

THE IMPACTS OF THE MEGA-AGREEMENTS ON THE BRICS: in search for a new global governance for trade at the WTO

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I. INTRODUCTION

While some of the BRICS countries were still beginning its participation on the multilateral trading system as members of the WTO, major players such as the United States and the European Union were changing their attention from the WTO – where negotiations of the Doha Round were at an impasse, despite the success of the Bali Ministerial, to the negotiations of preferential trade agreements. In the field of international trade, Brazil, India and South Africa were founding members of the GATT. China acceded to the World Trade Organization – WTO in 2001, after 15 years of negotiations. Russia has only acceded to the organization in 2012, after 19 years of negotiations, becoming the last big economy to enter the WTO.

The difficulties in negotiating new rules for the multilateral system to deal with the challenges of 21st century trade helped to diminish the centrality of the WTO as the forum of rules negotiation and encouraged the main “rule makes” in the international scenario to focus their efforts on preferential negotiations, where they could expand the frontiers of international trade regulation, advance market access liberalization and deepen economic integration.

In January, 2014, the US had 14 preferential trade agreements (PTAs) in force and the EU had 34. The total number of PTAs increased from around 50 in 1991 to 377². This significant proliferation of preferential trade agreements changed the international trade landscape, creating an increasing number trade rules and fragmenting international trade regulation.

These agreements often present rules that go beyond the WTO framework (WTO-plus rules) as in services or intellectual property or that deal with subjects outside the scope of the organization, such as environment, labor clauses, competition and investments (WTO-extra rules). Each major player presents its own model of rules regarding the main issues of international trade, proposing such framework to its trade partners and,

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² http://www.wto.org/english/tratop_e/region_e/region_e.htm

thus, expanding the application of rules that answer to their interests, in a clear exercise of domination by the rules.

The BRICS countries are still placed outside this movement of deep integration trade agreements. Even though some countries have started negotiating a significant number of PTAs, they still lack an ambitious model of trade rules able to respond to their needs, concentrating mainly in market access.

The situation raises more concern with the launch of the two called mega-agreements: the Trans-Pacific Partnership – TPP and the Transatlantic Trade and Investment Partnership – TTIP. The TPP is an initiative of the US to increase their presence in the Pacific region. The agreement encompasses 12 countries (Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore the US and Vietnam), and 25% of international trade³. The TTIP aims to integrate the two major players in international trade – the US and the EU, encompassing around one third of all international trade flows⁴.

Both agreements aim to promote the elimination of tariff barriers and a substantial reduction of non-tariff barriers amongst its members. Furthermore, they intend to become a model for 21st century international trade rules. The TTIP shall end longstanding divergences between the US and the EU on several aspects of international trade regulation, establishing a new benchmark for all trade relations with one of these partners, and certainly setting a new platform to the WTO.

In this scenario, what should be the role of BRICS? With the governance on international trade shifting from the WTO to the mega-agreements, how can the BRICS participate in international trade regulation and not become “rule-takers”? What are the impacts of the mega-agreements to the BRICS economies and what should be done to assure their insertion in global trade flows? What is the role of the BRICS to set a new agenda for the WTO and rescuing its centrality as forum of trade negotiation?

The origin of the BRICS is relatively new. In 2001, Goldman Sachs created the expression to call attention to these major emerging economies: Brazil, Russia, India and China. The prospects of economic growth of these countries encouraged their governments to transform it in a group of political coordination to discuss the main themes of global governance: UN, IMF and World Bank. In 2011, South Africa was included in the group.

With the economic difficulties faced by the World economy now, the big question is what will be the role of the BRICS. In terms of trade, what is the role of these countries in the WTO?

The main objective of this article is to give some attention to this question. Through global equilibrium model simulations, this article will analyze the main impacts of the

³ <https://www.dfat.gov.au/fta/tpp/>

⁴ <http://ec.europa.eu/trade/policy/countries-and-regions/countries/united-states/>

mega-agreements to the BRICS economies and, in the following, present the main actions the BRICS should promote to assure their place in international trade scenario.

II. THE IMPACT OF THE MEGA-AGREEMENTS ON BRICS: REDUCTION OF TARIFFS AND NON-TARIFF BARRIERS

TTIP and TPP – the two mega-agreements shall increase trade flows and promote economic growth amongst its partners, but they may also present negative effects on the economies which are not participating in such agreements, which may suffer from the impacts of trade diversion and from their isolation from the economic integration promoted by the two agreements.

This section shall analyze the impacts of the mega-agreements on the BRICS sectorial GDP as well as their exports and imports balances.

1. Modeling Issues

The GTAP computable general equilibrium model was used in the present simulations in order to evaluate the first round effects of the costs and opportunities for the BRICS of the creation of TTIP and 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, where solutions are obtained by solving the system of linearized equations of the 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). 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 the Ecorys Project, developed by Berden and Francois for the European Commission, in 2009. Non-tariff barriers are considered as all non-priced and non-quantitative restrictions to international trade in goods, services and investments. These measures include customs procedures, regulatory measures, and standards, amongst others.

2. 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. The last version of GTAP is from 2007, but the data in this simulation were updated.

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.

3. 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 BRICS economies in relation to the TTIP and TPP.

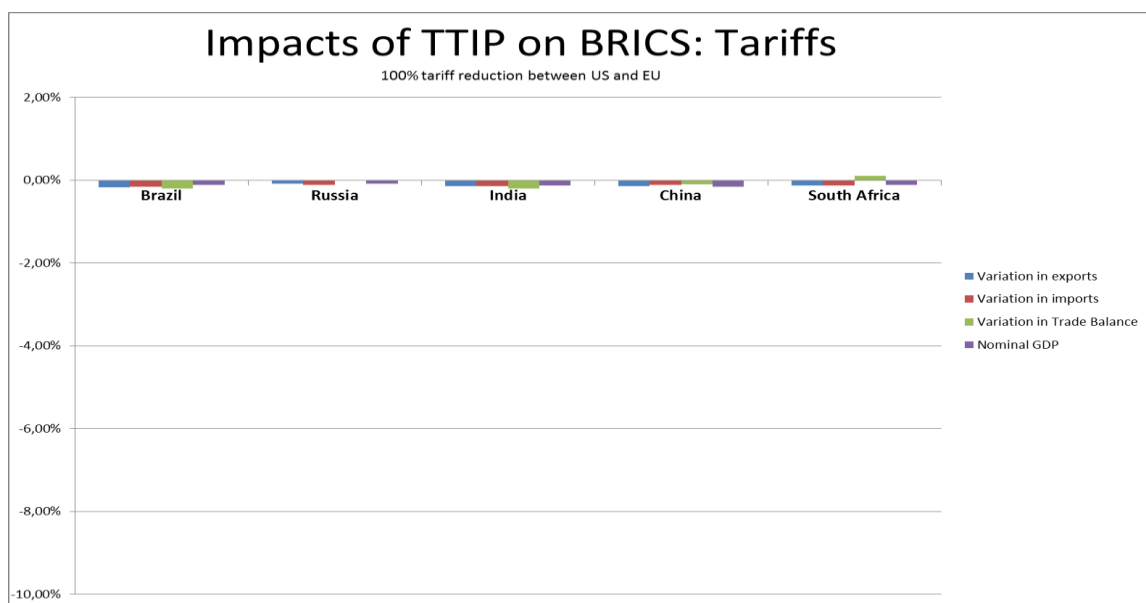
The choice for impacts on sectorial GDP can be explained as an attempt to explore the global effect of each PTA in a more complete evaluation since GDP includes the impacts on production, exports and imports.

