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Global Value Chains: Brazil's integration in international trade and the case of China

Dissertação de Mestrado

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Dedico à minha mãe, pelo amor INCONDICIONAL.

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RESUMO

SCANDIUZZI, Stephanie. *Cadeias Globais de Valor: a inserção o Brasil no Comércio internacional e o exemplo da China.* 2018. 128 f. Dissertação (Mestrado) - Faculdade de Direito, Universidade de São Paulo, São Paulo, 2018.

Este estudo tem como objetivo analisar a integração do Brasil e da China em cadeias de globais de valor, sob a ótica jurídica, por meio da análise de sua rede de acordos preferenciais de comércio e sua comparação com informações e dados de comércio relativos a cadeias globais de valor. Para tanto, os seguintes pontos são objeto de estudo: (i) a teoria geral das cadeias globais de valor; (ii) a teoria dos acordos preferenciais de comércio, sob a ótica das cadeias globais de valor; (iii) o perfil (escolha de parceiros) e conteúdo (cláusulas) dos acordos preferenciais de comércio do Brasil e da China, com base na metodologia de Horn, Mavroidis e Sapir; e (iv) a participação do Brasil e da China em cadeias globais de valor, com base em literatura e dados de comércio. Os resultados demostram que, ao empregar os indicadores de escolha de parceiros e de conteúdo em comparação com a literatura e os dados de comércio de cadeias globais de valor, a rede de acordos preferenciais de comércio do Brasil limita-se em especial à região da América Latina e pode ser vista como superficial, de forma a sugerir que o conjunto de acordos comerciais existente não conduziu o Brasil à integração em cadeias gloabis de valor. A rede de acordos preferenciais de comércio da China foca principalmente na região da Ásia e apresenta relativa profundidade, sugerindo que os acordos da China, em certa medida, auxiliaram na inserção do país em cadeias globais de valor.

Palavras-chave: Cadeias Globais de Valor. Acordos Preferenciais de Comércio. Integração. WTO Plus. WTO Extra.

ABSTRACT

SCANDIUZZI, Stephanie. *Global Value Chains: Brazil's integration in international trade and the case of China.* 2018. 128 f. Dissertation (Master) - Law School, University of São Paulo, São Paulo, 2018.

This study aims at analyzing Brazil and China's integration in global value chains, from a legal perspective, by assessing their preferential trade agreements network and comparing to existing global value chain trade information and data. In order to do so, the following points are object of study: (i) the general theory of global value chains; (ii) the theory of preferential trade agreements under a global value chain perspective; (iii) the profile (choice of partners) and contents (legal provisions) of Brazil and China's preferential trade agreements network based on the Horn, Mavroidis and Sapir methodology; and (iv) Brazil and China's participation in global value chains based on literature and trade data. Results show that by employing the proxies of choice of partners and contents in comparison with literature and trade data on global value chain trade, Brazil's preferential trade agreement network is mostly limited to the Latin America region and can be understood as being shallow, and suggest that such network of trade agreements has not been conductive to value chain integration for Brazil. China's preferential trade agreement network is mostly focused on the Asian region and have relative depth, suggesting that China's agreements have to an extent assisted in the country's insertion in value chains.

Keywords: Global Value Chains. Preferential Trade Agreements. Integration. WTO plus. WTO extra.

TABLES

FIGURES

ABREVIATIONS

ACE	Economic Complementarity Agreement
APTA	Asia-Pacific Trade Agreement
ASEAN	Association of Southeast Asian Nations
BIT	Bilateral Investment Agreement
BRICS	Brazil, Russia, India, China, South Africa
CPTPP	Progressive Agreement for Trans-Pacific Partnership
FDI	Foreign Direct Investments
FTAAP	Free Trade Area of the Asia-Pacific
GCC	Gulf Cooperation Council
ICT	Information communication technology
LAIA	Latin American Integration Association
MERCOSUR	Common Market of the South
NAFTA	North American Free Trade Agreement
OECD	Organization for Economic Co-operation and Development
RCEP	Regional Comprehensive Economic Partnership
SACU	Southern African Customs
TRIPs	Trade Related Aspects of Intellectual Property Rights Agreement
TTIP	Transatlantic Trade and Investment Partnership
UNCTAD	United Nations Conference on Trade and Development
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
WTO	World Trade Organization

SUMMARY

1 INTRODUCTION

Back in the 1980's there was a shift within international trade, where firms dispersed their manufacturing activities around the world, in search of better production conditions. This process became known as fragmentation of production, and was promoted by many factors, such as a quick development in communications technology, the multilateral liberalization of trade on goods, and the cross-border movements of capital. The increase of firms' activities within this system of continuous cross-border trade led to the development of global value chains.

They are currently understood as the complete set of activities involving the manufacturing of products, by one or more firms, such as design, production, marketing, distribution, consumer support services, and the like.

The development of global value chains has brought further complexity to international trade, as they are based on constant cross-border movements of goods and services. For instance, they have led to a growth in exports of intermediates in comparison to exports of final products. As such, global value chains continually change and rearrange economic and trade relations.

As such, they affect and are affected by a number of different topics, such as trade in goods and services, domestic regulations, investment, services, intellectual property, and many others. In this regard, literature on the topic have found that the spread of global value chains is connected to the multiplication of preferential trade agreements, as they are able to discipline topics beyond traditional market access issues (such as tariffs). Accordingly, there is a positive and double-way correlation, where preferential trade agreements have the ability of inducing global value chain creation by regulating all kinds of topics affecting value chains, and that at the same time, trade relations within global value chains stimulate the formation of preferential trade agreements. Some authors (Horn, Mavroidis and Sapir) have helped deepening the analysis of this relationship by offering a more practical approach based on the analysis of the scope and depth of preferential trade agreement provisions.

Under this framework, we then propose to inquire what would be the specific relationship between Brazil and China's preferential trade agreements and their respective integration in global value chains.

Our research is based on first identifying the relevant provisions of Brazil and China's trade agreements under the Horn, Mavroidis and Sapir methodology, and also relevant data on their respective trade links under the global value chain perspective, provided by the OECD-WTO Tiva database.

Finally, we note that our research focuses only on the legal aspects that relate to the formation and functioning of global value chains, namely trade provisions contained in preferential trade agreements. It aims at contributing to the understanding of the role of international trade law under this new reality of international trade marked by global value chains.

1.1 Proposed research

This study aims at analyzing Brazil and China's integration in global value chains, from a legal perspective, by assessing their preferential trade agreements network and comparing to existing global value chain trade information and data. In order to do so, the following points will be studied: (i) the general theory of global value chains; (ii) the theory of preferential trade agreements under a global value chain perspective; (iii) the profile (choice of partners) and contents (legal provisions) of Brazil and China's preferential trade agreement network based on the Horn, Mavroidis and Sapir methodology; and (iv) Brazil and China's participation in global value chains based on literature and trade data.

1.2 Premises and main argument

The proposed study is based on the overall conclusion of existing literature and trade data that Brazil shows little integration in global value chains, whilst China presents deeper levels of integration. As such, we will not inquire whether this diagnosis is correct; to the contrary, the study will be based on such premise.

The main argument to be developed is that Brazil and China's preferential trade agreements network have had an impact over their respective integration in global value chains, either for being inductive to value chain or for not being able to assist the countries in global value chains. The results of the research will be achieved by comparing the preferential trade agreements' profile and contents to information and data on global value chain trade.

1.3 Methodology and structure

This study is composed of both theoretical and an empirical research that complement one another. The theoretical is composed by the abovementioned topics (i) the general theory of global value chains; and (ii) the theory of preferential trade agreements under a global value chain perspective. The empirical part is composed of the above mentioned topics (iii) the profile (choice of partners) and contents (legal provisions) of Brazil and China's preferential trade agreement network based on the Horn, Mavroidis and Sapir methodology; (iv) Brazil and China's participation in global value chains based on literature and trade data; and (v) the relationship between Brazil and China's integration in value chains and their preferential trade agreements.

Literature on global value chains is very much wide. Complex as it is, this trade phenomenon can be reviewed under many areas of knowledge such as economics, for instance through the identification of value added contents; management, through the identification of the functioning of supply chains; or international law, for instance through the identification of the role played by international rules, among many others. As such, a necessary cut in all literature involving global value chains must be made, as to allow for the identification of the main features of global value chains that will matter for the development of this study.

For this reason, Chapter 2 will briefly address general characteristics of global value chains by providing overviews of: (i) the origins and development of global value chains; (ii) the functioning of global value chains with respect to countries' activities; (iii) the characteristics of global value chains with respect to factors that affect their creation and functioning; (iv) a debate involving the nature of global value chains; and (v) a debate on the impact global value chains have over countries' development for countries.

Topics (i) to (iv) have the purpose of explaining in simple terms what global values are, by informing how they came to be, how countries operate within them and what are factors that somehow link them to international trade rules. The fifth topic concerns a debate around the effects of global value chains over development of countries. As this study relates to two developing countries that are in lesser or larger extent involved in global value chains – Brazil and China – it is important to bear in mind that such a debate pervades literature on global value chains, and that benefits of engaging in global value chains are not at all a consensus.

Having introduced the topic of global value chains in Chapter 2, Chapter 3 will address relevant literature that refers to the relationship between international trade rules and global value chains, with a particular focus on preferential trade agreements.

An important clarification is due. The terms “regional trade agreements” and “preferential trade agreements” are frequently used interchangeably in the relevant literature, without adding up to distinction between those two forms of preferential trade arrangements. Likewise, the term “regionalism” would refer to the spread of preferential trade agreements, regardless of whether any regional arrangement would have been formed under for instance the Enabling Clause or XXIV (free trade areas and customs unions) of the GATT. In fact, around one-half of preferential trade agreements that are currently in force are not precisely “regional”, but rather cross-regional, since they are signed by countries located in different geographical areas.

As such, for purposes of the present study, we will address all types of trade agreements (bilateral, regional, partial scope, free trade agreements and so on) indistinctively as “preferential trade agreements”, as we will focus on the relationship of those agreements with global value chains.

Having that said, Chapter 3 has the objective of explaining the relationship between global value chains and preferential trade agreement, under a legal perspective, by looking into the following topics: (i) the existing links between international trade rules of the WTO, preferential trade agreements and global value chains; (ii) the connection between the proliferation of preferential trade agreements and the spread of global value chains; (iii) classifications of preferential trade agreements made by relevant literature; and (iv) the classification of the content of preferential trade agreements. This topic will describe the Horn, Mavroidis and Sapir methodology of legal review of provisions contained in preferential trade agreements, and that will be applied to our study described in Chapter 4.

Based on the findings of Chapter 3, that there is a positive correlation between the scope and depth of preferential trade agreements and countries’ global value chain integration, Chapter 4 will focus on the analysis of the profile and contents of Brazil and China’s preferential trade agreements, in order to be able to identify what is the role that their preferential trade agreements play in their respective insertion in global value chains. Our focus will be on those agreements that somehow contain provisions that go beyond the mere liberalization of tariffs over goods, and therefore does not include a certain amount of

agreements signed by Brazil and China. We have not also reviewed agreements that have been signed but that have not yet entered into force.

For research purposes, our view is that China is an interesting proxy as it consists of an emerging economy integrating BRICS (like Brazil) that has shown an impressive and quick integration into international trade, even though, it was a late comer in the race for industrialization and development. Our view is that China has developed an interesting preferential trade agreement network - which is mainly focused on the Asian region, but has been expanding to countries of the Pacific region - and is fairly integrated in global value chains, suggesting that the country has made a good use of available legal provisions on trade.

With this framework in mind and based on the elements provided by the previous chapters, we proceed to a review of Brazil and China's preferential trade agreements network. In this analysis we will look into what are Brazil and China's choice of partners, and the contents of their preferential trade agreements, based on the methodology proposed by Horn, Mavroidis and Sapir. Reasons for this choice is to also maintain coherence with the recent work developed by the WTO, which has already reviewed some of Brazil and China's agreements based on that same methodology. Our contribution in this regard will be to review the additional agreements signed by those countries that have not been object of the WTO's analysis. We have analyzed Brazil and China's preferential trade agreements that are currently in force without minding whether they have been notified to the WTO or not.

Chapter 5 will address literature and data regarding Brazil and China's participation in global value chains, as well as their bilateral trade relations, in order to provide complementary information to the review conducted in Chapter 4. Finally, it will contain the results of our research on the relationship between both countries integration in value chains and their preferential trade agreements network. Accordingly, based on literature, trade data and our review of preferential trade agreements, this chapter will bring our conclusions on what might have been the impact of such trade agreements in the countries respective integration in global value chains, from the legal perspective of either being inductive to value chain creation or development, or for not being able to assist the countries integrating in global value chains.

2 GLOBAL VALUE CHAINS: THE NEW FEATURE OF INTERNATIONAL TRADE

2.1 Overview of global value chains

Around the 1970's and 1980's there was a shift in the international organization of multinational firms within international trade. For several reasons, but mainly with a view of reducing production costs, instead of performing or directly controlling all activities related to the production of goods, firms began to contract with third-party firms for the performance of some activities throughout the entire manufacturing process[1].

From this moment on, production of goods, comprising manufacturing activities as well as rendering of related services, became more and more disintegrated and dispersed among firms located all around the world. Increasingly, goods began to be produced and services rendered within the so-called international supply chains – where suppliers from different locations would be connected to the production of a given good though different manufacturing stages. A consequence of this structure was a significant increase in imported intermediate products, since inputs that were once produced locally could then be imported from suppliers located in different countries, for lower prices.

Within international supply chains, suppliers in one country provide one or more inputs that are exported to another country, where they are processed and turned into a final product, and then again exported to other countries on their way to consumers. Alternatively, the inputs may be exported, processed and exported as an intermediate product, so that a third country can do another processing activity (generally assembly) – thus making the final product ready to be sent to any part of the world. This process became known as "fragmentation" of production[2].

The economic logic of this form of organization of production is clear: cheaper imported inputs and intermediates induce the downstream production of more competitive goods.

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[1] SOBEL-READ, Kevin B. *Global Value Chains: A framework for analysis*. Transnational Legal Theory, vol. 5, no. 3. 2014. Available at < https://ssrn.com/abstract=2312034>. Last visited: 12/02/2017. pp. 14-15.

[2] GEREFFI, Gary; HUMPHREY, John; STURGEON, Timothy. *The Governance of Global Value Chains.* 12 Rev. of Int'l Pol. Econ. 78, 2005. pp. 79-80. *Apud*. SOBEL-READ, Kevin B. *Global Value Chains: A framework for analysis*. Transnational Legal Theory (vol. 5, no. 3, 2014). Available at < https://ssrn.com/abstract=2312034>. Last visited: 12/02/2017. p. 15.

A few facts would be attributed to this process of fragmentation, albeit it does not amount to only those. A quick development in communication technology and the multilateral liberalization of trade promoted within international trade significantly lowered trade barriers to cross-border trade – the basis of fragmentation of production – and reduced the existing legal restrictions over the international movement of goods.[3] The expansion of supply chain trade is in part also a reflection of the cross-border movements of capital (foreign direct investment) ("FDI"). As such, the subsequent formation of over 3,000 bilateral investment agreements ("BITs") among different countries around the world has assisted in providing a global framework to encourage, support and protect such investments.

The increase of the new international organization of firms ultimately led to the development of the concept of "global value chains" that is currently used by relevant literature in the topic. The term "value chains" was first used by Porter even though his approach differs in scope and motivation from the current global value chain analysis. Accordingly, the scholar used the term "value chains" for business management studies, with the purpose of referring to the development of a strategy for promoting firms' competitiveness, by observing the whole set of activities involving the production of a good.[4]

Global value chains are now key to understanding global trade. Global value chain studies relate to sociology and consider the generation and transfer of value added as a consequence of firms' efforts to improve production, as well as consider the mechanism of how the structure of value distribution affects firms' choice for the organization of international production networks[5].

The birth of global value chains per se is attributed to large corporations active in the retail[6]and manufacturing[7] sectors, predominantly in the United States and Europe, and that have set up their production facilities in several regions such as Mexico and East Asia,

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[3] GEREFFI Gary, *Global Value Chains in a Post-Washington Consensus World*, Rev. of Int'l Pol. Econ. pp. 2-3 2013. Available at <dx.doi.org/10.1080/09692290.2012.756414>. *Apud*. SOBEL-READ, Kevin B. *Global Value Chains: A framework for analysis*. Transnational Legal Theory (vol. 5, no. 3, 2014). Available at < ssrn.com/abstract=2312034>. Last visited: 12/02/2017. p. 15.

[4] INOMATA, Satoshi. *Analytical Frameworks for global value chains. An overview In* WTO; WORLD BANK; IDE-JETRO; OECD; UIBE. *Global Value Chain Development Report 2017: Measuring and Analyzing the Impact of GVCs on Economic Development*. 2017. Available at: <www.wto.org/english/res_e/booksp_e/gvcs_report_2017.pdf.> Last visited: 18/03/2017. p. 6.

[5] INOMATA, Satoshi. *Opus Cit*. 19.

[6] JC Penny, Sears and Kmart.

[7] IBM, General Motors and Volkswagen.

with the aim of lowering production costs and exporting final products back to their domestic markets[8]. The growth and liberalization of international trade has also allowed those firms to have access to a larger set of customers outside their own domestic markets.

This strategy of production fragmentation and setting up of facilities in lower cost locations has ultimately resulted in a model of vertical integration, where production related activities concerning a given product are owned and operated by the same firm[9]. Generally, under a value chain perspective, firms from developed countries (high income economies) that own production technology and know-how, offshored tangible (e.g. facilities) and intangible (e.g. intellectual property) assets to developing countries[10] (lower income economies) with the aim of producing goods. On their turn, developing countries' firms played the role of providers of low-wage labor and specific and essential services that could be sourced locally[11].

This shift in the structure of international trade is also referred to in literature as "globalization's second unbundling" – in which production stages that were previously performed in proximity have been geographically dispersed[12]. Accordingly, in globalization's second unbundling, global value chains would not be defined by a relationship where one agent would say to the other "I'll keep my market open if you keep yours open", as it was the usual relation in traditional trade and reflected in the trade rules of the World Trade Organization ("WTO"). Rather, it would be something of the sort "I'll offshore my factories and technologies if you assure my tangible and intangible assets are protected". This idea is complemented by the fact that the disintegration of production took

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[8] DASSBACH, Carl. *Global Enterprises and the World Economy: Ford, General Motors, and IBM, the Emergence of the Transnational Enterprise*. New York: Garland Publishing. 1989. FRÖBEL, Folker; JŸRGEN, Heinrichs and KREYE, Otto. *The New International Division of Labor*. Cambridge: Cambridge University Press. 1980. GEREFFI, Gary; KORZENIEWICZ, Miguel (Eds.). *Commodity Chains and Global Capitalism*. Westport, CT: Praeger, 1994. pp. 95-122. *Apud*. STURGEON, Timothy J. *Global Value Chains and Economic Globalization: Towards a New Measurement Framework*. Industrial Performance Center, Massachusetts Institute of Technology. Report to Eurostat, May 2013. Available at <ec.europa.eu/eurostat/documents/7828051/8076042/Sturgeon-report-Eurostat.pdf. Last visited: 21/06/2017.

[9] SOBEL-READ, Kevin B. *Global Value Chains: A framework for analysis*. Transnational Legal Theory, vol. 5, no. 3. 2014. Available at < ssrn.com/abstract=2312034>. Last visited: 12/02/2017. p. 14

[10] For purposes of this study, the terms "developing country" and "developing countries" will refer to any country that is not considered high income, either being classified as a "developing" or "least developed country", or "middle income" or "low income", or any alike terms, under international organizations.

[11] BALDWIN, Richard. *Trade and Industrialisation after Globalisation's 2nd Unbundling: How Building And Joining A Supply Chain Are Different And Why It Matters.* NBER Working Paper No. 17716 December 2011. Available at: <www.nber.org/papers/w17716.pdf>. Last visited on 26/06/2016. p. 12.

[12] Id. p.12.

place not just through offshoring (the geographical dispersion), but also through outsourcing (the organizational dispersion) [13].

Overall, global value chains are currently understood as the complete set of activities related to a certain product, such as design, production, marketing, distribution, consumer support services, and so on and so forth, that may be performed by a single firm or split among different firms located in different countries[14]. Services are also an important part of global value chains, being present upstream and downstream[15]. Literature also points that global value chains are characterized by an international labor division that comprises both developed and developing countries[16]. Global value chains also vary in accordance with the economic sector they relate to. For instance, literature refers to "natural resources" global value chains and "industrial" global value chains[17].

Because the multiplicity of production and services tasks must result in a homogeneous product that will reach different customers in different regions of the world, there must be a thorough coordination among the different activities performed by all firms along a given chain. In this regard, the boom in information technology (mainly marked by the showing of the Internet) and the development of international communication networks has allowed for a cheaper coordination as required, and up to this day they play an important role for the proper functioning of global value chains[18].

The design of global value chains is not static[19]. Rather, developing countries increasingly participate in global value chains through intermediate goods trade, while

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[13] SOBEL-READ, Kevin B. *Global Value Chains: A framework for analysis*. Transnational Legal Theory, vol. 5, no. 3, 2014. Available at < ssrn.com/abstract=2312034>. Last visited: 12/02/2017. p. 15.

[14] KAPLINSKY, Raphael; MORRIS, Mike. *A Handbook for Value Chain Research*. International Development Research Centre – IDRC. 2001. *Apud*. DALLE, Demián; FOSSATI Verónica; LAVOPA Federico. *Industrial policy and developmental space: The missing piece in the GVCs debate*. CEI. Revista Argentina de Economía Internacional. Number 2. December, 2013. Available at: < www.cei.gob.ar/userfiles/GVC.pdf>. Last visited: 15/05/2017. p. 7.

[15] STEPHENSON, Sherry. *Global Value Chains: The New Reality of International Trade.* E15Initiative. Geneva: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum, 2013. Available at: <www.e15initiative.org/>. Last visited: 24/06/2017. p. 5.

[16] DALLE, Demián; FOSSATI Verónica; LAVOPA Federico. *Industrial policy and developmental space: The missing piece in the GVCs debate*. CEI. Revista Argentina de Economía Internacional. Number 2. December, 2013. Available at: < www.cei.gob.ar/userfiles/GVC.pdf>. Last visited: 15/05/2017. p. 7.

[17] STEPHENSON, Sherry. Opus cit. p. 6.

[18] INOMATA, Satoshi. *Analytical Frameworks for global value chains. An overview*. *In* WTO; WORLD BANK; IDE-JETRO; OECD; UIBE. *Global Value Chain Development Report 2017: Measuring and Analyzing the Impact of GVCs on Economic Development*. 2017. Available at: <www.wto.org/english/res_e/booksp_e/gvcs_report_2017.pdf.> Last visited: 18/03/2017. p. 17.

[19] STEPHENSON, Sherry. *Trade Governance Frameworks in a World of Global Value Chains: Policy Options*. E15 Expert Group on Global Value Chains: Development Challenges and Policy Options – Policy Options Paper. E15Initiative. Geneva: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum. 2016. p. 9.

others move up in activities within a same global chain. For instance, it would seem that China exports more intermediate products to other countries located downstream value chains, in order to support their final goods exports to the global market[20]. On the other hand, China has been the main hub for processing and assembling of final products, but to the extent that wages and other labor costs increased, developed countries located upstream have offshored or moved their production network to other developing countries with lower costs such as Vietnam and Cambodia[21], or more recently, even back to their own territory.

In view of their natural complexity, global value chains consist of challenge for all countries as it intensifies global competitiveness and requires sophisticated trade strategies. Global value chains are extremely dynamic and demand much of firms and countries. Independently of where a supplying firm is located in a value chain, standards, minimum quality and costs, and reliability requirements must be consistently met in order for firms to "stay in the game", as buyers' downstream continuously change strategies in order to achieve competitiveness. Another consequence of global value chains is that they are increasingly consolidating around strong global suppliers.

As global value chains refer to value added throughout the entire manufacturing process by the countries involves, international organizations have worked on the creation and development of databases that could shed some light on global value chains studies. They mostly focus on trying to identify the domestic and imported contents of value added in products exported within value chains, and also the foreign content in domestic consumptions.

The first database was the OECD-WTO Trade in Value Added (TiVA)[22]. The TiVa database provides a periodic assessment of exports of currently 63 countries, segmented into 18 different industries. There is also the UNCTAD-EORA GVC Database, that comprises an assessment of 187 countries in between 25 to 500 different industries; the

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[20] DEGAIN, Christophe; MENG, Bo; WANG, Zhi. *Recent trends in global trade and global value chains.* In Global Value Chain Development Report 2017: Measuring and Analyzing the Impact of GVCs on Economic Development. World Bank, OECD, IDE-JETRO, Research Center of Global Value Chains and WTO. 2017.p. 40.

[21] STEPHENSON, Sherry. *Trade Governance Frameworks in a World of Global Value Chains: Policy Options*. E15 Expert Group on Global Value Chains: Development Challenges and Policy Options – Policy Options Paper. E15Initiative. Geneva: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum. 2016. p. 10.

[22] OECD-WTO Trade in Value Added (TiVA). Available at: <http://www.oecd.org/sti/ind/measuringtradeinvalue-addedanoecd-wtojointinitiative.htm>. Last visited: 11/08/2017.

Asian International I-O tables, promoted by the Institute of Developing Economies (IDE-JETRO), which assesses 10 countries and 76 industries; the Global Trade Analysis Project (GTAP), promoted by the Purdue University, which assess 129 countries and 57 industries; and the World Input-Output Database (WIOD), promoted by a group of 11 institutions funded by the European Union, which assesses 40 countries and 35 industries[23].

Finally, as a practical example on how the expansion of global value chains came to be, as a consequence of an increase of costs in domestic markets, leading firms operating in global value chains set up production facilities in the BRIC countries (Brazil, Russia, China and India) – but mainly in China, who would later on have become the "factory of the world"[24]. Such offshoring activity would have consisted of an effort to achieve brand recognition and market share in consumer markets that were growing at high-speed, in addition to the lowering of manufacturing costs. Accordingly, this would have been a major driver of globalization, since the BRIC countries provided a large source of low-wage workers, poorly served domestic markets with growing middle classes, an increasingly capable infrastructure for manufacturing and trade, and abundant raw materials. Between 1995 and 2007, for instance, global export shares of the United States and Japan fell by 3.8 and 3.7 percentage points, respectively, while China went from four percent to 10.1 percent in that same period, making it the world export leader in place of the former two countries.[25]

On its turn, India has become known as the world's "back office," a country specialized in telecommunications services. Brazil has consolidated its position as a leading provider of agricultural and primary commodities such as soy and metals. Russia took the position of the owner of large reserves of natural resources and relevant military technologies. Eastern Europe countries started to compete with countries such as Mexico and North Africa that are active in the task of processing intermediates for subsequent exportation of certain apparel goods and automobiles[26].

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[23] UNCTAD. *Global Value Chains and Development. Investment and Value Added Trade in the Global Economy.* A Preliminary Analysis. New York & Geneva: United Nations. 2013. p. 11.
[24] GEREFFI, Gary. *Global value chains in a post-Washington Consensus world*. Review of International Political Economy, 21:1. 2014. pp. 15-16.
[25] Id., p. 19-20.
[26] Ibid., p.16.

2.2. Functioning of global value chains: positions and upgrading

In the first studies on the structure of global value chains, literature refers to the functioning of global value chains as "governance". Accordingly, the original formulation related to "producer-driven" and "buyer-driven" chains, where governance meant which actor had the power to control the organization of activities and the distribution of value along the chain, i.e. the producer or the buyer. Subsequent literature shifted towards a concern with how governance was exercised and no longer with who was in charge of the chain[27] [28].

In order to better understand the functioning of global value chains, economic scholars have developed different study models. One of such models, - the "smile curve" - shows in a simple representation the possible positions that a country participating in a global value chain may take considering the broad range of existing activities.[29] We reproduce below a simplified smile curve model[30], which illustrates the range of activities within a global value chain:

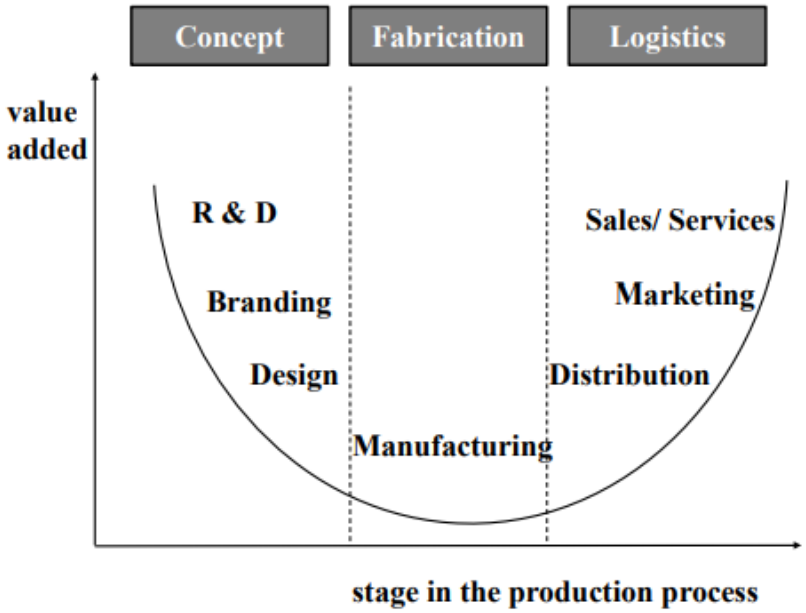
Figure 1 – Smile Curve

[27] IGLP Law and Global Production Working Group. *London Review of International Law*, Volume 4, Issue 1, 1 March 2016, Pages 57–79.

[28] GEREFFI, Gary. *The Organization of Buyer-Driven Global Commodity Chains: How U.S. Retailers Shape Overseas Production Networks*. In Commodity Chains and Global Capitalism. Praeger Publishers, Editors: Gary Gereffi, Miguel Korzeniewicz, pp.95-122.

[29] BERGER Axel, BRUHN Dominique, BENDER Andrea, FRIESEN Julia, KICK Katharina, KULLMANN Felix, ROBNER Robert, WEYRAUCH Svenja. *Deep Preferential Trade Agreements and Upgrading in Global Value Chains: the Case of Vietnam.* The German Development Institute / Deutsches Institut für Entwicklungspolitik (DIE). Bonn, 2016. p. 12.

[30] The authors provide an adaptation of the smile curve originally proposed by Stan Sih, based on RODRIGUE, Jean Paul; COMTOIS, Claude; Slack, Brian. *The geography of transport systems*. New York, NY: Routledge. 2013.



