA with the EU there is a significant increase in the exports of agricultural products, which explains the gains in the land value and the valorization of the Brazilian real exchange rate. The effect on the exchange rate has as impact the increase of industrial imports from the EU.

Simulation 1- Brazil x US – EU – China: Macro economic variables

Macroeconomic Variables	EU 27	US	China
Increase in bilateral exports (US$ mi, F.O.B., 2012)	9,967	2,590	4,782
Increase in bilateral exports %	20.4%	9.7%	11.6%
Increase in bilateral imports (US$ mi, F.O.B., 2012)	20,447	13,946	12,432
Increase in bilateral imports %	42.9%	43.1%	36,3%
Terms of trade	0.2%	-0.3%	0,0%
Real wage	0.0%	0.0%	0,0%
Capital gains	0.2%	0.1%	0,1%
Land gains	15.2%	2.8%	1,8%
Real exchange rate	0.4%	-0.2%	0,0%

Source: CGTI-FGV

In the sectorial analysis, the simulation presents the following results for each sectorial GDP:

For the agricultural sector, the PTAs with the US, the EU and China present positive results for almost all sectors, with more expressive gains for the EU.

For the industry, the PTA with the US is the one that presents the better results for Brazil, and the PTA with China represents the next best results. The negative results for the EU can be explained by the Brazilian real overvaluation, caused by the increase in the agricultural exports.

Simulation 2 – Mercosul(5) x US – EU

This simulation compares benefits and costs for Brazil after the negotiations of PTAs between Mercosul with the US and the EU.

The hypotheses assumed for the US and the EU are a partial liberalization on Agriculture with a tariff reduction of 50%, and a full liberalization on industry.

Results

Comparing the two agreements, Brazilian exports increase by 20% for the PTA with the EU and 10% for the PTA with the US. Brazilian imports increase by 42% for the PTA with the EU and by 42% for the US.

Considering the values given by Secex for the year of 2012 (US$ F.O.B.), this would correspond to an increase of: US$10.0 billion in exports to the EU and US$2.7 billion in exports to the US. Regarding imports, the increase would be of US$20.0 billion in imports from the EU and US$13.8 billion in imports from the US.

In the PTA with the EU there is a significant increase in the exports of agricultural products, which explains the gains in the land value and the valorization of the Brazilian Real.

The impacts for Brazil negotiating with the Mercosul are similar with the ones obtained in PTAs with Brazil negotiating independently from the bloc. This means that participating in a customs union brings no significant economic advantage for Brazil in negotiations of PTAs with other players.

Simulation 2– Mercosul(5) x US – EU: Macroeconomic Variables

Macroeconomic Variables	EU 27	US
Increase in bilateral exports (US$ mi, F.O.B., 2012)	10,016	2,697
Increase in bilateral exports %	20.5%	10.1%
Increase in bilateral imports (US$ mi, F.O.B., 2012)	19,970	13,752
Increase in bilateral imports %	41.9%	42.5%
Terms of trade	0.0%	-0.4%
Real wage	0,0%	0.0%
Capital gains	0.1%	0.1%
Land gains	15.7%	3.0%
Real exchange rate	0.2%	-0.3%

Source: CGTI-FGV

In the sectorial analysis, the simulation presents the following results for each sectorial GDP:

For the agricultural sector, the PTAs with the US and the EU present positive results for almost all sectors, with very expressive gains for the EU.

For the industry, the PTA with the US is the one that presents the better results for the Brazilian industry. The negative results for the EU can be explained by the Brazilian real valorization, caused by the increase in the agricultural exports.

Simulation 3 – Brazil and Mercosul (5) x US – EU – China

This simulation compares benefits and costs for Brazil after the negotiations of PTAs by both Brazil (negotiating independently from its customs union) and Mercosul with the US, the EU and China in contrast with a PTA between Brazil/Mercosul and the other South America countries.

The hypothesis assumed is of full liberalization for all PTAs in all sectors. The idea is to explore gains and losses of a full integration with these partners.

Results

When Brazil negotiates separately from Mercosul, Brazilian exports increase by 60% for the PTA with the EU, 13% for the PTA with the US, and 12% for the PTA with China. Brazilian imports increase by 49% for the PTA with the EU, by 44% for the US and by 87% for China.

Considering the values given by Secex for the year of 2012 (US$ F.O.B.), this would correspond to an increase of: US$29.3 billion in exports to the EU; US$3.5 billion in exports to the US; and US$5.1 billion in exports to China. Regarding imports, the increase would be of US$23.4 billion in imports from the EU; US$14.2 billion in imports from the US; and US$29.9 billion in imports from China.

When Brazil negotiates together with Mercosul, Brazilian exports increase by 57% for the PTA with EU, 13% for the PTA with the US and 10% for the PTA with China.

Brazilian imports increase by 49% for the PTA with the EU, 43% for the US and 94% for China.

Considering the values given by Secex for the year of 2012 (US$ F.O.B.), this would correspond to an increase of: US$28.0 billion in exports to the EU; US$3.4 billion in exports to the US; and US$4.2 billion in exports to China. Regarding imports, the increase would be of US$23.2 billion in imports from the EU; US$14.0 billion in imports from the US; and US$32.2 billion in imports from China.

In both scenarios, the PTA with the EU results in a substantial increase in the exports of agricultural products, which explains the 81% gain in the land value and the 3% valorization of the Brazilian real.

The comparison of results of the PTAs with Brazil and PTAs with Mercosul shows that there are no significant economic gains for Brazil in negotiating within the customs union. In fact, there are some small losses in Brazil exports in Mercosul's PTAs if compared to the PTAs negotiated only by Brazil.

Simulation 3– Brazil and Mercosul (5) x US – EU- China: Macroeconomic Variables

Macroeconomic Variables	EU 27		US		China	
	BR	MER	BR	MER	BR	MER
Increase in bilateral exports (US$ mi, F.O.B., 2012)	29,266	27,996	3,524	3,418	5,112	4,205
Increase in bilateral exports %	59.9%	57.3%	13.2%	12.8%	12,4%	10,2%
Increase in bilateral imports (US$ mi, F.O.B., 2012)	23,402	23,211	14,172	14,042	29,864	32,193
Increase in bilateral imports %	49.1%	48.7%	43.8%	43.4%	87,2%	94,0%
Terms of trade	3.6%	3.3%	-0.2%	-0.1%	-0,3%	-0,1%
Real wage	-0.2%	-0.2%	0.0%	0.0%	0,0%	-0,1%
Capital gains	0.2%	0.2%	0.1%	0.1%	0,1%	0,1%
Land gains	81.2%	76.6%	5.0%	5.5%	2,8%	7,2%
Real exchange rate	3.5%	3.3%	-0.1%	0.0%	-0,3%	0,9%

Source: CGTI-FGV

In the sectorial analysis, the simulation presents the following results for each sectorial GDP:

For the agricultural sector, the PTAs with the EU present expressive gains in a number of sectors, with a small advantage in the PTA of Mercosul. The PTAs with the US presents gains in the majority of sectors, although they are less significant than in the PTAs with the EU Again, there is a small advantage in the PTA negotiated by the Mercosul. The PTAs with China presents gains in a great number of agricultural sectors; when negotiating with Mercosul, the gains in agriculture are more expressive.

For the industry, the PTAs with the EU present significant losses for the majority of sectors. The results are the same both to the PTA with Brazil and the PTA with Mercosul. In the PTA with the US, there are small gains for several sectors, with a couple of sectors with more expressive gains. The PTA with Mercosul presents a slight disadvantage if compared to the PTA with Brazil. In the same way, the PTA with China

reveals small gains for a great number of sectors when Brazil negotiates alone. When negotiating with Mercosul, the simulation presents a higher number of negative results, with expressive losses for some sectors, although other sectors present more significant gains.

V. THE IMPACTS OF TTIP AND TPP ON BRAZIL

The objective of this second part is to analyze the effects of the TTIP and TPP conclusion for Brazil. This issue is addressed under different hypotheses. The simulations take into account the reduction of both tariffs and non-tariff barriers. In the TTIP, an audacious alternative is assumed: a hypothetical participation of Brazil in the TTIP. Regarding the TPP an eventual adhesion of China to the agreement is considered.

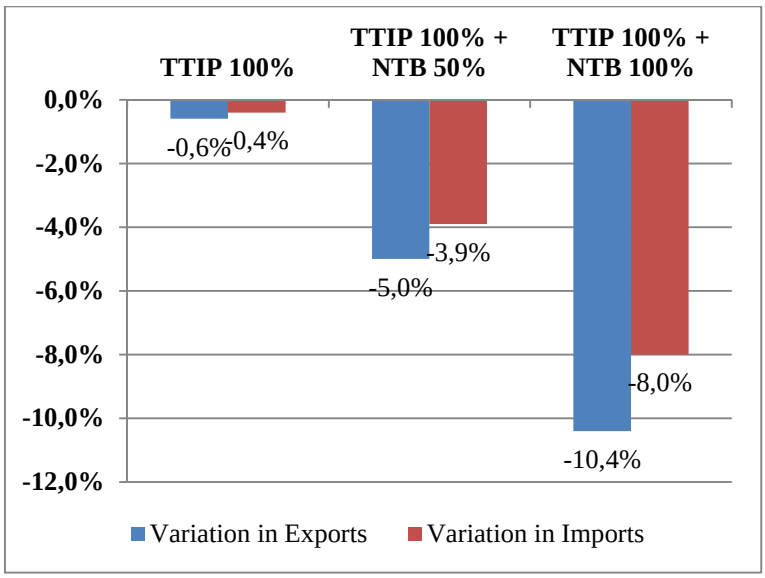
The methodology used to estimate non-tariff barriers was presented in the Ecorys Project (2009) developed by Berden e Francois to the European Commission.

Simulation 4 - Impacts of the negotiation of the TTIP, between the EU and the US, to the Brazilian economy.

Three different hypotheses are proposed: (i) a full tariff reduction between US and EU; (ii) a full tariff elimination plus a 50% reduction of non-tariff barriers (NTB); and (iii) a full elimination of both tariffs and NTBs.

Results

Figure 1 – Impact on Brazil´s Bilateral Exports and Imports



Source: CGTI-FGV

Despite the fact that Brazil does not suffer expressive losses in its trade balance with the negotiation of TTIP between the US and the EU, considering the first round effects presented by the simulation, the comparison shows the opportunities lost by Brazil by remaining outside the integration process. Furthermore, it is possible to assume that the TTIP will result in gains of competiveness for its partners, while Brazil, by remaining

outside of the agreement, will remain n in its current level, which will cause further losses in the country's trade balance.

When the elimination of non-tariff barriers between EU and US is taken into account, the negative impact to Brazil is more significant, regarding sectorial GDP and trade flows. More than tariffs, the trade gains of TTIP will be obtained through negotiations of non-tariff barriers including technical barriers, sanitary and phytosanitary measures, trade facilitation, among others, which are, nowadays, the real barriers to trade.

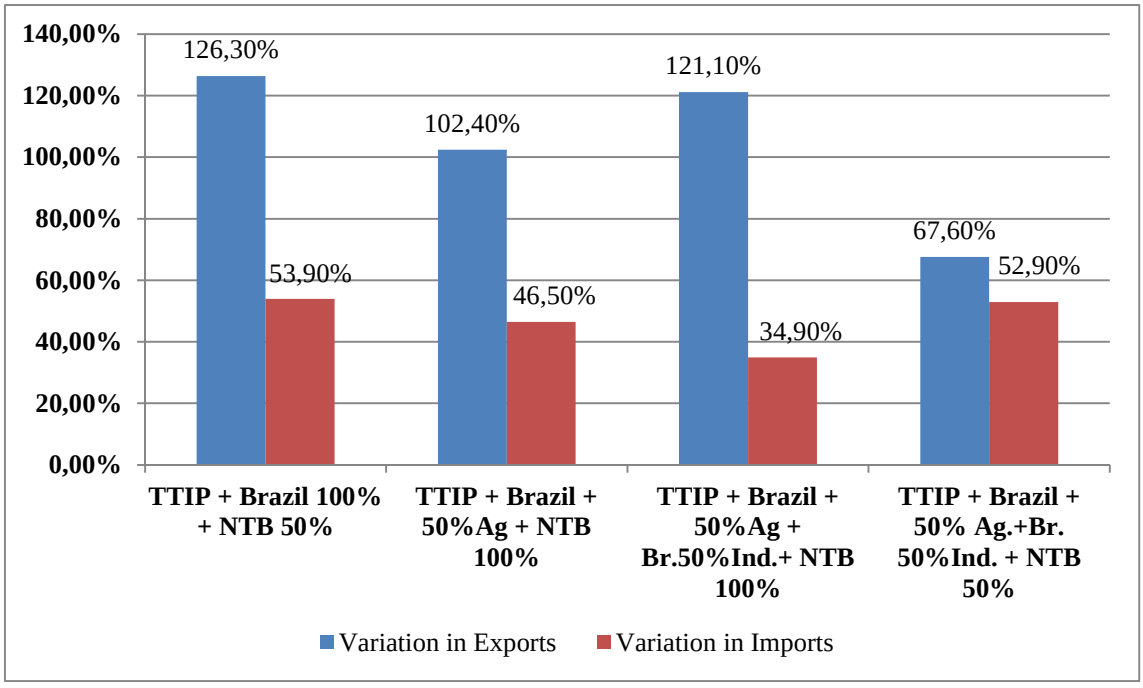
Simulation 5 – Impacts of the participation of Brazil on the TTIP

This simulation presents the impacts to the Brazilian economy of a hypothetical participation of the country in the negotiations of the TTIP.

The hypothesis assumed for this participation are: (i) a full liberalization of both tariff and NTBs; and (ii) a 50% reduction of tariffs in agriculture for the US and the EU and a full liberalization of all other tariffs and NTBs; (iii) a 50% liberalization of EU and US's agricultural sectors, 50% liberalization of Brazil's industry and services and a full liberalization of non-tariff barriers for all partners; and (iv) 50% liberalization of EU and US's agricultural sectors, 50% liberalization of Brazil's industry and services and a 50% reduction of non-tariff barriers for all partners.

Results

Figure 2 – TTIP + Brazil: Impact on Brazil´s Bilateral Exports and Imports



Source: CGTI-FGV

When Brazil adheres to the TTIP, its exports present a significant increase. There are highly expressive gains for the majority of agricultural sectors in all three scenarios. This presents the greatest costs of opportunity of Brazil remaining outside the Trans-Atlantic integration process. For the industry, when Brazil participates in the TTIP,

there are losses and gains for the industrial sectors, explained by the valorization of the Brazilian real, caused by the growth of agricultural exports.

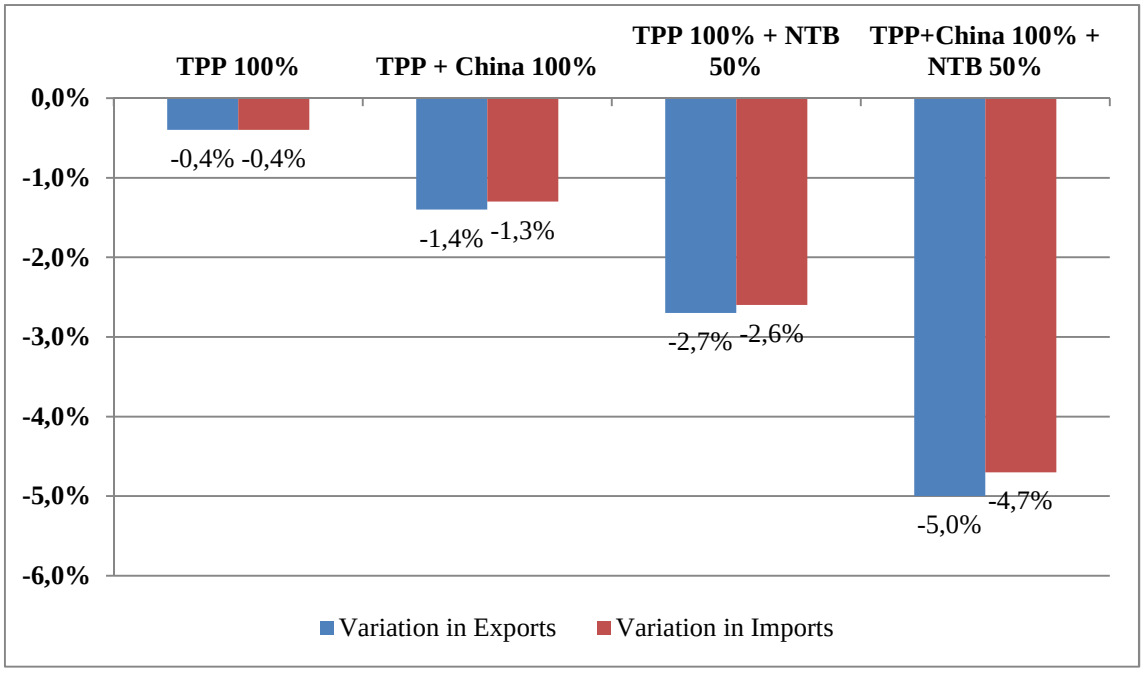
The audacious hypothesis of including Brazil as a part of the TTIP presents a substantial gain for agriculture, but as expected, losses for several industrial sectors due to the overvaluation of exchange rates and the consequent increase on industrial imports. To make this hypothesis viable, two important tasks are needed: the Brazilian industry must face an arduous work to improve its competitiveness, and the Brazilian Government should also play its role through active economic policies.