In this section, the main results from the simulations are presented.

Simulation 1

Simulation 1 presents the impacts of the TTIP on BRICS considering a scenario of 100% reduction of tariffs. The agreement results in slightly negative impacts for the global exports of all BRICS countries, affecting their trade balance and resulting in a small reduction of the GDP of these countries.

The most affected countries are Brazil, with a decline of 0.17% in its exports and 0.16% in its imports, India with a decrease of 0.14% in both imports and exports, and China, that presents a drop of 0,14% in its exports and of 0,12% in its imports.



Source: CGTI estimates

Because tariffs of the US and the EU are already low, the major market liberalization of the TTIP will be promoted through the reduction of non-tariff barriers. The parties aim an ambitious NTB reduction which will reduce costs incurred by exporters and will allow an increase of trade flows.

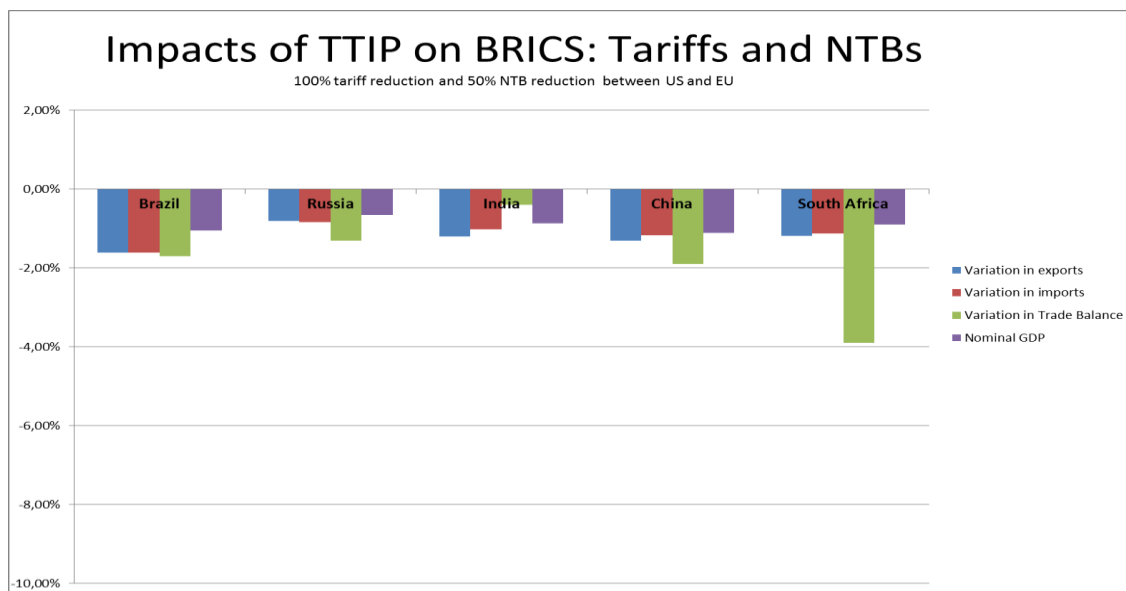
Simulation 2

Simulation 2 presents the impacts of TTIP on BRICS, considering the elimination of tariffs combined to the elimination of 50% of NTBs between the US and the EU. Under this scenario, the negative impacts of BRICS global trade flows and GDP are more expressive.

When the reduction of NTBs is considered, the impacts of the TTIP become greater, negatively affecting the BRICS economies. Brazilian exports and imports are affected more severely by the reduction of tariff and non-tariff barriers in the scope of TTIP:

both exports and imports are reduced in 1.61%. China, South Africa, and India exports and imports are also negatively affected in more than 1%, while Russia endures losses by 0.8%.

BRICS will also face reductions between 0,6% to 1,2% of their total GDP already in the first round effects of the agreement.



Source: CGTI estimates

The negative impacts can increase in the long term. The TTIP shall promote a deep economic integration within its members. The benefits of this deep integration include an increase in business opportunities (trade in goods and services and investments) amongst the partners as well as the exchange of know-how and technology through the internationalized production chain, enhancing the countries' competitiveness and negatively affecting trade partners that do not participate in this process of regional integration.

The most affected sector for Brazil, India and South Africa, considering exports, will be agriculture, while China and Russia will face more losses in the agribusiness sector. For all four sectors (agriculture, extractive, agribusiness and industry) losses in global exports of the five BRICS countries are verified.

Simulation 3

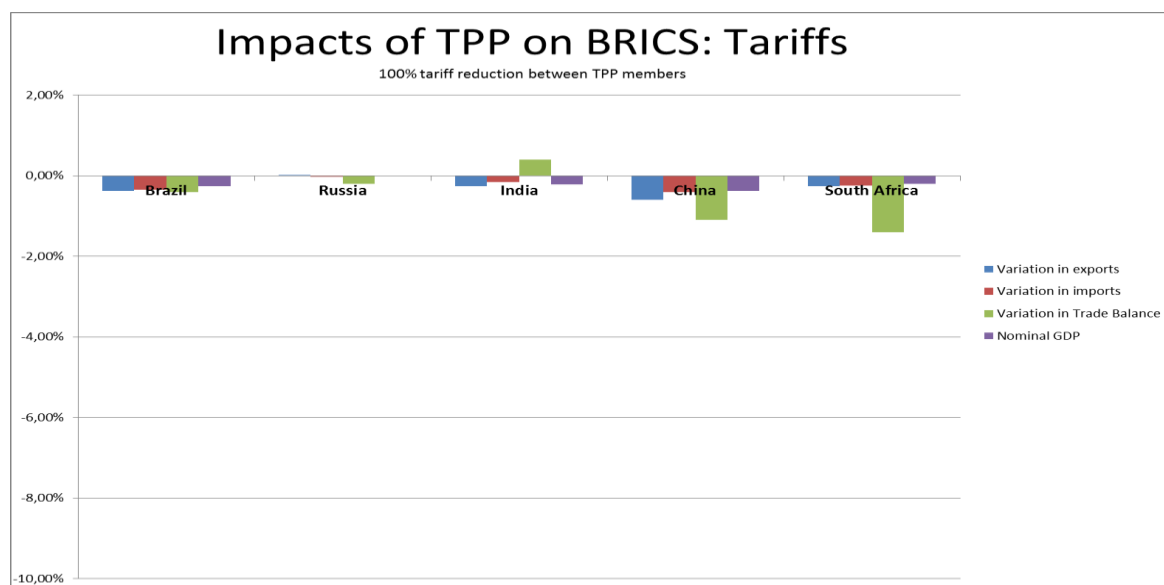
Simulation 3 presents the impacts of the TPP in the BRICS. Again, the simulation included, at first, only the elimination of tariff barriers. Small losses are verified for all BRICS countries, except for Russia, which benefits from a very small increase in its exports.

