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Economic effects of bilateral trade agreements:

China, United States, European Union and Japan

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ABSTRACT

Economic integration and international trade among different regions are analysed in this study. It describes recent history and explains a theoretical framework of economic integration. It focuses in Mega-Regional Trade Agreements, more specifically in the biggest ones, TTIP (Transatlantic Trade and Investment Partnership) and TPP (Trans-Pacific Partnership), both of them still under negotiation. These agreements involve the most important economies in the world such as the European Union (formed by 28 countries), United States which is member of both, and Japan. However, China is not a member of any of them and doesn't seem to be in the near future, but it is a really relevant country and economy in the world. This report analyses which opportunities China should take not to be left behind regarding international trade. Three hypothetical alternatives are developed where China joins US, EU and Japan separately eliminating its tariff barriers with each of them under three different scenarios or degrees of liberalization. Potential economic and trade effects that those agreements will cause for the Chinese economy are analysed specially focusing on welfare, tariff revenue change, trade creation and trade diversion.

KEY WORDS

Mega-regional trade agreements (MRTAs), Tariff, Trade creation, Trade diversion, Welfare

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1. INTRODUCTION

Regional trade has been carried out for several centuries. But the way of doing it during the last decades is changing. After the lack of agreement in multilateral trade negotiations in the last Ministerial Conferences of the World Trade Organization (WTO), some countries have decided to engage in a different type of negotiations involving largest economies in the world, Mega Regional Trade Agreements (MRTAs). The biggest are Trans-Atlantic Trade and Investment Partnership (TTIP) formed by the European Union and the United States and Trans-Pacific Partnership (TPP) formed by Australia, Brunei Darussalam, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, the United States, and Vietnam. Nevertheless, China is not included in any of them and it is not going to be included in the near future. It has already taken some actions not to be left behind. This report will include other course of actions that could be followed by this country as a response to actual international trade situation in accordance with its strategy.

Since 1st century BC China had already a trade and cultural network, formed by several routes through which this Asian economy commercialized mainly silk with other countries, even with the Mediterranean Sea, called the Silk Road. Nowadays, China is still actively participating in international trade; moreover, it is the major world trading partner in goods, it is member of some free trade agreements and of the World Trade Organization since December 2001, and it is relaunching the Silk Road.

This theoretical and empirical study has three objectives. First objective is to develop a framework to explain regional trade agreements and economic integration evolution throughout history, definition, types, causes that lead to it and economic and trade effects, being this last part especially important.

Second aim is to describe most relevant MRTAs at the moment, TTIP and TPP, and to analyse China's possible alternatives, responses and strategies regarding trade policy. China has been chosen because it is one of the most important economies nowadays and it is not included in any of the Mega-Regionals.

The third one is to decide which hypothetical bilateral trade agreement is more advisable for China to negotiate based on Trade Effects such as Trade Creation, Trade Diversion, Tariff Revenue Change and Welfare. The bilateral are referred to European Union, United States and Japan, and reflect China's response or strategy to be followed due to the exclusion of this country from main MRTAs. For the generation of all those economic

indicators, the software WITS has been used. It is a data base of the World Bank that allows simulating trade and effects of tariff cuts among countries.

To be able to achieve and fulfil objectives of this report, it follows a logical structure. Section 2 is devoted to describe the background of Regional Trade Agreements, including history, definition, types, reasons and effects, of economic integration. Section 3 encompasses the explanation of TTIP and TPP, MRTAs under negotiation, and China's position and strategy. Empirical analysis of hypothetical bilateral agreements of China as a response or trade policy is developed in section 4. Finally, in section 5 conclusions of the study are explained. Two appendixes are also included. Appendix 1 includes three tables, containing data of each country in the European Union. These tables have been developed to obtain information for the EU shown in table 2 and to compare the effects among countries. Also generic and specific competences, knowledge and abilities required to be fulfilled, their demonstration and examples of them are compiled in Annex 2.

2. HISTORICAL AND THEORETICAL FRAMEWORK OF REGIONAL TRADE AGREEMENTS

2.1. Recent History of Regional Trade Agreements

Nowadays whenever consumers buy clothes, computers, fruit or any other item they can easily realize that most probable the shirt has been made in China, the computer of a European or American brand has been assembled in Mexico or China and that the orange is coming from Morocco. This means that countries are trading with others all over the world, but economies have not always been as open as they are today.

2.1.1. From the First World War till the GATT/WTO

The 20th Century began with a change in the pattern of international trade. The First World War modified governments' behaviour, which was more open due to convertibility of currencies into gold; then they became much more closed, protecting their economies and focusing trade within their own borders. When the war was over some of the protectionist measures built by the countries were eliminated, but again in 1920 with the arrival of the economic recession they stopped this liberalisation and countries started raising tariffs again.

To avoid that this measures continued closing economies and making the countries more isolated, the League of Nations organized in 1927 the World Economic Conference to restore international trade. However, this slow recovery was soon stopped by the Great

Depression. During the 30s, countries increased their import tariffs and started to make small trade agreements. The Dutch-Scandinavian Economic Pact (Denmark, the Netherlands, Norway and Sweden) was formed, Britain created the Imperial (tariff) Preferences with its colonies, and Germany together with Southern and Eastern European countries formed another bloc. At the same time the United States changed from a huge increase of tariffs followed by a great trade fell, caused by the Smooth-Hawley Act.; to a strong tariff reduction through bilateral tariff reduction agreements.

After the Second World War, multilateral negotiations started letting liberalization and international trade improve. Victorious Allies, who were in favour of this trend, supported International Monetary Fund, the World Bank and the International Trade Organization (in creation during that time) as the institutions in charged to maintain world economic stability and to set multilateralism as the pattern of trade to be followed. But in 1947, 23 countries started to negotiate using some trade rules, which received the name of General Agreement on Tariffs and Trade (GATT) because they didn't want to wait till the complete creation of the ITO.

50 years later, in 1995 the World Trade Organization (WTO) was born subsuming the GATT rules and basic principles. The most notorious aspects of WTO are the following: export subsidies are forbidden (with the exception of agricultural exports), also new import quotas are not allowed (exception, cope with market disruption), binding system is applied to tariffs (whenever a tariff is set the country compromises not to increase it after), trade rounds are held periodically to negotiate different and new measures to continue the path of trade liberalization, and Most Favoured Nation clause under which when a country establishes a better condition with another country it applies to all the members in the WTO. Another characteristic of the WTO is that it deals not only with agreements in traded goods, but also adds rules of trade in services GATS and includes an Agreement on Trade-Related Aspects of Intellectual Property (TRIPS). Moreover the Dispute Settlement Procedure makes it easier and quicker for cases of violation of rules to be solved (one of the weakest points of GATT).

It should be highlighted as well the increasing role of developing and recently industrialized countries in world trade in general and in particular in this organization (in 2001, China entered the WTO) and in regional trade agreements, to understand the Doha disappointment (last trade round that started in 2001, still under negotiation) due to the different views and diversity of ideas (developing vs developed countries).

2.1.2. Regional Trade Agreements

WTO, a worldwide agreement and organization, has not stopped regional or bilateral agreements. Probably the clearest example of this is the European Union, which started in 1951 as the European Coal and Steel Community and has evolved till the most advanced form of integration among countries that exists nowadays, the economic union. Later other countries became integrated, in 1994 came into force the North America Free Trade Agreement (USA, Canada and Mexico). There also exist this type of agreements among developing countries for example MERCOSUR, Africa experienced regional agreements as well.

Asia has also experienced such associations, Association of Southeast Asian Nations (ASEAN) was created and planned to evolve into ASEAN Free Trade Area (AFTA). Least but not last, in 1989 the Asia Pacific Economic Cooperation (APEC) appeared (Australia, Brunei Darussalam, Canada, Indonesia, Japan, South Korea, Malaysia, New Zealand, Philippines, Singapore, Thailand, USA, Chinese Taipei, Hong Kong, People's Republic of China, Mexico, Papua New Guinea, Chile, Peru, Russia and Vietnam).

But in the 21st Century, other type of agreements are taking place or at least are being negotiated, due to their magnitude in volume of trade, importance of economies and GDP of the countries taking part, they are not only Regional Trade Agreements but Mega Regional Trade Agreements (hereafter MRTAs). Two of the most important ones are TTIP (Trans-Atlantic Trade and Investment Partnership) and TPP (Trans-Pacific Partnership), which will be analysed in this report.

Those were only some of the most important examples but the number of regional and mega regional trade agreements has been increasing since the 90s. At 15th of June 2014 there were 585 RTA notified to the GATT/WTO (taking separately goods and services) of which 379 were in force. But would this mean that this is the end of multilateralism and the Doha Round? According to the European Commission (2014a), regarding to the TTIP, one thing doesn't change the other: "The fact that the EU and US have decided to launch a bilateral negotiation does not mean we are no longer committed to a multilateral approach involving as many countries as possible. Indeed, we worked hard to get the deal at the World Trade Organisation's (WTO) meeting in Bali where 159 countries agreed on measures that will bring huge benefits to the world economy and especially to developing countries. Importantly, the agreement in Bali represents a boost to the WTO and the multilateral system and will help to get the WTO's multilateral trade negotiations - the so-

called Doha Round - moving again. Likewise, the TTIP could also encourage others to revive the WTO negotiations. Furthermore, if the EU and US are able to harmonise many of their regulations and standards, this could act as a basis for creating global rules with all the cost savings and economic benefits that would bring”

2.2. Economic Integration and its different forms

As it is explained by Jordán (2013), economic integration can be understood as the combination of different national economies in a bigger territorial unit; it means, according to Pelkmans (2006), elimination of economic frontiers (any area that restricts mobility of goods, services and factors of production among countries) between two or more countries. It includes cooperation as well as coordination, which implies a process through which a common sovereignty starts to be created. There are two different aspects regarding integration as Tinbergen (1970) explains:

-Negative integration: when barriers between countries are removed

-Positive integration: when modification of the instruments and institutions already existing takes place and new supranational institutions are created.

According to the degree of integration we can find different forms, according to Jordán (2013) four types can be distinguished:

- **Free trade area (FTA).** Simplest way of economic integration, which includes the elimination of tariffs (a tax imposed on imported goods), and quantitative restrictions to trade between member countries, but each member country keeps its own tariffs in regard to third countries. Due to this last characteristic, at this level of integration, sometimes Trade Deflection happens (that is, that a country not taking part in the FTA, can commercialize its products in the country of the FTA with higher taxes introducing them previously in a country of the FTA; this way, the country with higher taxes doesn't earn revenue from tariffs decreasing its welfare).
- **Customs union.** Elimination of tariffs and quantitative restrictions is given but now member countries set common external tariffs, same tariffs are applied to third countries.
- **Common market.** At this stage, not only goods are traded without tariffs or quantitative restrictions but also factors of production, such as labour and capital are

free to move within member countries. There is integration of goods, services and factors markets.

- **Economic and Monetary union.** It is the most advanced form of integration, a common market where monetary policy has been unified among member countries, which usually includes coordination of other economic policies among members.

2.3. Reasons for international trade and economic integration

Every agreement among countries and of course mega regionals also, takes place because of at least one of two reasons according to a report released by the World Economic Forum (2014): geopolitical and/or economic. Geopolitical causes alone are not enough for countries to engage in such agreements; economic aspects are always more relevant when a country has to decide whether to sign or not an agreement; that is why it will be studied later in this report the economic advantages for China in joining EU, US or Japan, to see which of them would be more profitable economically for this country. Now in this section it is going to be explained both reasons for international trade, geopolitical and trade-economic.

2.3.1. Geopolitical Reasons

Apart from the classical reason of international negotiation as a measure to avoid trade wars or which is the same to escape from the Prisoner's dilemma (governments are not able to obtain best outcome possible when they act alone, taking into account their own interests, they choose to protect; while if they will choose not to protect they would be better off), this analysis will centre in more concrete causes for recent mega-regionals to be created.

One of the main causes for MRTAs to appear has been the apparent failure of the Doha Round which may be due to the enormous diversity among the WTO members, the different objective of developed and developing countries and in addition the crisis that started in 2008 has not helped, increasing tensions among them. All these has made that some countries preferred to leave aside the multilateral system and they have focused their attention in being part of mega-regionals.

Mega-regionals go further than the WTO, they deepen and extend to new topics (lots of non-tariff barriers elimination, harmonization rules, regulations of capital, environment...) the laws and agreements under the WTO, which are called WTO-plus (deepen) and WTO-extra (new), giving to the members of MRTAs more benefits.

A clear reason in the case of US for example, is the worry to lost its power and importance especially in Asia due to the emergence of some countries as China (neither included in TTIP nor in TPP, which can be from the point of view of US or Japan as a way to diminish its increasing power).

Related to previous topic is also the willingness of EU and US to continue setting rules regarding world trade. Due to the lack of agreement in the Doha Round caused by the diversity, these two big economies are not obtaining the results and new rules of the game that they expected. By signing both mega-regional agreements US and EU would be the rule makers and probably the WTO will start following their actions to behave similarly and they will be no longer rule takers as they are now.

Both agreements are being used by the US to show that its economy and its model is better than the Chinese one (state capitalist economy, that made it quite well during the last crisis), so it is kind of a power war in which by the moment US is the only country in both mega regionals and has achieved its goal of China not being in none of them by the moment. With respect to this The Economist (2013) published: *“America is trying to design a trade regime which China will eventually have to join – rather than getting to set its own rules as its clout increases”*

2.3.2. Trade-Economic Reasons

All the reasons contained in this category are based on the two basic causes for international trade: first, countries differ in their resources or technology and they specialize, related to comparative advantage and second, increasing returns or which is the same economies of scale.