Simulation 6 – Impacts of the TPP on Brazil

The simulation presents the impacts of TPP to the Brazilian economy, considering: (i) a full tariff liberalization amongst TPP members; (ii) a full tariff liberalization plus a 50% reduction of non-tariff barriers (NTB) amongst TPP members; (iii) the adhesion of China to the agreement and a full tariff liberalization; and (iv) the adhesion of China to the TPP, with a full tariff liberalization plus a 50% reduction of NTBs.

Results

Figure 3 – TPP: Impact on Brazil´s Global Exports and Imports



Source: CGTI-FGV

As the TTIP, the TPP shall present negative impacts for the Brazilian economy, already in the first round effects. These impacts can be more significant with the gains of competitiveness of the TPP partners, result of the agreement.

The losses for the Brazilian economy become more expressive when China accedes to the agreement and, most of all, when non-tariff barriers are reduced, showing, once more, the importance of the negotiation of rules in PTAs, which have direct impact on market access.

In summary

The conclusion of TTIP and TPP will represent a serious threat to Brazil. Not only it will lose international market, but will be left behind in the negotiations of international trade rules, losing its present role as relevant global rule maker, accepting a secondary role of passive rule taker.

In a time of global value chains, the integration of Brazil with major economies is fundamental to the survival of the industry.

The present research shows clearly that the negotiation of an agreement between Brazil and the EU, now in its final phase, is an important step forward and should be concluded rapidly, before the finalization of the TTIP negotiation.

But a second step should also be considered seriously – that of an agreement with the US. There is no "trade logic" of an agreement with the EU without an agreement with the US in the case of a successful TTIP.

With the TTIP and TPP, a new opportunity is open to Brazil. It is time to review the priorities and to re-evaluate losses and gains. The costs of Brazil´s isolation in the World because of the difficulties of Mercosul should be re-examined with care.

Details of the simulations on the impacts of TTIP and TPP for Brazil.

In this Section the construction of different scenarios are simulated, considering the following sectors: agriculture, industry and services.

The idea is to estimate opportunity costs for Brazil of not participating in the TTIP and the TPP. The hypotheses are: partial and full liberalization of tariff and non-tariff barriers. The audacious scenario of Brazil participating in the TTIP is considered.

Simulation 4.1 – Impacts of the TTIP on Brazil by sectors

This simulation presents the impacts of the negotiation of the TTIP, between the EU and the US, to the Brazilian economy.

Three different hypotheses are proposed: (i) a full tariff reduction between US and EU; (ii) a full tariff elimination plus a 50% reduction of non-tariff barriers (NTB); and (iii) a full elimination of both tariffs and NTBs.

Results

When Brazil remains outside the TTIP, the country's exports are reduced:

(i) an exclusively tariff reductions results in a small drop of 0,6% of Brazilian exports to the US and the EU, corresponding to a decrease of US$0.4 billion;

(ii) a full tariff reduction plus a 50% NTB reduction results in a decrease of 5% of Brazil's exports, corresponding to US$3.8 billion reduction; and

(iii) a full liberalization of both tariff and NTBs for TTIP result in a drop of 10% of the exports, corresponding to a US$7.8 billion decrease.

With the expected increase of trade flow between US and EU, the share of Brazil in the World trade will be reduced.

Regarding imports, when Brazil remains outside the TTIP:

(i) a full tariff reduction between the US and the EU results in a decrease of 0,4% of Brazil imports from the US and the EU, corresponding to 0.3 billion;

(ii) a full tariff elimination plus 50% reduction in NTBs results in a drop of 4% of imports, corresponding to a decrease of US$3.1 billion; and

(iii) a scenario of full liberalization of both tariffs and NTBs results in a decrease of 8% of imports, corresponding to US$6.4 billion.

Despite the fact that Brazil does not suffer expressive losses in its trade balance with the negotiation of TTIP between the US and the EU, considering the first round effects presented by the simulation, the comparison shows the opportunities lost by Brazil by remaining outside the integration process. Furthermore, it is possible to assume that the TTIP will result in gains of competiveness for its partners, while Brazil, by remaining outside of the agreement, will remain n in its current level, which will cause further losses in the country's trade balance.

Simulation 4.1 – Impacts of TTIP on Brazil: Macroeconomic Variables

Macroeconomic Variables	TTIP	TTIP+NTB (50%)	TTIP+NTB (100%)
Variation in bilateral exports (US$ mi, F.O.B., 2012)	-453	-3,778	-7,858
Variation in bilateral exports %	-0.6%	-5.0%	-10.4%
Variation in bilateral imports (US$ mi, F.O.B., 2012)	-320	-3,121	-6,401
Variation in bilateral imports %	-0.4%	-3.9%	-8.0%
Terms of trade	-0.1%	-0.6%	-1.3%
Real wage	0.0%	0.0%	-0.1%
Capital gains	0.0%	-0.1%	-0.1%
Land gains	-0.4%	-2.7%	-6.2%
Real exchange rate	-0.1%	-1.0%	-2.2%

Source: CGTI-FGV

In the sectorial analysis, the simulation presents the following results for each sectorial GDP:

For the agricultural sector, the conclusion of the TTIP results in small losses to the majority of the agricultural sectors, with a slightly better scenario according to the level of liberalization of NTBs. One factor that should affect Brazilian agricultural exports to

the EU is that any preferential tariff quotas offered by the EU to the US should affect other countries' market access to the EU, since the global tariff quotas will be shared by many partners, with the US benefiting from a larger share of such global quota. Regarding the NTBs, the results of the simulation show that Brazil will benefit from the elimination of NTBs between the two countries.

For the industry, the conclusion of the TTIP results in small gains for a number of sectors. This can be explained by the fact that the increase of trade flows and economic integration between the EU and the US will create some demand for exports from other countries as well.

In services the scenario is not very different from the industry, with small gains for Brazil in the agreement between the EU and the US.

Simulation 4.1 – Impacts of the TTIP on Brazil: Sectorial Analysis

	TTIP	**TTIP+NTB (50%)**	**TTIP+NTB (100%)**
Agriculture	4	5	7
Industry	12	12	12
Services	8	10	11
Total	**24**	**27**	**30**

Source: CGTI-FGV

Simulation 5.1 – Impacts of the participation of Brazil on the TTIP by sectors

This simulation presents the impacts to the Brazilian economy of a hypothetical participation of the country in the negotiations of the TTIP.

The hypothesis assumed for this participation are: (i) a full liberalization of both tariff and NTBs; and (ii) a 50% reduction of tariffs in agriculture for the US and the EU and a full liberalization of all other tariffs and NTBs; (iii) a 50% liberalization of EU and US's agricultural sectors, 50% liberalization of Brazil's industry and services and a full liberalization of non-tariff barriers for all partners; and (iv) a 50% liberalization of EU and US's agricultural sectors, 50% liberalization of Brazil's industry and services and a 50% reduction of non-tariff barriers for all partners.

Results

When Brazil adheres to the TTIP, its exports present a significant increase:

(i) a full liberalization of tariffs and NTBs for all three partners results in a strong increase of 126% of Brazilian exports, corresponding to a US$95.4 billion raise; and

(ii) with a more realistic 50% reduction of agricultural tariffs plus a full liberalization of all other tariffs and NTBs results in an increase of 102% of the country's exports, corresponding to US$ 77.3 billion.

(iii) with a 50% reduction of EU and US agricultural tariffs, a 50% reduction of Brazilian industrial tariffs a full liberalization of non-

tariff barriers for all partners, Brazilian exports increase by 121% , corresponding to US$91.5 billion[51].

(iv) finally, in a more realistic scenario of 50% reduction of EU and US agricultural tariffs, a 50% reduction of Brazilian industrial tariffs and a 50% reduction of non-tariff barriers for all partners, Brazilian exports increase by 67,6%, corresponding to US$ 51,1 billion[52]

In the TTIP, there is a very expressive increase in the exports of agricultural products, which explains the gains in the land value and the valorization of the Brazilian real.

Regarding imports, when Brazil participates in the TTIP:

(i) full liberalization of tariffs and NTBs results in an increase of 54%; corresponding to a US$43.1 billion rise in imports from the US and the EU; and

(ii) a 50% liberalization in agricultural tariffs and a full liberalization in other tariffs and NTBs results in an increase of 46,5%, corresponding to US$37.2 billion.

(iii) a 50% liberalization in the agricultural sectors of the EU and US, a 50% liberalization in the Brazilian industrial sector and a full liberalization of non-tariff barriers for all partners results in an increase of 34.9%, corresponding to US$27,9 billion[53].

(iv) finally, in a more realistic scenario of 50% reduction of EU and US agricultural tariffs, a 50% reduction of Brazilian industrial tariffs and a 50% reduction of non-tariff barriers for all partners, Brazilian imports increase by 52,9%, corresponding to US$ 42.3 billion[54]

Simulation 5.1 – Impacts of the participation of Brazil on the TTIP - Macroeconomic Variables

Macroeconomic Variables	**TTIP + Brazil (100% + 100%NTB)**	**TTIP + Brazil (50%ag +100% NTB)**	**TTIP + Brazil (50% ag + 50% ind. + 100% NTB)**	**TTIP + Brazil (50% ag + 50% ind. + 50% NTB)**
Increase in bilateral exports (US$ mi, F.O.B., 2012)	95,433	77,374	91,504	51,079
Increase in bilateral exports %	126.3%	102.4%	121,1%	67,6%
Increase in bilateral imports (US$ mi, F.O.B., 2012)	43,130	37,209	27,926	42,330
Increase in bilateral imports %	53.9%	46.5%	34,9%	52,9%
Terms of trade	16.0%	10.7%	16,9%	5,4%
Real wage	0.4%	0.8%	0,4%	1,0%
Capital gains	1.1%	1.1%	1,0%	1,2%
Land gains	198,4%	87.7%	191,2%	57,9%
Real exchange rate	15.2%	10.5%	15,9%	6,3%

Source: CGTI-FGV.

[51] Values from Secex (US$ F.O.B.) for 2012
[52] Values from Secex (US$ F.O.B.) for 2012
[53] Values from Secex (US$ F.O.B.) for 2012
[54] Values from Secex (US$ F.O.B.) for 2012

In the sectorial analysis, the simulation presents the following results for each sectorial GDP:

In a scenario of participation of Brazil in the TTIP, there are highly expressive gains for the majority of agricultural sectors in all three scenarios. This presents the greatest costs of opportunity of Brazil remaining outside the Trans-Atlantic integration process.

For the industry, when Brazil participates in the TTIP, there are significant losses for the majority of Brazil's industrial sectors in all cases, explained by the impact of the exchange rate.

For services, small and medium losses for the majority of sectors are verified.

Simulation 5.1 – Impacts of the TTIP on Brazil: alternative scenario - Sectorial Analysis

	TTIP + Brazil (100% + 100% NTB)	**TTIP + Brazil (50%ag +100% NTB)**	**TTIP + Brazil (50% ag + 50% ind. + 100% NTB)**	**TTIP + Brazil (50% ag + 50% ind. + 50% NTB)**
Agriculture	13	13	13	12
Industry	2	3	2	4
Services	5	5	6	6
Total	**20**	**21**	**21**	**22**

Source: CGTI-FGV.

Simulation 6.1 – Impacts of TPP on Brazil by sectors

The simulation presents the impacts of TPP to the Brazilian economy, considering: (i) a full tariff liberalization amongst TPP members; (ii) a full tariff liberalization plus a 50% reduction of non-tariff barriers (NTB) amongst TPP members; (iii) the adhesion of China to the agreement and a full tariff liberalization; and (iv) the adhesion of China to the TPP, with a full tariff liberalization plus a 50% reduction of NTBs.

Results

The entry into force of the TPP, considering full tariff liberalization results in a drop of 0,4% of Brazilian global exports as well as a drop of 0,4% of Brazilian global imports.

Full tariff elimination plus a reduction of 50% of NTBs result in a more marked drop on Brazilian global exports, with a reduction of 2,7%, while imports drop by 2,6%.

The adhesion of China to the TPP results in even more expressive losses to Brazil: the elimination of tariffs leads to a reduction of 1,4% of Brazilina exports and 1,3% of imports, while the elimination of tariffs combined to the reduction of 50% of NTBs leads to a reduction of 5% of Brazilian global exports and 4,7% of imports.

Simulation 8 – Impacts of TPP on Brazil: Macroeconomic outlook

Mroeconomic variables	TPP	TPP + NTB	TPP + China	TPP+China+NTB
Variation in global exports (%)	-0,4%	-2,7%	-1,4%	-5,0%
Variation in global imports (%)	-0,4%	-2,6%	-1,3%	-4,7%
Terms of Trade	-0,2%	-0,9%	-0,3%	-1,5%
Rela wage	0,0%	-0,1%	0,0%	-0,1%
Capital gains	-0,0%	-0,1%	0,0%	-0,1%
Land gains	-0,3%	-3,1%	-0,2%	-7,7%
Real Exchange rate	-0,3%	-1,8%	-1,2%	-3,7%

Source: CGTI - FGV

Regarding the sectorial analysis, the following results are verified:

In agriculture, small losses are verified for most of the sectors and more relevant losses are verified to a limited number of sectors. The situation is worsened both by the adhesion by the reduction of NTBs. For the industry, small losses are verified for a few sectors, with more sectors affected when NTBs are also reduced. For services, small gains are verified for the majority of sectors.