Brazil, India, China and South Africa are negatively affected in their trade balances: South Africa is the most affected, with a diminution of 1.4% (-0.26% in exports; -0.24% in imports), followed by China, with a decrease of 1.1% (-0.6% in its exports and -0.4%

in its imports); Brazil, that suffers a reduction of 0.4% (-0.37% in exports; -0.35% in imports); and Russia, with a drop of 0.2% (0.01% in exports; -0.02% in imports).

India is the only country that presents a slightly increase of 0,4% in its trade balance, but its exports and imports are still negatively affected in -0.26% and -0.16% respectively.

Furthermore, all countries face a decrease in their nominal GDP.



Source: CGTI estimates

As in the TTIP, despite the impacts of the elimination of tariffs, the major market liberalization in the TPP will be achieved through the negotiation of NTBs.

Simulation 4

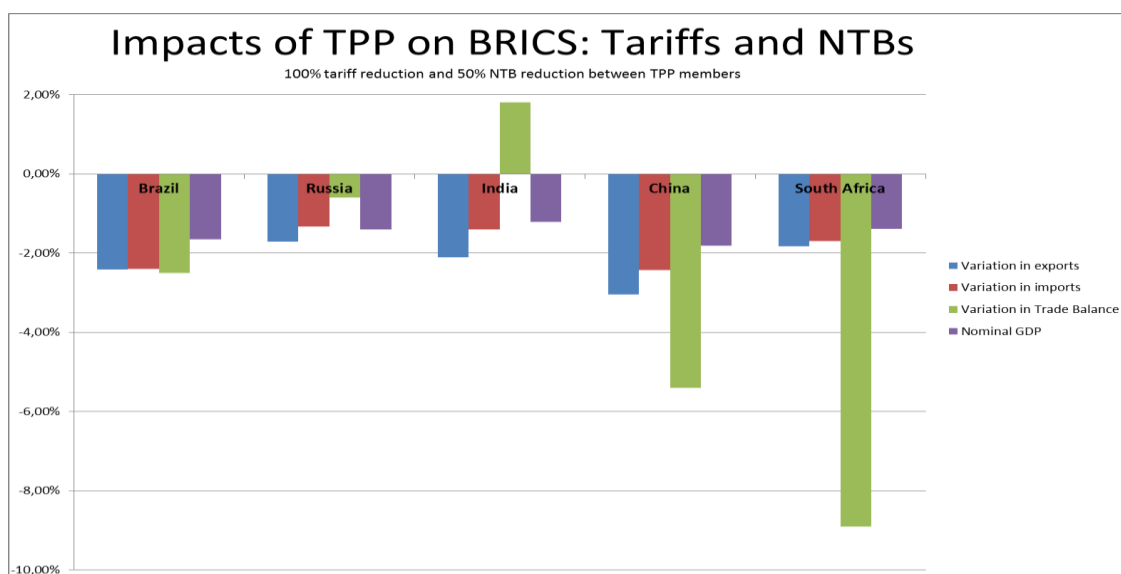
Simulation 4 considers the impacts of the TPP on BRICS under the scenario of elimination of tariff barriers combined with a 50% reduction of NTBs.

The reduction of NTBs significantly increases the negative impacts of the mega-agreement to the BRICS. Losses from 1,7% to 3,1% are verified for global exports of all countries.

Four of the five countries that form the BRICS group would have its trade balance negatively affected. South Africa would endure the greatest reductions (-8.9%), followed by China (-5.4%), Brazil (-2.5%) and Russia (-0.6%). Contrarily, India would observe an increase of 1.8% in its trade balance, although both its exports and imports would suffer a decrease of -2.1% and -1.4% respectively.

All countries will suffer losses of more than 1% of their nominal GDP.

Because the simulations consider only the first round effects of the mega-agreements, the negative impacts can become even greater when considered the gains of competitiveness brought by the agreement to its members in the long-term.



Source: CGTI estimates

The major losses in BRICS exports will be concentrated in the agribusiness, with drops from 5% to 15% of global exports for the agribusiness sector, but all four sectors (agriculture, extractive, agribusiness and industry) of the BRICs will have their exports negatively affected, with the exception of Russia's agriculture sector.

In summary, the mega-agreements will negatively affect the BRICS economies, which will not be included in these preferential access offered by the partners of the two mega-agreements. The higher the market liberalization promoted within the two agreements, with an ambitious reduction of NTBs, higher will be the negative impacts suffered by the BRICS.

The simulations show the potential harms of the proliferation of preferential trade agreements, and specially, of the mega-agreements, on BRICS, which are being left isolated from economic integration. With the creation of free trade areas, exporters from the parties of these agreements will benefit from preferential access, diverting trade and negatively affecting exports of BRICS products.

The impacts on specific sectors in the agriculture, extractive and industry sectors are presented in the annex.

III. THE NEW RULES OF THE MEGA-AGREEMENTS

Besides the reduction of tariffs and non-tariff barriers, there is another factor of the mega-agreements that may impact BRICS international trade: the 21st century rules that

are being negotiated within these agreements and that exceed the regulatory framework of the WTO.

The mega agreements being negotiated mainly by the US and the EU are giving rise to intense discussions over the content of the new rules applied for international trade.

The negotiations of the TTIP and the TPP present an agenda that aims to achieve pioneering goals, including enlargement of market access in services and government procurement, harmonization and mutual recognition of technical, sanitary and phytosanitary measures, global value chains, regulatory harmonization and other aspects that deal with the challenges of trade at the 21st century.

The agreements propose numerous WTO plus and extra rules such as enhanced intellectual property protection, regulation of e-commerce, competition rules, liberalization and protection of investments, regulation of trade related aspects of state owned enterprises, provisions on small and medium sized enterprises, rules of international supply chains, amongst other themes⁵.

Several rules negotiated within those agreements, including technical regulations and intellectual property, might reach all the other players in the international trade scenario. Since these rules suggest a modification in the national legislation of each partner to be applied to all goods or services trade within the territory of the respective country, BRICS products are likely to face technical and sanitary standards negotiated within the TTIP or enhanced intellectual property protection in patents registered in any of the TPP partners, which may negatively affect their exports.

