



# Industrial policy space in the context of North-South and South-South preferential trade agreements

Salam Alshareef

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## THÈSE

Pour obtenir le grade de

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préparée au sein du **Centre de Recherche en Economie de  
Grenoble**  
dans l'**École Doctorale de Sciences Économiques**

### **Des contraintes sur l'espace de la politique industrielle dans les Accords Commerciaux Régionaux de type Nord-Sud et Sud-Sud**

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*A ma mère, à mon père,  
et à la Syrie qui vient*



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# List of Acronyms

**ASEAN:** The Association of Southeast Asian Nations

**BITs:** Bilateral Investment Treaties

**CAFTA-DR:** The Dominican Republic-Central America Free Trade Agreement

**CARIFORUM:** The Caribbean Forum of the African, Caribbean, and Pacific Group of States

**CBD:** Convection Biological Diversity

**EU:** European Union

**FDI:** Foreign Direct Investment

**FET:** Fair and Equitable Treatment

**GATS:** General Agreement on Trade in Services

**GATT:** General Agreement on Tariffs and Trade

**GDP:** Gross Domestic Product

**GSP:** Generalized System of Preferences

**HCOMs:** Host Country Operational Measures

**HFCS:** High Fructose Corn Syrup

**ICT:** Information and Communication Technologies

**IEC:** The International Electrotechnical Commission

**IIAs:** International Investment Agreements

**IMF:** International Monetary Fund

**ISDS:** Investor-State Dispute Settlement

**ISO:** International Organization for Standardization

**M&A:** Merger and Acquisition

**MED:** Mediterranean Countries

**MERCOSUR:** Southern Common Market

**MFN:** Most Favored Nation

**NAFTA:** North American Free Trade Agreement

**NT:** National Treatment

**NTMs:** Non-Tariff Measures

**OECD:** The Organization for Economic Cooperation and Development

**R&D:** Research and Development

**RTAs:** Regional Trade Agreements

**SAFTA:** The South Asian Free Trade Area

**SCMs:** Subsidies and Countervailing Measures

**SDT:** Special and Different Treatment for Developing Countries

**SPS:** Sanitary and Phytosanitary Measures

**STCs:** Specific Trade Concerns

**TBT:** Technical Barriers to Trade

**TRIMS:** Trade-Related Investment Measures

**TRIPS:** Trade Related Intellectual Property Rights

**U.N:** United Nations

**UPOV 1991:** The International Union for the Protection of New Varieties of Plants 1991

**US:** United States

**WIPO:** World Intellectual Property Organization

**WTO:** World Trade Organization

**WWII:** World War II



## **General Introduction**



Until lately, industrial policy was dismissed as lacking sound economic fundamentals and an even worse policy record. As Stiglitz et al (2009, p.1) put it “There has been a time when ‘industrial policies’, for both developed and developing countries were bad words not to be spoken either in public or in private by respectable people. It was the time of the (in)famous ‘Washington Consensus’ on development”.

It is appropriate in this context to highlight that interests in industrial policy have dimmed but never stopped, even throughout the 1980<sup>th</sup> and 1990<sup>th</sup>. At that time some publications have appeared on the contribution of industrial policy in what are considered as successful experiences of industrialization, especially in the case of Taiwan and South Korea (See, for example, Amsden, 2001; Wade, 1989; Chang; 1996, 2002).

During last decade, interest was rapidly grown even among institutions that argued for a long time against industrial policy such as the World Bank (Rodrik, 2008; Yusuf, 2012). Interest in industrial policy and productive transformation has made a remarkable comeback both in academia and in governments’ policies in many developed developing countries (see Warwick, 2013 on industrial policy programs being applied by both developed and developing countries). To give just a few examples, Stiglitz et al (2009) book published by Initiative for Policy Dialogue provides some evolutionary and institutional views on the role of industrial policy in the development process. In Brussels, writing for the Bruegel think tank, Aghion et al (2011) have been “rethinking industrial policy”. In the United Nations system, UNCTAD is one of the institutions that have maintained interest in industrial policy, through many working papers and especially through Trade and Development Report (For example Alhaque, 2007; UNCTAD 2006, 2012, 2014). The United Nations University World Institute for Development Economics Research has published many papers on industrial policy (Naudé, 2010a, 2010b), and two books (Newman et al, 2016; Szirmai, 2013).

Although the industrial policy is being again revitalized, disagreements and divide stay a characteristic of the debate, mainly on its very nature, extent, and orientation of State’s interventions. Basically, there are two different stances regarding the need for industrial policy. On the one hand, the standard position calling for minimal State intervention in some limited cases of market failures. On the other hand, the approach, adopted in this thesis, that synthesizes Schumpeterian, evolutionist and structuralist views in which there is a necessity for State intervention in industrial development (Peres and Primi, 2009). Even within this second, there are different normative contents of industrial policy as the use of certain

instruments is emphasized while other is downplayed (see for example Rodrik, 2004; Rodriguez-Clare, 2007; Harrison and Rodriguez-Clare, 2009). In effect, differing views of the behavior of socioeconomic systems, and their correspondent normative statements are the underlying causes of this persisting divide that is here to stay.

The thesis adopts a theoretical perspective that could be considered a common ground between diverse approaches in development economics, in particular, evolutionist and structuralist. These approaches recognizes: (i) the intrinsic, qualitative and quantitative differences between sectors and among productive activities, (ii) economic efficiency should not be reduced to its allocative side, but innovative and growth efficiencies should also be considered, altogether in their dynamic relations, (iii) the specificities of knowledge and technology, and their catalyzing role in development processes, and (iv) the absence of automatic adjustment mechanisms. From this perspective, structural transformation faces barriers that necessitate *ad hoc* State intervention to be addressed and involves the creation of asymmetries to favor activities and sectors considered as a locomotive for long-term growth, generally the manufacturing sector (Peres and Primi, 2009).

As there is no consensus on the definition of industrial policy, the thesis formulates a definition that stresses three aspects: (i) the development strategy that guides the industrial policy, (ii) industrial policy objectives and (iii) the industrial policy orientation, that's the types of State's interventions and the set of instruments that it calls for. On these bases, the Industrial Policy can be defined as a concerted process that aims to establish and promote specific industries and sectors, especially manufacturing, as a part of structural transformation strategy, aimed at the economic diversification and which necessitates various types of State's interventions, both horizontal and vertical.

The structural transformation strategy is a development strategy aiming at changing the sectorial composition of the economy in a manner that moves the economy from low productivity to high productivity activities (especially in manufacture sector), from outdated and disintegrated production capacities and technological capabilities to integrated and efficient ones. Production capacity refers to the stocks of resources, the nature of capital-embodied technologies, labor skills, product and input specification and the organizational routines in use. Technological capabilities are the needed knowledge and resources for generating and managing technical change. While the term production capacity refers to the

physically installed capacity, the term technological capability refers to the ability to use that capacity efficiently (Lall, 1992; Bell and Pavitt, 1993).

Horizontal interventions are general business environment policies, characterized by the use of a limited number of instruments. It implies broad measures, which have an impact on most or all industries. They include measures to support human capital formation, investment in infrastructure, etc. Conversely, the vertical industrial policy is primarily concerned with supporting specific economic sectors and firms. It is selective and discriminatory by definition. The vertical industrial policy calls for the use of a broad set of instruments.

In this theoretical perspective, State's role ranges from a promoter and articulator of policy measures tailored to reinforce linkages between agents, to be directly involved in the production. In industrial policy, the State might play diverse roles. According to Peres and Primi (2009), there are four main types of State's interventions in support of industrial development: (i) as regulator, e.g., by promoting, regulating investment flows, as a standards setter, promoter and coordinator, setting tariffs and production levels for certain activities, creating fiscal incentives and subsidies to support specific sectors etc., (ii) as producer, participating directly in economic activity, as in the case of State-owned enterprises, (iii) as consumer, ensuring a market for industries through public procurement programs, and finally (iv) as a financial agent and investor, influencing the credit market and promoting the allocation of public and private financial resources to industrial projects considered priorities.

Ironically, industrial policy role in the development process is getting more recognized than ever by many standards economists, after a long-time period of underestimation and even rejection, at the same time that its implementation becomes legally restricted by the neoliberal mode of regulation of international economic relations. Recognizing industrial policy role is important, but ensuring necessary conditions to be able to implement it effectively should be the central element of the debate for policy recommendations not to be disconnected from concrete realities.

Although disagreement between economist persists on many points related to industrial policy, there is an emerging consensus on the necessity to move the focus of debate from the "why" side to the "how" side. The present thesis aims to contribute to the "how" side of the debate on industrial policy, more precisely on how to ensure the necessary space to implement

industrial policy while integrating into international economy giving the constraints imposed on its instruments by trade and investment agreement.

In this respect, there are two relevant elements of industrial policy design: objectives and instruments. Policymakers must have the necessary space to articulate objectives and choose the necessary policy instruments. The thesis is interested particularly in instrument component of industrial policy making. This choice can be explained by the increasing pressures on States' autonomy in respect to historically used policy instruments, by supranational trade, investment, and financial institutions.

Accordingly, Development Economics saw the emergence of the debate on the "Policy Space for Development" that investigates, among other things, the availability of industrial policy tools given the disciplines of the contemporary international financial, monetary, trade and investment regimes (UNCTAD, 2004, 2006; Hamway, 2005; Akyuz, 2009, Mayer, 2009).

### **Industrial Policy Space**

Policy space essentially refers to the freedom and ability of a State to pursue the most appropriate economic and social policies according to its particular circumstances. The so-called São Paulo Consensus (2004) refers to space for national economic policy "as the scope for domestic policies, especially in the areas of trade, investment and industrial development" and mentions the importance of all countries taking "into account the need for appropriate balance between national policy space and international disciplines and commitments" (UNCTAD, 2004a, p.2-3).

This concept was developed in opposition to the "one-size-fits-all" development approach of the World Bank, the International Monetary Fund (IMF) and the World Trade Organization (WTO), whose authorities over national States were considerably extended throughout 1980<sup>th</sup> and 1990<sup>th</sup>. Countries seeking financial assistance or debt rescheduling from the World Bank or the IMF had to adopt approved macroeconomic stability programs and agree to "structural" reforms, such as trade liberalization, privatization, and financial deregulation, and substantially reduced the economic role of the State. Similarly, the Uruguay Round of trade negotiations extended the authority of the WTO to embrace behind-the-border areas such as services, technical regulations and standards, intellectual property and trade-related investment measures, thereby restricting the policy options available to developing countries to manage their integration into the global economy.

Economic liberalization weakens *de facto* control over national economic development by allowing foreign actions and conditions to influence national macroeconomic policy targets. This reduced effectiveness in the ability to control national policy targets is most prominent in macroeconomic policy. On the other hand, multilateral rules and disciplines, as well as commitments resulting from bilateral agreements, reduce *de jure* autonomy and sovereign control over policy instruments (Mayer, 2009). The separation between *de facto* and *de jure* is not always clear. For example, the design of investment rules in investment agreements, not only limit *the de jure* autonomy of host States to regulate foreign investments but also liberalize capital account, reducing the *de facto* effectiveness of macroeconomic policy.

To avoid any ambiguity at the conceptual level, it is useful to distinguish between three terms (i) national policy space or national policy autonomy, (ii) policy space for development and (iii) industrial policy space. Although the term “policy space” is the common denominator between three expressions, it may have different meanings.

First, under today international trade, investment, and financial regimes, national States have enough policy space at the domestic level to implement development strategy inspired by Washington consensus. On the contrary, policy space is significantly constrained when it comes to the implementation of development strategy aimed at the structural transformation of the economy. Consequently, the term “policy space” is generic and unclear in what concerns the type of economic policy and the overall development strategy.

National sovereignty of national States after World War II constitutes a historical pattern under which independent State enjoyed a relative autonomy (that was far from being achieved) that permitted local population an unprecedented space in modern history, in deciding their development trajectories. Since 1980<sup>th</sup> and 1990<sup>th</sup>, policy makers are found to be caged in Washington consensus policy style, and whenever they try to apply measures to contain crisis, that are not even industrial policy measures, they break records in respect to the number of appeals against them in international courts, as it was in the case of Argentina following its financial crisis in the late 1990<sup>th</sup>.

Consequently, autonomy at the national level is not the ultimate objective, but it is a necessary mean. Autonomy is needed with specific policy option, i.e. industrial policy as defined above.

Second, regional trade agreements, which are based on the idea that the free trade is the engine of sustainable growth, bring about a reduction of national policymakers autonomy, and more specifically they reduce State autonomy in respect to the application of industrial policy. On the contrary, a “productive regionalism” project would entail a reduction of national policy autonomy, but it expands industrial policy space both “national” and “regional”. By productive regionalism, we mean a progressive process of regional economic integration that is guided by the objective of building, upgrading and integrating production capacities, and where market access liberalization would be submitted to this aim and one of the instruments to achieve it. Moreover, “productive regionalism” may be a necessity in many cases to overcome restrained endogenous policy space. It may liberate some potential of the national economy and enlarges its production capacity and technological capabilities. Such a choice may reveal to be a necessity as it is not clear if it would be possible to go back to post-World War II exact configurations, as “no man ever steps in the same river twice”. Furthermore, it is not that clear that it is necessary to go back to the exact institutions that prevailed in that period. Even if they ensured larger policy space than today’s ones, but they were far from being ideal.

Accordingly, the re-conquest of national policy autonomy shouldn’t be seen at odds with a process of “productive regionalism”. This is why this thesis finds more accurate to use the concept of industrial policy space, as it reflects the fundamental issue of policy space debate, without limiting it to the national scale.

In the context of trade and investment agreements constraints, industrial policy space corresponds to the national State ability to use industrial policy instruments without being appealed to international courts such as International Centre for Settlement of Investment Disputes (ICSID) or WTO dispute settlement, put on watch list and get sanctioned by a (hub) partner country, or simply required to abandon its industrial policy against an IMF loan etc.

Throughout neoliberal era, many developing countries have been engaged in programs of “structural adjustment” of their economies in order, among other things, to set the “adequate business environment” and “sound macroeconomic policies” as means of attracting the foreign capital and investment. In contrary, this thesis is based on the idea that industrial development is mainly a domestic project, in the sense that the structural transformation couldn’t take place without concerted and continuous implementation of economic policies based on and hold by local social forces that set a minimum consensus concerning a social

transformation project. The very benefits arising from external factors couldn't take place without enabling mechanisms built-in industrial policy framework. Such vision (for example Chang, 2003, Amsden, 2001) goes in opposite direction with development strategy based on begging a push from the “outside”, whether from a Northern or the Southern partner, to initiate and lead the process of structural transformation. To avoid ambiguities, saying that development is a domestic project is not an invitation to autarky, but an invitation to avoid the “waiting for Godot” or the running after the mirage attitudes, being foreign capital, investment, technology, etc.

Exchange and trade can accelerate the structural transformation, as they ensure, for example, that developing countries will not engage in “reinventing the wheel” trajectory, as they seek to upgrade and reinforce their production capacities. However, in our view trade by itself is not the principal locomotive for achieving structural transformation. Importantly, global trade is facing unprecedented challenges as the rate of growth of global commerce is below global growth rate<sup>1</sup>. Slow trade growth has led to worries that the ratio of global trade to Gross Domestic Product (GDP) has reached a limit. However, available evidence suggests that cyclical factors, while important, may not fully explain the trade slowdown (See Hoekman, 2015). Moreover, it may be useful to differentiate the role of trade according to different sectors and products when analyzing trade contribution to the economic development (Hausmann et al, 2007).

In our view, increasing the role of domestic economic factors both on the supply, i.e. local source for investment such as development banks (Chandrasekhar, 2016), and the demand side, i.e. domestic demand-led growth<sup>2</sup> (Palley, 2002, UNCTAD, 2014a), is not only primordial pre-requisite for successful and inclusive industrialization, but also it enlarges industrial policy space as it reduces the leverage of the external actors on national economic policy making. Besides, such approach is necessary to ensure well-distributed and inclusive economic growth, reducing inequality that seems to be vital for the very sustainability of the economic growth itself as suggest recent studies (Ostry et al, 2014, Cingano, 2014, Hakura et

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<sup>1</sup> One of the ‘stylised facts’ of the last six decades is that international trade had grown faster than world output, in contrast to previous time periods, when the elasticity of trade with respect to output was much lower (Irwin 2002).

<sup>2</sup> As Palley (2011, p.18) argues “This does not mean the abandonment of exporting. Countries will always need exports to pay for needed imported inputs and final goods they do not produce. However, it does mean building up the domestic demand side of the economy and reducing reliance on strategies aimed at attracting export-oriented FDI.”

al, 2016).

It seems paradoxical to insist on the idea that development is a local project, at the same time affirming that national autonomy is not a purpose by itself. This reflects an objective paradox in which is found many countries as, on the one hand, they should strive to ensure the minimum autonomy in the face of “international institutions”, and, on the other hand, they strive to overcome limited endogenous space. One way to ensure a partial ‘solution’ to this paradox is to adopt double tracked strategy: (i) observing available space to exploit it to the maximum and to preserve it while avoiding to contract any new agreements that may curtail it, (ii) expanding it through retreating from restrictive agreements where it is possible, such as the case for Bilateral Investment Agreements (BITs) (UNCTAD, 2014a), and whenever possible, through engaging in “productive regionalism” projects.

Ensuring the needed industrial policy space at the national or/and the regional levels is a matter of particular historical circumstances. Still, preserving and expanding this space implies an inversion of the reasoning from focusing on what should be done domestically in order to satisfy international actors, e.g. to attract foreign investment, to what kind of integration into international economy, and, by consequence with which types of partners, is more appropriate to ensure the necessary space to implement effectively industrial policy? To avoid voluntaristic approach, a fundamental question needs to be answered: Is such integration into international economy possible? One of the essential contributions of this thesis is to provide elements of answer to this question.

In fact, the literature analyzing constraints on industrial policy space focuses on two of its sources: international monetary and financial system (For example Akyüz, 2008a, 2008b, 2010, Rodrik, 2006; Ocampo and Vos, 2008), and multilateral trade system (For instance Akyuz, 2005; Ayala and Gallagher, 2005; Kumar, 2005; Wade, 2003a; Shadlen, 2005b). Little attention has been paid to the impact of regional trade agreements on the industrial policy instruments (See for example Shadlen 2005a; Khor, 2008; Gallagher and Thrasher, 2008).

As regional trade agreements (called free trade agreements also) become a cornerstone of international structure managing economic policy for members’ State, the thesis endeavors to fill some of the gap in literature considering the effects of regionalism on industrial policy space.



## **Regional Trade Agreements and Non-Tariff Measures**

In general, as multilateral trade negotiations have stalled over the past decade, Regional Trade Agreements (RTAs) have taken center point in the trade policy strategies of many countries. All WTO members are parties to at least one RTA. On the WTO portal, Regional Trade Agreements (RTAs) are defined as reciprocal trade agreements between two or more partners. They include free trade agreements and customs unions<sup>3</sup>. They don't necessarily involve countries from the same geographical region. Markedly, today's mega-regional trade agreements, the Trans-Pacific Partnership (TPP), which is awaiting ratification, and the Transatlantic Trade and Investment Partnership (TTIP), which is under negotiation, if concluded regulate trade among countries from which originate over 40% of world commerce (Suominen, 2016).

According to WTO portal, in the period 1948-1994, the GATT received 124 notifications of RTAs (relating to trade in goods), and since the creation of the WTO in 1995, over 400 additional arrangements covering trade in goods or services have been notified. RTAs have become increasingly prevalent since the early 1990s. As of 1 February 2016, some 625 notifications of RTAs (counting goods, services and accessions separately) had been received by the GATT/WTO. Of these, 419 were in force. These WTO figures correspond to 454 physical RTAs (counting goods, services, and accessions together), of which 267 are currently in effect<sup>4</sup>. Figure (0.1) shows all notified RTAs to the GATT/WTO (1948-2016), including inactive RTAs, by year of entry into force.

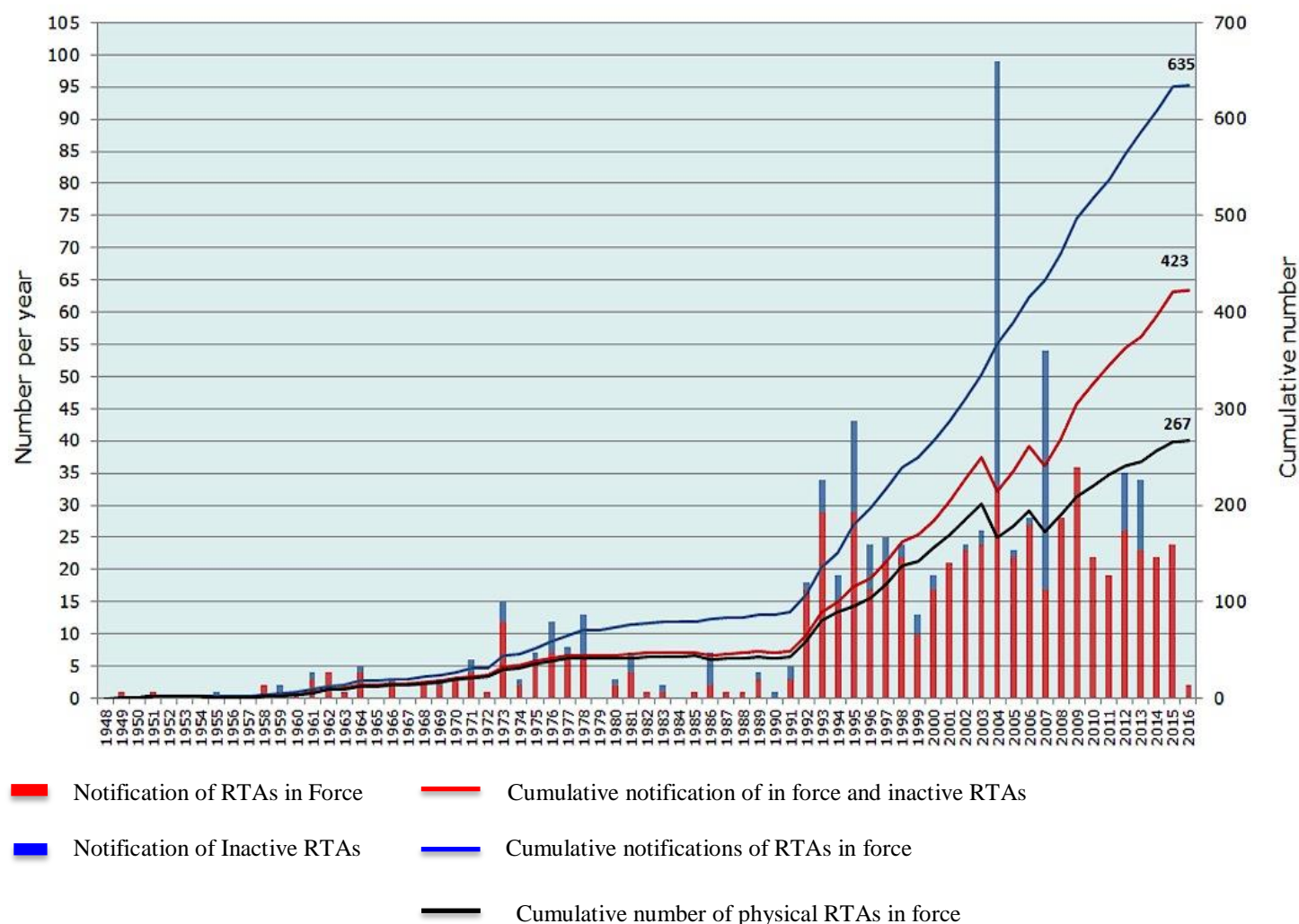
RTAs may be classified according to different criteria. The distinction between shallow and deep agreements (WTO, 2011) is of particular relevance from the perspective of industrial policy instruments. Trade agreements that deal mostly with border policy measures are often defined as "shallow" agreements. On the domestic side, these agreements accord non-discriminatory national treatment to foreign goods and firms but do not intervene in national economic policies beyond this requirement.

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<sup>3</sup> Definition accessible on [https://www.wto.org/english/tratop\\_e/region\\_e/rta\\_pta\\_e.htm](https://www.wto.org/english/tratop_e/region_e/rta_pta_e.htm)

<sup>4</sup>Of these, 431 notifications were made under Article XXIV of the GATT 1947 or GATT 1994, 41 under the Enabling Clause, and 153 under Article V of the GATS.

**Figure 0.1 Evolution of regional trade agreements, 1984-2016**



Note: Notifications of RTAs: goods, service and accession to an RTA are counted separately. Physical RTAs: goods and accession to an RTA are counted together. The cumulative lines show the number of notification and physical RTAs that were in force for a given year.

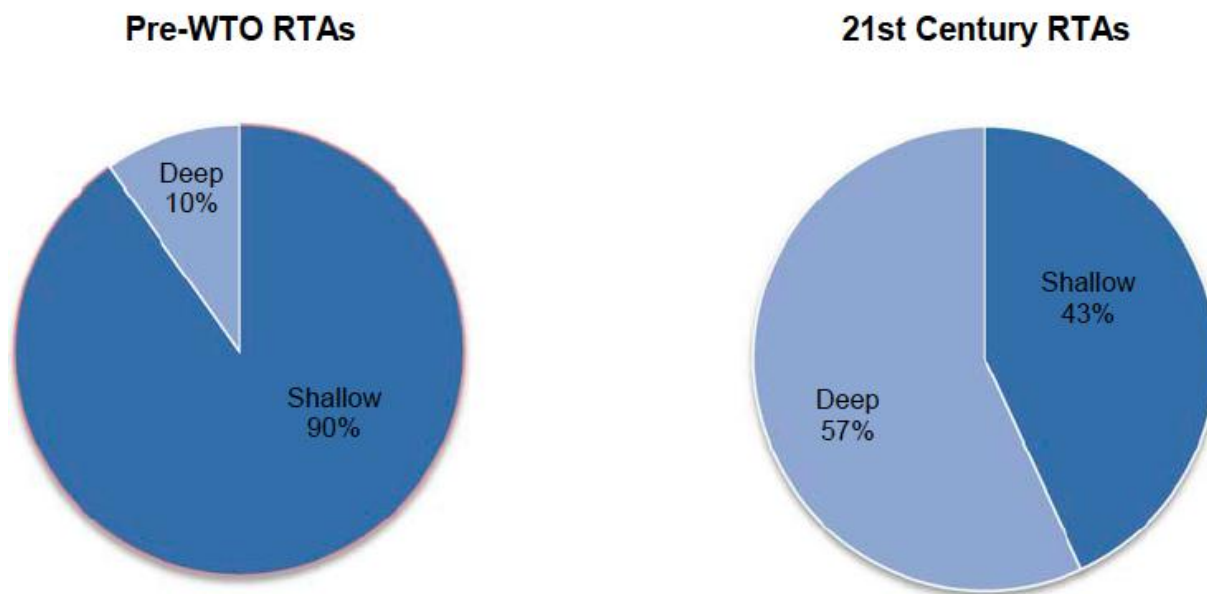
**Source: WTO Secretariat<sup>5</sup>**

In contrast, trade agreements containing rules on domestic policies that fall “inside the border” are referred to as “deep” agreements (Lawrence, 1996). There are two distinct dimensions of deep agreement: the extensive and the intensive margins. The first dimension refers to widening the coverage scope of an agreement beyond the lowering of tariffs (e.g. the liberalization of public procurement). The second dimension relates to the institutional depth of the agreement, such as the extent to which certain policy prerogatives are delegated to international institutions. The coverage and depth of preferential treatment vary from one

<sup>5</sup> Figure is accessible on WTO Gate [https://www.wto.org/english/tratop\\_e/region\\_e/regfac\\_e.htm](https://www.wto.org/english/tratop_e/region_e/regfac_e.htm)

RTA to another. Figure (0.2) illustrates the increasing share of deep trade agreement of the total number of trade agreements.