Simulation 6.1 – Impacts of TPP on Brazil: Summary of gains – GDP by sector

	TPP	TPP + NTB	TPP + China	TPP+China+NTB
Agriculture	14	9	14	9
Industry	16	11	15	12
Services	12	11	12	11
Total	**42**	**31**	**41**	**32**

Source: CGTI - FGV

SIMULATIONS

Simulation 1 – Brazil x US – EU – China

- Hypothesis: US and EU – Partial liberalization on Agriculture + Agribusiness = 50% reduction
  Full liberalization on Industry
  China – Full liberalization on Agriculture + Agribusiness
  Partial liberalization on Industry = 50% reduction (Brazil)

Table 0.1 – Variation on GDP by sector (%) – Agriculture

Agricultura	EU 27	US	China
Paddy rice	0,06	0,02	0
Wheat	0,51	0,08	0,04
Other cereals	1,60	0,22	0,04
Vegetables/fruits	1,76	0,22	-0,06
Oil seeds	-0,06	0,30	1,27
Sugar (cane&beet)	2,16	0,44	0,51
Plant fibres	-0,65	0,73	0,92
Other crops (unprepared)	0,50	1,32	0,29
Cattle, horses, sheeps	11,81	0,38	0,08
Animal products	4,77	0,37	0,22
Raw milk	-0,09	-0,02	0
Wool, silk	-0,04	0,02	-0,02
Forestry products	0,03	0,36	-0,03
Meat: cattle, sheeps, horses	14,89	0,46	0,10
Meat products	9,11	0,68	0,43
Vegetables oils and fats	0,34	0,29	0,88
Processed rice	0	0	0
Sugar	3,47	0,85	0,66
Food products (animal feed)	1,36	0,17	0,09
Beverage, Tobacco products	0,09	0,01	-0,01

Source: CGTI-FGV

Simulation 1 – Brazil x US – EU - China

Hypothesis: US and EU – Partial liberalization on Agriculture + Agribusiness = 50% reduction
Full liberalization on Industry
China – Full liberalization on Agriculture + Agribusiness
Partial liberalization on Industry = 50% reduction (Brazil)

Table 0.2 – Variation on GDP by sector (%) – Industry

Industry	EU 27	US	China
Extractive			
Fishing	**0,14**	**0,01**	**0,01**
Coal	**-0,01**	**0,18**	**0,03**
Oil	**-0,05**	**0,14**	**0,02**
Gas	**-0,14**	**0,09**	**0,01**
Minerals	**-0,27**	**0,19**	**0,04**
Manufacturing			
Textiles	**-0,92**	**1,08**	**-1,57**
Apparel	**-0,15**	**0,32**	**-0,40**
Leather products	**1,72**	**6,29**	**1,92**
Wood products	**0,62**	**1,19**	**-0,14**
Paper products	**-0,66**	**0,00**	**0,02**
Petroleum products	**-0,09**	**0,14**	**0,03**
Chemical, rubber, plastics	**-1,38**	**-0,68**	**0,10**
Mineral (non-metallic)	**-0,58**	**0,94**	**-0,13**
Iron, steel	**-2,13**	**-0,11**	**-0,11**
Metals (non-ferrous)	**0,52**	**0,85**	**0,30**
Metal products	**-2,78**	**-0,67**	**-0,38**
Motor vehicles and parts	**-0,92**	**0,16**	**0,15**
Transport equipament	**0,75**	**1,56**	**0,29**
Electronic equipment	**-0,72**	**-0,75**	**-0,89**
Machinery and equipment	**-5,22**	**-2,09**	**-0,51**
Manufactures	**-0,51**	**-0,42**	**-0,54**

Source: CGTI-FGV

Simulation 1 – Brazil x US – EU - China

Hypothesis: US and EU – Partial liberalization on Agriculture + Agribusiness = 50% reduction
Full liberalization on Industry
China – Full liberalization on Agriculture + Agribusiness
Partial liberalization on Industry = 50% reduction (Brazil)

Table 0.3 – Summary of gains - GDP by sector

	EU 27	**US**	**China**
Agriculture	15	18	13
Industry	5	14	12
Total	**20**	**32**	**25**

Source: CGTI-FGV

Table 0.4 – Macroeconomic outlook

Macroeconomic Variables	**EU 27**	**US**	**China**
Increase in bilateral exports (US$ mi, F.O.B., 2012)	9,967	2,590	4,782
Increase in bilateral exports %	20.4%	9.7%	11.6%
Increase in bilateral imports (US$ mi, F.O.B., 2012)	20,447	13,946	12,432
Increase in bilateral imports %	42.9%	43.1%	36,3%
Terms of trade	0.2%	-0.3%	0,0%
Real wage	0.0%	0.0%	0,0%
Capital gains	0.2%	0.1%	0,1%
Land gains	15.2%	2.8%	1,8%
Real exchange rate	0.4%	-0.2%	0,0%

Source: CGTI-FGV

Simulation 1 – Brazil x US – EU - China

Table 0.5 – Trade Balance: Agriculture

	EU 27			US			China		
Agriculture	**Δ Trade balance (US$ Million)**	**% Exports**	**% Imports**	**Δ Trade balance (US$ Million)**	**% Exports**	**% Imports**	**Δ Trade balance (US$ Million)**	**% Exports**	**% Imports**
Paddy rice	**-1,2**	**11,76**	**1,92**	**0,4**	**8,95**	**-0,52**	**-0,02**	**0,02**	**0,03**
Wheat	**-28,68**	**-1,27**	**1,97**	**-2,1**	**3,07**	**0,21**	**-1,7**	**-0,11**	**0,12**
Other cereals	**9,07**	**0,8**	**4,13**	**3,36**	**0,15**	**-0,02**	**-0,9**	**-0,03**	**0,12**
Vegetables/fruits	**47,88**	**6,69**	**2,27**	**3,2**	**0,47**	**0,19**	**-4,03**	**0,12**	**0,86**
Oil seeds	**-18,84**	**-0,27**	**0,56**	**11,68**	**0,17**	**-0,04**	**160,53**	**2,36**	**2,75**
Sugar (cane&beet)	**-0,2**	**-5,89**	**2,84**	**0**	**-0,01**	**0,05**	**-0,03**	**-0,96**	**0,58**
Plant fibres	**3,4**	**0,4**	**-1,07**	**-9,48**	**0,57**	**9,89**	**73 ,15**	**14,32**	**-0,22**
Other crops (unprepared)	**102,34**	**1,96**	**4,02**	**374,09**	**6,54**	**2,66**	**84,09**	**1,48**	**0,8**
Cattle, horses, sheeps	**-39,43**	**-14,47**	**32,38**	**-0,19**	**-0,03**	**0,5**	**-0,32**	**-0,12**	**0,2**
Animal products	**-22,94**	**-3,56**	**8,06**	**-0,41**	**0,29**	**1,11**	**-1,91**	**-0,03**	**1,41**
Raw milk	**-0,02**	**-0,8**	**0,24**	**0,07**	**1,82**	**-1,12**	**0**	**-0,09**	**0,05**
Wool, silk	**-1,32**	**-3,33**	**26,63**	**0,24**	**1,77**	**-1,18**	**-0,04**	**-0,42**	**-0,07**
Forestry products	**-0,47**	**0,15**	**2,44**	**-0,46**	**0,43**	**2,76**	**0,08**	**0,34**	**0,07**
Meat: cattle, sheeps, horses	**3719,34**	**104,52**	**21,27**	**22,33**	**0,69**	**1,68**	**-4,77**	**-0,1**	**0,86**
Meat products	**1513,08**	**21,43**	**29,1**	**93,93**	**1,36**	**12,64**	**68,22**	**0,98**	**7,16**
Vegetables oils and fats	**-37,63**	**0,71**	**13,46**	**32,86**	**0,84**	**0,58**	**150,71**	**3,69**	**1,29**
Processed rice	**1,72**	**4,4**	**0,62**	**1,64**	**1,11**	**-0,47**	**-0,07**	**0,03**	**0,04**
Sugar	**588,58**	**11,74**	**4,66**	**126,65**	**2,53**	**4,06**	**109,05**	**2,18**	**9,92**
Food products (animal feed)	**249,35**	**9,21**	**5,43**	**42,84**	**2,11**	**2,17**	**29,54**	**1,25**	**1,02**
Beverage, Tobacco products	**-4,42**	**4,11**	**9,79**	**8,8**	**0,6**	**0,11**	**-0,72**	**-0,01**	**0,07**

Source: CGTI-FGV

Simulation 1 – Brazil x US – EU - China

Table 0.6 – Trade Balance: Industry

Industry	EU 27			US			China		
Extractive	**Δ Trade balance (US$ Million)**	**% Exports**	**% Imports**	**Δ Trade balance (US$ Million)**	**% Exports**	**% Imports**	**Δ Trade balance (US$ Million)**	**% Exports**	**% Imports**
Fishing	**0,62**	**3,34**	**0,60**	**0,64**	**0,72**	**-0,31**	**-0,06**	**-0,02**	**0,04**
Coal	**6,64**	**0,23**	**-0,53**	**-1,19**	**0,02**	**0,09**	**-0,16**	**0,50**	**0,01**
Oil	**17,66**	**0,09**	**-0,15**	**-2,93**	**0,07**	**0,09**	**-6,78**	**-0,04**	**0,05**
Gas	**8,50**	**7,43**	**-0,87**	**2,09**	**2,45**	**-0,21**	**-0,40**	**-0,24**	**0,04**
Minerals	**32,56**	**0,01**	**-1,01**	**21,45**	**0,05**	**-0,36**	**9,31**	**0,06**	**0,07**
Manufacturing									
Textiles	**-138,57**	**5,32**	**7,75**	**139,26**	**16,7**	**4,09**	**-207,95**	**2,33**	**8,58**
Apparel	**-49,15**	**18,67**	**20,32**	**57,64**	**28,68**	**6,35**	**-91,21**	**2,74**	**18,68**
Leather products	**228,05**	**7,16**	**13,58**	**707,13**	**16,78**	**2,35**	**226,89**	**9,15**	**28,42**
Wood products	**103,86**	**4,80**	**26,69**	**126,68**	**3,55**	**7,39**	**-2,11**	**0,30**	**3,78**
Paper products	**-200,78**	**0,37**	**12,83**	**-11,45**	**1,58**	**4,94**	**8,37**	**0,34**	**0,41**
Petroleum products	**61,79**	**0**	**-0,62**	**81,62**	**1,29**	**-0,07**	**-1,97**	**0,04**	**0,04**
Chemical, rubber, plastics	**-1330,58**	**1,71**	**5,74**	**-864,54**	**3,34**	**4,70**	**75,98**	**2,03**	**0,60**
Mineral (non-metallic)	**-94,77**	**0,57**	**12,17**	**199,36**	**9,93**	**4,45**	**-20,24**	**0,48**	**3,58**
Iron, steel	**-151,53**	**0,61**	**10,39**	**113,86**	**1,65**	**1,64**	**37,01**	**0,88**	**2,07**
Metals (non-ferrous)	**320,68**	**5,19**	**0,46**	**176,51**	**2,49**	**-0,4**	**76,39**	**0,98**	**-0,35**
Metal products	**-677,68**	**0,18**	**32,27**	**-151,12**	**2,13**	**9,06**	**-90,68**	**1,26**	**5,42**
Motor vehicles and parts	**-519,61**	**5,06**	**13,01**	**21,60**	**1,86**	**2,64**	**76,27**	**0,63**	**0,19**
Transport equipament	**47,91**	**2,32**	**1,04**	**100,87**	**4,00**	**1,52**	**35,05**	**1,14**	**0,35**
Electronic equipment	**-212,66**	**1,43**	**2,96**	**-309,6**	**3,49**	**4,81**	**-348,73**	**1,46**	**4,53**
Machinery and equipment	**-2627,32**	**3,02**	**13,53**	**-1213,15**	**3,6**	**7,57**	**-228,98**	**1,95**	**2,19**
Manufactures	**-114,21**	**0,74**	**14,42**	**-94,76**	**2,62**	**13,25**	**-110,59**	**1,89**	**14,72**

Source: CGTI-FGV

Simulation 2 – Mercosul (5) x US – EU

Hypothesis: US and EU – Partial liberalization on Agriculture + Agribusiness = 50% reduction

Full liberalization on Industry

Table 0.2 – Variation on GDP by sector (%) – Agriculture

Agriculture	EU 27	US
Paddy rice	0,45	0,03
Wheat	0,88	0,18
Other cereals	1,71	0,28
Vegetables/fruits	2,04	0,29
Oil seeds	0,2	0,4
Sugar (cane&beet)	2,31	0,46
Plant fibres	-0,55	0,77
Other crops (unprepared)	0,65	1,37
Cattle, horses, sheeps	11,5	0,46
Animal products	5,08	0,49
Raw milk	-0,07	-0,02
Wool, silk	-0,03	0,02
Forestry products	0,18	0,43
Meat: cattle, sheeps, horses	14,45	0,56
Meat products	9,74	0,91
Vegetables oils and fats	0,59	0,39
Processed rice	0,1	0,01
Sugar	3,7	0,92
Food products (animal feed)	1,42	0,19
Beverage, Tobacco products	0,1	0,02

Source: CGTI-FGV.

Simulation 2 – Mercosul (5) x US – EU

Hypothesis: US and EU – Partial liberalization on Agriculture + Agribusiness = 50% reduction

Full liberalization on Industry

Table 0.2 – Variation on GDP by sector (%) – Industry

Industry	**EU 27**	**US**
Extractive		
Fishing	**0,14**	**0,01**
Coal	**0,08**	**0,22**
Oil	**0,04**	**0,18**
Gas	**-0,09**	**0,12**
Minerals	**-0,14**	**0,25**
Manufacturing		
Textiles	**-0,98**	**1,04**
Apparel	**-0,16**	**0,33**
Leather products	**2,34**	**6,55**
Wood products	**1,05**	**1,38**
Paper products	**-0,63**	**0,02**
Petroleum products	**-0,07**	**0,14**
Chemical, rubber, plastics	**-1,46**	**-0,81**
Mineral (non-metallic)	**-0,54**	**0,96**
Iron, steel	**-2,24**	**-0,11**
Metals (non-ferrous)	**1,01**	**1,10**
Metal products	**-2,91**	**-0,76**
Motor vehicles and parts	**-2,15**	**-0,06**
Transport equipament	**1,44**	**1,90**
Electronic equipment	**-0,66**	**-0,87**
Machinery and equipment	**-5,36**	**-2,28**
Manufactures	**-0,51**	**-0,46**

Source: CGTI-FGV.

Simulation 2 – Mercosul (5) x US – EU

Hypothesis: US and EU – Partial liberalization on Agriculture + Agribusiness = 50% reduction

Full liberalization on Industry

Table 0.3 – Summary of gains - GDP by sector

	EU 27	US	South America
Agriculture	17	19	9
Industry	7	14	7
Total	**24**	**33**	**16**

Source: CGTI-FGV.

Table 0.4 – Macroeconomic outlook

Macroeconomic Variables	**EU 27**	**US**
Increase in bilateral exports (US$ mi, F.O.B., 2012)	10,016	2,697
Increase in bilateral exports %	20.5%	10.1%
Increase in bilateral imports (US$ mi, F.O.B., 2012)	19,970	13,752
Increase in bilateral imports %	41.9%	42.5%
Terms of trade	0.0%	-0.4%
Real wage	0,0%	0.0%
Capital gains	0.1%	0.1%
Land gains	15.7%	3.0%
Real exchange rate	0.2%	-0.3%

Source: CGTI-FGV.

Simulation 3– Brazil and Mercosul (5) x US – EU – China

Hypothesis - Full liberalization

Table 0.3. – Variation on GDP by sector (%) – Agriculture

	EU 27		US		China	
Agriculture	**BR**	**MER**	**BR**	**MER**	**BR**	**MER**
Paddy rice	**-0,05**	**0,81**	**0,00**	**0,01**	**0,04**	**2,18**
Wheat	**-0,84**	**-0,32**	**-0,32**	**-0,28**	**0,41**	**12,36**
Other cereals	**2,99**	**3**	**0,18**	**0,23**	**0,25**	**1,05**
Vegetables/fruits	**2,45**	**2,82**	**0,16**	**0,16**	**0,17**	**1,23**
Oil seeds	**-2,41**	**-2,11**	**0,20**	**0,23**	**1,62**	**5,92**
Sugar (cane&beet)	**15,88**	**15,98**	**1,27**	**1,36**	**0,76**	**1,31**
Plant fibres	**-3,41**	**-3,22**	**0,59**	**0,68**	**-0,02**	**-1,57**
Other crops (unprepared)	**-0,65**	**-0,58**	**2,93**	**2,8**	**0,52**	**-0,31**
Cattle, horses, sheeps	**38,05**	**36,57**	**0,30**	**0,59**	**0,24**	**0,86**
Animal products	**10,66**	**10,9**	**0,30**	**0,52**	**0,63**	**0**
Raw milk	**-0,50**	**0,02**	**0,04**	**0,75**	**0**	**1,45**
Wool, silk	**-0,15**	**-0,15**	**0,01**	**0,02**	**-0,05**	**0,15**
Forestry products	**-2,34**	**-2,23**	**0,25**	**0,23**	**0,21**	**0,15**
Meat: cattle, sheeps, horses	**48,28**	**46,3**	**0,36**	**0,7**	**0,29**	**1,03**
Meat products	**19,65**	**20,18**	**0,50**	**0,89**	**1,23**	**-0,31**
Vegetables oils and fats	**-1,51**	**-1,24**	**0,19**	**0,2**	**1,27**	**3,44**
Processed rice	**-0,09**	**0,15**	**-0,01**	**0**	**0,01**	**1,13**
Sugar	**23,37**	**23,52**	**2,03**	**2,24**	**0,94**	**0,35**
Food products (animal feed)	**3,30**	**3,35**	**0,23**	**0,31**	**0,17**	**0,7**
Beverages and tobacco	**-0,27**	**-0,26**	**-0,04**	**-0,03**	**0,01**	**0,26**

Source: CGTI-FGV.