The BRICS will have to adapt to a number of the requirements established by these two agreements without having participated in the drafting of such rules, and thus, without being able to impose its own interests and perspectives in the regulation of such themes.

Regarding market access the TTIP and the TPP aim at a substantial reduction of all tariffs and non-tariff barriers, as well as important commitments in access on services.

Concerning rules of origin, the most relevant proposal in the TPP negotiations is the “yarn forward” for textiles, already implemented in other agreements. This stringent requirement confers origin only for textile products fully produced in one or more member countries of the preferential agreement. In addition, the TPP will provide rules allowing bilateral cumulation⁶. In other words, this means that the countries participating in the agreement will be allowed to cumulate origin.

⁵ FERGUSSON, I.; COOPER, W.; JURENAS, R.; WILLIAMS, B., *The Trans-Pacific Partnership Negotiations and Issues for Congress*, Congressional Research Service Report for Congress, junho de 2013, p. 47-48 and *Interim Report to Leaders from the Co-Chairs EU-US High Level Working Group on Jobs and Growth*, June 2012

⁶ Cumulation is the term used to describe a system that allows originating products of country A to be further processed or added to products originating in country B, just as if they had originated in country B. The resulting product would have the origin of country B.

In regard to trade defense, the TPP maintains the antidumping rights as they are regulated within the WTO. The subsidies theme, conversely, has proposals by Australia and New Zealand that intend to limit their use in the agricultural sector. Safeguards are also subject to new regulatory measures, particularly when related to monetary and exchange rate policies, a proposal that is being pressed by some sectors within the US.

In the issue of technical, sanitary and phytosanitary barriers to trade, it is possible to identify two approaches that may be reproduced both on the TPP and the TTIP. The first one refers to the US model: in its PTAs they usually present mechanisms of mutual recognition of these measures by the parties of the agreement. This mechanism considers that the technical and sanitary requirements present on the legislation of each country have equivalent level playing fields and can be recognized by the other country. The second one is related to the European model: the theme is usually regulated through harmonization (export of European standards) of each partner's domestic legislations. The creation of a consultation mechanism was also suggested, as well as a quick and effective consultation mechanism for non-durable products, since the regular mechanism can sometimes be long-lasting which may cause damages to the exports of these type of products.

The negotiations on trade in services encompass new themes such as e-commerce and regulatory coherence, to be achieved through an intergovernmental regulatory reform.

One of the objectives of the TTIP is to enhance the protection level related to intellectual property, including, but not limited to, geographic indication, pharmaceutical products, trademarks and patents, copyright, trade secrets, and e-commerce.

The regulation of investments aims both liberalization and protection of international investments and shall present and investor-state arbitration clause.

The new agreements also innovates in the environmental regulation, bringing clauses that deal with illegal trade in endangered species of fauna and flora, climate change and environmental goods.

Competition and labor clauses are also addressed in the negotiations of both TPP and TTIP. Discussions related to the first subject envisage transparency, technical assistance, and consumer protection; while the ones with reference to the second theme make reference to multilateral commitments within International Labor Organization (ILO).

Other themes are included in the negotiations of those agreements, such as: state owned enterprises (SOEs) and the regulation of its investments and competition; value chains and its implications to international trade; and small and medium-sized enterprises, especially regarding the promotion of access to foreign markets.

The mega-agreements will bring a series of behind-the-boarders measures that will impact not only the parties of the agreements but all other players that wish to export to

these partners. These exporters will be obliged to adapt with these requirements even though there was no participation of their countries in the negotiation of these measures.

In this scenario, if the BRICS countries do not pursue a more active participation in the drafting of 21st century trade rules, they will become a rule takers, instead of a rule makers, bearing all the costs related to its late arrival in this new generation of international trade rules.

IV. A ROLE FOR THE BRICS

With the mega-agreements and the deadlock of multilateral negotiations, the position of BRICS in international trade is threatened. The countries that form the BRICS are outside the negotiations of the mega-agreements and, consequently, of the market liberalization that will be achieved and of the negotiation of new rules for 21st century trade.

The US and the EU for decades have led the negotiations under the multilateral trading system. With the enlargement of the WTO and the accession of several developing countries, the negotiations became more complex. The active participation of Brazil and India during the Doha Round, especially in agriculture, leading the developing countries and opposing the propositions of the US and EU is a good example of how the “old quad” (US, EU, Canada and Japan) lost its importance and gave place to the “new quad” (US, EU, Brazil and India with China as a recently acceded member). This created a new geometry of negotiating power, given more influence to developing countries, and introducing difficulties to the US and the EU to impose their position in multilateral negotiations as happened in all GATT negotiations.

The attention of the US and EU was, thus, drawn to the preferential sphere, where they could negotiate individually with other trade partners, achieving to establish new market access and drafting new trade rules. This movement helped the proliferation of preferential trade agreements that is seen today.

The mega-agreements represented one step further. They aim more ambitious market access and deeper and more innovative regulatory frameworks. By comprehending major portions of world trade, these initiatives shall also be the base for the 21st century international trade, diminishing the importance of multilateral negotiations.

With the deadlock of multilateral negotiations and outside of the mega-agreements, the BRICS are isolated from international trade governance. Currently, there is only one forum where these countries can negotiate and make their own interests regarding international trade regulations prevail – it is the WTO.

The BRICS must reactivate the WTO as the major negotiation forum for international trade regulation. The Ministerial Conference of Bali was an important achievement that may help this goal. The conference approved the first multilateral agreement since the

creation of the WTO. Even though what was agreed in Bali represents just a small part of the Doha package, its success gives a boost to multilateral negotiations.

The WTO remains as the only forum where the BRICS may exercise their pressure and influence international trade governance. It is the only international trade forum where all five countries participate, allowing all five countries to coordinate their positions, strengthening their power of bargain. Under the WTO, the BRICS will be more able to make their interests on the drafting of new trade rules prevail.

At the Bali Ministerial Conference, members have decided to prepare, within the following 12 months, the work program on the remaining Doha Development Agenda issues⁷. This is momentum for the BRICS to reactivate WTO negotiations and undertake an active participation in global trade governance, defining the themes that should integrate the post-Bali agenda and effectively influencing the drafting of a new regulatory framework for international trade.