**Figure 0.2 Share of deep and shallow RTAs**



Source: OECD (2014, p.11)

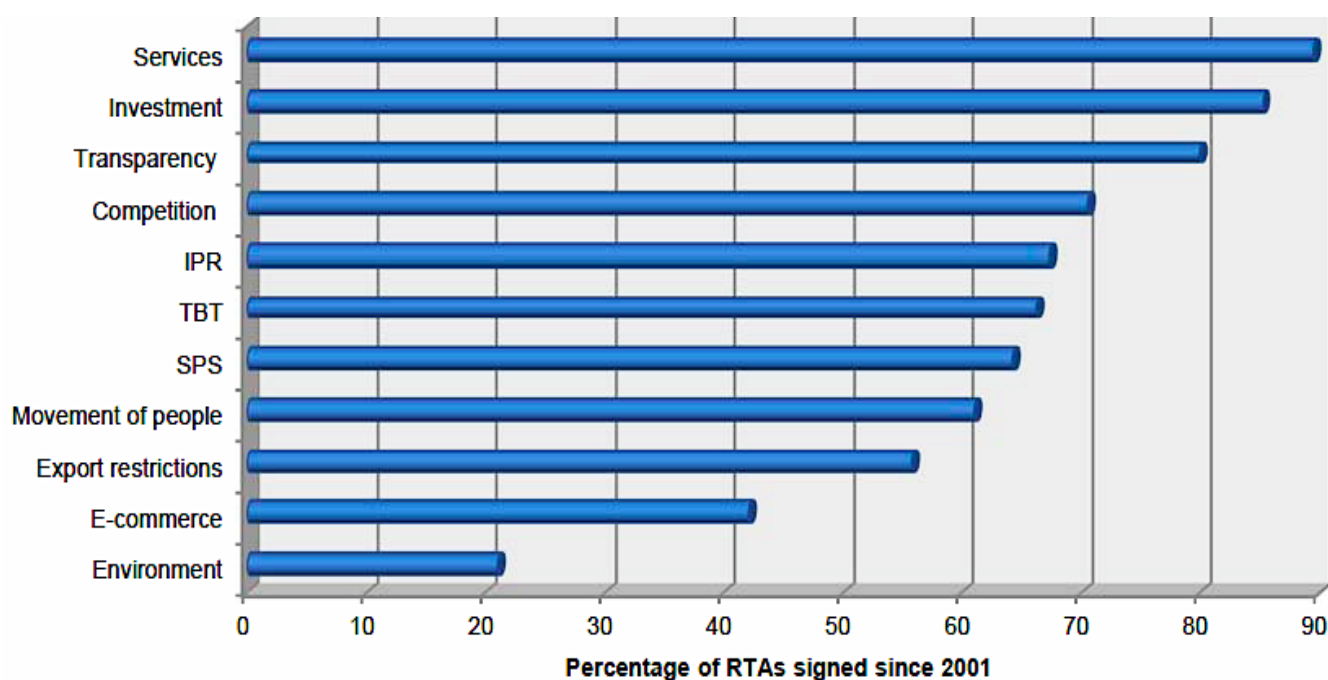
It should be noted that tariffs have been substantially reduced unilaterally and in regional and multilateral negotiations in recent decades. The use of Non-Tariff Measures (NTMs), however, to regulate trade has been increasing, both in terms of countries adopting these measures and in their variety (UNCTAD, 2013a). UNCTAD (2013a) define the NTMs as “all measures altering the conditions of international trade, including policies and regulations that restrict trade and those that facilitate it [...] The multitude of NTMs are often aggregated in various groups: hard measures (e.g. price and quantity control measures), threat measures (e.g. anti-dumping and safeguards), Sanitary and Phytosanitary Measures (SPS) and Technical Barriers to Trade (TBTs) and other categories such as export measures, trade-related investment measures, distribution restrictions, restrictions on post-sales services, subsidies, measures related to intellectual property rights and rules of origin” (UNCTAD, 2013a, p.1-2).

Little progress has been made in addressing NTMs liberalization at the multilateral level. This means that national State has a considerable autonomy to integrate the design of these

measures into an overall industrial policy framework.

Nonetheless, substantial efforts are made to address them at the regional level through “deep agreements”. Some RTAs became the leading club where NTMs are getting liberalized. The most sophisticated RTAs include regional rules on investment, competition, intellectual property, public procurement, financial services, environment, labor, etc. According to OECD (2014), WTO *plus* commitments in services are present in over 90% of RTAs, and over 60% of RTAs have WTO *plus* commitments in respect to TBTs and SPSs, and over 85% of RTAs have commitments on investment (WTO *extra*). Similarly, over 65% of RTAs have deepened obligations on intellectual property rights beyond TRIPS (see figure 0.3).

**Figure 0.3 RTAs with WTO *Plus*, WTO *extra* measures, by policy area**



Source: OECD (2014, p.17)

Thus, a new set of industrial policy instruments appears to be on the top of the agenda of liberalization for some major economies, such as United States (US) and European Union (EU). A fundamental question rises here is whether such an enterprise entails the risk of elimination of the remaining industrial policy space.

## **Thesis Objective**

The thesis aims to push forward the debate on the “how” component of industrial policy. The thesis endeavors to assess the state of non-tariff measures, considered as industrial policy instruments, in regional trade agreements. It provides new empirical and analytical results, on RTAs impacts on its industrial policy instruments.

More precisely, it provides a qualitative and comparative assessment of constraints on integrating the design of some NTMs into an industrial policy framework, taking into account the *de jure* commitments introduced in North-South and South-South RTAs.

Among the used criteria to categorize the RTAs is the level of development of RTA members. In this approach, RTAs can be classified as (i) North-North, (ii) North-South, (iii) South-South. “North” denotes developed countries according to OECD classification, while “South” denotes less developed countries (other than developed countries). Our thesis uses this categorization as it is widely employed in the RTAs studies (see for example Wood, 1994; Evans et al; 2006, Hoekman, 2011, WTO, 2011; Disdier et al, 2013). The RTAs of both the US and the EU with less developed countries will serve as examples of North-South RTAs, and the RTAs of both China and India with other less developed countries will serve as examples of South-South RTAs.

The study is both empirical and analytical. Empirical in that it maps RTAs commitments that affect industrial policy instruments in three interrelated areas: foreign investment regulation, patent and standardization. It reviews 36 North-South and South-South RTAs: 10 Free Trade Agreements of US, 12 Association and Economic Partnership Agreements of EU, 6 Chinese Free Trade Agreements and 8 Indian Trade Agreements (see Table 0.1).

There are many studies that map trade and investment agreements while examining the consistency of different types of agreements rules, with particular importance given to the impact of regionalism on the multilateral trade system (see for Example, Piermartini and Budetta, 2009; Baldwin and Low, 2009; Kotschwar, 2009; Lester and Mercurio, 2009). While it uses some methodological approaches developed in this literature, this thesis adopts a distinct analytical approach as it (i) assesses the RTAs commitments from the perspective of industrial policy in three studied areas, and (ii) compares two types of RTAs North-South and South-South.

**Table.0.1 Studied regional trade agreements**

	US	EU	China	India
	CAFTA-DR <sup>a</sup> (2006)	Morocco (2000)	Chile (2010)	Afghanistan (2003)
	Chile (2004)	Algeria (2005)	Peru (2010)	Bhutan (2006)
	Peru (2009)	Tunisia (1998)	ASEAN <sup>c</sup> (2007)	Nepal (2009)
	Colombia (2012)	Egypt (2004)	Costa Rica (2011)	Sri Lanka (2001)
	Panama (2012)	Jordan (2002)	Pakistan (2009)	MERCOSUR <sup>d</sup> (2009)
	Bahrain (2006)	Lebanon (2003)	South Korea(2015)	SAFTA <sup>e</sup> (2006)
	Oman (2009)	Chile (2005)		ASEAN <sup>c</sup> (2010)
	Jordan (2001)	Mexico (2000)		Chile (2007)
	Morocco (2006)	Peru and Colombia (Andean Community) (2013)		
	South Korea (2012)	South Africa (2000)		
		CARIFORUM <sup>b</sup> (2008)		
		South Korea (2011)		
<b>Total by country</b>	10	12	6	8
<b>Total</b>	<b>36</b>			

<sup>a</sup>: The Dominican Republic-Central America FTA (CAFTA-DR) comprises Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and the Dominican Republic.

<sup>b</sup>: Forum of Caribbean States CARIFORUM are: Antigua and Barbuda, The Bahamas, Barbados, Belize, Cuba, Dominican Republic, Grenada, Guyana, Haiti, Jamaica, St. Kitts and Nevis, Saint Lucia, St. Vincent and the Grenadines, Suriname and Trinidad and Tobago.

<sup>c</sup> : The Association of Southeast Asian Nations (ASEAN)comprises Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Viet Nam.

<sup>d</sup> : Southern Common Market (MERCOSUR) comprises Argentina, Brazil, Paraguay, Uruguay, Venezuela

<sup>e</sup> : The South Asian Free Trade Area (SAFTA) includes Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka.

In respect to the choice of policy instruments, reasons are multiple. Historically, rules on foreign investment establishment, operations, liquidation, etc. in the host country are set out in Bilateral Investment Treaties (BITs). Starting with North American Free Trade Agreement (NAFTA), the RTAs of capital exporting countries began to include a chapter on investment that, typically, mirrors their BIT model. To our knowledge, investment agreement, whether BITs or RTAs, was little, if any, analyzed from the perspective of their implications on the autonomy of different industrial policy instruments. Investment rules are highly analyzed by law researchers and by consequence legal approach prevails their study. Chapter two

contributes to overcoming this lack in the literature by constructing a simple foreign investment regulatory framework that permits to analyze impacts of investment rules in RTAs on industrial policy instruments, in particular, its component aimed at regulating foreign investment and reaping its potential developmental benefits.

Intellectual Property Rights (IPRs) rules in RTAs were analyzed by many economists, but they focused almost exclusively on the RTAs of US and EU (For example Shadlen, 2005a, Mercurio, 2006, Drexler, 2014). By consequence, these studies had painted a bleak picture on the state of the Trade-Related Aspects of Intellectual Property Rights Agreement (TRIPS) flexibilities in the context of rising regionalism. It is quite astonishing that little works have been devoted to IPRs rules in emerging countries' RTAs, given that they become major players in different technologies and manufacturing sector. Thus, they may be a potential source of technology and knowledge that help developing the production capacities and technological capabilities. Moreover, the analysis of implications of patent regulations, either in TRIPS agreement or RTAs, on economic policy has focused, almost solely, on health-related issues, while impacts on the overall industrial development were not studied sufficiently.

Our thesis contributes to filling some of the gaps in the literature by providing comparative insight on IPRs rules in different types of RTAs, while emphasizing, theoretically, the relation between the nature of patent regulations and the industrial policy. This approach results in rather optimistic conclusions, contrary to previous studies, as it shows that the RTAs of China and India do not impede partners' countries to operationalize TRIPS flexibilities at the national level, in a manner that facilitates the industrial development.

The thesis brings into analysis an important industrial policy instrument, i.e. standards, that have received extremely limited attention in the debate on industrial policy in development economics. Theoretically, this is mirrored in the widespread reduction of standards functions to an only instrument of public and trade policies (see for example Baldwin, 1970; Fischer and Serra, 2000). This is why different types and phases of standardization process are regrouped under the term "Technical Barriers to Trade". Empirically, studies in development economics, have adopted quantitative approaches to estimate trade effects of standards liberalization and the cost of standards harmonization (for

example Disdier et al, 2013; Chen and Mattoo, 2008; Baldwin, 2000). It should be noted that standards and regulatory measures are a top topic in the liberalization agenda of many RTAs.

In contrast to the widespread reduction of standards functions to a trade policy instrument, the thesis focuses on standards function as an instrument of industrial policy. In addition, the problematic of “policy space” is applied to standards, thus, chapter four assesses the “national standardization space” under the WTO Agreement on Technical Barriers to Trade, and it compares RTAs rules on standards against the available space under WTO to design the standards as instrument of industrial policy at the national level.

Last but not least, the three studied policy instruments are interrelated. Concerning the relation between investment policy and patent, some RTAs define intellectual property rights, including patent, as an investment. This adds a new layer of protection, creating additional obstacles to the industrial development as the patentee can benefit from investment protection rules under RTAs. Furthermore, investment chapters in US RTAs include restrictive rules on intellectual property limiting flexibilities available under TRIPS agreement, such as limiting grounds upon which compulsory license can be issued.

Intellectual property rights and standards have been an intensely debated issue, as the two conflict each other. Standards embody technology and thus play an essential role in the process of technology diffusion as other firms in the industry use the technological advance incorporated into standards by the developer. Therefore, without the direct purchase of a patent, the acquisition of a product with embodied technology and a specific, traceable standard can help a firm to develop a similarly sophisticated product. Standards are a tool for diffusing innovation, and intellectual property rights are means for securing the private right of innovators. Standards are open (though closed standards are rising increasingly), and act as a public infrastructure for innovation. Patents, by contrast, are proprietary and may be used to maintain exclusivity.

Concerning the relationship between standards and investment, a by-product of the thesis chapter is the formulation of simple theoretical argument on (i) standards as an instrument to overcome investment coordination failure and reinforce cohesion and compatibility of complementary industries, and (ii) standards as component of control mechanism that should accompany State’s distributed supports to domestic producers. Moreover, diffusion of foreign standards through foreign investments and value chains may call into questioning the coherence of productive apparatus of the host country.



In respect to the choice of RTAs, the reasons and objectives are multiples. The RTAs sample offers insight on the possibility to preserve significant industrial policy space while integrating into the international economy, through the comparative examination of “Southern” and “Northern” modes of regulation of trade and investments relations by the mean of RTAs.

Indeed, this studied RTAs sample would permit to evaluate if there are significant differences between the conduct of emerging economies and core countries in their RTAs with developing countries in a manner that impacts the possibility to use the studied NTMs as instruments of industrial policy. The research provides an empirical contribution to the debate on effects of the South’s rise on international economic governance, and in particular, whether the emerging Southern countries constrain equally industrial policy space as Northern countries do, or they offer developing countries opportunities to expand the restricted industrial policy space throughout the neoliberal era. The thesis’ results provide some empirical materials on the conduct of two majors emerging economies, China and India, in respect RTAs negotiations as instruments of regulation of economic relations in the area of trade and investment.

Observing the existing modes of regulation of trade and investment relations and their corresponding impacts on industrial policy space is a necessary step to answer the question of how to implement industrial policy while integrating into the international economy. Such an observation is a prerequisite to determining the more appropriate economic partners from the perspective of industrial policy space. This permits to move to next step where the central question is which model of economic partnership is the more adequate. However, the thesis objective on this level is limited to observe impacts of different modes of regulation of trade and investment relations, being North-South and South-South RTAs, on the industrial policy space.

The choice of countries was based on an underlying assumption that the present international environment not only holds challenges to industrial policy making, but it may also hold opportunities especially as a result of the rise of some major Southern economic actors.

The relative weight of South-South economic and trade relations is increasing. According to UNCTAD (2012a), as of 1995, 38% of the developing countries’ imports were sourced from other developing countries, and by 2010 this figure had exceeded 57%. In parallel, there

has been a consistent increase in imports of high technology intensive goods in the South. On average, over 53% of all high-tech products imported by developing countries as a group were sourced from developing countries. Interestingly, this means that Northern countries leading the march toward the highest IPRs, are no more the sole source of technology and knowledge, rather the emerging economies characterized by ongoing technological “catching up”, and thus, laxest IPRs, can be complement and alternative to Northern sources of technology (Abbott et al, 2013). Moreover, emerging economies are playing growing role in foreign investment outflows, especially in the case of China who became the third largest source of Foreign Direct Investment (FDI) in the World in 2014 (UNCATD-WIR, 2016).

Also, India and China are getting increasingly active in trade agreements negotiations. Therefore, it becomes necessary to examine their approaches in trade agreements, from the perspective of industrial policy. Moreover, East and South-East Asia becomes a major playground for the constitutions of economic blocks, in a context of an apparent competition between China and US.

Here, it should be highlighted that the thesis does not aim, through the comparative assessment, to choose the more appropriate RTA, from the point of view of industrial policy space, to sign. The question of the appropriate trade agreements model from the point of view of industrial policy is beyond the scope of the thesis. Moreover, the elaboration of such model needs a case-by-case study, as there is no “one size fits all” agreement template. Again, RTAs assessment provides a proxy to understand international trade and investment regulation strategies of keys world economies, in order to assess whether there exist modes of regulation of investment and trade relations that preserve substantial industrial policy space at the national level.

### **Thesis Questions and Hypothesis**

The thesis aims at answering three main questions, the first is general, and the two others are specific:

- (i) Do South-South modes of regulation of trade and investment relations, as exemplified by the RTAs of China and India, provide developing countries larger industrial policy space than do North-South modes of regulation of trade and investment relations as exemplified by the RTAs of the United States and the European Union?

- (ii) To which extent the RTAs of the United States and the European Union go beyond WTO agreements disciplines on industrial policy instruments with respect to foreign investment regulation, patent rules, and standardization? To which extent both countries' RTAs restrict industrial policy space in these three areas?
- (iii) To which extent the RTAs of China and India preserve and affirm WTO agreements flexibilities with respect to foreign investment regulation, patent rules, and standardization? Do the RTAs of China and India preserve significant industrial policy space in these three areas?

Previous studies have shown that the RTAs of US and EU go systematically beyond WTO commitments, restricting profoundly industrial policy space with respect to non-tariff measures. Although RTAs are generally instruments of liberalization, the thesis assumes that the RTAs of China and India tend relatively to preserve industrial policy space available under WTO agreements in the three studied areas.

Consequently, the basic interpretative hypothesis is: There exist various industrial policy spaces depending, among other things, on the mode of integration into the international economy as expressed by (i) the choice of partner economies, Southern or Northern, and (ii) the corresponding mode of regulation of trade and investment relations. More specifically, the RTAs of China and India have a tendency to preserve WTO flexibilities, thus, offering developing countries partners larger industrial policy space compared to the RTAs of the US and the EU that constrain systematically their ability to use the studied industrial policy instruments.

### **Thesis Methodology**

To answer the above questions, the thesis adopts a qualitative methodology that combines three interrelated analytical components:

(i) The basic concepts of the Economic Policy Theory of Tinbergen that permits to identify necessary policy instruments to achieve industrial policy objectives<sup>6</sup>.

(ii) The concept of “WTO flexibilities” that helps to assess the extent of restriction imposed on industrial policy instruments under WTO agreements. This permits to make use

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<sup>6</sup> The question of which instrument is better suited to achieve defined target is beyond the scope of the thesis.

of available policy space under WTO agreements as a benchmark against which RTAs are studied comparatively.

(iii) The approach developed by Horn et al (2010) that classifies RTAs engagements in comparison with WTO agreements commitments and coverage to WTO, WTO *plus* and WTO *extra*.

First, the methodology draws on the theory of economic policy, dating back to Tinbergen (1952, 1956), as its basic concepts allow consideration of the operational content of the policy space concept (Mayer, 2009). The focus of the theory was on the general conditions for controllability of an economic system. This theory is concerned with the targets of economic policy, the instruments available to achieve those targets and the relationships between the targets and instruments of policy.

A target is an economic policy aim that is usually measured in terms of an economic variable. An instrument is another economic variable that can be used to induce the economy to achieve the target, i.e. to change the value of the objective variable in the desired direction. The ability of instruments to influence targets is inferred from economic analysis, which identifies the relationships between economic variables, thereby giving us an idea of the possibility that adjusting the instruments will consequently have an effect on the target.

Tinbergen assumes that the design of economic policy includes the specification of a certain number of separate target variables. Each of these target variables could be given quantitative values. Once the government had done this, policy-making would consist of the following steps: (i) selecting adequate instruments to achieve the targets, (ii) formulating the connections between targets and instruments, (iii) determining the quantitative values required for the instruments. Tinbergen's *golden rule* asserts that a policymaker can reach the targets if the number of independent instruments equals the number of his independent targets<sup>7</sup>.

The second component of methodology builds on the concept of "WTO flexibilities" that has been used, notably, in the discussion and analysis of WTO agreements on TRIPS, Trade-Related Investment Measures (TRIMs), and Subsidies and Countervailing Measures (SCMs). Although WTO agreements have placed significant, and historically new, constraints on industrial policy instruments, as a consensual outcome it has left room for variation across

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<sup>7</sup> Later Theil (1956, 1964) addressed the situation where policymakers are endowed with a number of instruments lower than the number of targets.

countries as a result of:

(i) Policy areas and instruments that haven't been disciplined under WTO agreements, either because of the non-coverage for all Members countries or as result of the Special and Different Treatment for developing countries (SDT)<sup>8</sup>. The latter corresponds to actions developing countries may undertake through exemptions from commitments otherwise applying to Members in general, or a reduced level of commitments for developing countries, e.g. the latter are not expected to base their standards on existing international standards.

(ii) Indefinite commitments that were formulated vaguely, giving place to different interpretations and different implementations at the national level, e.g. grounds upon which compulsory license for patent may be issued.

The thesis uses the term “flexibilities”, as equivalent to the possibility to use an industrial policy instrument, whether as a result of the special and differential treatment for developing countries, general exceptions, or ambiguities in commitments formulations.

However, the relative character of the very concept “WTO flexibilities” should be stressed. First, commitments formulated vaguely may give place to different interpretations in both directions, less or more restrictive. For instance, while some provisions in TRIPS Agreement are interpreted by many experts in a manner that facilitates the access to knowledge and technology, there exist interpretations for the same provisions seeking to increase the level of protection for intellectual property. Moreover, the latter interpretations are well “muscle” being adopted by key economic and political powers like US and EU, and enforced by sanctions and threat to sanction. For example, 13 developing countries appear on the US Priority Watch including China and India because of their national IPRs practices (USTR, 2015a). Therefore, the balance of power may be a determinant factor of the type of implemented interpretation of WTO flexibilities at the national level.

Second, while developing countries have formally the right to exercise the flexibilities under some WTO Agreements, in reality, it remains difficult for many of them to make

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<sup>8</sup> According to Singh (2007), the universe of special and differential treatment consists of 145 provisions spread across the different Multilateral Agreements. Of the 145 provisions, 107 were adopted at the conclusion of the Uruguay Round, and 22 apply to least-developed country Members only. The WTO secretariat has developed a six-fold typology to classify the existing SDT provisions: i) provisions aimed at increasing the trade opportunities of developing country Members, ii) provisions under which WTO Members should safeguard the interests of developing country Members, iii) flexibility of commitments, of actions, and use of policy instruments, iv) transitional time periods, v) technical assistance, vi) provisions relating to least-developed country Members.

effective use of them because of lack of minimum necessary manufacture capacities, technological capabilities and technical expertise. Put it in a simple way, the use of many of WTO agreements flexibilities necessitate an already considerable level of industrial development. Furthermore, even countries having this critical level of industrial development but worsened macroeconomic situation may find themselves prohibited to make use of WTO flexibilities if they ask for the assistance of international financial institution such as IMF which attaches to its loans conditionality that even ban the use of permitted industrial policy instruments under WTO.

Third, WTO flexibilities are considered as such when compared to WTO *plus* commitments contained in some RTAs. In fact, these flexibilities are getting eliminated, especially in North-South RTAs.

Still, if these policy spaces remain unexplored, existing space would be missed by developing countries that have the sufficient capacities to make full use of it. More importantly, defining these flexibilities would be a necessary step to build on them in any project of “productive regionalism”.

The latest component of thesis methodology is the approach developed by Horn et al (2010) that classifies the content of the RTAs of US and EU in comparison with the coverage scope of WTO agreements. This approach divides the subjects covered by RTAs into three categories: WTO, WTO *plus* (WTO+), and WTO *extra* (WTO-X). The first and second categories correspond to those provisions of RTAs which come under the current mandate of the WTO. RTAs can here either reconfirm existing commitments or provide for further obligations. The first category corresponds to cases where parties undertake bilateral commitment that does not go beyond engagements under WTO agreements. The second category corresponds to cases where the parties undertake bilateral commitments going beyond those they have accepted at the multilateral level. An example would be the extension of patent terms, restrictions on the possibility to design standards in accordance with national “legitimate objectives”, and restricting the use of performance requirements for regulating foreign investment.

By contrast, the WTO-X category comprises RTA provisions that deal with issues lying outside the current WTO mandate. It corresponds to an obligation in an area that is qualitatively new’ relating to a policy instrument that has not previously been regulated by the

WTO. An example is the investment chapters that seek to liberalize foreign investment admission in goods sector.

The thesis' methodology is applied as follows: in the first place, functions of studied measures as industrial policy instruments are outlined. Secondly, WTO disciplining commitments affecting the use of instruments are analyzed, while flexibilities are examined. Then, a framework, for each studied area, is designed, on the basis of WTO "flexibilities". Lastly, these frameworks will serve as analytical devices to assess comparatively the state of studied policy instruments under RTAs, i.e. whether "WTO flexibilities" were eliminated, preserved or affirmed.

The inclusion of investment chapters in RTAs is WTO *extra* commitment, as no comprehensive agreement was concluded under the auspice of WTO. Though, there exist agreements that address investment related aspects, the General Agreement on the Trade in Services (GATS) and the Agreement TRIMs. Together, these agreements do not cover the broad spectrum of disciplined policy instruments under investment chapters in RTAs. To fill this gap, the study develops a simple foreign investment regulatory framework to analyze RTAs influence on industrial policy component aimed at regulating foreign investment admission and operation.

In the case of patent regulations in RTAs, they will be compared against commitments contained in WTO agreement on TRIPS. This section does not develop an analytical framework, but it simply combines "TRIPS flexibilities" as developed in previous literature and uses it as an analytical framework. Then, the state of theses "flexibilities" will be examined in the studied RTAs, whether eliminated, preserved or affirmed.

In respect to standards, the study assesses national standardization space under WTO agreements on Technical Barriers to Trade. National standardization space is the autonomy that disposes the national State to design standards according to a development strategy that considers standards as an industrial policy instrument that can achieve specific functions beyond their use as protections measures. Finally, the study examines whether RTAs preserve TBT Agreement flexibilities or whether "TBT *plus*" commitments were introduced.

However, one may argue that *de jure* commitments may not correspond to real practices. There may be a considerable difference between the text of the agreement and the extent to which and manner with which commitments are implemented. The difference may happen in

both directions, implementations based on tight interpretation of the legal text, or implementations based on laxest interpretation.

This is true. The examination of concrete implementations of legal commitments is beyond thesis scope. Nonetheless, efforts were made to respond to the need to have an insight on how legal rules may be implemented. Some international investment arbitrations and some WTO cases in respect to standards and technical regulation measures were discussed to understand how some key commitments were applied and interpreted by parties to agreements and by international forums for disputes settlements.

It is necessary not to underestimate the consequence of legal commitments on policymaking process, as the “playground” of trade agreements “implementation game” is the legal texts. Rules governing markets are far from being natural outcomes, rather, they are social constructions that take different types and forms of embodiments, including trade and investment agreements such as RTAs. Accordingly, discerning legal commitments is an unavoidable step in the policymaking process, if sanctions and penalties to be avoided, if policy recommendations to be realist and if policy space to be widened.

Examining the content of Chinese and Indian RTAs against both WTO rules and Northern countries RTAs provides an objective evaluation that permits to understand the conduct of two emerging economies with respect to the regulation of trade and investment relations with developing countries. This conduct may be seen as a proxy to understand Indian and Chinese internationalization strategies in areas that have crucial importance for industrial policy. Legal texts are not the product of hazardous formulations of jurists, rather they embody specific social interests and outlines national preference.

This methodology has its merits as it is applied to specific policy instruments that are used actively by both China and India. One may suppose that they have no interest to adopt restrictive interpretations of legal commitments in studied areas. It is not likely that India and China will take cases of implementation of WTO flexibilities to international courts, as this will simply backfire, especially in the context of their contentious relations with industrialized countries with respect to WTO agreements interpretations. Both countries are top figures as respondent States in WTO dispute settlement on patent, investment-related measures, and subsidies and countervailing measures. For example, since its access to WTO, China is a respondent State in 14 cases of dispute settlement out of 46 cases (the total number of raised



cases since the access of China) with respect to subsidies and countervailing measures, and in 5 cases out of 21 cases in respect to investment-related measures. Furthermore, China and India figure on the Priority Watch List of US due to their IPRs policies and practices (USTR, 2015a).

Indeed, both countries have already operationalized many of TRIPS Agreement flexibilities in their national patent system (in respect to China see Zhuang, 2013; and for India see Kher, 2013). Both countries still clearly adopt selective foreign investment regime, though they are easing conditions and restrictions on FDI in some sectors (see Davis, 2013). In respect to standard and technical regulations, it seems that China makes use of available standardization space under WTO Agreement on TBT to develop its own national standards. USTR (2015b) Report to Congress on China's WTO Compliance concluded: "China continues to pursue the development of unique Chinese national standards, despite the existence of well-established international standards, apparently as a means for protecting domestic companies from competing foreign technologies and standards" (USTR, 2015b, p.68).

To summarize, the thesis methodology results in two principal contributions, (i) it permits to map RTAs commitments from the perspective of industrial policy, and (ii) it provides an objective insight, though incomplete and imperfect, on the conduct of China and India in respect to the regulation of international trade and investment relations with developing countries.

## **The Thesis Results**

First of all, it should be noted that not all studied RTAs contain rules and commitments on the three studied areas. While investment and intellectual property rights were not covered at all in the RTAs of India, provisions on standards are too brief and rhetoric that one can consider that it is not covered. In the case of RTAs of EU, no investment chapter was observed as European Commission had not negotiation mandate on behalf of Members countries, until lately, in the domain of investment.

While US chapters and rules in the three areas are almost identical in content and formulation throughout studied RTAs (even the enumerations of provisions are identical in many cases), EU rules are relatively less homogenous in their formulation and content. Provisions formulations vary throughout Chinese RTAs, but the end results are rather similar

from the point of view of industrial policy. It may be adequate also to note that US treaty language diffuses from some partner countries, Peru and Chile in particular, to Chinese RTAs. India RTAs are consistent in term of the absence of any commitment in respect to investment and IPRs.

Results show that North-South modes of regulation of investment and trade relations, as exemplified by RTAs of US and EU, go systematically beyond WTO Agreements commitments, narrowing or/and eliminating flexibilities available therein. As a result, *de jure* industrial policy space of partner countries shrinks to a historically low level. While the US has the most restrictive approaches with respect to foreign investment regulations and patent, it seems that EU approach on standards is the most restrictive.

In turn, the South-South modes of regulation of trade and investment relations, as exemplified by the RTAs of China and India, preserve “WTO flexibilities” to a large extent, as result of (i) explicit affirmation of these flexibilities, and (ii) the non-inclusion of substantial commitments going beyond WTO agreements. The only exception where two of Chinese RTAs include substantial disciplines is the inclusion of investment chapters which by definition regulate WTO *extra* policy area, thus, going inherently beyond WTO commitments such as the inclusion of Investor-State dispute settlement. Nonetheless, Chinese RTAs rules on investment are much less restrictive than the US rules, as autonomy in vital areas, e.g. foreign investment admission, were systematically preserved. Table 0.2 provides a results overview in the three studied areas.