Every country that signs a trade agreement has preferential access to a bigger market; which in any case would be one more country or one more market to export and to trade with, potentially improving its competitiveness and thus its economy and income. When talking about mega-regionals the market is tremendous so this effect increases.

The previous argument has played an important role during last years, given the crisis the economies of most countries didn't grow or did it very slowly. For all of them, MRTAs create a stimulus for the recovery of the economies because the agreements allow them to trade under better conditions with each other and to have certain advantages in topics that before found barriers as investment, capital, intellectual property...

In such a globalized world, existing trade agreements were old fashioned and getting smaller. In the case of TTIP, EU who is already an integration of countries decided to start negotiations with US one of the most powerful and advanced economies in the world nowadays. On the other hand, for the case of TPP, USA, Canada and Mexico already where in NAFTA and all the members of TPP and other Asiatic countries were already members of APEC. But the need of all of them to go a step further and to achieve what they would have liked to be agreed in the Doha Round they have started forming these MRTAs; that if successful, they would be the model to be followed by the WTO regarding international trade rules.

The economic reasons explained until now could be understood as “why to be member of TTIP, TPP, the Pacific Alliance or any other MRTA?” but the following reasons have to be taken from the point of view of “why shouldn’t I as a country stay aside of this agreements?”

Some countries may find useful to sign these agreements in order not to be at a competitive disadvantage, MRTAs are very attractive opportunities for countries especially small ones to trade in a more advantageous position with others and if they stay outside they will be left behind in economic and trade terms. It might be also the case of some countries signing because they were already in a trade agreement where the rest of the members are taking part of the new mega-regional, so in this situation this country may find also useful or at least more convenient to sign than not doing it not to be left behind.

Of course it also is much easier or beneficial for countries to be in the agreements since the very beginning being able in this way to write and create the rules of the game and not to wait and enter later when rules will be already written and players that want to incorporate after have to accept those established rules. This will be the case of China if it decides to join TPP or TTIP, it will have to accept rules established by others not taking part in the decisions to set up those rules, acting as a rule taker.

Big countries or important economies are expected to join the MRTAs to write the rules, to diminish the power of other economies or to exploit economies of scale to reactivate growth; while smaller countries or less important economies may be joining these agreements not to be outside them and to avoid the risk of not being accepted when rules are already settled.

2.4. Effects of economic integration: Trade creation and trade diversion.

In this analysis this question will be studied for the case of China, but the effects of trade creation and trade diversion occur whenever two countries decide to economically integrate with each other. The data analysis will come later, now the theoretical aspects of these effects are going to be explained.

The effects of economic integration are analysed through the theory of economic integration, this theory was studied and developed in the case of custom unions by the prominent economist Jacob Viner as explained by Jordán (2013). The creation of a custom union will have two types of effects: static (changes in relative prices of the goods in the different member countries, due to the changes in tariffs, which will influence trade, production and consumption) and dynamic (mechanisms activated due to economic integration that affect the potential growth of output of the members). This study will focus on static effects that are easier to be measured and which can be divided into trade creation and trade diversion.

Theoretically, trade creation is the substitution in each country of the national production (more expensive) of a specific good, by imports (cheaper) coming from a trade partner (or member of a trade agreement). This effect can also be divided into two: production effect (when national production of a more expensive good is reduced because it is substituted by cheaper imports of the partner) and consumption effect (when national purchases of that good increase because it is now cheaper).

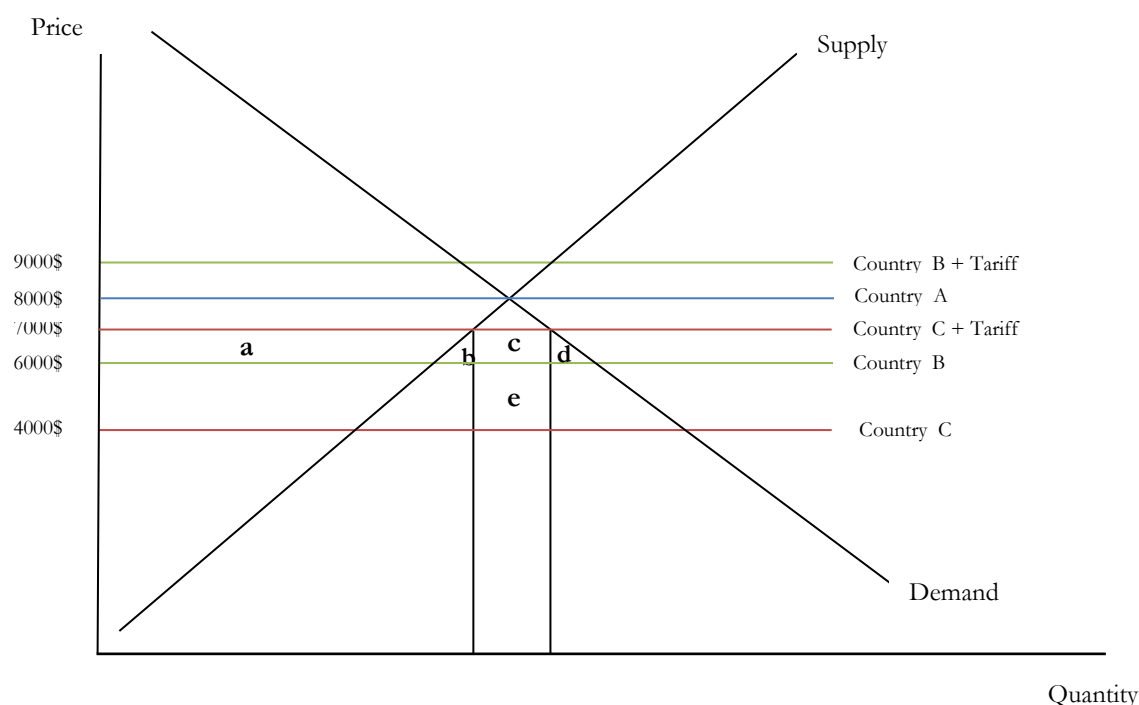
Whenever trade creation is given, there can be two kinds, when the countries trade with different types of goods we will be talking of inter-industrial trade creation, which implies that some sectors will be closed in a country and open in the other, making them more dissimilar, or when the countries trade with the same type of goods (with differentiation of the goods and taking advantage of economies of scale) we will be talking of intra-industrial trade creation, which widens the same sector in both countries, being them more similar.

On the other hand trade diversion is the switch in each country of cheaper imports from countries that are not under the agreement, by more expensive imports of a member country, change in the origin of imports (in both cases cheaper than national production).

So, economic integration will increase a nation's welfare when the effect of trade creation outweighs the effect of trade diversion. A basic graphical and numerical example will be used for a better understanding.

Imagine the following situation illustrated in Graph 1, the production costs of a car in countries A, B and C are 8,000\$, 6,000\$ and 4,000\$ respectively. From the point of view of country A which has a tariff on car imports of 3,000\$/car it would be cheaper to buy cars from country C at 7,000\$ (4,000\$ + 3,000\$) which is lower than imports from B at 9,000\$ (6,000\$ + 3,000\$). But, if a custom union is created instead between A and B things would be different. Now A imports cars from B because after the preferential trade agreement cars are imported from B at 6,000\$ rather than at 7,000\$ (4,000\$ + 3,000\$) cars from C. As there is a change of cheaper imports of C to more expensive ones of a member country B in this case, a situation of trade diversion takes place.

Graph 1: Trade creation and trade diversion



Source: Own elaboration

The national welfare will be formed by: the increase in consumer surplus that is created when country A changes its imports of C at 7,000\$ by its imports of B at 6,000\$ after the establishment of the custom union between A and B, represented by the areas a, b, c and d; the decrease in producer surplus, now producers of A have to offer cars at 6,000\$ to be sold, this is represented by area a; and the decrease in tariff revenue by the government, before it was collecting 3,000\$ per car when they were bought to C but now that a custom union between A and B has been formed, it doesn't collect that amount any longer, this loss or decrease of revenue is represented by the areas c and e. As a conclusion whenever

areas b plus d are greater than area e there will be given trade creation; on the other hand if b and d are smaller than e trade diversion will occur as it is the case here.

3. MEGA-REGIONAL TRADE AGREEMENTS: TTIP, TPP AND CHINA

3.1. Trans-Atlantic Trade and Investment Partnership

The TTIP is a interregional free trade agreement between the European Union (composed of 28 member countries represented by the European Commission in the area of trade policy of the negotiations, the Council and the European Parliament are also involved in the process) and the United States (represented by the United States Trade Representative, USTR), they are both two of the most developed, biggest and modern economies in the world. This agreement is still under negotiation since June 2013, last 6th of February concluded its eighth round in Brussels. Both together produce half of the world output and their trade accounts also for half of the world's trade.

In 2013 their GDP added up around 50% of world's GDP, 34,730,000 million of US dollars (almost 18,000,000 millions of dollars EU and USA almost 17,000,000 millions of dollars). The population of both together was 822.8 million in 2013 (11% world's population); of those more than 316 million are Americans and the other 506 million Europeans, according to the World Bank data. After studying the amounts involved in this case it can be considered as a MRTA and not only as a simple free trade agreement.

Trade and investment between both is already very active, the EU is the biggest investor in the US (in 2011) and the same happens if we consider investment in the other direction. EU is also the second largest destination for US exports of goods as of 2012, accounting for 19% of them; and biggest market for US exports of services (in 2010). In 2011, by exports, the US was the most relevant trade partner for the EU; approximately 17% of EU exports went to the US economy.

According to the European Commission (2015) the final agreement would have 3 parts containing a total of 24 articles. These three big blocks are: market access, which consists of removal of duties in agricultural and industrial products, rules of origin, public procurement and trade in services; second big group talks about regulatory cooperation, which mainly involves harmonization, alignment and standardization of regulation-making and non-tariff barriers, in order to set a common framework for a better trade and investment between both; and last but not least rules, this chapter will include everything

related to intellectual property rights, financial, labour, environmental, investment, competition policy, transparency, raw materials, energy and trade defence regulation.

More specifically the objectives of TTIP according to the Office of the United States Trade Representative (2013) are:

- Open EU markets, increasing the \$458 billion in goods and private services the United States exported in 2012 to the EU.
- Strengthen rules-based investment to grow the world's largest investment relationship. The United States and the EU already maintain a total of nearly \$3.7 trillion in investment in each other's economies (as of 2011).
- Eliminate all tariffs on trade.
- Tackle costly "behind the border" non-tariff barriers that impede the flow of goods, including agricultural goods.
- Obtain improved market access on trade in services.
- Significantly reduce the cost of differences in regulations and standards by promoting greater compatibility, transparency, and cooperation, while maintaining our high levels of health, safety, and environmental protection.
- Develop rules, principles, and new modes of cooperation on issues of global concern, including intellectual property and market-based disciplines addressing state-owned enterprises and discriminatory localization barriers to trade.
- Promote the global competitiveness of small- and medium-sized enterprises.

However, both economies involved in TTIP are part of the WTO and apply MFN tariff regimes, which mean that their tariffs are already low. A reduction or elimination of them will produce benefits for both of them but most of the benefits will come from the standardization of regulation, alignment of standards regulation and the elimination of non-tariff barriers.

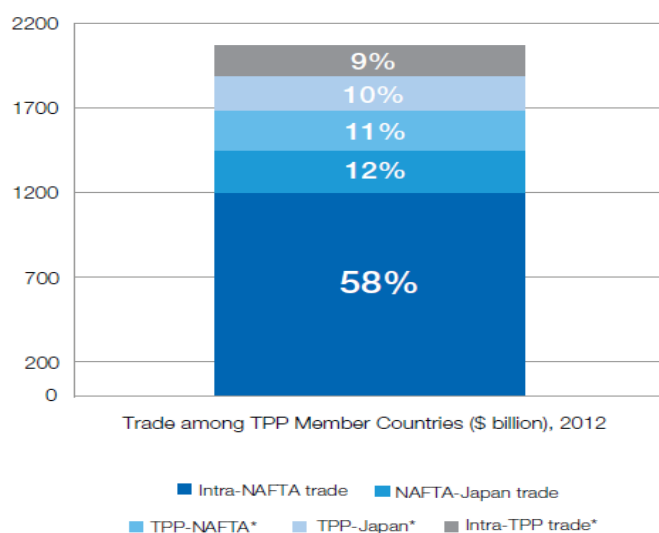
If the agreement is finally signed, according to an independent study of the Centre for Economic Policy Research published by the European Commission (2013) exports are

expected to increase to the US by 28% and to the rest of the world, obviously not all the sectors' exports will raise in the same way. The economic gains for the EU bill add up to €119 billion a year and to €95 billion a year in the case of the US, which expressed in terms of disposable income on average means €545 each year per family (of 4) in the EU and in US €655 for a family. This increase will be given thanks to the decrease in goods and services prices and also because of increased wages or higher level of employment. More or less 80% of all the gains mentioned depend on the ability to negotiate and cut costs coming from regulations and lack of harmonization. Summarising TTIP will lead to an increase exports, trade, economic activity and productivity will translate in jobs creation and raise of wages in the EU and the US also.

3.2. Trans-Pacific Partnership

The TPP is a proposed free-trade and investment agreement being negotiated. It began in 2005 as the Trans-Pacific Strategic Partnership Agreement - TPSEP or P4. Nowadays it has become a much ambitious agreement involving 12 countries which are Australia, Brunei Darussalam, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, the United States, and Vietnam. Last round, the 21st took place in Hanoi, the capital of Vietnam. In this case USA has already free trade agreements with some of the economies in the list.