Simulation 3– Brazil and Mercosul (5) x US – EU – China

Hypothesis – Full liberalization

Table 0.2 – Variation on GDP by sector (%) – Industry

Industry	EU 27		US		China	
Extrative	**BR**	**MER**	**BR**	**MER**	**BR**	**MER**
Fishing	**0,3**	**0,29**	**0,01**	**0,01**	**0,01**	**0,01**
Coal	**-1,11**	**-1,07**	**0,14**	**0,11**	**0,21**	**-0,03**
Oil	**-1,05**	**-1,02**	**0,10**	**0,06**	**0,16**	**0,10**
Gas	**-1,48**	**-1,50**	**0,04**	**-0,04**	**0,18**	**1,77**
Minerals	**-2,42**	**-2,38**	**0,10**	**0,01**	**0,32**	**-0,36**
Manufacturing						
Textiles	**-3,32**	**-3,16**	**0,99**	**1,19**	**-3,58**	**-5,16**
Apparel	**-0,26**	**-0,24**	**0,31**	**0,36**	**-0,98**	**-0,98**
Leather products	**-10,59**	**-8,74**	**6,01**	**7,36**	**1,19**	**-2,32**
Wood products	**-5,01**	**-4,68**	**0,96**	**0,95**	**0,36**	**-1,58**
Paper products	**-2,50**	**-2,49**	**-0,09**	**-0,13**	**0,24**	**1,06**
Petroleum products	**-0,71**	**-0,71**	**0,12**	**0,08**	**0,11**	**3,33**
Chemical, rubber, plastics	**-4,23**	**-4,27**	**-0,75**	**-0,98**	**0,27**	**3,96**
Mineral (non-metallic)	**-2,09**	**-2,02**	**0,87**	**0,89**	**-0,15**	**0,34**
Iron, steel	**-7,18**	**-7,16**	**-0,33**	**-0,47**	**0,10**	**-2,55**
Metals (non-ferrous)	**-9,46**	**-9,45**	**0,42**	**-0,04**	**1,44**	**-6,15**
Metal products	**-5,38**	**-5,42**	**-0,79**	**-0,91**	**-0,79**	**-1,51**
Motor vehicles and parts	**-3,61**	**-3,03**	**0,04**	**0,94**	**0,58**	**2,76**
Transport equipament	**-6,03**	**-5,65**	**1,27**	**1,26**	**1,67**	**-3,52**
Electronic equipment	**-3,21**	**-3,24**	**-0,86**	**-1,42**	**-1,72**	**-3,88**
Machinery and equipment	**-11,42**	**-11,65**	**-2,36**	**-2,92**	**-0,91**	**-4,89**
Manufactures	**-1,04**	**-1,06**	**-0,44**	**-0,50**	**-1,34**	**-1,77**

Source: CGTI-FGV.

Simulation 3– Brazil and Mercosul (5) x US – EU – China

Hypothesis - Full liberalization

Table 0.3 – Summary of gains - GDP by sector

	EU 27		US		China	
	BR	**MER**	**BR**	**MER**	**BR**	**MER**
Agriculture	9	12	16	17	17	16
Industry	1	1	14	12	14	8
Total	**10**	**13**	**30**	**29**	**31**	**24**

Source: CGTI-FGV

Table 0.4 – Macroeconomic outlook

Macroeconomic Variables	EU 27		US		China	
	BR	**MER**	**BR**	**MER**	**BR**	**MER**
Increase in bilateral exports (US$ mi, F.O.B., 2012)	29,266	27,996	3,524	3,418	5,112	4,205
Increase in bilateral exports %	59.9%	57.3%	13.2%	12.8%	12,4%	10,2%
Increase in bilateral imports (US$ mi, F.O.B., 2012)	23,402	23,211	14,172	14,042	29,864	32,193
Increase in bilateral imports %	49.1%	48.7%	43.8%	43.4%	87,2%	94,0%
Terms of trade	3.6%	3.3%	-0.2%	-0.1%	-0,3%	-0,1%
Real wage	-0.2%	-0.2%	0.0%	0.0%	0,0%	-0,1%
Capital gains	0.2%	0.2%	0.1%	0.1%	0,1%	0,1%
Land gains	81.2%	76.6%	5.0%	5.5%	2,8%	7,2%
Real exchange rate	3.5%	3.3%	-0.1%	0.0%	-0,3%	0,9%

Source: CGTI-FGV

Simulation 4 – Impacts of TTIP on Brazil

Hypothesis: TTIP – only tariffs
TTIP with 50% reduction of non-tariff barriers (NTBs)
TTIP with 100% reduction of NTBs

Table 4.4 – Variation on GDP by sector (%) – Agriculture

Agriculture	TTIP	TTIP+NTB (50%)	TTIP+NTB (100%)
Paddy rice	**-0,03**	**-0,12**	**-0,27**
Wheat	**0,20**	**1,54**	**2,74**
Other cereals	**-0,12**	**-0,66**	**-1,24**
Vegetables/fruits	**-0,01**	**-0,27**	**-0,63**
Oil seeds	**0,08**	**-0,55**	**-1,54**
Sugar (cane&beet)	**0,01**	**0,11**	**0,28**
Plant fibres	**-0,12**	**0,07**	**0,20**
Other crops (unprepared)	**-0,12**	**-1,23**	**-2,93**
Cattle, horses, sheeps	**-0,13**	**-0,29**	**-0,76**
Animal products	**-0,24**	**-1,01**	**-1,95**
Raw milk	**-0,02**	**0,00**	**0,03**
Wool, silk	**0,00**	**0,00**	**0,01**
Forestry products	**0,06**	**0,59**	**1,26**
Meat: cattle, sheeps, horses	**-0,17**	**-0,37**	**-0,96**
Meat products	**-0,48**	**-2,01**	**-3,83**
Vegetables oils and fats	**-0,02**	**-0,17**	**-0,61**
Processed rice	**-0,01**	**-0,03**	**-0,07**
Sugar	**0,00**	**0,06**	**0,19**
Food products (animal feed)	**-0,04**	**-0,24**	**-0,49**
Beverage, Tobacco products	**-0,01**	**-0,43**	**-0,68**

Source: CGTI-FGV

Simulation 4 – Impacts of the TTIP on Brazil

Hypothesis: TTIP – only tariffs
TTIP with 50% reduction of non-tariff barriers (NTBs)
TTIP with 100% reduction of NTBs

Table 4.2 – Variation on GDP by sector (%) – Industry

Industry	**TTIP**	**TTIP+NTB (50%)**	**TTIP+NTB (100%)**
Extractive			
Fishing	**0,00**	**-0,05**	**-0,10**
Coal	**0,04**	**0,26**	**0,49**
Oil	**0,03**	**0,01**	**-0,01**
Gas	**0,01**	**0,09**	**0,21**
Minerals	**0,04**	**0,07**	**0,15**
Manufacturing			
Textiles	**-0,06**	**0,03**	**0,10**
Apparel	**-0,01**	**-0,03**	**-0,05**
Leather products	**-0,47**	**-0,64**	**-0,87**
Wood products	**0,15**	**1,41**	**3,00**
Paper products	**0,06**	**0,52**	**1,11**
Petroleum products	**-0,03**	**-0,32**	**-0,61**
Chemical, rubber, plastics	**0,02**	**0,26**	**0,53**
Mineral (non-metallic)	**-0,19**	**-0,59**	**-0,94**
Iron, steel	**0,10**	**-0,14**	**-0,34**
Metals (non-ferrous)	**0,00**	**0,36**	**0,78**
Metal products	**0,04**	**0,28**	**0,59**
Motor vehicles and parts	**-0,02**	**-0,01**	**0,01**
Transport equipament	**0,12**	**-2,86**	**-6,54**
Electronic equipment	**0,07**	**0,41**	**0,82**
Machinery and equipment	**0,16**	**0,55**	**1,06**
Manufactures	**0,00**	**-0,07**	**-0,15**

Source: CGTI-FGV

Simulation 4 – Impacts of the TTIP on Brazil

Hypothesis: TTIP – only tariffs
TTIP with 50% reduction of non-tariff barriers (NTBs)
TTIP with 100% reduction of NTBs

Table 4.3 – Variation on GDP by sector (%) – Services

Services	TTIP	TTIP+NTB (50%)	TTIP+NTB (100%)
Electricity	**0,00**	**0,04**	**0,08**
Gas distribution	**0,01**	**0,10**	**0,25**
Water	**0,00**	**-0,02**	**-0,05**
Construction	**0,00**	**0,00**	**0,01**
Trade	**0,00**	**-0,02**	**-0,05**
Transport	**0,00**	**0,01**	**0,04**
Water transport	**0,08**	**0,68**	**1,49**
Air transport	**0,03**	**0,22**	**0,49**
Communication	**0,01**	**0,05**	**0,11**
Financial services	**0,01**	**0,02**	**0,05**
Insurance	**0,01**	**0,02**	**0,06**
Business services	**0,03**	**0,32**	**0,70**
Recreation and other serv.	**0,01**	**0,06**	**0,12**
Public administration	**0,00**	**-0,04**	**-0,08**
Dwellings	**-0,01**	**-0,07**	**-0,15**

Source: CGTI-FGV

Simulation 4 – Impacts of the TTIP on Brazil

Hypothesis: TTIP – only tariffs
TTIP with 50% reduction of non-tariff barriers (NTBs)
TTIP with 100% reduction of NTBs

Table 4.4 – Summary of gains – GDP by sector

	TTIP	TTIP+NTB (50%)	TTIP+NTB (100%)
Agriculture	4	5	7
Industry	12	12	12
Services	8	10	11
Total	**24**	**27**	**30**

Source: CGTI-FGV

Table 4.5 – Macroeconomic outlook

Macroeconomic Variables	TTIP	TTIP+NTB (50%)	TTIP+NTB (100%)
Variation in bilateral exports (US$ mi, F.O.B., 2012)	-453	-3,778	-7,858
Variation in bilateral exports %	-0.6%	-5.0%	-10.4%
Variation in bilateral imports (US$ mi, F.O.B., 2012)	-320	-3,121	-6,401
Variation in bilateral imports %	-0.4%	-3.9%	-8.0%
Terms of trade	-0.1%	-0.6%	-1.3%
Real wage	0.0%	0.0%	-0.1%
Capital gains	0.0%	-0.1%	-0.1%
Land gains	-0.4%	-2.7%	-6.2%
Real exchange rate	-0.1%	-1.0%	-2.2%

Source: CGTI-FGV

Simulation 4 – Impacts of the TTIP on Brazil

Table 4.6 - Trade Balance: Agriculture

	TTIP			TTIP+NTB (50%)			TTIP+NTB (100%)		
Agriculture	**Δ Trade balance (US$ million)**	**% Exports**	**% Imports**	**Δ Trade balance (US$ million)**	**% Exports**	**% Imports**	**Δ Trade balance (US$ million)**	**% Exports**	**% Imports**
Paddy rice	**-0,36**	**3,03**	**0,57**	**-1,27**	**7,36**	**2**	**-2,97**	**-1,88**	**4,48**
Wheat	**2,20**	**-0,27**	**-0,16**	**16,55**	**-1,58**	**-1,19**	**35,56**	**-3,55**	**-2,55**
Other cereals	**-8,88**	**-0,43**	**-0,28**	**-60,54**	**-2,91**	**-1,78**	**-115,13**	**-5,55**	**-3,63**
Vegetables/fruits	**0,16**	**-0,07**	**-0,13**	**-10,09**	**-1,88**	**-1,2**	**-23,79**	**-4,26**	**-2,57**
Oil seeds	**7,18**	**0,1**	**-0,09**	**-148,95**	**-2,18**	**-1,88**	**-360,59**	**-5,28**	**-4,47**
Sugar (cane&beet)	**0**	**-0,17**	**-0,13**	**0,01**	**0,13**	**-1,15**	**0,02**	**0,36**	**-2,41**
Plant fibres	**-2,92**	**-0,64**	**-0,28**	**-2,80**	**-0,90**	**-1,41**	**-5,69**	**-1,84**	**-2,94**
Other crops (unprepared)	**-41,14**	**-0,72**	**-0,38**	**-390,47**	**-6,82**	**-2,70**	**-914,74**	**-15,93**	**-5,51**
Cattle, horses, sheeps	**0,21**	**0,02**	**-0,62**	**0,13**	**-0,29**	**-2,81**	**0,08**	**-0,7**	**-5,92**
Animal products	**-0,29**	**-0,21**	**-0,35**	**-2,44**	**-1,46**	**-2,12**	**-4,5**	**-2,84**	**-4,32**
Raw milk	**0,01**	**0,27**	**-0,15**	**0,09**	**2,04**	**-1,73**	**0,15**	**2,13**	**-3,72**
Wool, silk	**-0,01**	**-0,16**	**-0,19**	**0,16**	**0,33**	**-3,54**	**0,37**	**1,19**	**-6,59**
Forestry products	**0,03**	**0,03**	**-0,11**	**-1,32**	**-5,68**	**-0,89**	**-2,94**	**-12,47**	**-1,79**
Meat: cattle, sheeps, horses	**-36,62**	**-1,03**	**-0,23**	**-106,88**	**-3,03**	**-1,39**	**-272,04**	**-7,68**	**-2,48**
Meat products	**-84,26**	**-1,19**	**-0,40**	**-382,42**	**-5,40**	**-3,48**	**-740,48**	**-10,46**	**-7,02**
Vegetables oils and fats	**-4,34**	**-0,12**	**-0,16**	**-56,80**	**-1,52**	**-1,57**	**-163,2**	**-4,24**	**-3,43**
Dairy	**-3,88**	**-1,53**	**-0,07**	**4,69**	**0,18**	**-2,01**	**14,78**	**2,16**	**-4,33**
Processed rice	**-0,19**	**-0,34**	**-0,02**	**0,53**	**-1,23**	**-0,70**	**0,77**	**-2,98**	**-1,43**
Sugar	**-4,15**	**-0,08**	**-0,17**	**-13,96**	**-0,28**	**-1,85**	**-34,79**	**-0,7**	**-3,68**
Food products (animal feed)	**-11,55**	**-0,39**	**-0,17**	**-80,48**	**-2,88**	**-1,53**	**-167,31**	**-6,01**	**-3,26**
Beverage, Tobacco products	**-3,04**	**-0,25**	**-0,13**	**-94,25**	**-6,37**	**-1,16**	**-151,15**	**-10,48**	**-2,44**

Source: CGTI-FGV

Simulation 1 – Impacts of the TTIP on Brazil

Table 4.7 - Trade Balance: Industry

Industry	TTIP			TTIP+NTB (50%)			TTIP+NTB (100%)		
Extrative	**Δ Trade balance (US$ million)**	**% Exports**	**% Imports**	**Δ Trade balance (US$ million)**	**% Exports**	**% Imports**	**Δ Trade balance (US$ million)**	**% Exports**	**% Imports**
Fishing	**0,25**	**0,28**	**-0,12**	**1,20**	**-0,17**	**-1,09**	**2,47**	**-0,57**	**-2,33**
Coal	**0,20**	**0,03**	**-0,02**	**6,20**	**-1,97**	**-0,49**	**14,70**	**-4,15**	**-1,17**
Oil	**21,46**	**0,17**	**-0,13**	**135,07**	**-0,12**	**-1,70**	**248,72**	**-0,87**	**-3,59**
Gas	**0,91**	**-0,28**	**-0,09**	**7,98**	**1,23**	**-0,81**	**16,77**	**2,73**	**-1,71**
Minerals	**-7,49**	**-0,05**	**-0,09**	**-143,93**	**-0,80**	**-0,67**	**-311,64**	**-1,74**	**-1,43**
Manufacturing									
Textiles	**-6,08**	**-0,74**	**-0,18**	**14,30**	**-1,74**	**-1,44**	**33,47**	**-3,45**	**-3,04**
Apparel	**-1,38**	**-0,70**	**-0,16**	**8,14**	**-0,39**	**-1,75**	**18,09**	**-0,53**	**-3,70**
Leather products	**-58,08**	**-1,38**	**-0,21**	**-104,01**	**-2,65**	**-1,65**	**-163,84**	**-4,28**	**-3,43**
Wood products	**11,89**	**0,25**	**-0,17**	**112,27**	**2,38**	**-1,73**	**235,99**	**5,01**	**-3,61**
Paper products	**15,55**	**0,26**	**-0,22**	**130,71**	**2,15**	**-1,87**	**274,48**	**4,53**	**-3,89**
Petroleum products	**-10,08**	**-0,28**	**-0,06**	**-123,51**	**-3,72**	**-0,93**	**-231,83**	**-7,47**	**-2,03**
Chemical, rubber, plastics	**26,69**	**-0,22**	**-0,19**	**321,80**	**-1,08**	**-1,68**	**683,96**	**-2,25**	**-3,55**
Mineral (non-metallic)	**-43,39**	**-1,88**	**-0,20**	**-146,31**	**-6,80**	**-1,94**	**-242,77**	**-11,59**	**-4,08**
Iron, steel	**14,05**	**0,14**	**-0,10**	**-165,24**	**-2,22**	**-1,60**	**-357,78**	**-4,80**	**-3,44**
Metals (non-ferrous)	**-11,58**	**-0,20**	**-0,04**	**-12,26**	**-0,62**	**-0,76**	**-20,81**	**-1,28**	**-1,69**
Metal products	**3,26**	**-0,05**	**-0,20**	**58,26**	**0,51**	**-2,31**	**125,68**	**1,22**	**-4,86**
Motor vehicles and parts	**-19,38**	**-0,21**	**-0,12**	**-68,06**	**-1,20**	**-1,15**	**-128,92**	**-2,45**	**-2,45**
Transport equipament	**5,09**	**-0,06**	**-0,12**	**-275,17**	**-8,79**	**-2,58**	**-610,56**	**-19,32**	**-5,61**
Electronic equipment	**30,83**	**0,44**	**-0,20**	**190,65**	**1,71**	**-1,57**	**382,49**	**3,07**	**-3,28**
Machinery and equipment	**65,33**	**0,14**	**-0,21**	**151,27**	**-1,97**	**-1,85**	**286,20**	**-4,34**	**-3,88**
Manufactures	0,63	-0,21	-0,21	-2,48	-3,51	-1,94	-7,33	-7,74	-4,04