Results show that investment chapters in US RTAs adopt liberal investment model that eliminates the *de jure* possibility of host State to use the very policy instruments that permit to reap industrial development benefits from foreign investment. State’s autonomy was extremely eroded in relation to the regulation of foreign investment admission as investments were liberalized on pre-admission bases. Many policy measures aimed at triggering FDI linkages and spillovers effects were disciplined due to restriction on performance requirements. The same goes for measures designed to managing interaction and ensuring consistency with other industrial policy areas. Many of capital account regulation measures permitted under GATS and IMF rules were disciplined because of service sectors liberalization in combination with liberal transfer rules. IPRs are defined as an investment, and their holders have the right to be protected under investment rules. Moreover, the possibility to grant a compulsory license on the very common ground is eliminated.

Furthermore, US RTAs discipline host States policy measures aimed at promoting and protecting domestic investment due to pre and post-admission national treatment clause. Lastly, US RTAs rules in the areas covered by TRIMs and GATS go well beyond disciplines contained in these agreements.

**Table.0.2 Results overview**

	Investment (WTO <i>extra</i> )				Patent regulation				Coverage scope	H
	Admission liberalization	Linkage and spillover effect	Consistency with other policy areas	Investor-State dispute settlement	Patent granting conditions	Exceptions to patentee rights	Relation to international agreements	Dispute settlement		
US	WTO extra	WTO+	GATS+/TRIMs +/TRIPS+	WTO extra	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TBT+	
EU	-	-	-	-	TRIPS/TRIPS+	TRIPS/TRIPS+	TRIPS+	TRIPS+	TBT+	
China	-	WTO	WTO/TRIPS+	WTO extra <sup>a</sup>	TRIPS	TRIPS	TRIPS	TRIPS/TRIPS+	TBT	
India	-	-	-	-	-	-	-	-	TBT	

WTO+: policy measure is covered under various WTO agreements, but RTA rules go beyond its commitments.

WTO: policy measure is covered under various WTO agreements, and RTA rules include no additional discipline.

GATS+: policy measure is covered under GATS Agreement, but RTA rules go beyond its commitments.

TRIMs+: policy measure is covered under TRIMS Agreement, but RTA rules go beyond its commitments.

TRIPS+: policy measure is covered under TRIPS Agreement, but RTA rules go beyond its commitments.

TRIPS: policy measure is covered under TRIPS agreement, and RTAs rule includes no additional discipline.

TBT+: policy measure is covered under WTO Agreement on TBT, but RTA rules go beyond its commitments.

TBT: policy measure is covered under TBT Agreement, and RTA rules include no additional discipline.

<sup>a</sup>: Only in two RTAs and with some limitations to the scope of application of the dispute settlement.

-: not covered by RTAs.

By contrast, the RTAs of China investment chapters ensure substantial autonomy to partners States in respect to (i) the regulation of foreign investment admission due to post-admission national treatment standard, (ii) the use of policy measures aimed at triggering FDI linkages and spillovers effects, as performance requirement were not banned, and (iii) measures designed to managing interactions and ensuring the consistency with other industrial policy areas. State preserves considerable space to ensure macroeconomic stability as service sector is excluded from coverage, transfer rules mandate the respect of host State's regulation, and host State retains control over capital admission. Nevertheless, IPRs are defined as an investment and their holder can enjoy investors' rights under the RTAs. Furthermore, some RTAs establish State-Investor dispute settlement, though with limitation to its scope of application.

Interestingly, Chinese RTAs exclude some policy instruments from investment chapters' coverage scope, such as taxes, subsidies and public procurement that can be used as tools to promote and support domestic investments. Finally, commitments of Chinese RTAs in the areas covered by TRIMs and GATS do not go beyond disciplines contained in these agreements. In general, favoring domestic targeted sectors and industries is possible under Chinese RTAs as long as the used policy measure is permitted under WTO agreements, and foreign investment was not admitted in the sector.

The analysis of patent provisions in the RTAs of US and EU illustrates their clear efforts to eliminate, even to varying degrees, TRIPS flexibilities. The RTAs of US tighten patent rules in each aspect of TRIPS flexibilities, and with respect to all products but also with respect to specific product, i.e. agrochemical and pharmaceuticals. They extend the scope of patentability by defining the criteria of patentability (inventiveness, novelty, industrial applicability) loosely compared to TRIPS agreement definitions. Moreover, they mandate that patents be available for new uses of known products. Also, they permit and mandate the patentability of excluded subject matters under TRIPS: plants and animals. Disclosure requirements were softened, protection terms were extended, and cases justifying patent revocation were limited.

Moreover, general and specific exceptions to exclusive rights of patentee were narrowed or eliminated. Thus, exclusivity of test and clinical data attached to the patent application were imposed, the linkage between patent term and market approval was established, early working exceptions and parallel importation were prohibited in some RTAs. Last but not least, they limit the possibility to issue compulsory licenses as result of explicitly narrowing of ground upon which licenses could be justified, in addition to the connection established between patent rules and investment chapter.

Patent provisions in EU RTA have changed over time. The earlier version committed parties to adhere to some WIPO treaties that contain TRIPS *plus* provisions. Indeed, as those treaties do not contain dispute settlement mechanism, their inclusion in RTAs makes them enforceable under its dispute settlement. The latest RTAs converge toward the US approach. In particular, they enlarge patentability scope to include excluded subject matter under TRIPS, i.e. plants, they mandate the patentability of new uses of known products (in the case of pharmaceutical and agrochemical products), and finally, they extend patent term. Furthermore, some restrictions are imposed on the possibility to use exceptions to patentee exclusive rights under TRIPS, i.e. the period of data exclusivity, early working exception and by consequent the possibility to issue a compulsory license.

Chinese approaches range from the absence of the mere term “intellectual property rights” and “patent” in some RTAs to the inclusion of a chapter on IPRs in others without any further engagements beyond TRIPS agreement. Whenever such chapters are present, all TRIPS flexibilities are maintained. More specifically, Chinese rules on patent do not broaden the scope of patentability. To the contrary, Chinese RTAs introduce no restriction on TRIPS exceptions. Finally, while integrating international treaties in IPRs that have TRIPS *plus* rules is a characteristic of both US and EU RTAs, Chinese RTAs are characterized by reference to Doha Declaration that widens grounds upon which compulsory license may be issued and to treaties that were lobbied for by developing countries such as the Convention on Biological Diversity (CBD).

Concerning standards, results show that their liberalization under the RTAs of EU is the most extensive going systematically beyond commitments of the WTO Agreement on TBT. They enlarge liberalization coverage to include new instruments, i.e. metrology and new

sectors, i.e. public procurement (the same goes for US RTAs). The EU has adopted hegemonic harmonization (harmonization towards EU own standards) as liberalization approach in its association agreements with Mediterranean countries (MED). In addition, some RTAs of EU eliminate the right of developing countries to design their regulations and standards in accordance with national objectives.

The RTAs of US adopt accepting as equivalent as an approach of liberalization in respect to technical regulations and affirm the presence of specific mechanisms to recognize the conformity assessment procedures and results of another party. In regard to transparency requirements, the RTAs of US go profoundly beyond WTO Agreement on TBT, as they introduce national treatment clause for the accreditation and recognition of conformity assessment bodies in the territory of other parties, and for the participation of investors of another party in the development of its national standards, technical regulations, and conformity assessment procedures. Finally, commitments in the RTAs of US are highly enforceable as consultation on standard related disputes may take place under the RTAs dispute settlement mechanism.

Although Chinese RTAs adopt diverse approaches with respect to standards, all agreements confirm engagements under WTO Agreement on TBT, but they consolidate it by establishing institutions to administer the engagements. Some RTAs encourage parties, without a clear obligation, to liberalize technical regulation through acceptance as equivalent approach. Importantly, developing countries' right to design their regulations and standards in accordance with national objectives and not on the basis of international standards was affirmed explicitly. It is clear that some Chinese RTAs contain adapted versions of partners' countries commitments with the US in respect to TBT, especially in the case of Peru and Chile. Adaptation passes through the elimination of some binding formulations in the initial commitments found in the RTAs of US.

The RTAs of India affirm engagement to the WTO Agreement on TBT, with no additional commitment. Interestingly, one of the Indian RTAs introduced derogations that permit the use of non-tariff restrictions for reasons of protection of local industries.

To summarize, contrary to the North-South RTAs, the *de jure* possibility to integrate the design of examined NTMs into an overall industrial policy framework is substantially preserved under South-South RTAs with respect to: (i) measures aimed at regulating foreign investments in a manner that permits to trigger its industrial development benefits and to avoid its associated risks, (ii) the design of national patent system in manner that facilitates the access to and diffusion of technologies and knowledge, and (iii) the use of standards and technical regulations as instruments to overcome investment coordination failure, and as tools of control mechanism that should be associated with the State's distributed support to local producers.

As a result, the central thesis hypothesis was confirmed: South-South RTAs, as exemplified by Chinese and Indian agreements, offer developing countries larger industrial policy space than North-South RTAs<sup>9</sup>, as exemplified by the agreements of US and EU. Thus, it would be more accurate to speak about industrial policy spaces in the plural rather than in the singular. Under the actual international trade and investment regime, there do exist multiple and different industrial policy spaces, depending, among other things, on the choice of partner economies, Southern or Northern, and the corresponding modes of regulation of trade and investment relations.

### **The Thesis Plan**

The First chapter reviews the literature selectively on Industrial policy in development economics. Although the thesis subject focuses on the “how” side of industrial policy debate, it may be appropriate to note that different rationales for industrial policy result in different and even opposing opinions on the type of policy needed, in particular with respect to its objectives and to policy instruments that should or should not be used. Hence, the survey revisits some fundamental arguments in favor of a selective industrial policy that is a part of structural transformation development strategy.

The second chapter studies investment rules in RTAs. In particular, it analysis WTO investment-related agreements (GATS and TRIMS), and the investment chapters included in

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<sup>9</sup> Although this is the general tendency as observed in studied South-South RTAs, there are some southern countries, such as Chile and Peru, which have clearly liberal stance.



the US and the Chinese RTAs. It assesses comparatively constraints imposed by these agreements on policy instruments aimed at regulating foreign investment, protecting and promoting local investment, and ensuring cohesion with other policy areas.

The third chapter studies patent provisions in RTAs. It assesses to which extent studied agreements, constrain or preserve necessary policy space, available under TRIPS agreement, to design national patent system in a manner that favors the diffusion of knowledge and inventions.

The fourth and last chapter considers standards and technical regulation as instruments of industrial policy. It assesses standardization policy space available under WTO Agreement on TBT, and whether it was constrained or preserved in the studied RTAs.

Finally the general conclusion summarizes the results, points out some limits of the thesis, comments on South-South cooperation on the basis of thesis results and opens some perspective on the future of Chinese and Indian modes of regulation of investment and trade relations with other developing countries, in particular, whether they will converge toward US and EU approaches or not.



## **I) Chapter One: Selective Survey on Industrial Policy, Old Issues, and New Challenges**

The economic growth has been at the center of the economic thinking. Productivity growth is a precondition for a sustained economic growth that permits to increase living standards. In turn, it is the type of goods a country produces that determines productivity growth and, thus, the sustainability of growth.

Initiating sustained growth trajectory, call to engage the concerned economy into a structural change process, i.e. the continuous improvement of existing activities and the generation of new ones, moving from one sector to another and absorbing surplus labor, increasing the labor productivity and promoting the integration of production sectors within the domestic economy. All advanced and emerging economies have followed this path of economic development, undergoing a transformation of their economy from being dominated by low-productivity traditional activities, especially the agriculture, to a diversified economy where high-productivity activities, especially manufacturing, play a central role.

Investment, technological change and innovation are key determinants of structural change. It is assumed that manufacturing sector offers special opportunities for capital accumulation because of its high content in capital investment. The manufacturing sector exhibits an enormous potential for productivity growth because of the high rate of technological change that characterizes its production processes. Manufacturing also helps develop significant forward and backward linkages within the sector and with other sectors. Within manufacturing, linkages are more dynamic and stronger than in other sectors, provided that a considerable share of industrial output is used as inputs for other industries.

The debate on industrial policy has been characterized by some disagreements, mainly with respect to the degree, orientation and objectives of State's interventions. Basically, there are two different stances regarding the need for industrial policy: (i) the standard position calls for minimal State intervention in some limited cases of market failures<sup>10</sup>, that is horizontal industrial policy and (ii) an approach that synthesizes Schumpeterian, evolutionist and structuralist views that calls for vertical or selective industrial policy (Peres and Primi, 2009).

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<sup>10</sup> For survey on standard views on industrial policy see, for example, Chang (1996).

The ideological divide persists and will continue to exist, though it will take different shapes and expression. However, economic realities have solved some theoretical question of the debate, especially the crisis of 2008 that has shaken up modern economic thinking. According to Naudé (2010a), a fragile consensus is within reach in the academic debate on the necessity of industrial policy. This consensus may reveal exaggerated. This is the most clear in respect to the question of the best policy instrument to be used, where some economists emphasize the higher effectiveness of subsidies compared to tariffs. This may be the case for industrialized countries that have enough “fiscal space”, but not developing countries that do not have sufficient resources to rely uniquely on subsidies.

Ironically, the industrial policy role in development is getting recognized after its implementation gets legally restricted by trade and investment agreements at multilateral regional and bilateral levels. New and unprecedented challenges render the question of “how” to implement industrial policy an urgent priority, as neoliberal era has introduced profound changes in the international environment.

Although the thesis subject focuses on the “how” side of industrial policy debate, it should be noted that separation between the “why” and the “how” sides of the debate is not that mechanic. Indeed, the different rationales for industrial policy give place at various opinions on the type of policy needed: its objective and policy instruments that should or should not be used. To put it in another way, different rationales result in different, not to say opposing, versions of the industrial policy.

However, the objective of this selective survey is not to provide a comprehensive overview of the debate on the *raison d'être* of industrial policy. The survey revisits only some fundamental arguments in favor of selective industrial policy, which are related to the studied policy instruments, i.e. foreign investment regulations, patent system as component of policies aiming at accumulation of production capacities and technological capabilities, and standardization as instrument to overcome investment coordination failure, and as component of control mechanism. Such revision may be useful to put the highly technical character of the thesis essential subjects of study in the broader perspective of the debate on industrial policy. The theoretical section in each of next chapters which emphasizes the specific relations between industrial policy and the studied policy instruments complements this survey. Finally, the presented arguments and cited references were selected purposefully to show the

persisting structural problems and new challenges facing developing countries and to justify the need for industrial policy as defined in the first section.

Section one examines industrial policy definitions and formulates a new one. Section two reviews arguments on manufacturing sector specific characteristics. Section three reconsiders the argument on underdevelopment as offer problem and the overwhelming presence of investment coordination failure that calls for State concerted interventions. Section four reviews the argument on the terms of trade and how sectoral specialization and diversification influence the sustained economic growth. Section five presents one of oldest rational for the industrial policy that is infant industry protection. Section six presents too briefly some evolutionary argument on the specificity of technology as product and input of production process. Finally, the debate on policy space for development will be reviewed.

## **I.1) Industrial Policy Definitions**

Industrial policy is a controversial topic, even with respect to its very definition. There is no consensus on the definition beyond the fact that it is a guide to government intervention in the economy. Degree and orientation of State's intervention and its objectives are the main debated subjects<sup>11</sup>.

As illustrated in Box I.1, the range of definitions of industrial policy is extremely broad. Naudé (2010a, p.4) adopts a broad definition that emphasizes the objective of the industrial policy using generic rather specific terms, “the process whereby governments aim to deliberately affect the structural characteristics of their economies.” Some definitions are much more general, for example, Adams and Klein's definition includes “everything which is useful to improve growth and competitive performance.” Chang (1996, p.59) comments on this type of definition: “industrial policy is used as a catch-all term for policies affecting industrial performance, that is, effectively, any economic policy. Such a practice overloads the concept of industrial policy, rendering the concept meaningless”.

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<sup>11</sup> According to Aiginger (2007), definitions disagree upon the following issues: (i) sectoral targeting (vertical) versus horizontal measures which have a broad impact on many or all industries (horizontal), (ii) policies which restructure predominantly large firms, often decelerating the speed of change, versus the promotion of entry, entrepreneurs, spinoffs, new capabilities (passive versus active), (iii) boosting competitiveness via “framework” conditions versus micro intervention for specific firms, regions, and industries (general measures versus “picking the winners”), (iv) subsidies to prevent exits versus the promotion of innovation, training and other “dynamic activities” (restructuring versus promoting positive spillovers).

By contrast, some definitions, including those of Chang and Rodrik, contain declared intention on the recourse to sectoral targeting as a mean to alter the structure of the economy.

The difference in definitions may result from the difference of economic disciplines in which these definitions were formulated, as they treat different epochs and countries of different levels of economic development. It is quite normal that economist studying industrial countries address and conceive industrial policy differently from development economics economists, given the relative decline of manufacture sector in this economies. For instance, Curzon-Price (1981) argues that any measure aim at preventing structural change may be considered as industrial policy. The prevention of structural change as policy objective can be understood in the context of the decline of manufacturing sector shares in European economies. By contrast, in the development economic literature, industrial policy was often synonymous of promoting the structural change.

### **Box I.1 Industrial policy definitions**

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Curzon-Price (1981, p.17) defines industrial policy as “any government measure, or set of measures, to promote or prevent structural change.”

Adams and Klein (1983, p.56) define industrial policy is considered as “everything which is useful to improve growth and competitive performance.”

The World Bank (1993, p.304) defines industrial policy as “government efforts to alter industrial structure to promote productivity based growth.”

Chan, (1996, p.60) defines industrial policy as “a policy aimed at particular industries (and firms as their components), to achieve the outcomes that are perceived by the state to be efficient for the economy as a whole.”

Pack and Saggi (2006, p.267-268) define industrial policy is defined as “any type of selective government intervention or policy that attempts to alter the structure of production in favour of sectors that are expected to offer better prospects for economic growth that would not occur in the absence of such intervention.”

Rodrik (2008, p.3) defines industrial policy as “policies that stimulate specific economic activities and promote structural change.”

UNCTAD (2009, p.4) defines industrial policy as “Concerted, focused, conscious effort on the part of government to encourage and promote a specific industry or sector with an array of policy tools.”

Naudé (2010a, p.4) defines industrial policy as “the process whereby governments aim to deliberately affect the structural characteristics of their economies.”

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**Source: Warwick (2013) and author compilation**

Nevertheless, the fundamental disagreement in the debate about industrial policy result, in the first instance, from different perspectives and views on how economies develop, the role of various economic sectors in economic growth, the role of international trade, and the relative efficiency of markets and States intervention in bringing out the desirable outcomes. The proponents of soft industrial policy (horizontal) consider that State intervention should take place just in some limited situations where there arise market failures. By contrast, those who consider market failure as the norm rather than the exception in the functioning of the economy would call for selective industrial policy (vertical) (For an illustrative debate, see Chang and Lin, 2009).

Two interrelated dimensions of any type of policy can be identified and analyzed to develop an appropriate definition of industrial policy, i.e. (i) policy objectives and (ii) policy instruments.

Policies often have multiple objectives and may not fit into one category or another. Aside from the fact that boundaries between sectors and disciplines conceived by economists very often do not conform to economic and social real complexities, it is also evident that the targets of industrial policy involve overlapping policy areas and sectors (Baldwin and Evenett, 2012). Economic development strategy encompasses and coordinates many categories of policies, such as fiscal policy, monetary policy, labor policy, environmental policy, etc.

However, each policy has usually set of priorities. Importantly, priorities are defined by the nature of State's development strategy. Consequently, it may be useful to put the question of industrial policy design in the broader perspective of development strategy.

Historically, industrial policy was usually associated with development strategy that aims at the structural transformation or change. The term "structural change" was applied by Simon Kuznets (1966) to characterize the economic epoch of the last 250 years distinguished by the pervasive application of science-based technology to production. One of the principal characteristics of this economic epoch is a sustained increase in per capita or per worker product. Later Chenery and Syrquin developed and tested this stylized facts (For example, see Chenery and Syrquin 1975). Structural change refers to long-term persistent changes in the composition of an aggregate (Syrquin, 2008). In the structural transformation strategy, manufacture sector has specific characteristics that make it a priority and locomotive for the rest of the economic sectors upgrading.



Industrial policy guided by structural transformation strategy aims at the productive diversification rather than the sectoral specialization and focuses on dynamic comparative advantage rather than static one (Wade, 2012). Rodrik (2004, p.2-3) notes that “industrial policy is not about industry per se. Policies targeted at nontraditional agriculture or services qualify as much as incentives on manufactures”.

In turn, policy instruments are mechanisms that create the conditions for achieving policy objectives. There must be a correspondence between the objectives and the instruments selected. Industrial policy instruments range from State direct involvement in production activities, to direct and indirect support to specific industries and sectors. For example, Naudé (2010a) provides an overview of the various policy instruments categorized by domains (see Table I.1).

**Table I.1 Illustrative list of industrial policy domains and instruments**

<b>Domain</b>	<b>Instrument</b>
<b>Economic signals and incentives</b>	Intellectual property rights
	Price regulations
	Exchange rate policy
	Monetary policy
	Countercyclical fiscal policy
	Tax breaks
<b>Scientific and technological innovation</b>	Scientific policies
	High-tech lead projects
	Funding of university research
	Establishment of research centers
	R&D subsidies and/or tax credits
<b>Learning and improving technological capabilities</b>	Education and training policies
	Labor training subsidies and/or Tax breaks
	International educational and research collaboration
	Promotion and regulation for foreign direct investment
<b>Selective industry support</b>	Entry and exit regulations for firms
	Support national trading companies
	Preferential access to finance
	Long-term development finance
<b>Distribution of information</b>	Promotion of standards
	Encouraging firm cooperation/firm linkages
	Use of consultative forums
	Marketing of export industries
	Dissemination of successful experiences

Source: Adapted from Naudé (2010a), Cimoli et al. (2009) and Perez and Primi (2009)

Characteristics of industrial policy instruments vary considerably, ranging from the targeting that only implies quantifiable subsidies granted to specific companies and industries, to the very general that includes government initiatives to improve the ‘business environment’ and to correct markets failures.

This calls the issue of industrial policy categorization in function to its orientations, horizontal (also called functional) or vertical (also called selective). Horizontal approach implies broad measures, which have an impact on most or all industries, such as improving Information and Communication Technologies (ICT) infrastructure, education, and public services. Horizontal measures are supposed to be non-discriminatory. The European Commission (2002, p.3) defined its mainly horizontal industrial policy as: “Industrial policy is horizontal in nature and aims at securing framework conditions favorable to industrial competitiveness. Its instruments, which are those of enterprise policy, aim to provide the framework conditions in which entrepreneurs and business can take initiatives, exploit their ideas and build on their opportunities”.

Conversely, the vertical industrial policy is primarily supporting specific economic sectors and firms. It is selective and discriminatory by definition. The vertical industrial policy calls for the use of a broad set of instruments. Examples of selective policies are the selective attraction of foreign direct investment, incentives and subsidies for specific sectors or production activities, and the protection of infant industries. They also include direct production by State-owned enterprises and the implementation of public procurement contracts, among other measures.

Nevertheless, the dichotomy between vertical and horizontal policies is only possible at the conceptual level and in theoretical debate, while it is hard to separate both of them in practice. According to Warwick (2013), selective policies result not only from a directly targeted approach to industrial policy but also from the selective application of horizontal policies. For instance, the impact of R&D tax credits is highly concentrated in the manufacturing sector. Recent OECD research using microdata confirms that even horizontal policies can have heterogeneous impacts across the beneficiary activities (Bravo-Biosca et al, 2012). Thus, horizontal policies can be implemented in more targeted ways or turn out to be very uneven in their impacts across sectors.

In our views, structural transformation strategy calls for horizontal and vertical State intervention. Consequently, it may be better to analyze policy orientations as complementary choices rather than substitutable. For example, selective policy measures aiming at the use of certain technologies in specific sector would operate less efficiently if State does not ensure the quality of education system.

By consequence, we propose a definition of industrial policy that emphasizes three aspects: (i) the overall development strategy that guides the industrial policy, (ii) industrial policy objectives and (iii) the industrial policy orientation, that's the type of State's interventions and the set of instruments that it calls for.

Industrial policy can be defined as a concerted process that aims to establish and promote specific industries and sectors, especially manufacturing, as a part of structural transformation strategy aimed at the economic diversification, and which calls for various types of State's interventions, both horizontal and vertical.

This definition mitigates the dichotomy between the selective and the horizontal policies, as a vertical industrial policy does not exclude horizontal measures. In this context, it is important to call attention three fundamental aspects that, according to Chang (1996), constitute necessary conditions for successful industrial policy:

(i) selectivity as industrial policy involves positive discrimination because its purpose is to promote some industries, firms, and technologies, using some tools of policy instead of others, and support firms and industries differently.

(ii) flexibility as strategies should be changed when circumstances change.

(iii) the presence of a system of performance-related incentives, whereby firms and industries are promoted to achieve specific and concrete targets of efficiency previously defined, and are rewarded only when complying with such targets and penalized if not achieved.

## **I.2) Manufacturing Sector as a Growth Engine**

The argument on manufacturing sector<sup>12</sup> as the engine of growth is based on a mix of empirical studies and historical observations. There is an empirical correlation between the degree of industrialization and the level of per capita income in developing countries (Kaldor, 1966,1967; Rodrik, 2009). Developing countries that have attested an increase in per capita incomes have seen also increases in the share of manufacturing in GDP and employment. In addition, they have experienced dynamic growth of manufacturing output and manufactured exports (Szirmai, 2012; Su and Yao, 2016).

Kaldor (1966, 1967) had formulated three “laws” to explain the differences in rates of growth. The first states that the faster the rate of growth in manufacturing, the faster the rate of growth of the economy as a whole. The second law, also known as Verdoorn’s Law, specifies that the growth rate of labor productivity in manufacturing is endogenous to the growth rate of manufacturing output. According to the third law, aggregate productivity growth is positively related to the growth of manufacturing output and employment and negatively related with non-manufacturing employment.

Many interrelated factors may explain the role of manufacturing sectors as a growth engine. First, the capital intensity in manufacturing is higher than in other sectors of the economy (Su and Yao, 2016). The manufacturing sector is assumed to offer special opportunities for capital accumulation. Also, investment spending is skewed towards capital goods such as machinery, equipment and building materials (Rowthorn and Coutts, 2004). Provided that capital accumulation is one of the aggregate sources of growth, an increase in the share of manufacturing will contribute to aggregate growth.

Second, the manufacturing sector allows special opportunities for economies of scale (Kaldor, 1966,1967), which are less available in agriculture or services, and for both embodied and disembodied technological progress (Cornwall, 1977). Technological advance is seen as being concentrated in the manufacturing sector and diffusing from there to other economic sectors such as the service sector (Su and Yao, 2016). The capital goods that are employed in other sectors are produced in the manufacturing sector. For this reason, in the

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<sup>12</sup> This chapter purposefully focuses on the role of manufacturing, because in the International Standard Industrial Classification the industrial sector includes broader set of activities than manufacturing, i.e. mining and construction.

older development economics literature, the capital goods sector (machines to make machines) was given a prominent role (Mahanolobis, 1953).

After finding that the manufacture sectors still an engine of the growth, Cantore et al (2014) try to identify the “fuel” in the process of industrialization. They find that intensive rather than extensive industrialization enhances economic growth. Whereas intensive industrialization refers to an increase in manufacturing value added based on drivers that strengthen manufacturing industries regarding productivity and structural change, extensive industrialization is an increase of manufacturing value added based on total employment, a driver that does not promote structural change.

Third, linkage and spillover effects are assumed to be stronger in manufacturing than in other sectors (Hirschman, 1958). The linkage effect refers to the direct backward and forward purchasing relations within the sector and between different sectors. Linkage effects create positive externalities to investments. In addition, spillover effects refer to the disembodied knowledge flows between sectors. Inter-sectoral linkage and spillover effects between manufacturing and other sectors such as services or agriculture are also very powerful (see Cornwall, 1977; Park and Chan, 1989; Guerrieri and Meliciani, 2005).

It should be noted that the thesis on manufacturing as the engine of growth has been challenged lately, in the context of the increasing importance of the services sector, especially the development of the ICT sector, that is no longer within the exclusive domain of manufacturing but operate in the service sector. Many studies demonstrate that nowadays the services sector could become a new engine of economic growth (Fagerberg, Guerrieri, and Verspagen 1999; Dasgupta and Singh, 2005; Maroto-Sanchez and Cuadrado-Roura 2009; Lee and McKibbin 2014).

Nevertheless, Park and Chan (1989) argue that there exist relations of dependence between manufacturing and services and that these relations are asymmetric. Services depend more on manufacturing than vice versa. Also, the emergence of modern service activities depends on the structure of manufacturing. Some knowledge intensive manufacturing sectors such as office and computing machinery, electrical apparatus or industrial chemicals are the main users of services (Guerrieri and Meliciani, 2005). Manufacturing is a major source of demand for modern intermediate services such as financial services, transport and logistics and business services (Park, 2009; Park and Chan, 1989).

Su and Yao (2016) demonstrate that for middle-income economies, manufacturing pulls along services, instead of the other way around. A(n) decline/increase in manufacturing sector growth rate will negatively/positively affect the growth rate of the services sector, in both the short-run and the long-run.

Finally, one of explanation of manufacturing sector contribution refers to the demand effects. As per capita incomes rise, the share of agricultural expenditures in total expenditures declines due to low-income elasticity and the share of expenditures on manufactured goods increase (Engel's law). Countries specializing in the agricultural and primary sector will, therefore, have demand constraints to sustained growth and suffer from the unfavorable evolution of the terms of trade.