Proposals for the BRICS at the WTO can include:

- Enhancement of the transparent mechanism regarding PTAs. The WTO still lacks an efficient mechanism that allows for a surveillance of preferential agreements. The fragmentation of international trade regulation has severe effects on the multilateral system. The WTO needs to better study each clause of the several PTAs currently in force, analyze the compatibilities and incompatibilities amongst them and with WTO rules, and discuss mechanisms to assure coherence of international trade rules, avoiding the negative impacts of fragmentation.
- Improvement of the mechanisms of notification and special trade concerns in the Technical Barriers to Trade Committee and Sanitary and Phytosanitary Committee. These mechanisms are important to the transparency of these non-tariff barriers, which frequently constitute significant obstacles to international trade. Special attention should be given to the issue of private standards, that require new transparency mechanisms in order to avoid negative impacts on trade.
- Improvement of market access and reduction of subsidies in agriculture. Agriculture still presents higher tariffs and more flexible rules to subsidies, which harms agricultural exports. The granting of subsidies, because it affects all exporters, independently of their origin, is traditionally dealt on the multilateral level. Commitments for the reduction of subsidies are not usual in PTAs, since they would not constitute a preferential advantage, because all exports competing with the subsidized product would benefit from the reduction.

⁷ WTO, Ministerial Conference – Ninth Session, *Bali Ministerial Declaration*, Adopted on December 2013 (WT/MIN(13)/DEC), para. 1.11

The agricultural market is of great interest for the BRICS and the WTO constitutes the ideal forum to discuss the reduction of barriers to these exports.

- Inclusion of new themes on the agenda of negotiations. Through 2014, WTO members shall decide if future negotiations will remain restricted to the Doha Agenda or new themes should be included. This is the proper momentum for the BRICS to discuss which their priorities in international trade regulation are and which themes shall object of future negotiations. To return to the old agenda of the Doha Round will reintroduce competition, investment and public procurement in the discussion and will divide the attention between the mega and WTO to regulate these areas.

V. CONCLUSION

The mega-agreements will promote trade flows and economic growth amongst its partners and will establish the pillars for the 21st century international trade regulation. But they will also cause significant losses for the economies that are not part of these agreements, which will suffer from losses in their exports and imports and will be isolated from the creation of rules for new important trade issues. These countries will be affected by the economic integration promoted within the TTIP and TPP.

In the meanwhile, the WTO, which would allow all countries to benefit from increasing larger market access and from the development of consensus based international trade rules is severely weakened, mainly because of the position of the US and the EU to reduce the role of the WTO. The deadlock of the Doha Round negotiations, combined with the proliferation of deep-integration preferential trade agreements, led by the US and the EU, have diminish the importance of the organization as the main forum for international trade governance.

Under this scenario, the future for the BRICS economies is worrying.

Simulations have shown losses of up to 1,6% in BRICS's global exports and of up to 1,1% in the nominal GDP with the entry into force of the TTIP, and of up to 3% global exports and of up to 1,8% in the nominal GDP with the entry into force of the TPP, considering only the first round effects of the agreements. The combination of the negative effects of the two agreements entering into force simultaneously, as well as the consideration of impacts in the long term can worsen the results.

Besides, the two mega-agreements will also create the basis for new international trade rules, which shall answer to the challenges of modern international trade, such as global value chains, competition issues, regulatory coherence, participation of small and medium enterprises, investments and state trading enterprises. The discussions on these new rules will be held only amongst the partners of the two agreements, even though they will be gradually extended to the whole international trade. They shall be constituted mostly for behind the boarder measures and, thus, shall be applied to all exporters that trade with any of the TPP and TTIP members.

The BRICS will lose their prominent role in international trade governance, see their trade flows reduced and gradually be isolated from global trade. This situation must be reverted quickly. The BRICS must find their space in this new context. They must promote a forum where they can actively participate in trade governance.

The WTO shows itself as the best forum to assure the position held by the BRICS countries in the international arena. With the accession of Russia, in 2012, the WTO became the only trade forum where the five countries can act conjointly, making their interests prevail.

The reactivation of the WTO should be considered a priority for the BRICS foreign trade policy. The momentum is favorable, since the post-Bali agenda is being discussed, allowing the BRICS to influence the decision on the new themes of international trade regulation.

The mega-agreements are deeply changing the landscape of international trade. It is imperative that the BRICS adapt to this new scenario and react in order to assure their place in international trade governance again.

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ANNEX – SIMULATIONS

Simulation 1– Impacts of the TTIP on BRICS: Tariffs

Hypothesis: 100% of tariff liberalization between the US and the EU

Table 1.1: Macroeconomic Outlook

Macroeconomic Variables	Brazil	Russia	India	China	S.A.
Nominal GDP	-0,12%	-0,08%	-0,13%	-0,16%	-0,11%
Real GDP	0,00%	0,00%	-0,01%	-0,02%	0,00%
Variation in Trade Balance	-0,20%	0,00%	-0,20%	-0,10%	0,10%
Variation in exports %	-0,17%	-0,08%	-0,14%	-0,14%	-0,13%
Variation in imports %	-0,16%	-0,11%	-0,14%	-0,12%	-0,13%
Terms of trade	-0,07%	0,01%	-0,05%	-0,05%	-0,03%
Real wage	-0,01%	0,00%	-0,01%	-0,01%	-0,01%
Capital gains	-0,01%	0,00%	-0,01%	0,01%	-0,02%
Land gains	-0,37%	-0,01%	-0,12%	-0,30%	-0,24%
Real exchange rate	-0,12%	-0,09%	-0,13%	-0,15%	-0,12%

Table 1.2: Variation in Exports

Exports				
	Agriculture	Extractive	Agribusiness	Industry
Brazil	-0,3%	0,0%	-0,7%	-0,2%
Russia	0,0%	0,0%	-0,3%	-0,3%
India	-0,2%	-0,1%	-0,5%	-0,3%
China	0,2%	0,0%	-0,2%	-0,1%
South Africa	-0,3%	0,0%	-0,5%	-0,2%

Table 1.3: Variation in Imports

Imports				
	Agriculture	Extractive	Agribusiness	Industry
Brazil	-0,3%	-0,1%	-0,2%	-0,2%
Russia	-0,1%	-0,2%	-0,1%	-0,1%
India	-0,3%	-0,1%	-0,2%	-0,2%
China	-0,2%	-0,1%	-0,4%	-0,1%
South Africa	-0,2%	-0,1%	-0,1%	-0,1%