Source: CGTI-FG

Simulation 1 – Impacts of the TTIP on Brazil

Table 0.5 - Trade Balance: Services

Services	TTIP			TTIP+NTB (50%)			TTIP+NTB (100%)		
	Δ Trade balance (US$ million)	% Exports	% Imports	Δ Trade balance (US$ million)	% Exports	% Imports	Δ Trade balance (US$ million)	% Exports	% Imports
Electricity	**3,15**	**0,17**	**-0,14**	**28,15**	**2,27**	**-1,17**	**60,02**	**5,04**	**-2,47**
Gas distribution	**0,45**	**0,13**	**-0,19**	**2,88**	**1,70**	**-1,15**	**5,90**	**3,74**	**-2,33**
Water	**0,24**	**0,33**	**-0,34**	**1,88**	**2,58**	**-2,64**	**4,05**	**5,77**	**-5,46**
Construction	**0,18**	**0,02**	**-0,14**	**2,47**	**1,06**	**-1,37**	**5,33**	**2,34**	**-2,92**
Trade	**6,23**	**0,07**	**-0,19**	**66,67**	**1,36**	**-1,76**	**142,86**	**3,05**	**-3,70**
Transport	**4,98**	**0,09**	**-0,16**	**32,09**	**0,15**	**-1,48**	**71,93**	**0,50**	**-3,15**
Water transport	**6,45**	**0,08**	**-0,12**	**51,25**	**0,55**	**-1,01**	**111,17**	**1,22**	**-2,15**
Air transport	**5,42**	**0,14**	**-0,13**	**45,92**	**1,03**	**-1,13**	**98,76**	**2,26**	**-2,41**
Communication	**1,53**	**0,18**	**-0,19**	**15,13**	**1,89**	**-1,73**	**32,86**	**4,19**	**-3,65**
Financial services	**8,56**	**0,33**	**-0,31**	**15,72**	**-2,42**	**-2,37**	**46,63**	**-3,67**	**-4,95**
Insurance	**3,48**	**0,22**	**-0,17**	**19,08**	**0,52**	**-1,50**	**43,61**	**1,53**	**-3,16**
Business services	**37,06**	**0,19**	**-0,14**	**362,97**	**1,79**	**-1,37**	**792,20**	**3,99**	**-2,93**
Recreation and other serv.	**6,44**	**0,21**	**-0,25**	**55,21**	**2,18**	**-2,01**	**117,33**	**4,80**	**-4,23**
Public administration	**17,71**	**0,28**	**-0,30**	**89,65**	**0,09**	**-2,34**	**195,13**	**0,55**	**-4,87**
Dwellings	**0**	**-0,13**	**-0,13**	**0**	**-1,06**	**-1,06**	**0**	**-2,25**	**-2,25**

Source: CGTI-FGV

Simulation 5 - Impacts of the participation of Brazil on the TTIP

- Hypothesis
  - Full Liberalization + NTBs (100%)
  - 50% liberalization on agriculture (US and EU) + NTBs (100%)
  - 50% liberalization on agriculture (US and EU) + 50% liberalization on industry (Brazil) + NTBs (100%)
  - 50% liberalization on agriculture (US and EU) + 50% liberalization on industry (Brazil) + NTBs (50%)

Table 5.1 - Variation on GDP by sector (%): Agriculture

Agriculture	**TTIP + Brazil (100% + 100% NTB)**	**TTIP + Brazil (50%ag +100% NTB)**	**TTIP + Brazil (50% ag + 50% ind. + 100% NTB)**	**TTIP + Brazil (50% ag + 50% ind. + 50% NTB)**
Paddy rice	**-0,81**	**-0,71**	**-0,84**	**-2,27**
Wheat	**-5,44**	**-3,44**	**-4,53**	**-26,11**
Other cereals	**8,00**	**6,89**	**6,43**	**4,63**
Vegetables/fruits	**16,93**	**16,69**	**16,14**	**9,49**
Oil seeds	**3,74**	**6,74**	**6,02**	**1,28**
Sugar (cane&beet)	**22,09**	**3,94**	**3,56**	**1,35**
Plant fibres	**-9,33**	**-5,39**	**-5,65**	**-10,15**
Other crops (unprepared)	**14,19**	**14,18**	**13,69**	**10,45**
Cattle, horses, sheeps	**47,01**	**24,86**	**24,34**	**28,92**
Animal products	**29,43**	**21,33**	**20,5**	**21,34**
Raw milk	**-0,98**	**-0,54**	**-0,96**	**-2,91**
Wool, silk	**0,97**	**1,67**	**1,55**	**-0,57**
Forestry products	**-5,35**	**-2,41**	**-2,69**	**-1,98**
Meat: cattle, sheeps, horses	**59,89**	**31,71**	**31,08**	**36,22**
Meat products	**57,26**	**41,27**	**39,70**	**41,73**
Vegetables oils and fats	**19,06**	**22,55**	**21,27**	**8,63**
Processed rice	**-0,21**	**-0,26**	**-0,29**	**-0,51**
Sugar	**34,74**	**8,47**	**7,73**	**4,50**
Food products (animal feed)	**10,12**	**7,53**	**7,16**	**4,42**
Beverage, Tobacco products	**-0,56**	**-0,16**	**-0,36**	**-0,66**

Source: CGTI-FGV

Simulation 5 – Impacts of the participation of Brazil on the TTIP

- Hypothesis:
  - Full Liberalization + NTBs (100%)
  - 50% liberalization on agriculture (US and EU) + NTBs (100%)
  - 50% liberalization on agriculture (US and EU) + 50% liberalization on industry (Brazil) + NTBs (100%)
  - 50% liberalization on agriculture (US and EU) + 50% liberalization on industry (Brazil) + NTBs (50%)

Table 5.2 - Variation on GDP by sector (%): Industry

Industry	TTIP + Brazil (100% + 100% NTB)	TTIP + Brazil (50%ag +100% NTB)	TTIP + Brazil (50% ag + 50% ind. + 100% NTB)	TTIP + Brazil (50% ag + 50% ind. + 50% NTB)
Extractive				
Fishing	**0,95**	**0,72**	**0,70**	**0,61**
Coal	**-5,83**	**-4,05**	**-4,45**	**-4,38**
Oil	**-1,57**	**-0,24**	**-0,51**	**-0,61**
Gas	**-7,53**	**-5,18**	**-5,50**	**-3,29**
Minerals	**-9,06**	**-6,15**	**-6,60**	**-3,78**
Manufacturing				
Textiles	**-6,85**	**-3,04**	**-2,73**	**-3,66**
Apparel	**1,19**	**1,54**	**1,79**	**1,05**
Leather products	**-6,09**	**15,35**	**12,84**	**11,27**
Wood products	**-12,50**	**-5,71**	**-6,48**	**-3,78**
Paper products	**-6,59**	**-4,48**	**-4,49**	**-3,18**
Petroleum products	**-1,03**	**-0,30**	**-0,35**	**-0,64**
Chemical, rubber, plastics	**-11,92**	**-8,32**	**-7,71**	**-7,2**
Mineral (non-metallic)	**-2,34**	**-0,03**	**-0,09**	**-1,16**
Iron, steel	**-13,23**	**-6,56**	**-6,71**	**-6,95**
Metals (non-ferrous)	**-28,08**	**-17,14**	**-18,62**	**-11,34**
Metal products	**-12,13**	**-8,76**	**-7,43**	**-7,18**
Motor vehicles and parts	**-7,22**	**-3,66**	**-3,68**	**-3,18**
Transport equipament	**-13,45**	**-5,24**	**-8,03**	**0,66**
Electronic equipment	**-12,05**	**-9,13**	**-8,93**	**-6,56**
Machinery and equipment	**-23,74**	**-15,74**	**-14,20**	**-17,19**
Manufactures	**-1,89**	**-1,13**	**-0,74**	**-1,07**

Source: CGTI-FGV

Simulation 5 – Impacts of the participation of Brazil on the TTIP

- Hypothesis:
  - Full Liberalization + NTBs (100%)
  - 50% liberalization on agriculture (US and EU) + NTBs (100%)
  - 50% liberalization on agriculture (US and EU) + 50% liberalization on industry (Brazil) + NTBs (100%)
  - 50% liberalization on agriculture (US and EU) + 50% liberalization on industry (Brazil) + NTBs (50%)

Table 5.3 – Variation on GDP by sector (%): Services

Services	**TTIP + Brazil (100% + 100% NTB)**	**TTIP + Brazil (50%ag +100% NTB)**	**TTIP + Brazil (50% ag + 50% ind. + 100%NTB)**	**TTIP + Brazil (50% ag + 50% ind. + 50%NTB)**
Electricity	**-4,28**	**-2,58**	**-2,74**	**-1,85**
Gas distribution	**-5,76**	**-3,18**	**-3,48**	**-2,71**
Water	**0,43**	**0,28**	**0,34**	**0,37**
Construction	**-0,03**	**-0,04**	**-0,03**	**-0,01**
Trade	**0,24**	**0,30**	**0,34**	**0,33**
Transport	**-0,84**	**-0,56**	**-0,59**	**-0,35**
Water transport	**-10,38**	**-7,43**	**-7,99**	**-4,82**
Air transport	**-4,35**	**-3,22**	**-3,36**	**-1,91**
Communication	**-0,95**	**-0,69**	**-0,66**	**-0,46**
Financial services	**-0,77**	**-0,53**	**-0,47**	**-0,55**
Insurance	**-0,02**	**-0,16**	**-0,12**	**0,05**
Business services	**-3,76**	**-2,54**	**-2,74**	**-2,13**
Recreation and other serv.	**0,44**	**0,12**	**0,17**	**0,49**
Public administration	**1,49**	**0,72**	**0,84**	**0,79**
Dwellings	**1,80**	**1,07**	**1,23**	**1,17**

Source: CGTI-FGV.

Simulation 5 – Impacts of the participation of Brazil on the TTIP

- Hypothesis:
  - Full Liberalization + NTBs (100%)
  - 50% liberalization on agriculture (US and EU) + NTBs (100%)
  - 50% liberalization on agriculture (US and EU) + 50% liberalization on industry (Brazil) + NTBs (100%)
  - 50% liberalization on agriculture (US and EU) + 50% liberalization on industry (Brazil) + NTBs (50%)

Table 5.4 – Summary of gains: GDP by sector

	TTIP + Brazil (100% + 100% NTB)	**TTIP + Brazil (50%ag +100% NTB)**	**TTIP + Brazil (50% ag + 50% ind. + 100% NTB)**	**TTIP + Brazil (50% ag + 50% ind. + 50% NTB)**
Agriculture	13	13	13	12
Industry	2	3	2	4
Services	5	5	6	6
Total	**20**	**21**	**21**	**22**

Source: CGTI-FGV.

Table 5.5 – Macroeconomic outlook

Macroeconomic Variables	**TTIP + Brazil (100% + 100%NTB)**	**TTIP + Brazil (50%ag +100% NTB)**	**TTIP + Brazil (50% ag + 50% ind. + 100% NTB)**	**TTIP + Brazil (50% ag + 50% ind. + 50% NTB)**
Increase in bilateral exports (US$ mi, F.O.B., 2012)	95,433	77,374	91,504	51,079
Increase in bilateral exports %	126.3%	102.4%	121,1%	67,6%
Increase in bilateral imports (US$ mi, F.O.B., 2012)	43,130	37,209	27,926	42,330
Increase in bilateral imports %	53.9%	46.5%	34,9%	52,9%
Terms of trade	16.0%	10.7%	16,9%	5,4%
Real wage	0.4%	0.8%	0,4%	1,0%
Capital gains	1.1%	1.1%	1,0%	1,2%
Land gains	198,4%	87.7%	191,2%	57,9%
Real exchange rate	15.2%	10.5%	15,9%	6,3%

Source: CGTI-FGV.

Simulation 5 – Impacts of the participation of Brazil on the TTIP
Table 5.6 – Trade balance - Agriculture

	TTIP + Brazil (100% + 100%NTB)			TTIP + Brazil (50%ag +100%NTB)			TTIP + Brazil (50% ag + 50% ind. + 100%NTB)			TTIP + Brazil (50% ag + 50% ind. + 50%NTB)		
Agriculture	**Δ Trade balance (US$ mi)**	**% Exports**	**% Imports**	**Δ Trade balance (US$ mi)**	**% Exports**	**% Imports**	**Δ Trade balance (US$ mi)**	**% Exports**	**% Imports**	**Δ Trade balance (US$ mi)**	**% Exports**	**% Imports**
Paddy rice	-32,25	1998,15	66,89	-21,11	1975,79	49,85	-24,29	1892,75	53,91	-58,93	286,09	91,74
Wheat	-393,71	-11,35	27,21	-286,18	-12,07	19,70	-290,05	-12,95	19,95	-349,37	-24,4	23,85
Other cereals	227,69	14,31	42,37	314,52	17,05	29,78	307,17	16,72	29,75	162,66	9,59	23,51
Vegetables/fruits	796,26	109,31	34,72	788,75	104,37	28,34	775,26	103,57	29,38	439,28	58,9	16,99
Oil seeds	62,62	1,59	70,38	171,06	3,16	70,27	171,72	3,16	69,3	215,41	3,53	41,43
Sugar (cane&beet)	-2,59	-70,06	74,03	-1,36	-38,91	26,47	-1,39	-39,68	27,08	-1,21	-34,73	22,8
Plant fibres	-72,31	-8,81	21,94	-56,66	-6,89	17,27	-71,91	-8,2	24,14	-160,79	-17,15	58,77
Other crops (unprepared)	5580,24	101,64	121,04	5338,18	96,22	95,89	5224,54	94,49	100,22	3615,72	66,75	95,98
Cattle, horses, sheeps	-296,34	-79,97	474,26	-137,83	-48,83	127,35	-137,69	-48,78	127,19	-88,47	-28,18	107,08
Animal products	-127,61	-9,35	73,64	-34,92	6,30	44,57	-37,45	6,62	47,42	-34,56	3,7	37,12
Raw milk	6,44	439,18	65,14	9,23	559,6	47,00	8,94	546,45	48,52	0,63	104,1	46,86
Wool, silk	39,59	415,57	195,62	63,86	607,52	118,45	59,17	575,41	148,9	-14,33	62,39	597,59
Forestry products	37,6	160,62	24,31	42,94	175,98	18,30	40,49	170,67	23,27	13,95	91	48,92
Meat: cattle, sheeps, horses	24007,78	686,25	445,65	9358,86	266,11	135,21	9232,76	262,68	137,34	9050,04	255,39	79,88
Meat products	12671,07	179,5	265,96	8453,70	119,61	129,37	8200,49	116,17	169,72	7364,64	104,94	339,82
Vegetables oils and fats	3403,36	90,31	87,47	4034,42	102,42	64,48	3849,04	99,84	79,5	1683,57	53,87	120,88
Processed rice	-33,00	38,10	30,22	-28,70	21,92	22,43	-33,49	19,17	23,98	-37,58	0,57	19,72
Sugar	7638,74	152,45	84,27	1947,03	38,87	36,11	1861,25	37,16	42,98	1152,52	23,04	60,86
Food products (animal feed)	3353,58	112,09	45,68	2704,97	87,61	30,32	2541,61	85,51	35,9	1098,18	47,07	39,01
Beverage, Tobacco products	29,29	14,74	28,85	52,61	10,61	16,4	-6,44	9,96	23,13	-26,68	7,07	19,49

Source: CGTI-FGV.