Graph 2: Trade among TPP members (\$ billion) 2012



* Excludes USA and Japan

Source: World Economic Forum (2014)

Some other countries have also announced their willingness to join this agreement for example: Taiwan, Philippines, Laos, South Korea, Thailand, Indonesia, Bangladesh, India, Costa Rica and Colombia. China was at the beginning more reluctant to the treaty but it has finally showed some interest on it.

Given data from World Bank the GDP of all of them in 2013 will be round 29,330,000 million US dollars (40% of world's GDP), being USA the economy with the highest GDP (16,770,000 million), being half of the total GDP of the whole agreement, and the next is Japan (4,920,000 million), the smallest countries regarding GDP are Chile, Vietnam, Singapore and Peru (each of them 200 million approximately). All together added up to more than 801.71 million inhabitants (10% of world's population) of those 316 million are coming from the United States which is the most populated country in this agreement followed by Japan (127 million) and Mexico (122 million); the countries that have less inhabitants are Brunei Darussalam (less than 0.5 million), New Zealand (almost 4.5 million) and Singapore (5 million). This agreement is very relevant for the US, for example taking some data reported by the United States Trade Representative (2014) to show the importance of this treaty: TPP countries are the largest goods and services export market of the United States \$698 billion in 2013, 44% of US total goods exports.

According to a report published by the World Economic Forum (2014), all together trade adds up to 33% of world's trade, goods trade among TPP members was higher than \$2 trillion in 2012, but of those as it can be seen in graph 2 most of it, around 70% is given among NAFTA members (Canada, United States and Mexico) and Japan, which are only four members out of the twelve that form the TPP. Whereas combination such as TPP-NAFTA, TPP-Japan or intra TPP trade, (excluding US and Japan in the agreements mentioned) represent a much smaller amounts. All these just confirm that the main players in this treaty are NAFTA members, specially the United States, and also Japan.

TPP aims to liberalize and secure fair, open and transparent goods and services markets eliminating tariffs and other barriers, same can be applied to investment; to fix regulatory coherence to improve trade between countries; to prompt competitive business environment, to cooperate among them to ease the implementation of the agreement; to protect intellectual property and patents as well as protection for investment, cross border data flows and government procurement. The US particularly will be satisfied if when negotiations finish all the following aspects are covered and ruled, and if there exist an agreement regarding all of them according the United States Trade Representative (2014): trade in goods; textiles; services; investment; labour; environment; e-commerce and

telecommunications; competition policy and state-owned enterprises; small and medium-sized enterprises; intellectual property rights; technical barriers to trade and sanitary and phytosanitary measures; transparency, anticorruption and regulatory coherence; customs, trade facilitation and rules of origin; government procurement; development and trade capacity-building; dispute settlement; and US-Japan bilateral negotiations on motor vehicle trade and non-tariff measures.

Nowadays there are already lots of free trade agreements among some of the member countries of the TPP which, as in TTIP, means that tariffs among them are already considerably low and the economic effects of TPP will depend not only in the reduction or elimination of tariffs, but on the reduction of non-tariff barriers and harmonization of regulation. The economic effects of this mega-regional trade agreement according to most of the studies will be positive, estimate that in general an increase of GDP will be experienced but it won't be equal for all the countries facing great differences among them.

Negotiations in this case will be more difficult in the sense there is a higher number of countries involved; they are much more diverse in terms of wealth, GDP, population, tastes, competitiveness and even culture and they also have very different levels of tariffs among them. Actually in the TTIP there are more countries, 29 to be precise, but the EU acts as only one economy in the agreement as there is already unification of regulation, currency in most of the cases, tariffs, non-tariff barriers and more similar demographics as well, which is the same as if there were only 2 economies under negotiation the US and EU; whereas the TPP encompasses 12 different countries acting each on his name, so in this case there would be 12 different points of view, opinions, regulations...

3.3. Role of China

China is one of the most important economies in the world nowadays. It is the country with more inhabitants all over the world and one of the biggest. According to the World Bank data base, based on data of 2013, China by its Gross Domestic Product is located in the second position after USA or third if we take the EU as one economy; when talking about Purchasing Power Parity it occupies the first place. However, it is not in the top ten when it comes to GDP per capita, only USA, Brunei Darussalam and Singapore are among those positions. More specific comparisons with the rest of the countries in TTIP and TPP of this macroeconomic data will be given in following sections.

This Asian economy, a large assembler, has 11.74% share in world total merchandise exports being 94% of them manufactures; it also imports mainly manufactures, 58 % of

total imports, which among other products add up to 10.32% of world's total imports, according trade profiles of countries released by the World Trade Organization (2015). In both cases more than 10% a huge amount in international trade taking into account that it is only one country. Excluding Hong Kong the main destinations of its exports are by order: USA, European Union and Japan. Whereas regarding imports by origin and ordered the most important countries are: EU, Republic of Korea and Japan. These four countries are the most relevant for China if we concentrate in international trade, that is why this country should consider joining TTIP or TPP, or make other types of agreements. Possible responses taken by China will be analysed in following pages.

It also must be highlighted the activity of this country in Mega-Regionals. As it is already known it is not taking part in neither TTIP nor TPP, but it is participating in the free trade agreement China-Japan-South Korea adding up to 20% of world's GDP and exports; and in RCEP which has 16 members representing 33% of world's GDP and approximately 30% of world's exports.

3.3.1. China and Transatlantic Trade and Investment Partnership

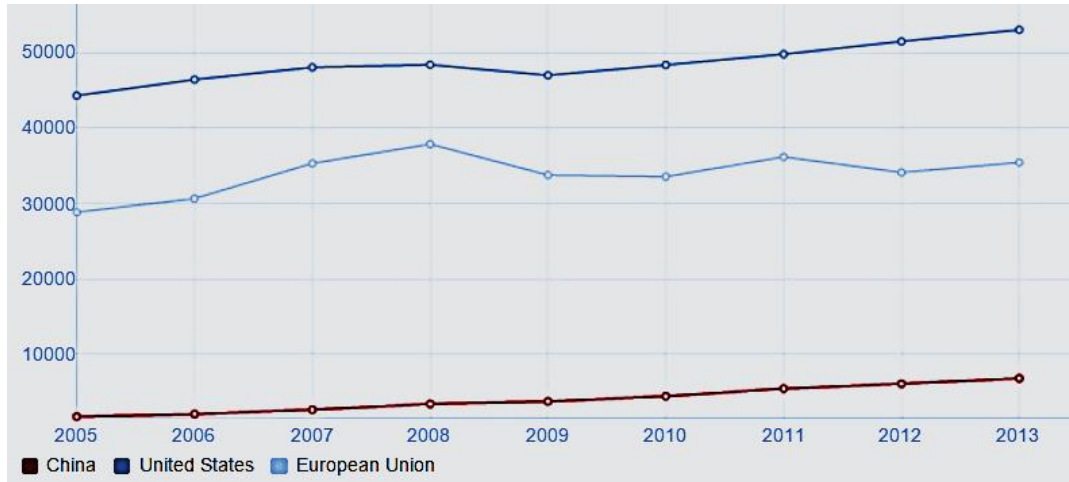
China, an Asian country that in 2013 had 1,357 million inhabitants (most populated country all over the world) which means more than four times the population of the US and almost three times the population of the European Union (formed by 28 countries). GDP of China was in the same year 9,240,000 million current US dollars, which in this case is more or less half of the GDP of any of both. All this means that its GDP per capita, GDP divided by population of a region, that reflects better the standard of living of a country is different and much lower than the GDP per capita compared to the other economies engaged in TTIP, as it is shown in graph 3.

If we compare China with this mega-regional's members as in graphs 3 and 4, it can be appreciated that we are talking of very unlike economies. China has a much lower and dissimilar GDP per capita or welfare, as well as much higher tariffs applied, more or less double. EU and USA in both aspects as in others such as culture and development are practically identical specially when comparing them to China.

As it has been explained before, with just EU and the US into action, we were talking about an incredibly big agreement involving half of the world trade and output, so if inclusion of China will take place the numbers would multiply. The GDP of a potential TTIP including China will add up to almost 44,000,000 million dollars and it will be a

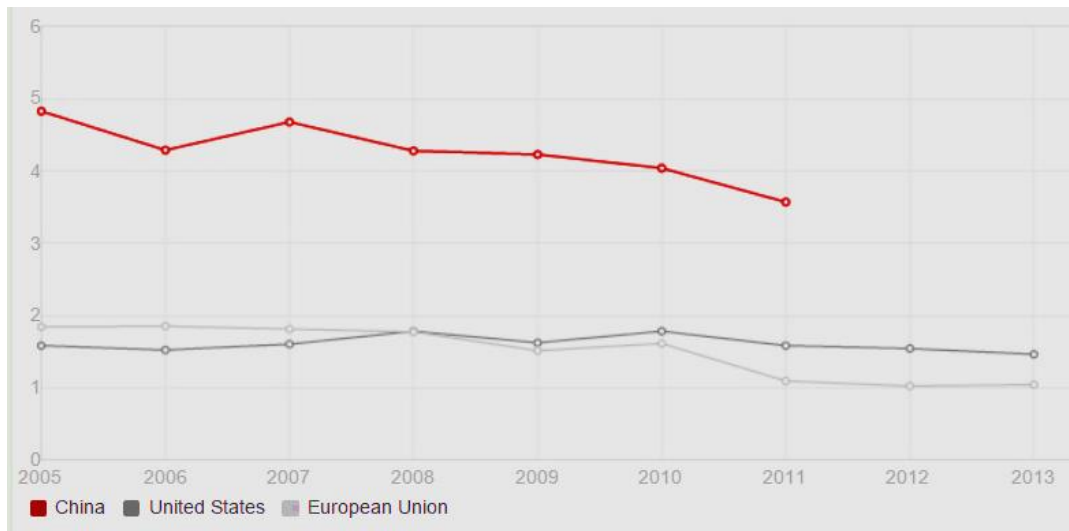
market with a population over 2,100 million. However, we cannot forget that this is a quite “close” agreement with no new members by the moment, formed by two big and quite similar economies, where China has no place at least in the near future.

Graph 3: GDP per capita (current USD) China, EU and US (2005-2013)



Source: World Bank (2015a)

Graph 4: Tariff rate, applied, weighted mean, all products (%) China, EU and US (2005-2013)



Source: World Bank (2015b)

3.3.2. China and Trans-Pacific Partnership

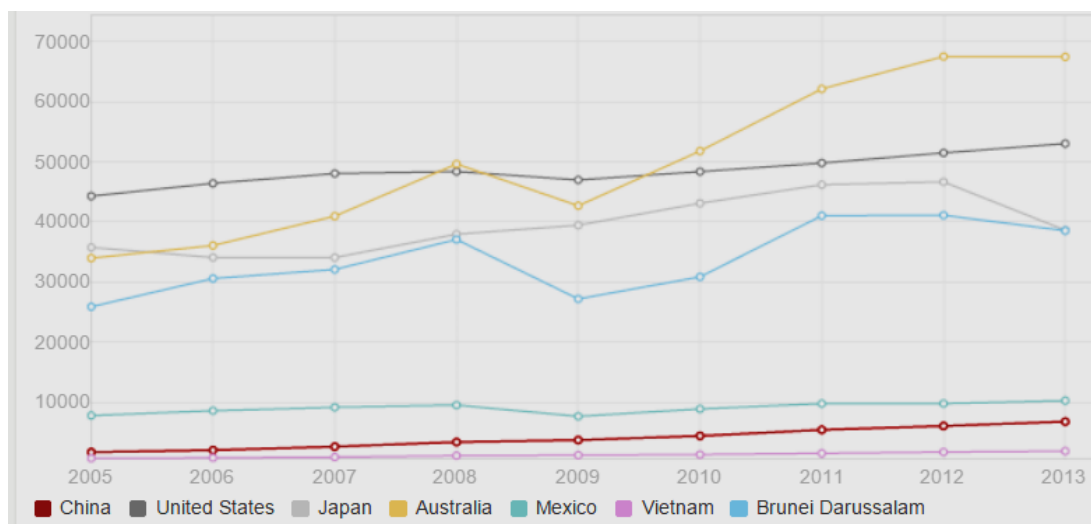
TPP an already a very varied agreement with 12 different countries both demographically and economically, for example the US is two times any other country involved if we

compare inhabitants or economic data. Moreover development, culture, economic and political interest, and welfare are also diverse among them.

As it was previously mentioned China had 1,357 million inhabitants in 2013, more than four times the population of the US. But what is even more impressive is that China is by far bigger in population than all the twelve members of the TPP together, that add up to slightly more than 800 million inhabitants. GDP of China was in the same year 9,240,000 million current US dollars, which in this case is more or less half of the GDP of US GDP and doubles Japan's GDP.

To compare the standard of living of economies involved is going to be used GDP per capita, shown in graph 5 for some of the countries from 2005 to 2013. In this case we can divide economies in two groups: those with higher GDP per capita or richer as US, Japan, Australia and Brunei Darussalam; in this group are also Singapore, New Zealand and Canada; those with lower GDP per capita or poorer are apart from China, Mexico and Vietnam; Chile, Malaysia and Peru. However there also exist differences among countries in the same group so TPP is much diverse than TTIP, but China would be more related to countries in the former agreement.