### **I.3) Terms of Trade, Commodity Prices Volatility, and Economic Growth**

Gains that a country can reap from international trade are highly affected by both changes in the volume and product composition of trade, and the volatility of traded goods prices. These gains are traditionally referred to as the terms of trade, i.e. the purchasing power of its exports defined as the total export value deflated by its import prices, and the evolution of a country's export prices relative to its import prices.

Based on the observed tendencies for a decline in the commodity terms of trade, both Singer (1950) and Prebisch (1968) defended the thesis on the secular decline in terms of trade experienced by the primary producing and exporting countries. Supplementary material, which supported the hypothesis, was provided in the Haberlar report on international trade from GATT (1956) on the factors explaining the lack of demand for exportable goods from the semi-industrialized countries in advanced-country markets. Explanations included the falling or low import content of production in advanced nations as a consequence of technological changes (Harberler, 1968). Sapsford and Balasubramanyam (1994) have used different price series, and have concluded that when the analysis is extended up to the 1980s, there remains a secular decline in the export price of primary goods vis-à-vis manufactures, of around 1% annually<sup>13</sup>.

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<sup>13</sup> For a survey of results, see Sapsford et al. (1992).

Based on works of many economist (Cashin and McDermott, 2002; Hadaas and Williamson, 2003; Ocampo and Parra, 2007, 2010; Farooki and Kaplinsky, 2012), UNCTAD (2012b) defines six stylized facts commonly agreed on in the empirical debate on the long-term development of the aggregate terms of trade (see Box I.2).

### **Box I.2 Stylized facts on terms of trade**

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UNCTAD (2012b, p.11-13) reported the following stylized facts on terms of trade:

- 1- “Between 1820 and the end of the First World War, commodity prices markedly improved relatively to the prices of textiles, which was the main manufactured product imported by developing countries at the time”.
- 2- “The twentieth century saw a long-term decline of the commodity terms of trade. The decline amounted to about 50 per cent between the first two decades of the twentieth century and the year 2000, which corresponds to a rate of slightly below 1 per cent per year, and to about 30 per cent between the middle of the nineteenth century and the last two decades of the twentieth century, which corresponds to a rate of decline by 1.3 per cent per year”.
- 3- “The decline in the terms of trade in the twentieth century was not continuous but is attributable to two downward structural breaks and, equally important, no upward structural break. One of the two downward shifts occurred after the First World War and the other in the 1980s”.
- 4- “The terms of trade of specific commodity categories may deviate substantially from the evolution of the aggregate terms of trade: the decline of the non-oil terms of trade during the twentieth century appears to have been strongest for agricultural products, and especially tropical agricultural products for which the major downward shifts after the First World War and during the 1980s were very pronounced. The terms of trade of metals were fairly stable over most of the twentieth century, yet also experienced major downward shifts during the two World Wars and during the 1980s, i.e. with the slowdown of world manufactured production. The sharp improvement in the terms of metals during the 2000s is most probably due to industrialization and urbanization in emerging economies, especially China and India”.
- 5- “The downward shift in the terms of trade in the early 1980s occurred not only in terms of prices of commodities relative to those of manufactures but also in terms of prices of manufactures exported by developing countries relative to those exported by developed countries, i.e. what has been called “the manufactures-manufactures terms of trade”.
- 6- “The commodity price boom between 2003 and 2008 marked a spectacular rebound in the terms of trade. However, it is not yet fully clear whether the beginning of the current economic crisis, and the associated commodity price collapse in 2008, merely punctuated this rebound or whether the associated decline in advanced countries’ manufacturing activity marks a shift similarly to the downward structural breaks experienced after the First World War and in the early 1980s”.

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**Source: UNCTAD (2012, p.11-13)**

Two arguments may explain low economic performance for commodity-dependent countries (Singer, 1950). First, the increase in productivity is less fast in the production of foods and raw materials than the productivity in the manufacturing industries of the industrialized countries. More importantly, the fruits of technical progress in commodity sectors will be distributed either to producers in the form of raising incomes or to the consumers in the form of lower prices. Moreover, in primary commodity producing countries the growth of productivity is not only slower, but its increases are not necessarily appropriated by the pertinent sectors, since the abundance of labor prevents wages from rising, and higher productivity may make itself felt in lower prices, which in turn will contribute to the decline in the terms of trade.

Furthermore, markets for manufactures in the center are oligopolistic, with prices determined by a markup on costs, while in the periphery they are competitive. So, the productivity increasing, created by the technical progress, was reflected in rising incomes in the manufacturing industries, while the productivity increasing in food and raw materials industries was reflected by a fall in its prices (Singer, 1950). Consequently, Singer, (1950, p.47) concluded that the industrialized countries “have had the best of both worlds, both as consumers of primary commodities and as producers of manufactured articles, whereas the underdeveloped countries had the worst of both worlds, as consumers of manufactures and as producers of raw materials.”

The second argument concerns the income elasticity of demand which refers to the proportionate changes in demand in relation to proportionate changes in income. Income elasticity is positive, but it may be greater than unity in the case of a dynamic good or less than unity in the case of a traditional product. This issue harks back to what is known as Engel's law, which emerged from the studies conducted by this German economist in the nineteenth century. He had shown, using a broad horizontal sample that different segments of the population had distinct structures of demand, depending on income level, and that as income raised the structure shifted in favor of industrial goods and services, away from expenditure on food. From this emerged the idea that countries specialized in the production and export of raw materials and foodstuffs were faced with the problem of low-income elasticity of demand for their exports. By contrast, those countries' demand for industrial goods will increase as their income rise, and this would put pressure on their trade balance, moving it away from equilibrium. If for various structural reasons the productive transformation were blocked and developing countries maintained their specialization in



primary goods, they would see their capacity for growth constrained by the limited rise in demand for their exportable goods and a propensity to import that outpaced their income, leading to a growing deficit in their trade balance (Prebisch, 1959). Thus, Prebisch underlines the risks of spontaneous industrialization of primary sector solely without a simultaneous industrialization in the industries sector. Furthermore (Seers, 1962) argued long ago that the development of synthetic substitutes is eroding the demand for natural materials.

If a long-term decline in the terms of trade was an accurate forecast of future trends, as opposed to simply an observation from a particular period, it implies that the route of continued expansion based on traditional exports cannot be relied upon for sustained long-term growth. As Prebisch himself pointed out later, it is rational to shift resources into new industrial activities even they imply high cost by international standards, provided that the losses sustained through the excess of domestic production costs over the costs of comparable imports are less than the income losses, which would result from falling export prices as a consequence of the expansion of traditional exports (Prebisch, 1984).

In an extension of the original Prebisch-Singer hypothesis, Sarkar and Singer (1991) consider the common characteristics that have some manufactured goods exported by developing countries with commodities. They argue that when all developing countries attempt to increase exports of labor-intensive manufactures, there will be a risk of a decline in the terms of trade to the extent that the benefits of any increased volume of exports are more than offset by losses due to lower export prices<sup>14</sup>.

Kaplinsky (1998) advance the same argument that there will be a tendency for the costs of labor-intensive manufactures to fall relative to skill or capital-intensive manufactures as countries compete through reductions in wages costs. He argues that such decline in terms of trade can lead to immiserizing growth, that is, an increase in economic activity which delivers lower standards of living. Such an outcome may be serious since not only China has big share of world-manufactured exports, but it is also being followed by other low-income producers such as India, Indonesia, Thailand, and Vietnam.

There are many empirical works that show the positive correlation between terms of trade and the economic growth. Barro and Sala-i-Martin (1995) empirically investigated

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<sup>14</sup> Farooki and Kaplinsky (2012) use China's export to the European Union, Japan and the United States to highlight the impact of rapidly growing manufactured exports from low-wage economies on the global price of manufactures.

determinants of economic growth, using cross-country data. They established that the growth rate in real per capita GDP was positively correlated with an improvement in the world price. Mendoza (1997) examined the impact of terms of trade on economic growth of a sample of 40 countries (9 industrial countries and 31 developing countries) using cross-country evidence over the period 1971-1991. The results showed a positive correlation between the two variables. Fatima (2010) examines Pakistan's terms of trade behavior using time series data from 1990- 2008. She finds that the worsening of terms of trade has a negative impact on economic growth of Pakistan, as it ultimately reduces gross domestic product.

Baxter and Kouparitsas (2000) reported that the magnitude of change in terms of trade is twice as large in developing countries as in developed countries. Indeed, several studies have concluded that changes in terms of trade can account for roughly half of output volatility in developing countries (Mendoza, 1997; Kose, 2002). Using a panel database for 35 countries, Blattman et al (2003) have shown that terms of trade volatility were a very important determinant of country economic performance. The secular deterioration in the terms of trade experienced by the periphery represented a significant drag on income growth during those seven decades 1870-1938. But even more damaging to the primary product producers in the periphery was the high degree of volatility in the terms of trade that exerted a negative impact on growth more than twice the size of the negative impact of the trend. The two combined served to halve the growth performance of the periphery.

Consequently, the question of terms of trade applies not only to the declining terms of trade of primary commodities relative to manufactures goods but also to the declining terms of trade for developing countries exports relative to developed countries exports.

However, changing sectoral composition of the economy in a manner that moves the economy from low productivity (agriculture and extraction) to high productivity activities (especially in manufacture sector) is anything but the outcome of markets forces alone. Many structural hurdles prevent the automatic development of these activities, if not overcome through concerted State's interventions.

#### **I.4) Investment Coordination Failure**

The old argument on the necessity of a "big push" by the State on supply side as a mean to industrialization in developing countries have made a comeback in Development

Economics (see for example, Buera and Kaboski, 2012; Deichmann et al. 2008; Rodriguez-Clare, 2005, 2007; Rodrik, 2004; Murphy et al, 1989). According to Easterly (2005, p.3) “The big push has returned to favor in the development policymaking, after half a century of exile.”

The basic argument behind the need for a “big push” is the presence of the investment coordination failure. The latter is a situation where “profitable new industries fail to develop unless upstream and downstream investments are coaxed simultaneously [...] More generally, coordination failures can arise whenever new industries exhibit scale economies and some of the inputs are non-tradable (or require geographic proximity)” (Rodrik, 2004, p.13). Indeed, investment coordination failures present a problem that is similar to the old proverbial chicken and egg dilemma.

The notion that countries can be stuck in a low-level equilibrium trap has also made a comeback, as it has been shown that multiple equilibrium can exist in the face of pecuniary externalities driven by increasing returns (Shapiro, 2007). Consequently, the transition from so-called ‘cottage production equilibrium’ to ‘industrialization equilibrium’, which entails economic diversification, is the challenge of industrial policy (Murphy et al, 1989, p.1004). This echoes a point made long ago by Gerschenkron (1966), about the inertia of backwardness and that more than market signals are required to displace the previous equilibrium in order to make new manufacturing investment projects attractive.

For the Pioneers of development economics, investment coordination failure needs concerted and planned industrialization by the State, provided that: (i) underdevelopment is especially a supply side problem, (ii) the overwhelming presence of demand complementarities of different industries, (iii) the presence of pecuniary externalities with respect to investment.

The Balanced Growth Theory as formulated by Ragnar Nurkse is based on the idea that the problem of development is rather a problem of supply side that is articulated with the shortage on the demand side. The inducement to invest is constrained by the size of the market in developing countries, which is caused by the lack of domestic purchasing power in real terms not in monetary term. Indeed, the determinant of market size is the productivity, i.e. the volume of production. Hence, the volume of goods and services produced is not a fixed magnitude for a given economy, but it is variable depending on labor productivity (Nurkse, 1952). In turn, the economic productivity is ‘a function, in technical terms, of the capital

intensity of production' (Nurkse, 1952, p.9). In this context, Nurkse point out the presence of investment coordination failure as the establishment of capital-intensive production is hindered, for an individual producer, by the small size of the market, since the labor forces engaged in an isolated industry will not spend all their revenue on the products of this industry.

According to Rosenstein-Roden (1943), governmental actions taking the form of effective investment framework that permits an interlocked undertaking of different investment projects, are needed if low trap equilibrium to be surpassed.

Different arguments are defending the idea that the whole of the industry to be planned like one huge firm or trust were highlighted, especially the demand complementarity and the external economies of different firms and industries. According to Roden-Rosenstein a "whole system of industries" would "create its own additional market. Industries producing the bulk of the wage goods can, therefore, be said to be complementary. The planned creation of such a complementary system reduces the risk of not being able to sell, and, since risk can be considered as cost, it reduces costs. It is in this sense a special case of "external economies" (Roden-Rosenstein, 1943, p.205-206).

In addition, two types of external economies will be induced by the creation of a system of different industries, the first is the strictly Marshallian economies external to a firm within a growing industry, and the second is the economies external to one industry due to the growth of other industries (Roden-Rosenstein, 1943).

Equally, Scitovsky (1954) called for a coordinated and centralized program of investment in underdeveloped countries. This conclusion is reached through a theoretical demonstration on the irrelevance of the general equilibrium theory conclusion with regard to investment and allocation of resources in underdeveloped countries. Scitovsky points out that the general equilibrium theory is a static theory, whereas the problem of investment and resources allocation is dynamic. Consequently, the profit-maximizing incentive of producers brings about the socially desirable situation when the system is in equilibrium. By contrast, Scitovsky, (1954, p.148) argued that the investment mechanism is based on the disequilibrium due to the presence of pecuniary external economies: "For example, investment in industry A will cheapen its product; and if this is used as a factor in industry B, the latter's profits will rise. This, then, is a case where the price reduction creates [...] pecuniary external economies,

benefiting firms. The profits of industry B, created by the lower price of factor A, call for investment and expansion in industry B, one result of which will be an increase in industry B's demand for industry A's product. This in its turn will give rise to profits and call for further investment and expansion in industry A; and equilibrium is reached only when successive doses of investment and expansion in the two industries have led to the simultaneous elimination of profits in both. It is only at this stage, where equilibrium has been established, that the conclusions of equilibrium theory become applicable [...] We can conclude, therefore, that when an investment gives rise to pecuniary external economies, its private profitability understates its social desirability.”

To bridge the gap between social profits and private profits, Scitovsky advocates integration of all industrial projects and affirm the need for centralized and coordinated investment process with recourse to an additional communication system to the market one. In this case, the pecuniary external economies created one industry would become “internal” and part of the profits of the investors themselves<sup>15</sup>. Pack and Westphal (1986) argue that such pecuniary externalities in technology investments are pervasive in industrialization.

Although Hirschman’s major contribution, the Unbalanced Growth Theory was formulated in reaction and by criticizing the balanced growth theory of Nurkse, they agree on the need for concerted State intervention to overcome investment coordination failure. The debate between the two economists concerns the question of “how” State should intervene. Hirschman (1958, p. 66) argued that “If the economy is to be kept moving ahead, the task of development policy is to maintain tensions, disproportions, and disequilibria [...] Therefore, the sequence that leads away from equilibrium is precisely an ideal pattern of development from our point of view: for each move in the sequence is induced by a previous equilibrium and in turns creates a new disequilibrium that require a further move”.

According to Hirschman, some investment projects appropriate less than the external economy created by them, so there social profitability is higher than their private one, and the opposite situation might be encountered also. Drawing on the contribution of Galenson and

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<sup>15</sup> Scitovsky (1954, p.150) emphasized that “Market prices, however, reflect the economic situation as it is and not as it will be. For this reason, they are more useful for coordinating current production decisions, which are immediately effective and guided by short-run considerations, than they are for coordinating investment decisions, which have a delayed effect and looking ahead to a long future period should be governed not by what the present economic situation is but by what the future economic situation is expected to be. The proper coordination of investment decisions, therefore, would require a signaling device to transmit information about present plans and future conditions as they are determined by present plans; and the pricing system fails to provide this”.

Leibenstein (1955) about the investment criteria upon which the sequence of investment might be designed, Hirschman construct his most important contribution to the theory of industrialization: (i) the development via shortage capacity versus the development via excess capacity and, (ii) the forward linkage versus the backward linkage. According to Galenson and Leibenstein (1955), the investment criteria must take account, in addition to the output stream, the different effects of the proposed industry on the supply of investor, saving, consumption habits, population increases and a variety of other factors affecting further growth.

Recently, the above concepts have been formalized within the new economic geography literature (Mayer, 2004; Deichmann et al., 2008). Here forward and backward linkages in manufacturing lead to increasing returns to scale with positive externalities: the higher output growth and the higher productivity growth. When there are trade costs, firms will locate or cluster in large markets which become self-reinforcing. Mayer (2004) concludes that developing countries need to create the critical mass of linkages that provide pecuniary externalities to industrial firms.

Buera and Kaboski (2012) have recently emphasized that coordination mechanisms are needed particularly for technology that leads to increased productivity in the optimal scale of production, but which often require high initial fixed costs such as credit facilities, inter-sectoral coordination, and mass consumer demand.

Although the investment coordination failures argument has made a comeback, it seems that policy conclusions derived from it are highly different from the pioneers of development economics propositions, as modern economists call for no more than horizontal industrial policy.

A good illustration is the adoption of Millennium Development Goals by the U.N. which, claiming that many third world countries are kept in a poverty trap, called for “a big push of basic investments between now and 2015 in public administration, human capital (nutrition, health, education), and key infrastructure (roads, electricity, ports, water and sanitation, accessible land for affordable housing, environmental management)” (U.N, 2005, p. 19). For Deichmann et al (2008), policymakers should simply focus on streamlining laws and regulations to make the business environment more attractive rather than provide subsidies and tax breaks, if investment coordination failures problem to be treated. Rodriguez-Clare

(2005, 2007) argues that microeconomic interventions are needed to promote coordination and collective action to improve productivity, but only where the economy already shows a comparative advantage. Rodriguez-Clare (2005, p.22) comments on his own conclusion “This policy advice is less radical than the more typical heterodox mantra that countries should strive to create comparative advantage in advanced sectors, but more interventionist and selective than the standard approach to competitiveness policies currently in fashion.” Thus, the economic diversification is not even an objective for the industrial policy.

However, in our view, the industrial policy may not only use measures aimed at the promotion and the support of domestic industries but also measures aimed at their protection from the competition with well-established firms in industrialized countries.

### **I.5) The Infant Industry Argument**

The infant industry argument is one of the oldest arguments in favor of protectionist trade policy. Newly established industries are frequently not in a position to compete with established producers abroad. The infant industry argument provided a justification for not requiring such industries to face unrestrained import competition, at least not initially. Such arguments often draw on observations of the historical record, where a number of the world’s largest economies used tariffs extensively during their industrialization process (see for example, Bairoch, 1993; Shafaedin, 1998).

The argument is conventionally traced back to the context of United State and Germany periods of industrialization formulated firstly by the Treasury Secretary of the United States, Hamilton (1790). Then the German economist List (1841) deployed the infant industry argument to advocate protection for manufacturing more generally in temperate zone countries that had achieved a high level of agricultural.

The infant industry argument has been formalized by many economists. Aghion, (2009) argues that the absence of import protection in small developing economies may lower the incentive of firms to invest in innovation and learning-by-doing. This is similar to observations by Bardhan (1971) who models the learning-by-doing process of protected infant firms.

The infant industry case has evolved over time and three interrelated justification supporting the argument (i) learning by doing, (ii) externalities, (iii) technical change dynamics. These arguments provide for the conditions agreed on where protection will be fruitful.

The first argument is the simple proposition that new activities can only be mastered effectively over a period of time (the learning period). Therefore, new industries cannot compete on equal terms with established producers in other countries. This is why it is necessary to ensure infant industries a limited period of protection from import competition either in the form of import tariff or quota protection, while learning takes place. Over time, new domestic producers can experience cost reductions due to learning by doing and can end up attaining the production efficiency of their foreign rivals. Arrow (1962) was one of the first economists that developed the idea that the growth of an infant industry would in time be positively correlated to its learning effects.

In addition, the case for infant industry protection has been linked with the question of the externalities generated by learning by doing (Meade, 1955). It is argued that not only the costs of individual producers will fall due to learning, which is an internal economy for them, but that the external benefits they create for others producers will also grow over time (Harrison and Rodriguez-Clare, 2009). This can apply to both intra-industry and inter-industry level (Succar, 1987). Meade (1955) also pointed out that the key argument on which the infant-industry case must rest relates to the technological externalities frequently associated with the learning process. Works of Succar (1987) and Young (1991) have examined the impact of spillover effects of one industry on other industries.

In theory, there is agreement that protection can bring about welfare enhancing structural change under two conditions, (i) if the protected sector will be able to survive without protection later, and (ii) if the discounted future benefits achieved through protection exceed its costs (Harrison and Rodriguez-Clare, 2009)<sup>16</sup>.

Nevertheless, which protection instruments are the best to be used is still a subject of debate. Baldwin (1969) criticized the infant industry argument on the base that tariffs

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<sup>16</sup> These conditions were first set by Mill (1848) and Bastable (1891). The first condition corresponds to what is called "Mill test" requires that the protected sector can eventually survive international competition without protection. The second condition correspond to "the Bastable test" that requires that the discounted future benefits compensate the present costs of protection.



protection will fail to induce firms to internalize the externalities. According to him, the only effective way to induce the firms to invest in learning that is external is to give them subsidy conditional on undertaking the activity with which learning is associated. In cases where learning is internal to the firm but the firm is unable to borrow at the social rate of discount, the first-best policy is to subsidize credit. If this option is not available, the next best option is an output subsidy. For Baldwin (1969), tariff distorts consumption this is why it is the third-best instrument. In recent literature, there is widespread agreement that infant industry protection through tariffs may not be optimal, and that direct subsidies would be more appropriate (Baldwin, 2003; Lall, 2004; Pack and Saggi, 2006; Harrison and Rodriguez-Clare, 2009).

By contrast, Wade considers infant industry protection as simply the use of tariffs and non-tariff measures to give domestic producers a chance to get established. So he insists that the case for infant industry protection is not a case for tariffs and non-tariff barriers. Rather, it is a case for public support, of which trade protection is one kind among many others (Wade, 2003b).

Finally, the infant industry argument was extended by introducing dimensions related to technology and technical change. Since many industries are characterized by indivisible technologies, such that a critical minimum level of output is required to introduce a new technology subject to significant declining unit costs, trade protection or promotion can be critical in ensuring that firms reach this critical minimum output. Rodrik (1992) developed a simple model on technological catch-up by a domestic firm which shows that the larger market share provided by protection to the firm increases its incentives to invest in the technological effort. Traca (2002) shows that the impact of foreign competition on R&D and productivity depends on the industry's relative position in markets. He concludes that trade liberalization promotes innovation and enhances welfare in mature industries, but hinders growth and leads to market exit in infant industries with a large productivity gap.

The evolutionary approach has developed an interesting view in respect to the relation between technical progress dynamics, trade and economic growth.

## **I.6) Economic Efficiencies and Technological Capability Accumulation**

In a response to neoclassical reductionist conception of economic efficiency, Dosi et al (1990) introduced an interesting distinction between three different types of economic efficiencies: (i) allocative efficiency (Ricardian efficiency), (ii) innovative efficiency (Schumpeterian efficiency), and (iii) growth efficiency of particular patterns of production. Evolutionary approach insists that the mechanism leading to allocative efficiency do not guarantee the fulfillment of the two other types of economic efficiency.

It is argued that the mechanisms regarding resource allocation determine where learning by doing and technical skills will be accumulated, innovation undertaken, economics of scale reaped, etc. Put it in another way, present allocative choices influence the direction and rate of the future evolution of technological coefficients (Cimoli et al, 2009).

The influence of allocative efficiency on both innovative and growth efficiencies depends on sectors and technologies in which investments are allocated. In each epoch there appear to be technologies whose domains of application are so wide and their role so crucial that the pattern of technical change of each country depends to a large extent on the national capabilities in mastering production, imitation, and innovation in such crucial knowledge areas (e.g. in the past, mechanical engineering, electricity and electrical devices, and nowadays information technologies and green energy technologies). Moreover, the linkages among production activities often embody structured hierarchies whereby the most dynamic technological paradigms play a fundamental role as sources of technological skills, problem-solving opportunities, and productivity improvements (Dosi and Nelson 2010; Stiglitz et al 2009).

It is suggested that the likelihood of tradeoffs between the three types of efficiencies is proportional to the distance of each country from the technological frontier in the newest, most dynamic and most pervasive technologies (Cimoli et al, 2009). For countries far from the technological frontier, patterns of allocation of resources which are “efficient” on the grounds of its static technological capabilities and relative prices might well entail negative long-term effects in terms of (i) the growth efficiency, as by-product of demand elasticities of the goods developing countries produce (ii) innovative efficiency, due to low innovative potential associated with commodities and labor-intensive manufacturing.

Evolutionary approach emphasizes the idea that technology is different from traditional good as it includes a fundamental learning aspect, characterized by varying degrees of

cumulativeness, opportunity, appropriability (Nelson and Winter, 1982). Both appropriability and cumulateness of technical change are affected by the degrees of tacitness and the degrees of formal understanding of each technology. The more a technology is tacit (it involves idiosyncratic capabilities such as the experience-based skills of designing particular machines for particular conditions of use), the higher the difficulty in transmitting it in the form of blueprints or even to imitate it without a painstaking process of informal learning (Dosi and Nelson, 2010).

The tacitness of knowledge makes some of the elements of technology inherently non-tradable. Here it is not technical knowledge per se that is involved but rather knowledge of local circumstances that must in some way be experienced to be fully understood. In turn, the combination of technical knowledge with knowledge of local circumstances can lead to innovations. The resultant new products or processes are non-tradable in the sense that they could not have been created without their development in the local circumstances. Accordingly, the technology in its communicable form is quite distinct from the capability to make effective use of them. Thus, efforts are required in using technological information and accumulating technological knowledge, which take the form of investments in technological capability (Pack and Westphal, 1986).

Therefore, a distinction is made between capacity i.e. physical installed capacity and capability i.e. the ability to use that capacity efficiently (Lall, 2004). Technological capabilities are the skills, technical, managerial or organizational, that firms need to utilize efficiently the hardware (equipment) and software (information) of technology (see box I.3).

Consequently, State's intervention to boost the accumulation of technological capabilities is unavoidable as argued by Lall (2004, p.11) "The process of gaining technological mastery in a new setting is not instantaneous, costless or automatic, even if the technology is well diffused elsewhere. It is risky and unpredictable, and the process itself may have to be learned [...] Capability development can face market failures in building initial capacity and in subsequent deepening. Both need support, functional and selective". Institutions and policies shaping technological learning have to do with the construction of national innovation system as a part of country industrial policy framework (Cimoli and Dosi, 1995).

### **Box I.3 Production Capacities and Technological Capabilities Definitions**

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Bell and Pavitt (1993, p.163) distinguish between **production capacity and technological capabilities**: “The former incorporates the resources used to produce industrial goods at given levels of efficiency and given input combinations: equipment (capital-embodied technology), labor skills (operating and managerial know-how and experience), product and input specifications, and the organizational methods and systems used. Technological capabilities consist of the resources needed to generate and manage technical change, including skills, knowledge and experience, and institutional structures and linkages”.

Technological capabilities on firm-level are defined as the sources that are necessary to generate and manage technological change, including skills, knowledge, experience and organizational systems (Kim, 1997; Figueiredo, 2001).

Lall (1992) developed a useful categorization of technological capabilities that is based on two principles: the functions they perform and their corresponding degree of complexity. On the function level, three interrelated, interdependent and overlapping capabilities are defined: the “investment”, “production” and “linkage” capabilities.

Investment capabilities include the capabilities to assess the feasibility and utility of a project and to define its detailed specification, as the required technology, the selection of its best sourcing and the recruit and train of the skilled personnel required.

Production capabilities include the necessary skills for the efficient operation of a plant with a given technology and its improvement over time. Such operations include the assimilation of technology, its adaptation and improvement, the quality control, the monitoring of productivity, the coordination of different production stages and the innovations related to basic research activity.

Linkage capabilities are the needed skills to transmit information, skills and technology to, and receive them from, component or raw material suppliers, subcontractors, consultants, service firms, and technology institutions. Such linkages affect the productivity of the enterprise and the diffusion of technology through the economy.

In each of the category described above, there are technological capabilities with different degrees of technological complexity.

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**Source: Bell and Pavitt (1993), Lall (1992), Kim (1997) and Figueiredo (2001)**

Patel and Pavitt, (1994) define the national innovation system as “the national institutions, their incentive structures, and their competencies, that determine the rate and direction of technological learning (or the volume and composition of change generating activities) in a country”<sup>17</sup>. For Metcalfe (1995, p.425) national innovation system is a “set of distinct institutions which jointly and individually contribute to the development and diffusion of new technologies and which provides the framework within which governments form and implement policies to influence the innovation process. As such it is a system of interconnected institutions to create, store and transfer the knowledge, skills and artefacts which define new technologies”. For Freeman (1987 p.1) national innovation system makes

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<sup>17</sup> Quoted in OECD (1997a).

reference to “the network of institutions in the public and private sectors whose activities and interactions initiate, import, modify and diffuse new technologies.”

Finally, the accumulation of technological capabilities is a process that is shaped by a set of complementary policies that include active and selective industrial policies (Burlamaqui and Cimoli, 2014). Cimoli et al (2009) noted that these policies historically involved, to different degrees and according to specific local conditions, the following elements: (i) State ownership, (ii) selective credit allocation, (iii) favorable tax treatment to selective industries, (iv) restrictions on foreign investment, (v) local context requirements, (vi) special IPRs regimes, (vii) government procurement, and (viii) promotion of large domestic firms.

Nonetheless, many of these policies were *de facto* and *de jure* constrained throughout the neoliberal era, as result of financial liberalization and the mode of regulation of trade and investment relations through multilateral, bilateral and regional agreements.