Simulation 5 – Impacts of the participation of Brazil on the TTIP

Table 5.7 – Trade balance - Industry

Industry	TTIP + Brazil (100% + 100%NTB)			TTIP + Brazil (50%ag +100%NTB)			TTIP + Brazil (50% ag + 50% ind. + 100%NTB)			TTIP + Brazil (50% ag + 50% ind. + 50%NTB)		
Extractive	**Δ Trade balance (US$ mi)**	**% Exports**	**% Imports**	**Δ Trade balance (US$ mi)**	**% Exports**	**% Imports**	**Δ Trade balance (US$ mi)**	**% Exports**	**% Imports**	**Δ Trade balance (US$ mi)**	**% Exports**	**% Imports**
Fishing	**-18,75**	**13,07**	**20,67**	**-10,07**	**18,38**	**14,95**	**-11,19**	**17,79**	**15,72**	**-6,74**	**10,36**	**9,35**
Coal	**59,61**	**-12,69**	**-4,73**	**32,82**	**-11,10**	**-2,60**	**33,5**	**-11,7**	**-2,66**	**79,06**	**10,14**	**-6,27**
Oil	**586,59**	**64,43**	**38,66**	**782,94**	**67,68**	**38,62**	**701,78**	**66,71**	**38,9**	**306,42**	**26,1**	**14,84**
Gas	**30,19**	**269,90**	**-3,07**	**11,16**	**248,45**	**-1,13**	**6,31**	**228,59**	**-0,64**	**31,34**	**40,32**	**-3,19**
Minerals	**-94,58**	**-2,11**	**-11,27**	**-60,40**	**-1,35**	**-7,21**	**-107,1**	**-1,52**	**-6,82**	**89,74**	**-0,5**	**-6,45**
Manufacturing												
Textiles	**-918,78**	**27,28**	**47,07**	**-402,49**	**47,06**	**39,54**	**-324,41**	**40,87**	**33,46**	**-438,62**	**23,22**	**27,97**
Apparel	**-171,80**	**94,06**	**88,18**	**37,71**	**129,00**	**69,93**	**100,22**	**118,04**	**51,71**	**-15,57**	**74,38**	**47,29**
Leather products	**-103,05**	**11,43**	**101,67**	**2293,14**	**63,09**	**71,29**	**2029,51**	**55,8**	**62,86**	**1505,9**	**41,38**	**46,47**
Wood products	**-830,89**	**-11,62**	**78,36**	**-189,45**	**1,90**	**67,41**	**-262,82**	**-1,68**	**46,53**	**-108,43**	**0,92**	**36,82**
Paper products	**-1808,02**	**-20,90**	**49,89**	**-1181,70**	**-10,56**	**41,01**	**-1161,81**	**-13,5**	**31,87**	**-802,87**	**-8,07**	**25,44**
Petroleum products	**1147,37**	**21,94**	**1,25**	**1058,68**	**23,62**	**3,13**	**1016,76**	**23,21**	**3,31**	**772,06**	**13,96**	**0,37**
Chemical, rubber, plastics	**-11571,64**	**-19,79**	**34,78**	**-8456,84**	**-7,42**	**28,49**	**-7628,29**	**-10,84**	**23,89**	**-5670,61**	**-2,78**	**20,07**
Mineral (non-metallic)	**-33,82**	**17,11**	**50,03**	**344,87**	**29,72**	**41,58**	**345,52**	**26,51**	**32,85**	**63,71**	**15,5**	**34,75**
Iron, steel	**-441,36**	**1,91**	**30,87**	**642,51**	**13,83**	**29,55**	**475,12**	**10,41**	**22,67**	**102,21**	**6,04**	**21,91**
Metals (non-ferrous)	**-1613,65**	**-23,49**	**2,33**	**-756,94**	**-9,23**	**4,24**	**-994,44**	**-12,9**	**4,2**	**-198,77**	**-2,87**	**0,32**
Metal products	**-2322,72**	**-25,54**	**87,27**	**-1800,87**	**-11,96**	**74,66**	**-1338,91**	**-15,59**	**49,54**	**-1142,44**	**-9,47**	**45,69**
Motor vehicles and parts	**-2863,30**	**2,58**	**32,90**	**-1102,44**	**12,16**	**29,77**	**-893,13**	**7,5**	**20,52**	**-519**	**8,19**	**17,78**
Transport equipament	**-960,19**	**-7,46**	**8,15**	**-246,53**	**7,38**	**8,97**	**-464,47**	**1,24**	**7,53**	**570,2**	**22,71**	**8,69**
Electronic equipment	**-4508,38**	**-34,76**	**39,20**	**-3397,09**	**-21,79**	**31,12**	**-3276,54**	**-26,24**	**28,14**	**-2169,63**	**-12,72**	**20,31**
Machinery and equipment	**-10055,34**	**-6,06**	**41,20**	**-6358,08**	**12,00**	**35,55**	**-5273,64**	**4,85**	**26,42**	**-5244,75**	**6,11**	**27,05**
Manufactures	-641,14	2,41	79,85	-397,22	23,39	63,43	**-294,53**	**17,11**	**46,88**	**-336,89**	**8,06**	**46,29**

Source: CGTI-FGV..

Simulation 5 – Impacts of the participation of Brazil on the TTIP

Table 5.8 – Trade balance - Services

Services	TTIP + Brazil (100% + 100%NTB)			TTIP + Brazil (50%ag +100%NTB)			TTIP + Brazil (50% ag + 50% ind. + 100%NTB)			TTIP + Brazil (50% ag + 50% ind. + 50%NTB)		
	Δ Trade balance (US$ mi)	% Exports	% Imports	Δ Trade balance (US$ mi)	% Exports	% Imports	Δ Trade balance (US$ mi)	% Exports	% Imports	Δ Trade balance (US$ mi)	% Exports	% Imports
Electricity	-367,34	-29,55	15,21	-276,61	-19,06	11,66	-295,5	-21,07	12,41	-174,84	-12,9	7,31
Gas distribution	-12,17	5,69	5,64	-9,05	11,25	4,64	-10,15	9,21	4,99	-3,84	7,54	2,14
Water	-20,18	-26,22	29,85	-13,37	-15,56	21,69	-14,85	-17,84	23,51	-9,69	-10,82	16,19
Construction	-49,66	-27,51	23,16	-36,90	-21,06	16,78	-40,01	-22,65	18,31	-22,04	-12,89	9,8
Trade	-1073,93	-22,23	28,17	-742,92	-14,51	19,91	-806,26	-16,01	21,48	-519,62	-9,78	14,11
Transport	-807,01	-16,75	24,79	-564,09	-11,02	17,98	-615,51	-12,3	19,36	-370	-6,8	12,2
Water transport	-780,17	-10,38	12,38	-541,85	-7,07	8,81	-592,7	-7,82	9,51	-320,26	-4,07	5,37
Air transport	-647,52	-16,09	15,37	-477,19	-12,47	11,11	-511,56	-13,24	11,96	-288,95	-7,16	6,86
Communication	-161,79	-17,10	22,50	-103,02	-9,34	16,33	-115,7	-10,96	17,73	-81,6	-9,01	10,85
Financial services	-430,10	-10,75	19,14	-255,79	-2,10	13,94	-296,46	-3,83	15,32	-253,43	0,6	15,4
Insurance	-350,84	-19,27	20,16	-237,06	-11,53	14,76	-260,39	-13,08	15,89	-166,56	-6,82	11,34
Business services	-3858,25	-13,35	19,15	-2352,53	-5,06	14,15	-2664,74	-6,77	15,19	-2027,79	-7,61	9,59
Recreation and other serv.	-715,24	-25,53	26,90	-502,02	-18,26	18,78	-543,05	-19,73	20,32	-335,92	-12	12,63
Public administration	-1472,12	-21,44	26,09	-1002,77	-14,09	18,09	-1097,7	-15,65	19,66	-754,18	-9,5	14,28
Dwellings	0	13,51	13,51	0	10,04	10,04	0	10,79	10,79	0	6,3	6,3

Source: CGTI-FGV.

Simulation 6 – Impacts of TPP on Brazil

- Hypotheses:
  - Full liberalization of tariffs
  - Full liberalization on tariffs and 50% reduction on NTBs
  - Full liberalization of tariffs + China
  - Full liberalization on tariffs and 50% reduction on NTBs + China

Table 6.1 – Variation on GDP by sector (%) – Agriculture

Agriculture	TPP	TPP + NTB	TPP+China	TPP+China+NTB
Paddy rice	0,04	0	0,02	-0,03
Wheat	0,26	-0,21	0,67	-0,14
Other cereals	-0,13	-0,3	0,07	0,38
Vegetables/fruits	0,22	-2,5	0,57	-1,75
Oil seeds	0,57	0,32	0,53	-9,59
Sugar (cane&beet)	-0,02	-0,1	-0,27	-0,01
Plant fibres	0,56	-0,49	-1,16	-2,21
Other crops (unprepared)	0,17	-1,12	0,25	-0,71
Cattle, horses, sheeps	0,24	0,49	0,11	0,87
Animal products	-1,74	-2,76	-1,32	-2,04
Raw milk	0,05	0,05	0,07	0,17
Wool, silk	0,02	0,03	-0,03	-0,02
Forestry products	0,09	0,75	0,06	1,09
Meat: cattle, sheeps, horses	0,26	0,58	0,10	0,98
Meat products	-3,52	-5,07	-2,76	-3,74
Vegetables oils and fats	0,16	-0,14	0,10	0,31
Dairy	0,07	0,07	0,10	0,21
Processed rice	0,02	0,01	0,01	0,01
Sugar	-0,05	-0,29	-0,06	0,14
Food products (animal feed)	-0,23	-0,95	-0,13	-0,90
Beverage, Tobacco products	-0,01	-0,22	0,05	-0,09

Source: CGTI – FGV

Simulation 6 – Impacts of TPP on Brazil

- Hypotheses:
  - Full liberalization of tariffs
  - Full liberalization on tariffs and 50% reduction on NTBs
  - Full liberalization of tariffs + China
  - Full liberalization on tariffs and 50% reduction on NTBs + China

Table 6.2 – Variation on GDP by sector (%)– Industry

Industry	TPP	TPP + NTB	TPP+China	TPP+China+NTB
Extractive				
Fishing	**0,01**	**-0,01**	**0,05**	**0,02**
Coal	**0,13**	**0,5**	**0,38**	**0,84**
Oil	**0,15**	**0,01**	**0,09**	**0,05**
Gas	**0,05**	**-0,3**	**-0,06**	**-0,31**
Minerals	**0,22**	**0,49**	**-0,03**	**-0,87**
Manufatures				
Textiles	**-0,2**	**-0,11**	**-1,65**	**-1,47**
Apparel	**-0,08**	**-0,12**	**-0,23**	**-0,22**
Leather products	**-1,16**	**-0,96**	**-5,99**	**-6,7**
Wood products	**0,32**	**1,8**	**0,31**	**2,62**
Paper products	**0,04**	**0,69**	**0,09**	**1,03**
Petroleum products	**0,03**	**-0,14**	**0,24**	**0,07**
Chemical, rubber, plastics	**0,08**	**0,42**	**-0,86**	**-0,41**
Mineral (non-metallic)	**0,02**	**-0,02**	**0,02**	**-0,1**
Iron, steel	**-0,01**	**-0,32**	**0,7**	**0,77**
Metals (non-ferrous)	**0,57**	**1,08**	**1,78**	**3,72**
Metal products	**0,05**	**0,25**	**0,28**	**0,9**
Motor vehicles and parts	**-0,33**	**-1**	**0,08**	**-0,24**
Transport equipament	**0,22**	**-3**	**1,75**	**-0,61**
Electronic equipment	**0,14**	**0,91**	**0**	**0,91**
Machinery and equipment	**0,2**	**0,08**	**0,97**	**1,48**
Manufactures	**0**	**0,03**	**0,04**	**0,19**

Source: CGTI - FGV

Simulation 6 – Impacts of TPP on Brazil

- Hypotheses:
  - Full liberalization of tariffs
  - Full liberalization on tariffs and 50% reduction on NTBs
  - Full liberalization of tariffs + China
  - Full liberalization on tariffs and 50% reduction on NTBs + China

Table 6.3 – Variation on GDP by sector (%) – Services

Services	TPP	TPP + NTB	TPP+China	TPP+China+NTB
Electricity	**0,04**	**0,10**	**0,13**	**0,36**
Gas distribution	**0,09**	**0,59**	**0,36**	**1,18**
Water	**-0,01**	**-0,03**	**-0,03**	**-0,06**
Construction	**0,00**	**0,00**	**0,01**	**0,01**
Trade	**-0,02**	**-0,05**	**-0,03**	**-0,06**
Transport	**0,01**	**0,05**	**0,03**	**0,11**
Water transport	**0,49**	**1,34**	**1,90**	**4,03**
Air transport	**0,09**	**0,39**	**0,23**	**0,72**
Communication	**0,02**	**0,07**	**0,06**	**0,14**
Financial services	**0,02**	**0,08**	**0,08**	**0,16**
Insurance	**0,02**	**0,11**	**0,08**	**0,20**
Business services	**0,09**	**0,44**	**0,20**	**0,80**
Recreation and other serv.	**0,01**	**0,08**	**0,09**	**0,14**
Public administration	**0,00**	**-0,04**	**0,02**	**-0,08**
Dwellings	**-0,02**	**-0,11**	**-0,04**	**-0,19**

Source: CGTI - FGV

Simulation 6 – Impacts of TPP on Brazil

- Hypotheses:
  - Full liberalization of tariffs
  - Full liberalization on tariffs and 50% reduction on NTBs
  - Full liberalization of tariffs + China
  - Full liberalization on tariffs and 50% reduction on NTBs + China

Table 6.4 – Summary of gains – GDP by sector

	TPP	**TPP + NTB**	**TPP + China**	**TPP+China+NTB**
Agriculture	14	9	14	9
Industry	16	11	15	12
Services	12	11	12	11
Total	**42**	**31**	**41**	**32**

Source: CGTI - FGV

Table 6.5 – Macroeconomic outlook

Macroeconomic Variables	**TPP**	**TPP + NTB**	**TPP + China**	**TPP+China+NTB**
Variation in global exports (%)	-0,4%	-2,7%	-1,4%	-5,0%
Variation in global imports (%)	-0,4%	-2,6%	-1,3%	-4,7%
Terms of Trade	-0,2%	-0,9%	-0,3%	-1,5%
Rela wage	0,0%	-0,1%	0,0%	-0,1%
Capital gains	-0,0%	-0,1%	0,0%	-0,1%
Land gains	-0,3%	-3,1%	-0,2%	-7,7%
Real Exchange rate	-0,3%	-1,8%	-1,2%	-3,7%

Source: CGTI - FGV

Simulation 6 – Impacts of TPP on Brazil

Table 6.6 – Trade Balance: Agriculture

	TPP			TPP + NTB			TPP + China			TPP+China+NTB		
Agriculture	**Δ Trade balance (US$mi)**	**% Exports**	**% Imports**	**Δ Trade balance (US$mi)**	**% Exports**	**% Imports**	**Δ Trade balance (US$mi)**	**% Exports**	**% Imports**	**Δ Trade balance (US$mi)**	**% Exports**	**% Imports**
Paddy rice	0,87	39,95	-0,96	1,46	42,4	-1,82	1,2	12,24	-1,71	1,96	8,01	-2,9
Wheat	9,71	2,25	-0,63	45,02	6,78	-3	23,57	1,75	-1,61	75,48	11,12	-5,03
Other cereals	1,74	0,02	-0,59	-17,72	-1,06	-2,74	-8,42	-0,52	-1,45	-21,71	-1,42	-4,67
Vegetables/fruits	10,64	0,95	-0,32	-82,79	-10,62	-2,45	16,64	0,98	-1,28	-66,59	-10,19	-4,52
Oil seeds	53,03	0,77	-0,24	-77,54	-1,14	-1,75	-15,89	-0,24	-1,34	-1627,15	-23,67	-5,54
Sugar (cane&beet)	0,02	0,44	-0,44	0,02	0,28	-2,54	-0,01	-0,66	-1,52	0,06	1,07	-5,28
Plant fibres	21,31	3,96	-0,94	-21,73	-5,16	-3,61	0,4	-1,11	-4,85	-49,53	-12,04	-9,38
Other crops (unprepared)	40,64	0,68	-0,27	-366,89	-6,42	-2,83	4,95	0,02	-1,18	-386,17	-6,91	-6
Cattle, horses, sheeps	2,97	1,34	-0,44	-0,68	-0,6	-2,27	2,84	1,07	-2,06	2,09	0,33	-5,19
Animal products	1,17	-0,08	-1,12	-21,14	-7,19	-3,36	2,87	0,02	-2,17	-23,73	-8,81	-5,81
Raw milk	0,05	1,94	-0,61	0,2	5,64	-3,27	0,08	2,15	-1,46	0,41	10,89	-7,07
Wool, silk	0,79	6,7	-1,08	0,83	6,28	-3,45	-0,28	-2,69	-0,69	-0,48	-6,23	-5,97
Forestry products	-0,05	-0,51	-0,39	-1,32	-6,59	-2,08	0,34	-0,17	-1,84	-0,77	-6,26	-4,27
Meat: cattle, sheeps, horses	67,55	1,86	-0,66	79,74	2,18	-1,08	69,13	1,81	-3,01	173,03	4,66	-4,37
Meat products	-547,35	-7,72	-1,12	-878,46	-12,4	-4,02	-497,69	-7,03	-3,34	-812,32	-11,48	-8,88
Vegetables oils and fats	31,12	0,67	-0,55	-37,49	-1,18	-2,5	-16,73	-0,63	-2,02	-63,52	-2,3	-6,8
Dairy	9,27	2,8	-0,91	9,47	1,26	-2,93	13,56	3,3	-2,33	24,78	4,93	-5,63
Processed rice	1,89	1,71	-0,4	3,64	0,59	-1,69	2,53	-0,18	-1,38	6,13	-1,39	-3,66
Sugar	-19,85	-0,4	-0,61	-123,55	-2,47	-3,02	-71,36	-1,43	-1,99	-162,28	-3,24	-6,57
Food products (animal feed)	-73,24	-2,2	-0,42	-372,25	-11,29	-2,39	-57,52	-2,28	-1,6	-402,81	-13,28	-5,05
Beverage, Tobacco products	-2,83	-0,3	-0,27	-53,05	-4,14	-1,89	2,06	-0,44	-1,26	-44,67	-4,49	-3,83

Source: CGTI - FGV.