Source: Berger, Bruhn, Bender, Friesen, Kick, Kullmann, Robner and Weyrauch, based on proposition by Stan Sih

Under the smile curve model, upstream and downstream activities tend to generate greater value added than the activities that are in between the two (lower part of the smile curve). Upstream activities in the smile curve relate to higher value-added tasks mostly involving intellectual property such as design, branding and research and development (left side of the smile curve), as well as activities within manufacturing that precede assembly tasks. Downstream activities follow the manufacturing activities, consisting of distribution, marketing, sales and services (right side of the smile curve).[31]

Global value chains have not spread equally across the world, giving rise to a division between countries that participate in such chains. There would be the "headquarter economies", industrialized (high income) or developed countries - such as Unites States, countries of the European Union and Japan; and the "factory economies"[32] or developing countries – such as East Asia countries, China, Brazil and several others. Additionally, there is a division of categories based on the position the country occupies in each relevant value chain (and that does not relate to the smile curve); accordingly, countries can be

[31] BERGER Axel, BRUHN Dominique, BENDER Andrea, FRIESEN Julia, KICK Katharina, KULLMANN Felix, ROBNER Robert, WEYRAUCH, Svenja. *Deep Preferential Trade Agreements and Upgrading in Global Value Chains: the Case of Vietnam.* The German Development Institute / Deutsches Institut für Entwicklungspolitik (DIE). Bonn, 2016. p. 13.

[32] BALDWIN, Richard. *Trade And Industrialisation After Globalisation's 2nd Unbundling: How Building And Joining A Supply Chain Are Different And Why It Matters.* NBER Working Paper No. 17716 December 2011. p. 31. Available at:< www.nber.org/papers/w17716.pdf>. Last visited: 26/06/2016.

located upstream (activities of lower value added, such as extraction of raw material) or downstream (activities of higher value added) global value chains.

Under this division, developed countries are usually located downstream in global value chains, performing knowledge-intensive activities[33], where the higher valued added components tend to be located, including "intangible or knowledge-based assets" such as research, branding and design[34]. Developing countries are normally located upstream, at the manufacturing part of the production process, which comprises assembly tasks highly dependent on imported contents[35], low value added or labor-intensive activities[36].

Furthermore, global value chains have led to a growth in exports of intermediates in comparison to exports of final products. This ultimately raises competitiveness between countries as countries intend to develop activities of that can bring greater returns. In this regard, global value chains studies have brought about the concept of "upgrading".

This concept was originally developed within international trade studies, and referred to a country's production of goods of higher value than those products it would be then producing. As trade relations within value chains became more complex, the concept would later evolve to refer to the manufacturing of products through the performance of several activities that each adds its own portion of value to the final good[37]. In general terms, upgrading can be understood as moving to higher value activities in global value chains in order to increase benefits (e.g. profits, value-added, capabilities) from participating in global production. On its turn, downgrading would indicate a movement within global value chains towards lower value added activities.

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[33] DALLE, Demián; FOSSATI Verónica; LAVOPA Federico. *Industrial policy and developmental space: The missing piece in the GVCs debate*. CEI. Revista Argentina de Economía Internacional. Number 2. December, 2013. Available at: < http://www.cei.gob.ar/userfiles/GVC.pdf>. Last visited: 15/05/2017. p. 7.

[34] OECD. *Interconnected economies: Benefiting from global value chains*. Paris: OECD Publishing. 2013. *Apud*. BERGER Axel, BRUHN Dominique, BENDER Andrea, FRIESEN Julia, KICK Katharina, KULLMANN Felix, ROBNER Robert, WEYRAUCH, Svenja. *Deep Preferential Trade Agreements and Upgrading in Global Value Chains: the Case of Vietnam.* The German Development Institute / Deutsches Institut für Entwicklungspolitik (DIE). Bonn, 2016. p. 13.

[35] UNCTAD. *Global Value Chains and Development. Investment and Value Added Trade in the Global Economy. A Preliminary Analysis*. New York & Geneva: United Nations. 2013. *Apud.* BERGER Axel, BRUHN Dominique, BENDER Andrea, FRIESEN Julia, KICK Katharina, KULLMANN Felix, ROBNER Robert, WEYRAUCH Svenja. *Deep Preferential Trade Agreements and Upgrading in Global Value Chains: the Case of Vietnam.* The German Development Institute / Deutsches Institut für Entwicklungspolitik (DIE). Bonn, 2016. p. 13.

[36] DALLE, Demián; FOSSATI Verónica; LAVOPA Federico. *Industrial policy and developmental space: The missing piece in the GVCs debate*. CEI. Revista Argentina de Economía Internacional. Number 2. December, 2013. p. 7.Available at: < www.cei.gob.ar/userfiles/GVC.pdf>. Last visited: 15/05/2017

[37] NADIM, Ahmad; PRIMI, Annalisa. *From domestic to regional to global: Factory Africa and Factory Latin America? In* WTO; WORLD BANK; IDE-JETRO; OECD; UIBE. *Global Value Chain Development Report 2017: Measuring and Analyzing the Impact of GVCs on Economic Development*. 2017. Available at: <www.wto.org/english/res_e/booksp_e/gvcs_report_2017.pdf.> Last visited: 18/03/2017. pp.69-70.

Literature on the topic brings different comprehensions of upgrading in global value chains. The most complete picture distinguishes four definitions of upgrading: process upgrading, product upgrading, functional upgrading and intersectoral or chain upgrading[38].

Process upgrading refers to increasing efficiency through advanced technology or better organization of the production process within firms, as well as enhancing relationships with other firms active in the chain. Product upgrading refers to a shift in the product itself, that is, producing goods of better quality, launching a new product or changing the design of products. Both process and product upgrading mean moving up the smile curve. Functional upgrading refers to occupying higher value added positions in the smile curve mentioned above, but either upstream or downstream. Finally, intersectoral or chain upgrading means entering a new sector of higher value added, which means creating a new smile curve[39] [40].

It has been argued that success in upgrading could be achieved by beginning at process upgrading (e.g. assembling), passing to product upgrading (e.g. manufacturing output); going to functional upgrading (e.g. design or marketing) and finally reaching the intersectoral upgrading (new chain)[41]. Accordingly, this would have been the path followed by a number of East Asian firms[42].

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[38] BERGER Axel, BRUHN Dominique, BENDER Andrea, FRIESEN Julia, KICK Katharina, KULLMANN Felix, ROBNER Robert, WEYRAUCH, Svenja. *Deep Preferential Trade Agreements and Upgrading in Global Value Chains: the Case of Vietnam.* The German Development Institute / Deutsches Institut für Entwicklungspolitik (DIE). Bonn, 2016. p. 12.

[39] HUMPHREY, John; SCHMITZ, Hubert. *How does insertion in global value chains affect upgrading in industrial clusters*. Regional Studies, 36(9). 2002. pp. 1017–1027. Apud. BERGER Axel, BRUHN Dominique, BENDER Andrea, FRIESEN Julia, KICK Katharina, KULLMANN Felix, ROBNER Robert, WEYRAUCH Svenja. *Deep Preferential Trade Agreements and Upgrading in Global Value Chains: the Case of Vietnam.* The German Development Institute / Deutsches Institut für Entwicklungspolitik (DIE). Bonn, 2016. p. 12.

[40] DALLE, Demián; FOSSATI Verónica; LAVOPA Federico. *Industrial policy and developmental space: The missing piece in the GVCs debate*. CEI. Revista Argentina de Economía Internacional. Number 2. December, 2013. Available at: < www.cei.gob.ar/userfiles/GVC.pdf>. Last visited: 15/05/2017. p. 8.

[41] GEREFFI, Gary; STARK, Karina Fernández. *Global Value Chain Analysis: A Primer*. Center on Globalization, Governance & Competitiveness (CGGC), Duke University. 2011. *Apud.* DALLE, Demián; FOSSATI Verónica; LAVOPA Federico. *Industrial policy and developmental space: The missing piece in the GVCs debate*. CEI. Revista Argentina de Economía Internacional. Number 2. December, 2013. Available at: < http://www.cei.gob.ar/userfiles/GVC.pdf>. Last visited: 15/05/2017. p. 8.

[42] DALLE, Demián; FOSSATI Verónica; LAVOPA Federico. Opus cit. p. 8.

Attention is called to the fact that upgrading is not an easy task, requiring from national governments the creation of proper incentives and implementation of effective policies that can help firms move on and move up in value chains[43].

2.3 Characteristics of global value chains

The simpler 20th century trade referred almost exclusively to goods crossing borders, but the 21st century trade became much more complex since global value chains go much beyond the mere trade in parts and components. Global value chains are characterized and driven by trade in goods, particularly parts and components, and they rely on several related factors, such as the lowering of tariffs and non-tariff measures (also called behind-the-border measures), foreign investment, infrastructure (telecom, internet, logistics), and coherent trade policies that are able to address the needs of global value chains.

Increasingly, goods began to be produced and services rendered within international supply chains. This structure resulted in a significant increase of imported intermediate products, since inputs that used to be produced locally could then be imported from suppliers located in different countries. High production and transaction costs induce vertical integration of production within a single firm, whereas low transaction costs reduce the need for vertical integration[44]. For this reason, the lowering of costs of any and all kinds is paramount for the free flow of capital and goods.

Tariffs are at first the most significant barrier to the free flow trade in goods and services. At the time that trade liberalization was put in place, low tariffs on inputs (raw materials) and high tariffs to protect final products helped developing and promoting domestic firms and industries. The new structure of international trade marked by global value chains is based, however, on multiple cross border trade, on sourcing of inputs and on extensive trade of intermediate products.

As such, tariffs have meaningful consequences. They do not just mean a higher price of the sourced input, but also increase the price of what will be the final product. Consequently, the competitiveness of the final product is reduced when taken into consideration that there is a fearsome international competition for the same good.

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[43] GEREFFI, Gary. *Global value chains in a post-Washington Consensus world*. Review of International Political Economy, 21:1. 2014. p. 18.

[44] ICTSD. *Global Value Chains Group; Proposals and Analysis*. Geneva, Switzerland. 2013. p. 20. Available at <www.ictsd.org>.

This is to say that the rise of global value chain trade means that firms must source inputs and intermediates from the most competitive suppliers, in order to ensure their very own competitiveness and therefore tariffs can imply a relevant trade restriction. This is the reason why tariffs have taken the larger portion of countries interests in trade liberalization throughout the years.

The price of inputs alone is not the only factor driving buying decisions in global value chains, so a country's trade policy aimed solely at reducing tariffs is not enough to promote its firms participation or competitiveness[45]. Even where tariffs are low, many countries impose behind-the-border barriers that have a large impact on trade[46].

Global value chains are highly sensitive and directly related to costs of infrastructure, time and transportation. This implies that a higher level of protection and existence of behind-the-border measures affects countries whose participation in global value chains are dependent on intermediate imports and rendering of services. Accordingly, barriers to trade are present in a number of areas, and originate from regulations and institutions. Examples of behind-the-border issues are national rules and procedures relating to investment, logistics, customs, services restrictions, intellectual property rights and competition.

Services are another factor of high importance as they are present throughout the production chains, in upstream and downstream activities. Depending on the industry, services may consist of a large portion of value added within the specific chain. In particular, the services sector has played a significant role in attracting foreign direct investment in tasks involving goods as well as services[47]. Smaller firms are also allowed an easier entry into global value chains through the providing of specific services. Even

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[45] STEPHENSON, Sherry. *Global Value Chains: The New Reality of International Trade.* E15Initiative. Geneva: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum, 2013. Available at: <www.e15initiative.org/>. Last visited 24/06/2017.

[46] DANIELSEN, Dan. *Economic Approaches to Global Regulation: Expanding the International Law and Economics Paradigm*, 10 J. Int'l Bus. & L. p. 23. 2011. SOKOL, Daniel. *Limiting Anticompetitive Government Interventions that Benefit Special Interests*, 17 Geo. Mason L. Rev. p. 119. 2009. *Apud*. SOBEL-READ, Kevin B. *Global Value Chains: A framework for analysis*. Transnational Legal Theory (vol. 5, no. 3, 2014). Available at < ssrn.com/abstract=2312034>. Last visited: 12/02/2017. p. 23.

[47] DRAKE-BROCKMAN, J.; STEPHENSON, Sherry. *Implications for 21st Century Trade and Development of the Emergence of Services Value Chains*. Study for ICTSD, Geneva, Switzerland. 2012. Available at <ictsd.org/downloads/2012/11/ implications-for-21st-century-trade-and-development-ofthe-emergence-of-services-value-chains.pdf.>. Last visited 24/06/2017. *Apud.* STEPHENSON, Sherry. *Global Value Chains: The New Reality of International Trade.* E15Initiative. Geneva: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum, 2013. Available at: <www.e15initiative.org/>. Last visited 24/06/2017. p. 3.

though trade barriers relating to services would generally be slowly declining, they are still much higher than trade barriers relating to goods[48].

Literature points that infrastructure are good starting points in order for countries to participate more in global value chains. Logistics are essential, so that countries with poor logistics performance could hardly play central roles in global value chains[49]. In this regard, there are specific infrastructures according to the industry underlying a global value chain, such as transportation and telecommunications. Distance between suppliers and the distance to markets are important features that demand a smooth and effective operation of transport and ancillary services. Such services would consist of aspects related to border management, such as speed, automation in clearance procedures through customs, efficient port operations and cargo handlers, in addition to the existence of trade-related infrastructure and good transport services, distribution, telecommunication and express delivery services[50].

Finally, global value chains require the implementation of coherent trade policies that are able to address the needs of global value chains. This would include, for example, a sound protection of intellectual property rights and access to financial services, among others.

2.4 The nature of value chains: regional or global

Regardless of having received the qualification of being "global", global value chain scholars submit that value chains would be of a regional nature[51]. Despite the fast globalization that occurred up until the 2008/2009 crisis, available evidence shows that the majority of international production networks are in reality regionally oriented. For instance, literature argues that between 1995 and 2015, intraregional exports in Europe, America and Asia of intermediate and final products show large shares of intraregional

[48] STEPHENSON, Sherry. *Global Value Chains: The New Reality of International Trade.* E15Initiative. Geneva: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum, 2013. Available at: <www.e15initiative.org/>. Last visited 24/06/2017.

[49] DOLLAR David. *Global Value Chins Provide New Opportunities to Developing Countries.* Brookings Institution. Order the Chaos blog. July, 2017. Available at: </www.brookings.e du/blog/order-from-chaos/2017/07/19/global-value-chains-provide-new-opportunities-to-developing-countries/>. Last visited: 19/09/2017.

[50] See for example, STEPHENSON, Sherry. *Global Value Chains: The New Reality of International Trade.* E15Initiative. Geneva: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum, 2013. Available at: <www.e15initiative.org/>. Last visited 24/06/2017. p. 3. BALDWIN, Richard. *WTO 2.0: Global Governance of Supply-Chain Trade*, in CEPR Policy Insight No.64, December (London, UK, Centre for Economic Policy Research). 2012. p. 5.

[51] Id. pp. 2-4.

linkages among them, confirming that global value chains are primarily created at the regional level[52].

Regionalism of value chains is also argued by other scholars, which submit that they would be comprised of central hubs identified as "factories": Factory Asia, which would have first been led by Japan and is currently led by China; Factory Europe, which would be led by Germany; and Factory North America, which would be led by the United States[53]. Accordingly, Europe and North America would consist centers of demand and Asia would consist of a center of supply.

Factors such as transportation costs, distance, communication, and the quality of infrastructure would have played their part in the regionalization of value chains as well. Additionally, but no less important, preferential trade agreements formed under regional arrangements have also induced to the creation of regional value chains through specific provisions addressing regional trade (such as rules of origin which will be explained further ahead), that would have affected the organization and specialization of tasks and related investment flows.

Having explained the debate around the nature of value chain, for purposes of this study, we will nevertheless employ the term "global value chain" to refer to all types of value chains, regardless of whether they are regional or not.

2.5 The development debate within global value chain studies

One additional debate within relevant literature on global value chains refer to their impact over development or industrialization strategies of countries. The way global value chains are structured implicates that the benefits derived from participation are asymmetrically distributed between developed and developing countries. This is because, in simple terms, the activities that generate returns (either value added or even profits) are

[52] DEGAIN, Christophe; MENG, Bo; WANG, Zhi. *Recent trends in global trade and global value chains.* In Global Value Chain Development Report 2017: Measuring and Analyzing the Impact of GVCs on Economic Development. World Bank, OECD, IDE-JETRO, Research Center of Global Value Chains and WTO. 2017. p. 39.

[53] BALDWIN, Richard. *WTO 2.0: Global Governance of Supply-Chain Trade*, in CEPR Policy Insight No.64, December (London, UK, Centre for Economic Policy Research). 2012. p. 5.

usually owned by the developed countries, while the low value activities are normally performed by the developing countries[54].

Additionally, even upgrading within value chains could have negative consequences for developing countries. Productivity seems to slow down as the technology gap between countries located in high and low value added positions diminishes, and a consequent raise in domestic wages of developing countries could lower such countries' comparative advantages in outsourcing and offshoring processes. As a result, it is argued that depending on the characteristics of the global value chain, developing countries could risk being caught in a "middle-income trap" or "imitation trap"[55], and "immiserizing growth"[56] [57].

The consequences of participating in global value chains has also raised a debate in relevant literature and international organizations such as the Organization for Economic Co-operation and Development ("OECD"), the WTO and the United Nations Conference on Trade and Development ("UNCTAD") on whether integrating and participating in global value chains can lead to higher levels of development, especially for those countries that locate within the range of low value added activities. For these organizations and certain scholars, there would be a positive relationship between participation in global value chains and development.

Accordingly, there would be positive results with regard to productivity such as an increase in efficiency, given the rise of international competition; greater access to technology and knowledge; and growth of specialization and economies of scale. Productivity would also be a positive consequence of global value chains to the extent that participants have access to cheaper and higher quality intermediate inputs[58].

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[54] DALLE, Demián; FOSSATI Verónica; LAVOPA Federico. *Industrial policy and developmental space: The missing piece in the GVCs debate*. CEI. Revista Argentina de Economía Internacional. Number 2. December, 2013. Available at: < www.cei.gob.ar/userfiles/GVC.pdf>. Last visited: 15/05/2017. pp. 7-8.

[55] AGÉNOR, Pierre-Richard; CANUTO, Otaviano; JELENIC, Michael. Avoiding Middle-Income Growth Traps. Economic Premise; No. 98. World Bank. 2012. *Apud*. BRUHN, Dominique, Global Value Chains and Deep Preferential Trade Agreements: Promoting Trade at the Cost of Domestic Policy Autonomy? (August 8, 2014). p. 1.

[56] KAPLINSKY, Raphael; MORRIS, Mike. *A Handbook for Value Chain Research*. International Development Research Centre – IDRC. 2001. *Apud.* DALLE, Demián; FOSSATI Verónica; LAVOPA Federico. *Industrial policy and developmental space: The missing piece in the GVCs debate*. CEI. Revista Argentina de Economía Internacional. Number 2. December, 2013. Available at: < www.cei.gob.ar/userfiles/GVC.pdf>. Last visited: 15/05/2017. p. 8.

[57] BHAGWATI, Jagdish. *Immiserizing Growth: A Geometrical Note.* Review of Economic Studies 25, (June) 1958. pp. 201-205.

[58] DALLE, Demián; FOSSATI Verónica; LAVOPA Federico. *Industrial policy and developmental space: The missing piece in the GVCs debate*. CEI. Revista Argentina de Economía Internacional. Number 2. December, 2013. Available at: < http://www.cei.gob.ar/userfiles/GVC.pdf>. Last visited: 15/05/2017. p. 5.

More importantly, for such organizations and scholars, global value chains would consist of a fast track to development since firms would not be required to specialize in all aspects of a given product.

Before the appearance of global value chains, countries such as the United States, Germany and Japan, had to build a complete industrial base in order to become competitive. But today, developing countries would not have to build an entire value chain in order to be a part of this new structure of internal production, and consequently industrialize. Instead, they could specialize in certain tasks in a given global value chain, and thus have access to available international markets of goods and services[59] or take advantage of a commodity or sector in which they have comparative advantages[60] (for example, available labor force, low wages, natural resources). This way, firms - including small farmers, small and medium-sized firms that act as suppliers of inputs or service and logistics – could concentrate on one or just a few specific stages of production[61].

By reaching new markets within global value chains, developing countries would have access to opportunities of adding more value within their domestic industries, creating and expanding jobs and raising their income. Entering an already established global value chain would be a significantly faster and surer path to industrialization than the adoption of classic import-substitution policies[62].

There would be two important directions for countries that intend to achieve growth through integration in global value chains. One is that imports from more competitive international suppliers could be an important driver of export growth. Another is that the creation of strong domestic chains could mean a stepping-stone towards global

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[59] UNCTAD. *Global Value Chains and Development. Investment and Value Added Trade in the Global Economy. A Preliminary Analysis*. New York & Geneva: United Nations. 2013. UNCTAD. *World Investment Report 2013. Global Value Chains: Investment and Trade for Development*. New York & Geneva: United Nations. 2013. *Apud.* DALLE, Demián; FOSSATI Verónica; LAVOPA Federico. *Industrial policy and developmental space: The missing piece in the GVCs debate*. CEI. Revista Argentina de Economía Internacional. Number 2. December, 2013. Available at: < http://www.cei.gob.ar/userfiles/GVC.pdf>. Last visited: 15/05/2017. pp. 5.

[60] NADIM, Ahmad; PRIMI, Annalisa. *From domestic to regional to global: Factory Africa and Factory Latin America? In* WTO; WORLD BANK; IDE-JETRO; OECD; UIBE. *Global Value Chain Development Report 2017: Measuring and Analyzing the Impact of GVCs on Economic Development*. 2017. Available at: <www.wto.org/english/res_e/booksp_e/gvcs_report_2017.pdf.> Last visited: 18/03/2017. p. 72.

[61] STEPHENSON, Sherry. *Trade Governance Frameworks in a World of Global Value Chains: Policy Options*. E15 Expert Group on Global Value Chains: Development Challenges and Policy Options – Policy Options Paper. E15Initiative. Geneva: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum. 2016. p. 9.

[62] BALDWIN, Richard. *Trade And Industrialisation After Globalisation's 2nd Unbundling: How Building And Joining A Supply Chain Are Different And Why It Matters.* NBER Working Paper No. 17716 December 2011. p. 30.

integration[63]. In addition, integration in global supply chains is commonly associated to an increase of foreign direct investment, technology transfer and upgrading, knowledge spillovers from global firms to local suppliers, and higher economic growth[64].

Distancing from this view, other scholars provide a counterbalance to the pro-development speech adopted by such international organizations, by concluding that it is necessary to focus debates on the relationship between the insertion in global value chains and the creation of adequate public policies to achieve economic development. In other words, it is not insertion into value chains itself the instrument for achieving development, but rather a combination of that with proper trade policies. Similarly, others advocate the importance of identifying the barriers that prevent or make it hard for developing countries to perform activities within global value chains that can generate greater returns and thus help them to achieve the benefits of participation[65].

There would also be a concern that participating in global value chains does not result in actual balance between economic development and social development. Accordingly, a developing country's insertion into global value chains does not necessarily create more or better jobs in the invested countries and could even result in the worsening of labor and social conditions[66].

To such scholars, those international institutions are highly optimistic with regard to globalization, global value chains and their potential and current effects on economic development, and, at the same time, they are silent on a number of other global value

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[63] NADIM, Ahmad; PRIMI, Annalisa. *From domestic to regional to global: Factory Africa and Factory Latin America? In* WTO; WORLD BANK; IDE-JETRO; OECD; UIBE. *Global Value Chain Development Report 2017: Measuring and Analyzing the Impact of GVCs on Economic Development*. 2017. Available at: <www.wto.org/english/res_e/booksp_e/gvcs_report_2017.pdf.> Last visited: 18/03/2017. p. 74.

[64] ESTEVADEORDAL, Antoni; BLYDE, Juan; HARRIS, Jeremy; MARTINCUS, Christian Volpe. *Global Value Chains and Rules of Origin.* E15Initiative. ICTSD–IADB think piece prepared for the E15 Expert Group on Global Value Chains: Development Challenges and Policy Options, Geneva, Switzerland. 2013. ESTEVADEORDAL, Antoni, SUOMINEN, Kati, BLYDE, Juan. *Are Global Value Chains Really Global? Policies to Accelerate Countries' Access to International Production Networks*. E15Initiative. Geneva: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum. 2013. *Apud.* STEPHENSON, Sherry. *Trade Governance Frameworks in a World of Global Value Chains: Policy Options*. E15 Expert Group on Global Value Chains: Development Challenges and Policy Options – Policy Options Paper. E15Initiative. Geneva: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum. 2016. p. 9.

[65] DALLE, Demián; FOSSATI Verónica; LAVOPA Federico. *Industrial policy and developmental space: The missing piece in the GVCs debate*. CEI. Revista Argentina de Economía Internacional. Number 2. December, 2013. Available at: < www.cei.gob.ar/userfiles/GVC.pdf>. Last visited: 15/05/2017. pp. 9-11.

[66] BARRIENTOS, Stephanie; GEREFFI, Gary; ROSSI, Arianna. *Economic and Social Upgrading in Global Production Networks:* Developing a Framework for Analysis. Working Paper 3. Capturing the Gains. July. 2010. *Apud*. DALLE, Demián; FOSSATI Verónica; LAVOPA Federico. *Industrial policy and developmental space: The missing piece in the GVCs debate*. CEI. Revista Argentina de Economía Internacional. Number 2. December, 2013. Available at: < www.cei.gob.ar/userfiles/GVC.pdf>. Last visited: 15/05/2017. p. 11.

chain-related aspects that are more relevant. For instance, equally important would be decisions on the location in chain's activities and related labor divisions, and the impacts or limitations that the existing international legal framework brings to national public policies which could create proper incentives for developing countries to operate in value chains. Examples of relevant international provisions that have impact over national policies and participation in global value chains would be rules on international protection of intellectual property rights and investments, as well the level of tariffs applied developed countries[67].

Simply integrating into global value chains would not ensure economic development to developing countries. Instead, the position that such countries take within global value chains is what would be determinant on the benefits derived from the participation in such chains.[68] Choices of trade policy by national governments would thus be of high importance, since they provide the required incentives and support to do so.

Offshoring and outsourcing decisions of multinational firms are responsible for inducing the creation of global value chains worldwide. Therefore, greater gains deriving from global value chain participation could be felt when firms operating in global value chains though offshoring would effectively contribute to capacity building, develop relationships with local firms, and engage with local institutions, such as industry associations and universities, for the development of the local industry[69].

Within the global value chain, debate around other countries that are part of a same global value chain has also been raised in literature. This is to say that it matters who a country's trading partners are, how integrated into global value chains they are and how far that country is from economic centers and markets[70]. Some scholars refer to this as the "neighborhood effects". Under the neighborhood effects, by arguing that even if a well-structured country has low labor costs and high connectivity within a global chain, it will suffer just the same if their neighbor countries do not present the same conditions. As such,

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[67] DALLE, Demián; FOSSATI Verónica; LAVOPA Federico. *Opus cit.* p. 5.
[68] Idem. p. 9.
[69] GEREFFI, Gary; FERNANDEZ-STARK, Karina; PSILOS Phil. *Skills for Upgrading: Workforce Development and Global Value Chains in Developing Countries*. Durham, N.C.: Duke Center on Globalization, Governance & Competitiveness and the Research Triangle Institute. 2011.
[70] NADIM, Ahmad; PRIMI, Annalisa. *From domestic to regional to global: Factory Africa and Factory Latin America? In* WTO; WORLD BANK; IDE-JETRO; OECD; UIBE. *Global Value Chain Development Report 2017: Measuring and Analyzing the Impact of GVCs on Economic Development*. 2017. Available at: <www.wto.org/english/res_e/booksp_e/gvcs_report_2017.pdf.> Last visited: 18/03/2017. pp. 74-75.

they might negatively affect trade and (presumably) growth.[71]. As will be seen further ahead, this would be case of the relationship between Brazil and Latin America countries.

Finally, the size and capacity of countries' firms would also be relevant for the success in participating in global value chains[72]. Developing countries have a large number of small and medium firms than developed ones. Smaller firms have more difficulties in entering or participating in global value chains, either for having to deal with numerous trade barriers – in particular behind-the-border measures – or for having to compete with larger and more capable firms.

Regardless of which side is right, so far the efforts towards participation and integration in global value chains made by developing countries (and in particular Latin America countries), are insufficient to assess the influence and results of the "development" speech[73]. It still to be seen whether following such approach will lead to the expected results.

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[71] WILSON, William Julius. *The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy*. Second Edition. University of Chicago Press. Chicago: 2012.

[72] NADIM, Ahmad; PRIMI, Annalisa. *From domestic to regional to global: Factory Africa and Factory Latin America? In* WTO; WORLD BANK; IDE-JETRO; OECD; UIBE. *Global Value Chain Development Report 2017: Measuring and Analyzing the Impact of GVCs on Economic Development*. 2017. Available at: <www.wto.org/english/res_e/booksp_e/gvcs_report_2017.pdf.> Last visited: 18/03/2017. pp. 74-75.

[73] This could be due to the fact that such institutions and scholars are mostly related to developed countries and thus reflect their interests.

3 PREFERENTIAL TRADE AGREEMENTS

3.1 Links between the WTO, preferential trade agreements and global value chains

As demonstrated in the first chapter, current international trade is much more complex than international trade of the past century. Today the existence of complex global value chains are one of its main features and have contributed to the adding of complexity to trade relations all around the world. In this new trade arrangement, more and more multinational firms offshore production stages around different countries, and at the same time they outsource inputs, intermediates and services also from different countries[74]. As such, global value chains continually change and rearrange economic and trade relations.

As a result, global value chains give rise to a number of issues, such as the operation of multinational firms, national policies, the role of services and logistics, the link between investment and trade, and the influence and role of trade agreements in the creation and functioning of global value chains[75].

Under a strictly legal standpoint, the reality of global value chains brings challenges to conventional legal disciplinary boundaries, comprising different kinds of law, such as contract law, corporate law, antitrust law, intellectual property law and international law, among many others. This demands a deeper look at and attention to the role law can play in the configuration of global value chains, since no kind of law alone would be able to address the complexity of relationships arising from global value chains[76].

Thus, the current international trade that is marked by the operation of global value chains seem to have required a rethinking of the shaping of international trade rules. As such, a debate between the role played by the WTO rules and the rules drafted under preferential trade agreements arose in the relevant literature. As seen in the previous

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[74] WTO. *World Trade Report 2011. The WTO and preferential trade agreements: From co-existence to coherence*. World Trade Organization. 2011. Available at: <www.wto.org/english/res_e/booksp_e/anrep_e/world_trade_report11_e.pdf>. Last visited: 30/05/2017. p. 113.

[75] STEPHENSON, Sherry. *Global Value Chains: The New Reality of International Trade.* E15Initiative. Geneva: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum, 2013. Available at: <www.e15initiative.org/>. Last visited 24/06/2017.pp. 1-12.

[76] SOBEL-READ, Kevin B. *Global Value Chains: A framework for analysis*. Transnational Legal Theory vol. 5, no. 3, 2014. Available at < https://ssrn.com/abstract=2312034>. Last visited: 12/02/2017. p. 1.

chapter, trade in global value chains would be essentially regional, so there would seem to be a tendency to set rules governing global value chains regionally and no longer multilaterally[77].