Graph 5: GDP per capita (current US \$) Some TPP members and China (2005-2013)



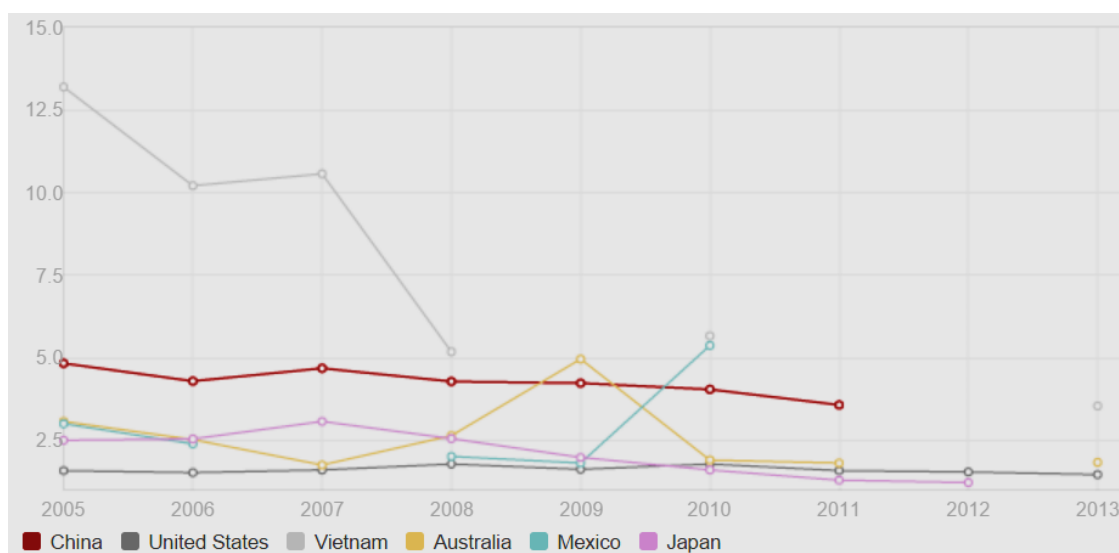
Source: World Bank (2015c)

In graph 5 it can be appreciated that China is much similar to countries such as Mexico and Vietnam that are not so important both for China's trade and regarding size as USA and Japan can be. When looking at graph 6, comparing tariff rates, this Asian economy is not that far from the rest, as there are much more economies involved there are also much

more different tariffs applied. However, once more, China's tariffs are higher than those applied by its more important trade partners in TPP, US and Japan that apply tariffs around 2% while China applies tariffs around 4%.

If China will be included in this agreement it will have a population of more than 2,100 million, very similar to the TTIP with China; both encompassing an enormous amount of people taking into account that the world population is recently slightly over 7,300 million. The GDP of TPP with the Chinese economy reaches 38,570,000 million current US dollars in 2013, somewhat under supposed TTIP that after Asian economy would reach 44,000,000 million US dollars.

Graph 6: Tariff rate, applied, weighted mean, all products (%) China and some of the members of the TPP (2005-2013)



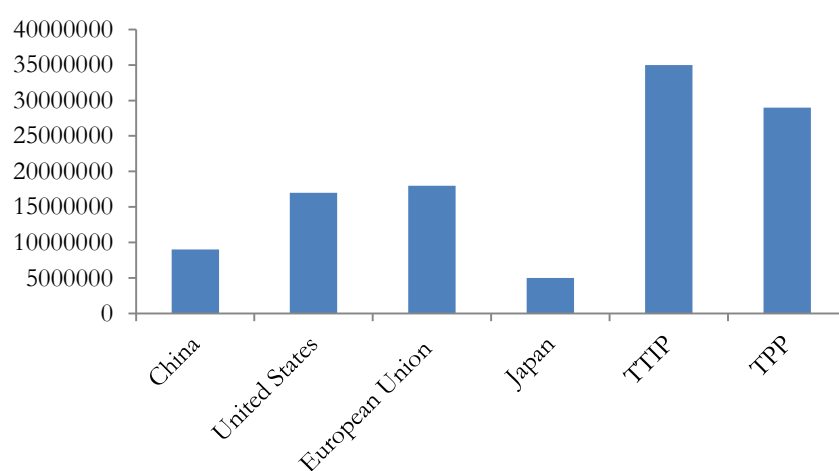
Source: World Bank (2015d)

Nevertheless China is not taking part in TPP at least in the near future, but still it seems more possible than its inclusion in TTIP. There are several reasons for China not to be a member of Trans Pacific Partnership, it has very high standards and strict regulation that it may not be willing to accept or to implement, USA might want to undermine China's role in world's and Asia's economy and there exist some geopolitical conflicts between it and other countries such as Japan. Moreover this treaty is going very slowly and with lots of uncertainties being for China a much comfortable and sure role to stay as a close watcher. Any way what it can be affirmed nowadays is that it is not a member of TPP but that it has in some occasions shown interest joining it in the future.

3.3.3. Graphical summary

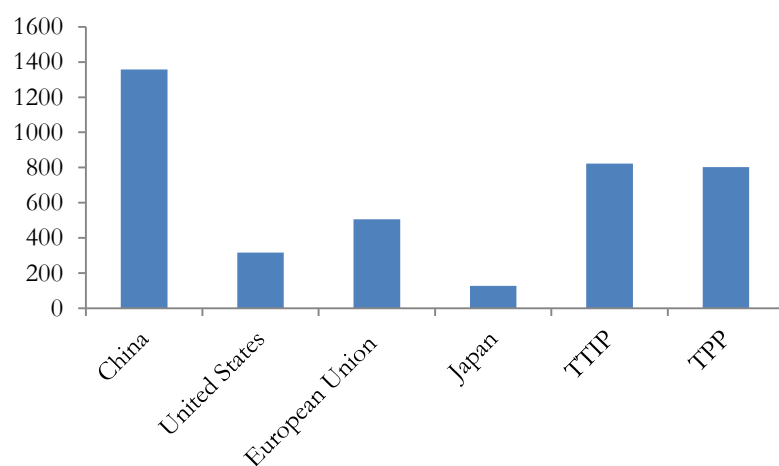
After having compared China with respect to both MRTAs and its members, a graphical summary of the data explained in sections 3.3.1. and 3.3.2. is shown here. Both graphs, 7 and 8, highlight that TTIP is bigger than TPP regarding GDP but when comparing population they are very similar; and what it is more impressive, China has higher population than both MRTAs but its GDP is half the one of US or EU, reflecting the difference of wellbeing of its inhabitants.

Graph 7: GDP in million current US dollars comparison (2013)



Source: Own elaboration with data from WTO (2014) Data base

Graph 8: Population (in million inhabitants) comparison (2013)



Source: Own elaboration with data from WTO (2014) Data base

3.3.4. Strategies followed by China

China is the major economy excluded from both TTIP and TPP, but there are other 160 countries in the world not participating in any of them, these countries add up to 80% of the world's population which means a very big share of the world market. Among them there are other important developing and growing powers such as India and Brazil. This type of countries, that are raising powers and the largest countries excluded may react faster given their ability to change the scenario. Smaller countries on the other hand, may not act in such a short time because they see themselves as not capable of modifying the system.

Both Mega-Regionals given their size and volume of trade will impact on members and on non-partners economies as well, so every excluded country has to respond in some way to these agreements, all possible responses will be presented below focusing in the case of China but could be applied to any other economy not integrating TTIP or TPP.

Probably the easiest but not best response would be doing nothing or at least waiting. This course of action is followed by many countries especially smallest ones. Given the uncertainties that both treaties generate (negotiations, timing ...) there are several economies that prefer to wait and see, monitoring negotiations, analysing possible effects and weighing possible responses. China is taking this position with respect to both agreements analysed in this report, especially with TPP, but it is not the only path that it is following.

Obstructing any way of international trade by excluded countries is probably the worst answer an economy could give to Mega-Regionals. Nowadays, in such a globalized world, it would make no sense to be isolated and to try to put barriers to international trade. This would make any economy unable to benefit from advantages of trading with other countries, such as comparative advantage, economies of scale...Of course China has not decided to follow this response.

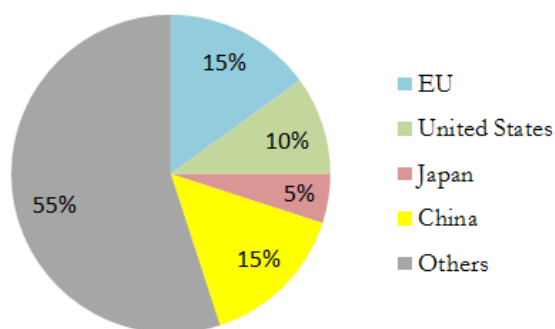
Continue taking part of multilateral agreements involving as many countries as possible is also another action that is followed by China, who continues being a member of WTO. Still as it was explained at the beginning of this study, there have being several disagreements among countries or group of countries, which have slowed down this way of improving international trade and eliminating barriers. That is why China has chosen to implement at the same time other alternatives not to be stalled in international trade as WTO's last rounds seem to be.

Instead of making autonomous trade reforms as an answer to Mega-Regionals, to international trade and to recent globalization, China has opted to compete with them forming other agreements, but no one as big as TTIP or TPP. It is member country of CJK (China-Japan-South Korea) and RCEP (including ten countries of ASEAN, China being one of them and six other countries, Australia, China, India, Japan, South Korea and New Zealand) both still under negotiation. Another course of action taken by China is the “Belt and Road”, referring to Silk Road Economic Belt and Maritime Silk Road. These are two very ambitious trade and political plans of China as explained by the government of China in its web page (The People’s Republic of China (2014-2015)), and by Tiezzi (2015) in her article published in The Diplomat; the belt or land route centres in linking China, Central Asia, Russia and Europe mainly in trading and investment terms but also getting cultures closer, moreover, following this strategy in December 2014 a train from Yiwu (China) arrived to Spain as it is explained by Qi, L. (2015) in her article released in January 2015 in El Mundo; and the route or maritime road is thought as a new Eurasian land bridge.

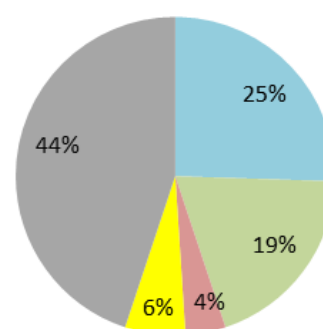
China could also join Mega-Regionals as a response. In the case of TTIP it seems not to be a possibility, it is more realistic to think about the inclusion of China in TPP, it even has expressed at some point its willingness to do it. However, this would imply that it has to accept and adopt the terms signed and decided by other countries such as Japan and the US unconditionally and to open to trade and competition; it is quite unlikely to happen.

Graph 9: The Major World Trading Partners

% of global exports, goods, 2013



% of global exports, commercial services, 2013



Source: Own elaboration with data from European Commission (2014)

Summarizing, China has taken a combination of possible responses. With respect to TTIP and TPP it has decided to watch closely negotiations and progresses in both, even expressing willingness to join TPP at some point; it also continues involved in multilateral

agreements being member of WTO, and mainly it has decided to compete with them. As its addition to both Mega-Regionals is not a realistic option it would be much more reasonable, possible and probably profitable that this Asian power signed agreements bilaterally with Japan, USA or EU. Moreover, China has already started negotiations with all of them; in 2012 started talks to reach an agreement regarding investment with EU, with the USA has trade agreements regarding high-technology consumer goods and it is involved in a couple of free trade agreements with Japan as well as with other countries (CJK and RCEP). That is why trade effects of these hypothetical agreements are going to be analysed in this report; this response does also aligns with China's main course of action at this time that is competing with both agreements and not letting them hindering China's power and predominant role in Asian economy. Even though any of these three hypothetical agreements only involves two economies they will still be Mega-Regional given the importance of the four countries in the world's economy and international trade as it is shown in graph 9. All this follows main China's strategy that is not just observing MRTAs but competing with them engaging in agreements such as RCEP and CJK, and creating New Silk Routes "Belt and Road".

4. EMPIRICAL ANALYSIS OF BILATERAL AGREEMENTS

4.1. World Bank simulation Tool - SMART

Whenever a government is planning to reduce tariffs or to reach a free trade agreement with another country, first it needs to balance advantages and disadvantages of taking that decision. This analysis is focused on economic impact of bilateral agreements of China with three different countries, and effects such as trade creation and diversion, tariff revenue changes and of course economic welfare will be examined. It is important to explain before which tool has been used in this report to calculate all these effects and to simulate those agreements; as well as it is necessary to clarify the way it defines and understands economic effects and other variables.

To simulate those agreements with China, SMART is going to be used, which is a tool of WITS (World Integrated Trade Solution), software containing international trade data, developed by the World Bank as well as by UNCTAD, ITC, UNSD and WTO. This data base allows analysing the effects of trade simulations (cut of tariffs). SMART uses partial equilibrium model, which according to the definition in the WITS Manual implies that: *"the analysis only considers the effects of a given policy action in the market(s) that are directly affected. That is*

the analysis does not account for the economic interactions between the various markets in a given economy. In a general equilibrium setup all markets are simultaneously modeled and interact with each other”.

This partial equilibrium modelling tool allows modifying and simulating tariff changes among countries, which will translate in a change in preferences and consumption producing at the same time variations in the trade flows among economies. The results given by SMART reflect trade effects which are divided into trade creation and trade diversion. Definitions as they appear in the user manual of this tool are for trade creation: *“the direct increase in imports following a reduction on the tariff imposed on good g from country c”*; and for trade diversion: *“If the tariff reduction on good g from country c is a preferential tariff reduction (i.e. it does not apply to other countries, c), then imports of good g from country c are further going to increase due to the substitution away from imports of good g from other countries that becomes relatively more expensive.”*

Trade diversion and trade creation as calculated in SMART can be also easily represented graphically. In the initial situation (Graph 10 a) an economy imports a good from two different countries: A and B. The curve q_0 represents the consumed composite quantity, which is imported from A and B, in the amounts A_0 and B_0 respectively; which are determined by the intersection of q_0 and the line representing the relative price, that leads to equilibrium in the initial situation at E_0 .