Simulation 6 – Impacts of TPP on Brazil

Table 6.7 – Trade Balance: Industry

	TPP			TPP + NTB			TPP + China			TPP+China+NTB		
Industry	**Δ Trade balance (US$mi)**	**% Exports**	**% Imports**	**Δ Trade balance (US$mi)**	**% Exports**	**% Imports**	**Δ Trade balance (US$mi)**	**% Exports**	**% Imports**	**Δ Trade balance (US$mi)**	**% Exports**	**% Imports**
Extrative												
Fishing	0,81	0,85	-0,41	1,89	-2,77	-2,58	1,94	0,74	-1,42	3,8	-3,81	-4,58
Coal	-1,18	0,04	0,09	7,29	0,03	-0,58	1,83	-2,19	-0,15	17,86	-3,23	-1,42
Oil	35,26	0,47	-0,09	81,44	-1,8	-2,25	-22,73	-0,84	-0,33	73,08	-3,38	-3,27
Gas	0,14	1,19	-0,01	13,41	-29,69	-1,37	11,65	-5,43	-1,19	29,01	-54,55	-2,96
Minerals	34,62	0,19	0,11	-138,46	-0,77	-0,61	-253,3	-1,41	-1,12	-1040,96	-5,42	-2,11
Manufacturing												
Textiles	-24,82	-2,54	-0,5	-3,65	-5,23	-2,69	-185,04	-13,13	-0,56	-166,22	-20,16	-5,01
Apparel	-10,88	-3,85	-0,26	-3,7	-5,58	-2,63	-38,66	-13	-0,53	-15,53	-16,79	-7,12
Leather products	-138,57	-3,27	-0,32	-162,43	-4,09	-2,3	-720,08	-16,95	-1,36	-870,51	-21,39	-8,25
Wood products	23,04	0,47	-0,51	120	2,49	-2,5	-17,93	-0,55	-1,54	124,92	2,32	-5,53
Paper products	5,6	-0,05	-0,46	153,33	2,09	-3,36	2,5	-0,72	-2,1	203,43	2,12	-6,24
Petroleum products	0,06	0,16	0,09	-55,61	-3,52	-1,5	161,12	1,01	-1,04	106,2	-3,63	-3,19
Chemical, rubber, plastics	90,1	-0,18	-0,42	568,77	-1,42	-2,75	-531,43	-7,19	-1,14	237,51	-8,99	-4,81
Mineral (non-metallic)	0,43	-0,15	-0,45	-37,41	-2,76	-3,27	-15,53	-1,26	-1,65	-98,45	-6,54	-6,62
Iron, steel	-27,62	-0,41	-0,43	-205,24	-2,95	-2,86	49,76	0,22	-1,55	-178,95	-3,29	-5,7
Metals (non-ferrous)	47,77	0,62	-0,2	28,32	-0,77	-2,12	127,83	1,44	-0,91	198,39	1	-3,59
Metal products	7,06	-0,31	-0,61	73,97	-0,06	-3,56	42,66	-0,12	-2,12	176,57	0,86	-7,6
Motor vehicles and parts	-201,22	-1,63	-0,45	-659,29	-6,25	-2,9	-62,39	-1,25	-1,28	-392,12	-5,51	-4,47
Transport equipament	13,47	0,01	-0,19	-296,29	-10,32	-3,42	114,29	1	-0,89	-127,58	-8,62	-4,56
Electronic equipment	52,96	0,01	-0,61	409,04	4,3	-3,14	61,44	-1,03	-1,08	461,12	0,88	-4,98
Machinery and equipment	69,15	-0,25	-0,46	-88,31	-5,5	-2,9	446,79	0,21	-1,87	493,77	-5,86	-5,72
Manufactures	2,77	-0,3	-0,53	21,46	-0,95	-3,23	9,32	-1,05	-1,81	44,56	-5,48	-8,93

Source: CGTI – FGV

Simulation 6 – Impacts of TPP on Brazil

Table 6.8 – Trade Balance - Services

Services	TPP			TPP + NTB			TPP + China			TPP+China+NTB		
	Δ Trade balance (US$mi)	% Exports	% Imports	Δ Trade balance (US$mi)	% Exports	% Imports	Δ Trade balance (US$mi)	% Exports	% Imports	Δ Trade balance (US$mi)	% Exports	% Imports
	6,43	0,58	-0,26	40,72	1,3	-1,81	27,67	0,13	-1,28	83,5	2,18	-3,74
Electricity	0,71	0,63	-0,27	6,38	3,64	-2,54	3,65	0,9	-1,53	10,98	5,09	-4,45
Gas distribution	0,61	1,06	-0,63	2,68	3,52	-3,91	1,67	1,92	-2,72	4,93	6,41	-7,3
Water	1,39	1	-0,48	5,26	2,8	-2,53	2,56	0,97	-1,52	10,07	5,15	-5
Construction	19,53	0,5	-0,46	99	1,74	-2,75	66,38	1	-1,92	218,07	4,48	-5,74
Trade	19,16	0,6	-0,39	81,47	1,7	-2,49	49,61	0,94	-1,61	153,76	2,98	-4,93
Transport	42,83	0,87	-0,23	103,2	1,3	-1,74	167,21	3,2	-1,22	329,79	5,51	-3,58
Water transport	15,46	0,67	-0,27	80,55	1,96	-1,93	50,84	0,96	-1,31	149,35	2,66	-3,91
Air transport	4,77	0,63	-0,5	21,07	2,32	-2,81	11,25	0,94	-1,89	37,18	3,74	-5,41
Communication	15,01	0,67	-0,5	79,68	2,12	-3,47	62,32	1,71	-2,68	155,52	4,25	-6,7
Financial services	8,97	0,6	-0,43	48,09	2,5	-2,87	28,71	1,51	-1,7	87,56	4,56	-5,22
Insurance	99,96	0,55	-0,33	507,91	2,14	-2,22	254,96	0,84	-1,3	924,34	3,67	-4,21
Business services	14,22	0,65	-0,49	82,75	2,96	-3,11	50,45	1,16	-2,09	152,37	4,73	-5,95
Recreation and other serv.	34,31	0,68	-0,49	189,96	2,78	-3,36	130,27	1,73	-2,41	348,81	4,63	-6,46
Public administration	0	-0,28	-0,28	0	-1,8	-1,8	0	-1,36	-1,36	0	-3,81	-3,81

Source: CGTI - FGV

GTAP DATA BASES: DETAILED SECTORIAL LIST

Number	Description
1	Paddy Rice: rice, husked and unhusked
2	Wheat: wheat and meslin
3	Other Grains: maize (corn), barley, rye, oats, other cereals
4	Veg & Fruit: vegetables, fruit vegetables, fruit and nuts, potatoes, cassava, truffles,
5	Oil Seeds: oil seeds and oleaginous fruit; soy beans, copra
6	Cane & Beet: sugar cane and sugar beet
7	Plant Fibres: cotton, flax, hemp, sisal and other raw vegetable materials used in textiles
8	Other Crops: live plants; cut flowers and flower buds; flower seeds and fruit seeds; vegetable seeds, beverage and spice crops, unmanufactured tobacco, cereal straw and husks, unprepared, whether or not chopped, ground, pressed or in the form of pellets; swedes, mangolds, fodder roots, hay, lucerne (alfalfa), clover, sainfoin, forage kale, lupines, vetches and similar forage products, whether or not in the form of pellets, plants and parts of plants used primarily in perfumery, in pharmacy, or for insecticidal, fungicidal or similar purposes, sugar beet seed and seeds of forage plants, other raw vegetable materials
9	Cattle: cattle, sheep, goats, horses, asses, mules, and hinnies; and semen thereof
10	Other Animal Products: swine, poultry and other live animals; eggs, in shell (fresh or cooked), natural honey, snails (fresh or preserved) except sea snails; frogs' legs, edible products of animal origin n.e.c., hides, skins and furskins, raw , insect waxes and spermaceti, whether or not refined or coloured
11	Raw milk
12	Wool: wool, silk, and other raw animal materials used in textile
13	Forestry: forestry, logging and related service activities
14	Fishing: hunting, trapping and game propagation including related service activities, fishing, fish farms; service activities incidental to fishing
15	Coal: mining and agglomeration of hard coal, lignite and peat
16	Oil: extraction of crude petroleum and natural gas (part), service activities incidental to oil and gas extraction excluding surveying (part)
17	Gas: extraction of crude petroleum and natural gas (part), service activities incidental to oil and gas extraction excluding surveying (part)
18	Other Mining: mining of metal ores, uranium, gems. other mining and quarrying
19	Cattle Meat: fresh or chilled meat and edible offal of cattle, sheep, goats, horses, asses, mules, and hinnies. raw fats or grease from any animal or bird.
20	Other Meat: pig meat and offal. preserves and preparations of meat, meat offal or blood, flours, meals and pellets of meat or inedible meat offal; greaves
21	Vegetable Oils: crude and refined oils of soya-bean, maize (corn),olive, sesame, ground-nut, olive, sunflower-seed, safflower, cotton-seed, rape, colza and canola, mustard, coconut palm, palm kernel, castor, tung jojoba, babassu and linseed, perhaps partly or wholly hydrogenated,inter-esterified, re-esterified or elaidinised. Also margarine and similar preparations, animal or vegetable waxes, fats and oils and their fractions, cotton linters, oil-cake and other solid residues resulting from the extraction of vegetable fats or oils; flours and meals of oil seeds or oleaginous fruits, except those of mustard; degras and other residues resulting from the treatment of fatty substances or animal or vegetable waxes.
22	Milk: dairy products
23	Processed Rice: rice, semi- or wholly milled
24	Sugar
25	Other Food: prepared and preserved fish or vegetables, fruit juices and vegetable juices, prepared and preserved fruit and nuts, all cereal flours, groats, meal and pellets of wheat, cereal groats, meal and pellets n.e.c., other cereal grain products (including corn flakes), other vegetable flours and meals, mixes and doughs for the preparation of bakers' wares, starches and starch products; sugars and sugar syrups n.e.c., preparations used in animal feeding, bakery products, cocoa, chocolate and sugar confectionery, macaroni, noodles, couscous and similar farinaceous products, food products n.e.c.
26	Beverages and Tobacco products

27	Textiles: textiles and man-made fibres
28	Wearing Apparel: Clothing, dressing and dyeing of fur
29	Leather: tanning and dressing of leather; luggage, handbags, saddlery, harness and footwear
30	Lumber: wood and products of wood and cork, except furniture; articles of straw and plaiting materials
31	Paper & Paper Products: includes publishing, printing and reproduction of recorded media
32	Petroleum & Coke: coke oven products, refined petroleum products, processing of nuclear fuel
33	Chemical Rubber Products: basic chemicals, other chemical products, rubber and plastics products
34	Non-Metallic Minerals: cement, plaster, lime, gravel, concrete
35	Iron & Steel: basic production and casting
36	Non-Ferrous Metals: production and casting of copper, aluminium, zinc, lead, gold, and silver
37	Fabricated Metal Products: Sheet metal products, but not machinery and equipment
38	Motor vehicles and parts: cars, lorries, trailers and semi-trailers
39	Other Transport Equipment: Manufacture of other transport equipment
40	Electronic Equipment: office, accounting and computing machinery, radio, television and communication equipment and apparatus
41	Other Machinery & Equipment: electrical machinery and apparatus n.e.c., medical, precision and optical instruments, watches and clocks
42	Other Manufacturing: includes recycling
43	Electricity: production, collection and distribution
44	Gas Distribution: distribution of gaseous fuels through mains; steam and hot water supply
45	Water: collection, purification and distribution
46	Construction: building houses factories offices and roads
47	Trade: all retail sales; wholesale trade and commission trade; hotels and restaurants; repairs of motor vehicles and personal and household goods; retail sale of automotive fuel
48	Other Transport: road, rail ; pipelines, auxiliary transport activities; travel agencies
49	Water transport
50	Air transport
51	Communications: post and telecommunications
52	Other Financial Intermediation: includes auxiliary activities but not insurance and pension funding (see next)
53	Insurance: includes pension funding, except compulsory social security
54	Other Business Services: real estate, renting and business activities
55	Recreation & Other Services: recreational, cultural and sporting activities, other service activities; private households with employed persons (servants)
56	Other Services (Government): public administration and defense; compulsory social security, education, health and social work, sewage and refuse disposal, sanitation and similar activities, activities of membership organizations n.e.c., extra-territorial organizations and bodies
57	Dwellings: ownership of dwellings (imputed rents of houses occupied by owners)

ANNEX I

Brazil – Main products exported and imported to and from the EU

Brazil: Main products Exported to the EU (US$ Million F.O.B)		
Description	**2014**	
	Value	**Share**
Ore	5.588	13,3%
Soy meal	4.606	11,0%
Coffee, tea, mate	3.506	8,3%
Soybean and seeds	3.187	7,6%
Fuels	2.816	6,7%
Mechanical Machines	2.198	5,2%
Wood Pulp	2.082	5,0%
Iron and Steel	1.769	4,2%
Meat	1.398	3,3%
Preparation of Vegetables	1.301	3,1%
Subtotal	**28.451**	**67,7%**
Other products	**13.596**	**32,3%**
Total	**42.047**	**100,0%**

Source: MDIC/MRE, 2015.

Brazil: Main products imported from the EU (US$ Million F.O.B)		
Description	**2014**	
	Value	**Share**
Mechanical Machines	10.237	21,9%
Cars	4.557	9,8%
Pharmaceutical Products	3.959	8,5%
Electrical Machines	3.523	7,5%
Organic Chemical Products	2.972	6,4%
Fuels	2.807	6,0%
Precision Instruments	2.190	4,7%
Products of the Chemical Industry	1.991	4,3%
Plastic	1.960	4,2%
Articles of Iron or steel	1.291	2,8%
Subtotal	**35.487**	**76,0%**
Other Products	**11.228**	**24,0%**
Total	**46.716**	**100,0%**

Source: MDIC/MRE, 2015.

SECTION 3

Effects on GDP and trade: dynamic modelling

In this Section the effects on GDP of a PTA with the EU will be examined.

The simulation explores the impacts on Brazil of a PTA with EU under the hypothesis of full liberalization of tariff barriers for all economic sectors: Agriculture, Industry and Services.