### **I.7) Policy Space for Development**

State's primary functions, with other social actors and institutions, are to identify, implement and assess adequate economic policies in order to solve social and development problems. But, even if States as social and political institutions are committed to change their economies positions in the international division of labor, desire and ability have to be separated. The practice of these functions does not operate free of constraints, national policy formulation takes place in interactions with *de facto* and *de jure* international commitments and restrictions.

Throughout the neoliberal period, international agreements have produced a layer of ‘international’ policies. The latter are transmitted to the national level as commitments and obligations under international agreements that should be respected and taken into account by the States while designing and implementing their economic policies. If not, sanctions and penalties may apply through different international forums for dispute settlements, or even unilaterally, for example, through the US act 301 of 1979.

This process is challenging concepts such as national sovereignty and autonomy (Chayes and Handler Chayes, 1995; Mortensen, 2000). The narrowing set of permitted national policy options under international agreements is referred to in international debates as a major

constraint on national policy space. The question of the policy space for development is one of the most urgent issues of the discussion on “how” to implement industrial policy because it is, particularly, industrial policy instruments that are getting prohibited under international agreements.

The concept of “policy space” essentially refers to the freedom and ability of a government to identify and pursue the most appropriate economic and social is best suited to its particular national context. The São Paulo Consensus of 2004 refers to space for national economic policy “as the scope for domestic policies, especially in the areas of trade, investment and industrial development [...] often framed by international disciplines, commitments and global market considerations” and mentions the importance of all countries taking “into account the need for appropriate balance between national policy space and international disciplines and commitments” (UNCTAD, 2004).

Hamway (2005) introduces an important distinction between i) endogenous constraints forming a boundary limiting the extent of ‘endogenous policy space’ within a larger universe of possible policy options, and ii) international or exogenous constraints limiting a country’s ‘exogenous policy space’. Together, endogenous and exogenous constraints define the size of a country’s ‘effective national policy space’. The endogenous policy space depends on multiple factors such as the magnitude of available resources, the level of a country’s economic development, etc.

In turn, Mayer (2009) distinguishes between two levels policy autonomy, (i) *de jure* autonomy, which involves the formal authority of national policymakers over policy instruments, and (ii) *de facto* control, which includes the ability of national policymakers to effectively influence specific targets through the use of adequate policy instruments (Cooper, 1968; Bryant, 1980)<sup>18</sup>. On this basis, Mayer (2009) defines the national policy space as the combination of *de jure* policy sovereignty and *de facto* national policy autonomy. The policy autonomy thus refers to both the effectiveness of policy instruments in achieving policy objective, and the very possibility of using the instrument.

These two sources of external constraints policy space overlap and reinforce each other. As shown in the second chapter on investment provisions in RTAs, some multilateral trade

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<sup>18</sup> Quoted in Mayer (2009).

agreement, such as GATS, and some bilateral trade agreements induce capital account liberalization. Consequently, *de facto* constraints may be the result of *de jure* commitments.

Indeed, financial integration into international economy through capital account liberalization weakened *de facto* control over national economic development by allowing foreign actions and conditions to influence national macroeconomic policy targets (Ocampo and Vos; 2008, Akyüz, 2008a, 2008b, 2010). This reduced effectiveness in the ability to control national policy targets is most prominent in macroeconomic policy. With an open capital account both the exchange rate and the interest rate are potential policy instruments, but only one of them can be employed independently as demonstrated by Mundell's impossible trinity.

Moreover, multilateral rules and disciplines, as well as commitments resulting from regional trade and investment agreements, reduce *de jure* sovereign control over industrial policy instruments. For example, the WTO agreements reduce the scope for the Member States to mobilize vertical industrial policy instruments, as tariff barriers, subsidies, "soft" intellectual property regime, etc.

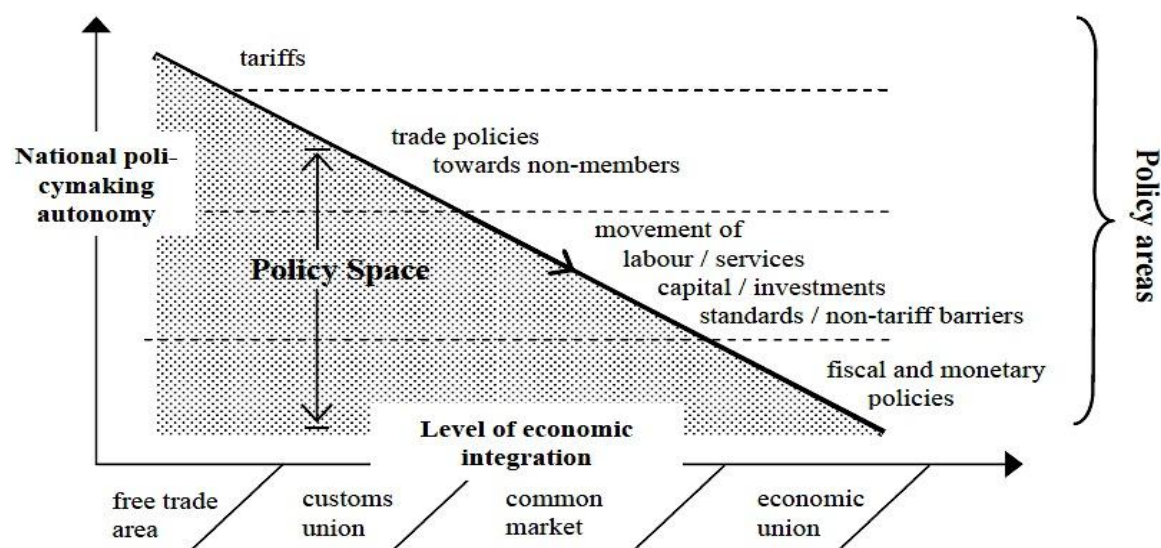
However, to address the particular conditions of developing countries, most multilateral agreements contain special provisions for enabling mechanisms which take into account their specific needs, development priorities and limited implementation capacities, i.e. Special and Differential Treatment (SDT). Anyway these dispositions are severely criticized by many economists as exceptions provide, in most cases, only for the transitional period. Moreover, these commitments lack real mechanism assuring their implementation, including dispute settlement (Corrales-Leal et al, 2003). In fact, their objective is rather to alleviate the burden of transition from one policy option to another, and not to expand policy space. Finally, provisions of particular interest to developing countries such as technology transfer are not enforceable.

According to Akyuz (2009), multilateral disciplines in trade serve to restrict not so much discriminatory treatment among different economies, but State's interventions aimed at regulating markets. The most-favored-nation standard has increasingly been replaced by "market access" and "national treatment" standards, as liberalization and "non-distortion" have become the organizing principles of international trade and investment. The same goes for bilateral trade agreements, especially in agreements where Northern countries are parties.

Deep integration is pursued in three areas where industrialized countries have the upper hand: free movement of industrial products, capital, and enterprises. By contrast, protectionism is kept on three areas where liberalization would, generally, benefit the developing world: agricultural goods and technology transfer. Current trade and investment rules and practices seek to deepen economic liberalization in areas of interest to industrial countries and restrain policy autonomy by surrendering power to global markets dominated by transnational corporations (Akyuz, 2009).

Regional and multilateral trade and economic agreements, including free trade areas, customs unions, common markets, and economic unions, became a cornerstone of international structure managing economic policy for members' States. As illustrated in Figure I.1, reductions in national policy space vary in proportion to the depth of economic integration pursued as shown in Figure (Hamway, 2005).

**Figure I.1 Economic integration and policy space**



Source: Hamway (2005, p.10)

Nevertheless, the thesis results illustrate a variation in restrictions imposed on industrial policy space among the different type of trade agreements. South-South trade, as exemplified by Chinese and Indian RTAs, offer developing countries less restricted industrial policy space than North-South trade agreements, as exemplified by the RTAs of US and EU.

In fact, literature on constraints imposed by international economic institutions on industrial policy space focus on two of its components: international financial and monetary system (Akyüz, 2008a, 2008b, 2010; Rodrik, 2006; Ocampo and Vos, 2008), and multilateral trade system.



Concerning multilateral trade system, several studies have investigated disciplines of WTO agreements on the industrial policy instruments, especially in relation to industrial tariffs (Akyuz, 2005), industrial subsidies (Ayala and Gallagher, 2005), investment-related measures (Kumar, 2005; Wade, 2003a; Shadlen, 2005b) and technology related policy (Correa, 2014; Khan, 2009). Some studies conduct an investigation on all above-mentioned instruments (Akyuz, 2009, 2008a; Dicaprio and Gallagher, 2008; UNCTAD, 2006; Kumar and Gallagher, 2007; Bora et al, 2000).

By contrast, little attention has been paid to the impact of bilateral trade agreements on the industrial policy instruments. Shadlen (2005a) examined intellectual property provisions in RTAs of US. The study showed that the RTAs of US eliminate many flexibilities existing under the WTO Agreement on TRIPS.

Khor (2008) showed that RTAs of US not only eliminate flexibilities present in the agreements of WTO but also restrict policy space in areas that were not covered by the WTO agreements.

Gallagher and Thrasher (2008) evaluated policy space in several trade-related areas across 13 trade agreements. Their results affirm the conclusions of previous studies about the RTAs of US, but find that South-South agreements provide ample policy space for industrial development and that EU agreements largely represent the middle of the spectrum compared to US agreements. However, the thesis results show that in some policy domains, such as standard and technical regulation, EU RTAs introduce more onerous restrictions on its partner country than the US.

This thesis contributes to the literature on regional and bilateral trade and investment trade agreements impacts on industrial policy space. Thesis results show that there exist multiple and different industrial policy spaces under today's international trade and investment regime, depending, among other things, on the choice of partner economies, Southern or Northern, and the corresponding modes of regulation of trade and investment relations.

## **Conclusion**

As the “why” and the “how” sides of the debate on industrial policy cannot be thought separately, the survey provided a selective revision of fundamentals arguments in favor of a selective industrial policy. Different definitions of industrial policy were presented, and a new definition was formulated. The adopted definition emphasis (i) the overall development strategy in which industrial policy is designed, (ii) its objectives and (iii) types of required State’s interventions.

The argument on manufacturing sector as an engine of growth was revisited as well as some recent empirical and theoretical on the subject. Furthermore, the debate on the terms of trade was also revisited and actualized through the presentation of new findings on consequences of specialization in commodity sector on sustained economic growth.

Some old but relevant arguments of development economics pioneers were revisited, in particular, those on underdevelopment as a shortage in investment, and the need for a big push by the State to overcome the problem of investment coordination failure. Industrial policy is fundamentally a supply-side policy, as investment promotion, establishment and coordination constitute one of its primary components. Moreover, infant industry protection argument was reviewed. Some basic arguments on development as an evolutionary process involving the accumulation of technological capabilities were too briefly revisited.

Finally, the concept of policy space for development was revisited, as it conceptualizes one aspect of new challenges facing industrial policy making, specifically, international constraints over policy formulation and implementation at the national level. The policy space problematic invites economists to focus on the question of how to implement industrial policy giving international constraints on its very instruments.

Following chapters contribute to understanding challenges and opportunities that face industrial policy in the context of the North-South and South-South RTAs.



## **II) Chapter Two: Constraints on Foreign Investment Regulation in North-South and South-South RTAs**

Ragnar Nurkse (1953, 1952) argued that the problem of development is rather a problem of supply side which is articulated with the shortage on the demand side. This influence arises not only because investment, as a dynamic component of effective demand, generates income, but also it expands productive capacity and carries strong complementarities with other determinants of growth, notably capital accumulation, technological progress and productivity growth (Rosenstein-Rodan, 1943; Scitovsky, 1954; Nurkse, 1953). Strong complementarities and mutually reinforcing linkages among capital accumulation, technological progress, and structural change have constituted the basis for rapid and sustained productivity growth (UNCTAD, 2003a).

A given pace of capital accumulation can certainly generate different growth rates, depending on its composition, technological intensity and sectorial distribution. These are essential questions that should be addressed by selective industrial policy, through its investment policy component.

Investment policy seeks to establish coherent productive capacities ensemble. It regulates the allocation of capital among different sectors and industries while creating and reinforcing linkages between the various sectors and industries. It needs a complex device that incentivizes, prescribes and proscribes the performance of investment whether foreign or domestic. Influencing investment performance has been a key ingredient of industrial policies, as observed in succeeded industrialization experience for (newly) industrialized countries (Amsden, 2001; Chang, 1996, 2002; Wade, 1989; UNCTAD, 2003 and 2012).

During the neoliberal era, foreign direct investment became the primary source of investment that countries seek. Two paradigms broadly shape government policy towards foreign investment. One perspective tends to assume that all investment is good and that all investment promotes growth and development. The derived policy prescription is that governments should provide protection to foreign investors, liberalize investment regime, reduce or limit its regulations with respect to investment. This policy perspective is embedded in the structure and content of existing International Investment Agreements (IIAs), being Bilateral Investment Treaties (BITs) or investment chapters in RTAs (Mann, 2013).

The alternative view recognizes that foreign investment can potentially be a source for investment that, under certain conditions, may play a positive role in economic development.

It considers that regulations are needed to ensure that investments make a positive contribution to development in the host State. The associated spillover benefits of FDI as they relate to technology transfer, managerial best practice, skills development, research, as well as building beneficial linkages to the national economy need to be purposefully built into the investment regulatory regime. Furthermore, foreign investments may result in critical negative effects on the industrial development, macroeconomic stability, and social standards of the host country.

The use of industrial policy tools related to investment has been progressively restricted by the WTO Uruguay Round Agreements, as well as by a large number of BITs and RTAs. Most of the international investment rules are embedded in bilateral agreements among States, which incorporate mechanisms for investment protection and liberalization. By the end of 2012, there were 2,857 BITs and more than 339 investment chapters in RTAs (UNCATD-WIR, 2013).

The primary rationale to sign an investment agreement by developing countries was that they had the impact of attracting new levels of foreign investment by ensuring attractive investment environment. By the 2000s, this argument was called into serious question by many studies. By the end of the decade, it had been widely conceded that any effect of RTAs in attracting investment into developing countries was at best minimal, and more likely did not exist<sup>19</sup>.

Furthermore, certain countries received substantial FDI but do not hold BITs with the home countries. Despite the fact that the US does not hold a BIT with China, the latter is the largest destination for US FDI among developing countries.

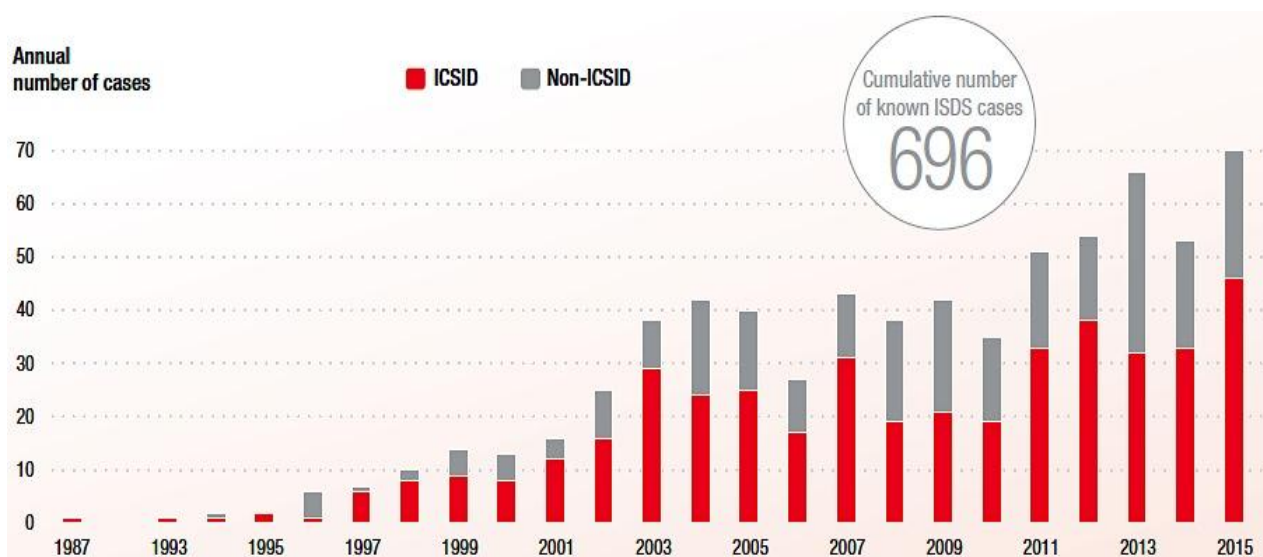
Nevertheless, investment agreements can harm signatory countries as they become important weapons in the hand of transnational capital against different types of national State measures aiming at regulating the conduct of foreign investment in its territory. Many Investment agreements provide investors with effective “protection” due to Investor-State dispute settlement (ISDS). There has been a dramatic increase in the number of claims brought by foreign investors against governments with the first in 1987, growing cumulatively to 50 by 2000 (Carim, 2015). In 2015 alone, investors initiated 70 known ISDS cases. As of 1 January 2016, the total number of publicly known ISDS claims has reached

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<sup>19</sup> For an extensive literature review on this subject see UNCATD (2009) study on the role of IIAs in attracting FDI to developing countries.

696 (see figure II.1). So far, 107 countries have been respondents to one or more known ISDS. As arbitrations can be kept confidential under certain circumstances, the actual number of disputes filed for this and previous years is likely to be higher. The threat of legal action has a powerful deterrent effect on government's regulations, particularly in low and middle-income countries that can have severe difficulties to afford expensive and protracted litigation<sup>20</sup>.

**Figure II.1 Known ISDS cases, 1987–2015.**



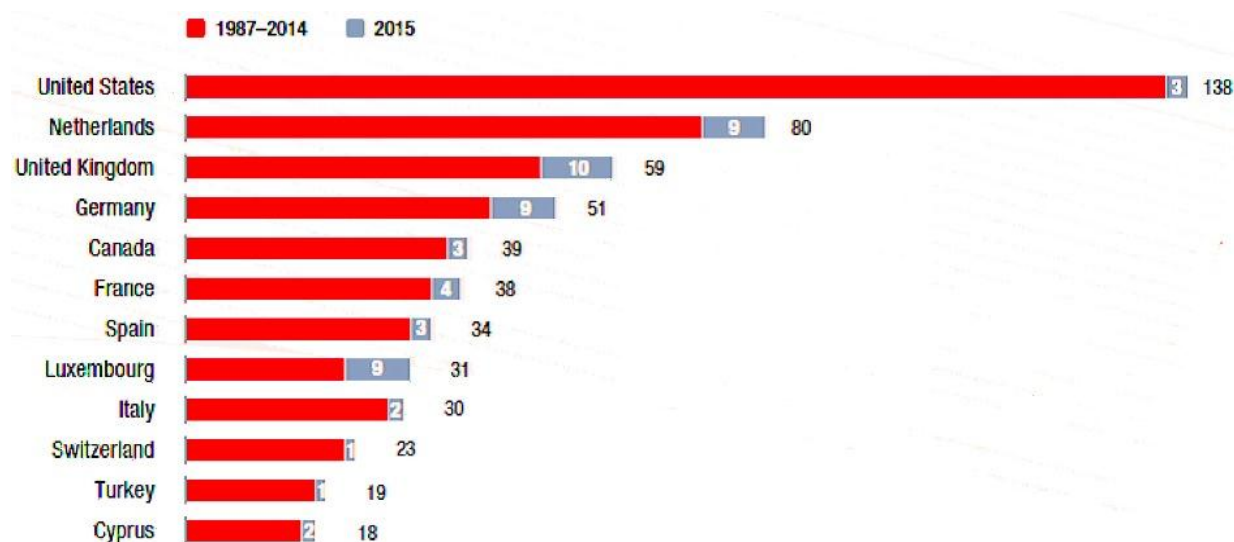
Source: UNCTAD (2016, p.2)

The historical trend shows that Northern countries' investors have been the primary ISDS users, accounting for over 80 percent of all known claims (see figure II.2). In 2015, all reported cases were brought by Northern countries' investors. The most frequent home States are the United States and Netherlands. The latter seems to be a gateway to 'treaty shopping' practice for transnational capital (Os and Knottnerus, 2011).

The historical trend also shows that claims are brought mostly against Southern States' measures, whether motivated by urgency situations such as the financial crisis in Argentina late 90s or driven by industrial development strategy as the case in Venezuela and Ecuador (See figure II.3).

<sup>20</sup> According to Eberhardt and Olivet (2012), legal and arbitration costs average over US\$8 million per Investor-State dispute, exceeding US\$30 million in some cases. The highest known award in the history of investment treaty arbitration featured in the 2012 case of Occidental v. Ecuador II where the investor was awarded US\$1.77 billion plus pre- and post-award compound interest.

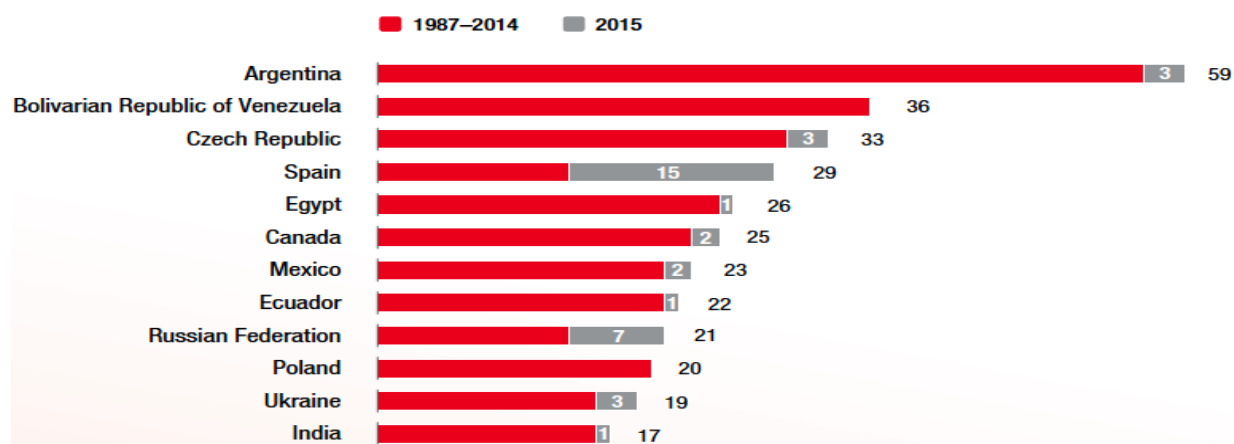
**Figure II.2 Most frequent home States of claimants, total as of end 2015 (Number of known cases)**



Source: UNCTAD (2016, p.3)

Some countries started to react to address IIAs challenges by revising treaties, replacing earlier treaties, or terminating either unilaterally or by mutual consent (UNCTAD, 2014a). Interestingly, the UNCTAD points out that, at the end of 2013, more than 1,300 bilateral treaties were at the stage where they could be terminated or renegotiated at any time. Furthermore, between 2014 and 2018, at least 350 more bilateral treaties will reach the end of their initial duration (UNCTAD, 2013b).

**Figure II.3 Most frequent respondent States, total as of end 2015 (known cases)**



Source: UNCTAD (2016, p.3)

Investment agreement and investment chapters are highly analyzed by law researchers and by consequence legal approach dominates investment treaties studies. To our knowledge,



IIAs were little, if any, examined from the perspective of their implications on industrial policy space. This chapter assesses these implications, in particular, through answering two questions: Do investment chapters of RTAs leave host State enough space to regulate foreign investments according to industrial policy objectives? To which level investment chapters in RTAs go beyond WTO agreements rules on investment related issues?

To answer these questions, the study constructs a simple investment regulatory framework that will be used as an analytical device to analyze RTAs investment rules impacts on industrial policy instruments, in particular on its component aimed at regulating foreign investment admission and operation. The framework is based the idea that the associated spillover benefits of FDI need to be purposefully built into the investment regulatory regime, and not taken-for-granted. It's not probable that FDI will act spontaneously, in accordance with the overall development strategy. In addition, ensuring industrial development benefits from FDI requires regulations to minimize its associated risks (UNCATD-WIR, 2012c). Moreover, regulation should consider foreign investment activities consistency with a broad range of industrial policy areas, especially but not exclusively, intellectual property right, trade policy, macroeconomic stability and public policy. The analytical framework allows comparative understanding at three levels (i) the gap between RTAs legal commitments and the necessary foreign investment regulation from the perspective of industrial policy, (ii) between North-South and South-South investment rules, (iii) whether studied RTAs rules on investment go beyond WTO Agreements on GATS and TRIMs.

In total, investment chapters are found in 9 US RTAs<sup>21</sup> with developing countries and in 4 Chinese RTAs. In the case of RTAs of EU, no investment chapter was observed as European Commission had not a mandate to negotiate investment agreements on behalf of Members countries, until lately. In the case of RTAs of India, no investment chapter was found.

Although the degree of restrictiveness varies across different RTAs models, what is common among different studied RTAs rules on investment is that they are not frameworks that promote the developmental interest of host country. They are frameworks that regulate and discipline host State's conducts toward both foreign and local investments. Nonetheless,

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<sup>21</sup> US-Jordan RTA is the only agreement that does not include investment chapter.

there exist different models of the investment agreement corresponding to different levels of restrictions on industrial policy space.

Results show that the RTAs of US adopt liberal investment model that eliminates the *de jure* possibility of host State to use the very policy instruments that permit to reap developmental benefits of foreign investment. State's autonomy was highly eroded in relation to the regulation of foreign investment admission as investments were liberalized on pre-admission bases. Many policy measures aimed at achieving FDI linkages and spillovers effects were disciplined due to restrictions on performance requirements and as result of national treatment standard. The same goes for measures designed to manage interaction and ensuring the consistency with other industrial policy areas. Many of capital account control measures permitted under GATS and IMF rules were disciplined because of service sectors liberalization in combination with both pre-admission national treatment standard and liberal transfer rules. IPRs are defined as an investment, and their holders have the right to be protected under investment rules. Moreover, the possibility to grant a compulsory license on very common ground is eliminated (e.g. patent confers market power). Public policy was highly constrained under some polyvalent investment rules, especially fair and equitable treatment and expropriation. Furthermore, US RTAs discipline host States policy measures aimed at promoting and protecting domestic investment due to pre and post-admission national treatment clause. US RTAs rules in areas covered by TRIMs and GATS go well beyond disciplines contained in these agreements. Finally, all US RTAs establish State-Investor dispute settlement mechanism.

By contrast, the Chinese investment chapters ensure substantial autonomy to partners States in respect to (i) the regulation of foreign investment admission due to post-admission national treatment standard, (ii) the use of policy measures aimed at achieving FDI linkages and spillovers effects, as performance requirements were not banned, and (iii) measures designed to manage interactions and ensuring the consistency with other industrial policy areas. State preserves considerable space to ensure macroeconomic stability as service sector is excluded from coverage, transfer rules mandate the respect of host State's regulation, and host State retains control over the capital entry. Nevertheless, IPRs are defined as an investment, and their holder can enjoy investors' rights. Furthermore, two RTAs establish State-Investor dispute settlement, though with limitations to its scope of application. Moreover, Chinese RTAs include adapted version of some problematic provisions found in US RTAs that may constrain State's regulatory space. Still, rules on indirect expropriation are

not present in all Chinese RTAs, and introduce some significant exceptions in some RTAs (e.g. indirect expropriation rules do not apply to compulsory license). Interestingly, Chinese RTAs exclude from the coverage scope of investment chapters some policy tools such as taxes, subsidies and public procurement. Finally, Chinese RTAs commitments in areas covered by TRIMs and GATS do not go beyond disciplines contained in these agreements. In general, favoring domestic targeted sectors and industries is possible under Chinese RTAs as long as the used policy measure is permitted under WTO agreements, and foreign investment was not admitted in the sector.

The study is structured as follow. Section one develops the foreign investment regulatory framework while providing grounds for the inclusion of its components. It provides a brief overview of results and permits to understand by which rules each part of the framework is affected. Subsequent sections analyses, in details, investment chapters in the RTAs of US and China, in addition to WTO agreements on GATS and TRIMs. Moreover, they assess RTAs constraints on foreign investment regulatory framework. The second section studies investments chapters' coverage scope at the geographical, sectorial and instruments levels, and in respect to covered investment and investors. The third section examines foreign investment standards of treatment and their implication on the degree of liberalization of investment regime. The fourth section evaluates rules on performance requirements under the RTAs and the TRIMs agreement. The fifth section presents expropriation rules under RTAs. The sixth section evaluates the State's autonomy to regulate capital flows under both GATS agreement and investment chapters of studied RTAs. Finally, the conclusion is presented.

## **II.1) Foreign Investment Regulatory Framework**

In her influential work, Amsden (2001) identifies two groups of countries in respect to their policy toward foreign investment. The first group, called “independents”, is characterized with: i) minimal reliance on FDI, ii) country's technology development is based on the strengthening of domestic firms and a heavy emphasis on domestic skill building and R&D, iii) a pervasive use of industrial policies to create national champions. The second group, called “integrationists”, is itself divided into two groups. The “active integrationists” rely on the spillovers from Transnational Companies (TNCs) to access to new technology and make a significant use of selective policies to move into high value added activities. The “passive integrationists”, instead, do not select TNCs but attract them through the utilization of a vast number of welcoming policies: low wages, disciplined and semi-skilled labor, etc.