Initially, the WTO rules and traditional preferential trade agreements would have been designed to liberalize a more traditional form of trade[78] within the context of a simpler reality (or assumption of such) that countries only traded final goods and that manufacturers would only aim at protecting their products[79]. However, as trade became more complex, intermediates trade became just as important as trade in final goods, and services played an eminent role within production networks and so on.

Literature questions the role of WTO rules within the context of the new reality of international trade marked by global value chains in view of its so-called "silo approach" or in simpler terms, policy fragmentation. Such institution's multilateral rules would be designed to address several relevant areas, but in a rather isolated manner. As such, it would operate in "vertical silos", with parallel and diverse rules governing goods, services, intellectual property and so on, that would only have a correlation between on another through the institutional framework and dispute settlement mechanism of the organization[80]. As a result, this could have the consequence of reducing the relevance of the WTO rules, as the effects of addressing one policy through only one agreement would be minimal if others that affect that same area were not addressed as well.

As a consequence, multilateral negotiations within the WTO would not seem to be the path for the moment, for three reasons. Firstly, countries may not be ready for negotiations (especially global value chain topics that are naturally more complex), as

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[77] BALDWIN, Richard. *WTO 2.0: Global Governance of Supply-Chain Trade*, in CEPR Policy Insight No.64, December (London, UK, Centre for Economic Policy Research). 2012. p. 5.

[78] Baldwin, for example, argues that multilateral rules possibly would have been more efficient than regional rules, however negotiating them within the WTO framework would have been too cumbersome and slow because most members at the time were not involved in international trade. BALDWIN, Richard. *WTO 2.0: Global Governance of Supply-Chain Trade*, in CEPR Policy Insight No.64, December (London, UK, Centre for Economic Policy Research). 2012. p. 9.

[79] YI, Kei-Mu. *Can vertical specialization explain the growth of world trade?* Journal of Political Economy, Vol. 111, No. 1. February, 2003. pp. 52-102. A*pud*. WTO. *World Trade Report 2011. The WTO and preferential trade agreements: From co-existence to coherence*. World Trade Organization. 2011. Available at: < https://www.wto.org/english/res_e/booksp_e/anrep_e/world_trade_report11_e.pdf>. Last visited: 30/05/2017. p. 113.

[80] STEPHENSON, Sherry. *Trade Governance Frameworks in a World of Global Value Chains: Policy Options*. E15 Expert Group on Global Value Chains: Development Challenges and Policy Options – Policy Options Paper. E15Initiative. Geneva: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum. 2016. p. 13.

shown by the stalemate of the Doha Round[81]. Secondly, many of the policy areas that are relevant for global value chains including investment, certain subsidies, environment, public procurement, data protection and privacy policies are not part of the Doha agenda[82]. Thirdly, the complete functioning and effects of trade within global value chains are not yet quite clear for countries. Therefore, further statistical and analytical data on how world trade is currently being carried out in view of global value chains and the way its structure is changing would be required[83].

Two factors would have been determinant upon the shift in legal governance from the WTO's multilateralism to the regionalism of preferential trade agreements. One would be the growth rates in many large developing countries, particularly China. The second would be the spread of offshoring and outsourcing activities of firms around the world engaged in global value chains. Accordingly, these factors would have made trade more complex and led to policy agendas turned to production networks going beyond common market access issues that were usually the main topics regulated by traditional trade agreements (e.g. tariffs), in order to address relevant behind-the-border issues arising from the more complex trade relations within global value chains[84]. As production networks spread, more specific rules were required to govern those cross border relations.

Literature argues that too much hope deposited in the WTO as a government-to-government institution has left it somehow aside as the adequate forum to address trade, in view of the absence of bringing actual results for a long period, in view of governmental conflicts and rivalry. Accordingly, this would have caused the international business community to lose interest in the WTO and therefore turn to preferential trade agreements as the instrument to meet their needs[85].

As the silo approach provided by the WTO would no longer meet the needs of the global value chain trade, discussions and negotiations would thus require rethinking.

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[81] STEPHENSON, Sherry. *Trade Governance Frameworks in a World of Global Value Chains: Policy Options*. E15 Expert Group on Global Value Chains: Development Challenges and Policy Options – Policy Options Paper. E15Initiative. Geneva: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum. 2016. p. 17.

[82] Idem. Abstract.

[83] Ibidem. pp. 1-12.

[84] RUTA, Michele. *Preferential trade agreements and global value chains: Theory, evidence, and open questions*. *In* WTO; WORLD BANK; IDE-JETRO; OECD; UIBE. *Global Value Chain Development Report 2017: Measuring and Analyzing the Impact of GVCs on Economic Development*. 2017. Available at: <www.wto.org/english/res_e/booksp_e/gvcs_report_2017.pdf.> Last visited: 18/03/2017. pp. 175-185.

[85] NAKATOMI, Michitaka. *Global Value Chain Governance in the Era of Mega FTAs and a Proposal of an International Supply Chain Agreement.* Available at: <www.rieti.go.jp/en/special/policy-update/050.pdf.>. Last visited: 18/03/2017. p. 7.

Complex cross-border trade would demand more complex rules to regulate it[86]. Trade-related issues such as transparency, standards, competition, public procurement and investment, in both goods and services, should be thought of and governed as a package. Rules on such topics should be horizontally applied, as to offer a model of trade governance more consistent with trade of global value chains[87].

In this regard, preferential trade agreements and autonomous reforms carried out by developing countries [88] seem to have gone beyond the WTO by further addressing issues that are not contained in WTO-related agreements or by providing for deeper commitments in areas under the WTO umbrella. Examples of areas that preferential trade agreements have gone further would be procurement, investment, competition policy, standards and intellectual property rights[89]. Addressing and harmonizing such new disciplines could also be taking place also in the so-called "mega-regionals" such as the Comprehensive and Progressive Agreement for Trans-Pacific Partnership ("CPTPP")[90] and "Transatlantic Trade and Investment Partnership ("TTIP") under negotiation or discussion.[91]

Finally, while studying the role of preferential trade agreements, most scholars believe that the new wave of preferential agreements would complement (as opposed to being a problem to) the multilateral trade system of the WTO. This is because, as mentioned above, certain key policy areas that have not been agreed to under multilaterally would be more efficiently negotiated and regulated between a smaller group of countries that have with similar characteristics and purposes[92]. In addition, from a global value

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[86] BALDWIN, Richard. *WTO 2.0: Global Governance of Supply-Chain Trade*, in CEPR Policy Insight No.64, December. London, UK, Centre for Economic Policy Research. 2012. p. 9.

[87] STEPHENSON, Sherry. *Trade Governance Frameworks in a World of Global Value Chains: Policy Options*. E15 Expert Group on Global Value Chains: Development Challenges and Policy Options – Policy Options Paper. E15Initiative. Geneva: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum. 2016. p. 13.

[88] BALDWIN, Richard. Opus cit. pp. 9-10.

[89] ALDONAS, Grant. *Trade Policy in a Global Age*. E15Initiative. Geneva: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum. 2013. Apud. STEPHENSON, Sherry. *Trade Governance Frameworks in a World of Global Value Chains: Policy Options*. E15 Expert Group on Global Value Chains: Development Challenges and Policy Options – Policy Options Paper. E15Initiative. Geneva: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum. 2016. p. 10.

[90] Currently comprising Australia, Brunei, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, and Vietnam. The CPTPP has replaced the Trans-Pacific Partnership, in view of the United States' withdraw.

[91] Currently comprising: ASEAN (Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Viet Nam), Australia, China, India, Japan, South Korea and New Zealand.

[92] RUTA, Michele. *Preferential trade agreements and global value chains: Theory, evidence, and open questions*. *In* WTO; WORLD BANK; IDE-JETRO; OECD; UIBE. *Global Value Chain Development Report*

chain perspective, many of these disciplines are not sufficiently addressed at the multilateral level, thus exposing the absence of institutions, regulations and mechanisms that can handle relevant behind-the-border issues.

Preferential trade agreements would thus seem to be helping to close a gap in international trade governance left by areas not comprised by the WTO, by including disciplines and commitments that go substantially further than the more traditional WTO provisions[93] [94].

There is an interesting counterpoint with regard to mega regionals although the reasoning could very much be applied to any more comprehensive preferential trade agreement. Accordingly, such agreements are not designed to provide global solutions, because they are regional in scope and consequently provide for regional rules. As a result, those agreements could not substitute the WTO on their own[95]. As such, as negotiations for each agreement take place separately, it is expected that they will create different agreements that will address different disciplines and provide for different rules[96] [97].

Attention is also called to the fact that preferential trade agreements may end up having limited effects if they are not also part of more comprehensive liberalization and facilitation policies, including multilateral and unilateral efforts[98].

It is also argued that the spread of preferential trade agreements bring a potential for a larger regionalization of trade, most notably in the Asia-Pacific region in view of negotiations of the CPTPP and the Regional Comprehensive Economic Partnership ("RCEP"). There would also be a potential distortion of foreign direct investment flows. This because regional arrangements with particular behind-the-border rules or provisions

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2017: Measuring and Analyzing the Impact of GVCs on Economic Development. 2017. Available at: <www.wto.org/english/res_e/booksp_e/gvcs_report_2017.pdf.> Last visited: 18/03/2017. pp. 181.

[93] BRUHN, Dominique, *Global Value Chains and Deep Preferential Trade Agreements: Promoting Trade at the Cost of Domestic Policy Autonomy?* (August 8, 2014). Available at: <ssrn.com/abstract=2464136> or <dx.doi.org/10.2139/ssrn.2464136>. Last visited 08/08/2017. p. 21.

[94] YEATS, A. *Just how big is global production sharing*. In Kierzkowski, H. and Arndt, S. (eds), Fragmentation: New production Patterns in the World Economy, Oxford: Oxford University Press: 108-143, 2001. A*pud* WTO. *World Trade Report 2011. The WTO and preferential trade agreements: From co-existence to coherence.* World Trade Organization. 2011, p. 113.

[95] NAKATOMI, Michitaka. *Global Value Chain Governance in the Era of Mega FTAs and a Proposal of an International Supply Chain Agreement.* Available at: <www.rieti.go.jp/en/special/policy-update/050.pdf.>. Last visited: 18/03/2017. p. 9.

[96] BHAGWATI, Jagdish. *Immiserizing Growth: A Geometrical Note.* Review of Economic Studies 25, (June) 1958.

[97] NAKATOMI, Michitaka. Opus cit. p. 4.

[98] NADIM, Ahmad; PRIMI, Annalisa. *From domestic to regional to global: Factory Africa and Factory Latin America? In* WTO; WORLD BANK; IDE-JETRO; OECD; UIBE. *Global Value Chain Development Report 2017: Measuring and Analyzing the Impact of GVCs on Economic Development*. 2017. Available at: <www.wto.org/english/res_e/booksp_e/gvcs_report_2017.pdf.> Last visited: 18/03/2017. p. 89.

on regulatory cooperation could have the result of forcing firms to set up in the bloc and invest in it, rather than in countries that are outside the arrangement. Likewise, it could also result in more efficient firms that are not part of the agreement being excluded from relevant regional value chains[99].

Trade preferential trade agreements might have the result of adding rules and further complexity to the existing trade framework. This is particularly true for small and medium-size firms as they face greater barriers to entry then large firms. Too many preferential trade agreements may be indicative that the excess of rules or in case the agreements are not broad enough in liberalization and facilitation policies, they may actually hinder instead of inducing participation in global value chains by developing countries. Europe for instance has the highest level of intraregional trade but seems to have the simplest legal framework structure; on their turn, Latin America and Sub-Saharan Africa present very low levels of intraregional trade whilst having have the most complex legal arrangements in place[100].

Consequently, some kind of harmonization of rules set in the different agreements would be required, or they could not lead to the creation of truly global trade rules. Accordingly, such diverse agreements and their legal framework could even lead to the escalation of the famous "spaghetti bowl"[101] [102].

Opposed to this view, adopting a legal international framework that considers global value chains could assist in understanding how the different rules that specific groups of countries separately negotiated affect value chains of agricultural products, industrial goods and services. In addition, existing domestic regulations on goods and services have become highly important to farmers, manufacturers and service providers, especially to those that are integrated into global value chains[103].

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[99] HOEKMAN, Bernard. *Moving Forward in the WTO post-Bali.* European University Institute and CEPR. February 26, 2014. p. 23.

[100] NADIM, Ahmad; PRIMI, Annalisa. *From domestic to regional to global: Factory Africa and Factory Latin America? In* WTO; WORLD BANK; IDE-JETRO; OECD; UIBE. *Global Value Chain Development Report 2017: Measuring and Analyzing the Impact of GVCs on Economic Development*. 2017. Available at: <www.wto.org/english/res_e/booksp_e/gvcs_report_2017.pdf.> Last visited: 18/03/2017. p. 89.

[101] BHAGWATI, Jagdish. *Immiserizing Growth: A Geometrical Note.* Review of Economic Studies 25, (June) 1958.

[102] NAKATOMI, Michitaka. *Global Value Chain Governance in the Era of Mega FTAs and a Proposal of an International Supply Chain Agreement.* Available at: <www.rieti.go.jp/en/special/policy-update/050.pdf.>. Last visited: 18/03/2017. pp. 1-13.

[103] HOEKMAN, Bernard. *Moving Forward in the WTO post-Bali.* European University Institute and CEPR. February 26, 2014. p. ii.

It is undeniable that trying to discipline the spillovers of several international and domestic regulations is much more complex than if it took place within traditional trade. In reality, many of the policies that affect the development and functioning of global value chains are mostly regulatory (meaning domestic behind-the-border regulations). However, an approach that considers how different national policy areas affect the several kinds of production networks could ultimately assist negotiations on their way forward[104].

It would thus seem that preferential trade agreements going beyond traditional trade issues should make efforts to address at least topics such as domestic regulations in relevant areas, services and investment[105].

Going forward, literature points that as the Doha Round of trade negotiations has not moved on, (mega) preferential trade agreements would most likely be the main source of trade liberalization and legal framework for some time to come. As such agreements are in nature regional, they would probably create and enhance global value chains within their relevant geographic regions[106].

In conclusion, literature points to two directions. One where preferential trade agreements are complementary to WTO rules, and another in which such agreements would somehow replace the WTO for being capable of disciplining topics that the organization has not been able to do. Nevertheless, as the international trade marked by global value chains is constantly changing, the true effects of preferential trade agreements and, in particular, the mega-regionals are yet to be assessed.

3.2 The proliferation of global value chains and preferential trade agreements

Literature is unequivocal on the topic that the spread of global value chains is connected to the multiplication of preferential trade agreements that go beyond traditional

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[104] HOEKMAN, Bernard, and JACKSON, Selina, 2013. *Reinvigorating the Trade Policy Agenda: Think Supply Chain!* VoxEU, January 23. Available at: <www. voxeu.org/article/reinvigorating-trade-policy-agenda-think-supply-chain>. Last visited: 23/05/2017.

[105] KOMMERSKOLLEGIUM. *Global Value Chains and Trade Negotiations*. National Board of Trade – First Edition April 2015. Available at: www.kommers.se/Documents/dokumentarkiv/publikationer/2015/Publ-global-value-chains-and-trade-negotiations.pdf. Last visited: 19/03/2017. p. 6.

[106] NAKATOMI, Michitaka. *Global Value Chain Governance in the Era of Mega FTAs and a Proposal of an International Supply Chain Agreement.* Available at: <www.rieti.go.jp/en/special/policy-update/050.pdf.>. Last visited: 18/03/2017. pp. 1.

trade issues[107] [108], and there are studies that show that they are indeed are highly interconnected[109].

Available literature and studies regarding the relationship between global value chains and preferential trade agreements suggest that this relationship is twofold: preferential trade agreements are being shaped by, and at the same time are shaping global value chains[110]. This is to say that the development of global value chains have led to the proliferation of preferential trade agreements addressing deeper disciplines, and that preferential trade agreements have on their turn allowed for the spread of global value chains.

First, the intensification of trade within global value chains have led to an increase of preferential trade agreements[111]. As discussed above, there has been a shift in the former trade model - trade in final goods to trade in intermediate goods[112] -, which is to say that it consists of a cross-border type of trade.

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[107] ALDONAS, Grant. *Trade Policy in a Global Age*. E15Initiative. Geneva: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum. 2013. Apud. STEPHENSON, Sherry. *Trade Governance Frameworks in a World of Global Value Chains: Policy Options*. E15 Expert Group on Global Value Chains: Development Challenges and Policy Options – Policy Options Paper. E15Initiative. Geneva: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum. 2016. p. 10.

[108] OREFICE Gianluca; ROCHA, Nadia. *Deep Integration and Production Networks: An Empirical Analysis*. Staff Working Paper ERSD-2011-11.World Trade Organization Economic Research and Statistics Division. July, 2011. Available at: <www.wto.org/english/res_e/reser_e/ersd201111_e.pdf>. Last visited: 18/03/2017. p. 2.

[109] BERGER Axel; BRUHN Dominique; BENDER Andrea; FRIESEN Julia; KICK Katharina; KULLMANN Felix; ROBNER Robert; WEYRAUCH Svenja. *Deep Preferential Trade Agreements and Upgrading in Global Value Chains: the Case of Vietnam*. The German Development Institute / Deutsches Institut für Entwicklungspolitik (DIE). Bonn, 2016. Available at: <www.die-gdi.de/uploads/media/Study_92.pdf>. Last visited: 24/05/2017. p. 20.

[110] See: IMF. *Trade interconnectedness: the world with global value chains*. Washington, DC. 2013. BRUHN, Dominique, *Global Value Chains and Deep Preferential Trade Agreements: Promoting Trade at the Cost of Domestic Policy Autonomy?* (August 8, 2014). Available at: <ssrn.com/abstract=2464136> or <dx.doi.org/10.2139/ssrn.2464136>. Last visited 08/08/2017.

[111] OREFICE Gianluca; ROCHA, Nadia. *Deep Integration and Production Networks: An Empirical Analysis*. Staff Working Paper ERSD-2011-11.World Trade Organization Economic Research and Statistics Division. July, 2011. Available at: <www.wto.org/english/res_e/reser_e/ersd201111_e.pdf>. Last visited: 18/03/2017; DAMURI, Yose Rizal: *21st century regionalism and production sharing practice.* CTEI Working Papers. 2012. Available at: <http://graduateinstitute.ch/files/live/sites/iheid/files/sites/ctei/shared/CTEI/working_papers/CTEI-2012-04.pdf >. Last visited: 23/02/2017. *Apud*. BRUHN, Dominique, *Global Value Chains and Deep Preferential Trade Agreements: Promoting Trade at the Cost of Domestic Policy Autonomy?* August 8, 2014. Available at: <ssrn.com/abstract=2464136> or <dx.doi.org/10.2139/ssrn.2464136>. Last visited 08/08/2017. p. 20.

[112] ANTRÀS, Pol and STAIGER, Robert. *Offshoring and the role of trade agreements.* NBER Working Papers Cambridge MA. National Bureau of Economic Research (NBER) Working Paper No. 14285, 2008. *Apud.* WTO. *World Trade Report 2011. The WTO and preferential trade agreements: From co-existence to coherence*. World Trade Organization. 2011. Available at: < https://www.wto.org/english/res_e/booksp_e/anrep_e/world_trade_report11_e.pdf>. Last visited: 30/05/2017. p. 114.

Because it consists of a cross-border type of trade, costs either arising from tariffs and non-tariff barriers over goods or services, are larger within global value chains[113]. In addition, cross-border production activities necessarily require adequate regulations in behind-the-border areas and preferential trade agreements, in particular those that provide for deeper commitments, often address these behind-the-border issues[114]. Production networks require going further from tariffs, and involve a set of other policy areas, such as investment, intellectual property and logistics, that need mutual collaboration. For instance, offshoring by an investor country means cross-border investments that need adequate investment rules in the host country; contracting with suppliers located elsewhere may require transfer of knowledge which may not otherwise be done without a strong intellectual property protection; delivery of products require efficient logistical arrangements such as harmonization of customs procedures[115].

Inefficient logistics and customs consist of relevant behind-the-border trade barriers, and could even often be more important than tariffs. This is particularly true as trade facilitation plays a relevant role in fostering a country's integration into global value chains. For instance, studies indicate that costs of trade delays are higher in countries that deal with trade of more time-sensitive goods, as they depreciate quickly or have high inventory costs[116].

In addition to being able to address tariffs and non-tariff barriers, preferential trade agreements provide a framework for international trade governance with respect to behind-the-border issues. For this reason, preferential agreements would be able to fill the governance gap with respect to this topic[117].

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[113] BERGER Axel; BRUHN Dominique; BENDER Andrea; FRIESEN Julia; KICK Katharina; KULLMANN Felix; ROBNER Robert; WEYRAUCH Svenja. *Deep Preferential Trade Agreements and Upgrading in Global Value Chains: the Case of Vietnam*. The German Development Institute / Deutsches Institut für Entwicklungspolitik (DIE). Bonn, 2016. Available at: <www.die-gdi.de/uploads/media/Study_92.pdf>. Last visited: 24/05/2017. p. 20.

[114] RUTA, Michele. *Preferential trade agreements and global value chains: Theory, evidence, and open questions*. *In* WTO; WORLD BANK; IDE-JETRO; OECD; UIBE. *Global Value Chain Development Report 2017: Measuring and Analyzing the Impact of GVCs on Economic Development*. 2017. Available at: <www.wto.org/english/res_e/booksp_e/gvcs_report_2017.pdf.> Last visited: 18/03/2017. p. 20.

[115] STEPHENSON, Sherry. *Global Value Chains: The New Reality of International Trade.* E15Initiative. Geneva: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum, 2013. Available at: <www.e15initiative.org/>. Last visited 24/06/2017. pp.2-3.

[116] HUMMELS, David. *Time as a Trade Barrier.* Mimeo, Purdue University. 2001. Available at: <www.krannert.purdue.edu/faculty/hummelsd/research/time3b.pdf>. Last visited: 18/03/2017. p. 2-3.

[117] BERGER Axel; BRUHN Dominique; BENDER Andrea; FRIESEN Julia; KICK Katharina; KULLMANN Felix; ROBNER Robert; WEYRAUCH, Svenja. *Deep Preferential Trade Agreements and Upgrading in Global Value Chains: the Case of Vietnam*. The German Development Institute / Deutsches

Therefore, from the global value chain point of view, signing preferential agreements have the capability of reducing and even eliminating relevant tariffs and non-tariff barriers[118].

On the other hand, studies also point to the fact that (deep) preferential trade agreements enhance global value chains existing within trade relations between the members of a given agreement. More comprehensive trade agreements have a stronger effect on trade flows[119], and according to studies conducted by the WTO, trade in parts and components raises in average 35 percent among members of a preferential trade agreement[120]. As seen above, such agreements address a number of dimensions that are key for the well-functioning of global value chains such as investment policy, intellectual property rights, competition policy, harmonization of customs procedures[121]. Because these regulations facilitate the operations of complex production structures that spread across multiple countries, they would consist of an effective way to create and increase participation in global value chains[122].

Numbers support the argument that global value chains relate to preferential trade agreements, even though global value chains are not the only reason to the spread of the latter. For instance, the WTO argues that the spread of preferential trade agreements is also a result from developing countries engaging in such activity. Accordingly, developing countries would have formerly engaged in preferential trade agreements with developed

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Institut für Entwicklungspolitik (DIE). Bonn, 2016. Available at: <www.die-gdi.de/uploads/media/Study_92.pdf>. Last visited: 24/05/2017. p. 20.

[118] BERGER Axel; BRUHN Dominique; BENDER Andrea; FRIESEN Julia; KICK Katharina; KULLMANN Felix; ROBNER Robert; WEYRAUCH, Svenja. *Deep Preferential Trade Agreements and Upgrading in Global Value Chains: the* Case of Vietnam. The German Development Institute / Deutsches Institut für Entwicklungspolitik (DIE). Bonn, 2016. Available at: <www.die-gdi.de/uploads/media/Study_92.pdf>. Last visited: 24/05/2017. p. 20.

[119] KOHL, Tristan, BRAKMAN, Steven, GARRETSEN, Harry. *Do trade agreements stimulate international trade differently? Evidence from 296 trade agreements.* The World Economy, 39(1). 2015. pp. 97–131. Apud. BERGER Axel; BRUHN Dominique; BENDER Andrea; FRIESEN Julia; KICK Katharina; KULLMANN Felix; ROBNER Robert; WEYRAUCH, Svenja. *Deep Preferential Trade Agreements and Upgrading in Global Value Chains: the* Case of Vietnam. The German Development Institute / Deutsches Institut für Entwicklungspolitik (DIE). Bonn, 2016. Available at: <www.die-gdi.de/uploads/media/Study_92.pdf>. Last visited: 24/05/2017. p. 21.

[120] WTO. *World Trade Report 2011. The WTO and preferential trade agreements: From co-existence to coherence*. World Trade Organization. 2011. Available at: < https://www.wto.org/english/res_e/booksp_e/anrep_e/world_trade_report11_e.pdf>. Last visited: 30/05/2017. p. 14.

[121] ICTSD. *Global Value Chains Group; Proposals and Analysis*. Geneva, Switzerland. 2013. Available at <www.ictsd.org>. p. 50.

[122] DOLLAR David. *Global Value Chins Provide New Opportunities to Developing Countries.* Brookings Institution. Order the Chaos blog. July, 2017. Available at: </www.brookings.edu/blog/order-from-chaos/2017/07/19/global-value-chains-provide-new-opportunities-to-developing-countries/>. Last visited: 19/09/2017.

countries, but turned ways towards a greater number of agreements signed with other countries.[123]

The number of preferential trade agreements has increased significantly in the last 30 years. In 1990, for instance, there were 50 agreements notified to the WTO and in force[124]. By June 2017, there were 279 agreements notified to the WTO and in force[125].

WTO's statistics relating to 2011 show that all WTO members (with the exception of Mongolia) belonged to at least one preferential trade agreement. Back then, for instance, the EU participated in the largest number of agreements (30), followed by Chile (26), Mexico (21), the European Free Trade Association ("EFTA") members (between 20 and 22), Singapore (19), Egypt (18), Turkey (17), Brazil (13), India (12) and China (10). Asian countries, were the ones that have most increased preferential trade activity, with Singapore and India concluding a majority of their agreements since 2000[126].

Finally, it should be noted that the extent and type of trade determines the design of preferential trade agreements. For this reason, literature commonly suggest that deep agreements would be the instruments that mostly allow for the creation and functioning of global value chains.

3.3 Preferential trade agreements – deep and shallow agreements

As seen above, a simple way to explain the connection between global value chains and preferential trade agreements is that global value chains require specific regulations of several behind-the-border issues in order to operate efficiently, and such rules are better found in preferential trade agreements[127].

Literature on trade agreements commonly refer to the depth and scope of legal provisions contained in such agreements, classifying the agreements into "shallow" or

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[123] WTO. *World Trade Report 2011. The WTO and preferential trade agreements: From co-existence to coherence*. World Trade Organization. 2011. Available at: < https://www.wto.org/english/res_e/booksp_e/anrep_e/world_trade_report11_e.pdf>. Last visited: 30/05/2017. p. 57.

[124] RUTA, Michele. *Preferential trade agreements and global value chains: Theory, evidence, and open questions. In* WTO; WORLD BANK; IDE-JETRO; OECD; UIBE. *Global Value Chain Development Report 2017: Measuring and Analyzing the Impact of GVCs on Economic Development*. 2017. Available at: <www.wto.org/english/res_e/booksp_e/gvcs_report_2017.pdf.> Last visited: 18/03/2017. pp. 175.

[125] WTO – RTA database. This number refers to agreements identified by the WTO as "regional trade agreements".

[126] WTO. *World Trade Report 2011. The WTO and preferential trade agreements: From co-existence to coherence.* World Trade Organization. 2011, p. 59.

[127] RUTA, Michele. *Opus cit*. pp. 178.

"deep", although there is not a single definition. Under this approach, shallow agreements would consist of those agreements that usually address traditional border measures such as tariffs, and do not interfere with domestic economic policies. In contrast, deep trade agreements would be generally referred to as those agreements that go beyond traditional trade issues such as tariff cutting, including commitments in laws and regulations and rules on domestic policies[128] [129].

As such, deep agreements regulate innumerous behind-the-border issues like infrastructure, institutions, competition policy, the standardization and harmonization of regulations, among others. Agreements containing deeper commitments could also render activities more secure and less likely to encounter disruptions or restrictions[130].

Additionally, there is a notion that deeper agreements are an effective means for improving institutions and generally lowering trade costs, by ensuring better infrastructure, corruption, reduction of red tape (bureaucracy), and elimination on tariffs on imported inputs and services[131].

While attempting to investigate the relationship between global value chains and deep agreements, the WTO suggests that preferential trade increases trade in parts and components by 35 percent among members. On its turn, the deeper the preferential trade agreement the larger the increase in trade in parts and components among its members. Accordingly, entering into deep agreements would increase trade between member countries within global value chains by around 8 percentage points (in average).

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[128] LAWRENCE, Robert Z. *Regionalism, Multilateralism and Deeper integration*. Washington DC: Brookings Institution, 1996. *Apud.* WTO. *World Trade Report 2011. The WTO and preferential trade agreements: From co-existence to coherence*. World Trade Organization. 2011. Available at: < https://www.wto.org/english/res_e/booksp_e/anrep_e/world_trade_report11_e.pdf>. Last visited: 30/05/2017. p. 114.

[129] DOLLAR David. *Global Value Chins Provide New Opportunities to Developing Countries.* Brookings Institution. Order the Chaos blog. July, 2017. Available at: </www.brookings.edu/blog/order-from-chaos/2017/07/19/global-value-chains-provide-new-opportunities-to-developing-countries/>. Last visited: 19/09/2017.

[130] OREFICE Gianluca; ROCHA, Nadia. *Deep Integration and Production Networks: An Empirical Analysis*. Staff Working Paper ERSD-2011-11.World Trade Organization Economic Research and Statistics Division. July, 2011. Available at: <www.wto.org/english/res_e/reser_e/ersd201111_e.pdf>. Last visited: 18/03/2017. p. 18

[131] DOLLAR David. *Global Value Chins Provide New Opportunities to Developing Countries.* Brookings Institution. Order the Chaos blog. July, 2017. Available at: </www.brookings.edu/blog/order-from-chaos/2017/07/19/global-value-chains-provide-new-opportunities-to-developing-countries/>. Last visited: 19/09/2017.

Alternatively, studies also show that the greater trade in parts and components is between certain countries, the deeper a preferential trade agreement signed among them will be[132].

In addition, effects of deeper commitments would be more significant for industries that require higher levels of regulation because of their nature. For instance, studies show that deeper agreements increase production networks trade in automotive parts and information communication technology ("ICT") products by 81 and 56 percent respectively, while the impact on trade in textiles trade would show an average of only 20 percent[133].