Simulation 1– Impacts of the TTIP on BRICS: Tariffs

Hypothesis: 100% of tariff liberalization between the US and the EU

Table 1.4: GDP(%) – Agriculture + Agribusiness

Agriculture	Brazil	Russia	India	China	S.A.
Paddy rice	-0,01	-0,02	-0,07	-0,06	0,50
Wheat	0,21	0,05	-0,01	-0,02	0,39
Other cereals	-0,14	-0,01	0,00	0,01	-0,01
Vegetables/fruits	0,01	-0,01	0,01	-0,02	-0,09
Oil seeds	0,24	0,00	0,03	0,13	0,03
Sugar (cane&beet)	0,02	-0,02	-0,01	-0,01	-0,01
Plant fibres	0,01	0,18	-0,07	-0,11	-0,07
Other crops (unprepared)	-0,19	-0,19	-0,04	0,06	-0,27
Cattle, horses, sheeps	-0,15	-0,02	-0,03	-0,28	-0,01
Animal products	-0,28	-0,01	-0,02	-0,11	-0,12
Raw milk	-0,02	0,00	-0,02	-0,05	-0,04
Wool, silk	0,00	-0,02	-0,01	-0,04	0,00
Forestry products	0,06	0,02	0,00	0,10	0,01
Meat: cattle, sheeps, horses	-0,18	-0,01	0,02	-0,51	-0,02
Meat products	-0,55	0,10	0,00	-0,17	-0,11
Vegetables oils and fats	-0,01	-0,03	0,04	0,00	0,01
Dairy products	-0,03	-0,04	-0,16	-0,05	-0,08
Processed rice	0,00	-0,05	-0,02	-0,03	0,00
Sugar	0,02	-0,02	-0,01	-0,01	-0,02
Food products (animal feed)	-0,04	-0,03	-0,03	-0,03	-0,04
Beverage, Tobacco products	-0,01	0,00	-0,01	0,00	-0,01

Simulation 1 – Impacts of the TTIP on BRICS: Tariffs

Hypothesis: 100% of tariff liberalization between the US and the EU

Table 1.5: GDP(%) – Industry

	Brazil	Russia	India	China	S.A.
Extractive					
Fishing	0,00	-0,01	-0,02	-0,02	-0,06
Coal	0,04	0,01	0,01	0,01	0,03
Oil	0,03	0,01	0,03	0,03	0,03
Gas	0,01	-0,01	0,01	0,00	0,01
Minerals	0,04	-0,05	0,03	0,04	0,04
Manufacturing					
Textiles	-0,06	-0,08	-0,22	-0,21	-0,07
Apparel	-0,01	-0,03	-0,44	-0,14	-0,02
Leather products	-0,47	-0,05	-0,24	-1,13	-0,12
Wood products	0,15	0,00	0,02	0,15	0,06
Paper products	0,06	0,03	0,03	0,08	0,05
Petroleum products	-0,03	-0,09	-0,03	0,01	0,00
Chemical, rubber, plastics	0,02	-0,18	-0,05	0,02	-0,01
Mineral (non-metallic)	-0,19	-0,02	-0,09	-0,06	0,00
Iron, steel	0,10	0,01	0,04	0,06	0,08
Metals (non-ferrous)	0,00	-0,17	0,07	0,09	-0,13
Metal products	0,04	0,00	0,00	0,04	0,03
Motor vehicles and parts	-0,02	-0,05	-0,06	-0,01	-0,08
Transport equipment	0,12	-0,11	0,22	0,13	-0,22
Electronic equipment	0,07	0,01	0,07	0,29	0,11
Machinery and equipment	0,16	0,02	0,03	0,09	0,08
Manufactures	0,00	0,00	-0,04	-0,03	-0,03

Simulation 2– Impacts of the TTIP on BRICS: Tariffs and NTBs

Hypothesis: 100% of tariff liberalization between the US and the EU and reduction of 50% of NTBs

Table 2.1: Macroeconomic Outlook

Macroeconomic Variables	Brazil	Russia	India	China	S.A.
Nominal GDP	-1,05%	-0,65%	-0,86%	-1,11%	-0,89%
Real GDP	-0,02%	0,00%	-0,03%	-0,08%	0,00%
Variation in Trade Balance	-1,70%	-1,30%	-0,40%	-1,90%	-3,90%
Variation in exports %	-1,61%	-0,81%	-1,20%	-1,31%	-1,18%
Variation in imports %	-1,61%	-0,84%	-1,02%	-1,17%	-1,13%
Terms of trade	-0,60%	-0,27%	-0,25%	-0,32%	-0,37%
Real wage	-0,04%	-0,01%	0,02%	-0,08%	-0,04%
Capital gains	-0,06%	-0,03%	0,00%	-0,07%	-0,11%
Land gains	-2,71%	-0,40%	-0,61%	-0,69%	-1,74%
Real exchange rate	-1,05%	-0,65%	-0,85%	-1,06%	-0,90%

Table 2.2: Variation in Exports

Exports				
	Agriculture	Extractive	Agribusiness	Industry
Brazil	-3,6%	-0,7%	-3,0%	-1,9%
Russia	-0,7%	-0,3%	-2,1%	-1,8%
India	-2,6%	-1,0%	-2,2%	-2,2%
China	-0,3%	-1,6%	-1,8%	-1,5%
South Africa	-2,5%	-1,6%	-1,8%	-1,4%

Table 2.3: Variation in Imports

Imports				
	Agriculture	Extractive	Agribusiness	Industry
Brazil	-2,0%	-1,4%	-1,7%	-1,7%
Russia	-0,9%	-1,6%	-0,7%	-0,8%
India	-1,5%	-1,0%	-1,1%	-1,1%
China	-0,9%	-0,8%	-1,8%	-1,2%
South Africa	-1,6%	-0,7%	-1,0%	-1,2%

Simulation 2– Impacts of the TTIP on BRICS: Tariffs and NTBs

Hypothesis: 100% of tariff liberalization between the US and the EU and reduction of 50% of NTBs

Table 2.4: GDP(%) – Agriculture + Agribusiness

Agriculture	Brazil	Russia	India	China	S.A.
Paddy rice	-0,01	-0,17	-0,41	-0,09	2,30
Wheat	1,42	0,05	-0,11	0,19	2,27
Other cereals	-0,67	-0,07	-0,02	0,24	-0,05
Vegetables/fruits	-0,12	-0,09	0,01	-0,03	-0,69
Oil seeds	0,00	-0,58	-0,10	0,31	-0,14
Sugar (cane&beet)	0,17	-0,26	-0,06	-0,05	-0,07
Plant fibres	0,72	0,67	0,27	0,72	0,37
Other crops (unprepared)	-1,52	-1,02	-0,31	-0,63	-1,96
Cattle, horses, sheeps	-0,25	-0,12	-0,10	-0,83	-0,08
Animal products	-1,24	-0,09	-0,03	-0,31	-0,52
Raw milk	0,04	-0,02	-0,02	0,06	0,03
Wool, silk	0,01	-0,18	-0,12	0,48	-0,66
Forestry products	0,58	0,04	-0,19	0,61	0,05
Meat: cattle, sheeps, horses	-0,32	-0,12	0,05	-1,13	-0,10
Meat products	-2,44	0,47	0,01	-0,33	-0,53
Vegetables oils and fats	-0,11	-0,55	-0,15	-0,10	-0,30
Dairy products	0,04	0,06	-0,15	0,06	0,02
Processed rice	0,00	-0,36	-0,11	-0,12	-0,24
Sugar	0,15	-0,26	-0,06	-0,05	-0,17
Food products (animal feed)	-0,23	-0,18	-0,17	-0,18	-0,14
Beverage, Tobacco products	-0,43	-0,03	-0,07	0,00	-0,18