However, the extent to which attempts to regulate foreign investments are successful often depends on the leverage of host countries over foreign firms. It is clear that the larger a host country's domestic market and the more developed its industrial production structure, the better it will be able to demand concessions in terms of technology transfer and an extensive domestic network of input suppliers etc. (UNCTAD, 2006). Interestingly, Amsden (2001) emphasized that foreign investment were more likely to enter certain States in order to enjoy an ongoing process rather than to be a first-mover or to act as a catalyst for the industrialization process. Therefore, the development of local investments has crucial importance not only for long-term industrial development but also for the attraction of foreign investment itself. In an interesting empirical study, Lautier et Moreaub (2012) examine the impact of domestic investment on FDI flows in developing countries using a cross-country sample, from 68 developing countries, for the period 1984-2004. The results suggest that lagged domestic investment has a quantitatively significant influence on FDI inflows in the host-economy. The effect is strongest when countries move away from under-development level. The derived policy recommendation is that the promotion of domestic firms investment through industrial policy measures will efficiently stimulate FDI inflows.

It should be noted that FDI is extremely concentrated at the geographical level, where nearly 60% of FDI inflows to developing countries are concentrated in 8 countries in 2015 (UNCTAD-WIR, 2016). Consequently, States that rely on the attraction of FDI as the primary source of investment may be running after a mirage. The analysis of foreign and national investment roles in structural transformation is beyond the scope of this study. The point here is that foreign source of investment should not be promoted at the expense of the national source. Theoretically, attracting foreign investment and supporting local investment are not necessarily contradictory, rather they could be complementary. Nevertheless, the actual multilateral and bilateral mode of regulation of investments, are rendering the promotion of foreign investment inconsistent with the support of local investment.

UNCATD-WIR (2012) presented some principles and guidelines for the design of both national investment policy, and international investment agreements. This framework emphasizes that national investment policy should be integrated into the country's overall industrial development strategy. It considers that the foreign investment potential contribution to local productive capacities should guide investment policy. Thus, the ultimate objective is the building of local productive capacities, and foreign investment should be assessed through this lens.

In practice, a multitude of factors plays a role in determining whether foreign investments will contribute to structural transformation. It's not probable that FDI will act spontaneously, in accordance with industrialization strategy. Ensuring development benefits from FDI requires not only an enabling regulatory policy framework, but it also needs regulation to minimize risks associated with it (UNCATD-WIR, 2012). The associated linkages and spillover benefits of FDI need to be purposefully built into host State policies, and not taken for granted (see for example Ethier and Markusen, 1996; Blomstrom et al, 1998; Te Velde, 2001). The outcome depends critically on, among other things, the regulatory framework of the host State. As the hierarchy of priorities for industrial policy evolves throughout industrialization process, investment policy framework needs to be flexible to adapt accordingly.

The chapter constructs a simple foreign investment regulatory framework to be used as an analytical tool of investment chapters in studied RTAs. It responds to methodological imperative. The inclusion of investment chapters in RTAs is WTO *extra* commitment, as no comprehensive multilateral agreement was concluded under the auspice of WTO. There exist agreements that address investment related aspects, the GATS, and the TRIMs. Together, these agreements do not cover the broad spectrum of disciplined investment policy instruments under RTAs investment chapters. Consequently, no comprehensive multilateral investment agreement could be used as a benchmark to understand to which level RTAs rules restrict the possibility to regulate foreign investment according to industrial policy objectives. Thus, the framework has a methodological function in the study, as it permits to analyze the RTAs influence on industrial policy space.

Foreign investment regulatory framework needs to address, mainly, three critical issues, (i) the regulation of foreign investment admission, (ii) triggering FDI linkages and spillover effects, and finally (iii) ensuring the consistency of foreign investment activities with other industrial policy areas, in particular, IPRs, trade policy, macroeconomic stability and public policy. It should be noted that borders are not clear between these policy areas, and practically, there are no boundaries. For instance, the question of linkages and spillover effects could be addressed at the border, such as imposing technology transfer or local sourcing requirements as a condition of entry. Equally, managing investment interaction with macroeconomic stability objectives could be a potential reason behind the prohibition on the entry of portfolio investment or closing some financial service sector for foreign investors. Furthermore, trade-related and exchange balancing performance requirements address

interaction with respectively trade policy and financial stability. Trade balancing requirements seek to reduce pressure on the balance of payment and to ensure exchange rates stability. When a minimum level of local content requirement is imposed, it contributes indirectly to reducing pressure on current account by substituting some imports. In addition, it creates vertical linkage and contributes to expanding national investment through enlarging market for the concerned products. This is why introducing a distinction between these three areas serves conceptual and analytical purposes of the chapter.

Before developing the three components of foreign investment regulatory framework, Table (II.1) presents an overview on the level of host State's autonomy in mobilizing foreign investment regulations, under the WTO agreement on GATS and TRIMs, and the RTAs of US and China. It should be noted that Investor-State dispute settlement mechanism applies to investment chapter in all US RTAs and two of Chinese RTAs.

**Table II.1 Host States' autonomy to regulate foreign investment in trade and investment agreements**

Policy measures	WTO		RTAs investment chapter	
	GATS	TRIMs	US	China
<b>Admission regulation</b>				
Goods		Restricted	TRIMs+	TRIMs
Services	Restricted		GATS+	Preserved <sup>a</sup>
<b>Triggering spillovers</b>				
Equity requirements			Restricted	Preserved
Capital requirements			Restricted	Preserved
Linkage & value Added requirements		Restricted	TRIMs+	TRIMs
Technology transfer requirements			Restricted	Preserved
<b>Managing interaction</b>				
Trade Policy		Restricted	TRIMs+	TRIMs
Capital controls	IMF+		GATS+	IMF <sup>a</sup>
Intellectual property right			Restricted	Restricted
Public Policy			Restricted	Restricted
<b>Enforcement mechanism</b>				
Investor-State Dispute Settlement			WTO+	WTO/WTO+ <sup>b</sup>

Restricted: investment chapter includes restrictions or prohibition on the use of the policy measure.

Preserved: not covered by the investment chapter, or covered but autonomy is preserved.

GATS+: policy measure is covered under GATS, but RTA rules go beyond its commitments.

TRIMs+: policy measure is covered under TRIMs, but RTA rules go beyond its commitments.

TRIMs: Investment chapters do not have rules on the policy measure.

IMF+: commitment restricting allowed policy measures under IMF.

IMF: IMF rules are affirmed, or the related policy measure was not covered in the investment chapter.

<sup>a</sup> Commitments contained in the chapter on financial service are not taken into account.

<sup>b</sup> Only Chinese RTAs with Peru and South Korea contain Investor-State dispute settlement. In China-Peru RTA, MFN standard is excluded from the application of Investor-State dispute settlement.

**Source: Salam Alshareef**

### **II.1.1) Regulations of Foreign Investment Admission**

Admission regulations measures aim at ensuring that foreign investments fit and serve industrial policy objectives. On the one hand, it assesses whether proposed investment can contribute to structural transformation and diversification of domestic economic activities, through, for example, Greenfield investment in targeted industries. On the other hand, it assesses the foreign investment potential impact on local investment whether it has potential to develop positive backward and forward linkages with local productive activities or not.

The effects of FDI on domestic investment and industrial development in individual countries depend to a large extent on the mode of entry (UNCTAD, 2004b). As officially defined, FDI can take three forms. The first is Greenfield investment which involves creating a subsidiary from scratch with fresh capital by one or more non-resident investors. The second is cross-border merger and acquisition (M&A) which relate to existing company structures. Cross-border mergers arise when resident and non-resident companies agree to combine into a single firm. Acquisitions involve the purchase of existing companies wholly or partly by a non-resident company or a group of companies, that is, a transfer of ownership from residents to non-residents of at least 10 percent of voting stock of an existing company. The third is the expansion of production capacity of existing firms partly or fully owned by non-residents through injection of capital investment, including loans from parent companies.

Here, it is important to note that investment definition in investment agreement does not correspond to FDI definition, and the latter is just one component of the former. Investment definition includes portfolio investment, financial products, loans, etc. While a greenfield investment in new plant equipment adds physically to the existing capital stock, and it probably involve a longer-term commitment by the foreign investor to produce in the host country, portfolio investment is rather motivated by monetary benefits and short-term considerations permitted by the easier exit of capital with all associated risks on the economic stability. Within FDI different forms, acquisition of existing assets has no direct contribution to the domestic capital formation, although it may be followed by new investment or may stimulate domestic investment. In all cases, acquisition involves a transfer of property to non-resident protected by well-muscled institutions, of which the RTAs are one element, rendering the influence of investment decisions by host State more complicated and risky.

In addition, FDI has not been in sectors that are capable of generating sustainable growth in productivity and value added. FDI flows are highly concentrated in sectors that have little

impact on increasing productivity and value-added. By 2014, 64% of FDI inflows stock was concentrated in the service sector, while manufacturing sector received 26% (UNCATD-WIR, 2016). If China is excluded, the increase in the share of services and the decline in manufacturing in FDI inflows to developing countries are much more pronounced (Akyuz, 2015). Kaldor (1966) emphasized that labor in the non-manufacturing sector is less productive. Baumol (1967) argued that productivity improvements in services are harder to achieve than in goods-producing industries.

The service sector includes activities such as banking and insurance that do not contribute necessarily to the development of productive capacities, even it may be harmful as they may include speculative activities. Moreover, rent seeking-service sector may pump out locally produced plus-value through transferring their profits abroad, thus, depriving productive activities of internal source of finance.

Moreover, in evaluating the impact of FDI on development, however, a fundamental question is whether MNEs crowd in domestic investments or whether they crowd them out and suffocate domestic technological development. Leahy and Montagna (2000) argue that through direct product competition, local firms may suffer profit losses as transactional companies capture their market shares. If the profit losses are severe, the domestic enterprises may close down partially or entirely. In the case of crowding out local investment, the contribution to the total capital formation of such FDI is likely to be less than the FDI flow itself.

Theoretically, foreign and domestic investments are not necessarily contradictory, rather they may be complementary. Indeed, the outcome depends on the policy framework and its ability to integrate and harmonize the both activities if possible. The empirical evidence on FDI impact on domestic investment is inconclusive (Akyuz, 2006; Morrissey and Udomkerdmongkol 2012; Farla et al, 2013). Results also differ across regions with East Asian mostly showing crowding-in while Latin America crowding-out. In contrast to East Asian newly industrialized countries, Latin America assisted a widespread association of increased FDI with reduced fixed capital formation (For a detailed analysis see UNCTAD, 2003a).

For all these reasons and more, foreign investment regulatory framework should select and conditions foreign investments admission. A distinction should be made between different types of FDI (M&A, Greenfield, outward or inward oriented TNCs, etc.), and



different sectors (commodity, extractive, manufacturing, services, etc.). Admission regulation measures may close some sectors, industries, and activities to the foreign investor, or limit entry through restrictions on foreign ownership, such as joint ventures requirements. Narula and Dunning (1998) highlight that the direct intervention of government in ownership can guarantee the increase of the knowledge base not only for the firms directly linked to foreign partners but for the whole economic system.

State autonomy to regulate foreign investment admission is extremely reduced by some RTAs investment chapter, especially those of the US. Table (II.2) reports studied RTAs impact on host State's autonomy in respect to foreign investment admission control.

The degree of restriction is determined, mainly and not exclusively, by provisions on coverage scope and national treatment standards. The coverage scope of investment chapter is defined by (i) the covered and excluded sectors. For instance, some RTAs exclude public procurement and limit the applicability of substantive commitment like national treatment to services sector, as Chinese RTAs, whereas other RTAs cover all sectors like the US agreements (ii) the disciplined policy instruments, some RTAs exclude subsidies and grants as Chinese RTAs, where US RTAs have no exceptions, (iii) investment definition, whether or not it includes IPRs, portfolio investment, debt, financial derivatives, etc. Both China and US RTAs cover IPRs, portfolio investment and debt, and only US cover financial derivatives, (v) investor definition or the qualification criteria of investor and legal entities in connection to States' party of RTAs.

**Table II.2 Autonomy to regulate foreign investment admission in RTAs**

Extent of liberalization		Investment chapter	
		US	China
<b>Sectors</b>			
Goods		Restricted	Preserved
Service		Restricted	Preserved
Public Procurement		Restricted	Preserved
<b>Types of admission regulation</b>			
Closure of certain sectors/industries		Restricted	Preserved
Conditional admission		Restricted	Preserved

Restricted: investment chapter includes restrictions or prohibition on the use of the measure.

Preserved: either not covered by the investment chapter or covered but autonomy is preserved.

**Source: Salam Alshareef**

The types and design of national treatment standard are the principle determinant of State's freedom to control FDI admission. Autonomy is relatively preserved under post-admission national treatment, whereas autonomy is lost under pre-admission national treatment. Moreover, with a pre-admission national treatment standard, the possibility of conditioning the entry of foreign investment on the fulfillment of some operational conditions is eliminated, such as transfer of technology, local sourcing, and the achievement of a certain level of value added in the host country territory, etc. Box (II.1) presents an illustrative list of FDI admission regulations that were restricted under US RTAs.

**Box II.1 Illustrative list of restricted foreign investment regulation measures under US RTAs**

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**Controls over access to the host country economy**

- Closing certain sectors, industries, activities or regions to FDI.
- Quantitative restrictions on the number of foreign companies admitted in specific sectors, industries or activities.
- General screening/authorization of all investment proposals.
- Restrictions on certain forms of entry (e.g. mergers and acquisitions may not be allowed, or must meet certain additional requirements).

**Conditional entry into the host country economy**

**Conditions based on capital requirements:**

- Minimum capital requirements.
- Subsequent additional investment or reinvestment requirements.
- Restrictions on the import of capital goods needed to set up investment (e.g. machinery, software) possibly combined with local sourcing requirements.

**Conditions based on ownership**

- Compulsory joint ventures either with State participation or with local private investors.
- Restrictions on the percentage of foreign ownership (e.g. no more than 50 percent).
- Mandatory transfers of ownership to local firms usually over a period of time (fade-out requirements).
- Golden" shares to be held by the host Government allowing it, for example, to intervene if the foreign investor captures more than a certain percentage of the investment.
- Restrictions on the free transfer of shares or other proprietary rights over the company held by foreign investors (e.g. shares cannot be transferred without permission).
- Restrictions on land or immovable property ownership and transfers thereof.

**Controls based on governmental intervention in the running of the investment**

- Government reserves the right to appoint one or more members of the board of directors.
- Government reserves the right to veto certain decisions or requires that important board decisions be unanimous.

**Performance requirements on investment operation (See Table II.3)**

Source: Adapted from UNCTAD, 1996; Muchlinski, 1995, UNCTAD, 2004a

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## **II.1.2) Triggering FDI Positive Spillover**

Proponents of FDI argue that its benefits arise from the increase in the productivity of domestic firms as a result of the spillover of the production capacities and technological capability, marketing, and management skills of foreign investment to these firms. The literature discusses two types of spillover, horizontal and vertical.

Productivity spillovers that may occur due to the presence of foreign investment in the same industry are called horizontal spillovers. Horizontal spillovers arise through channels such as demonstration effect<sup>22</sup> (Dunning, 1993; Sawada, 2010), competition effect (Caves, 1974; Cantwell, 1989; Jordaan, 2011) and labor mobility (Sousa, 2001)<sup>23</sup>.

Spillovers that arise with the diffusion of positive effects at an inter-industry level, as in the case of benefiting from foreign suppliers or customers in the production chain, are called vertical spillovers. Vertical spillovers can take place through backward linkages and forward linkages. Backward linkages are relationships that domestic firms establish as suppliers of foreign-owned companies and forward linkages are relationships that domestic firms develop as customers of intermediate inputs produced by foreign investment (Rodriguez-Clare, 1997). There has been an argument that vertical spillover is a more likely channel for spillovers resulting in benefits for the economy (Du et al., 2011). Rodriguez-Clare (1997) demonstrates that the more industrially developed is host country, the more is the probability that linkage take place.

The existence of backward or forward linkages from the establishment of foreign investors is a key consideration for determining the total developmental impact of FDI. Even where FDI does not displace domestic investment, foreign investments may not stimulate new downstream or upstream production and, therefore, may fail to exert strong crowd in effects on domestic investment. It should be stressed that linkages are a necessary but not sufficient factor for crowd in. In cases where foreign firms simply displace existing ones, the existence of linkages cannot prevent crowd out (Agosin and Machado, 2005). Linkages creation permits not only the direct contribution of FDI to capital formation and the increasing of value added but also the indirect contribution through integrating local producers.

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<sup>22</sup> Demonstration effects means by their mere presence in the domestic markets, foreign products and technologies can inspire and stimulate local innovators to develop new products and processes.

<sup>23</sup> Some studies argue that TNCs may put in place measures to curb the diffusion of labor into local firms (Fosfuri et al., 2001).

Performance requirements are crucial instruments that aim at enabling targeted developmental benefits from certain investment. Performance requirements were extensively used by industrialized and newly industrialized countries (UNCTAD, 2003b). Performance requirements prescribe, proscribe and incentivize certain desired outcomes of investment activities. Performance requirements could be used at the border as conditions for foreign investment entry, or in the post-establishment phase.

The literature tells us that in the presence of spillovers, performance standards can act as a coordinating mechanism (Davies and Ellis, 2001). Theories of control mechanisms tend to focus on how government intervention can solve rather than exacerbates the problem that it is intended to address. Performance requirements constitute crucial components in control mechanism, where access to rent distributed to firms by the State is conditioned by the contribution to overall productivity and value creation (Amsden, 2001).

In UNCTAD parlance, performance requirements are one kind of the so-called “host country operational measures” (HCOMs) (UNCTAD, 2004c). Nevertheless, when performance requirements are combined with conditional advantages, they could be considered incentives (on incentives see UNCTAD, 2004c). The HCOMs and incentives have shared characteristics. The HCOMs are designed to prescribe certain behavior for foreign firms to bring about results. It covers a very wide range of measures, and it may affect almost all aspects of foreign firms' operations. They range from restrictions or requirements on ownership and control to sourcing of inputs, production technologies, etc. Investment incentives, on the other hand, provide advantages, such as tax relief, subsidies and cash grants, that are designed to induce foreign affiliates to bring about certain results. Governments use three main categories of incentives, (i) financial incentives, such as grants and loans at concessionary rates, (ii) fiscal incentives such as tax holidays and reduced tax rates, and (iii) other incentives, including subsidized infrastructure or services, and market preferences (UNCTAD, 2004c).

The distinction between different performance requirements is usually based on whether they were used in pre or post-establishment phases, or whether they are obligatory or optional (against advantage). Nevertheless, from the economic policy perspective, a function-based typology is more appropriate for the purpose of this chapter analysis. Such typology may include the following categories.

Equity requirements have ambivalent functions, however, concerning FDI it permits host state to have a stake in decisions concerning enterprises activities, including the increasing of value added locally produced and the establishment of linkage with local producers. Equity requirements have been employed by host governments to enhance the chances of technology and knowledge controlled by foreign affiliates being diffused to the domestic enterprise sector in the host country. By forcing TNCs to share the knowledge and inputs they control and bring to a host economy, it is expected that local firms would stand a better chance to access them (Blomström et al., 2000, p. 30). Moreover, equity requirements could ensure the durability of foreign investment. Even when FDI investment in manufacture sector is established in a country, the “lasting interest” of the foreign investment enterprise does not always translate into a long-term commitment of that enterprise to the host country. Such requirements include joint venture requirements, a minimum level of domestic equity participation and mandatory transfers of ownership to local firms usually over a period of time (fade-out requirements).

Capital related performance requirements have the objective to ensure the contribution of investment projects to the host state overall fixed capital formation, quantitatively and qualitatively. It includes minimum capital requirements, subsequent additional investment, and reinvestment requirements, and restrictions on the import of capital goods needed to set up investment, possibly combined with local sourcing requirements.

Value added related requirements aim, on the one hand, to establish forward and backward linkages that increase value added created by local producers, and on the other hand, to increase value added achieved directly by foreign investment activities in the host country. It includes requirements to make minimums level of value added in host country territory and local sourcing requirements.

Technology transfer and know-how acquisition requirements aim at increasing host country production capacities and technological capabilities. Such requirements may include licensing agreements, a minimum level of employment or internship requirements in technical positions, and achieving R&D at the national level.

In the context of RTAs, State’s autonomy to use policy instruments that trigger positive spillover and minimize negative ones is determined by, especially and not exclusively, provisions on performance requirements and national treatment standard. US RTAs model

goes beyond TRIMs agreement discipline, restricting requirements to increase value added and to transfer technology. Table (II.3) show the level of host State's autonomy to use performance requirements with foreign investment giving the rules of investment chapters of both US and Chinese RTAs.

**Table II.3 Host state's autonomy to use performance requirements under RTAs**

Types of performance requirements	RTAs Investment chapters	
	US	China
<b>Capital requirements</b>		
Minimum capital requirements	Restricted	Preserved
Additional investment or reinvestment requirements	Restricted	Preserved
<b>Equity requirements</b>		
Joint venture requirements	Restricted	Preserved
Minimum level of domestic equity participation	Restricted	Preserved
<b>Value added requirement</b>		
Domestic content requirement	TRIMs+ <sup>a</sup>	TRIMs
Linking market access to the establishment local production or facilities	Restricted	Preserved
Increasing value added achieved in host country	TRIMs+ <sup>a</sup>	TRIMs
Employment requirements	Restricted	Preserved
<b>Technology transfer and know how acquisition</b>	Restricted	
Technology transfer requirements	Restricted	Preserved
Achieving R&D in host country	Preserved	Preserved

Restricted: investment chapter includes restrictions or prohibition on the use of the policy measure.

Preserved: not covered by the investment chapter, or covered but autonomy is preserved.

TRIMs+: policy measure is covered under TRIMS, but RTA rules go beyond its commitments.

TRIMs: Investment chapters do not have rules on the policy measure.

<sup>a</sup>: Scope of restriction was broadened as to cover public procurement sector. Also, safeguard exception in the case of balance of payments difficulties were eliminated.

**Source: Salam Alshareef**

Pre-admission national treatment standards restrict state ability to qualify and condition the entry of foreign investors against some performance requirements. National treatment standard, whether pre or post-admission, permit, according to UNCTAD publications, to discriminate between different investment activities in industries, sectors or regions, as long as they do not discriminate between foreign and local investments, nevertheless, in the case of incentives integrated in control mechanism, the limited fiscal policy space for developing countries could act as *de facto* restriction on the ability to use such incentives where foreign investment are present in the targeted sector. Even more, given their competitive advantage,

foreign investors may gain lion share of state distributed rent to and wipe national enterprises out of the market. Consequently, national treatment standard, whether a post or pre-admission, can paralyze the State's ability to influence not just FDI, but even domestic investment.

### **II.1.3) Consistency with other Industrial Policy Areas**

Managing interaction with other policy areas is pre-request for an effective integration of investment policy framework into overall industrial policy aiming at the structural transformation. This component of investment policy should ensure the consistency of FDI activities with industrial policy objectives in respect to macroeconomic stability, trade policy, IPRs, and public policy. As mentioned above, interaction should be addressed both pre and post-establishment phases.

#### **II.1.3.1) Macroeconomic Stability**

The evolution of real economic activity, production and investment has come to be increasingly dominated by financial cycles. Financial instability and pro-cyclical behavior of finance have far-reaching implications for the real economy. Sharp swings in asset prices, exchange rates and aggregate demand cause a fundamental uncertainty regarding the return on capital, shorten planning horizons and promote defensive and speculative strategies in investment which can, in turn, not only lower the average level of investment over the business cycle (Dixit and Pindyck, 1994), but also distort its allocation at the expense of socially productive capital, the pace and pattern of capital accumulation, economic growth and employment (Fischer, 1993).

The relation between investment regulation and macroeconomic stability become clear, once the investment is defined with the broader terms, as is the case in RTAs, to include portfolio investment, bond, financial derivatives, profits, etc. However, macroeconomic (in)stability is not only influenced by the above component of investment but even by Greenfield FDI activities. There is evidence on the existence of a strong correlation between (i) the stock of FDI and capital flight, (ii) FDI in primary resource and capital flight (Ndikumana and Sarr, 2016).

In addition, literature reports some practices of TNCs such as borrowing in the host country by the subsidiary to lend the money back to the parent company or the parent can

recall intercompany debt (Loungani and Razin, 2001). A direct investor can borrow to export capital, and thereby generate rapid capital outflows (Claessen *et al*, 1993).

Moreover, TNCs are known to be extensively involved in illicit financial outflows from developing countries through such practices as tax evasion. According to UNECA (2014) report, Africa has been losing \$50-\$60 billion per annum in illicit financial outflows in recent years. About 60 percent of these originate from the activities of large foreign companies operating in sectors such as oil, precious metals and minerals, and ores. This outflow is higher than FDI inflow in Africa in 2015 (54 billion).

Some RTAs commit partners' countries to liberalize their service sector, including financial service involving its cross borders capital and payments movements. The outcome is capital account liberalization. According to the standard economic theory, policymakers cannot simultaneously pursue an independent monetary policy, control the exchange rate and maintain an open capital account (this dilemma is known as impossible trinity). If the capital account is liberalized, policymakers have to make a choice between an independent monetary policy and exchange rate controls. Large cyclical swings in the exchange rate and balance of payments may result from the use of monetary policy as a countercyclical tool to stabilize economic activity. Conversely, if monetary policy is used to stabilize the fixed exchange rate, it cannot act as a countercyclical macroeconomic tool and prevent large cyclical swings in economic activity (Akyuz, 2008, 2009; Ocampo and Rob, 2008).

Macroeconomic stability necessitates the control of foreign capital transfers in and out host country territory, especially in respect to portfolio investment and financial derivatives, but also FDI. Financial transactions can accomplish a reversal of FDI. Capital controls can (i) stabilize short-term volatile capital flows, (ii) discourage long-term capital outflows, and more generally (iii) reduce exposure of real economy activities to the high volatility of finance (Ostry *et al*, 2010).

Economists usually differentiate between capital controls on capital inflows and controls on outflows. Inflow restrictions on currency debt can reduce the overall level of such borrowing and steer investment toward longer-term productive investments. Outflows restrictions and measures are usually deployed to "stop the bleeding" and stop capital exit from the host country too rapidly (see Box II.2). However, the use of these policy measures came under severe attacks under investment agreements, as shown by the case of Argentina during its financial crisis.



## Box II.2 Capital control management and capital techniques

Capital control management and capital techniques	
Inflows	
•	Restrictions on currency mismatches <sup>a</sup>
•	End-use limitations <sup>b</sup>
•	Unremunerated reserve requirements <sup>c</sup>
•	Taxes on inflows
•	Minimum stay requirements
•	Limits on domestic firms and residents from borrowing in foreign currencies
•	Mandatory approvals for capital transactions
•	Prohibitions on inflows
Outflows	
•	Limits on ability of foreigners to borrow domestically
•	Exchange controls
•	Taxes / restrictions on outflows
•	Mandatory approvals for capital transactions
•	Prohibitions on outflows

<sup>a</sup> Borrowing abroad only allowed for investment and foreign trade.

<sup>b</sup> Only companies with foreign currency reserves can borrow abroad.

<sup>c</sup> Percent of short-term inflows kept in deposit in local currency for specified time.

**Source: Gallagher (2010, p.3): based on Ocampo et al, 2007; and Epstein et al, 2008**

Restrictions by RTAs on State's autonomy to manage macroeconomic stability could be derived from (i) Agreement coverage scope both at the sectoral and instrumental levels. The inclusion of services sector, especially financial services will lead to the liberalization of the capital account. The inclusion of taxes in the scope of the agreement may prohibit the State from imposing taxes on capital outflows as an instrument to manage disruptive exit of capital. (ii) Investment definition, where US RTAs include not only investment portfolio, but also sovereign debt and financial derivatives, etc. (iii) the design of national treatment standard, in particular, pre-admission standard where covered investment capital inflows would enter the State territory freely. And finally (iv) Transfer provisions, that could, combined with previous provisions, produce a complete liberalization of capital account where the free transfer of capital in and out the country is recognized, as is the case in US RTAs. It should be noted that transfer provisions are absolute standards, what could lead to better treatment of foreign investor than the national investor.

Table (II.4) provide a comparative understanding of State's autonomy to regulate capital account under the International Monetary Funds (IMF) rules, WTO agreement on GATS and the investment chapters of both US and China.

**Table II.4 State's autonomy to regulate capital account under IMF, GATS, and RTAs**

Control measures	Capital Account Regulation under			
	IMF	GATS	US RTAs	China RTAs
<b>Capital account</b>				
Inflows	Preserved	IMF/IMF+ <sup>a</sup>	GATS+	IMF
Outflows	Preserved	IMF/IMF+ <sup>a</sup>	GATS+	IMF
<b>Current transactions</b>				
Inflows	Preserved	IMF/IMF+ <sup>a</sup>	GATS+	IMF
Outflows	Restricted	IMF/IMF+ <sup>a</sup>	GATS+	IMF
<b>Exceptions</b>				
Balance of payment safeguard	Preserved	IMF+	GATS+	IMF

Restricted: investment chapter includes restrictions or prohibition on the use of the policy measure.

Preserved: not covered by the investment chapter, or covered but autonomy is preserved.

GATS+: policy measure is covered under GATS, but RTA rules go beyond its commitments.

IMF+: commitment restricting allowed policy measures under IMF.

IMF: IMF rules are affirmed, or the policy measure was not covered in the investment chapter.

<sup>a</sup>: IMF means that IMF rules apply only where the country had not committed to liberalizing service of Modes 1 and 3 under GATS agreement.