Other studies on the correlation of preferential trade agreements and the creation and development of global value chains are based on foreign direct investment data, by looking at the number of vertical subsidiaries set across every two countries. Accordingly, the number of vertical subsidiaries from a parent country located in a host country would be 11 percent higher if both countries were members of a preferential trade agreement; on its turn, the host country would have a 2.5 percent more entry of vertical subsidiaries from a parent country if they both belong to the same preferential trade agreement[134].

Scholars also find that deeper agreements have more impact on trade than shallow agreements while assessing the effects of preferential trade agreements by looking at value added trade. Accordingly, in trade between countries members of a preferential trade agreement, there is less domestic value added and a higher foreign value added used in manufacturing of goods that are exported[135]. This aspect is particularly interesting for our present analysis, as will be seen in the following chapters.

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[132] WTO. *World Trade Report 2011. The WTO and preferential trade agreements: From co-existence to coherence*. World Trade Organization. 2011. Available at: < https://www.wto.org/english/res_e/booksp_e/anrep_e/world_trade_report11_e.pdf>. Last visited: 30/05/2017. p. 14.

[133] OREFICE Gianluca; ROCHA, Nadia. *Deep Integration and Production Networks: An Empirical Analysis*. Staff Working Paper ERSD-2011-11.World Trade Organization Economic Research and Statistics Division. July, 2011. Available at: <www.wto.org/english/res_e/reser_e/ersd201111_e.pdf>. Last visited: 18/03/2017. p. 14.

[134] ESTEVADEORDAL, Antoni; BLYDE, Juan; HARRIS, Jeremy; MARTINCUS, Christian Volpe. *Global Value Chains and Rules of Origin.* E15Initiative. ICTSD–IADB think piece prepared for the E15 Expert Group on Global Value Chains: Development Challenges and Policy Options, Geneva, Switzerland. 2013. In ICTSD. *Global Value Chains Group; Proposals and Analysis*. Geneva, Switzerland. 2013. Available at <www.ictsd.org>. pp. 49-50.

[135] JOHNSON, Robert; NOGUERA Guillermo. *Fragmentation and Trade in Value Added Over Four Decades.* NBER Working Paper No. 18186. 2012. *Apud.* ESTEVADEORDAL, Antoni; BLYDE, Juan; HARRIS, Jeremy; MARTINCUS, Christian Volpe. *Global Value Chains and Rules of Origin.* E15Initiative. ICTSD–IADB think piece prepared for the E15 Expert Group on Global Value Chains: Development Challenges and Policy Options, Geneva, Switzerland. 2013. In ICTSD. *Global Value Chains Group; Proposals and Analysis*. Geneva, Switzerland. 2013. Available at <www.ictsd.org>. pp. 49-50.

3.4 Reasons for signing preferential trade agreements

As mentioned above, there is a clear correlation between preferential trade agreements and global value chains. On the one side, preferential trade agreements can induce the creation of global value chains by liberalizing trade and providing market access to the participants of such chains. Furthermore, deep preferential trade agreements can consist of an instrument for harmonizing rules and narrowing gaps in laws and regulations for the performance of activities relating to the productions of goods among several countries[136].

With this is mind, scholars often investigate the reasons why countries would be inclined to become members of preferential trade agreements in the context of global value chains.

At first, one important reason for signing preferential trade agreements would be to enlarge market access to foreign markets in exports of goods and services, as well as to improve attractiveness of foreign direct investment. Additionally, preferential trade agreements have the ability to assist firms in approaching novel markets; increasing economies of scale; improving competiveness, creating, entering into or enhancing participation in global value chains, and to adopt relevant domestic economic reforms[137].

Furthermore, the formation of preferential trade agreements would particularly relate to two aspects of global value chains that have influence over countries' decisions. The first would be a general factor that addresses how much a country would be interested in participating in global value chains. This is to say that the more eager a country would be to participating in global chains, the more inclined it would be to sign preferential trade agreements containing deeper disciplines.

The second factor would relate to the trading partner that a country would choose to sign a preferential trade agreement. Accordingly, stronger bilateral relationships between two given countries that operate within global value chains would consist of a bigger

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[136] WTO. *World Trade Report 2011. The WTO and preferential trade agreements: From co-existence to coherence*. World Trade Organization. 2011. Available at: < https://www.wto.org/english/res_e/booksp_e/anrep_e/world_trade_report11_e.pdf>. Last visited: 30/05/2017. p. 147.

[137] SCHWAB, Susan, BHATIA, Karan. *Why Mega-regionals?* World Economic Forum.2014. pp.18-20. GHIBUȚIU, Agnes. *The Race for Preferential Trade Agreements – Causes, Patterns And Effects*. Romanian Economic Business Review, 2015, vol. 10, issue 2, 9-28 Available at: <http://www.rebe.rau.ro/RePEc/rau/journl/SU15/REBE-SU15-A1.pdf>. Last visited: 20/09/2017. p. 22.

incentive for them to assume deeper commitments that ultimately address their own behind-the-border regulations. In this regard, in order to handle behind-the-border barriers, countries that are involved in global chains would be more willing to sign preferential trade agreements with the trading partners of their choice than to unilaterally liberalize.

Other countries would be interested in securing commercial relationships to reinforce their position as suppliers of intermediate goods and services[138].

Further literature points a series of additional relevant reasons why countries would seek to sign preferential trade agreements. Normally, preferential trade agreements make access to international markets easier, as they allow for the reduction of relevant trade barriers. When considering trade relations within global value chains, however, they can go further[139].

Preferential trade agreements allow for the sourcing of inputs and intermediate goods at competitive prices and quality, which is key a country's competitiveness. They ensure predictability and stability for investors as they set rules governing the cross-border trade relations as well as behind-the border measures. They increase the level of trade among trading partners (as discussed above). Finally, they can also indirectly (and positively) affect non-member countries that somehow participate in the cross-border trade of the preferential trade agreements members[140].

Furthermore, for the well-functioning of current cross-border activity, coordination must take place across global value chains[141]. Thus, the systemic coordination that preferential trade agreements may offer would be especially important for firms operating in value chains, as a whole set of different regulations must be met throughout a chain, either upstream or downstream. For instance, regulation of agricultural products frequently demands a certain degree of traceability along an entire chain; or a change in the

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[138] WTO. *World Trade Report 2011. The WTO and preferential trade agreements: From co-existence to coherence*. World Trade Organization. 2011. Available at: < https://www.wto.org/english/res_e/booksp_e/anrep_e/world_trade_report11_e.pdf>. Last visited: 30/05/2017. p. 147.

[139] BERNHARDT, Thomas. *Global Value Chains and Preferential Trade Agreements.* ARTNeT Training Workshop on Regional Cooperation and Integration held on 11 May 2016, in Yangon, Myanmar. Available at: <www.unescap.org/sites/default/files/Session%209%20GVCs-and-PTAs.pdf>. Last access: 21/03/2017.

[140] The author gives the example of investments made by car manufacturers. For instance, China's Chery Automobile Co.'s investment in Malaysia results in access to markets and to a full range of suppliers in ASEAN countries. BERNHARDT, Thomas. *Global Value Chains and Preferential Trade Agreements.* ARTNeT Training Workshop on Regional Cooperation and Integration held on 11 May 2016, in Yangon, Myanmar. Available at: <www.unescap.org/sites/default/files/Session%209%20GVCs-and-PTAs.pdf>. Last access: 21/03/2017.

[141] SOBEL-READ, Kevin B. *Global Value Chains: A framework for analysis. Transnational Legal Theory* (vol. 5, no. 3, 2014). Available at < https://ssrn.com/abstract=2312034>. Last visited: 20/12/2017. p. 7.

production process of a good might result in changes along the chain, such as the need of sourcing a different input or an additional service[142]. Preferential trade agreements could thus assist in the coordination of the rules applying to the different stages of global value chains.

Additionally, countries with preexistent relevant trade relationships in parts and components between themselves would seem to be more likely to enter into a preferential agreement with deep integration commitments. In addition, complementarities between their export portfolio would also consist of a reason for countries to be motivated to enter into deeper integration.

Studies show that preferential trade agreements do not have homogeneous effects when the trade in question is a mixture of trade in goods and services[143]. It would seem that countries with different economic levels could draw larger benefits from deeper integration, so they would be more willing to introduce deeper commitments in their agreements to address several issues. The effects differ according to the relative level of economic development of the partners and also according to the content of the agreement[144].This relation however is not consistent in all situations. In case of countries that present too different economic level differences, chances that they will sign a preferential trade agreement may be much smaller.

Participating or not participating in global value chains have impacts over development levels as well, and affect countries that either inside or outside value chains. This is because there are different products manufactured, different services provided and different positions occupied within the value chains by operating firms. As such, smaller developing countries may face global value chains differently from larger developing

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[142] HUMPHREY, John; SCHMITZ, Hubert. *Inter-firm Relationships in Global Value Chains: Trends in Chain Governance and Their Policy Implications.* 1 Int. J. Technological Learning, Innovation and Development, 2008. p. 258 - 270. GEREFFI, Gary; HUMPHREY, John; STURGEON, Timothy. *The Governance of Global Value Chains.* 12 Rev. of Int'l Pol. Econ. 78, 2005. p. 92-94. CAFAGGI, Fabrizio. *Private Regulation, Supply Chain and Contractual Networks: The Case of Food Safety.* 4 Robert Schuman Centre For Advanced Stud., Paper No. RSCAS 2010/10, 2010. Available at: <http://ssrn.com/abstract=1554329>. Accessed on 12/12/2017. *Apud.* SOBEL-READ, Kevin B. *Global Value Chains: A framework for analysis. Transnational Legal Theory* (vol. 5, no. 3, 2014). Available at < https://ssrn.com/abstract=2312034>. Last visited: 20/12/2017. p. 7.

[143] RUBÍNOVÁ, Stela. *The Impact of New Regionalism on Global Value Chains Participation.* Centre for Trade and Economic Integration Working Papers. Ctei-2017-07. Available at: <http://graduateinstitute.ch/files/live/sites/iheid/files/sites/ctei/shared/CTEI/working_papers/CTEI-2017-07_Rubinova.pdf>. Last visited: 23/03/2017. p. 31.

[144] WTO. *Global Value Chain Development Report 2017: Measuring and Analyzing the Impact of GVCs on Economic Development*. 2017. Available at <wto.org/english/res_e/booksp_e/gvcs_report_2017.pdf> Last visited: 19/04/2017.
p. 80.

countries, or land-locked countries may view them differently from countries that have access to seas and oceans[145].

Additionally, preferential trade agreements can assist in counterbalancing domestic trade policies that vary across countries. Most developing countries have certain sectors and industries they consider particularly important, and therefore must be protected or nurtured. As such, they are supported by diverse trade policies that require local content, presence, investments (e.g. joint ventures), research and development activities or other requirements that tend to favor domestic in detriment of foreign firms. Brazil, China, India and Korea make use of a most extensive set of horizontal or economy-wide policies of that sort[146].

As seen in the first chapter, global value chains are not exactly global, but mostly regional. The regionalization of preferential trade agreements have also brought about discussions regarding the effects of rules of origin and cumulation provisions over global value chains. While there are arguments supporting that such rules and provisions induce the formation of value chains, there are also negative effects.

Briefly speaking, rules of origin set the requirements that goods must fulfill in order to be considered of a certain origin, so they can enjoy the benefits of a preferential agreement. Rules of origin have the role of avoiding that goods originating from countries that are not part of the preferential trade agreement reach a (high-tariff) member through an intermediate member accorded with preferential treatment. Thus, rules of origin aim a preventing trade deflection between the country members of a preferential trade agreement.

On the side of global value chains, at first sight, a country is not necessarily prevented from entering or developing a value chain with non-member countries, especially considering situations where tariffs between such countries are not high. In addition, there are cases where although the preferential trade agreements establish rules of origin, they are flexible as to enable countries to participate in cross-border trade relations with members outside such preferential trade agreement.

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[145] STEPHENSON, Sherry. *Global Value Chains: The New Reality of International Trade.* E15Initiative. Geneva: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum, 2013. Available at: <www.e15initiative.org/>. Last visited 24/06/2017. p. 7.

[146] GEREFFI, Gary; STURGEON, Timothy. *Global value chain-oriented industrial policy: the role of emerging economies*. In. WTO. *Global value chains in a changing world*. Edited by Deborah K. Elms and Patrick Low. Switzerland, 2013. Available at: <www.wto.org/english/res_e/booksp_e/aid4tradeglobalvalue13_e.pdf>. Last visited: 23/05/2017. p. 343.

However, depending on how strict they are, rules of origin could mean restrictions for those countries that are not part of the preferential trade agreement[147]. This is to say that they could result in disincentives for importing cheaper inputs or intermediate goods for final products that will afterwards be exported to other members of the agreement from non-member countries. As a result, rules of origin might have the effect of increasing production costs within global value chains whenever the costs of meeting their requirements exceed the benefits arising from the preferential agreement[148]. The more complex preferential rules are (local contents or regional value content), the harder it would be to allow for integration into global value chains[149] [150].

Further to restricting outsourcing locations, the existence of rules of origin within preferential trade agreements might have the effect of narrowing firms' choices for offshoring (or broadly saying, investments) when deciding where to locate affiliates abroad[151].

With regard to cumulation provisions, literature mentions the problem between the Common Market of the South ("MERCOSUR") and the countries of the Andean Community agreements. The preferential trade agreements set forth a cumulation provision, by means of which products (inputs) originating from any of these countries may be deemed as originating from any of the others, when they are used in subsequent production of another good.

Accordingly, there would be at least 19 different sets of provisions governing trade among the Andean Community, MERCOSUR, Bolivia, Colombia, Ecuador, Peru and

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[147] ESTEVADEORDAL, Antoni, SUOMINEN, Kati, BLYDE, Juan. *Are Global Value Chains Really Global? Policies to Accelerate Countries' Access to International Production Networks*. E15Initiative. Geneva: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum. 2013. In ICTSD. *Global Value Chains Group; Proposals and Analysis.* Geneva, Switzerland. 2013. Available at <www.ictsd.org>. p.41-42.

[148] ESTEVADEORDAL, Antoni; BLYDE, Juan; HARRIS, Jeremy; MARTINCUS, Christian Volpe. *Global Value Chains and Rules of Origin.* E15Initiative. ICTSD–IADB think piece prepared for the E15 Expert Group on Global Value Chains: Development Challenges and Policy Options, Geneva, Switzerland. 2013. In ICTSD. *Global Value Chains Group; Proposals and Analysis*. Geneva, Switzerland. 2013. Available at <www.ictsd.org>. pp. 49-50.

[149] STEPHENSON, Sherry. *Global Value Chains: The New Reality of International Trade.* E15Initiative. Geneva: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum, 2013. Available at: <www.e15initiative.org/>. Last visited 24/06/2017. p. 2.

[150] BERNHARDT, Thomas. *Global Value Chains and Preferential Trade Agreements.* ARTNeT Training Workshop on Regional Cooperation and Integration held on 11 May 2016, in Yangon, Myanmar. Available at: <www.unescap.org/sites/default/files/Session%209%20GVCs-and-PTAs.pdf>. Last access: 21/03/2017.

[151] ESTEVADEORDAL, Antoni; BLYDE, Juan; HARRIS, Jeremy; MARTINCUS, Christian Volpe. *Opus cit.* pp.49-50.

Venezuela[152], from preferential trade agreements to bilateral rules of origin. Literature has not provided actual studies on the effects of that cumulation provision, but it would seem that the high complexity of the multilateral and bilateral rules could consist of a relevant obstacle to the formation of value chains in the region[153].

Based on the dialogue between shallow and deep agreements mentioned above, one may conclude that the contents of preferential trade agreements have changed and continuously change as negotiations progress and value chains find their way in international trade.

Thus, in the former decades, preferential trade arrangements would have mostly tackled the issue of tariff elimination, as the main way to allow for trade liberalization and market access. Today, such trade arrangements contain provisions that either address such traditional topics in a more stringent manner, or go beyond by disciplining new topics.

Out of these disciplines, literature argues that four would seem to be addressed more regularly in preferential trade agreements and have greater potential to affect global value chains: investments, intellectual property, competition and services[154].

For a country to enter or participate in global value chains, regulations regarding foreign direct investment are highly important. This is because most of global value chain trade is created through the international offshoring activities of multinational firms[155] and therefore eliminating barriers and ensuring a reliable business environment have a direct impact in such activities[156].

Investment provisions included in preferential trade agreements have, for instance, the capability of simplifying procedures for the realization of foreign investment, and

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[152] Accordingly, there would be five different agreements: the Andean Community; Mercosur; Mercosur and Bolivia; Mercosur and Peru; and Mercosur with Colombia, Ecuador, and Venezuela), in addition to rules of origin bilaterally negotiated between Mercosur with Peru, Colombia, Ecuador, and Venezuela.

[153] ESTEVADEORDAL, Antoni; BLYDE, Juan; HARRIS, Jeremy; MARTINCUS, Christian Volpe. *Opus cit*. pp.52-53.

[154] MIROUDOT, Sébastien. *Investment*. In Chauffour, Jean-Pierre and Jean-Christophe Maur (eds.), Preferential Trade Agreement Policies for Development: a Handbook, Washington D.C.: The World Bank. 2011. *Apud*. RUBÍNOVÁ, Stela. *The Impact of New Regionalism on Global Value Chains Participation.* Centre for Trade and Economic Integration Working Papers. Ctei-2017-07. Available at: <http://graduateinstitute.ch/files/live/sites/iheid/files/sites/ctei/shared/CTEI/working_papers/CTEI-2017-07_Rubinova.pdf>. Last visited: 23/03/2017. p. 5.

[155] UNCTAD. *World Investment Report 2013. Global Value Chains: Investment and Trade for Development.* New York & Geneva: United Nations. 2013. *Apud*. BRUHN, Dominique, *Global Value Chains and Deep Preferential Trade Agreements: Promoting Trade at the Cost of Domestic Policy Autonomy?* (August 8, 2014). Available at: <ssrn.com/abstract=2464136> or <dx.doi.org/10.2139/ssrn.2464136>. Last visited 08/08/2017. p. 12.

[156] BRUHN, Dominique, *Global Value Chains and Deep Preferential Trade Agreements: Promoting Trade at the Cost of Domestic Policy Autonomy?* (August 8, 2014). Available at: <ssrn.com/abstract=2464136> or <dx.doi.org/10.2139/ssrn.2464136>. Last visited 08/08/2017. p. 2.

ensuring that there is compliance with the national treatment principle for multinational firms' affiliates in relation to domestic firms[157]. Government transparency and policy reliability also consist of important issues to be regulated, as investments and contractual relationships can be of a long-term duration[158].

This is to say that such types of provision facilitate the setting up of local affiliates, provide transparency as to what are the applicable regulations, and guarantee the required legal protections. Relevant provisions generally include broader definitions of what is deemed to be a foreign investment in order to include portfolio investment, different forms of tangible and intangible property, as well as capital outflows[159].

It is now usual for preferential trade agreements to include more robust intellectual property protection rights than those granted under the Trade Related Aspects of Intellectual Property Rights Agreement ("TRIPs"), as well as to go beyond other topics and grant accession to international treaties not mentioned by the TRIPs. Intellectual property rights are an important factor for trade involving more sophisticated high-technology goods, as they often entail high investments in research and development. On the part of the intellectual property owners, legal protection is key for investments in their related production networks. Consequently, countries without a sound intellectual property protection – from the granting of rights to proper enforcement – may be hindered from participating in global value chains involving sophisticated high-tech goods, as the owners of such rights may choose not to deem such countries as their investment targets.

On the other hand, it is argued that the inclusion of intellectual property provisions tend to benefit only firms from developed countries, as in rule, they are the intellectual property right holders. As such, high intellectual property protection can act as a trade

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[157] MIROUDOT, Sébastien. *Investment*. In Chauffour, Jean-Pierre and Jean-Christophe Maur (eds.), Preferential Trade Agreement Policies for Development: a Handbook, Washington D.C.: The World Bank. 2011. *Apud*. RUBÍNOVÁ, Stela. *The Impact of New Regionalism on Global Value Chains Participation*. Centre for Trade and Economic Integration Working Papers. Ctei-2017-07. Available at: <http://graduateinstitute.ch/files/live/sites/iheid/files/sites/ctei/shared/CTEI/working_papers/CTEI-2017-07_Rubinova.pdf>. Last visited: 23/03/2017. p. 5.

[158] BRUHN, Dominique, *Global Value Chains and Deep Preferential Trade Agreements: Promoting Trade at the Cost of Domestic Policy Autonomy?* (August 8, 2014). Available at: <ssrn.com/abstract=2464136> or <dx.doi.org/10.2139/ssrn.2464136>. Last visited 08/08/2017. p. 12.

[159] MIROUDOT, Sébastien. *Investment*. In Chauffour, Jean-Pierre and Jean-Christophe Maur (eds.), Preferential Trade Agreement Policies for Development: a Handbook, Washington D.C.: The World Bank. 2011. *Apud*. RUBÍNOVÁ, Stela. *The Impact of New Regionalism on Global Value Chains Participation*. Centre for Trade and Economic Integration Working Papers. Ctei-2017-07. Available at: <http://graduateinstitute.ch/files/live/sites/iheid/files/sites/ctei/shared/CTEI/working_papers/CTEI-2017-07_Rubinova.pdf>. Last visited: 23/03/2017. p. 5.

barrier to developing countries, to the extent they prevent imports of products made through imitation of protected technologies[160].

Competition rules are very important in the protection of global value chains against restrictions to competition that inefficiently raise market power and creates monopolies, reduce the capability of domestic firms to integrating into global value chain trade and increase costs throughout the chains[161]. The ever-growing cross-border dimension of firms engaged in global value chains and the increase in the number of antitrust authorities creates an additional complexity to multinational cases involving anticompetitive conducts, which in turn, makes a uniform and effective application or enforcement of competition laws much more difficult[162].

Competition rules are not homogeneous between developed and developing countries, therefore harmonizing them and raising enforcement standards while drafting preferential trade agreements with important partners could assist firms to access monopolized markets, or reduce barriers to entry in concentrated domestic markets. Another important reason for countries to include competition provisions in their relevant agreements refer to the possibility of exchange of information and cooperation for cases that involve multinational firms, and that could not otherwise be addressed by a single competition authority[163].

Finally, with regard to services, infrastructure, information and communication technology, transport and a series of business services are also relevant factors for foreign firms' investment decisions, as well as to domestic firms looking to access foreign markets through exports. Consequently, addressing a full range of different services through preferential trade agreements can guarantee that firms have better conditions to participate in international production networks that depend highly on connectivity and coordination[164].

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[160] RUBÍNOVÁ, Stela. *The Impact of New Regionalism on Global Value Chains Participation.* Centre for Trade and Economic Integration Working Papers. Ctei-2017-07. Available at: <http://graduateinstitute.ch/files/live/sites/iheid/files/sites/ctei/shared/CTEI/working_papers/CTEI-2017-07_Rubinova.pdf>. Last visited: 23/03/2017. p. 6.

[161] Idem p. 5.

[162] OECD. *Challenges of International Co-operation in Competition Law Enforcement Report,* 2014, p.9

[163] RUBÍNOVÁ, Stela. *The Impact of New Regionalism on Global Value Chains Participation.* Centre for Trade and Economic Integration Working Papers. Ctei-2017-07. Available at: <http://graduateinstitute.ch/files/live/sites/iheid/files/sites/ctei/shared/CTEI/working_papers/CTEI-2017-07_Rubinova.pdf>. Last visited: 23/03/2017. p. 6.

[164] RUBÍNOVÁ, Stela. *The Impact of New Regionalism on Global Value Chains Participation.* Centre for Trade and Economic Integration Working Papers. Ctei-2017-07. Available at:

3.5 WTO plus and WTO extra provisions of preferential trade agreements

Under a more practical standpoint, preferential trade agreements provisions have been reviewed and analyzed by a number of scholars with regard to the scope and depth of their provisions[165]. Among such studies, stands out the methodology developed by Horn, Mavroidis, and Sapir[166], which classify a set of provisions of preferential trade agreements based on their scope and assess their legal enforceability.

Accordingly, in a study of 2010, the authors have analyzed the depth of preferential trade agreements by first defining their contents (policy areas) and second inquiring after the legal enforceability of the respective provisions. They have assessed the provisions of 17 preferential trade agreements entered into by the European Union and 14 entered by the United States. In such work, the authors have identified a total amount of 52 relevant policy areas.

These relevant policy areas are on their turn divided into two categories. Standing from a vertical dimension, one category comprises WTO plus (also identified as "WTO+") provisions, which consist of policy areas that fall under the mandate of the WTO, and that are already subject to some form of commitment in the WTO agreements. As such, the preferential trade agreement may restate existing commitments, or provide for further and broader ones, going beyond those they have accepted at the multilateral level.

<http://graduateinstitute.ch/files/live/sites/iheid/files/sites/ctei/shared/CTEI/working_papers/CTEI-2017-07_Rubinova.pdf>. Last visited: 23/03/2017. p. 6.

[165] MIROUDOT, Sébastien. *Investment*. In Chauffour, Jean-Pierre and Jean-Christophe Maur (eds.), Preferential Trade Agreement Policies for Development: a Handbook, Washington D.C.: The World Bank. 2011. ESTEVADEORDAL, Antoni; SHEARER, Matthew; SUOMINEN, Kati. *Market Access Provisions in Regional Trade Agreements.* In Antoni Estevadeordal, Kati Suominen and Robert Teh (eds.), Regional Rules in the Global Trading System, Cambridge: Cambridge University Press. 2009. HORN, Henrik; MAVROIDIS Petros C.; SAPIR André. *Beyond the WTO? An anatomy of EU and US Preferential Trade Agreements.* Bruegel Blueprint Series. January 2009. Available at: <http://bruegel.org/wp-content/uploads/imported/publications/bp_trade_jan09.pdf>. Last Visited: 02/02/2017. DÜR, Andreas, BACCINI, Leonardo; ELSIG, Manfred. *The design of preferential trade agreements: A new dataset in the Making*. No ERSD-2011-10, WTO Staff Working Papers, World Trade Organization (WTO), Economic Research and Statistics Division. 2011. HOFMANN, Claudia; OSNAGO, Alberto; RUTA, Michele. *Horizontal Depth: A New Database on the Content of Preferential Trade Agreements*. Mimeo, World Bank. 2016. Available at: <https://openknowledge.worldbank.org/bitstream/handle/10986/26148/WPS7981.pdf?sequence=1&isAllowed=y.> Last visited: 18/03/2017.

[166] HORN, Henrik; MAVROIDIS Petros C.; SAPIR André. *Beyond the WTO? An anatomy of EU and US Preferential Trade Agreements.* Bruegel Blueprint Series. January 2009. Available at: <http://bruegel.org/wp-content/uploads/imported/publications/bp_trade_jan09.pdf>. Last Visited: 02/02/2017.

Based on this classification, deep preferential trade agreements would be those that set forth broader commitments in areas that are part of the WTO's rules.

There are 14 WTO plus policy areas. These provisions consist of the areas of Tariff Liberalization for Industrial Goods ("FTA Industrial"), Tariff Liberalization for Agricultural Goods ("FTA Agricultural)", Customs, Export Taxes[167], Sanitary and Phytosanitary Standards ("SPS"), Technical Barriers to Trade ("TBT"), State Trade Enterprise ("STE"), Antidumping ("AD"), Countervailing Measures ("CVM"), State Aid, Public Procurement, Trade-Related Investment Measures ("TRIMs"), Trade in Services ("GATS") and Trade-Related Intellectual Property Rights ("TRIPs").

Standing from a horizontal dimension, the second category comprises WTO extra (also identified as "WTO-X") provisions, which refer to obligations relating to policy instruments that have not been previously regulated by the WTO. Such policy areas may also not be directly related to trade.

There are 38 WTO extra policy areas: Anti-Corruption; Competition; Environment; Intellectual Property Rights; Investment; Labor; Movement of Capital; Consumer Protection; Data Protection; Agriculture; Approximation of Legislation; Audio Visual; Civil Protection; Innovation Policies; Cultural Cooperation; Economic Policy Dialogue; Education and Training; Energy; Financial Assistance; Health; Human Rights; Illegal Immigration; Illicit Drugs; Industrial Cooperation; Information Society; Mining; Money Laundering; Nuclear Safety; Political Dialogue; Public Administration; Regional Cooperation; Research and Technology; Small and Medium Enterprise; Social Matters; Statistics; Taxation; and Visa and Asylum.

The table below contains a list and a description of the contents of the 14 WTO plus areas identified by the authors:

Table 1 – WTO Plus Provisions

Area Covered	***Content***
FTA industrial goods (FTA ind.)	Tariff liberalization; elimination of non-tariff measures
FTA agricultural goods (FTA agr.)	Tariff liberalization; elimination of non-tariff measures
Customs administration	Provision of information; publication on the Internet of new

[167] The authors argue that although the WTO contains no precise commitments in the area of export taxes, WTO members could negotiate commitments on export taxes under Article II of the GATT. Therefore, it could be argued that a WTO instrument already exists in such area.

	laws and regulations; training
Export taxes	Elimination of export taxes
Sanitary and phytosanitary (SPS) measures	Affirmation of rights and obligations under WTO Agreement on SPS; harmonization of SPS measures
Technical barriers to trade (TBT) measures	Affirmation of rights and obligations under WTO Agreement on TBT; provision of information; harmonization of regulations; mutual recognition agreements
State trading enterprises (STE)	Establishment or maintenance of an independent competition authority; non-discrimination regarding production
Antidumping (AD)	Retention of AD rights and obligations under the WTO Agreement (Art. VI GATT)
Countervailing measures (CVM)	Retention of CVM rights and obligations under the WTO Agreement (Art. VI GATT)
State aid	Assessment of anticompetitive behavior; annual reporting on the value and distribution of state aid given; provision of information
Public procurement	Progressive liberalization; national treatment and/or non-discrimination principle; publication of laws and regulations on the internet; specification of public procurement regime
Trade-related investment measures (TRIMs)	Provisions concerning requirements for local content and export performance on foreign direct investment
Trade in services agreement (GATS)	Liberalization of trade in services
Trade-related intellectual property rights (TRIPs)	Harmonization of standards; enforcement; national treatment; most-favored nation treatment

Source: Horn, Mavroidis and Sapir.