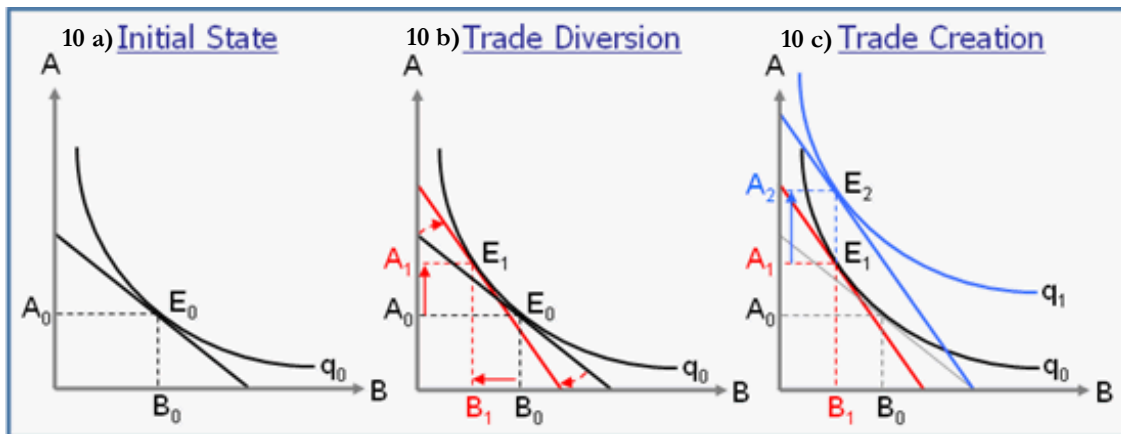
If our economy agrees a reduction of tariffs with country A this will translate in a reduction of relative price compared with country B, which makes relative price line steeper as it can be seen in Graph 10 b), while q_0 consumption composite quantity remains the same as before. The equilibrium will no longer be at E_0 , after tariff reduction new equilibrium will be E_1 , involving higher imports from A (A_0 to A_1) and symmetrically lower imports from (B_0 to B_1). Thus for our economy the total quantity imported remains unchanged, the only change is the market share based on the new relative prices.

However this doesn't end here, as there has been produced a tariff reduction for imports from A, using the same amount of expenditure consumers will be able to import a higher amount from A increasing further until A_2 . This is reflected in Graph 10 c) with the new relative prices line (same as in Graph 10 b) and the increased consumption composite quantity (q_0 to q_1) a new equilibrium is achieved E_2 , reflecting trade creation.

Summarizing, in SMART, for our economy the only trade effect that occurs after tariff reduction at world level is trade creation (increase of imports due to lower prices with the same level of expenditure) because as it is explained above the addition of trade diversion

of all the countries is neutral (for the whole world, not for each country). Those countries (as A) that face a tariff reduction will have positive trade creation and positive trade diversion; but countries as B that don't face any improvements or tariff reductions will have only negative trade diversion ($B_1 < B_0$) and no trade creation (no B_2) or trade creation equal to 0.

Graph 10: Trade creation and trade diversion (SMART – World Bank)



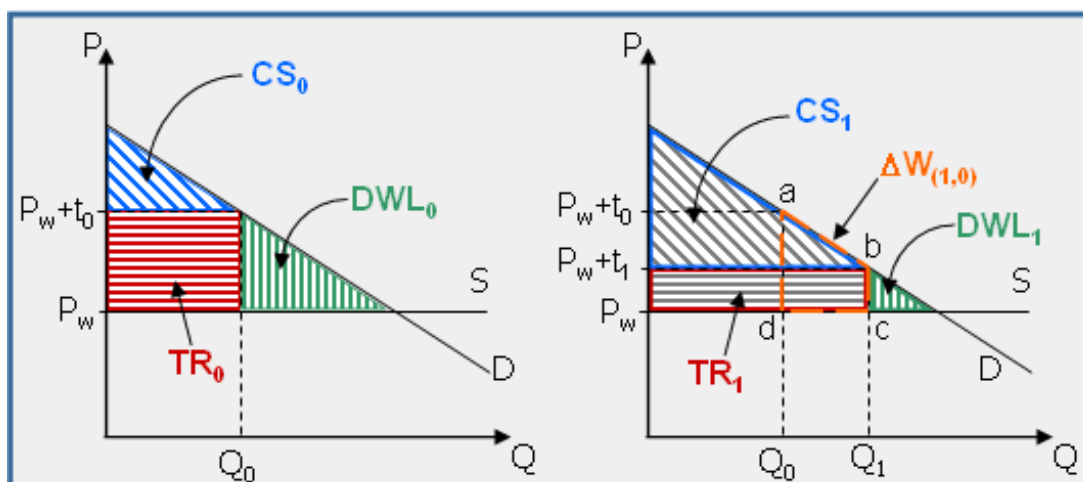
Source: WITS User Manual

Other economic concepts such as consumer surplus, tariff revenue, dead-weight loss and welfare will be given by SMART and will be analysed in this report as well. Let's consider an economy where the price (without tariff) of its imports is p_w that imposes a tariff t_0 and imports a quantity Q_0 , being D the demand curve and S the supply curve (which elasticity is infinite).

Graph 11: Impact of tariff reduction (from t_0 to t_1)

11 a) INITIAL SITUATION

11 b) TARIFF REDUCTION



Source: WITS User Manual

Consumer surplus (CS) which is the difference between consumer willingness to pay and the price he actually pays will increase (from CS_0 to CS_1) as tariff is reduced from t_0 to t_1 . The revenues of the government due to the tariff imposed (TR) changes (from TR_0 to TR_1) but this change will depend on the imports demand elasticity as it is equal to tariff times quantity demanded. By imposing a tariff (bigger than 0%) the economy losses welfare, this is also represented in Graph 11 and it is called dead-weight loss (DWL), as the tariff is reduced or gets closer to zero, the DWL decreases. This reduction of the DWL will be the increase in welfare (W) that is represented below (abcd) which will be formed by a part of the consumer surplus and a part of the tariff revenue.

In this report three hypothetical Chinese bilateral agreements will be studied (USA, EU and Japan); for each case three scenarios will be developed. Given differences, sizes, policies and sensibility of the agricultural sector of those countries it is realistic to think that complete tariff elimination may not be achieved, that is why at least these three scenarios should be taken into account:

- Scenario 1: The most optimistic or ambitious one will consist of a 100% tariff reduction
- Scenario 2: Less ambitious implying an 80% of tariff reduction
- Scenario 3: implying only 100% reduction of non-agricultural products tariffs

To simplify the analysis the market will be divided only in two groups of goods: agricultural products and non-agricultural products. However, simulation tool, which data source is TRAINS, allow very different levels of disaggregation of products depending on different nomenclatures (GTAP, SITC, NACE, MTN Categories, the one used in this study, among others). The whole study will be done from the point of view of China because the purpose of this report is to choose its best option and trade data of 2011 will be used as they are the latest available in WITS for this economy.

4.2. USA – China

Biggest economies in the world have already started trade negotiations, but only of some goods. Last year USA and China agreed to cut down tariffs on high technology consumer goods. However, the hypothetical situations in this report will cover three scenarios: first removing every single tariff of all the products, second reducing 80% tariffs of every product and finally eliminating completely tariffs on non-agricultural products. After the introduction of three scenarios in WITS, the information contained in Table 1 is released.

First scenario, complete tariff elimination, will be second best option for China. Under this situation the value of products that were previously imported from non-member countries that after the agreement will be imported from USA (trade diversion) add up to \$5,917 million being more than \$5,000 million coming from imports of non-agricultural products. The direct increase in value of imports following tariff reduction (trade creation) adds up to more than \$12,757 million of which approximately one half come from agricultural products and the other half of non-agricultural ones. Tariff revenue decreases by \$18,554 million US dollars but it is mainly due to Trade Diversion (imports previously from countries paying tariffs that change its origin and are now imports from USA with 100% tariff elimination) given in non-agricultural products, imports' origin of agricultural product doesn't change that much not contributing to change in tariff revenue. Even though, China will face an increase in Welfare or reduction of Dead-Weigh Loss of \$1,552 million.

Most favourable scenario will be to agree an 80% tariff reduction in all the products. Again half of the \$10,206 million of Trade Creation effect will be caused by agricultural products and the other half by non-agricultural products approximately. In Trade Diversion the proportion is much different, 90% of almost \$5,000 million is due to non-agricultural products. Value of Tariff Revenue change is \$14,243 million, most of it coming from non-agricultural products because of the same reason as in firs scenario. The increase in Welfare in this case adds up to \$1,300 million.

Table 1: Trade Effects USA-China in 1000 USD (2011)

		Trade Creation	Trade Diversion	Tariff Revenue Change	Welfare
100% Tariff Reduction	AGR	5,862,938.15	692,317.02	-1,959,429.46	685,207.13
	NON-AGR	6,894,733.45	5,225,122.66	-16,595,281.12	866,914.12
	TOTAL	12,757,671.59	5,917,439.68	-18,554,710.58	1,552,121.25
80% Tariff Reduction	AGR	4,690,350.54	550,092.52	-1,460,106.13	646,682.39
	NON-AGR	5,515,786.47	4,177,274.10	-12,783,451.18	721,016.19
	TOTAL	10,206,137.01	4,727,366.61	-14,243,557.31	1,367,698.59
100% Tariff NON-AGR. Reduction	AGR	0.00	0.00	0.00	0.00
	NON-AGR	6,894,733.45	5,225,122.66	-16,595,281.12	866,914.12
	TOTAL	6,894,733.45	5,225,122.66	-16,595,281.12	866,914.12

Source: Own elaboration with data from the World Bank (WITS)

Worst case scenario is the last one, in which tariffs are eliminated only for non-agricultural products. Given the small amount or value of change of origin of imports of agricultural products after tariff reduction, Trade Diversion doesn't change much from first situation, and so neither does Tariff Revenue. Nevertheless the increase of imports after tariff reduction is very big for both products, this produces that in scenario 3 Trade Creation is much lower than in first situation and Welfare becomes half of the amount with complete tariff elimination.

Concluding, China mainly won't change the origin of its imports to US of agricultural products, even if there is a 100% tariff reduction of every good, which makes Trade Diversion and Tariff Revenue Change being mainly produced by non-agricultural products. On the other hand, the increase of imports of both kinds of goods is practically the same. In three scenarios analysed Trade Creation is higher than Trade Diversion, so Welfare will increase in China under any of them, nevertheless the one where this difference is lower, or which produces lower increase in Welfare as it can be seen is the third one. If China negotiates with US the best agreement should be achieving 80% elimination of tariffs, because even is the second best alternative if only taking into account Trade Creation and Trade Diversion, as a whole (looking also at Welfare and Tariff Revenue Change) it is best option.

4.3. EU (27) - China

There already exists between both economies the comprehensive EU-China Investment Agreement. However, given the trade between both a trade agreement would be much more profitable. They trade every day over €1 billion, China's main source of imports is the EU so we will observe bigger trade effects in Table 2 (in which EU 27 data are going to be used as it is the latest available information in WITS and not EU 28).

In this case it is clear that the first scenario is the most beneficial for China when looking at Trade Creation and Diversion. If 100% of tariff reduction would take place, this country will stop earning \$48,112 million dollars of Tariff Revenue. The Welfare generated by this agreement will add up \$3,168 million, this difference is the biggest and thus the worst scenario if paying attention to this criteria. The direct increase in imports from members of the EU is almost \$31,000 million, most of them are non-agricultural products; and the majority of Trade Diversion is produced by the same type of products, \$11,399 million out of \$11,858 million, which means that there is not going to be a lot of change in the origin of imports from non-members to members.

However, depending on whether this economy prefers the second best option could be any of the other two scenarios. If China is more interested on Welfare the agreement of 80% tariff reduction in all the products will be the next option to be taken. With this cut of tariffs value of increase in imports from members is \$24,533 million and the value of change of origin imports will add up to \$9,390 million, the first reason reflects Trade Creation and the second Trade Diversion. Under this scenario Tariff Revenue will be reduced \$37,168 million and Dead-Weigh Loss will decrease \$2,859 million.

Table 2: Trade Effects EU (27)-China in 1000 USD (2011)

		Trade Creation	Trade Diversion	Tariff Revenue Change	Welfare
100% Tariff Reduction	AGR	3,334,245.02	459,690.16	-3,298,843.14	328,394.51
	NON-AGR	27,357,617.38	11,399,204.39	-44,813,552.70	2,840,420.03
	TOTAL	30,691,862.40	11,858,894.55	-48,112,395.83	3,168,814.54
80% Tariff Reduction	AGR	2,667,396.00	363,480.26	-2,511,541.46	308,259.73
	NON-AGR	21,886,093.21	9,027,234.53	-34,656,614.45	2,550,931.59
	TOTAL	24,553,489.21	9,390,714.79	-37,168,155.91	2,859,191.32
100% Tariff NON-AGR. Reduction	AGR	0.00	0.00	0.00	0.00
	NON-AGR	27,357,617.38	11,399,204.39	-44,813,552.70	2,840,420.03
	TOTAL	27,357,617.38	11,399,204.39	-44,813,552.70	2,840,420.03

Source: Own elaboration with data from the World Bank (WITS)

On the opposite side, if China is more concerned about Trade creation, which is direct increase of imports due to price (tariff) reduction to the partner country, the EU in this case, it should choose the option that cuts all the tariffs of non-agricultural products. \$27,357 are produced by Trade Creation and \$11,399 million by change of origin of Chinese imports. The Welfare is slightly lower than in previous scenario, it is \$2.840 million and it will stop earning \$44,813 million coming from tariffs.