**Source: Salam Alshareef**

### II.1.3.2) Trade Policy

Foreign firms may generate import substitution effects or can facilitate or impede exports by domestic companies. Navaretti and Venables (2004) argue that FDI could replace imports by raising local production. Local firms that were producing close substitutes of previously imported goods are crowded out of the market, forcing them to reduce sales or exit the market altogether. The entry of foreign firms with lower marginal costs leads to a fall in demand for goods produced by domestic firms owing to the higher prices of these commodities (Cuyvers et al, 2008). This leads to higher unit costs of production in domestic firms since the market has to bear the fixed production costs. Demand, therefore, shifts further in favor of goods produced by foreign-owned firms. Aitken and Harrison (1999) refer to this as the “market-stealing effect” of the entry of foreign companies.

Moreover, TNCs may engage themselves in importing more to provide markets to related companies or may indulge in manipulation of transfer prices of imports from related sources to transfer profits. Local content requirements or foreign exchange neutrality could moderate the effect of such practices (Kumar, 2005).

A full account of the impact of FDI on imports would require identification of not only direct imports by the firms concerned, but also the indirect imports embodied in the goods and services locally procured. Accounting for FDI impact on the structure of the balance of

payments, need to analyze its effects on the imports and exports in the economy as a whole through supply and demand linkages and macroeconomic channels.

Trade-related investment measures permit to ensure the compatibility of FDI-trade activities with trade policy objectives. Thus, local sourcing requirements may be a translation of import substitution strategy, and exchange balancing may have the purpose of ensuring exchange price stability in compliance with trade policy, either export promotion or import substitution depending on the sector. The compatibility could be managed both at and in the border, where one of the criteria for foreign investment admission could be the level of its final products' import intensity, and the possibility to condition the entry on import substitution.

Thus, RTAs provisions that might restrict state ability to manage investment interaction with trade policy are national treatment standards and performance requirements, especially trade and exchange balancing requirements and import substitution requirements, etc.

**Table II.5 Host State's autonomy to use trade-related investment measures in TRIMs and RTAs of US and China**

Trade-Related Investment Measures	WTO-TRIMs	US RTAs	China RTAs
Trade-balancing requirements	Restricted	TRIMs+ <sup>a</sup>	TRIMs
Quantitative restrictions	Restricted	TRIMs+ <sup>a</sup>	TRIMs
Exchange balancing requirements	Restricted	TRIMs+ <sup>a</sup>	TRIMs
Domestic content	Restricted	TRIMs+ <sup>a</sup>	TRIMs
Linking domestic sales to exports		Restricted	
Linking domestic sale to foreign exchange earning		Restricted	

Restricted: investment chapter includes restrictions or prohibition on the use of the policy measure.

TRIMs+: policy measure is covered under TRIMs, but RTA rules go beyond its commitments.

TRIMs: Investment chapters do not have rules on the policy measure.

<sup>a</sup> : Covered sectors include excluded sectors under TRIMs, i.e. service and public procurement. In addition, TRIMs agreement safeguard exception in the case of balance of payment difficulties was eliminated.

**Source: Salam Alshareef**

### II.1.3.3) Intellectual Property Rights

The consistency between foreign investment and intellectual property regime is a critical question, as IPRs, including patent, are defined as investment in RTAs. In respect to patent, foreign companies may raise ISDS challenges against State with respect to, for example, patent revocations, issuance of compulsory licenses, parallel importation of pharmaceutical and agrochemical patented products, etc.

Under US RTAs, the issuance of compulsory license, revocation, and limitation on the creation of IPRs could be considered as expropriatory measures even if such practice were in accordance with TRIPS Agreement. Such practices are only permitted if they comply with the RTAs chapters on IPR rules. This adds a new layer of restriction on IPRs practices permitted under TRIPS, as the RTAs rules of US on IPRs are TRIPS *plus* with respect to compulsory license and revocation.

For example, US-based Eli Lilly is suing the Canadian government for invalidating its patents for two drugs, Strattera and Zyprexa, for want of utility. It brings the suit under investment chapter of the North American Free Trade Agreement (NAFTA), claiming that Canadian patent law contravenes both the TRIPS Agreement and NAFTA by imposing onerous and additional utility requirements. Eli Lilly claims, among other things, that the invalidation of both patents constitutes an “expropriation” of “intangible property” acquired in the expectation of economic benefit.

For instance patent regulations, concerning compulsory license may be contradictory with both expropriation and performance requirements rules. US provisions in performance requirements indicate explicitly that “patent does not confer market power”. This eliminates the possibility to grant a compulsory license on the basis of anti-competitive practice. Thus, when states operationalize one of the TRIPS flexibilities, it might be brought before international investment courts for “breaching” investor's rights. In 2007, for example, Brazil's decision to issue a compulsory license on the patented anti-Human Immunodeficiency Virus drug Efavirenz prompted a hostile statement from Merck & Co. characterizing the Brazilian government's move as an expropriation of its property (Gibson, 2010).

Like compulsory licensing, the disclosure of clinical trial data may also be deterred by the threat of Investor-State disputes launched by foreign pharmaceutical companies. In 2010, the European Medicines Agency adopted a policy of greater transparency in clinical trial data, triggering the release of nearly two million pages of data. In 2013, however, two US drug companies, AbbVie and InterMune, obtained an interim injunction against the European Medicines Agency preventing the release of “commercially sensitive” information and the European Medicines Agency stopped releasing trial data for fear of further legal action from other pharmaceutical companies (Dyer, 2013).

Investment provisions in RTAs that may restrict IRPs related policy are (i) investment definition, whether it considers IPRs as an investment or not, (ii) expropriation rules, (iii)

performance requirements rules. Finally, establishing a link between investment chapter and IPRs chapter, in particular, if the later rules are TRIPS *plus*, downplay TRIPS flexibilities, is it is the case in the RTAs of US.

#### II.1.3.4) Public Policy

State's overall regulatory space in areas related to public policy is getting circumscribed. Governments might find their normal functions restricted by the threat of having to compensate foreign investors if they introduce policy measures designed to respond to changing circumstances (such as financial crises or new scientific findings) or to public necessities in areas such as environment and health protection (Wallach, 2012). The sole possibility of breaching an investment treaty can be sufficient to deter a State from taking any measure that might alter the business environment, even if this is necessary for economic, social or environmental reasons. The impact of the uncertainty adds to the risk of regulatory chill, as the uncertainty surrounding a large damages award is a State's primary concern if an investor brings an arbitration claim. Finally, international investment arbitrations have seen many cases where foreign investors brought cases against host countries for public policy-related measures especially in the areas of environment and public health (For an example see Box II.5 on TECED v. Mexico case).

RTAs restrictions on public policy space are derived from provisions formulated vaguely, and giving place to increasing numbers of cases brought to international investment courts, especially Fair and Equitable Treatment (FET) and the indirect expropriation provision. It seems that their formulation doesn't hold an importance on the outcomes of investment arbitration as it was illustrated by contradictory arbitral decisions for the same formulations. It is up to tribunals to determine what constitutes compensable indirect expropriation and non-compensable general regulation, the content of FET, and the amount of flexibility it grants to government decision-making.

## II.2) Coverage Scope of Investment Chapters

Coverage scope of investment chapters is determined by (i) covered economic sectors and policy instruments, (ii) geographical and temporal coverage, (ii) its subject matter, i.e. investment and investors having rights under the RTAs, and finally (iii) general exceptions. In addition, substantive provisions on protection and liberalization contain specific

exceptions that impact the overall coverage scope. These exceptions will be assessed while analyzing their substantive provisions in other sections.

### **II.2.1) Sectorial and Instrumental Scope**

From an economic policy perspective, the extent of investment liberalization is directly determined by the economic sectors and policy-instruments that are disciplined by RTAs. This is typically defined through provisions on the scope and coverage. Certain RTAs, like those of US, do not include such provisions, meaning that its substantive commitments apply to all sectors and instruments.

Chinese RTAs provisions on scope and coverage are based on the negative list approach. Public procurement, subsidies, grants (attached or not to conditions) and taxation measures<sup>24</sup> are excluded. At the sectoral level, Chinese RTAs exclude trade in services<sup>25</sup> and public procurement. In the case of commercial presence of service provider, only certain provisions apply. Importantly, national treatment clause does not apply. These exceptions permit higher regulate to control investment admission (especially for service sector and public procurement), the use of subsidies, public procurement and taxation as industrial policy instruments while discriminating in favor of domestic investment. Furthermore, it permits the State to control service sector and to use taxes as means of macroeconomic stability policy framework.

### **II.2.2) Geographical and Temporal Coverage**

The number of States parties to the agreement determines its geographical scope. It is also determined by the territorial limits of the States concerned (UNCTAD, 2011a). The territory is not defined in US PTIA. In the case of China, a definition is provided only in

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<sup>24</sup> In China-Peru RTA Article (142), China-ASEAN RTA Article (3.4), taxation measures are excluded, but expropriation and dispute settlement provisions apply to taxation measures.

<sup>25</sup> China-ASEAN RTA (Article 3.5) and China-South Korea RTA (Article 12.18) state that in the case of supply of service through commercial presence, only the following provisions of investment chapter apply: minimum standard of treatment, expropriation, compensation, and transfer. In the case of China-ASEAN RTA, the dispute settlement provisions apply also. While RTA with South Korea highlights that these provisions apply only to “the extent that they relate to an investment” under Trade in Service Chapter and Financial Service Chapter, RTA with ASEAN highlights that these provisions apply “regardless of whether or not such a service sector is scheduled” in Agreement on Trade in Services.

RTAs with ASEAN as the customs territory of China<sup>26</sup> (excluding Macao, Hong Kong, and Taiwan), and the entire territory of ASEAN countries.

The temporal scope of an agreement raises the issue of whether the agreement applies to an investment established prior to its entry into force (UNCTAD, 2011a). For Both US and China RTAs, the investment chapter applies to existing and future investment. However, in the case of China, dispute settlement procedures do not apply for disputes under consideration of another judicial body and related to an existing investment<sup>27</sup>.

### **II.2.3) Beneficiary of Investment Protection**

Beneficiaries of the agreement refer to the economic activities to which the provisions of an agreement apply, and which are determined by the definition of “investment” and “investor”. Accordingly, the normative content of RTAs is determined by these two terms, as they specify the economic activities to which the operative provisions of agreements apply. These definitions should be seen not as objective formulations of the meaning of terms, but as part of an agreement’s normative content (UNCTAD, 2004b).

It should be noted that State measures may affect one or both categories, investment, and investors, individually or jointly. This would have the consequence of excluding foreign individuals or companies from the RTAs investment rules by limiting its application to the locally established investor or assets acquired under the legislation of the host State (UNCTAD, 2011a).

#### **II.2.3.1) Investment Definitions**

Literature classifies investment definitions into three categories, asset based, transaction based and enterprise based definitions. However, these definitions are not mutually exclusive. Studied RTAs contains elements of all the three, in particular asset-based definition.

For both US and China RTAs, investment refers to “every asset”, suggesting that the term embraces everything of economic value without limitation, though these assets may make no contribution to the host State's economic development, or even may be harmful.

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<sup>26</sup> China-ASEAN RTA (Article 3.1.b(i)(ii)).

<sup>27</sup> China-ASEAN RTA (Article 14.2).

Investment tribunals have shown that the phrase means to a large extent what it says. This was shown by the case of *Chevron V Ecuador*, where the court considered a lawsuit in Ecuadorian courts as an investment deciding that it has jurisdiction over the case<sup>28</sup>.

Besides, US agreements emphasize that investment includes all assets owned “directly or indirectly” by investor of a Party. The term indirectly could have a significant impact in respect to transnational enterprises, especially if combined with a broad definition of the investor. This was shown in the case of *Perenco V. Ecuador*<sup>29</sup> that used Ecuador-France BIT definition of investment as all assets owned indirectly by national of party country. Indeed, Perenco (a) is a company established in the tax haven Bahamas, belonging to another Perenco (b) company in the Bahamas, in turn owned by another Perenco (c) company in the Bahamas, in turn owned by another Perenco (d) company in the Bahamas, in turn owned, partially, by a dead French citizen. The arbitral tribunal decided that Perenco (a) is eligible for protection under France-Ecuador BIT. The tribunal found that Ecuador breached its obligation under the treaty and awarded Perenco compensations and damages (Arauz, 2015).

In the studied RTAs, the general definition is followed by an illustrative list of the main categories of protected investment. Even illustrative, components of the list could have significant consequences given the interaction with other provisions of the agreement. The following categories are common elements in US and Chinese RTAs:

The first category comprises movable and immovable property. Thus, investment explicitly includes merchandise and other tangible property. This indicates that investment may include mere inventory, i.e. finished products stored in a warehouse awaiting sale to consumers. The reference to immovable property makes clear that land is included, even if it concerns speculative real estate investment. FDI includes components such as real estate components<sup>30</sup> that are often driven by speculative motivations and susceptible to sharp fluctuations, to the point that IMF (2009) recommend policy maker “to publish data on such investment separately” from FDI. Cross-border real state acquisitions have played a major role in the increased volatility and gyrations of property prices in the past two decades in

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<sup>28</sup> See Interim Award, Para 150-195 of *Chevron Corporation and Texaco Petroleum Company v. The Republic of Ecuador* (PCA Case No. 34877).

<sup>29</sup> *Perenco v. Ecuador Perenco Ecuador Limited v. Republic of Ecuador (Petroecuador)*, ICSID Case No. ARB/08/6.

<sup>30</sup> This has led the IMF (2009, p.105) to suggest that “[b]ecause it may have different motivations and economic impact from other direct investment, if real estate investment is significant, compilers may wish to publish data on such investment separately on a supplementary basis”



several countries (Akyuz, 2015)<sup>31</sup>.

The second category comprises various types of interests in companies. It includes shares, stocks, and debentures of companies or interests in the property of such companies. Defining investment to include shares of companies gives independent rights to minority shareholders in a company with respect to the company as a whole. This was confirmed by CMS v. Argentina<sup>32</sup> case, in which the claimant, CMS an American company holding 30% of the shares of an Argentina gas transports company. The Tribunal held that it has full jurisdiction in the case as the US-Argentina BIT provide for a broad definition of investment including “equity, stock or shares in a company” (paras. 68–76, Annulment Decision). This case shows that interaction between foreign investment regulation and financial stability do not arise only from transfer provisions (see section) or service sector liberalization, but from the whole structure of investment agreements provisions (see box II.3).

Furthermore, this category includes portfolio that is an investment of a purely financial character, where the investor remains passive and does not control the management of the investment. The primary concern of portfolio investors is the appreciation of the value of their capital and the return that it can generate, regardless of any long-term relationship consideration or control of the enterprise. Portfolio investment does not lead to technology transfer and other benefits associated with direct investment.

In addition, it covers debt, as it's shown by the explicit reference to debentures, including bond issued by public agencies. Therefore, in case a State needs to restructure a foreign debt, holders of debt instruments, including vulture funds, may resort to dispute settlement to request the entire face value of the original debt instead of participating in the restructuring process (UNCTAD, 2011b).

*In the case of Abaclat and Others Vs. Argentine*<sup>33</sup> ICSID tribunal has accepted jurisdiction to hear a claim by tens of thousands of Italians who claim to hold securities

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<sup>31</sup> According to Akyuz (2015, p.14): “Foreign purchases played an important role in the build-up of the Spain property bubble in the run up to the crisis in 2008. Hopes are now pinned once again on foreign demand for the recovery of the housing market in Spain as sales to foreigners increased almost 209 per cent in the 12 months ending in October 2014 with the share of foreigners hitting a new high of 13 per cent of the market (Taylor, 2014)”.

<sup>32</sup> CMS Gas Transmission Co. v. Republic of Argentina, (ICSID Case No. ARB/01/8).

<sup>33</sup> See Abaclat and others v. Argentine Republic, ICSID Case No. ARB/07/5.

linked to Argentine sovereign bonds. The dispute relates to Argentina's sovereign debt restructuring in the wake of the country's financial crisis. Argentina's deep recession reached a crisis point in 2001, when it deferred over US\$100 billion of external bond debt. The tribunal decided that bonds and securities under consideration constitute investment according to Argentina-Italy BIT.

### **Box II.3 CMS v. Argentina case**

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Under the Gas Law, the national state-owned gas monopoly was divided into a number of companies to be privatized, one of which was Transportadora de Gas del Norte (TGN). In December 1992, TGN was granted a license to transport gas in Argentina. By 1999, CMS Gas Argentina, a wholly owned subsidiary of claimant CMS Gas Transmission Company (CMS), a United States company, had purchased close to 30 percent of TGN's shares.

According to CMS, its tariffs were to be calculated in dollars, converted to pesos at the time of billing and adjusted every six months in accordance with the United States Producer Price Index. In the late 1990s, a serious economic crisis began in Argentina. In 2000, the representatives of the gas companies agreed to defer the adjustment of the gas tariffs in accordance with the United States Producer Price Index.

As the crisis deepened, a law declaring a public emergency was passed in 2002, under which the right of licensees of public utilities to adjust tariffs according to the United States Producer Price Index was terminated, as well as the calculation of tariffs in dollars. The tariffs were redenominated in pesos, at the rate of one peso to one dollar. CMS commenced arbitration proceedings against Argentina at ICSID under the United State-Argentina (BIT). The Tribunal ruled that Argentina had breached its obligations under fair and equitable treatment and the umbrella clause.

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**Source: Bernasconi-Osterwalder and Johnson (2011)**

The third category includes claims to money and claims under a contract having a financial value. Thus, it provides an explicit textual basis for concluding that “investment” may embrace contractual rights for the performance of services, such as management agreements, contracts for accounting or other professional services, turnkey contracts, and insurance policies. Further, the RTAs do not require that contracts be long-term contracts (UNCTAD, 2004b). Consequently, short-term services agreements, where no productive investment is taking place, and that ordinarily would be considered current transactions, is considered as an investment.

The case of *SGS v. Pakistan*<sup>34</sup> showed how a broad definition of investment could be interpreted to cover a broad range of activities and expenditures made by investors, including, in this instance, a contract for services under which Pakistan had hired SGS for a period of

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<sup>34</sup> *SGS Société Générale de Surveillance S.A. v. Islamic Republic of Pakistan*, ICSID Case No. ARB/01/13.

time. The tribunal found that SGS made certain expenditures in the territory of Pakistan to carry out its obligations under the Pre-shipment Inspection Agreement<sup>35</sup> that constituted an investment under the BIT. The term “investment” and that the definition of that term in the Switzerland–Pakistan BIT is broad, including “*every kind of asset*” and, in particular, “*claims to money or to any performance having economic value*” and “*concessions under public law...as well as all other rights given by law, by contract or by decision of the authority in accordance with law*” (para. 134, emphasis added by Tribunal).

The fourth category comprises intellectual property rights. Such rights may include trademarks, trade secrets, patents, and copyrights. This adds a new layer of IPRs protection, creating additional obstacles to the development of production capacities and technological capabilities as a principal element of structural transformation. In some RTAs of US and China, the reference to intellectual property explicitly includes “technical processes”, and “know-how”, which suggests that investment, can include at least some forms of valuable information that are not protected under TRIPS. They include goodwill, an indication that the protected assets of a company may include not only its tangible property but its reputation as well.

The fifth category is business concessions, including natural resource concessions. It is of interest for FDI in natural resources and extractive industries. This category suggests that investment may sometimes include privileges or rights granted to private parties by the government, in addition to more traditional forms of property that are generally acquired through transfer among private parties (UNCTAD, 2004b).

Investment definitions in the RTAs of US explicitly include speculative assets, such as “futures, options, and other derivatives”. Considering financial instruments and derivatives as investments in combination with pre-establishment national treatment and the inclusion of services sector, extremely limit State ability to ensure the financial stability of the economy.

Consequently, there exist huge divergence between the extremely broad definition of investment in RTAs and the development economics conception of investment as productive capital.

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<sup>35</sup> Pursuant to the agreement, SGS agreed to provide pre-shipment inspection services with respect to goods to be exported from certain countries to Pakistan, in order to ensure that goods were classified properly for duty purposes and to enable Pakistan to increase the efficiency of its customs revenues collection.

Chinese RTAs narrow the scope of covered “investment” by incorporating some limitation in investment definition. Chinese RTAs emphasize that investment should be established and operating in accordance with host country laws. Such limitation, combined with the absence of pre-establishment national treatment standard, reserve the right of the host country to control investments admission. It ensures that only those investments that have been approved by the host country are entitled to protection under the agreement. Moreover, such screening can examine the development implications of the investment. For instance, China-ASEAN PTIA, make an explicit statement that protected investment are those made in accordance with government policies, with footnote clearing the term government policies as “those affecting investment that are endorsed and announced by the Government of a Party, and made publicly available in a written form”<sup>36</sup>.

#### **II.2.3.2) Investor Definitions**

Investment agreements generally apply only to investment by those who are qualified as covered investors. The definition of the term “investor” thus can be critical to determine the scope of an investment agreement.

Two types of entity may be included within the definition of “investor”: natural persons or individuals and legal persons, also referred to as legal or juridical entities. The determination of whether a natural person is covered by an agreement concerns the qualifying links of the person with the State party to the agreement, such as nationality and residency (UNCTAD, 2004b)<sup>37</sup>. Both China and the US adopt the nationality as criteria. China-ASEAN PTIA considers the criteria of permanent residency<sup>38</sup>.

With respect to legal persons, the criteria by which nationality is established vary among countries. Among the criteria in use, the place of incorporation, the location of the company seat and the nationality of the controlling shareholders or owners are prominent. A related set of issues arises on dual nationals where one nationality is that of the host State.

US RTAs don't define any criteria for legal persons except being an enterprise of a Party. In China case, three qualification criteria are observed: to be established under a party laws

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<sup>36</sup> China-ASEAN RTA footnote1.

<sup>37</sup> A concept like permanent residence can be used as an alternative to nationality criteria. This is in the interest of high immigration countries in which a considerable proportion of the economically active population may not yet have citizenship. Such countries (e.g. the United States) regularly extend a special legal status to permanent residents (UNCTAD, 2011a).

<sup>38</sup> Indonesia, Laos, Myanmar, Thailand and Vietnam are excluded from this obligation. China conditions it application on the reciprocity.

and regulation<sup>39</sup>, having its seats in one of the Party's territories (RTAs with Pakistan and Peru), and engaged in substantive business operation (RTA with ASEAN).

A broad definition of “investor” can result in unanticipated or unintended coverage of persons (natural or legal). For example, if a treaty determines the nationality of a corporation solely on the basis of the place of incorporation, it creates opportunities for treaty shopping or free riding by investors not conceived to be beneficiaries. A corporate entity can relatively establish a formal presence in a foreign country by, for example, changing the place of incorporation, incorporating a new affiliate, and/or registering itself with the appropriate domestic authorities (UNCTAD, 2011; Bernasconi-Osterwalde *et al*, 2012).

This case of *Tokios Tokelés v. Ukraine*<sup>40</sup> suggests that not only an investor from a third State can obtain the benefits of IIAs protection, but even an investor from the host State itself. Although it was recognized that the company incorporated in Lithuania was owned and controlled by Ukrainian nationals (who owned 99 percent of the shares and formed two-thirds of the management), the majority of the tribunal held that the company is covered by Lithuania–Ukraine BIT. This conclusion was based on the fact that the BIT defined an “investor” of Lithuania under Article 1(2)(b) as an “entity established in the territory of the Republic of Lithuania in conformity with its laws and regulations.”

There are various technics to narrow the range of covered investors. A treaty may add a requirement that a company must have its seat in the home State and carry out real economic activities there. This approach is observed in China RTAs with Peru and Pakistan. RTAs may indicate that investors will only be protected if they have substantial business activities in the home State (UNCTAD, 2011a). This approach is observed in China-ASEAN RTAs.

In contrast, some US RTAs broaden that definition further by stating that a covered “investor” may include those that have not yet established an actual investment in the host country. US definition of investor refers to enterprises, nationals “that attempt to make, is making, or has made an investment in the territory of another party.” Such emphasis serves to reinforce “investors” protection in pre-establishment phase.

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<sup>39</sup> China-ASEAN RTA (Article 1.e and 1.f), China-Peru RTA (Article 126), China-Pakistan RTA (Article 46.3), China-South Korea RTA (Article 12.1).

<sup>40</sup> *Tokios Tokelés v. Ukraine* *Tokios Tokelés v. Ukraine*, ICSID Case No. ARB/02/18.

## II.2.4) Exceptions

States can circumscribe the scope of RTAs by excluding specific subject matters. This exclusion could reach policy instruments such as taxation and subsidies and grants, or sectors such as government procurement or trade in services. In addition, some agreements include a general exception for cases where investment rules do not apply, such as for public interest etc.

China-ASEAN RTA contains article on general exception where agreement provisions does not apply in case where it's necessary: to protect public morals and maintain public order, to protect human, animal or plant life, to secure compliance with laws or regulations which are not consistent with the provisions of the agreement, to ensure the equitable or effective imposition or collection of direct taxes (as defined by GATS footnote 6). Importantly it makes explicit reference to paragraph 2 of GATS Annex on financial services, where the right of countries to use macro-prudential measures is established<sup>41</sup>. There is no exception related to the scope of the agreement under US RTAs.

To summarize, both Chinese and US RTAs aim at liberalizing investment regime. Nevertheless, their scopes of liberalization, at the horizontal and vertical levels are different under both countries approach. While the US liberalize all economic sectors and economic policy instruments, China adopts the negative list approach that excludes some sectors, service and public procurement, in addition to some important industrial policy instruments, i.e. subsidies and taxes. Equally, both countries adopt a broad definition of investment. Still, US one is well more extensive than Chinese as it refers explicitly to speculative assets. In respect to investment and investor benefiting from RTAs protection, Chinese approach includes additional qualifications compared to the US, in an attempt to limit TNCs abusive practices such as treaty shopping or the establishment of shell companies. Differences between both approaches reveal to be significant, from the perspective of the foreign investment regulatory framework, in particular, when combined with other provision different formulations, especially in respect to investment standard of treatment. Table (II.6) synthesis rules on coverage scope in both Chinese and US RTAs.

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<sup>41</sup> Paragraph 2 of Annex on financial services states “ a Member shall not be prevented from taking measures for prudential reasons, including for the protection of investors, depositors, policy holders or persons to whom a fiduciary duty is owed by a financial service supplier, or to ensure the integrity and stability of the financial system. Where such measures do not conform with the provisions of the Agreement, they shall not be used as a means of avoiding the Member’s commitments or obligations under the Agreement.”

**Table II.6 Coverage scope of investment chapters under RTAs of US and China**

RTAs coverage scope	US		China		
	All RTAs	Pakistan	ASEAN	South Korea	Peru
<b>Temporal scope</b>	Ex ante & ex post		Ex ante & ex post <sup>a</sup>		Ex ante & ex post <sup>a</sup>
<b>Geographical scope</b>	All territories	All territory	All territory <sup>b</sup>	All territory	All territory
<b>Instrumental and sectoral exceptions</b>					
Subsidies	no	no	yes	no	no
Taxation	no	no	yes	no	yes
Service	no	yes	yes	yes	yes
Public procurement	no		yes	no	yes
<b>General exception</b>	no	no	yes	no	no
<b>Investment definition</b>					
All assets	yes	yes	yes	yes	yes
Indirect ownership	yes	no	no	yes	no
Portfolio investment	yes	yes	yes	yes	yes
Financial derivatives	yes	no	no	no	no
IPRs	yes	yes	yes	yes	yes
Narrowing the definition <sup>c</sup>	no	yes	yes	no	yes
<b>Qualified investor</b>					
<b>Natural person</b>					
Nationality	yes	yes	yes	yes	yes
Bi-national	yes	no	no	no	no
Permanent residency	yes	no	yes <sup>d</sup>	no	no
<b>Legal entities</b>					
Substantive activity	no	no	yes	no	no
Seats in either party	no	yes	yes	no	yes

<sup>a</sup> dispute settlement procedures do not apply to cases under consideration of another judicial body and related to an existing investment.

<sup>b</sup> For China: Hong Kong, Macao, and Taiwan are excepted.

<sup>c</sup> Investment should be established in accordance with host state Laws.

<sup>d</sup> Except for Lao, Myanmar, Thailand and Vietnam. China only reciprocal MFN.

Source: Salam Alshareef

### II.3) Foreign Investment Treatment Standards

As in trade, the non-discrimination standards, i.e. National Treatment (NT) and Most Favored Nation (MFN), are the most influential commitment of treatment on the industrial policy space in RTAs. However, IIAs include another, distinct, standard of treatment: Fair and Equitable Treatment (FET), which become a polyvalent provision raised by complaining investors in almost every investment dispute, thus, having a substantial impact on host State's

regulatory space. The content of NT and MFN is defined in relation to the treatment accorded to other national investors and foreign investors, this is why they are known as relative standards. They establish non-discrimination principle, as between foreign investors of different origins in the case of the MFN standard, and as between foreign and domestic investors, in the case of the NT standard. As the FET is supposed to establish itself its contents through its (vague) formulation, it is qualified as absolute standard (UNCTAD, 2012d).

The scope of NT and MFN in the investment field goes well beyond their use in trade agreements. The activities of foreign investors in their host countries encompass a wide array of operations, including international trade in products, know-how, and technology, local production and distribution, the raising of finance capital and the provision of services, the administrative procedures involved in the creation of an enterprise etc. Hence, wider categories of economic transactions are subjected to national treatment disciplines under investment agreements than under trade agreements. In trade, they apply to measures at the border, in particular to tariffs. In relation to investment, they usually apply to the treatment of investors after entry, though some agreements also extend its operation to the pre-entry stage. Given the close interrelationship between trade and investment in the operations of TNCs, the combined effect of trade-related and investment related NT and MFN is to offer freedom for TNCs to choose the precise mode of operation in a host country on an equal basis with their competitors (UNCTAD, 1999).