The table below contains a list and a description of the contents of all the 38 WTO extra areas identified by the authors:

Table 2 – WTO Extra Provisions

Area Covered	***Content***
Anti-corruption	Regulations concerning criminal offence measures in matters affecting international trade and investment
Competition Policy	Maintenance of measures to proscribe anticompetitive business conduct; harmonization of competition laws, establishment or maintenance of an independent competition authority
Consumer protection	Harmonization of consumer protection laws; exchange of information and experts; training
Data protection	Exchange of information and experts; joint projects
Environmental laws	Development of environmental standards; enforcement of national environmental laws; establishment of sanctions for

Area Covered	***Content***
	violation of environmental laws; publications of laws and regulations
Investment	Information Exchange; development of legal frameworks; harmonization and simplification of procedures; national treatment; establishment of mechanisms for the settlement of disputes
Movement of capital	Liberalization of capital movement, prohibition on new restrictions;
Labor market regulations	Regulation of the national labor market; affirmation of International Labor Organization commitments; enforcement
Intellectual Property Rights	Accession to international treaties not referenced in the TRIPs agreement
Agriculture	Technical assistance to conduct modernization projects; exchange of information
Approximation of legislation	Application of EC legislation in national legislation
Audio Visual	Promotion of the industry; encouragement of co-production
Civil protection	Implementation of harmonized rules
Innovation policies	Participation in framework programs; promotion of technology transfers
Cultural cooperation	Promotion of joint initiatives and local culture
Economic policy dialogue	Exchange of ideas and opinions; joint studies
Education and training	Measures to improve the general level of education
Energy	Exchange of information; technology transfer; joint studies
Financial assistance	Set of rules guiding the granting and administration of financial assistance
Health	Monitoring of diseases; development of health information systems; exchange of information
Human rights	Respect for human rights
Illegal immigration	Conclusion of re-admission agreements; prevention and control of illegal immigration
Illicit drugs	Treatment and rehabilitation of drug addicts; joint projects on prevention of consumption; reduction of drug supply; information exchange
Industrial cooperation	Assistance in conducting modernization projects; facilitation and access to credit to finance
Information society	Exchange of information; dissemination of new technologies; training
Mining	Exchange of information and experience; development of joint initiatives
Money laundering	Harmonization of standards; technical and administrative assistance
Nuclear safety	Development of laws and regulations; supervision of the transportation of radioactive materials

Area Covered	***Content***
Political dialogue	Convergence of the parties' positions on international issues
Public administration	Technical assistance; exchange of information; joint projects; training
Regional cooperation	Promotion of regional cooperation; technical assistance programs
Research and technology	Joint research projects; exchange of researchers; development of public-private partnership
Small and medium enterprise	Technical assistance; facilitation of the access to finance
Social matters	Coordination of social security systems; non-discrimination regarding working conditions
Statistics	Harmonization and/or development of statistical methods; training
Taxation	Assistance in conducting fiscal system reforms
Terrorism	Exchange of information and experience; joint research and studies
Visa and asylum	Exchange of information; drafting legislation; training

Source: Horn, Mavroidis and Sapir.

Hoffman, Osnago and Ruta have expanded the research made by Horn, Mavroidis and Sapir by further classifying the WTO plus and WTO extra provisions as "Border" and "Behind-the-Border" provisions, based on whether the policy that the relevant provision disciplines is applied at the border or not. For instance, provisions on Tariff Liberalization for Industrial and Agricultural Goods, Antidumping, Countervailing Measures, Trade-Related Investment Measures, Trade-Related Intellectual Property Rights, Customs, Export Taxes, Sanitary and Phytosanitary Standards, Technical Barriers to Trade and Movement of Capital would consist of border provisions. On the other hand, provisions on State Enterprise, State Aid, Competition Policy, Intellectual Property Rights, Investment, Public Procurement and Services would consist of behind the border provisions[168].

As a second step, Horn, Mavroidis and Sapir have determined whether each obligation contained in the agreements would be legally enforceable or only imply non-enforceable obligations. The authors have assessed each provision to the extent it specifies at least some obligation that is clearly defined, and that is likely effectively to bind the

[168] HOFMANN, Claudia; OSNAGO, Alberto; RUTA, Michele. *Horizontal Depth: A New Database on the Content of Preferential Trade Agreements*. Mimeo, World Bank. 2016. Available at: <https://openknowledge.worldbank.org/bitstream/handle/10986/26148/WPS7981.pdf?sequence=1&isAllowed=y.> Last visited: 18/03/2017.

parties. In addition, they also classify as non-enforceable any commitment for which dispute settlement is expressly ruled out under the reviewed agreement[169] [170].

In 2011, the WTO expanded such research, to review 100 additional preferential trade agreements signed by 178 countries[171]. In this regard, as a result of its research, the WTO found that there is a positive association between deeper integration and trade in parts and components, which in turn is a proxy of global value chain integration[172].

As a final step, the authors have established whether the obligations that are legally binding actually contain some 'depth', that is, whether the obligations set forth in the agreements would be likely to matter in practice.

Several different studies have followed the methodology developed by Horn, Mavroids and Sapir, having expanded it or applied a new focus to it. For instance,

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[169] Horn, Mavroidis and Sapir explain what they have considered, in terms of language of the agreements provisions, as enforceable or non-enforceable obligations. They provide the following examples of provisions they have considered as creating legally enforceable obligations:
"The parties shall allow the free movement of capital ..." ; "Neither party may expropriate or nationalise a covered investment ..."; "If a party does not accept the technical regulation that is equivalent of its own it shall, at the request of the other party, explain the reasons ..."; "By the end of (exact date) a party shall accede to the following international conventions: ..."; "Neither party may impose performance requirements or enforce any commitment or undertaking, in connection with the establishment, acquisition, expansion, management, conduct, operation or sale..."; "Each party shall not fail effectively to enforce labour (environmental) laws …".
Going forward, the authors explain which provisions have been interpreted as not creating binding obligations and the reason why: "The following examples illustrate formulations that we define to be in the opposite category, not meeting the test of effectively binding the parties: "The parties shall cooperate ..." - It is likely to be very difficult to prove that a party has not 'cooperated' ; "Dialogue shall be established ..." - It would require almost complete silence from the respondent for the complainant successfully to argue that no dialogue has been established. ; "Special attention shall be paid to ..." - How could it be verified that special attention has not been devoted to an issue?; "Measures necessary for development and promotion of ...". - It is likely to be very hard for a complainant in a dispute to prove either that that a measure is necessary or that it is not necessary for development; "Parties may conclude ..." - This phrase does not impose any restriction on the parties; "Parties shall strive (aim) to ..." - It would be difficult to prove absence of best endeavours. HORN, Henrik; MAVROIDIS Petros C.; SAPIR André. *Beyond the WTO? An anatomy of EU and US Preferential Trade Agreements.* Bruegel Blueprint Series. January 2009. Available at: <http://bruegel.org/wp-content/uploads/imported/publications/bp_trade_jan09.pdf>. Last Visited: 02/02/2017. pp.16-19.

[170] There are several other factors that could impact enforceability of obligations, however, the authors study focuses solely on the text of the preferential trade agreements, not on their actual effects or implementation. WTO. *World Trade Report 2011. The WTO and preferential trade agreements: From co-existence to coherence*. World Trade Organization. 2011. Available at: < https://www.wto.org/english/res_e/booksp_e/anrep_e/world_trade_report11_e.pdf>. Last visited: 30/05/2017. p. 132.

[171] WTO. *World Trade Report 2011. The WTO and preferential trade agreements: From co-existence to coherence*. World Trade Organization. 2011. Available at: < https://www.wto.org/english/res_e/booksp_e/anrep_e/world_trade_report11_e.pdf>. Last visited: 30/05/2017.

[172] HOFMANN, Claudia; OSNAGO, Alberto; RUTA, Michele. *Horizontal Depth: A New Database on the Content of Preferential Trade Agreements*. Mimeo, World Bank. 2016. Available at: <https://openknowledge.worldbank.org/bitstream/handle/10986/26148/WPS7981.pdf?sequence=1&isAllowed=y.> Last visited: 18/03/2017. p. 4.

Kleimann used the methodology to study the coverage and depth of the Association of Southeast Asian Nations ("ASEAN") agreement and the individual ASEAN members' agreements with third countries. Such study also attempts to analyze the depth of some WTO plus provisions. Villalta, Puig and Dalke apply the methodology to analyze the legal enforceability of sanitary and phytosanitary measures and technical barriers to trade provisions in preferential trade agreements signed by Canada[173].

Kohl, Brakman and Garretsen review 13 WTO plus and 4 WTO extra provisions, under a similar coding to that of Horn, Mavroids and Sapir, and expand the analysis to 296 preferential trade agreements (notified and not notified to the WTO)[174]. Dür, Baccini and Elsig have developed The Design of Trade Agreements Database ("DESTA"), which provides a more detailed analysis of the content and depth of specific provisions in a large sample of trade agreements. However, the database focus on only 10 policy areas, namely market access, services, investments, intellectual property rights, competition, public procurement, standards, trade remedies, non-trade issues, and dispute settlement[175].

3.6 North-South agreements

While studying the relationship between preferential trade agreements and global value chains, literature also divides preferential trade agreements, based on the level of development of the country members, into North–North, North–South, and South–South agreements. In this case, depth is measured by the number of relevant provisions in the agreements.

North–North agreements are those signed by developed countries. North–South preferential trade agreements consist of those agreements signed between developed and developing countries; and South-South agreements are those signed by developing countries.

Accordingly, North-North and North-South preferential trade agreements would seem to have similar depth and would be more likely to have deeper provisions, while

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[173] HOFMANN, Claudia; OSNAGO, Alberto; RUTA, Michele. *Horizontal Depth: A New Database on the Content of Preferential Trade Agreements*. Mimeo, World Bank. 2016. Available at: <https://openknowledge.worldbank.org/bitstream/handle/10986/26148/WPS7981.pdf?sequence=1&isAllowed=y.> Last visited: 18/03/2017. p. 5.

[174] Idem. p. 5.

[175] DÜR, Andreas, BACCINI, Leonardo; ELSIG, Manfred. *The design of preferential trade agreements: A new dataset in the Making*. No ERSD-2011-10, WTO Staff Working Papers, World Trade Organization (WTO), Economic Research and Statistics Division. 2011.

South–South preferential trade agreements would be on average shallower. For instance, studies show that North-South agreements would include, in average, 20 relevant provisions, while North–North preferential trade agreements would include, in average, 22 provisions[176]. Going forward, North–North agreements show greater legal enforceability than North–South preferential trade agreements.

On the other hand, developing countries seem to be more likely to sign shallower agreements covering only liberalization on trade in goods, even though there are agreements among developing countries of deeper integration. South–South preferential trade agreements have an average total depth of 13 provisions. Recent preferential trade agreements between developing countries might only include limited concessions on both sides, although there seems to be a tendency towards the adoption of deeper provisions. This reflects the fact that most trade agreements among developing countries mainly focus on more traditional trade policy issues[177].

In this regard, literature points that before, developing countries had a clear preference for signing preferential trade agreements with developed countries, in order to reach higher-income consumer markets. However, as trade within global chains has grown between developing countries and they are becoming important end-markets, import and export tariffs between these countries continue to be high and there are a number of behind-the-border measures in place. As such, South-South agreements have become increasingly more frequent.

Developed and developing countries sign deeper preferential trade agreements for different reasons. North–North deep agreements have mostly the main goal of internalizing cross-border policy spillovers as trade among them is generally already liberalized[178].

Reasons for North-South agreements being deeper than one would expect are various. Scholars argue that one possible explanation would be the bargaining power of

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[176] RUTA, Michele. *Preferential trade agreements and global value chains: Theory, evidence, and open questions*. *In* WTO; WORLD BANK; IDE-JETRO; OECD; UIBE. *Global Value Chain Development Report 2017: Measuring and Analyzing the Impact of GVCs on Economic Development*. 2017. Available at: <www.wto.org/english/res_e/booksp_e/gvcs_report_2017.pdf.> Last visited: 18/03/2017. pp. 178

[177] HOFMANN, Claudia; OSNAGO, Alberto; RUTA, Michele. *Horizontal Depth: A New Database on the Content of Preferential Trade Agreements*. Mimeo, World Bank. 2016. Available at: <https://openknowledge.worldbank.org/bitstream/handle/10986/26148/WPS7981.pdf?sequence=1&isAllowed=y.> Last visited: 18/03/2017. p. 3-4.

[178] RUTA, Michele. *Preferential trade agreements and global value chains: Theory, evidence, and open questions*. *In* WTO; WORLD BANK; IDE-JETRO; OECD; UIBE. *Global Value Chain Development Report 2017: Measuring and Analyzing the Impact of GVCs on Economic Development*. 2017. Available at: <www.wto.org/english/res_e/booksp_e/gvcs_report_2017.pdf.> Last visited: 18/03/2017. pp. 180.

developed countries that offer valuable market access to developing countries in return for concessions on their side[179]. Additionally, deeper provisions in such agreements would serve developed countries' purposes of gaining and securing preferential access to low cost production locations in value chains they participate in, and locking out third-country firms in a sort of investment in protections that may grant them a competitive advantage in comparison to other countries[180]. Finally, North–South deep trade agreements would induce greater participation in global value chains for developing countries as they consist of an instrument to address relevant border and behind-the-border issues that have a direct connection with the function of value chains.

While overall average tariffs are low, tariffs can mean significant barriers to investments in developing countries that are dependent on efficient functioning of value chains, as they may have the effect of precluding a country from entering or efficiently participating in value chains. Consequently, insisting in keeping high tariffs or refusing to make tariff reduction commitments results in developing countries incurring in significant costs[181]. Therefore, on the side of developing countries, deeper South–South preferential trade agreements could help participation in global value chains mostly through traditional trade liberalization, as tariffs between them are often high[182].

The average total depth of European Union's agreements is 25. Europe has the highest number of deep signed preferential trade agreements, and this is mostly because of the EC-Treaty and subsequent accessions of countries to the European Union. Members of EFTA, Japan and Korea also tend to sign deep preferential trade agreements with an average of 23, 21 and 20 provisions respectively[183]. Recent North-South agreements, such

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[179] BRUHN, Dominique, *Global Value Chains and Deep Preferential Trade Agreements: Promoting Trade at the Cost of Domestic Policy Autonomy?* (August 8, 2014). Available at: <ssrn.com/abstract=2464136> or <dx.doi.org/10.2139/ssrn.2464136>. Last visited 08/08/2017. p 14.

[180] MANGER, Mark S. *Investing in Protection. The Politics of Preferential Trade Agreements between North and South.* Cambridge University Press. October, 2009. *Apud* BRUHN, Dominique, *Global Value Chains and Deep Preferential Trade Agreements: Promoting Trade at the Cost of Domestic Policy Autonomy?* (August 8, 2014). Available at: <ssrn.com/abstract=2464136> or <dx.doi.org/10.2139/ssrn.2464136>. Last visited 08/08/2017. p 14.

[181] HOEKMAN, Bernard. *Moving Forward in the WTO post-Bali.* European University Institute and CEPR. February 26, 2014. P. 43.

[182] RUTA, Michele. *Preferential trade agreements and global value chains: Theory, evidence, and open questions. In* WTO; WORLD BANK; IDE-JETRO; OECD; UIBE. *Global Value Chain Development Report 2017: Measuring and Analyzing the Impact of GVCs on Economic Development*. 2017. Available at: <www.wto.org/english/res_e/booksp_e/gvcs_report_2017.pdf.> Last visited: 18/03/2017. pp. 180.

[183] HOFMANN, Claudia; OSNAGO, Alberto; RUTA, Michele. *Horizontal Depth: A New Database on the Content of Preferential Trade Agreements*. Mimeo, World Bank. 2016. Available at: <https://openknowledge.worldbank.org/bitstream/handle/10986/26148/WPS7981.pdf?sequence=1&isAllowed=y.> Last visited: 18/03/2017. p. 18.

as Japan's with Malaysia, Indonesia, Thailand and Vietnam, or ASEAN's efforts towards the inclusion of deeper provisions in its preferential trade agreements show that Asia is moving towards a deeper integration[184].

North–North and North–South preferential trade agreements seem to have more WTO extra provisions, but North-North agreements tend to be more legally enforceable than North-South agreements. On their turn, South-South focus on the inclusion of WTO plus and show less legal enforceability in comparison to the other agreements[185].

As mentioned above, the contents of preferential trade agreements have relevant effects over the creation and integration into global value chains, and their impact varies according to the countries' level of development. WTO plus provisions are the basis of deep preferential trade agreements on South–South. As such, studies point that every additional WTO plus provision would mean an increase in South–South integration into global value chains of 8.3 per cent. On their turn, WTO extra provisions add up to the basis of North–South. Every additional WTO extra provision in a North–South preferential trade agreement would increase global value chain integration in 4.3 percent[186].

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[184] WTO. *World Trade Report 2011. The WTO and preferential trade agreements: From co-existence to coherence.* World Trade Organization. 2011, p. 114.

[185] RUTA, Michele. *Preferential trade agreements and global value chains: Theory, evidence, and open questions*. *In* WTO; WORLD BANK; IDE-JETRO; OECD; UIBE. *Global Value Chain Development Report 2017: Measuring and Analyzing the Impact of GVCs on Economic Development*. 2017. Available at: <www.wto.org/english/res_e/booksp_e/gvcs_report_2017.pdf.> Last visited: 18/03/2017. pp. 180-181.

[186] Idem. pp. 180-181.

4 BRAZIL AND CHINA'S PREFERENTIAL TRADE AGREEMENTS

4.1 Brazil's preferential trade agreements

Brazil is part of the Latin American Integration Association ("LAIA") since August 12, 1980, which currently comprises Argentina, Bolivia, Chile, Colombia, Cuba, Ecuador, Mexico, Panama, Paraguay, Peru, Uruguay and Venezuela. Since March 26, 1991, Brazil is a member of MERCOSUR[187], which consists of a regional trade agreement that includes Argentina, Paraguay, Uruguay and Venezuela[188.] MERCOSUR was notified under the LAIA legal regime though the Economic Complementarity Agreement ("ACE") No. 18/1992.

Brazil has the peculiar characteristic of being highly committed to the multilateral trading system of the WTO, as opposed to other countries who have shifted towards regional and intra-regional integration. For instance, it has recently reinforced commitments under the WTO through the ratification of the Trade Facilitation Agreement and ratified the Fifth Protocol on Financial Services. Brazil has also granted preferential treatment to services and service suppliers from least developed countries[189].

The country has goals of enhancing its regional integration through the negotiation of preferential trade agreements within the LAIA and MERCOSUR frameworks. It has recently also sought negotiations with trading partners outside the region. Accordingly, Brazil currently has put in place a trade strategy aiming at a deeper integration with Latin America region, and signing preferential trade agreements with more relevant partners[190]. This suggests that the country may be willing to more participant of global production networks.

In this regard, Brazil has displayed efforts towards enhancement of relevant existing trade relations, and gaining access to foreign markets for its exports, by addressing measures tackling agricultural protectionism in export destinations, subsidies and other concerning domestic support policies. In order to do so, Brazil has engaged in negotiating

[187] MERCOSUR is a part of the LAIA legal regime under Economic Complementarity Agreement No. 18.
[188] On December 2, 2016, Venezuela's rights as a MERCOSUR member-State given the non-compliance of commitments assumed under the Accession Protocol. On August 5, 2017 Venezuela's rights and obligations deriving from its condition a MERCOSUR member-State were suspended.
[189] WTO. *Trade policy review*: *Report by the secretariat (Brazil). 2017.* Available at: < https://www.wto.org/english/tratop_e/tpr_e/s358_e.pdf > Last visited: 07/10/2017. p. 32.
[190] WTO. *Trade policy review*: *Report by the secretariat (Brazil). 2017.* Available at: < https://www.wto.org/english/tratop_e/tpr_e/s358_e.pdf > Last visited: 07/10/2017. p. 28.

preferential trade agreements containing deeper provisions, such as investments, services, trade facilitation, sanitary and phytosanitary measures, technical regulations and so on[191].

Brazil is currently part of over 20 preferential trade agreements, including the LAIA and MERCOSUR agreements[192]. Brazil, (as country) has signed agreements with the following countries: Argentina, Uruguay, Mexico, Guyana/Saint Kitts and Nevis, Peru, Suriname and Venezuela. A bilateral agreement with Peru for the enlargement of trade relations between the two countries has been signed in April 2016, but has not yet entered into force. Under MERCOSUR, Brazil has agreements with Bolivia; Chile; Colombia, Ecuador and Venezuela; Cuba; Egypt; India; Israel; Mexico; Peru and the Southern Africa Customs Union ("SACU"). An agreement with Palestine has been signed in December 2011, but it has not entered into force up to this date.

Additionally, there are four agreements under negotiation[193]: an enlargement of an agreement with Mexico ("ACE-53"); an enlargement of the agreement between MERCOSUR and India; one with the European Union; and a Cooperation and Investment Facilitation Agreement with African countries (to possibly be extended to Latin American partners).

Three agreements were signed within the LAIA framework: the Regional Tariff Preferences Agreement ("PTR-04"), the Seeds Agreement ("AG-02") and the Cultural Goods Agreement ("AR-07"). The first entered into force in 1985, and comprises a wide granting of preferential tariffs among country-members. The second agreement entered into force in 1993, and refers to liberalization of intra-regional trade for seeds between the country-members. The third agreement entered into force in 1989, and provides for the free flow of cultural, educational and scientific elements, works of art, collection objects and antiques among country-members.

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[191] WTO. *Trade policy review*: *Report by the secretariat (Brazil). 2017.* Available at: < https://www.wto.org/english/tratop_e/tpr_e/s358_e.pdf > Last visited: 07/10/2017. p. 28.

[192] Brazilian Ministry of Industry, Foreign Trade and Services. Available at: <http://www.mdic.gov.br/comercio-exterior/negociacoes-internacionais/132-acordos-dosquais-o-brasil-e-parte.>

[193] Brazilian Ministry of Industry, Foreign Trade and Services. Available at: <http://www.mdic.gov.br/comercio-exterior/negociacoes-internacionais/132-acordos-dosquais-o-brasil-e-parte>.

The ACE-02, between Brazil and Uruguay, came into force in 1983, and had as object the trade of products in automotive sector, until the effective entry into force of MERCOSUR's Automotive Policy[194].

The ACE-14, between Brazil and Argentina, incorporated 24 former protocols signed between the two countries, and came into force in 1991. The agreement served as a reference for the treaty that established MERCOSUR. Currently, trade between Argentina and Brazil takes place under the MERCOSUR framework established by ACE-18[195].

The preferential trade agreement signed between Brazil and Guyana under the Montevideo Treaty of 1980 (AAP.A25TM80 No. 38) came into effect in Brazil in 2004. In 2012, Saint Kitts and Nevis acceded to the agreement, which became effective in 2014. The agreement is relatively simple, only setting forth liberalization of tariffs between the countries[196].

In April 2016, Brazil and Peru signed a bilateral agreement[197] extending and deepening commitments by both countries in the areas of investment, services and public procurement. The agreement aims at expanding the countries' trade integration and boosting their social and economic development. The agreement has not entered into force up to this date[198].

In 2005, ACE-41, signed between Brazil and Suriname entered into force in Brazil. The agreement sets forth a concession on the part of Brazil of an annual quota of 10 thousand tons of certain types of rice[199] from Suriname, without any barriers to import[200].

ACE-69 was signed between Brazil and Venezuela in 2012, and entered into force in Brazil in 2014. The agreement set forth full liberalization of tariffs for products

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[194] Brazilian Ministry of Industry, Foreign Trade and Services. Available at: <http://www.mdic.gov.br/index.php/comercio-exterior/negociacoes-internacionais/132-acordos-dos-quais-o-brasil-e-parte/1817-acordos-brasil-uruguai-ace-02>.

[195] Brazilian Ministry of Industry, Foreign Trade and Services. Available at: <http://www.mdic.gov.br/index.php/comercio-exterior/negociacoes-internacionais/132-acordos-dos-quais-o-brasil-e-parte/1818-acordos-brasil-argentina-ace-14>.

[196] Brazilian Ministry of Industry, Foreign Trade and Services. Available at: <http://www.mdic.gov.br/index.php/comercio-exterior/negociacoes-internacionais/132-acordos-dos-quais-o-brasil-e-parte/1827-acordos-brasil-guiana-sao-cristovao-e-nevis-aap-a25tm-38>.

[197] "Acordo de Ampliação Econômico-Comercial".

[198] Brazilian Ministry of Industry, Foreign Trade and Services. Available at: <http://www.mdic.gov.br/index.php/comercio-exterior/negociacoes-internacionais/9-assuntos/categ-comercio-exterior/1508-acordo-de-ampliacao-economico-comercial-brasil-peru-ainda-sem-vigencia>.

[199] Non-parboiled peanut rice, non-parboiled peeled rice, non-parboiled rice and non-parboiled peeled non-parboiled rice.

[200] Brazilian Ministry of Industry, Foreign Trade and Services. Available at: <http://www.mdic.gov.br/index.php/comercio-exterior/negociacoes-internacionais/132-acordos-dos-quais-o-brasil-e-parte/1828-acordos-brasil-suriname-ace-41>.

originating in Venezuela, and provided for full liberalization with regard to Brazil's exports up to 2018. It has been replaced by ACE-59, signed between MERCOSUR and Colombia, Ecuador and Venezuela[201].

ACE-18[202], the agreement that sets forth the trading basis of MERCOSUR, entered into force in 1992. The agreement was signed within the ALADI framework on November 20, 1991 with the purpose of allowing for the creation of a common market between the member countries. Originally intended to be a common market, MERCOSUR might as well be considered an incomplete customs union.

A number of additional protocols updating trade and institutional issues are part of ACE-18. The agreement addresses a number of topics within the bloc, such as liberalization of trade in goods and services, trade-related investment measures, intellectual property rights, public procurement and competition policy.

The agreement may be deemed Brazil's most relevant preferential arrangement, as it forms the basis for the trade between the countries of MERCOSUR. As will be further seen, MERCOSUR consists of the deepest and broadest preferential trade agreement that Brazil is a part of, and one of Brazil's most important market for exports. It is also under MERCOSUR that Brazil is integrated into a specific value chain (automotive), which will be further mentioned.

ACE-35, signed between Mercosur and Chile, came into force for Brazil in 1995. It is Brazil's second broadest and deepest preferential trade agreement, containing provisions on the liberalization of tariffs and services as well as provisions on cooperation on economic, scientific and technological areas. There are also provisions on physical integration[203].

ACE-36, between Mercosur and Bolivia came into effect for Brazil in 1997. The agreement has references to the creation of a free trade area between the countries,

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[201] Brazilian Ministry of Industry, Foreign Trade and Services. Available at: <http://www.mdic.gov.br/index.php/comercio-exterior/negociacoes-internacionais/132-acordos-dos-quais-o-brasil-e-parte/1829-acordos-brasil-venezuela-ace-69>.

[202] Brazilian Ministry of Industry, Foreign Trade and Services. Available at: <http://www.mdic.gov.br/index.php/comercio-exterior/negociacoes-internacionais/132-acordos-dos-quais-o-brasil-e-parte/1819-acordos-mercosul-ace-18>.

[203] Brazilian Ministry of Industry, Foreign Trade and Services. Available at: <http://www.mdic.gov.br/index.php/comercio-exterior/negociacoes-internacionais/132-acordos-dos-quais-o-brasil-e-parte/1820-acordos-mercosul-chile-ace-35>.

originally intended to be established in a period of 10 years. The agreement deals with liberalization in trade of goods, through the concession of tariff preferences[204].

There are three agreements signed between MERCOSUR and Mexico: ACE-53, ACE-54, and ACE-55 (also known as the "Automotive Agreement"). The ACEs signed with Mexico do not substantially liberalize all the trade; instead, the agreements have different objects. ACE-53 consists of a bilateral agreement setting fixed tariff preferences and covering only some 800 products. ACE-55 consists of a bilateral agreement liberalizing the automotive sector trade. ACE-54 has the object of creating a free trade area through the elimination of tariffs and non-tariff barriers to trade. It also has provisions on the cooperation between MERCOSUR and Mexico for the creation of a framework aiming at promoting investments and economic cooperation[205].

ACE-58 was signed between MERCOSUR and Peru and came into force in Brazil by the end of 2005. The agreement provides for liberalization of trade in goods and services, and has provisions on technical barriers to trade, sanitary and phytosanitary measures and sets forth a dispute settlement mechanism[206].

MERCOSUR and Cuba have in place the ACE-62, which entered into force in 2007 and incorporates the provisions of another agreement signed between Brazil and Cuba (ACE-43) that have not been addressed by ACE-62. The agreements has rules on tariff liberalization, technical barriers to trade, and sanitary and phytosanitary measures and contains a dispute settlement mechanism[207].

The preferential trade agreement signed between MERCOSUR and India came into force in 2009. It was the first agreement signed by MERCOSUR (and Brazil as well) with a country outside Latin America. The agreement sets forth preference margins 10 percent,

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[204] Brazilian Ministry of Industry, Foreign Trade and Services. Available at: <http://www.mdic.gov.br/index.php/comercio-exterior/negociacoes-internacionais/132-acordos-dos-quais-o-brasil-e-parte/1821-acordos-mercosul-bolivia-ace-36>.

[205] Brazilian Ministry of Industry, Foreign Trade and Services. Available at: <http://www.mdic.gov.br/index.php/comercio-exterior/negociacoes-internacionais/132-acordos-dos-quais-o-brasil-e-parte/1822-acordos-brasil-mexico-ace-53>.
Available at: <http://www.mdic.gov.br/index.php/comercio-exterior/negociacoes-internacionais/132-acordos-dos-quais-o-brasil-e-parte/1823-acordos-mercosul-mexico-ace-54>.
Available at: <http://www.mdic.gov.br/index.php/comercio-exterior/negociacoes-internacionais/132-acordos-dos-quais-o-brasil-e-parte/1824-acordos-automotivo-mercosul-mexico-ace-55>.

[206] Brazilian Ministry of Industry, Foreign Trade and Services. Available at: <http://www.mdic.gov.br/index.php/comercio-exterior/negociacoes-internacionais/132-acordos-dos-quais-o-brasil-e-parte/1825-acordos-mercosul-peru-ace-58>.

[207] Brazilian Ministry of Industry, Foreign Trade and Services. Available at: <http://www.mdic.gov.br/index.php/comercio-exterior/negociacoes-internacionais/132-acordos-dos-quais-o-brasil-e-parte/1830-acordos-mercosul-cuba-ace-62>.

20 percent or 100 percent for about 450 tariff lines and contains provisions on technical barriers to trade and sanitary and phytosanitary measures[208].

The MERCOSUR-Israel preferential trade agreement entered into effect in 2010. The agreement provides for tariff liberalization for more than 8,000 tariff lines in up to 10 years, and contains several provisions such as technical barriers to trade and sanitary and phytosanitary measures[209].

The preferential trade agreement between Mercosur-SACU (a customs union formed by South Africa, Namibia, Botswana, Lesotho and Swaziland) entered into force in 2016. The agreement provides for the concession of margin preferences of 10 percent, 25 percent, 50 percent and 100 percent for more than 1,000 tariff lines. The agreement also addresses provisions on technical barriers to trade and sanitary and phytosanitary measures[210].

The MERCOSUR-Egypt preferential trade agreement was signed in 2010, but only entered into force in Brazil in December 2017. The agreement provides for tariff liberalization for almost 10,000 tariff lines, in a period of at least 10 years. It contains a general provision on the possibility of future understandings for access to services and investments, as well as addresses provisions on technical barriers to trade and sanitary and phytosanitary measures[211].