In general, tariff elimination of non-agricultural products can be considered the best option, especially considering the sensibility of agricultural products in both regions. But it is not a clear result, China should balance its priorities and decide what it is more important for its economy, the slightly higher Welfare (scenario 2) or higher Trade Creation due to tariff reduction (scenarios 1 and 3).

The itemised information for each of the 27 countries in the European Union can be found in section 7. Annexes, Annex 1- EU (27) By Countries – China, where there is a table for each scenario. Main conclusion that can be extracted from those tables is that the countries contributing more to Trade Effects, both Trade Creation and Diversion, are by order in all the scenarios Germany, United Kingdom, Italy and France, the ones contributing less are Cyprus, Lithuania, Latvia and Malta. Obviously such big differences are due to volume of trade between China and those countries.

The percentage of Spain participation in Trade Creation is 4% in two first scenarios (slightly above the mean 3%) but in the case of elimination of tariffs of non-agricultural products only, the percentage of Spain is 2%, this shows the importance of agricultural products' exports from Spain to China. In the case of Trade Diversion of all products, Spanish participation is around 2% in all the scenarios (below the mean).

However these percentages are not surprising as more or less in both cases it is close to the mean, the most important aspect of Spain Trade Effects is that, together with Denmark, France and the Netherlands, are the only countries in the EU where the percentages of Trade Creation and Trade Diversion are bigger for agricultural products than for non-agricultural products. It must be highlighted that Trade Creation of agricultural products (in two first scenarios: complete tariff elimination and 80% tariff reduction) of Spain is 25% of the total, which implies that 25% of all the increase in imports of agricultural products (that were previously produced in China) from the EU to China after tariff reduction will come from Spain. Similar case is the one of France, in this aspect is the most similar to Spain, between both add up to 50% of the increase of exports of agricultural products to China due to change from national production to be imports from EU. On the other hand, Spain contributes with 10% to Trade Diversion of agricultural products, not as high as France 22% but still one of the countries contributing more to Trade Diversion of this kind of products; which implies that 10% of the imports of China previously coming from non-partner countries that after tariff reduction will come from the EU, will be exported by Spain.

After the analysis of all these data, it is clear that for Spain the best scenarios are complete tariff elimination and 80% tariff reduction. Due to the importance of exports from Spain to China of agricultural products, third scenario, where complete tariff reduction only takes place for non-agricultural products will be the less profitable one for the Spanish economy.

4.4. Japan – China

Finally, same analysis is going to be made for the hypothetical agreement between Japan and China. They are both already involved in other agreements but not by their selves, both are taking part of CJK and RCEP. In table 3 the trade effects of such a join can be found.

In this case the best choice is the first scenario but it should be noticed that is practically identical to the scenario were only tariffs of non-agricultural products are eliminated. The difference is so minimal that complete tariff elimination (scenario 1) is not going to be considered, it is not worthy for China to negotiate the cut of tariffs of all the products if the benefits are the same as if it only eliminates non-agricultural goods' tariffs. This means that the proportion of agricultural products imported by China from Japan is very small and that no changes will be produced if tariffs of agricultural products are eliminated.

Table 3: Trade Effects Japan-China in 1000 USD (2011)

		Trade Creation	Trade Diversion	Tariff Revenue Change	Welfare
100%	AGR	63,738.37	29,418.35	-601,645.29	9,850.99
	NON-AGR	15,519,510.15	12,379,778.07	-29,424,924.97	5,853,074.62
	TOTAL	15,583,248.52	12,409,196.42	-30,026,570.26	5,862,925.61
80%	AGR	50,990.69	23,512.41	-449,107.78	8,362.81
	NON-AGR	12,415,607.89	9,891,965.24	-22,673,105.34	5,304,006.14
	TOTAL	12,466,598.58	9,915,477.65	-23,122,213.12	5,312,368.94
100%	AGR	0.00	0.00	0,00	0,00
	NON-AGR	15,519,510.15	12,379,778.07	-29,424,924.97	5,853,074.62
	TOTAL	15,519,510.15	12,379,778.07	-29,424,924.97	5,853,074.62

Source: Own elaboration with data from the World Bank (WITS)

When tariffs of non-agricultural products are eliminated imports increase by \$15,519 million (Trade Creation), imports from non-member countries that change of origin and become imports from member countries add up to \$12,379 million. The reduction of Tariff Revenue is \$29,424 million, but the decrease of Dead-Weigh Loss is \$5,853 million.

If achieving second scenario, Welfare will be very similar \$5,312 million. However, value of increase in imports from Japan, that were national production before, is \$12,466 million;

value of imports changing of origin from non-members to Japan is \$9,915 million. In case this scenario took place the decrease of Tariff Revenue will be \$23,122 million.

Summing up, value of Chinese imports from Japan of agricultural products is so tiny that there is almost no difference between eliminating all tariffs and eliminating tariffs of non-agricultural products only. Given these results, it is better for China to choose second scenario that is the option having a lower impact on this country's Welfare. However, this difference with respect to other scenario is not that big and China's should realize about the tiny impact of agricultural products' tariff cut in its economy.

4.5. Best option for China

After analysing hypothetical trade agreements with three different scenarios for each country (USA, EU (27) and Japan), related to China's strategy to compete against TTIP and TPP instead of doing nothing; a comparison among nine different possibilities is going to be made to find best option for China. For this purpose, the information shown in tables 1, 2 and 3 is represented in graphs 12 and 13.

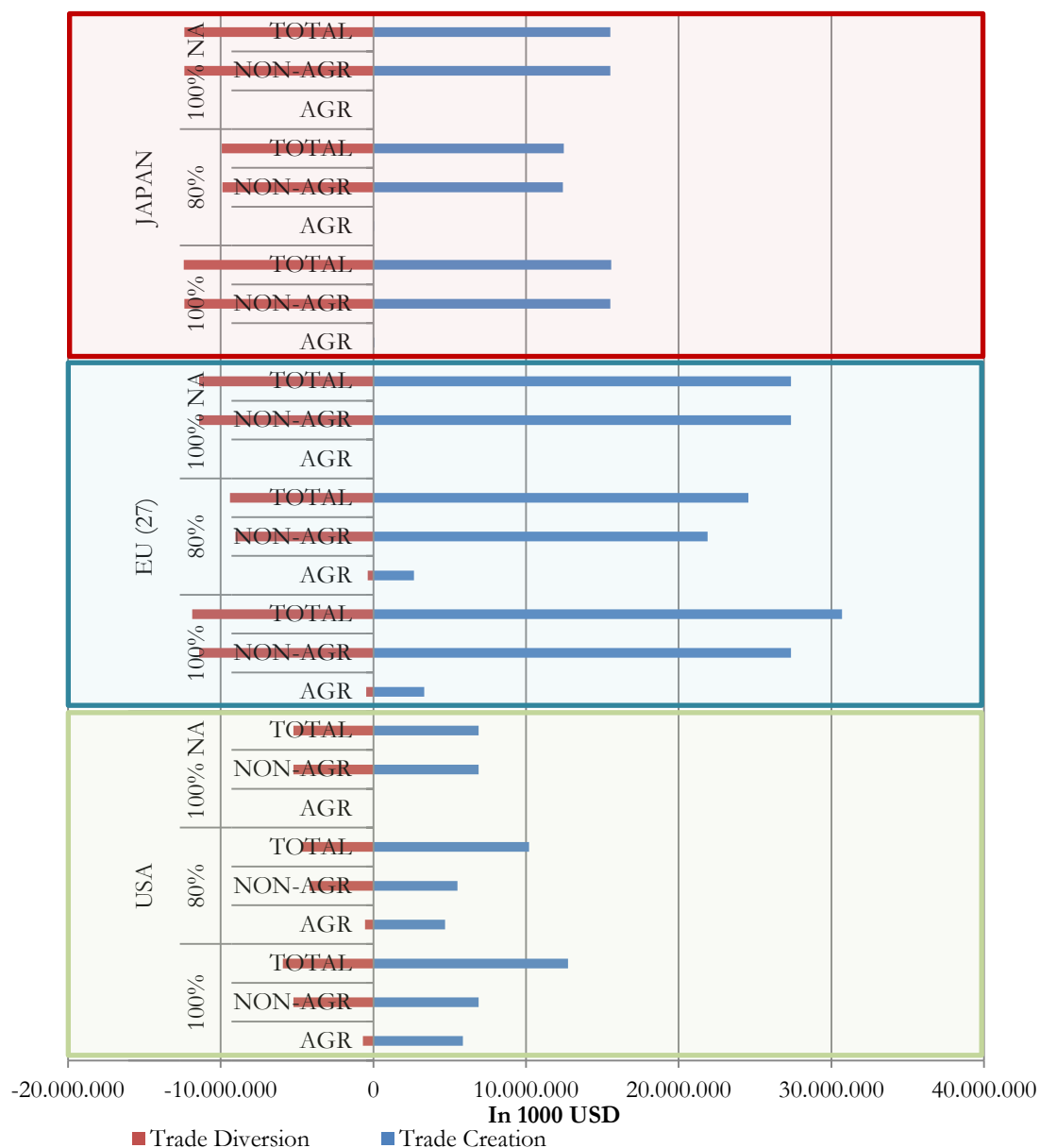
Obviously, it is more beneficial for China, both in terms of Welfare and Trade Creation to try to achieve complete elimination of tariffs of all the products with the three countries or choosing achieving best scenario in each case. However, for the case of the bilateral agreement with Japan, it is practically the same to choose third scenario and it will be easier to negotiate than the first given the low relevance of trade of agricultural products between Japan and China. But comparison among scenarios for each country has already been developed in sections 4.2., 4.3., and 4.4..

The objective of here is to decide with which country should China put more efforts to attain an agreement, it means to compare with which country does China achieve higher Welfare and Trade Creation, and lower Tariff Revenue Change or loss and Trade Diversion. The clearest conclusion is that the best outcome for China will be if possible to sign FTAs with the three of them. Nevertheless, an order has to be established for China to decide which market to join first and to put efforts on negotiations.

The country reporting fewer benefits for China is the United States, both in terms of Welfare and Trade Creation it generates less than half than with any of the other two countries; it is also the country with which China experiences less Trade Diversion and also the Tariff Revenue loss is the smallest. Thus out of the three possibilities, China should take US as its worst and last option specially because such a tiny Welfare generation, unless

main worry of Chinese government is reducing the loss of revenues, even though benefits are not that big; in this case US would be best country to join.

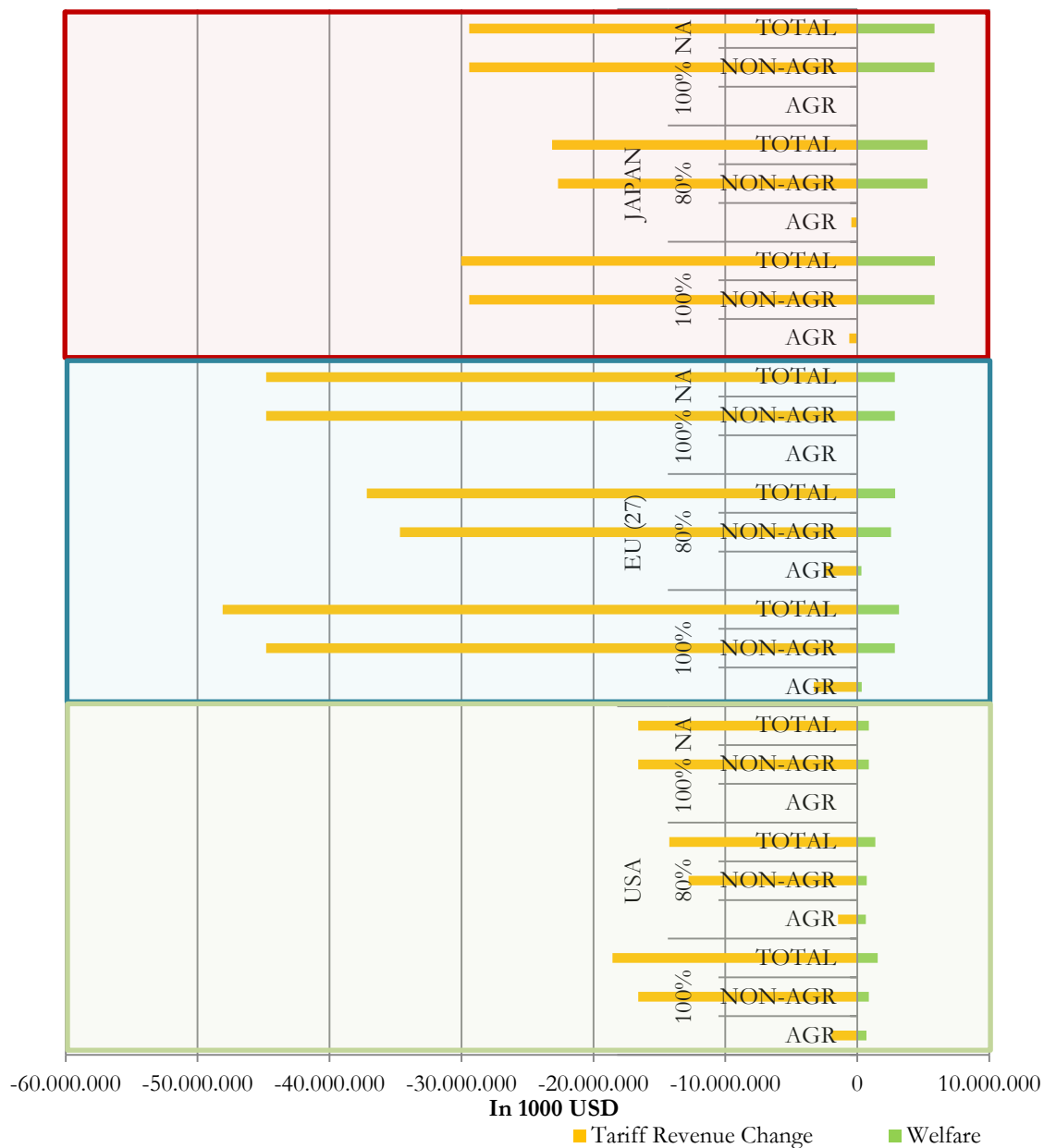
Graph 12: Trade Effects of China's Bilateral Agreements (USA, EU (27) and Japan) with three different scenarios.