Simulation 2 – Impacts of the TTIP on BRICS: Tariffs and NTBs

Hypothesis: 100% of tariff liberalization between the US and the EU and reduction of 50% of NTBs

Table 2.5: GDP(%) – Industry

	Brazil	Russia	India	China	S.A.
Extractive					
Fishing	-0,05	-0,06	-0,06	-0,08	-0,05
Coal	0,26	-0,57	-0,18	-0,04	-0,45
Oil	0,02	-0,03	0,00	0,11	0,05
Gas	0,08	-0,04	0,04	0,11	0,14
Minerals	0,07	-0,48	-0,03	0,08	0,00
Manufacturing					
Textiles	0,07	0,01	-0,46	0,15	-0,01
Apparel	-0,02	-0,02	-0,41	0,53	-0,04
Leather products	-0,55	0,10	0,25	-2,69	-0,24
Wood products	1,40	0,73	0,25	1,05	0,76
Paper products	0,52	0,68	0,28	0,54	0,60
Petroleum products	-0,32	-0,75	-0,20	0,01	0,05
Chemical, rubber, plastics	0,25	-0,17	-0,19	0,12	0,16
Mineral (non-metallic)	-0,59	0,11	-0,24	-0,10	0,25
Iron, steel	-0,14	0,13	0,01	0,05	0,31
Metals (non-ferrous)	0,38	-1,18	0,06	0,08	-0,99
Metal products	0,28	0,53	0,05	0,31	0,58
Motor vehicles and parts	0,00	0,03	-0,18	-0,02	-0,13
Transport equipment	-3,29	-2,49	0,59	-0,22	-3,64
Electronic equipment	0,38	0,32	0,13	0,99	1,14
Machinery and equipment	0,57	0,51	-0,01	-0,33	0,67
Manufactures	-0,06	-0,02	-1,25	-1,47	-0,70

Simulation 3 – Impacts of TPP on BRICS Tariffs

Hypothesis: 100% of tariff liberalization between TPP partners

Table 3.1: Macroeconomic Outlook

Macroeconomic Variables	Brazil	Russia	India	China	S.A.
Nominal GDP	-0,26%	-0,01%	-0,21%	-0,38%	-0,20%
Real GDP	-0,01%	0,01%	-0,01%	-0,07%	-0,01%
Variation in Trade Balance	-0,40%	-0,20%	0,40%	-1,10%	-1,40%
Variation in exports %	-0,37%	0,01%	-0,26%	-0,60%	-0,26%
Variation in imports %	-0,35%	-0,02%	-0,16%	-0,40%	-0,24%
Terms of trade	-0,17%	0,11%	-0,15%	-0,28%	-0,11%
Real wage	0,04%	0,00%	-0,04%	-0,05%	-0,06%
Capital gains	-0,03%	0,01%	-0,04%	0,03%	-0,04%
Land gains	-0,25%	0,04%	-0,29%	-1,41%	-0,15%
Real exchange rate	-0,26%	-0,02%	-0,22%	-0,34%	-0,21%

Table 3.2: Variation in Exports

Exports				
	Agriculture	Extractive	Agribusiness	Industry
Brazil	0,7%	0,3%	-2,3%	-0,5%
Russia	0,9%	0,3%	-1,8%	-0,3%
India	-0,2%	0,2%	-0,8%	-0,7%
China	-0,3%	0,7%	-6,5%	-0,5%
South Africa	0,3%	0,1%	-2,7%	-0,4%

Table 3.3: Variation in Imports

Imports				
	Agriculture	Extractive	Agribusiness	Industry
Brazil	-0,6%	0,0%	-0,5%	-0,4%
Russia	-0,2%	-0,2%	0,1%	0,0%
India	-1,0%	0,0%	-0,3%	-0,2%
China	-1,0%	0,0%	-1,3%	-0,5%
South Africa	-0,5%	0,1%	-0,2%	-0,3%

Simulation 3 – Impacts of TPP on BRICS Tariffs

Hypothesis: 100% of tariff liberalization between TPP partners

Table 3.4: GDP (%) – Agriculture + Agribusiness

Agriculture	Brazil	Russia	India	China	S.A.
Paddy rice	0,04	0,14	0,15	-0,25	6,38
Wheat	0,26	0,35	-0,11	-0,09	0,84
Other cereals	-0,13	-0,05	0,00	-0,51	-0,13
Vegetables/fruits	0,22	-0,07	0,02	-0,19	-0,09
Oil seeds	0,57	-0,02	0,01	0,50	0,23
Sugar (cane&beet)	-0,02	-0,15	-0,05	-0,14	-0,78
Plant fibres	0,56	0,14	-0,01	-0,42	0,27
Other crops (unprepared)	0,17	-0,75	-0,22	-0,68	0,06
Cattle, horses, sheeps	0,24	0,02	-0,04	-0,35	0,14
Animal products	-1,74	0,00	-0,08	-0,47	-0,28
Raw milk	0,05	0,02	-0,02	0,22	0,00
Wool, silk	0,02	0,04	0,43	1,80	3,10
Forestry products	0,09	0,04	0,12	0,34	0,00
Meat: cattle, sheeps, horses	0,26	0,01	-0,07	-0,55	0,12
Meat products	-3,52	-0,75	-0,50	-1,88	-0,45
Vegetables oils and fats	0,16	-0,03	-0,05	0,14	0,33
Dairy products	0,07	0,01	-0,08	0,22	0,03
Processed rice	0,02	0,51	0,08	-0,41	1,40
Sugar	-0,05	-0,15	-0,05	-0,14	-2,58
Food products (animal feed)	-0,23	-0,32	-0,19	-0,40	-0,13
Beverage, Tobacco products	-0,01	0,00	-0,04	-0,05	-0,03