The MERCOSUR-Palestine preferential trade agreement was signed in December 2011, but has not entered into force up to this date. It provides for a wide tariff liberalization for up to 10 years. The agreement also has provision on technical barriers to trade and sanitary and phytosanitary measures[212].

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[208] Brazilian Ministry of Industry, Foreign Trade and Services. Available at: <http://www.mdic.gov.br/index.php/comercio-exterior/negociacoes-internacionais/132-acordos-dos-quais-o-brasil-e-parte/1831-acordos-mercosul-india>.

[209] Brazilian Ministry of Industry, Foreign Trade and Services. Available at: <http://www.mdic.gov.br/index.php/comercio-exterior/negociacoes-internacionais/132-acordos-dos-quais-o-brasil-e-parte/1832-acordos-mercosul-israel>.

[210] Brazilian Ministry of Industry, Foreign Trade and Services. Available at: <http://www.mdic.gov.br/index.php/comercio-exterior/negociacoes-internacionais/132-acordos-dos-quais-o-brasil-e-parte/1833-acordos-mercosul-sacu>.

[211] Brazilian Ministry of Industry, Foreign Trade and Services. Available at: <http://www.mdic.gov.br/index.php/comercio-exterior/negociacoes-internacionais/132-acordos-dos-quais-o-brasil-e-parte/1834-acordos-mercosul-egito>.

[212] Brazilian Ministry of Industry, Foreign Trade and Services. Available at: <http://www.mdic.gov.br/index.php/comercio-exterior/negociacoes-internacionais/132-acordos-dos-quais-o-brasil-e-parte/1835-acordos-mercosul-egito-ainda-sem-vigencia-2>.

Finally, the ACE-72 between MERCOSUR and Colombia[213] entered into force in December 2017. The agreement reinforces the commitments under ACE-59, and is currently the agreement that disciplines trade relations between the two countries. In addition, it sets forth the future effect of an automotive agreement signed between Brazil and Colombia in 2015, the concession of a 100 percent preference margin for vehicles with increasing yearly import quotas, and elimination of tariffs in the textiles and steel sectors.

In the agreements with Chile, Peru and Colombia Brazil has granted a 100 percent margin of preference. It is worth noting that Chile, Colombia, Mexico and Peru, have formed preferential trade agreements with larger high-income countries like the United States, European Union and Japan. Such agreements are deeper and broader than those under MERCOSUR, and thus provide for better market access conditions than the shallower Economic Complementarity Agreements Brazil usually makes use of. As a result, those agreements have the effect of reducing the tariff preferences granted to Brazil in such countries, and consequently lower Brazilian exports to the markets of the region[214] [215].

A relevant question to be asked is what the list of agreements above indicate with regard to Brazil's choice for preferential trade partners.

A quick look at its trade agreement network easily shows that all of Brazil's agreements have been signed with developing countries. This is to say that the totality of Brazil's agreements consist South-South agreements. Second, this setting also suggests that the country has had a clear preference for achieving a regional integration within the Latin America region. This because, of over 20 agreements, only five refer to countries outside Latin America (Egypt, India, Israel, Palestine and SACU). This is further confirmed by the fact that among the agreements under negotiation, only one consists of a North-South agreement (European Union).

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[213] Brazilian Ministry of Industry, Foreign Trade and Services. Available at: <http://www.brasil.gov.br/economia-e-emprego/2017/07/acordo-mercosul-colombia-beneficiara-exportacoes-brasileiras-ao-pais>; Ministry of Industry and Turism of Chile. Available at: <http://www.tlc.gov.co/publicaciones/13228/acuerdo_de_complementacion_economica_n_72_ace-72>.

[214] WTO. *Trade policy review*: *Report by the secretariat (Brazil). 2017.* Available at: < https://www.wto.org/english/tratop_e/tpr_e/s358_e.pdf > Last visited: 07/10/2017. p. 36.

[215] For instance, the WTO points that in 2014, 85 percent of the total negotiated under the agreement was liberalized in the trade agreement signed with Peru, but that the liberalization would not reach 99.8 percent until 2019. As for the agreement with Colombia, full liberalization is set to occur only by 2018. WTO. *Trade policy review*: *Report by the secretariat (Brazil). 2017.* Available at: < https://www.wto.org/english/tratop_e/tpr_e/s358_e.pdf > Last visited: 07/10/2017. p. 36.

Going forward, a second relevant question refers to the contents of those preferential agreements, of whether they would consist of shallow or deep agreements. The WTO has reviewed some preferential trade agreements based on the methodology of Horn, Mavroidis and Sapir. With the aim of verifying which WTO plus and WTO extra those agreements contained, and thus assess the depth of such agreements. Results would also be indicative of the level of integration within global value chains by each country assessed.

The WTO has reviewed the MERCOSUR and the MERCOSUR-India agreements. However, in order to have a full picture with regard to Brazil's trade network, an additional work of review of the remaining of Brazil's preferential trade agreement would be required.

The economic complementarity agreements between Brazil and Argentina, Suriname and Uruguay, and the partial scope agreement with Guyana, Saint Kitts and Nevis basically address tariff liberalization provisions (or concessions of quotas). As they do not contain more relevant provisions (for instance trade remedies, technical barriers to trade, sanitary and phytosanitary measures, services, intellectual property, and so on) those agreements have not been included in the present analysis and therefore have not been reviewed. The same applies to the economic complementarity agreement with Venezuela, as it has been in practice replaced by the ACE-59 (Colombia, Ecuador and Venezuela), and the preferential trade agreements between MERCOSUR-Palestine and between Brazil and Peru, as they have not become effective up to this date. Finally, agreements that are still under negotiation have not been included as their legal text have not become final or become available.

Therefore the analysis on the contents of Brazil's agreements will only focus on those agreements that provide for additional commitments under the Horn, Mavroidis and Sapir study.

The tables below summarizes WTO's findings with regard to MERCOSUR and MERCOSUR-India agreements, and the findings on other MERCOSUR agreements. The analysis of the agreement with Mexico consisted of reviewing ACE-54.

Table 3 - Identified WTO Plus Provisions and Legal Enforceability - Brazil

Preferential Trade Agreement	WTO Plus Provisions	WTO Plus Leg. Enf.

MERCOSUR	FTA Industrial, FTA Agricultural, Customs, STE, AD, Public Procurement, TRIMs, GATS, TRIPs	All
MERCOSUR-India	FTA Industrial, FTA Agricultural, SPS, TBT, STE, AD, CVM	All
MERCOSUR-Bolivia	FTA Industrial, FTA Agricultural, SPS, TBT, AD, CVM	All
MERCOSUR-Chile	FTA Industrial, FTA Agricultural, SPS, TBT, AD, CVM, GATS, TRIPs	All
MERCOSUR-Colombia/Ecuador/Venezuela	FTA Industrial, FTA Agricultural, SPS, TBT, AD, CVM, GATS, TRIPs	All
MERCOSUR-Colombia	FTA Industrial, FTA Agricultural, SPS, TBT, AD, CVM, GATS, TRIPs	All
MERCOSUR-Cuba	FTA Industrial, FTA Agricultural, SPS, TBT, AD, CVM	All
MERCOSUR-Egypt	FTA Industrial, FTA Agricultural, SPS, TBT, AD, CVM	All
MERCOSUR-Israel	FTA Industrial, FTA Agricultural, Customs, SPS, TBT, STE, AD, CVM	All
MERCOSUR-Mexico	FTA Industrial, FTA Agricultural, SPS, TBT, AD, CVM	All
MERCOSUR-Peru	FTA Industrial, FTA Agricultural, SPS, TBT, AD, CVM, TRIPs	All
MERCOSUR-SACU	FTA Industrial, FTA Agricultural, Customs, SPS, TBT, AD, CVM	All

Source: WTO and author.

Table 4 - Identified WTO Extra Provisions and Legal Enforceability - Brazil

Preferential Trade Agreement	WTO Extra Provisions	WTO Extra Leg. Enf.
MERCOSUR	Competition Policy, IPR, Movement of Capital	All
MERCOSUR-India	None	None
MERCOSUR-Bolivia	None	None
MERCOSUR-Chile	Competition Policy	None
MERCOSUR-Colombia/Ecuador/Venezuela	None	None
MERCOSUR-Colombia	Research and Technology	None
MERCOSUR-Cuba	None	None
MERCOSUR-Egypt	None	None
MERCOSUR-Israel	None	None
MERCOSUR-Mexico	None	None
MERCOSUR-Peru	None	None
MERCOSUR-SACU	None	None

Source: WTO and author.

Table 5 - Number of WTO Plus and WTO Extra Provisions and Legal Enforceability - Brazil

Preferential Trade Agreement	WTO Plus Provisions	WTO Plus Legal Enf.	WTO Extra Provisions	WTO Extra Legal Enf.
MERCOSUR	9	9	3	3
MERCOSUR-India	7	7	0	0
MERCOSUR-Bolivia	6	6	0	0
MERCOSUR-Chile	8	8	1	0
MERCOSUR-Colombia/Ecuador/Venezuela	8	8	0	0
MERCOSUR-Colombia	8	8	1	0
MERCOSUR-Cuba	6	6	0	0
MERCOSUR-Egypt	6	6	0	0
MERCOSUR-Israel	8	8	0	0
MERCOSUR-Mexico	6	6	0	0
MERCOSUR-Peru	7	7	0	0
MERCOSUR-SACU	7	7	0	0

Source: WTO and author.

MERCOSUR's agreements have an average of seven (between six and nine) WTO plus provisions. None of the agreements presents all 14 WTO plus provisions. The agreement with the largest number of provisions would be MERCOSUR, with a total of nine provisions, followed by MERCOSUR agreements with Chile, Colombia/Ecuador/Venezuela, Colombia and Israel, with eight provisions each. Remaining agreements would have either seven or six provisions.

All except the MERCOSUR agreement itself (as it does not a CVM provision), would have provisions in the following main areas: FTA industrial, FTA Agricultural, SPS, TBT, AD and CVM.

Five of the 12 agreements would include TRIPs provisions (MERCOSUR, MERCOSUR-Chile, MERCOSUR-Colombia/Ecuador/Venezuela, and MERCOSUR-Colombia and MERCOSUR-Peru).

Four of the 12 agreements would include GATS provisions (MERCOSUR, MERCOSUR-Chile, MERCOSUR-Colombia/Ecuador/Venezuela, and MERCOSUR-Colombia).

Three agreements would have STE provisions (MERCOSUR, MERCOSUR-India and MERCOSUR-Israel) and other three would have Customs provisions (MERCOSUR, MERCOSUR-Israel and Mercosur-SACU).

Finally, MERCOSUR would be the only agreement out of the twelve that contain provisions on TRIMs and public procurement.

With regard to legal enforceability, the analysis shows that all WTO plus provisions set forth in MERCOSUR's agreements would be legally enforceable.

With regard to WTO-X provisions, only three agreements (MERCOSUR, MERCOSUR-Chile and MERCOSUR-Colombia) would have WTO extra provisions and they would be limited to only four types out of the existing 38 described by Horn, Mavroidis and Sapir: Competition Policy, IPR, Movement of Capital, and Research and Technology. MERCOSUR would consist of the agreement with the largest number of WTO-X provisions, which on their turn amount to only three.

Only MERCOSUR and MERCOSUR-Chile have provisions on Competition Policy. MERCOSUR is the only agreement with provisions on IPR and Movement of Capital; and MERCOSUR-Colombia is the only one with a provision on Research and Technology.

With regard to legal enforceability, the analysis shows that only the three WTO extra provisions of the MERCOSUR agreement would be legally enforceable.

Therefore, Brazil's agreements tend to be much shallower than in comparison to its contents of WTO plus, as only a minimal number of WTO extra provisions (four out of 38) is provided for in the agreements and would have legal enforceability (three). The comparison above shows that MERCOSUR is Brazil's overall deepest agreement.

Without any segmentation (i.e., considering both WTO plus and WTO extra provisions), Brazil would have an average of 8 provisions in total, which would in turn indicate that its set of agreements would be (very) shallow.

Under a global value chain perspective, literature argues that provisions relating to investment, intellectual property competition and services are deemed to potentially have more impact over value chains[216]. In this regard, we note that Brazil's network of

[216] MIROUDOT, Sébastien. *Investment*. In Chauffour, Jean-Pierre and Jean-Christophe Maur (eds.), Preferential Trade Agreement Policies for Development: a Handbook, Washington D.C.: The World Bank. 2011. *Apud*. RUBÍNOVÁ, Stela. *The Impact of New Regionalism on Global Value Chains Participation.* Centre for Trade and Economic Integration Working Papers. Ctei-2017-07. Available at: <http://graduateinstitute.ch/files/live/sites/iheid/files/sites/ctei/shared/CTEI/working_papers/CTEI-2017-07_Rubinova.pdf>. Last visited: 23/03/2017. p. 5.

agreements have only one provision on investment[217] (MERCOSUR's TRIMs); six provisions on intellectual property[218] (MERCOSUR, MERCOSUR-Chile, MERCOSUR-Colombia/Ecuador/Venezuela, and MERCOSUR-Colombia and MERCOSUR-Peru), one on Competition Policy (MERCOSUR-Chile); and four services provisions (MERCOSUR, MERCOSUR-Chile, MERCOSUR-Colombia/Ecuador/Venezuela, and MERCOSUR-Colombia).

The analysis above therefore shows that Brazil's preferential trade agreement network would be eminently South-South oriented, and shallow.

4.2 China's preferential trade agreements

China's accession to the WTO has assisted in providing the country with a more reliable institutional global legal framework. China's entry into WTO in 2001 has been widely viewed as a major milestone in China's economic development and integration into the world economy since the late 1970s[219]. But China has not taken larger steps as a result of its WTO accession. It has been increasingly active in the pursuit of regional and bilateral trade agreements and has made considerable progress in this regard[220].

Up to this moment, China has concluded 16 preferential trade agreements. They are with: ASEAN (Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam), Australia, Chile, Costa Rica, Georgia, Hong Kong, Iceland, Korea, Macao, Maldives, New Zealand, Pakistan, Peru, Singapore, Switzerland, and Asia-Pacific ("APTA") (Bangladesh, Korea, India and Sri Lanka)[221].

There are additional eight preferential trade agreements currently under negotiation: Japan/Korea, Israel, Mauritius, Moldova, Norway, Sri Lanka, the Gulf Cooperation

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[217] Includes WTO plus TRIMs and WTO extra Investment.
[218] Includes WTO plus TRIPs and WTO extra IPR.
[219] BRANSTETTER, Lee; LARDY, Nicholas. *China's Embrace of Globalization*. NBER Working Paper No. 12373. 2006. LARDY, Nicholas. *Integrating China into the Global Economy*. Brookings Institution Press. 2002. *Apud.* CHENG Dazhong; WANG Xinkui; XIAO Zhiguo; Yao Weiquan. How does the Selection of FTA Partner(s) Matter in the Context of GVCs? The Experience of China. Preliminary version: February 29, 2016. Available at:
< http://rigvc.uibe.edu.cn/docs/20160329212257271109.pdf>. Last visited: 05/05/2017. p. 3.
[220] LI, C., WANG, J.; WHALLEY, J. *China's Regional and Bilateral Trade Agreements.* NBER Working Paper No. 19853. 2014. *Apud.* CHENG Dazhong; WANG Xinkui; XIAO Zhiguo; Yao Weiquan. How does the Selection of FTA Partner(s) Matter in the Context of GVCs? The Experience of China. Preliminary version: February 29, 2016. Available at: < http://rigvc.uibe.edu.cn/docs/20160329212257271109.pdf>. Last visited: 05/05/2017. p. 3.
[221]Ministry of Commerce of the People's Republic of China. Available at: <http://fta.mofcom.gov.cn/topic/enpacific.shtml>.

Council ("GCC") (Saudi Arabia, United Arab Emirates, Kuwait, Amen, Qatar and Bahrain), and the RCEP (ASEAN, Australia, India, Japan, Korea and New Zealand)[222] [223].

Finally, there are seven preferential agreements under consideration (still in a feasibility study phase)[224]: Bengal, Canada, Colombia, Fiji, Nepal, Papua New Guinea and Mongolia[225].

The Asia-Pacific Trade Agreement (APTA) is a preferential trade agreement that originated from the Bangkok Agreement. The Bangkok Agreement was promoted by the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) and signed in 1975. China became a signatory in 2001. At the end of 2005, member countries revised the Bangkok Agreement and renamed it Asia-Pacific Trade Agreement. Currently ongoing, the fourth round of negotiations is discussing tariff concessions of trade in goods, trade in services, investment, trade facilitation, and non-tariff measures, among other topics[226].

As from 2002, China and ASEAN engaged in the formation of their free trade area. In 2002, China and the ASEAN members signed the Framework Agreement on China-ASEAN Comprehensive Economic Cooperation. Subsequently, in 2004, they signed the Agreement on Trade in Goods, which entered into force in 2005. In 2007, came the Agreement on Trade in Services and in 2009, the Agreement on Investment[227].

Between 2014 and 2015, China and ASEAN engaged in negotiations with a view of upgrading their trade relations. Accordingly, the upgrade concerns several areas such as goods, services, investment, and economic and technological cooperation, and also has the aim of assisting in the negotiations on the RCEP and the Free Trade Area of the Asia-Pacific ("FTAAP").

The China-Chile preferential trade agreement entered into force in October 2006. Through the agreement, China and Chile committed to eliminate tariffs for about 97 percent of products, and to cooperate in several areas like SMEs, culture, education, science and technology, and environmental protection. In 2008, the countries signed the

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[222] Available at the Ministry of Commerce of the People's Republic of China website: <http://fta.mofcom.gov.cn/topic/enpacific.shtml>.
[223] China is currently negotiating further commitments with Pakistan, Singapore and New Zealand.
[224] China is also developing feasibility studies for enlargement of Peru and Switzerland agreements.
[225] Ministry of Commerce of the People's Republic of China. Available at: <http://fta.mofcom.gov.cn/topic/enpacific.shtml>.
[226] Ministry of Commerce of the People's Republic of China. Available at: <http://fta.mofcom.gov.cn/topic/enpacific.shtml>.
[227] Ministry of Commerce of the People's Republic of China. Available at: <http://fta.mofcom.gov.cn/topic/chinaasean.shtml>.

Supplementary Agreement on Trade in Services, and in 2012, the Supplementary Agreement on Investment. In 2017, the countries signed an upgrading agreement. The China-Chile agreement addresses areas such as goods, services, economic and technological cooperation, e-commerce, environment, competition and government procurement[228].

The China-Pakistan preferential trade agreement entered into force in 2007. In 2009, the parties signed the Agreement on Trade in Services. In addition to traditional topics, the China-Pakistan agreement has provisions on investments and intellectual property[229].

The preferential trade agreement between China and New Zealand entered into force in 2008. The agreement has provisions on goods, trade in services, movement of persons, investment and cooperation in areas such as customs and intellectual property rights. It was the first more comprehensive agreement of China, as well as the first agreement China signed with a developed country. In 2016, the countries started negotiations for the upgrading of the agreement. In the latest negotiation round, the countries touched on topics such as technical barriers to trade, customs, trade facilitation, rules of origin, trade in services, investment, movement of persons, competition policy, e-commerce, agricultural cooperation, environment, and government procurement[230].

In 2008, the China-Singapore preferential trade agreement entered into force. The countries intended to speed the liberalization of trade in goods set forth under the China-ASEAN framework, and to expand liberalization of trade in services. The countries have engaged in negotiations for the upgrading of the agreement since 2015. The most recent negotiation round took place in October 2017, where the countries discussed trade in services, investment, rules of origin, customs procedures, trade facilitation and trade remedies[231].

Also in 2008, China signed an agreement with Peru, which became effective in 2009. This agreement was China's first comprehensive agreement with a Latin American country. The agreement aims at strengthening the economic and trade cooperation between

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[228] Ministry of Commerce of the People's Republic of China. Available at: <http://fta.mofcom.gov.cn/topic/enchile.shtml>.

[229] Ministry of Commerce of the People's Republic of China. Available at: <http://fta.mofcom.gov.cn/topic/enpakistan.shtml>.

[230] Ministry of Commerce of the People's Republic of China. Available at: <http://fta.mofcom.gov.cn/topic/enpakistan.shtml>.

[231] Ministry of Commerce of the People's Republic of China. Available at: <http://fta.mofcom.gov.cn/topic/ensingapore.shtml>.

the parties, and touches on new topics such as movement of capital and of persons through the countries' territories. The agreement provides for the elimination of tariffs for over 90 percent of goods traded between the parties. The agreement also sets forth commitments to further liberalize the service sectors based on their respective commitments assumed under the WTO, and addresses many other topics such as intellectual property and customs procedures. Certain sectors, such as R&D, leasing, technical testing and analysis, agriculture, mining, express delivery and tourist guide - on the part of Peru-, and mining, management and consulting, R&D, translation and interpretation, sports and tourism - on the part of China -, will be further liberalized. The parties have also committed to promote facilitation to investments[232].

The China-Costa Rica preferential trade agreement entered into force in 2011. The agreement provides for the elimination of tariffs for over 90 percent of goods traded between the parties. 45 service sectors and sub-sectors of Costa Rica (including telecommunication and commercial services, construction, real estate, distribution, education, environment, computers and tourism services), and 7 service sectors and sub-sectors of China (including computer services, real estate, market research, translation and interpretation, and sport, will be further liberalized. The agreement contains provisions on intellectual property, customs, technical barriers, health and plant inspection, and quarantine and cooperation[233].

The China-Iceland preferential trade agreement became effective in 2014. The agreement sets forth that around 96 percent of tariff lines will achieve zero rate. It comprises provisions on several topics such as customs procedures, competition policy, intellectual property, trade in services, investment, cooperation, movement of persons and dispute resolution. Iceland was the first developed European country to recognize China as a market economy, as well as the first European country to negotiate a preferential trade agreement with China[234].

The preferential trade agreement with Switzerland entered into force in 2014. The agreement is comprehensive, setting forth a number of commitments by the parties. The agreement provides for elimination of tariffs for almost 100 percent of China's exports to

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[232] Ministry of Commerce of the People's Republic of China. Available at: <http://fta.mofcom.gov.cn/topic/enperu.shtml>.

[233] Ministry of Commerce of the People's Republic of China. Available at: <http://fta.mofcom.gov.cn/topic/encosta.shtml>.

[234] Ministry of Commerce of the People's Republic of China. Available at: <http://fta.mofcom.gov.cn/topic/eniceland.shtml>.

Switzerland, and over 80 percent of Swiss exports to China will be fully liberalized. Other products will receive partial tariff reduction[235].

The China-Korea preferential trade agreement became effective in 2015. The China-Korea agreement is China's biggest free trade area so far, with regard to trade volume of countries and areas covered. China will eliminate 91 percent of tariffs, which represent 35 percent of Korea's import volume. Korea will eliminate 92 percent of tariffs, which represents 91 percent of China's import volume. At the time the agreement was signed, China was Korea's largest trading partner, export destination, origin of imports, foreign investment destination, origin of foreign students and tourism destination. Korea is one of China's most relevant trade and investment partners. The countries' bilateral trade and economy show high levels of complementarity and integration[236].

In 2015, the agreement between China and Australia also entered into force. The agreement is comprehensive and has provisions on areas such as goods, services, investment, e-commerce, government procurement, intellectual property and competition policy. The parties have committed to initially eliminate tariffs on products that account for around 85 percent of their trade value, which will reach full liberalization for Australia and 97 percent of trade liberalization for China. In the services sector, Australia has adopted a negative list and China has adopted a positive list of commitments. The countries have also committed to grant most-favored nation treatment in the investment sector[237].

The preferential trade agreement between China and Georgia entered into force in January 1, 2018. The agreement covers many areas like trade in goods and services, intellectual property, e-commerce, competition and environment. According to the agreement, the parties should eliminate tariffs for most products, liberalize service sectors and improve rules on intellectual property, environmental protection, e-commerce and competition. Georgia is an important trade partner located in the Eurasian region for China and the first country in that region to sign a preferential trade agreement with China. The agreement also represents a step towards approximation with the European Union[238].

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[235] Ministry of Commerce of the People's Republic of China. Available at: <http://fta.mofcom.gov.cn/topic/enswiss.shtml>.

[236] Ministry of Commerce of the People's Republic of China. Available at: <http://fta.mofcom.gov.cn/topic/enkorea.shtml>.

[237] Ministry of Commerce of the People's Republic of China. Available at: <http://fta.mofcom.gov.cn/topic/enaustralia.shtml>

[238] Ministry of Commerce of the People's Republic of China. Available at: <http://fta.mofcom.gov.cn/list/chinageorgiaen/chinageorgiaennews/1/encateinfo.html.>

China and Maldives signed a preferential trade agreement at the end of 2017, but it has not yet entered into force. The agreement provides for full tariff liberalization, further liberalization of services, based on the countries' WTO commitments, in addition to provisions on rules of origin, customs, and trade facilitation, trade remedies, technical trade barriers and sanitary and phytosanitary measures. The agreement also sets forth the granting of national treatment and the-most-favored-nation treatment for foreign investors[239].

With regard to China's choice for preferential trade partners, the list of agreements above indicate that China's partners are quite heterogeneous in terms of development level and positions within global value chains[240]. Overall there seems to have been a preference for forming trade agreements with Asian developing countries, although it would seem that China has sought to reach other countries of the Pacific, either developing or developed, as can be seen by its agreements with Costa Rica, Peru and Chile on the one side, and with Australia and New Zealand, on the other. The agreements with countries in the European region, albeit rather small in terms of relevance in global trade – Switzerland, Iceland and Georgia, and subject to negotiations, with Moldova – might represent a step for China towards establishing preferential trade agreements within the European continent.

Out of the 16 preferential trade agreements signed by China, four consist of North-South agreements (Australia, Iceland, New Zealand and Switzerland), while the remaining 12 (ASEAN, Chile, Costa Rica, Georgia, Hong Kong, Korea, Macao, Maldives, Pakistan, Peru, Singapore, and Asia-Pacific) are South-South agreements. This is to say that 75 percent of China's preferential trade agreements are among developing countries.

Out of the eight agreements under negotiation, three consist of North-South agreements (Japan/Korea, Norway and RCEP), while the remaining five consist of South-South agreements (Israel, Mauritius, Moldova, Sri Lanka, and the GCC). This is to say that 62.5 percent of China's possible preferential trade agreements would also be among developing countries.

Going forward with the analysis of China's agreements content, the WTO has reviewed the China-Chile, China-Hong Kong, China-New Zealand, China-Pakistan, China-

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[239] Ministry of Commerce of the People's Republic of China. Available at: <http://fta.mofcom.gov.cn/list/chinamedfen/chinamedfennews/1/encateinfo.html>.

[240] Ruta WTO 2017. CHENG Dazhong; WANG Xinkui; XIAO Zhiguo; Yao Weiquan. How does the Selection of FTA Partner(s) Matter in the Context of GVCs? The Experience of China. Preliminary version: February 29, 2016. Available at: < http://rigvc.uibe.edu.cn/docs/20160329212257271109.pdf>. Last visited: 05/05/2017. p. 3.

Peru, China-Singapore and China-ASEAN preferential trade agreements[241] back in 2011. As was done with Brazil, a complement to WTO's analysis was required with a view of including additional agreements that are currently in force, namely: China-Australia, China-Iceland, China-Costa Rica, China-Georgia, China-Korea, China-Macao, and China-Switzerland.

The China-Maldives preferential trade agreement has not entered into force so it has not been included in this review. The Asia-Pacific Trade Agreement mostly concerns liberalization of tariffs, and although the agreement contains a reference to the application of relevant WTO Agreements - including the Agreement on the Implementation of Article VI of the GATT 1994 (antidumping) and the Agreement on Subsidies and Countervailing Duties - such provision is very general. For not having further commitments, the agreement has not been included in the review.

The tables below summarize WTO's and our findings on China's preferential trade agreements.

Table 6 - Identified WTO Plus Provisions and Legal Enforceability - China

Preferential Trade Agreement	WTO Plus Provisions	WTO Plus Leg. Enf.
China-Chile	FTA Industrial, FTA Agricultural, Customs, Export Taxes, TBT, STE, AD, CVM, State Aid, TRIMs, TRIPs	FTA Industrial, FTA Agricultural, Customs, Export Taxes, AD, CVM, State Aid, TRIPs
China-Hong Kong	FTA Industrial, FTA Agricultural, AD, CVM, GATS	All
China-New Zealand	FTA Industrial, FTA Agricultural, Customs, Export Taxes, SPS, TBT, STE, AD, CVM, State Aid, TRIMs, GATS, TRIPs	All
China-Pakistan	FTA Industrial, FTA Agricultural, Customs, Export Taxes, SPS, TBT, AD, CVM, State Aid	All
China-Peru	FTA Industrial, FTA Agricultural, Customs, Export Taxes, SPS, TBT, STE, AD, CVM, TRIMs, GATS, TRIPs	All
China-Singapore	FTA Industrial, FTA Agricultural, Customs, SPS, TBT, STE, AD, CVM,	All

[241] China has recently announced the upgrading of the China-ASEAN and China-Peru agreements. These agreements have not been reviewed as their legal texts of the upgrading agreements were not available at the time this work was prepared.

Preferential Trade Agreement	WTO Plus Provisions	WTO Plus Leg. Enf.
	TRIMs, GATS	
China-ASEAN	FTA Industrial, FTA Agricultural, AD, CVM, TRIMs, GATS	All
China-Australia	FTA Industrial, FTA Agricultural, Customs, SPS, TBT, AD, CVM, TRIMs, GATS, TRIPs	All
China-Iceland	FTA Industrial, FTA Agricultural, Customs, SPS, TBT, AD, CVM, Public Procurement, GATS	All
China-Costa Rica	FTA Industrial, FTA Agricultural, Customs, SPS, TBT, AD, CVM, GATS, TRIPs	All
China-Georgia	FTA Industrial, FTA Agricultural, Customs, SPS, TBT, AD, CVM, GATS, TRIPs	All
China-Korea	FTA Industrial, FTA Agricultural, Customs, SPS, TBT, STE, AD, CVM, Public Procurement, TRIMs, GATS, TRIPs	All
China-Macao	FTA Industrial, FTA Agricultural, CVM, GATS	All
China-Switzerland	FTA Industrial, FTA Agricultural, Customs, SPS, TBT, STE, AD, CVM, GATS, TRIPs	All

Source: WTO and author.