Source: Own development with data from World Bank (WITS)

Of the other two options, both Japan and EU (27) cause more or less the same Trade Diversion for China, being slightly smaller the one produced when reducing tariffs with the EU. But when it comes to Trade Creation the difference is huge, if the agreement is signed with European Union its exports to China due to reduction of national production of China after tariff cut will be much higher than if the agreement is finally signed with Japan.

Graph 13: Welfare after China's Bilateral Agreements (USA, EU (27) and Japan) with three different scenarios.



Source: Own development with data from World Bank (WITS)

When comparing both countries effects in terms of Welfare, Japan will be the best option for China. Due to lower Tariff Revenue Change the Welfare generated after the agreement is signed with China is more or less double the one generated if it is signed with the EU.

So if China is most concerned about Welfare Japan should be its first option, but if is most concerned about the difference between Trade Creation and Trade Diversion, it will have to try to reach an agreement with the European Union. In some way, it has already chosen both options in reality, Japan with the agreement of CJK and Europe trying to connect its

trade with the EU through the New Silk Route (“Belt and Road”). But actually, as it was mentioned at the beginning of the report, not only economic effects are taken into account to reach a trade agreement. Of course, an agreement will only take place if it creates benefits of any type for the country or countries taking that decision, but the existence of political tensions and “power wars” play also an important role in the decision.

5. CONCLUSIONS

If trade between countries occurs since so many years ago it is because is beneficial for trading partners. But as it has been explained in the report, regional trade has changed over time. Nowadays, very large negotiations are taking part to form MRTAs. This study has specially focused on TTIP between the United States and European Union (composed of 28 members), and on TPP among the United States, Japan, Australia, New Zealand, Malaysia, Brunei Darussalam, Singapore, Vietnam Canada, Mexico, Peru and Chile. Being US involved in both of them, and EU and Japan other very relevant economies also taking part in one of them.

However, due to several reasons China is not a member of any of them. But as one of the major world trading partners its reaction to these agreements is interesting, that’s why this Asian economy has been compared with both TTIP and TPP, and what is more important that is why China’s strategy and possible responses have been analysed. At the moment, China is watching closely both MRTAs, it is taking part in smaller ones such as CJK FTA (China – Japan – South Korea Free Trade Agreement) and RCEP (Regional Comprehensive Economic Partnership), and it continues being a member of WTO, moreover it is also retaking Silk Route called “Belt and Road”.

Following actual course of action of this country, three hypothetical bilateral trade agreements have been simulated with SMART (trade simulation tool of WITS, database of the World Bank), with three scenarios each (100% tariff cut, 80% tariff cut and 100% tariff cut only for non-agricultural products). These agreements are China-US, China-EU and China-Japan. According to the provided results, best option for China would be to sign all of them; nevertheless that will take a lot of time and effort and not three of them report the same benefits for the Asian country. Attending to trade effects such as Trade Creation, Trade Diversion, Tariff Revenue Change (loss) and Welfare, best option would depend on China’s interest. If it is more concerned with Welfare, which is probably most important indicator, Japan is the best option; on the other hand if the difference between Trade Creation and Trade Diversion is more relevant for China the free trade agreement with the

EU would be more positive. Definitively, the agreement with the US under any scenario is the one to which China should dedicate less effort.

Regarding objectives of this report, three of them can be considered as fulfilled. First goal, the description of historical and theoretical framework, has been completed through the explanation of regional trade agreements and economic integration evolution throughout history, definition, different degrees or types of integration, causes that lead to it (economic and geopolitical) and explanation economic and trade effects.


The fulfilment of second objective is completed with the analysis of TTIP and TPP through economic data, such as GDP and GDP per capita, and treaties' purposes and possible effects in the economies of the member countries. Also in relation with the second objective, China's position regarding both MRTAs has been studied, actual trade strategies followed by this country have been presented, and taking them into account hypothetical bilateral trade agreements have been proposed.

Last objective, the decision of which of the suggested trade agreement, European Union, United States or Japan, is more advisable for China to negotiate based on Trade Effects has been completed through the study, analysis and comparison of results reported by WITS after tariff cuts simulation and results comparison. To be more realistic three possible scenarios have been compared in each bilateral, complete tariff elimination, 80% tariff reduction and elimination of 100% of tariffs for non-agricultural products.

Finally, this report also aims to demonstrate the acquisition of knowledge and abilities, and the development of generic and specific competences for the Degree in Economics (Grado en Economía) through the elaboration of this report (Trabajo de Fin de Grado). The detailed list of generic and specific competences to be proved by students of Economics and their fulfilment with this report is shown in Appendix 2.

Summing up, this report is not only a way of proving the acquisition of competences. It also shows that MRTAs are not the only solution to multilateral trade agreements slow down or failure. Especially left aside countries like China have other options that can be much more profitable such as the proposed hypothetical bilateral agreements or alternative trade policies, for example the New Silk Route a network of trade and culture routes. In addition it can be forgotten that neither TTIP nor TPP are finalized yet, and that given the way that are being negotiated many opponents are appearing, one of them the Nobel prize Joseph E. Stiglitz who has criticised in several occasions, for example Stiglitz (2015), the asymmetric information in TPP negotiations.

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ANNEXES

ANNEX 1 - EU (27) By Countries – China

Table 4: Scenario 1 (100% Tariff Reduction) in 1000USD

		100% TARIFF REDUCTION		RELATIVE TERMS	
		Trade Creation	Trade Diversion	TC	TD
AUSTRIA	AGR	16,900.83	3,596.78	0.51%	0.78%
	NAGR	483,962.95	251,949.86	1.77%	2.21%
	TOTAL	500,863.78	255,546.64	1.63%	2.15%
BELGIUM	AGR	31,674.99	18,072.09	0.95%	3.93%
	NAGR	932,716.46	629,275.23	3.41%	5.52%
	TOTAL	964,391.45	647,347.32	3.14%	5.46%
BULGARIA	AGR	461.24	223.88	0.01%	0.05%
	NAGR	35,013.37	9,823.88	0.13%	0.09%
	TOTAL	35,474.61	10,047.75	0.12%	0.08%
CYPRUS	AGR	1,349.56	157.12	0.04%	0.03%
	NAGR	613.39	902.73	0.00%	0.01%
	TOTAL	1,962.94	1,059.85	0.01%	0.01%
CZECH REPUBLIC	AGR	8,775.49	1,946.31	0.26%	0.42%
	NAGR	191,862.09	107,416.28	0.70%	0.94%
	TOTAL	200,637.59	109,362.59	0.65%	0.92%
DENMARK	AGR	516,497.78	57,610.94	15.49%	12.53%
	NAGR	297,312.89	109,898.24	1.09%	0.96%
	TOTAL	813,810.66	167,509.18	2.65%	1.41%
ESTONIA	AGR	74.46	37.79	0.00%	0.01%
	NAGR	23,027.18	7,790.42	0.08%	0.07%
	TOTAL	23,101.64	7,828.20	0.08%	0.07%
FINLAND	AGR	26,818.19	4,933.01	0.80%	1.07%
	NAGR	304,224.75	169,530.47	1.11%	1.49%
	TOTAL	331,042.94	174,463.48	1.08%	1.47%
FRANCE	AGR	843,486.99	103,024.74	25.30%	22.41%
	NAGR	1,892,476.20	792,812.91	6.92%	6.95%
	TOTAL	2,735,963.19	895,837.65	8.91%	7.55%
GERMANY	AGR	215,947.84	53,258.23	6.48%	11.59%
	NAGR	9,332,484.67	5,808,293.50	34.11%	50.95%
	TOTAL	9,548,432.52	5,861,551.73	31.11%	49.43%
GREECE	AGR	38,885.40	1,383.74	1.17%	0.30%
	NAGR	37,845.21	4,911.07	0.14%	0.04%
	TOTAL	76,730.61	6,294.81	0.25%	0.05%
HUNGARY	AGR	4,176.50	2,508.47	0.13%	0.55%
	NAGR	225,829.46	155,120.37	0.83%	1.36%
	TOTAL	230,005.96	157,628.84	0.75%	1.33%

IRELAND	AGR	66,665.94	18,327.46	2.00%	3.99%
	NAGR	113,503.52	84,025.07	0.41%	0.74%
	TOTAL	180,169.47	102,352.54	0.59%	0.86%
ITALY	AGR	222,535.71	25,602.77	6.67%	5.57%
	NAGR	4,002,420.17	909,719.44	14.63%	7.98%
	TOTAL	4,224,955.88	935,322.21	13.77%	7.89%
LATVIA	AGR	1,371.68	1,046.93	0.04%	0.23%
	NAGR	3,023.38	1,656.75	0.01%	0.01%
	TOTAL	4,395.06	2,703.67	0.01%	0.02%
LITHUANIA	AGR	826.29	786.68	0.02%	0.17%
	NAGR	2,866.09	1,536.01	0.01%	0.01%
	TOTAL	3,692.37	2,322.69	0.01%	0.02%
LUXEMBOURG	AGR	0.48	0.32	0.00%	0.00%
	NAGR	21,358.75	18,297.49	0.08%	0.16%
	TOTAL	21,359.23	18,297.81	0.07%	0.15%
MALTA	AGR	1.36	0.97	0.00%	0.00%
	NAGR	3,100.18	3,296.17	0.01%	0.03%
	TOTAL	3,101.54	3,297.15	0.01%	0.03%
NETHERLANDS	AGR	309,869.41	61,854.98	9.29%	13.46%
	NAGR	429,351.85	268,886.66	1.57%	2.36%
	TOTAL	739,221.26	330,741.64	2.41%	2.79%
POLAND	AGR	6,940.38	4,234.53	0.21%	0.92%
	NAGR	145,971.58	68,395.40	0.53%	0.60%
	TOTAL	152,911.96	72,629.93	0.50%	0.61%
PORTUGAL	AGR	13,550.77	1,585.65	0.41%	0.34%
	NAGR	119,739.97	65,566.44	0.44%	0.58%
	TOTAL	133,290.74	67,152.09	0.43%	0.57%
ROMANIA	AGR	583.72	317.27	0.02%	0.07%
	NAGR	127,151.96	54,149.46	0.46%	0.48%
	TOTAL	127,735.68	54,466.73	0.42%	0.46%
SLOVAKIA	AGR	89.51	32.97	0.00%	0.01%
	NAGR	1,568,880.35	433,130.51	5.73%	3.80%
	TOTAL	1,568,969.85	433,163.47	5.11%	3.65%
SLOVENIA	AGR	284.22	183.88	0.01%	0.04%
	NAGR	22,299.90	11,831.17	0.08%	0.10%
	TOTAL	22,584.12	12,015.04	0.07%	0.10%
SPAIN	AGR	837,556.29	49,289.25	25.12%	10.72%
	NAGR	611,411.82	228,171.16	2.23%	2.00%
	TOTAL	1,448,968.11	277,460.41	4.72%	2.34%
SWEDEN	AGR	30,421.83	7,368.23	0.91%	1.60%
	NAGR	500,001.07	310,164.62	1.83%	2.72%
	TOTAL	530,422.91	317,532.85	1.73%	2.68%
UNITED	AGR	138,498.15	42,305.19	4.15%	9.20%

KINGDOM	NAGR	5,929,167.97	892,653.11	21.67%	7.83%
	TOTAL	6,067,666.12	934,958.30	19.77%	7.88%
EU 27	AGR	3,334,245.00	459,690.16	100%	100%
	NAGR	27,357,617.17	11,399,204.39	100%	100%
	TOTAL	30,691,862.17	11,858,894.55	100%	100%

Source: Own elaboration with data from World Bank (WTIS)