I. MODELING ISSUES

The Dynamic GTAP (GTAP-Dyn) is a dynamic applied general equilibrium model and was used in the present simulations in order to evaluate the effects of alternative preferential trade agreements involving Brazil and any other party.

The dynamic GTAP model (Ianchovichina and McDougall, 1999) is a multi-period extension of the standard GTAP model (Hertel, 1997). The latter is used for trade policy analysis. The dynamic GTAP model enhances the ability of standard GTAP to conduct projections by adding new investment theory emphasizing errors in investors' expectations about potential returns to capital and international capital movements. The model preserves other features of GTAP including the representation of consumer demands and a supply side that emphasizes the role of inter-sectoral factor mobility in the determination of sectoral output. The model reflects exchange rate movements indirectly, either as shocks to regional trade balances, or equivalently as changes in net capital outflows.

Both the static and dynamic version of the GTAP model qualifies as a Johansen-type model. This type of model estimates the impacts of external shocks (gains and losses of a PTA) through a comparative static modeling (before and after the shock). The solutions are obtained by solving the system of linearized equations of the model. A typical result shows the percentage change in the set of endogenous variables (GDP, exports and imports, exchange rate and land value) after a policy shock is carried out, compared to their values in the initial equilibrium, in a given environment. The schematic presentation of Johansen solutions for such models is standard in the literature (see Dixon et al (1992) and Dixon and Parmenter (1996)).

The development of a baseline scenario is an important component of assessing the impact of a policy issue with a dynamic model. A baseline depicts how the world economy might be expected to change, over a given period of time, if the policy was not carried out. The baseline scenario should therefore reflect as closely as possible the changes expected to occur in the world economy, excluding the policy of interest.[55]

The GTAP 8 database combines detailed bilateral trade, transport and protection data characterizing economic linkages among 129 regions, together with individual country

[55] WALMSLEY, Terrie L.; DIMARANAN, Betina V.; MCDOUGALL, Robert A. A Baseline scenario for the Dynamic GTAP Model. In: IANCHOVICHINA, Elena; WALMSLEY, Terrie L. (ed.) Dynamic Modeling and Applications for Global Economic Analysis. New York: Cambridge University Press, 2012, p. 136.

input-output data bases which account for inter-sectorial linkages within regions. The dataset is harmonized and completed with additional sources to provide the most accurate description of the world economy.

The main applied protection data used in the GTAP 8 data base originates from ITC's MacMap database, which contains exhaustive information at the tariff line level. The ITC database includes the United Nations Conference on Trade and Development's (UNCTAD's) Trade Analysis and information system (TRAINS) data base, to which ITC staff added their own data. The model transforms all specific tariffs in ad valorem tariffs.

In order to capture the effects from each preferential trade agreement, the simulations were carried out using a standard GTAP hypothesis, which considers perfect factor mobility for labor and capital and imperfect factor mobility for land and natural resources. National growth supply of factors of production (labor and land) follows baseline predictions, capital stock growth is dictated by investment dynamics and production technology for firms is given.

II. RESULTS OF THE SIMULATIONS

The results in this simulation present the impacts for Brazil's GDP, exports and imports, as well as the gains and losses for the sectorial GDP, as projected for the year of 2030 relative to the baseline, in 2013. Gains and losses are calculated in relation to 2013 dollars.

The choice for impacts on sectorial GDP can be explained as an attempt to explore the global effect of the PTA in a more complete evaluation since GDP includes the impacts on production, exports and imports.

Simulation 7 – Brazil x EU – Dynamic Modelling

The simulation compares benefits and costs for Brazil after the negotiation of a preferential trade agreement (PTA) with the EU. The hypothesis herein assumed is full tariff liberalization on all sectors: Agriculture, Industry and Services.

This is a strong hypothesis, because negotiations normally take in account sensitivities of the main sectors. In the case of the EU, agriculture can be named and, in the case of Brazil, some important industrial sectors can be indicated. However, for the purpose of this simulation, what is relevant to reveal are the limits of gains and losses to interested governments and economic sectors.

These economic data will be important instrument for future negotiations.

Results

The hypothesis assumed for this simulation is a full liberalization of tariff barriers for all sectors: Agriculture, Industry and Services.

The baseline is the year 2013 and the projections go until 2030, when it is stablished that all restrictions will be eliminated. It is assumed that the implementation period of the PTA will start in 2016.

Concerning the impacts on Brazil´s GDP:

Brazil´s GDP in 2013 corresponded to US$ 2,2 trillion. The model projects the baseline GDP for 2030 as approaching US$ 3,0 trillion. This assessment does not consider a PTA between Brazil and EU.

An agreement between Brazil and the EU, under a full tariff liberalization hypothesis would represent an increase of the Brazilian GDP annually, around 1.3% in 2030. In dollars of 2013, the annual increases of GDP will reach an equivalent of more US$38,8 billion relative to the baseline, per year.

These numbers are compatible with the estimates of GDP increases for the US and the EU with the conclusion of the Trans-Atlantic Agreement – TTIP. For the US, estimates vary from 0,3% to 1,3%. For the EU, estimates vary from 0,5% to 0,7% (Schott, J. 2014) [56].

Concerning the impacts on exports:

The conclusion of a PTA between Brazil and the EU, with full elimination of tariff barriers, will increase Brazil's annual total exports (to the world), from 2016 till 2030, until these increases reach 6.8% annually in 2030.

Concerning the impacts on imports:

The Brazil – EU PTA will increase Brazil´s annual total imports (to the world), from 2016 till 2030, annually, till reach the amount of 9,0% in 2030.

In view of the projections assumed for the year 2030, this agreement would represent in 2013 dollars, additional annual total exports increasing till reach US$25.1 billion annually, while the increase in imports will increase around US$33.9 billion annually.

[56] Schoot, J. - Broad Objectives and Prospects for TTIP, Petersen Institute.

Table 7.1: Macroeconomic Variables

Macroeconomic Variables	2030
Total exports projected baseline (US$ bi, F.O.B.)	369,963
Increase in total exports (%)	6,77%
Total imports projected baseline (US$ bi, F.O.B.)	376,876
Increase in total imports (%)	9,02%
Real GDP projected baseline (US$ bi)	2.964,029
Real GDP (%)	1,31%

Source:CGTI-FGV

In the sectorial analysis, the simulation presents the following results for each sectorial GDP:

Regarding the agricultural sector, a PTA with the EU would represent positive results for some subsectors like meat and sugar, which observe a significant increase in its exports (333.8% and 67.4% respectively, by 2030). Other subsectors tend to show a slightly deterioration in export performance when compared to the baseline, especially cattle, horses and sheep and cane and beet. The importations of agricultural products tend to increase over the years for all products, notably regarding cattle, horses and sheep and milk and dairy products.

Both the extractive and the manufacturing industry have a slightly negative GDP during the period, which seems to be consistent with the reduction of its exports and the rise of its imports. Almost all sectors present a GDP decrease throughout the years, especially machinery and equipment and metal products. Regarding exports, the highest rates are verified for apparel and motor vehicles and parts, while metal and wood products present the highest import rates.

On the subject of services, it is observed a continuous growth for both GDP and importations, with a negative variation in the exports rates throughout the considered years.

Simulation 7.2 – Brazil x EU

Hypothesis: full tariff elimination for all sectors.

Table: Sectoral GDP and Trade balance – Agriculture

Agriculture	2016			2020			2025			2030		
	Sectorial GDP	**Exports %**	**Imports %**	**Sectorial GDP**	**Exports %**	**Imports %**	**Sectorial GDP**	**Exports %**	**Imports %**	**Sectorial GDP**	**Exports %**	**Imports %**
Paddy rice	0,00	3,89	4,93	0,15	6,39	6,62	0,30	10,57	9,68	0,52	16,81	7,29
Wheat	-0,44	-4,84	2,59	-0,15	-7,67	4,41	-0,09	-12,45	7,06	0,90	-10,43	6,66
Other grains	1,55	-0,61	4,26	2,87	-1,49	7,62	4,64	-3,55	13,05	5,01	-2,75	12,84
Vegetables/fruits	1,45	4,71	2,61	2,31	6,11	3,61	3,15	6,89	5,11	3,73	8,21	4,89
Oil seeds	-1,17	-1,47	0,65	-1,47	-2,16	1,63	-2,18	-3,10	2,45	-1,41	-2,28	2,63
Cane & Beet	2,10	-6,00	2,78	5,60	-11,52	5,85	13,74	-23,63	13,22	15,49	-25,34	14,60
Plant fibres	-1,22	-2,47	0,56	-1,54	-3,48	1,10	-2,55	-5,06	1,33	-1,63	-3,42	1,17
Other crops (unprepared)	-0,11	-1,27	5,96	-0,10	-2,23	7,95	-0,50	-4,46	11,02	0,08	-2,51	10,51
Cattle, horses, sheeps	11,93	-10,98	21,42	22,82	-19,87	42,52	41,58	-34,82	86,79	42,22	-36,64	91,61
Other Animal products	3,59	-3,52	6,50	5,99	-5,62	8,61	8,70	-8,96	11,51	9,04	-8,33	11,30
Raw milk	-0,40	-6,01	2,98	-0,25	-8,76	4,74	-0,23	-13,74	7,83	-0,09	-10,18	5,81
Wool, silk	1,63	-12,18	35,45	2,99	-17,81	45,20	4,11	-26,95	61,97	3,29	-21,45	57,37
Meat: cattle, sheeps, horses	14,63	89,99	12,56	28,10	172,98	22,74	51,73	320,69	45,40	53,35	333,73	47,29
Other Meat products	6,23	13,02	32,76	9,84	20,39	37,83	13,49	28,12	46,95	14,08	29,64	47,58
Vegetables oils and fats	-0,79	-2,62	16,35	-0,44	-3,02	17,91	-0,58	-5,49	20,72	0,30	-2,81	20,71
Milk & Dairy	-0,58	-4,90	34,95	-0,44	-6,14	38,15	-0,46	-10,48	44,52	-0,30	-6,64	46,63
Processed rice	-0,04	-0,86	2,22	0,01	-0,62	2,77	-0,01	-2,21	4,50	0,11	-0,02	3,20
Sugar	3,37	10,54	6,10	8,16	25,09	8,76	19,68	61,18	15,91	21,72	67,32	16,55
Food products (animal feed)	1,16	6,02	6,56	2,27	9,55	7,79	3,70	12,82	10,26	3,96	15,28	9,46
Beverage, Tobacco products	-0,13	2,12	10,68	0,08	3,51	11,18	0,22	3,99	12,44	0,42	5,47	11,93

Source: CGTI-FGV.

Simulation 7.3 – Brazil x EU

Hypothesis: full tariff elimination for all sectors.

Table: Sectoral GDP and Trade balance – Industry[57]

Industry	2016			2020			2025			2030		
	Sectorial GDP	**Exports %**	**Imports %**	**Sectorial GDP**	**Exports %**	**Imports %**	**Sectorial GDP**	**Exports %**	**Imports %**	**Sectorial GDP**	**Exports %**	**Imports %**
Extractive	-1,21	-2,10	0,35	-1,58	-2,95	0,80	-2,70	-4,84	1,36	-2,13	-3,97	1,55
Manufacturing												
Textiles	-0,83	0,08	4,07	-0,92	-0,44	5,38	-1,69	-3,77	7,90	-0,95	-0,23	6,35
Apparel	0,08	11,78	7,70	0,28	10,90	10,44	0,25	5,91	15,58	0,41	9,91	12,54
Leather products	0,36	2,12	7,07	-0,42	-0,32	9,77	-3,04	-8,31	15,25	-1,99	-5,51	13,77
Wood products	-0,50	0,23	11,44	-0,75	-0,30	16,63	-2,06	-3,53	25,31	-0,89	-0,12	24,68
Paper products	-0,73	-3,52	7,00	-0,57	-3,45	9,75	-0,76	-6,10	14,91	-0,13	-2,77	13,96
Petroleum products	-0,19	-0,82	-0,34	-0,01	-0,99	-0,14	0,09	-1,63	-0,13	0,46	-1,13	0,29
Chemical, rubber, plastics	-1,28	-2,31	3,73	-1,19	-2,38	5,21	-1,86	-5,32	7,98	-0,98	-2,20	7,34
Mineral (non-metallic)	-0,64	-2,66	6,43	-0,61	-2,70	8,40	-0,80	-5,19	12,20	-0,25	-2,41	10,65
Iron, steel	-2,01	-3,00	5,12	-1,99	-2,94	7,49	-3,31	-5,07	10,84	-2,15	-1,93	10,87
Metals (non-ferrous)	-1,85	-0,52	0,82	-2,06	-0,66	1,62	-4,88	-4,38	2,29	-2,38	-0,22	2,65
Metal products	-1,32	-4,88	13,48	-1,16	-5,13	19,12	-1,90	-8,52	28,44	-1,42	-3,97	26,62
Motor vehicles and parts	-0,42	0,94	5,90	-0,17	1,55	8,92	-0,89	0,15	13,74	-0,41	2,73	13,66
Transport equipament	-1,70	-3,29	1,45	-1,17	-2,91	2,59	-2,46	-5,92	3,62	-0,50	-2,21	3,23
Electronic equipment	-0,24	-4,59	3,61	0,48	-4,56	4,75	0,38	-8,40	7,15	0,87	-3,78	4,89
Machinery and equipment	-3,36	-3,93	7,44	-3,60	-3,73	10,57	-5,80	-6,92	15,03	-4,65	-2,31	12,53
Manufactures	0,16	-4,95	5,51	0,72	-5,14	6,69	0,99	-8,84	9,50	1,16	-4,33	6,07

Source: CGTI-FGV.

[57] The extractive industry encompasses fishing, coal, oil, gas, minerals, and forestry.

Simulation 7.4 – Brazil x EU

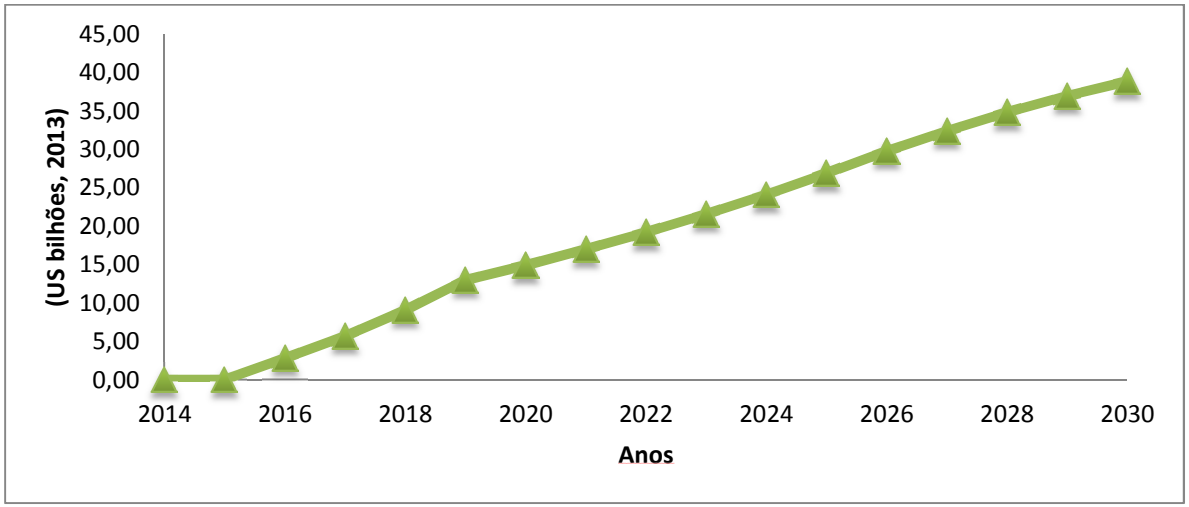
Hypothesis: full tariff elimination for all sectors; 40% reduction of non-tariff barriers for all sectors.

Table: Sectoral GDP and Trade balance – Services

	2016			2020			2025			2030		
	Sectorial GDP	**Exports %**	**Imports %**	**Sectorial GDP**	**Exports %**	**Imports %**	**Sectorial GDP**	**Exports %**	**Imports %**	**Sectorial GDP**	**Exports %**	**Imports %**
Services	0,01	-2,30	3,87	0,05	-0,13	12,61	0,31	-2,68	14,09	0,51	-0,32	12,62

Source: CGTI-FGV.

Impacts of the PTA Brazil – EU on Brazil´s GDP



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