Simulation 3 – Impacts of TPP on BRICS: Tariffs

Hypothesis: 100% of tariff liberalization between TPP partners

Table 3.5: GDP (%) – Industry

	Brazil	Russia	India	China	S.A.
Extractive					
Fishing	0,01	0,00	-0,03	-0,14	0,03
Coal	0,13	0,02	0,10	0,10	0,08
Oil	0,15	0,08	0,14	0,16	0,14
Gas	0,05	-0,02	0,06	0,05	0,03
Minerals	0,22	-0,10	0,19	0,21	0,20
Manufacturing					
Textiles	0,32	-0,12	0,15	0,29	0,18
Apparel	0,04	-0,15	-0,02	0,12	0,07
Leather products	0,03	-0,04	-0,03	0,02	-0,02
Wood products	0,08	-0,38	-0,08	0,21	0,09
Paper products	0,02	-0,03	0,02	0,10	0,07
Petroleum products	-0,01	-0,16	-0,02	0,04	-0,55
Chemical, rubber, plastics	0,57	-0,24	0,17	0,43	0,66
Mineral (non-metallic)	0,05	-0,16	-0,01	0,06	-0,11
Iron, steel	-0,33	-0,02	-0,03	-0,21	-0,86
Metals (non-ferrous)	0,22	-0,20	0,19	0,19	0,46
Metal products	0,14	-0,05	0,36	0,57	0,55
Motor vehicles and parts	0,20	-0,09	0,14	0,31	0,26
Transport equipment	0,00	-0,09	0,14	0,31	0,04
Electronic equipment	0,32	-0,12	0,15	0,29	0,18
Machinery and equipment	0,04	-0,15	-0,02	0,12	0,07
Manufactures	0,03	-0,04	-0,03	0,02	-0,02

Simulation 4 – Impacts of TPP on BRICS Tariffs and NTBs

Hypothesis: 100% of tariff liberalization between TPP partners and reduction of 50% of NTBs

Table 4.1: Macroeconomic Outlook

Macroeconomic Variables	Brazil	Russia	India	China	S.A.
Nominal GDP	-1,65%	-1,40%	-1,21%	-1,81%	-1,39%
Real GDP	-0,02%	-0,13%	-0,03%	-0,16%	-0,01%
Variation in Trade Balance	-2,50%	-0,60%	1,80%	-5,40%	-8,90%
Variation in exports %	-2,41%	-1,71%	-2,10%	-3,04%	-1,83%
Variation in imports %	-2,40%	-1,33%	-1,40%	-2,43%	-1,70%
Terms of trade	-0,75%	-0,38%	-0,21%	-0,78%	-0,33%
Real wage	-0,05%	0,09%	0,13%	-0,13%	-0,06%
Capital gains	-0,07%	0,06%	0,12%	0,00%	-0,11%
Land gains	-2,92%	-0,52%	-1,37%	-2,64%	-3,14%
Real exchange rate	-1,65%	-1,23%	-1,20%	-1,73%	-1,40%

Table 4.2: Variation in Exports

Exports				
	Agriculture	Extractive	Agribusiness	Industry
Brazil	-3,3%	-1,0%	-5,7%	-2,9%
Russia	1,0%	-1,7%	-5,8%	-1,2%
India	-5,6%	-1,1%	-6,6%	-3,3%
China	-7,1%	-0,5%	-15,2%	-3,2%
South Africa	-3,7%	-0,9%	-6,0%	-2,3%

Table 4.3: Variation in Imports

Imports				
	Agriculture	Extractive	Agribusiness	Industry
Brazil	-2,9%	-1,8%	-2,2%	-2,6%
Russia	-1,7%	-0,8%	-1,5%	-1,4%
India	-2,9%	-1,1%	-1,6%	-1,4%
China	-2,7%	-1,2%	-3,2%	-2,7%
South Africa	-2,3%	-1,4%	-1,5%	-1,8%

Simulation 4 – Impacts of TPP on BRICS Tariffs and NTBs

Hypothesis: 100% of tariff liberalization between TPP partners and reduction of 50% of NTBs

Table 4.4: GDP (%) – Agriculture + Agribusiness

Agriculture	Brazil	Russia	India	China	S.A.
Paddy rice	0,00	-0,18	-0,04	-0,30	6,54
Wheat	0,69	0,86	-0,31	0,12	2,06
Other cereals	-0,34	-0,28	-0,10	-1,04	-0,43
Vegetables/fruits	-2,42	-0,29	-0,08	-0,50	-1,31
Oil seeds	0,19	-0,35	-0,83	-0,27	-1,30
Sugar (cane&beet)	-0,11	-0,49	-0,17	-0,40	-0,94
Plant fibres	-0,27	0,69	-0,53	0,20	-0,28
Other crops (unprepared)	-0,97	-1,26	-0,52	-3,08	-1,62
Cattle, horses, sheeps	0,50	-0,16	-0,30	-0,20	0,05
Animal products	-2,77	-0,18	-0,11	-0,56	-0,44
Raw milk	0,11	-0,12	0,06	0,36	0,10
Wool, silk	0,02	-0,11	0,29	2,81	3,19
Forestry products	0,73	-0,17	-0,12	0,99	0,02
Meat: cattle, sheeps, horses	0,59	-0,19	-0,13	-0,19	0,04
Meat products	-5,11	-0,76	-0,58	-2,18	-0,62
Vegetables oils and fats	-0,25	-0,41	-1,27	-0,29	-0,53
Dairy products	0,14	0,03	-0,01	0,36	0,17
Processed rice	0,00	-0,11	-0,12	-0,70	0,46
Sugar	-0,30	-0,49	-0,22	-0,40	-3,08
Food products (animal feed)	-0,90	-0,95	-0,67	-1,14	-0,44
Beverage, Tobacco products	-0,22	-0,11	-0,05	-0,06	-0,12

Simulation 4 – Impacts of TPP on BRICS: Tariffs and NTBs

Hypothesis: 100% of tariff liberalization between TPP partners and reduction of 50% of NTBs

Table 4.5: GDP (%) – Industry

	Brazil	Russia	India	China	S.A.
Extractive					
Fishing	-0,17	-0,03	-0,06	-0,36	-0,05
Coal	0,44	0,21	0,13	0,19	0,25
Oil	-0,05	-0,08	-0,14	0,03	-0,03
Gas	-0,26	-0,86	-1,07	-0,88	-1,22
Minerals	0,36	0,10	0,11	0,31	0,19
Manufacturing					
Textiles	-0,07	-0,13	-1,34	-0,43	-0,28
Apparel	-0,09	-0,42	-3,00	-0,66	-0,18
Leather products	-0,82	-0,80	-1,81	-1,12	-0,82
Wood products	1,77	0,53	0,19	1,49	0,80
Paper products	0,67	0,62	0,34	0,99	0,49
Petroleum products	-0,16	-0,08	-0,24	-0,01	0,09
Chemical, rubber, plastics	0,40	0,91	-0,12	0,56	0,14
Mineral (non-metallic)	-0,06	0,30	0,03	0,23	0,27
Iron, steel	-0,32	0,56	-0,19	-0,01	-0,46
Metals (non-ferrous)	0,63	-0,24	0,08	0,37	-0,75
Metal products	0,24	0,36	-0,04	0,17	0,24
Motor vehicles and parts	-0,89	0,85	-0,36	-0,54	-1,19
Transport equipment	-3,08	1,09	0,97	-0,13	1,63
Electronic equipment	1,01	1,39	0,67	-0,07	1,93
Machinery and equipment	0,27	0,58	-0,09	-0,54	0,54
Manufactures	0,03	0,05	-0,23	0,42	0,13