Table 7 - Identified WTO Extra Provisions and Legal Enforceability - China

Preferential Trade Agreement	WTO Extra Provisions	WTO Extra Leg. Enf.
China-Chile	Environmental Laws, IPR, Investment, Labor Market Regulation, Cultural Cooperation, Economic Policy Dialogue, Education and Training, Financial Assistance, Health, Human Rights, Industrial Cooperation, Mining, Nuclear Safety, Public Administration, Research and Technology, SME, Social Matters, Taxation, Terrorism, Visa and Asylum	Environmental Laws, IPR, Investment, Labor Market Regulation, Cultural Cooperation, Economic Policy Dialogue, Education and Training, Industrial Cooperation, Mining, Research and Technology, SME, Social Matters
China-Hong Kong	IPR, Investment, Cultural Cooperation	None
China-New Zealand	Environmental Laws, IPR, Investment, Labor Market Regulation, Consumer Protection, Information Society, SME, Visa and Asylum	All
China-Pakistan	IPR, Investment	All
China-Peru	Competition Policy, Environmental Laws, Labor Market Regulation, Movement of Capital, Agriculture, Cultural Cooperation,	Movement of Capital, Visa and Asylum

	Education and Training, Industrial Cooperation, Mining, Regional Cooperation, Research and Technology, SME, Visa and Asylum	
China-Singapore	Investment, Cultural Cooperation, Education and Training, Industrial Cooperation, Regional Cooperation, Visa and Asylum	Investment, Industrial Cooperation, Regional Cooperation, Visa and Asylum
China-ASEAN	Investment	None
China-Australia	Investment, Visa and Asylum	All
China-Iceland	Competition Policy, IPR, Economic Policy Dialogue, Education and Training, Research and Technology	Competition Policy, IPR
China-Costa Rica	Competition Policy, Investment, Agriculture, Cultural Cooperation, Research and Technology, SME, Visa and Asylum	Investment
China-Georgia	Competition Policy, Environmental Laws, Investment, Visa and Asylum	Competition Policy, Investment
China-Korea	Competition Policy, Environmental Laws, IPR, Investment, Cultural Cooperation, Energy, Research and Technology, SME, Visa and Asylum	Environmental Laws, IPR, Investment, Visa and Asylum
China-Macao	None	None
China-Switzerland	Competition Policy, Environmental Laws, IPR, Investment, Agriculture, Health	IPR

Source: WTO and author.

Table 8 - Number of WTO Plus and WTO Extra Provisions and Legal Enforceability - China

Preferential Trade Agreement	WTO Plus Provisions	WTO Plus Legal Enf.	WTO Extra Provisions	WTO Extra Legal Enf.
China-Chile	11	8	20	12
China-Hong Kong	5	5	3	0
China New Zealand	13	13	8	8
China Pakistan	9	9	2	2
China-Peru	12	12	13	2
China-Singapore	10	10	6	4
China-ASEAN	6	4	1	0
China-Australia	9	9	2	2
China-Iceland	10	10	5	2
China-Costa Rica	9	9	7	1
China Georgia	9	9	4	2
China-Korea	12	12	9	4
China Macao	4	4	0	0
China Switzerland	10	10	6	1

Source: WTO and author.

China's preferential trade agreements follow no actual template, varying in accordance with the trading partner[242], in terms of both WTO plus and WTO extra provisions, as well as the legal enforceability of the latter.

The tables above show that China's agreements have an average of 10 (between four and 12) WTO plus provisions. None of the agreements presents all 14 WTO plus provisions set by Horn, Mavroidis and Sapir, although the agreement with New Zealand beats 13 of the 14 types of provisions.

Generally, 12 agreements (with the exception of the China-ASEAN and China-Macao), would have provisions in the main areas of: FTA industrial, FTA Agricultural, SPS, TBT, AD and CVM.

Likewise, 12 agreements would include GATS provisions (except for China-Chile and China-Pakistan), and eleven would comprise Customs provisions (with the exception of China-ASEAN, China-Hong Kong and China-Macao).

Eight agreements would contain provisions on TRIPs (except for China-ASEAN, China-Hong Kong, China-Iceland, China-Macao, China-Pakistan and China-Singapore), as well as Visa and Asylum (China-Australia, China-Chile, China-Costa Rica, China-Korea, China-New Zealand, China-Peru, and China-Singapore).

Six agreements would comprise provisions on TRIMs (China-ASEAN, China-Australia, China-Chile, China-Korea, China-New Zealand, China-Peru and China-Singapore) and five would have STE provisions (China-Chile, China-Korea, China-New Zealand, China-Peru and China-Switzerland).

Four agreements would comprise Export Taxes (China-Chile, China-New Zealand China-Pakistan China-Peru); three would have State Aid provisions (China- Chile, China-New Zealand and China-Pakistan); and finally, only two agreements would incorporate provisions on Public Procurement (China-Iceland and China-Korea).

China-New Zealand is the agreement with the largest number of WTO plus provisions (13), whereas ASEAN, Hong Kong and Macao rank last, with six, five and four provisions, respectively.

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[242] CHENG Dazhong; WANG Xinkui; XIAO Zhiguo; Yao Weiquan. How does the Selection of FTA Partner(s) Matter in the Context of GVCs? The Experience of China. Preliminary version: February 29, 2016. Available at: < http://rigvc.uibe.edu.cn/docs/20160329212257271109.pdf>. Last visited: 05/05/2017. p. 2.

With regard to legal enforceability, the analysis shows that, with the exception of the China-Chile agreement, all WTO plus provisions of the agreements would be legally enforceable.

This shows that China's agreements could be deemed to have a high degree of depth, as most agreements have up to 13 provisions out of 14. Likewise, the degree of legal enforceability of such agreements is high, as generally all provisions contained in the agreements could be enforced. This profile suggests that China's agreements have the basic required elements to foster a great level of integration between the members.

With regard to WTO extra provisions, China shows a varied choice in its agreements. Out of 38 existing WTO extra provisions, China employed 26, distributed among 13 agreements (according to our analysis, Macao would not have any WTO extra provisions).

WTO extra provisions that are not set forth in any of China's preferential trade agreements are: Anti-Corruption, Data Protection, Approximation of Legislation, Audio Visual, Civil Protection, Innovation Policies, Illegal Immigration, Illicit Drugs, Money Laundering, Political Dialogue and Statistics.

The tables above show that China's agreements have an average of 7 (between 0 and 20) WTO extra provisions. None of the agreements presents all 38 WTO extra provisions. China-Chile is the deepest agreement, having the highest number of WTO extra and legally enforceable provisions (20 and 12, respectively). Even though China-Peru is the second agreement with the highest number of WTO extra provisions (13), legal enforceability is very low (only two provisions). China-ASEAN is the shallowest agreement, having only one WTO extra provision, which is also not legally enforceable (Investment).

The most common provision would be Investment, which is set forth in 10 agreements (China ASEAN, China-Australia, China-Chile, China-Costa Rica, China-Georgia, China-Hong Kong, China-Korea, China-New Zealand, China-Singapore, and China-Switzerland).

IPR is provided for in seven agreements (China-Chile, China-Hong Kong, China-Iceland, China-Korea, China-New Zealand, China-Pakistan, and China-Switzerland), as well as Visa and Asylum (China-Australia, China-Chile, China-Costa Rica, China-Korea, China-New Zealand, China-Peru, and China-Singapore).

Environmental Laws are set forth in six agreements (China-Chile, China-Georgia, China-Korea, China-New Zealand, China-Peru, and China-Switzerland), as well as Cultural Cooperation (China-Chile, China-Costa Rica, China-Hong Kong, China-Korea, China-Peru, and China-Singapore), and Competition Policy (China-Costa Rica, China-Georgia, China-Iceland, China-Korea, China-Peru, and China-Switzerland).

Research and Technology is provided for in five agreements (China-Chile, China-Costa Rica, China-Iceland, China-Korea and China-Peru), as well as SME (China-Chile, China-Costa Rica, China-Korea, China-Zealand, and China-Peru).

Education and Training is set forth in four agreements (China-Chile, China-Iceland, China-Peru, and China-Singapore).

Industrial Cooperation is set forth in three agreements (China-Chile, China-Peru, and China-Singapore), as well as Labor Market Regulation (China-Chile, China-New Zealand, and China-Peru), and Agriculture (China-Costa Rica, China-Peru, and China-Switzerland).

In only two agreements Economic Policy Dialogue (China-Chile and China-Iceland), Health (China-Chile and China-Switzerland) and Regional Cooperation (China-Peru and China-Singapore) are found.

Other WTO extra provisions - Financial Assistance, Human Rights, Mining, Nuclear Safety, Public Administration, Social Matters, Taxation and Terrorism - are found only in the China-Chile agreement. Consumer Protection and Information Society are found only in China-New Zealand agreement. Movement of Capital is found only in the China-Peru agreement. Energy is only found in the China-Korea agreement.

With regard to legal enforceability, the analysis show that China's preferential trade agreements are also very distinct from one another. In most cases, not all of the WTO extra provisions that are set forth in each agreement would be enforceable. This is the case for the ASEAN, Chile, Costa Rica, Georgia, Hong Kong, Iceland, Korea, Peru, Singapore and Switzerland agreements. Only China-Australia, China-New Zealand and China-Pakistan have the totality of their WTO-X provisions being legally enforceable.

Finally, taking into account both WTO plus and WTO extra provisions, China would have an average of 17 provisions.

Considering the argument that provisions relating to investment, intellectual property competition and services are deemed to potentially have more impact over value chains, we note that China's network of agreements would have: 12 provisions on

investment[243] (China-ASEAN, China-Australia, China-Chile, China-Korea, China-New Zealand, China-Peru and China-Singapore); 15 provisions on intellectual property[244] (China-Australia, China-Chile, China-Costa Rica, China-Georgia, China-Hong Kong, China-Iceland, China-Korea, China-New Zealand, China-Pakistan, China-Peru and China-Switzerland); six competition provisions (China-Costa Rica, China-Georgia, China-Iceland, China-Korea, China-Peru, and China-Switzerland); and 12 provisions on services (China ASEAN, China-Australia, China-Costa Rica, China-Georgia China-Iceland, China-Hong Kong, China-Korea, China-Macao, China-New Zealand, China-Peru, China-Singapore, and China-Switzerland).

When compared to Europe, which would have an average of 25 provisions, China's agreements could be deemed to be shallow. However, taking into account that it is still a developing country and most of its agreements are South-South agreements (which average depth would be of 13 provisions as seen in the previous chapter), it could be argued that China's agreements are relatively deep. This conclusion would be reinforced by the fact that Brazil shows a much lower average depth, of merely 8 provisions.

The analysis above therefore shows that China's preferential trade agreement network would be mostly South-South oriented, even though there are North-South agreements, and relatively deep.

The review conducted above leads us to some conclusions.

Even though Brazil and China have a similar amount of relevant trade preferential agreements in force, (12 and 14, respectively) and they have focused in building a regional arrangement within their respective geographic regions (Latin America and Asia), the contents of such agreements are very different from one another.

The countries have adopted different approaches in drafting their preferential trade agreements. Brazil sticks to some basic WTO plus provisions (tariff liberalization on industrial and agricultural goods, antidumping, countervailing measures, technical barriers and sanitary and phytosanitary measures) and does not ordinarily introduce WTO extra rules on its agreements. China makes use of both mechanisms, introducing more WTO plus and WTO extra provisions in its agreements than Brazil.

As a consequence, Brazil's agreements are generally shallower, either for having less WTO plus provisions (even though they are all legally enforceable), or for having a

[243] Includes WTO plus TRIMs and WTO extra Investment.
[244] Includes WTO plus TRIPs and WTO extra IPR.

negligible quantity of WTO extra provisions. China's number of WTO plus provisions is higher, even though legal enforceability may vary. On the other hand, China makes a larger use of WTO extra provisions, although the number of legally enforceable ones is fairly reduced.

5 GLOBAL VALUE CHAINS: BRAZIL'S INTEGRATION IN INTERNATIONAL TRADE AND THE CASE OF CHINA

5.1 Brazil and China's integration in global value chains and the case of China

5.1.1 Overview of Brazil's integration in global value chains

The Brazilian economy is deemed to be inward oriented[245]. Tariffs remain Brazil's main trade policy-restricting instruments. At the WTO, Brazil bound its tariffs at rates of up to 55 percent in the case of agricultural products, and up to 35 percent for non-agricultural products, which consist of very high rates. Clothing, textiles, and transport equipment benefit from the highest tariff protection of 35 percent. The country is also a thorough user of trade remedies, in particular anti-dumping measures[246].

Export taxes remain in place for many products, such as raw hides and skins, cigarettes, and arms and ammunition. Brazil maintains a number of programs aiming at improving the competitiveness of exporting firms (in particular smaller firms) and increasing exports. Currently, only a small number of firms are responsible for the country's exports[247].

From early days, Brazil has mostly followed an industrialization approach based on import substitution policies, by choosing to develop vertically integrated industries instead of trying to insert into value chains through the comparative advantages it had. Brazil has adopted this strategy with a view of establishing upstream and downstream links between different activities that could ultimately create competitive industrial clusters. The country was able to achieve a certain level of growth and industrial diversification, even though it had a direct impact in its insertion in global production networks.

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[245] WTO. *Trade policy review*: Report by the secretariat (Brazil). 2017. Available at: < https://www.wto.org/english/tratop_e/tpr_e/s358_e.pdf > Last visited: 07/10/2017. p. 12.

[246] According to the WTO, during the country review conducted by such organization, Brazil initiated 123 new anti-dumping investigations, and by the end of 2016, the country had 163 definitive anti-dumping measures applied over the most varied range of products. See WTO. *Trade policy review*: Report by the secretariat (Brazil). 2017. Available at: < https://www.wto.org/english/tratop_e/tpr_e/s358_e.pdf > Last visited: 07/10/2017. p. 9.

[247] CANUTO, Otaviano; FLEISCHHAKER, Cornelius; SCHELLEKENS, Philip. *The curious case of Brazil's closedness to trade*. Vox. 2015. Available at < http://voxeu.org/article/brazil-s-closedness-trade > Last visited: 15/08/2017.

Under a global value chain perspective, Brazil has enhanced its participation in the production of low-tech products, but has lost comparative advantages in the production of more sophisticated goods. In technology intensive sectors, there is a tendency for specialization in the production of final goods, while low-tech exporting sectors are specializing in exports of intermediate products[248]. In other activities where Brazil is somehow integrated into global value chains, it occupies upstream (low value added) positions, where trade for sophisticated parts and components is more limited [249].

The services sector has significant relevance for Brazil's gross value added and leads to employment growth, but despite improvements in certain areas, the sector presents structural weaknesses and low integration. With regard to investments, foreign firms have set up facilities in Brazil aiming at accessing the country's large potential consumer market. However, most of them have not integrated their Brazilian plants into global value chains[250].

The exceptions relating to Brazil's insertion in global value chains identified by literature consist of the aircraft industry and the automotive industry within MERCOSUR. The aircraft industry is represented by Embraer. The company has been strongly integrated into global value chains in the past years, as imports of parts and components represent around 70 percent of its value added[251]. Embraer also consists of a relevant global supplier of certain types of aircrafts.

On its turn, the automotive industry in MERCOSUR has established its own regional value chain, even though at the same time it shows a low degree of integration with the rest of the world[252].

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[248] FERRAZ. Lucas P. do C.; GUTIERRE, Leopoldo; CABRAL, Rodolfo. *The Manufacturing Industry in Brazil in the era of Global Value Chains.* Available at: <http://bibliotecadigital.fgv.br/dspace/bitstream/handle/10438/15862/GVCs_Journal%20The%20Manufacturing%20Industry%20in%20Brazil%20in%20the%20era%20of%20Global%20Value.pdf?sequence=1> Last visited: 17/07/2017. p. 20

[249] WORLD BANK. *Implications of a changing China for Brazil: a new window of opportunity?* Available at: < http://documents.worldbank.org/curated/en/794561468017425088/pdf/894500WP0P148300Bank02014000English.pdf > Last visited: 04/06/2017. p. 76

[250] ARNOLD, Jens. *Brazil: A tale of two industries or how openness to trade matters.* OECD Ecoscope, 2016. Available at: <https://oecdecoscope.wordpress.com/2016/03/22/brazil-a-tale-of-two-industries-or-how-openness-to-trade-matters/>. Last visited: 14/06/2017.

[251] WTO. *Trade policy review: Report by the secretariat (Brazil).* 2017. Available at: < https://www.wto.org/english/tratop_e/tpr_e/s358_e.pdf > Last visited: 07/10/2017. p. 129.

[252] CANUTO, Octaviano. *The High Density of Brazilian Production Chains.* 2014. Available at: < http://blogs.worldbank.org/developmenttalk/high-density-brazilian-production-chains>. Last visited: 09/07/2017.

The OECD-WTO TiVA database is the most commonly used index for global value chain studies. It analyses the movements of global value chain through the measuring of trade in terms of value-added. As such, studies conducted by the organizations focus on the tasks that are actually performed by countries within value chains existing through the various economic sectors, instead of simply looking at their import and export relations with third countries. Most recent available data on value added (referring to 2011) support in terms of numbers the diagnosis that Brazil is somewhat poorly integrated in global value chains.

Accordingly, the higher the share of foreign contents in exports of a given country, the higher this country's integration in value chains would be. OECD-WTO TiVA database provides this analysis though figures relating to, for instance, foreign value added in exports, domestic value added in exports and foreign value added in domestic consumption[253.]

In 2011, the share of foreign value added in Brazil's exports was one of the lowest amongst the largest economies, namely of 10.7 percent. There has been an increase in the participation of imported intermediate goods in the domestic production of final products in Brazil in practically all industries between 1995 and 2011, especially in industries more highly inserted in international production networks, such as ICT and electronics, motor vehicles and other transport equipment.

However, the amount of such imported intermediate goods can still be considered low in particular when compared to large economies. For instance, of the total value added of Brazil's imports of intermediate products and services, an average of 17.6 percent was subsequently embodied in exports. This share is deemed to be significantly below the OECD countries average that is of 39.3 percent.

Highest rates of foreign imported intermediates are seen in the sectors of mining, machinery and agriculture, with 23.8 percent, 22.3 percent and 21.9 percent respectively. Lowest rates are found in non-metallic minerals and ICT and electronics[254].

Overall, shares of foreign value added in Brazil's exports are eminently low: less than 10 percent for business services, wholesale, retail and hotel services, finance and insurance and other services; around 10 percent for the sectors of agriculture, mining, food products, textiles and apparel, woods and paper, transport and telecoms; between 10 and 20

[253] OECD-WTO. *Trade in value added: Brazil.* 2015. Available at: < https://www.oecd.org/sti/ind/tiva/CN_2015_Brazil.pdf >. Last visited: 05/06/2017. p. 1

[254] OECD-WTO. *Opus cit.* p. 3

percent for chemicals, rubber and plastic, non-metallic minerals, basic metals, fabricated metals, machinery, electrical machinery, and other transport goods; and between 20 and 25 percent for ICT and electronics, coke and petroleum, and motor vehicles.

The share of foreign value added in exports in ICT and electronics, coke and petroleum, and motor vehicles were of 24.1 percent, 21.4 percent and 19.9 percent, respectively. In 1995, such shares were of 17.6 percent, 18.2 percent and 12.7 percent[255].

Local inputs and intermediate goods are sourced in basically all sectors[256] and consequently, there is a large share of domestic value-added in Brazil's exports of raw materials, agricultural or even manufacturing products. In 2011, 66.7 percent of Brazil's total exports of domestic value-added referred to exports of intermediates. This is particularly true for soybeans, mining products (although the high domestic value added is to some extent a consequence of the nature of these products i.e., commodities), food products, beverages and tobacco; transport equipment; manufacturing and recycling; and machinery and other equipment[257] [258].

Direct exports by the mining sector show the highest domestic value added, representing 17.8 percent of the total value added of Brazilian exports. Subsequently come the sectors of food products with 12.6 percent; wholesale, retail and hotels with 11.3 percent (which in part is due to tourism and upstream distribution services to exporters); and business services with 7.1 percent of share.

The service sector has a share of total exports of domestic value added in Brazil 48.9 percent, but shows low foreign services content. Less than one-tenth of the total services has foreign content. Accordingly, this is partly due to Brazil's relative specialization in upstream industries that typically employ little services content.

Additionally, in 2011, only 10.7 percent of Brazil's total final domestic consumption reflected foreign content. Europe accounted for 2.9 percentage points, the North American Free Trade Agreement ("NAFTA") accounted and East and Southeast

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[255] Available at: < https://www.oecd.org/sti/ind/tiva/CN_2015_Brazil.pdf >. Last visited: 05/06/2017. p.2.

[256] FERRAZ. Lucas P. do C.; GUTIERRE, Leopoldo; CABRAL, Rodolfo. *The Manufacturing Industry in Brazil in the era of Global Value Chains.* Available at <http://bibliotecadigital.fgv.br/dspace/bitstream/handle/10438/15862/GVCs_Journal%20The%20Manufacturing%20Industry%20in%20Brazil%20in%20the%20era%20of%20Global%20Value.pdf?sequence=1> Last visited: 17/07/2017. p. 16

[257] OECD-WTO. *Trade in value added: Brazil.* 2015. Available at: < https://www.oecd.org/sti/ind/tiva/CN_2015_Brazil.pdf >. Last visited: 05/06/2017. p. 1.

[258] WORLD BANK. *Implications of a changing China for Brazil: a new window of opportunity?* Available at: <http://documents.worldbank.org/curated/en/794561468017425088/pdf/894500WP0P148300Bank02014000English.pdf > Last visited: 04/06/2017. p. 77

Asia accounted each for 2.4 percentage points, South and Central America for 0.9 percentage points, and the rest of the world for the remaining 2.4 percentage points.

In that same period reviewed, in terms of gross exports, China, the United States, and Argentina were the main destinations of Brazil's exports. China represented 16.3 percent, while the United States and Argentina accounted for 13.4 percent and 7.5 percent, respectively. In terms of domestic value added, the United States was the most important destination, followed by China. United States and China were also the main origins of Brazilian imports, in terms of both gross imports and domestic value-added. Germany and Argentina come in third and fourth place.

With specific regard to intermediate products and services, China was the main destination of exports in terms of domestic value added, accounting for 23.2 percent of Brazil's intermediate exports in 2011.

Accordingly, this indicates that Brazil's leading import and export markets remain outside of Latin America, pointing to a generalized underdeveloped regional value chain in the region[259]. The data also suggest that Brazil has an overall low integration in global value chains.

Another aspect reviewed by literature is whether Brazil would be moving along existing value chains, either upstream or downstream, or conversely, downgrading or upgrading. For instance, literature on the topic[260] has found that for electrical and optical equipment there has been a significant increase in imports of intermediate goods in the period of 1995-2011. This fact would be indicative that Brazilian firms operating in this segment would be focusing in more sophisticated production stages within the value chain, and therefore producing goods of higher value.

With regard to the electronic segment, there have been some trade policies aiming at attracting investments by contract manufacturers, as well as leading firms of global value chains, such as Apple and HP. This would suggest that Brazilian policy makers

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[259] OECD-WTO. *Trade in value added: Brazil.* 2015. Available at: < https://www.oecd.org/sti/ind/tiva/CN_2015_Brazil.pdf >. Last visited: 05/06/2017.

[260] FERRAZ. Lucas P. do C.; GUTIERRE, Leopoldo; CABRAL, Rodolfo. *The Manufacturing Industry in Brazil in the era of Global Value Chains.* Available at <http://bibliotecadigital.fgv.br/dspace/bitstream/handle/10438/15862/GVCs_Journal%20The%20Manufacturing%20Industry%20in%20Brazil%20in%20the%20era%20of%20Global%20Value.pdf?sequence=1> Last visited: 17/07/2017. p. 16

understand the functioning of global value chains of that segment and have taken measures with a view of increasing the country's participation in related value chains[261].

Other more sophisticated sectors like transportation and chemicals equipment have overall shown a decrease in the value added of products, which could suggest a specialization in less sophisticated production stages of their respective value chains, therefore having moved upstream.

Additional segments that increased the use of imported intermediate goods also seem to have moved upstream within their value chains. This would be the case of textiles and apparel industries, which have become relatively more focused in lower value added stages.

This shows that there are a number of factors pointing to Brazil's poor integration in global value chains. Among those factors, the country's producing structure remains vertically structured (meaning that goods sold in the country and those goods that are exported contain a high share of domestic value added); the small participation of imported intermediates in Brazilian exports is indicative that the manufacturing sector in Brazil shows little integration[262]; also, the number of Brazilian exporters is too very small.

In addition, policy decisions on trade and local content, and to a lesser extent geographical and institutional distance from important economic hubs, have also resulted in Brazil's participation in global value chains being rather limited[263] [264].

Generally, there is poor transport infrastructure, which increases transaction costs, limited access to long-term investments and overall low skilled workforce.

Finally, but not less important, Brazil's limited network of preferential trade agreements has played its own significant role, which is our object of study[265]

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[261] GEREFFI, Gary. *A Global Value Chain Perspective on Industrial Policy and Development in Emerging Markets.* Duke Journal of Comparative & International Law Vol 24:433. 2014. Available at: <https://scholarship.law.duke.edu/cgi/viewcontent.cgi?article=1404&context=djcil>. Last visited: 24/05/2017. p. 448-449.

[262] FERRAZ. Lucas P. do C.; GUTIERRE, Leopoldo; CABRAL, Rodolfo. *The Manufacturing Industry in Brazil in the era of Global Value Chains.* Available at <http://bibliotecadigital.fgv.br/dspace/bitstream/handle/10438/15862/GVCs_Journal%20The%20Manufacturing%20Industry%20in%20Brazil%20in%20the%20era%20of%20Global%20Value.pdf?sequence=1> Last visited: 17/07/2017. p. 12.

[263] WORLD BANK. *Implications of a changing China for Brazil: a new window of opportunity?* Available at: <http://documents.worldbank.org/curated/en/794561468017425088/pdf/894500WP0P148300Bank02014000English.pdf >. Last visited: 04/06/2017.

[264] CANUTO, Octaviano. *The High Density of Brazilian Production Chains.* 2014. Available at: < http://blogs.worldbank.org/developmenttalk/high-density-brazilian-production-chains>. Last visited: 09/07/2017.

5.1.2 Brazil and China's bilateral trade relations in global value chains

Under a global value chain perspective, in the past years Brazil has been occupying the lowest positions in the value chains it shares with China[266]. Brazil's trade with MERCOSUR is the most dynamic among trade with other countries, as Brazil exports more sophisticated (involving higher levels of technology or value added) goods to MERCOSUR, than what it imports from the bloc. On its turn, China is one of Brazil's most important exports destinations, but Brazil exports less sophisticated goods to China than what it imports from it, even though trade data shows that Brazil's exports to China are more dynamic than its imports.

This is a result from the increasing share of commodities on the export side and machinery equipment on the import side[267]. To a large extent, China has contributed to the so-called "primarization" of Brazil's exports. On the one side, China has become one of the main destination for Brazil's exports, but the pattern of such exports to China is of primary commodities and manufactured products with very low levels of processing[268].

One of the reasons for this is that China has instituted policies to promote its industries of processing of imported raw materials. In order to pursue this strategy, China has imposed tariff and non-tariff measures on primary and processed intermediate products from Brazil, including soy-derived products, leather, iron and steel, and pulp and paper[269]. For instance, today around 45 percent of Brazil exports to China are of beans (mostly soy),

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[265] WTO. *Trade policy review: Report by the secretariat (Brazil).* 2017. Available at: < https://www.wto.org/english/tratop_e/tpr_e/s358_e.pdf > Last visited: 07/10/2017. p.12.

[266] GEREFFI, Gary. *A Global Value Chain Perspective on Industrial Policy and Development in Emerging Markets.* Duke Journal of Comparative & International Law Vol 24:433. 2014. Available at: <https://scholarship.law.duke.edu/cgi/viewcontent.cgi?article=1404&context=djcil>. Last visited: 24/05/2017. p. 447.

[267] WORLD BANK. Op. Cit. footnote 21. p. 89.

[268] As an example, in 2017, exports to China consisted of unprocessed soy, iron ores, crude oil, cellulose, beef, poultry, soy oil among others. Source: Brazilian Ministry of Industry, Foreign Trade and Services. Available at: http://www.mdic.gov.br/index.php/comercio-exterior/estatisticas-de-comercio-exterior/balanca-comercial-brasileira-acumulado-do-ano. Last visited: 01/01/2018.

[269] GEREFFI, Gary. *A Global Value Chain Perspective on Industrial Policy and Development in Emerging Markets.* Duke Journal of Comparative & International Law Vol 24:433. 2014. Available at:<https://scholarship.law.duke.edu/cgi/viewcontent.cgi?article=1404&context=djcil>. Last visited: 24/05/2017. The author provides the example of the soybean value chain in 2009. That year, about 95 percent of Brazil's soybean exports to China were of unprocessed soybeans, and there were virtually no exports of other soy-derived products, such as soybean meal, flour or oil. For instance, China imposed a tariff of nine percent on soybean oil imports, while the tariff on unprocessed soybean imports was only three percent. Imports of products based on processed soybeans were also levied at a higher value-added tax rate in China than were unprocessed beans.

while around 35 percent consist of minerals (mostly iron) and crude oil, followed by cellulose (5 percent)[270].

Opposing to the problem of primarization, the economic results of China's approach on trade policies has led to a higher demand for Brazilian raw material exports, which in turn resulted in higher prices. In the short term, Brazil has benefited from this price increase, which has boosted Brazil's consumption-oriented growth pattern[271].

On the import side, Brazil has also been influenced by China's structure of international trade. For instance, in the mid 1990's, low-tech products represented 40 percent of Brazil's imports from China, while high-tech products represented 25 percent. Around 15 years later, the trade profile shifted to practically the opposite: low-tech products represented approximately 21 percent, while high-tech products represented almost 42 percent total imports[272]. Currently, almost half of Brazil's imports from China consist of machinery equipment, followed by textiles/apparel (around 10 percent) and base metals (around 7 percent)[273].

Approximately half of all Brazilian importers import from China, while only a tenth of Brazilian exporters export to China. Additionally, around 60 percent of Brazil's largest exporters also import from China. The number of Brazilian exporters and importers in relation to China has increased significantly over the last decades, even though the number of importers has increased much faster than the number of exporters[274].

Trade data shows that Brazil and China's exporting profiles are not similar, but rather complementary, indicating that China is not a relevant competitor to Brazil in the sectors where Brazil has a comparative advantages, such as the agricultural sector. Brazil's exporting profile would be more similar to the United States, European Union and Argentina, even though the primarization of Brazil's exports in view of its bilateral trade

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[270] Source: Brazilian Ministry of Industry, Foreign Trade and Services. Available at: http://www.mdic.gov.br/index.php/comercio-exterior/estatisticas-de-comercio-exterior/balanca-comercial-brasileira-acumulado-do-ano. Last visited: 01/01/2018.

[271] WORLD BANK. *Implications of a changing China for Brazil*: a new window of opportunity? Available at: <http://documents.worldbank.org/curated/en/794561468017425088/pdf/894500WP0P148300Bank02014000English.pdf > Last visited: 04/06/2017. Footnote 7, p. 48

[272] GEREFFI, Gary. Opus. Cit. pp.447-448.