Table 5: Scenario 2 (80% Tariff Reduction) in 1000USD

		80% TARIFF REDUCTION		RELATIVE TERMS	
		Trade Creation	Trade Diversion	TC	TD
AUSTRIA	AGR	13,520.67	2,841.67	0.51%	0.78%
	NAGR	387,170.35	198,862.18	1.77%	2.20%
	TOTAL	400,691.02	201,703.85	1.63%	2.15%
BELGIUM	AGR	25,340.00	14,243.51	0.95%	3.92%
	NAGR	746,173.16	497,191.40	3.41%	5.51%
	TOTAL	771,513.16	511,434.91	3.14%	5.45%
BULGARIA	AGR	368.99	175.07	0.01%	0.05%
	NAGR	28,010.70	7,791.46	0.13%	0.09%
	TOTAL	28,379.69	7,966.53	0.12%	0.08%
CYPRUS	AGR	1,079.64	124.20	0.04%	0.03%
	NAGR	490.71	716.79	0.00%	0.01%
	TOTAL	1,570.35	840.99	0.01%	0.01%
CZECH REPUBLIC	AGR	7,020.40	1,540.04	0.26%	0.42%
	NAGR	153,489.67	85,103.02	0.70%	0.94%
	TOTAL	160,510.07	86,643.07	0.65%	0.92%
DENMARK	AGR	413,198.24	45,523.11	15.49%	12.52%
	NAGR	237,850.31	87,311.81	1.09%	0.97%
	TOTAL	651,048.55	132,834.93	2.65%	1.41%
ESTONIA	AGR	59.57	29.31	0.00%	0.01%
	NAGR	18,421.74	6,212.72	0.08%	0.07%
	TOTAL	18,481.31	6,242.02	0.08%	0.07%
FINLAND	AGR	21,454.55	3,852.20	0.80%	1.06%
	NAGR	243,379.80	134,187.53	1.11%	1.49%
	TOTAL	264,834.35	138,039.73	1.08%	1.47%
FRANCE	AGR	674,789.61	81,600.30	25.30%	22.45%
	NAGR	1,513,980.94	629,709.60	6.92%	6.98%
	TOTAL	2,188,770.55	711,309.90	8.91%	7.57%
GERMANY	AGR	172,758.28	42,100.98	6.48%	11.58%
	NAGR	7,465,987.54	4,614,002.04	34.11%	51.11%
	TOTAL	7,638,745.82	4,656,103.02	31.11%	49.58%
GREECE	AGR	31,108.32	1,092.50	1.17%	0.30%
	NAGR	30,276.17	3,895.30	0.14%	0.04%

	TOTAL	61,384.48	4,987.80	0.25%	0.05%
HUNGARY	AGR	3,341.20	1,968.94	0.13%	0.54%
	NAGR	180,663.56	122,396.14	0.83%	1.36%
	TOTAL	184,004.77	124,365.09	0.75%	1.32%
IRELAND	AGR	53,332.76	14,487.35	2.00%	3.99%
	NAGR	90,802.82	67,016.46	0.41%	0.74%
	TOTAL	144,135.58	81,503.81	0.59%	0.87%
ITALY	AGR	178,028.56	20,182.45	6.67%	5.55%
	NAGR	3,201,936.13	721,536.94	14.63%	7.99%
	TOTAL	3,379,964.69	741,719.39	13.77%	7.90%
LATVIA	AGR	1,097.34	808.29	0.04%	0.22%
	NAGR	2,418.70	1,316.77	0.01%	0.01%
	TOTAL	3,516.05	2,125.07	0.01%	0.02%
LITHUANIA	AGR	661.03	605.18	0.02%	0.17%
	NAGR	2,292.87	1,214.15	0.01%	0.01%
	TOTAL	2,953.90	1,819.33	0.01%	0.02%
LUXEMBOURG	AGR	0.38	0.25	0.00%	0.00%
	NAGR	17,087.00	14,578.74	0.08%	0.16%
	TOTAL	17,087.38	14,578.99	0.07%	0.16%
MALTA	AGR	1.09	0.76	0.00%	0.00%
	NAGR	2,480.15	2,623.87	0.01%	0.03%
	TOTAL	2,481.24	2,624.63	0.01%	0.03%
NETHERLANDS	AGR	247,895.52	49,157.02	9.29%	13.52%
	NAGR	343,481.48	213,865.03	1.57%	2.37%
	TOTAL	591,377.00	263,022.05	2.41%	2.80%
POLAND	AGR	5,552.30	3,323.69	0.21%	0.91%
	NAGR	116,777.26	54,310.56	0.53%	0.60%
	TOTAL	122,329.56	57,634.24	0.50%	0.61%
PORTUGAL	AGR	10,840.62	1,238.12	0.41%	0.34%
	NAGR	95,791.97	51,071.38	0.44%	0.57%
	TOTAL	106,632.59	52,309.50	0.43%	0.56%
ROMANIA	AGR	466.97	247.59	0.02%	0.07%
	NAGR	101,721.57	42,846.40	0.46%	0.47%
	TOTAL	102,188.54	43,093.99	0.42%	0.46%
SLOVAKIA	AGR	71.61	26.00	0.00%	0.01%
	NAGR	1,255,104.26	334,678.54	5.73%	3.71%
	TOTAL	1,255,175.86	334,704.55	5.11%	3.56%
SLOVENIA	AGR	227.38	143.89	0.01%	0.04%
	NAGR	17,839.92	9,381.81	0.08%	0.10%
	TOTAL	18,067.30	9,525.70	0.07%	0.10%
SPAIN	AGR	670,045.01	38,784.80	25.12%	10.67%
	NAGR	489,129.44	180,813.27	2.23%	2.00%
	TOTAL	1,159,174.45	219,598.06	4.72%	2.34%

SWEDEN	AGR	24,337.47	5,822.29	0.91%	1.60%
	NAGR	400,000.85	245,244.74	1.83%	2.72%
	TOTAL	424,338.32	251,067.03	1.73%	2.67%
UNITED KINGDOM	AGR	110,798.51	33,560.73	4.15%	9.23%
	NAGR	4,743,334.32	699,355.89	21.67%	7.75%
	TOTAL	4,854,132.83	732,916.62	19.77%	7.80%
EU 27	AGR	2,667,396.00	363,480.26	100%	100%
	NAGR	21,886,093.38	9,027,234.53	100%	100%
	TOTAL	24,553,489.37	9,390,714.79	100%	100%

Source: Own elaboration with data from World Bank (WTTS)

Table 6: Scenario 3 (100% Tariff Reduction of Non-Agricultural Products) in 1000USD

		100% TARIFF NON-AGR. REDUCTION		RELATIVE TERMS	
		Trade Creation	Trade Diversion	TC	TD
AUSTRIA	AGR	0.00	0.00	-	-
	NAGR	483,962.95	251,949.86	1.77%	2.21%
	TOTAL	483,962.95	251,949.86	1.77%	2.21%
BELGIUM	AGR	0.00	0.00	-	-
	NAGR	932,716.46	629,275.23	3.41%	5.52%
	TOTAL	932,716.46	629,275.23	3.41%	5.52%
BULGARIA	AGR	0.00	0.00	-	-
	NAGR	35,013.37	9,823.88	0.13%	0.09%
	TOTAL	35,013.37	9,823.88	0.13%	0.09%
CYPRUS	AGR	0.00	0.00	-	-
	NAGR	613.39	902.73	0.00%	0.01%
	TOTAL	613.39	902.73	0.00%	0.01%
CZECH REPUBLIC	AGR	0.00	0.00	-	-
	NAGR	191,862.09	107,416.28	0.70%	0.94%
	TOTAL	191,862.09	107,416.28	0.70%	0.94%
DENMARK	AGR	0.00	0.00	-	-
	NAGR	297,312.89	109,898.24	1.09%	0.96%
	TOTAL	297,312.89	109,898.24	1.09%	0.96%
ESTONIA	AGR	0.00	0.00	-	-
	NAGR	23,027.18	7,790.42	0.08%	0.07%
	TOTAL	23,027.18	7,790.42	0.08%	0.07%
FINLAND	AGR	0.00	0.00	-	-
	NAGR	304,224.75	169,530.47	1.11%	1.49%
	TOTAL	304,224.75	169,530.47	1.11%	1.49%
FRANCE	AGR	0.00	0.00	-	-
	NAGR	1,892,476.20	792,812.91	6.92%	6.95%
	TOTAL	1,892,476.20	792,812.91	6.92%	6.95%
GERMANY	AGR	0.00	0.00	-	-

	NAGR	9,332,484.67	5,808,293.50	34.11%	50.95%
	TOTAL	9,332,484.67	5,808,293.50	34.11%	50.95%
GREECE	AGR	0.00	0.00	-	-
	NAGR	37,845.21	4,911.07	0.14%	0.04%
	TOTAL	37,845.21	4,911.07	0.14%	0.04%
HUNGARY	AGR	0.00	0.00	-	-
	NAGR	225,829.46	155,120.37	0.83%	1.36%
	TOTAL	225,829.46	155,120.37	0.83%	1.36%
IRELAND	AGR	0.00	0.00	-	-
	NAGR	113,503.52	84,025.07	0.41%	0.74%
	TOTAL	113,503.52	84,025.07	0.41%	0.74%
ITALY	AGR	0.00	0.00	-	-
	NAGR	4,002,420.17	909,719.44	14.63%	7.98%
	TOTAL	4,002,420.17	909,719.44	14.63%	7.98%
LATVIA	AGR	0.00	0.00	-	-
	NAGR	3,023.38	1,656.75	0.01%	0.01%
	TOTAL	3,023.38	1,656.75	0.01%	0.01%
LITHUANIA	AGR	0.00	0.00	-	-
	NAGR	2,866.09	1,536.01	0.01%	0.01%
	TOTAL	2,866.09	1,536.01	0.01%	0.01%
LUXEMBOURG	AGR	0.00	0.00	-	-
	NAGR	21,358.75	18,297.49	0.08%	0.16%
	TOTAL	21,358.75	18,297.49	0.08%	0.16%
MALTA	AGR	0.00	0.00	-	-
	NAGR	3,100.18	3,296.17	0.01%	0.03%
	TOTAL	3,100.18	3,296.17	0.01%	0.03%
NETHERLANDS	AGR	0.00	0.00	-	-
	NAGR	429,351.85	268,886.66	1.57%	2.36%
	TOTAL	429,351.85	268,886.66	1.57%	2.36%
POLAND	AGR	0.00	0.00	-	-
	NAGR	145,971.58	68,395.40	0.53%	0.60%
	TOTAL	145,971.58	68,395.40	0.53%	0.60%
PORTUGAL	AGR	0.00	0.00	-	-
	NAGR	119,739.97	65,566.44	0.44%	0.58%
	TOTAL	119,739.97	65,566.44	0.44%	0.58%
ROMANIA	AGR	0.00	0.00	-	-
	NAGR	127,151.96	54,149.46	0.46%	0.48%
	TOTAL	127,151.96	54,149.46	0.46%	0.48%
SLOVAKIA	AGR	0.00	0.00	-	-
	NAGR	1,568,880.35	433,130.51	5.73%	3.80%
	TOTAL	1,568,880.35	433,130.51	5.73%	3.80%
SLOVENIA	AGR	0.00	0.00	-	-
	NAGR	22,299.90	11,831.17	0.08%	0.10%

	TOTAL	22,299.90	11,831.17	0.08%	0.10%
SPAIN	AGR	0.00	0.00	-	-
	NAGR	611,411.82	228,171.16	2.23%	2.00%
	TOTAL	611,411.82	228,171.16	2.23%	2.00%
SWEDEN	AGR	0.00	0.00	-	-
	NAGR	500,001.07	310,164.62	1.83%	2.72%
	TOTAL	500,001.07	310,164.62	1.83%	2.72%
UNITED KINGDOM	AGR	0.00	0.00	-	-
	NAGR	5,929,167.97	892,653.11	21.67%	7.83%
	TOTAL	5,929,167.97	892,653.11	21.67%	7.83%
EU 27	AGR	0.00	0.00	-	-
	NAGR	27,357,617.17	11,399,204.39	100%	100%
	TOTAL	27,357,617.17	11,399,204.39	100%	100%

Source: Own elaboration with data from World Bank (WITS)

ANNEX 2- COMPETENCES FULFILMENT

Table7: Generic and Specific Competences fulfilment and demonstration with examples

GENERIC COMPETENCES	DEMONSTRATION	EXAMPLES
CB2: Students can apply their knowledge to their work or vocation in a professional manner and have competences typically demonstrated through devising and sustaining arguments and solving problems within their field of study.	Study and knowledge of trade effects	Sections 2.3. and 4.
CB3: Students should have the ability to gather and interpret relevant data (usually within their field of study) to inform judgments that include reflection on relevant social, scientific or ethical.	Interpretation of economic data	Sections 3. and 4.
CB4: Students can communicate information, ideas, problems and solutions to both specialist and non-specialist audiences.	Explanation of trade effects and basic definitions	Sections 2.2., 2.4. and 4.1.
CG01: Capacity for analysis and synthesis	Selection of relevant information and data	Abstract, Introduction, Conclusions, Video, Poster, Sections 2.1., 3.1., 3.2...
CG02: Capacity for organization and planning	Logically structured work: Introduction, background, empirical analysis and conclusions	Report (Index), Video and Poster
CG03: Oral and written communication in mother tongue	---	---
CG04: Oral and written communication in a foreign language	Whole work developed in English	Report, Video and Poster
CG06: Ability to analyse and search for information from various sources	References to different sources in the whole work	Bibliography
CG14: Critical and self-critical abilities	Data elaboration, analysis and conclusions	Sections 3.3.4., 4.2.-4.5. and 5
CG15: Ethical compromise in the work	Quotation of sources	References, bibliography, sections 2.1.2., 3.1. and 4.1...
CG16: Ability to work in pressure environments	Working within deadlines, working with new tools	Use of WITS Section 4.1.
CG17: Ability to learn independently	Study of unknown aspects and new tools	Study of MRTAs and China's trade policy (Sections 3.1., 3.2. and 3.3.4.) and use of WITS 4.1.
CG19: Creativity	Study of hypothetical situations to analyse its economic effects	Sections 4.2., 4.3. and 4.4.
SPECIFIC COMPETENCES	DEMONSTRATION	EXAMPLES
CE02: Identification of relevant economic sources and their contents	Quotation and selection of relevant sources, and references in the text	Bibliography Sections 2.1.2., 4.1. ...
CE05: Edit advises about specific economic situations (international, national and regional) or about sectors	Analysis of data and selection of best options	Sections 4.2. to 4.5.
CE06: Design economic management projects at international, national or regional level	Recommendations for China related to its trade policy	Section 4.5.
CE09: Provide rationality to the analysis and to the description of any aspect of the economic reality	Data interpretation, analysis and comparison	Sections 3. and 4.2. to 4.5.