[273] Source: Brazilian Ministry of Industry, Foreign Trade and Services. Available at: http://www.mdic.gov.br/index.php/comercio-exterior/estatisticas-de-comercio-exterior/balanca-comercial-brasileira-mensal-2. Last visited: 01/02/2018.

[274] WORLD BANK. Opus. Cit., p. 79–81.

with China suggests that Brazil is increasingly showing less similarities to trade patterns of higher income countries[275].

Brazil and China do not share a close relationship with regard to investments. In general, the presence of Brazilian investors in China is still modest and concentrated in a few large Brazilian firms, such as Embraer, WEG and Embraco. Differently from have been done by firms based in the United States and Europe (which set up offshored producing facilities that could later export for lower prices), Brazilian firms aimed at investing in China in order to reach its large potential consumer market[276]. Many Brazilian firms have attempted to invest in China but have faced barriers such as restrictions and requirements[277].

On the other hand, Chinese investments in Brazil have been increasing in the past years. Investments are spread across different firms and activities, but tend to focus mostly on the primary and services sectors, although there are investments in manufacturing sectors. Through investments in such areas, China aims at securing sources of raw materials and intermediate goods that are relevant for its own exports. Conversely, China heavily invests in Asia, underscoring the relevance of the value chains it integrates in the region[278].

Brazil and China do not have a bilateral investment treaty signed with each other and the countries adopt different policies with regard to BITs. China has more than 100 BITs currently in force, while since the 1990's, Brazil has signed only 14 BITs and under MERCOSUR, two protocols on investment[279], but none have not come into effect[280] [281] [282].

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[275] WORLD BANK. *Implications of a changing China for Brazil: a new window of opportunity?* Available at: <http://documents.worldbank.org/curated/en/794561468017425088/pdf/894500WP0P148300Bank02014000English.pdf > Last visited: 04/06/2017. p. 52.

[276] PIMENTEL, João. *Empresas brasileiras na China: estratégia e gestão (Brazilian Firms in China: Strategy and Management)*, Masters' Dissertation, University of Sao Paulo, School of Economics, Business and Accounting. 2009. Apud. JENKINS, Rhys. China and Brazil: Economic Impacts of a Growing Relationship, in: Journal of Current Chinese Affairs, 41, 1, 21-47. Available at: <http://journals.sub.uni-hamburg.de/giga/jcca/article/viewFile/494/492>. Last visited: 29/09/2017. p. 35

[277] INSTITUTO DE PESQUISA ECONÔMICA APLICADA. *As Relacões Bilaterais Brasil-China: A Ascensão da China no Sistema Mundial e os Desafios para o Brasil (Brazil-China Bilateral Relations: The Rise of China in the World System and the Challenges for Brazil),* Comunicados do IPEA (IPEA Communications), 85, Brasilia. 2011. Apud. JENKINS, Rhys. Opus cit. p. 35

[278] HIRATUKA, Célio; SARTI, Fernando. Transformações na estrutura produtiva global, desindustrialização e desenvolvimento industrial no Brasil Texto para Discussão. IE/Unicamp, Campinas, n. 255, jun. 2015. Revista Tempo do Mundo, RTM, v.2. n. 1, jan. 2016. p 92.

[279] Those agreements are the Buenos Aires Protocol, which extra-MERCOSUR, and the Colonia Protocol, which is intra-MERCOSUR.

[280] WORLD BANK. *Implications of a changing China for Brazil: a new window of opportunity?* Available at:

Brazil's BITs are increasingly being replaced by cooperation and investment facilitation agreements.

Trade in services between both countries overall is liberalized, but varies in accordance with the supply mode[283]. According to data brought by the World Bank, Brazil is more open with regard to mode 3, and more restrictive with regard to mode 1. Most of the restrictions consist of limits on cross-border supply of services. Cross-border supply in the professional services sector (accounting, auditing, and legal services) is fully closed, being the sector with the highest restrictions. Telecommunications and retail services on the other hand are fully liberalized. China is more open in mode 3 and more restrictive in mode 4. Professional services are the most closed, with restrictions on commercial presence[284].

In sum, China has achieved a significant position in all sectors of the Brazilian economy. It is the country that has most benefited from bilateral trade relations with Brazil, either as supplier of first of low-tech, and currently of higher-tech goods, or as a main destination of Brazilian exports of unprocessed goods.

Under a global value chain perspective, nevertheless, it may be argued that to a certain extent Brazil has more or less inserted in global value chains (even though at low value added positions) due to its bilateral trade relations with China[285].

<http://documents.worldbank.org/curated/en/794561468017425088/pdf/894500WP0P148300Bank02014000English.pdf >p. 105.

[281] WTO. *Trade policy review: Report by the secretariat (Brazil).* 2017. Available at: < https://www.wto.org/english/tratop_e/tpr_e/s358_e.pdf > Last visited: 07/10/2017. p. 40.

[282] The bilateral agreements and the Buenos Aires Protocol have not come into force because they were withdrew by the Executive before the National Congress voted for their ratification. The Colonia Protocol has not come into force because the Executive did not submit the agreement to the National Congress. Accordingly, the National Congress had concerns about the constitutionality of the agreements regarding issues such as upholding the principle of full equality for investors under the law. See Complementary Law No. 116 of 31 July 2003 and Constitutional Amendment No. 37 of 13 June 2002.

[283] Accordingly: Mode 1: cross-border supply; Mode 2: consumption abroad, Mode 3: commercial presence; and Mode 4: presence of a natural person. Source: World Bank Services Trade Restrictiveness Index 2012.

[284] WORLD BANK. *Opus cit*. p. 100.

[285] FERRAZ. Lucas P. do C.; GUTIERRE, Leopoldo; CABRAL, Rodolfo. *The Manufacturing Industry in Brazil in the era of Global Value Chains.* Available at <http://bibliotecadigital.fgv.br/dspace/bitstream/handle/10438/15862/GVCs_Journal%20The%20Manufacturing%20Industry%20in%20Brazil%20in%20the%20era%20of%20Global%20Value.pdf?sequence=1> Last visited: 17/07/2017. p . 17.

5.2 Overview of China's integration in global value chains

As there are a number of developing countries, there has not been a single formula used by such countries to achieve their intended goals. Generally, those countries have put in place different kinds of trade policies along the past decades. One group of developing countries would have followed an outward strategy aiming at global integration in trade and economy, by adopting measures such as unilaterally liberalizing trade, removing restrictions to and stimulating foreign direct investments, and promoting the insertion of local manufacturers and suppliers in global production networks.

More importantly, they have signed deep preferential trade agreements with important and large trading partners like the European Union and the United States. Such agreements had the purpose of serving as suitable instruments to support domestic policy reforms that would not otherwise be made, to ensure market openness to and from the higher-income partners and to improve the governance of trade policy-related institutions. Among those countries would be Chile, Colombia, Costa Rica, Peru and Mexico, and some smaller countries part of the European Union.

The other group of developing countries have adopted an inward strategy that consisted of mostly using domestic trade policy instruments to promote industrialization based on import substitution policy. Such countries have signed shallow preferential trade agreements with limited commitments on trade liberalization and very often with trading partners of little or no relevance for their respective commercial relations or even international trade. Among those countries are Argentina, Brazil, South Africa.

On their turn, in order to achieve faster and effective economic growth and industrialization, most of East Asian countries have traditionally adopted a double strategy. They have turned to policies of import-substitution in order to foster domestic production and industrialization, but at the same time supported export-oriented industries that would achieve international competitiveness[286].

China has in a way adopted all strategies and followed the so-called "compressed development"[287] strategy, which aimed at achieving satisfactory levels of industrialization

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[286] ANDO Mitsuyo; KIMURA Fukunari. *The Formation of International Production and Distribution Networks in East Asia*. NBER Working Paper No. 10167 December 2003 JEL No. F1, F2. Available at: http://www.nber.org/papers/w10167.pdf. Last visited: 23/06/2017. P. 3.

[287] WHITTAKER; Hugh; TIANBIAO Zhu Tianbiao; STURGEON, Timothy, TSAI Mon Han; OKITA, Toshie, *Compressed Development*. Working Paper Series. Massachusets Institute of Technology. October 2008. Available at: <ipc.mit.edu/sites/default/files/documents/08-005.pdf>. Last visited: 05/05/2017. pp. 1-40.

and development in a short period. Accordingly, in order to do so, a country must take existing opportunities in all sectors, instead of following the traditional and slower path of nurturing infant industries and national champions, and developing new technology or own brands, for instance.

Until the 1990's, the country had a strict policy for receiving foreign direct investment, but then switched to a policy of larger acceptance, as to basically accept any and all investments. It hosted affiliates of foreign companies and created industrial clusters throughout the country[288].

China showed great success in its foreign direct investment strategy. Through the elimination of restrictions over foreign direct investment, China was able to access foreign technologies, know-how and management practices. Additionally, the country has incorporated certain foreign standards which have helped enhance quality of local production[289].

As from the 1990's, China put in place an ambitious program of trade and investment liberalization. China now operates globally in view of its upgrading strategy as Chinese firms have become large foreign investors and buyers of raw materials[290]. China became a leading economy, import market and largest manufacturer and exporter of goods[291]. At the same time, it has also led to a primary product export boom as it became the world's biggest importer of a full range of primary products[292]. In parallel, the country also kept to a certain extent trade protection for import-substituting key domestic industries[293].

Among its developing peers of BRICS, China has become a dominant player. Literature argues that the exporting profiles of Brazil, Russia and India - that are basically

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[288] ANDO Mitsuyo; KIMURA Fukunari. *Opus Cit.* p. 5.

[289] WORLD BANK. *Implications of a changing China for Brazil: a new window of opportunity?* Available at: <http://documents.worldbank.org/curated/en/794561468017425088/pdf/894500WP0P148300Bank02014000English.pdf >p. 31.

[290] KAPLINSKY, Raphael and FAROOKI, Masuma. *What are the implications for global value chains when the market shifts from the north to the south?* The World Bank. 2010. Available at: <https://pdfs.semanticscholar.org/9729/784f8477395b907406d76545d2e09ab6c196.pdf>. Last visited: 25/05/2017. pp. 1-24.

[291] WORLD BANK. Opus cit. p. 10.

[292] GEREFFI, Gary. *A Global Value Chain Perspective on Industrial Policy and Development in Emerging Markets.* Duke Journal of Comparative & International Law Vol 24:433. 2014. Available at:<https://scholarship.law.duke.edu/cgi/viewcontent.cgi?article=1404&context=djcil>. Last visited: 24/05/2017. p. 435.

[293] ANDO Mitsuyo; KIMURA Fukunari. *The Formation of International Production and Distribution Networks in East Asia*. NBER Working Paper No. 10167 December 2003 JEL No. F1, F2. Available at: <http://www.nber.org/papers/w10167.pdf>. Last visited: 23/06/2017. p.5

focused on primary products - , suggests that these countries are contributing to China's global position as a raw material processor and final assembly center. This would be indicative that South-South trade will increase as China continues to be as a major global buyer[294].

In 2001, China acceded to the WTO. The country bound tariffs in the WTO at 9.8 percent on average (which is relatively low), and numerous services industries were liberalized. Currently, applied tariffs are sometimes below than 7 percent. As it was entering the WTO, China accounted for only 3.7 percent of global trade. This participation increased by 6.7 percentage points in the following decade. By 2010, China had become the world's largest exporter in terms of gross value, with a 10.4 percent share of goods exports[295] [296].

Under the global value chain functioning standpoint, China followed the recipe for developing countries instead of following the harder path for industrialization like Germany or Japan, which built entire value chains domestically. China specialized in tasks where it realized it had comparative advantages thus entering existing international chains, rather than attempting to create entire value chains for its local firms. As global value chains expanded in scope and complexity throughout the world, the country experienced a fast growth in exports and receipt of several forms of foreign direct investment.

China had a large and attractive market for foreign sellers and ensured a favorable business environment for foreign investors. The country benefited from its huge and cheap labor force composed by millions of rural workers searching for job opportunities in the newly created production zones. Additionally, until the 2008 crisis, many countries were experiencing high growth, from what resulted in a raise of income of populations (in particular in developing countries), which in turn meant the rise of relevant demand for Chinese goods.

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[294] GEREFFI, Gary. *A Global Value Chain Perspective on Industrial Policy and Development in Emerging Markets.* Duke Journal of Comparative & International Law Vol 24:433. 2014. Available at:<https://scholarship.law.duke.edu/cgi/viewcontent.cgi?article=1404&context=djcil>. Last visited: 24/05/2017. P.435.

[295] WORLD BANK, World Development Indicators database. In HOEKMAN, Bernard. *Supply Chains, Mega-Regionals and Multilateralism: A Road Map for the WTO*. Robert Schuman Centre for Advanced Studies, EUI Working Papers. 2014 Available at: <http://ssrn.com/abstract=2406871> Last visited: 18/03/2017. p. 9.

[296] If the EU-28 is considered as a bloc. the EU is the largest exporter (15%), followed by China (13%) and the US (11%).

Finally, China has invested heavily in infrastructure and logistics, thus contributing to its services sector. All of these comparative advantages have helped China to enlarge increasingly its participation in global value chains.

As could be seen from the research on global value chains presented in the first chapter, countries with a proper legal framework and robust trade-policy related institutions, have the capability of being more deeply integrated in global value chains. Studies involving different Chinese cities show that those that provide better contract enforcement, faster customs clearance, and deeper financial systems tend to participate more in global value chains[297].

The downside of the strategies followed by China is that even though it is one of the largest economies in the world, it has developed only a few global industrial players[298]. As a result, for particular segments, China would have located in lower ends of global values, which means that the actual value it added to exports was relatively low.

Before, the higher the technology in the product, the lower was China's proportional value added. To illustrate this, literature mentions cases such as the IPhone and the HP notebook studies that were conducted at the early stages of global value chain research.

Accordingly, the first study[299] inquired how the manufacturing process of the IPhone took place, and what was the role of China in such process. The research focused on the value added by each participant of the chain. It was found that for an IPhone 4 (sold at a price of around US$600), which had an *ex-factory* price of $194.04, only US$6.54 (i.e., 3.4 percent) was actually added by China. In case, China was merely responsible for the assembly of the IPhone components and through a Taiwanese electronics manufacturer called Foxconn. The remaining US$187.50 (i.e. 96.6 percent) of the factory price referred to imported materials and technology components from Korea, United States and Germany.

The study of a 2005 HP Notebook computer model (model nc6230) found that the major components were imported from different origins. There were no domestic Chinese

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[297] DOLLAR David. *Global Value Chins Provide New Opportunities to Developing Countries.* Brookings Institution. Order the Chaos blog. July, 2017. Available at: <</www.brookings.edu/blog/order-from-chaos/2017/07/19/global-value-chains-provide-new-opportunities-to-developing-countries/>. Last visited: 19/09/2017.

[298] For instance Lenovo and Haier.

[299] LINDEN, Greg; MASHAYEKHI Mina; STURGEON Timothy J; ZHANG, Liping. *Tracing the Value-Added in Global Value Chains: product-level case studies in China.* UNCTAD, 2015, p. 27. Available at: <http://unctad.org/en/PublicationsLibrary/ditctncd2015d1_en.pdf>. Last visited: 18/03/2017.

firms among the major suppliers and China was responsible for smaller tasks of processing, assembly and test. It was estimated that China's value added to this product was of US$30 (3.5 percent), whereas the factory price of the notebook was of US$856.33. The other US$826.33 (96.5 percent) of the factory price went to imported materials and components mainly from Japan, Korea and the United States[300].

Recent data on trade in value added[301] would indicate however that China is highly involved in global value chains and not necessarily occupies lower end positions. Accordingly, one-third (33.3 percent) of China's exports embodies foreign content.

Overall, shares of foreign value added in China's exports would be of: up to 15 percent for agriculture, wholesale, retail and hotel, transport and telecoms, finance and insurance, business services and other services; between 20 and 30 percent for mining, food products, textiles and apparel, non-metallic minerals, basic metals, machinery; other transport and other manufactures; between 30 and 40 percent for rubber and plastics, fabricated metals, and motor vehicles; between 40 and 50 percent for wood and paper, coke and petroleum, chemicals, electrical machinery; and between 50 and 60 percent, ICT and electronics. The average foreign value added for 2011 was lower than in 1995[302].

In China's total exports of domestic value added, 52.9 percent consists of intermediates. This share is lower than the OECD average of 61.5 percent. In 1995, this share was of 47.3 percent. The service sector's share of total exports of domestic value added is of around 40 percent.

Similarly to Brazil, only 10.5 percent of China's total final domestic consumption contains foreign content. East and Southeast Asia account for 3.4 percentage points; Europe accounts for 2.1 percentage points, NAFTA accounts for 1.4 percentage points, South and Central America account for 0.7 percentage points and other countries for the remaining 3.0 percentage points from other regions.

In terms of gross exports and value added, United States and Japan are the main destinations for Chinese exports. The United States represents 21.1 percent and Japan represents 10.3 percent. In terms of gross exports, Korea represents 5.3 percent, but Germany's share in value added terms is higher (4.1 percent).

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[300] LINDEN, Greg; MASHAYEKHI Mina; STURGEON Timothy J; ZHANG, Liping. *Tracing the Value-Added in Global Value Chains: product-level case studies in China*. UNCTAD, 2015, p. 23. Available at: http://unctad.org/en/PublicationsLibrary/ditctncd2015d1_en.pdf. Last visited: 18/03/2017.

[301] OECD-WTO. *Trade in value added: China*. 2015. Available at: < https://www.oecd.org/sti/ind/tiva/CN_2015_China.pdf >. Last visited: 05/06/2017. Initial page.

[302] Idem. p. 5

As to imports, in terms of gross imports the main origins are Japan, Korea and the United States with shares of respectively 12.5 percent, 10.8 percent and 7.8 percent. In terms of value-added, Japan stays in first, United States comes second place with a 9.4 percent share, and Korea comes in third place, with a share of 6.2 percent. This shows that trade in value-added terms significantly changes China's bilateral trade balances; in 2011, China’s trade surplus with the United States for example was one-third smaller in value-added terms compared to gross exports.

With regard to intermediate products, in terms of value added, the United States, Japan and Korea are the main destinations for China’s exports of intermediates. The United States account for 18.8 percent, Japan accounts for 10.4 percent and Korea accounts for 7.0 percent of value added in exports.

The data also show that within a short period of time, s structural change have taken place in the past years, where China has moved up within the global picture of value chains. Accordingly, China no longer features as a prominent exporter of textiles or low-tech products, but rather now positions itself as an exporter of high-tech products.

The domestic value-added content of China’s exports has increased in basically all sectors. This is indicative that China has upgraded in certain value chains, possibly though specialization in higher value-added activities or increased participation in domestic value-chains by upstream intermediate suppliers (or maybe both). The ICT sector serves as a good example of this. In 1995, ICT exports had a share of foreign content of approximately 75 percent share, but in 2011 this share was about 50 percent. Similar results were seen in other sectors, such as electrical machinery and transport equipment.

In sum, general data on trade in value added, as well as other factor relating to trade policies adopted by China is highly integrated within global value chains, either occupying more downstream or upstream positions.

5.3 The role of Brazil and China’s preferential trade agreements in their respective integration in global value chains

As seen in the previous chapters, global value chains have become an important feature of international trade in the past decades. On their turn, preferential trade agreements have played an important role in providing an adequate legal framework for the proper creation, development and functioning of global value chains.

The analysis of Brazil and China's agreements network made in the previous chapter has allowed us to see how that the countries have employed different strategies of insertion in international trade, either through the choice of partners, or though the choice of contents of such agreements. One resemblance we have found is that both countries have pursued a regional integration strategy, with regard to their specific geographic regions.

Based on the data above, we are now able to assess how those strategies seems to have affected the countries' insertion and participation in global value chains.

The data above show that Brazil's participation in global value chains mostly relates to trade relations with China, the United States, Argentina and the European Union (Germany), under terms of both gross and value added exports and imports. Similarly, the domestic consumption foreign content index, points that the European Union, NAFTA (i.e. United States) and Southeast Asia (i.e. China) are the main origins or foreign content. Looking at Brazil's existing preferential trade agreements, however, except for Argentina, there are no agreements with such countries, but rather mostly with Latin America countries, and only expanding to a few countries in Asia (Israel and Egypt) and Africa (SACU).

This configuration indicates that there is a gap between Brazil's reality within the international trade characterized by global value chains – where partners are the United States, China and the European Union - and the network of preferential trade agreements that Brazil has established, leading to a first possible reason why Brazil would be little integrated in global value chains. Brazil's trade agreement network does not have a connection with the country's trade relations in value chains its shares with its main commercial partners, i.e., China, the United States and the European Union.

Additionally, as seen above, the domestic consumption index shows that South and Latin America represent only 0.9 percent of Brazil's consumption of foreign content. On the one side, trade within Latin America is relatively diversified and well-established and the region does a have a large network of intra and extra regional preferential trade agreements, which implies that there are significantly low barriers to trade. However, Latin America has a significantly low production network level[303]. Studies regarding Latin

[303] OECD. *Promoting Productivity for Inclusive Growth in Latin America*. OECD Publishing, Paris. Available at: <http://dx.doi.org/10.1787/9789264258389-en>. Last visited: 18/03/2017. BLYDE, Juan S. *Synchronized Factories: Latin America and the Caribbean in the Era of Global Value Chains*, Springer.

America participation in global value chains indicate that the region's participation in global value chains is even lower to that of other developing regions.

As a result, even though there are many preferential trade agreements with Latin America countries, the characteristics of the region's countries exert high influence over Brazil's distance from global value chains. This relationship seems to confirm the idea of the neighborhood effects, which advocates that even if a country has connectivity within a global chain, it will be hindered all the same in case its neighbor countries do not have similar features.

As such, a first reason for Brazil's lack of a deeper integration in global value chains would seem to primarily reside in its choice of preferential trade agreements partners that do not bear a connection with the country's activities within value chains, and do not have an overall relevant participation in value chains themselves.

The analysis of China's agreements and the data above, on the other hand suggests that China's trade relations within global value chains bears a closer connection with the network of preferential trade agreements it has established, albeit this is not an absolute rule.

Data shows that China's participation in value chains mainly refers to trade relations with Southeast Asia, in addition to the United States and Europe. In terms of gross and value added exports, United States, Japan, Korea and Germany are the main destinations. In terms of gross and value added imports, United States, Japan and Korea are the main origins.

China on its turn, has focused on establishing a preferential trade network within the Asian region, comprised by agreements with ASEAN, Hong Kong, Korea, Macao and Singapore, in addition to the Asia Pacific Agreement. This focus on reaching further within the regions is even reinforced by the current (highly relevant) negotiations of a preferential trade agreement with Japan/Korea, which would thus allow China to reach one of its main partners – Japan-, and the RCEP, which will allow China to go beyond ASEAN and deepen commitments with some of the countries with which it already has preferential

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2014. *Apud.* CADESTIN, Charles; GOURDON Julien; KOWALSKI Przemyslaw. *Participation in Global Value Chains in Latin America: Implications for Trade and Trade-Related Polic*y, OECD Trade Policy Papers, No. 192, OECD Publishing, Paris. 2016. Available at: <http://dx.doi.org/10.1787/5jlpq80ts8f2-en>. Last visited: 18/03/2017. p. 10.

trade agreements in place. On the other hand, China has no trade arrangements in place with the United States, nor does it display any intention to form one anytime soon.

Therefore, under the perspective of the existing trade agreements Brazil and China have in place, a first conclusion can be drawn with regard to the impact of such agreements in the countries' integration in value chains. Brazil's choice of partners for preferential trade agreements has not helped the country to integrate global value chains. This is either because the partners selected are not the countries with which Brazil has deeper trade relations under a global value chain context (China, Unites States or Europe), or because the selected countries are not integrated in global value chains themselves. On its turn, China's preferential trade agreement network suggests a positive correlation with the country's integration in global value chains, as its main trade relations take place within Southeast Asia, and its preferential trade agreements are mostly focused on countries of the region.

Having that said, it may be argued that for Brazil, forming preferential trade agreements with the United States, China and Europe may come to change the country's position in value chains. It is possible that such a change will happen within the next years, as MERCOSUR has been negotiating a rather broad preferential trade agreement with Europe.

From a legal framework perspective (i.e., contents), as seen in the previous chapter, Brazil's preferential trade agreement network is strictly South-South and overall comprises shallow agreements, in terms of WTO plus and WTO extra provisions.

Generally, Brazil ordinarily includes only a few basic WTO plus provisions - FTA industrial, FTA Agricultural, TBT, SPS, AD and CVM - in its agreements. Only three contain STE provisions (MERCOSUR, MERCOSUR-India and MERCOSUR-Israel) or Customs provisions (MERCOSUR, MERCOSUR-Israel and Mercosur-SACU). As a result, it has an average of seven WTO plus provisions.

With regard to provisions relating to investment, intellectual property competition and services that are deemed to potentially have more impact over value chains, there are: only one provision on investment (MERCOSUR's TRIMs); six provisions on intellectual property (MERCOSUR, MERCOSUR-Chile, MERCOSUR-Colombia/Ecuador/Venezuela, and MERCOSUR-Colombia and MERCOSUR-Peru), one on Competition Policy (MERCOSUR-Chile), and four provisions on services (MERCOSUR, MERCOSUR-Chile, MERCOSUR-Colombia/Ecuador/Venezuela, and MERCOSUR-Colombia).

With regard to WTO extra provisions, only three agreements (MERCOSUR, MERCOSUR-Chile and MERCOSUR-Colombia) have addressed some topics and they would be limited to only four types out of the existing 38 (Competition Policy, IPR, Movement of Capital, and Research and Technology). Agreements outside Latin America also have the basic relevant WTO plus provisions, but add two more: Customs (Israel and SACU) and State Trading Enterprises (Israel). They do not contain WTO extra provisions.

Even though all WTO plus provisions set forth in Brazil's agreements would be enforceable, only the WTO extra provisions of the MERCOSUR agreement would be legally enforceable.

Consequently, this suggests that the limited contents of Brazil's preferential trade agreements have also negatively impacted the country's integration in value chains, in the sense that they are not inductive to value chain creation or development with its partners. Exception to this is Argentina, which consists a relevant partner for Brazil under MERCOSUR.

China's agreements on the other hand are overall broader with regard to the amount of set forth WTO plus provisions and their legal enforceability, and could be considered as deep agreements when compared to Brazil. China's average is of 10 (between four and 12) WTO plus provisions. 12 agreements out of 14 have all the basic WTO plus provisions, in addition to services. Eight agreements have provisions on intellectual property and six on investments.

China's agreements also have a larger and varied number of WTO extra provisions, having included 26 out of 38 types, throughout 13 agreements (Macao would not have any WTO extra provisions). The most common provision would be Investment (10 agreements), followed by IPR (7 agreements). Legal enforceability of WTO plus is practically absolute, albeit legal enforceability of WTO extra provisions is reduced.

Considering the argument that provisions relating to investment, intellectual property competition and services are deemed to potentially have more impact over value chains, we note that China's network of agreements would have: 12 provisions on investment[304] (China-ASEAN, China-Australia, China-Chile, China-Korea, China-New Zealand, China-Peru and China-Singapore); 15 provisions on intellectual property[305] (China-Australia, China-Chile, China-Costa Rica, China-Georgia, China-Hong Kong,

[304] Includes WTO plus TRIMs and WTO extra Investment.
[305] Includes WTO plus TRIPs and WTO extra IPR.

China-Iceland, China-Korea, China-New Zealand, China-Pakistan, China-Peru and China-Switzerland); six competition provisions (China-Costa Rica, China-Georgia, China-Iceland, China-Korea, China-Peru, and China-Switzerland); and 12 provisions on services (China ASEAN, China-Australia, China-Costa Rica, China-Georgia China-Iceland, China-Hong Kong, China-Korea, China-Macao, China-New Zealand, China-Peru, China-Singapore, and China-Switzerland).

These results point to the fact that China's agreements can be more inductive to value chain creation and development, as they have a higher number of WTO plus provisions and even some WTO extra provisions, and the four types of provisions that would have more effects in global value chains.

Under the perspective of the contents of Brazil and China's preferential trade agreements, a second conclusion can be drawn with regard to the impact of such agreements in the countries' integration in value chains. Brazil's preferential trade agreement network suggests a negative correlation with the country's integration in value chains, in the sense that they do not contain deeper commitments that could support its integration in value chains with its partner. China's preferential trade agreement network suggests a positive correlation with the country's integration in global value chains, in the sense that they have more relevant provisions allowing for development of value chains.

6 CONCLUSIONS

The study conducted along this work have focused on first identifying what was the relationship between preferential trade agreements and global value chains within the international trade framework. Having found there is a positive and double-way correlation, where preferential trade agreements have the ability of inducing global value chain creation through the most varied forms of trade regulations, and that at the same time, trade relations within global value chains stimulate the formation of preferential trade agreements, we proceeded to inquire what were the specific relationship between Brazil and China's preferential trade agreements and their respective integration in global value chains.

Our research has first pointed to the general opinion that Brazil and China are active in global value chains across a number of economic sectors, but that Brazil is somewhat poorly integrated in value chains, and mostly occupying upstream (low value added) positions for having specialized in exports of commodities. We have identified that, on the other hand, Brazil is inserted in two specific value chains: the aeronautics and the automotive (the latter existing within MERCOSUR).

Our research has shown that there are two aspects relating to trade agreements that could help find the answers. One would be looking at the choice of partners for entering in preferential trade agreements. The other would be to look at the specific contents of legal provisions identified as WTO plus and WTO extra.

By employing those two proxies, we have first found that Brazil and China have followed similar strategies of focusing preferential trade arrangements within their respective geographical regions, but have achieved different results.

We have found that Brazil's preferential trade agreement network is mostly limited to the Latin America region, where global value chain activity is very low. The agreements on their turn, were found to be shallow as far as its contents on WTO plus and WTO extra provisions go, for having only a small number of relevant provisions. These results, on their turn, have suggested that Brazil's network of preferential trade agreements has not been conductive to value chain integration for Brazil. We have also learned that other agreements signed by Brazil with Asian countries (Israel and Egypt) and African countries (SACU) have similar contents on terms of WTO plus provisions and have no WTO extra

provisions, which seem to indicate that they might also not be inductive to Brazil's integration in value chains involving trade with such countries.

With regard to China, we have found that the country's choice of partners mainly focuses on Asia, where there are relevant value chain links. China has also expanded to the Pacific region reaching either developing or developed countries. Additionally, we have found that China's preferential trade agreements have a certain degree of depth, as it contains a more relevant number of WTO plus and WTO extra provisions, in addition to a greater number of the four types of provisions that would matter more for global value chains (investment, intellectual property, competition and services). These results suggest that China's agreements have to an extent assisted in the country's insertion in value chains.

We acknowledge that the results of this research may not be read under an isolated context, because, as seen throughout this work, there are a large number of factors that affect the functioning of global value chains, and preferential trade agreements is only one of those many factors. However, this work aims at contributing to the study of the relationship between global value chains and preferential trade so as to enrich the debate within the perspective of international trade law.

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