Therefore, the non-discrimination standards have serious impacts on a broad range of industrial policy instruments and practices. Especially, NT standard could be devastating for the local producer, as unequal “level playing field” for local and foreign investors is likely to result in more unequal results when the capacities are unequal, as foreign investors are larger and starting from a much stronger position. An indiscriminate policy of opening up and of treating foreign firms on equal or better terms than local companies goes in opposite direction with industrial policy prerequisites (Khor, 2006).

### **II.3.1) National Treatment**

The question of the scope of application of the national treatment standard involves two issues: first, at what stage of the investment process does national treatment apply? It requires consideration of whether national treatment applies to both the pre and post-admission stages



of the investment process or whether the national treatment standard applies only to investments that have already been admitted to a host country (UNCTAD, 1999).

US RTAs establish the pre-admission liberalization through the provision of national treatment for the whole cycle of investment life, covering “the establishment, acquisition, expansion, management, conduct, operation, and sale or other disposition of investments”<sup>42</sup>. Pre-admission NT treatment covers the entry conditions of investment, conferring rights to the investor both at the moment the investment is effectively materializing and prior to that point, i.e. while it is still in the making.

Chinese RTAs are limited to post-admission liberalization where NT standard apply in respect to “management, conduct, operation, maintenance, use, sale, liquidation, or other forms of disposal of such investments”<sup>43</sup>. Post-admission NT standard applies only once the investment is established. Therefore, the protection covers the life-cycle of the investment after entry, from start-up to the liquidation. Consequently, State can regulate, close, condition the entry of foreign investment in certain industries and sectors.

Another question having repercussion on the territorial scope is the administrative scope of NT standard: what is the meaning of national treatment where States have subnational authorities exercising constitutional powers to make investment policy? Such power may be used to grant preferential treatment to local investors (UNCTAD, 1999). A question that may arise in this respect is: what category of national investors constitutes the criterion for comparison with foreign investors for the purpose of national treatment, local subnational investors or other national investors? This issue is made clear under all US RTAs, where NT apply to all level of government federal or regional<sup>44</sup>.

The issue of the substantive content of the national treatment standard involves two closely related questions (UNCTAD, 1999): first, what are the factual situations in which national treatment applies? It defines the limits of factual comparison. Investment agreement makes usually reference to three situations, (i) the “same” or “identical” circumstances, (ii) like situations”, (iii) “similar situations” or “like circumstances”, (v) no factual comparisons.

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<sup>42</sup> See China-Chile RTA (Article 10.2), China-CAFTA-DR RTA (Article 10.3), China-Panama RTA (Article 10.3), China-Peru RTA (Article 10.3), China-Colombia (Article 10.3), China-South Korea RTA (Article 10.3), China-Morocco RTA (Article 10.3), China-Oman RTA (Article 10.3).

<sup>43</sup> See China-ASEAN RTA (article 4), China-Peru RTA (Article 129). Formulations in the case of RTAs with Pakistan and South Korea are less precise, where national treatment is accorded to “investment activities”. See China-Pakistan RTA (Article 48.2) and China-South Korea RTA (Article 12.3).

<sup>44</sup> See US-Colombia RTA (Article 10.3.3).

Second, in what manner, and to what extent, is the treatment of foreign investors assimilated to that of nationals? This deals with the techniques of comparison, the application of which is limited to the factual situations identified in answering the first question. RTAs have defined the NT standard in two main ways. The first requires a strict standard of equality of treatment between national and foreign investors through the formulation “as favorable as”. The second is “no less favorable” treatment than nationals. The second formulation offers the possibility of granting more favorable treatment to foreign investors.

In fact, both US and Chinese RTAs establish “no less favorable treatment”, “in like circumstances”, as references for factual comparison.

In addition, tribunals could take broad views of what are investors “in like circumstances”, even grouping investors involved in completely different economic sectors and activities in the same category. In one case, the tribunal determined that a foreign investor involved in oil production and exportation was in “like situations” with domestic investment involved in the production and export of lumber, bananas, and palm oil. The tribunal found that the State had discriminated against the foreign investor in violation of the national treatment obligation (Bernasconi-Osterwalde et al, 2012).

Some agreement includes exceptions to NT standards. The use of exceptions enables host countries to exclude particular types of enterprises, activities or industries from the operation of national treatment. In China-Peru RTAs countries “reserve the right to adopt or maintain any measure that accords differential treatment to socially or economically disadvantaged minorities and ethnic groups”, and where minorities defined as to “include peasant communities”, and ethnic groups defined as “indigenous and native communities”. Such exceptions could put agriculture sector, farming, food and animal industry out of NT coverage.

Almost all components of foreign investment regulation framework would be practically paralyzed by the adoption pre-admission NT standard, as is the case in US RTAs. Losing ability to regulate investment admission means automatically restraining State’s ability to address the two other components of foreign investment regulatory framework. Reaping developmental benefits from foreign investment by conditioning the entry against certain performance requirements will not be possible. Likewise, it will not be possible to manage

interactions with other industrial policy areas at the border, such as macroeconomic stability, trade policy, and public policy.

Chinese RTAs incorporates a post admission NT that permits the State to control FDI admission and to select and conditions the entry of investment in function of industrial policy objectives development strategy. Furthermore, State can ensure the compliance of the FDI with the two other components of investment policy on the border, and State can discriminate against foreign investments in borders as instruments such as taxes and subsidies are excluded from the scope of the agreement.

Three cases that were raised against Mexico under NAFTA agreement show to which level the NT standard can have paralyzing effects. CPI<sup>45</sup>, Cargill<sup>46</sup> and ADM<sup>47</sup> are American companies engaged in the manufacture and production of particular high fructose corn syrup used as soft drink sweetener, in Mexico. Their Claims arose out of Mexico's 2002 adoption of a tax on beverages containing high fructose corn syrup that allegedly affected the claimants' investments in the high fructose corn syrup industry in Mexico. The three companies argued that the government of Mexico interfered with its investment in the Mexican market, in breach of Mexico's legal obligations under Chapter 11 of the NAFTA. The context and conclusions of these disputes are of particular relevance on the how the rules enforcement and interpretations are matters of power relations (see BoxII.4). Three arbitrations found a breach of NT clause, two of them found a breach of performance requirements rules.

These three cases demonstrate how State's measures aimed at creating backward linkage with local products, may give raise to disputes on the basis of violating the NT standards for foreign investors. The three tribunals maintained that the tax constitutes discrimination motivated by the nationality of the investor on the basis of tax both effects and intent<sup>48</sup>.

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<sup>45</sup> See *Corn Products International, Inc. v. United Mexican States* (ICSID Case No. ARB(AF)/04/1).

<sup>46</sup> See *Cargill, Incorporated v. United Mexican States* (ICSID Case No. ARB(AF)/05/2).

<sup>47</sup> See *Archer Daniels Midland and Tate & Lyle Ingredients Americas, Inc. v. United Mexican States* (ICSID Case No. ARB(AF)/04/5).

<sup>48</sup> Cargel (para 220, p 59-60, Final Award), AMCD (Para 211, P 68, Final Award), CPI award is not public.

## Box II.4 Background of Cargill, ADM and CPI v. Mexico cases

High Fructose Corn Syrup (HFCS) is one of the products of refined corn. HFCS is used primarily as a sweetener in the food and beverages industry, where it competes directly with sweeteners made from sugar. By the mid-1980's HFCS had become the sweetener most commonly used in soft drinks in the US.

During the 1990's Mexico had a surplus of sugar which, but it was unable to export to the US. The latter is the only potentially available market in which prices were so far in excess of the world market price. As a consequence of competition from HFCS, sugar's share of the market for soft drinks sweeteners in Mexico had fallen. Approximately two million people were working in the sugar industry in Mexico, and the economic situation led to some bankruptcies, unemployment and falling prices paid to sugarcane growers.

Consequently, the Mexican sugar industry was engaged in a dispute with the United States over access to the United States market. Mexico complained to the United States the restrictions on Mexican sugar surplus access to the United States market in breach of NAFTA obligations. After different consultations, the problem has not been resolved.

In 2000 Mexico requested the establishment of an arbitral tribunal under NAFTA. No tribunal was established. The reason is a subject of a controversy between the United States and Mexico over whether tribunal has a jurisdiction or not.

In 2001 the Federal Congress in Mexico enacted legislation amending the Impuesto Especial Sobre Produccion y Servicios ("IEPS"), an excise tax. These amendments required bottlers of soft drinks to pay a tax of 20% on the full price of each drink. The tax was also payable on each increase in price when the soft drink was transferred in the chain of distribution to the retailer. An exemption from the tax was accorded if the soft drink was manufactured using sweeteners made exclusively from cane sugar. The result was that the new tax was effectively payable only on soft drinks made using HFCS.

Source: ADM and Cargill Awards

Although national treatment standard, whether pre or post-admission, permit, theoretically to discriminate between different investment activities in industries, sectors or regions, as long as they do not discriminate between foreign and local investments (UNCTAD, 1999), in the case of incentives (subsidies) integrated in control mechanism, the limited fiscal policy space for developing countries could act as *de facto* restriction on the ability to use such incentives in the context where foreign investment are present in the targeted sector (except where incentives are not covered by the agreement as in the case of Chinese RTAs).

This was demonstrated in the case of Occidental v. Ecuador (I)<sup>49</sup>. "Occidental", a US company, was engaged in exploration and production of oil in Ecuador with an Ecuadorian State-owned corporation. In 2000-2001 Occidental was reimbursed amounts of value added

<sup>49</sup> Occidental Exploration and Production Co. v. Ecuador, LCIA Case No. UN3467, Award, July 1, 2004, paras. 167-179.

tax Value Added Tax paid by it on purchases required for its activities. Later, the Ecuadorian tax authority issued resolutions denying all further applications for Value Added Tax refunds by Occidental on the grounds that Value Added Tax reimbursement was already accounted for in the contract. It required the return of the amounts previously reimbursed.

Although the Tribunal found that Occidental don't have the right to receive Value Added Tax refunds under the contract, it concluded that the company was entitled to such refunds under the Ecuadorian tax legislation and the law of the Andean Community. Consequently, the Tribunal condemned Ecuador to accord the company less favorable treatment than that accorded to certain national investors who continued to benefit from Value Added Tax refunds, which constituted a violation of the national treatment obligation. This case shows how NT clauses would force States to grant incentives to the foreign investor on equal basis with national ones, which render incentives useless from the industrial policy point of view.

Even more, given their competitive advantage, foreign investors may gain lion share of State distributed benefits relative to national enterprises and wipe them out of the market.

### **II.3.2) Most Favored Nation**

MFN treatment under IIAs generally extends to investors and their investments. The substantive coverage of MFN concerns three questions (UNCTAD, 2010). First, at what stage of the investment process does MFN apply? Second, what are the factual situations in which MFN applies? And finally, in what manner the treatment of foreign investors are compared to each other?

US and Chinese RTAs<sup>50</sup> accord pre-admission MFN to covered investments and investors treatment should not be “less favorable” than any third party, “in like circumstances”.

MFN is one of the most problematic provisions in investment agreement, as it gives rise to the practice of “treaty shopping” through the importing of substantive provisions from other agreements. This could include importing “more favorable” substantive protection standards, importing protection provisions which are absent in the basic treaty, comparing treatment “in like circumstances” and identifying better treatment, eliminating provisions of

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<sup>50</sup> China- South Korea RTA (Article 12.4), China- ASEAN RTA (Article 5.2) and China- Peru RTA (Article 131)

the basic treaty, altering scope of the treaty. Therefore, where an investor whose rights against the host state are governed by one investment agreement with an MFN provision can search the universe of RTAs to which the host State is a party (UNCTAD, 2010). Some countries investment agreements, such as Netherland BIT, seem to be a Gateway to ‘treaty shopping’ practice for TNCs (Os and Knottnerus, 2011).

Some arbitral decisions suggest that when importing these enhanced rights, investors can unhinge them from their associated limitations and exceptions. This arguably enables investors to create a “super treaty” that no country has been actually willing to conclude, but that the investors can craft by putting together a patchwork of only the most favorable provisions of existing agreements (Bernasconi-Osterwalde et al, 2012).

Siemens Vs. Argentina case<sup>51</sup> shows that an investor can use an agreement MFN clause to get access to a more favorable dispute resolution clause in another agreement to which the host state is a party. Siemens sought to use the MFN clause in the Germany-Argentina BIT to avoid its requirement that disputes be submitted to local courts for 18 months before investors can resort to arbitration. Siemens imported a more favorable dispute resolution clause from the Chile–Argentina BIT, which did not require recourse to local courts first. The Tribunal referred to Maffezini v. Spain case, where the investor was likewise allowed to use an MFN clause to access a more favorable dispute settlement clause in another Spanish BIT. Though MFN formulation differs in both BIT, the tribunal decided that what was applied in the case of Maffezini v. Spain apply to Siemens case.

Some agreements provide exceptions to MFN, in order to avoid both free rider practices and treaty shopping. Chinese RTAs exclude from the scope of MFN obligations the actual and future RTAs and BITS. In addition, Chinese RTAs make it clear that MFN doesn’t include the extension to investors of other Party dispute resolution procedures other than those set out in the Agreement<sup>52</sup>. Agreement with Peru excludes from the scope of MFN agreements provisions related to avoidance of double taxation<sup>53</sup> or for facilitating frontier trade. Besides, some discriminating measures are permitted, specifically, those targeting “socially or economically disadvantaged minorities and ethnic groups; or involving cultural industries related to the production of books, magazines periodical publications, or printed or

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<sup>51</sup> Siemens A.G. v. Republic of Argentina, ICSID Case No. ARB/02/8.

<sup>52</sup> See China- ASEAN RTA (Article 4.4) and China- South Korea RTA (Article 12.4.4)

<sup>53</sup> Under double-taxation treaties, the contracting parties partly renounce, on a mutual basis, their right to tax investors located in their territories in order to avoid double taxation. Each contracting Party, therefore, waives its taxation rights only if the other contracting Party undertakes the same commitment (UNCTAD, 2011a).

electronic newspapers and music scores.” Agreement with South Korea excludes specific sector: aviation, fishery and maritime matters including salvage.

Against these exceptions provided for in Chinese RTAs, US RTAs provide only one exception in only two agreements. RTAs with Colombia and Peru exclude the access to dispute settlement procedures that are provided for in international investment treaties or trade agreements<sup>54</sup>.

### **II.3.3) Fair and Equitable Treatment**

The fair and equitable treatment standard applies to investments without reference to how other investments or entities are treated (UNCTAD, 2012d). However, the concrete meaning of fair and equitable treatment remains subjects of considerable uncertainty (Kläger, 2010).

It remains one of the most controversial issues in international investment law. Due to the indeterminacy of its language and some far reaching arbitral decisions, it has become a prominent cause of action, which is ubiquitous in investor-state arbitration.

The standard would provide a gap-filling provision, as not all kinds of “unfair” State’s regulatory measures could be subsumed under the non-discrimination or protection of property provisions (Dolzer and Schreuer, 2008)<sup>55</sup>.

At the same time, identification of the source of the FET standard has important consequences in terms of the types of State’s measures that can be challenged, in addition to the required threshold for finding a violation. In fact, there is no consensus as to what constitutes the minimum standard of treatment of alien under customary international law. The reality is that the minimum standard itself is highly indeterminate, lacks a clearly defined content and requires interpretation (Porterfield, 2006).

Importantly, arbitral awards are not uniform, even on FET clauses of an identical formulation (UNCTAD, 2012d). There is no common approach, in the existing awards of arbitral tribunals, to the interpretation of the FET clauses and the minimum standard of treatment of aliens. Furthermore, tribunals tend to justify their findings by reference to earlier

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<sup>54</sup> Footnote 2 of US-Colombia RTA, Footnote 2 US-Peru RTA.

<sup>55</sup> Cited from UNCTAD (2012d).

awards, though different types of formulation used in treaties may require differentiated interpretations.

If policymakers do not know in advance what type of conduct may be considered a breach of FET standard, this may generate what is called “regulatory chill effects”, in addition to positive discrimination in favor of foreign investors.

Many arbitral awards have interpreted the FET on the basis of the “investor’s legitimate expectations” concept. This concept is an arbitral innovation. When economic or regulatory measures undergo changes negatively affecting the investment’s value, they may be seen as a breach of investor’s legitimate expectations. Paradoxically, investment rules and arbitration make no reference to legitimate expectation of host State in respect development, health, public, etc. issues. The result in an open-ended and unbalanced approach, which unduly favors investor’s against host State’s legitimate development objectives (UNCTAD, 2012d).

Such provision could create additional unnecessary hurdles to developing countries, where the functioning of public administration is far from optimal. It would be unreasonable for investors in developing countries to have expectations of treatment by the local authorities no different from that anticipated in the most advanced countries (UNCTAD, 2012d).

Analysis of FET provision is rather of legal nature, and focus on its relation to “international customary law”. As discussed above, identical formulation leads to different tribunal decisions, as well as different formulations lead to the same tribunal decisions. However, all studied RTAs of US and China contains FET, with rather similar formulations.

The Tribunal decision in the *TECMED v. Mexico* case<sup>56</sup> shows how FET may be interpreted very broadly. The Tribunal concluded that “the contradictions and lack of transparency” and “the absence of clear signs”, did not permit Tecmed to avoid infringement of Mexican law.

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<sup>56</sup> *Tecnicas Medioambientales Tecmed S.A. v. United Mexican States*, ICSID Case No. ARB(AF)/00/2.



## Box II.5 Tecmed v. Mexico case

In February 1996, Tecmed a subsidiary of the Spanish claimant purchased an existing hazardous waste landfill and related assets. Tecmed subsequently obtained the permit necessary to operate the Landfill from the federal agency in charge of Mexico's Environmental Protection Agency (para. 36). Although Tecmed's Permit was a renewable one-year license, the prior operator's permit was valid for an indefinite duration (para. 36). Despite this difference, Tecmed did not protest or otherwise raise the issue of the Permit's duration with relevant Mexican authorities (paras. 58, 92).

Tecmed<sup>2</sup> breached some terms of the Permit and applicable regulations, conduct for which it was investigated and fined (para. 43). Concerned by those violations and other issues, community groups mounted strong opposition to the continued operation of the Landfill (para. 43). In addition to protesting Tecmed's improper conduct, civil society groups protested the Landfill's close proximity to the population center of Hermosillo, 8 km, which was less than the 25 Km distance between urban centers and such landfills that Mexican regulations, enacted after the Landfill's 1988 construction, required (para. 106). Due to this community opposition, Tecmed committed to providing the funds necessary to relocate the Landfill (para. 147, 160, 162).

When Tecmed sought a second renewal in November 1998, the agency denied the request and ordered Tecmed to close the facility (para. 39). Justification of this decision were various (1) the wastes contained at the Landfill exceeded limits authorized by the Permit, (2) the Landfill temporarily stored waste destined for another facility without the authority to serve as such a "transfer center" (3) the Landfill received liquid and biological-infectious wastes despite lacking the necessary permit to do so, and (4) Tecmed had agreed to, but had not accomplished, relocation of the Landfill to a site farther away from Hermosillo's urban center (para. 99).

One of the notable aspect of Tribunal decision in the **Tecmed v. Mexico case** is the broad interpretation of the FET standard. The Tribunal argued that Spain-Mexico BIT provision required the state parties to act consistently, transparently and without ambiguity toward foreign investors and their investments (paras. 154–156). The Tribunal argued that, before denying renewal of the permit, Mexico specialized agency did not report "in clear and express terms", its position to Tecmed as to the effect of later infringements on the renewal of the permit. Consequently, Tecmed was prevented from expressing its position and to concert with the specialized agency about the measures required to cure the infringements. The Tribunal concluded that "the contradictions and lack of transparency" and "the absence of clear signs", did not permit Tecmed to "adopt a behavior to prevent the non-renewal of the Permit, or that might at least guarantee the continuity of the permit for the period required to relocate the Landfill to a new site" (Para 162, P 65). What seemed to concern the Tribunal more than a general failure by the agency to affirmatively disclose its intentions, however, was the Tribunal's belief that the agency was using environmental and health issues as pretexts for a decision that was essentially driven by social and political concerns (para.157, 158, 62).

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Source: Tecmed v. Mexico case Tribunal Award

Table (II.7) summarizes studied RTAs rules on standards of treatment. States' autonomy to regulate foreign investment admission was extremely reduced under US RTAs through the

establishment of pre-admission national treatment standard. Combined with broad investment and investor definitions make foreign investment admission extremely liberalized. Losing the ability to control investment admission means almost automatic restraining of State's ability to address the two other components of foreign investment regulatory framework. While Both US and Chinese RTAs establish pre-admission MFN standards, Chinese RTAs introduced many exceptions that reduce beneficiary investors to recourse to practices such as “treaty shopping”. Finally, both countries’ RTAs include FET standards that become on the most used provision in Investor-States dispute settlement.

**Table II.7 Standards of treatment of foreign investment in RTAs**

	US RTAs		China RTAs		
		Peru	ASEAN	Pakistan	South Korea
<b>National Treatment</b>					
Subnational government	yes				
Pre-admission	yes	no	no	no	no
Post-admission	yes	yes	yes	yes	yes
Specific exceptions	no	yes	no	no	no
<b>Most Favored Nation</b>					
Pre-admission	yes	yes	yes	yes	no
Post-admission	yes	yes	yes	yes	yes
Specific exceptions	no	yes	yes	yes	yes
<b>Fair and equitable Treatment</b>	yes	yes	yes	yes	yes

Source: Salam Alshareef

## II.4) Restrictions on Performance Requirements

Performance requirements are crucial policy instruments that can be used as means to fulfill the objectives of all the three components of foreign investment regulatory framework. Although the performance requirements definition of UNCTAD (2003) focuses on their role in respect to FDI, they can target also national firms. Both industrialized and newly industrialized countries have used this type of investment regulation during their industrialization periods (Chang, 2002; Kumar, 2005; Chang, 1996; Amsden, 2001; Wade, 1989).

Forms of performance requirements are varied and often complex, but their categorization in the literature on investment agreements is not based on functional criteria. This might be explained by the dominance of (i) legal analysis in this domain, and (ii) the liberal economic perspective on their analysis, in particular, the distinction between the mandatory and non-mandatory performance requirements. Mandatory performance requirements are linked to the conditions for the entry and operation of the investment. The investor must agree to them to make its investment or continue to operate. Non-mandatory performance requirements, on the other hand, are linked to access to certain advantages, such as tax exemptions or subsidies by the host country. Second, a distinction can be made between performance requirements imposed on the investor before the investment is made and those imposed afterward (Nikièma, 2014).

#### **II.4.1) Performance Requirements under TRIMs Agreement**

The Agreement on Trade-Related Investment Measures (TRIMs) was the first WTO agreement that restricts the use of performance requirements. The TRIMs Agreement prohibits the application of certain investment measures related to trade in goods to enterprises operating within the territory of a member.

It should be noted that the TRIMs Agreement subject is the discriminatory treatment of internationally trade goods and quantitative restrictions, and is not specifically concerned with the treatment of foreign investment. The basic substantive provision in Article 2 of the TRIMs Agreement prohibits the application of any trade-related investment measure that is inconsistent with the GATT's provisions on national treatment and on the elimination of quantitative restrictions<sup>57</sup>. In particular, an illustrative list annexed to the agreement identifies certain measures that are inconsistent with Article III.4 or Article XI:1 of GATT 1994. The agreement bans not only TRIMs that are obligatory in nature, but also those whose compliance is necessary in order to obtain an advantage. TRIMs prevent the following performance requirements:

(i) An enterprise uses or purchases of imported product is limited to an amount related to the value or volume of local products it exports

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<sup>57</sup> The article 2 reads “Without prejudice to other rights and obligations under GATT 1994, no Member shall apply any TRIM that is inconsistent with the provisions of Article III or Article XI of GATT 1994.”

(ii) the imposition of a domestic content requirement in terms of volume, value or proportion of local production

(iii) importation of product used in local production in general or relating it to the volume or value to its exportation of local production

(iv) importation of product used in local production by restricting its access to foreign exchange in relating it to the concerned enterprise's inflow of foreign exchange by exportation

(v) restriction of exportation by an enterprise of a product whether specified in terms of particular products, in terms of volume or value of products, or in terms of a proportion of volume or value of its local production.

The TRIMs Agreement prohibits not only the application of certain trade-related performance requirements but also the value-added related PRs, as it's clear in the above first and second PRs.

While the measures illustrated in the annex to the agreement frequently arise in the context of foreign investment policies, there is nothing in the TRIMs Agreement to suggest that these rules do not apply equally to measures imposed on domestic enterprises. For example, a local content requirement imposed in a nondiscriminatory manner on domestic and foreign companies is inconsistent with the TRIMs Agreement because it involves discriminatory treatment against imported products in favor of domestic products, regardless of whether there is any discrimination between domestic and foreign investors with regard to the imposition of the requirement. Furthermore, no distinction is made among TRIMs with regard to the time of the investment at which they are imposed. Performance requirements prohibition of Article 2 of the TRIMs Agreement thus applies to measures used both at the time of the entry of the investment as well as afterward.

Several disputes based on alleged breaches of the TRIMs Agreement have been brought before the WTO dispute settlement body, the majority of which occurred in the automobile sector. However, only two main cases, namely the Indonesia–Automobiles<sup>58</sup> and Canada–

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<sup>58</sup> Indonesia—Certain measures affecting the automobile industry, Panel Report; WT/DS54/R, WT/DS55/R; WT/DS59/R; WT/DS64/R.

Renewable Energy<sup>59</sup> cases, have given the panels an opportunity to specify the condition under which a State's measure breaches the TRIMs Agreement. Indonesia–Automobile panel report affirmed that it must be a “trade-related investment measure” that breach Articles II.4 and XI.1 of the GATT (Panel Report paras, 14.71–14.72). Moreover, it provided that the term “investment measures” in the TRIMs Agreement are not limited to measures taken specifically in regard to foreign investment (Panel Report, para. 14.73). Besides, it considered that non-mandatory trade-related investment measures are also covered (Panel Report, para. 14.90).

However, two features of the TRIMs Agreement should be noted:

(i) The Agreement applies only to investment measures related to trade in goods. It does not cover trade in services. Measures concerning service industries are addressed by the GATS Agreement, which does not contain explicit rules dealing with TRIMs, though it may be subject to specific negotiated commitments.

(ii) Article 4 allows developing countries to deviate temporarily from the obligations of the Agreement, as provided for in Article XVIII of GATT 1994 and related WTO provisions on safeguard measures for the balance of payment difficulties.

TRIMs agreements constituted a historical setback as it constrains one of the principles industrial policy instruments. However, some critical requirements such as technology transfers requirements, capital and equity requirements are still permitted. Nevertheless, these relative flexibilities are eliminated under the RTAs of US

By contrast, Chinese investment chapters do not contain any commitment on performance requirements. One exception is the recently signed RTA with South Korea which introduces vague obligation not to “impose unreasonable or discriminatory measures” concerning performance requirements on “export or transfer of technology”. However, the terms “unreasonable” was not defined. In addition, a provision on the performance requirements incorporates annex A1 of TRIMs agreement in the RTA<sup>60</sup>.

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<sup>59</sup> See Canada—Certain Measures Affecting the Renewable Energy Generation Sector, Panel Report, WT/DS412/R.

<sup>60</sup> See China-South Korea RTA (Article 12.7.1)

#### II.4.2) US RTAs Rules on Performance Requirements

It seems that the US got through its RTAs what had not succeeded to obtain during Uruguay Round negotiations. All Studied US RTAs established a TRIMs *Plus* set of obligations that includes outright bans on certain performance requirements that apply to all sectors, goods, services and public procurement, and, at all phases of investment: establishment, acquisition, expansion, management, conduct, operation, or sale. Importantly, these restrictions apply to non-party also, and are of absolute nature, in the sense that they are prohibited if imposed only on foreign investments, or on both foreign and national investments. Prohibited performance requirements that are TRIMS *plus*:

- (i) Export requirements
- (ii) To achieve a given level or percentage of domestic content
- (iii) Linking sales in domestic market to exports level
- (iv) Linking sales in domestic market to foreign exchange earnings
- (v) Requirements to transfer technology, production processes or other proprietary knowledge
- (vi) Requirements to act as the exclusive supplier to specific regional or world market.

The first, third and fourth requirements are prohibited even when linked to an advantage.

The provisions on senior management and borders of director impose restrictions on the requirements to employ key personnel. The requirement to appoint to senior management positions persons of a particular nationality is banned. However, the requirement that a majority of the board of directors to be of a particular nationality is permitted under the condition that such requirement doesn't impair the ability of the investor to exercise control over its investment.

In respect to restriction on technology transfer requirements, it does not apply to measures requiring the disclosure of proprietary information that falls within the scope of, and are consistent with, Article 39 of the TRIPS Agreement; and to measures to remedy anti-competitive practices under party's competition laws. Nevertheless, the possibility to grant compulsory license to remedy anticompetitive practice of patentee was eliminated, as a footnote confirms “The Parties recognize that a patent does not necessarily confer market power”<sup>61</sup>.

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<sup>61</sup> Footnote 6 of US-CAFTA-DR RTA.

By contrast, some soft performance requirements with less relative importance for selective industrial policy are permitted but only against advantages, such as requirements to locate production, supply a service, train or employ workers, construct or expand particular facilities in its territory.

Table (II.8) lists exempted performance requirements when they are related to government procurement<sup>62</sup>, environmental standards, some health measures, export promotion and foreign aid programs and requirements for local R&D.

**Table II.8 Exceptions to restrictions on performance requirement in US RTAs**

Type of performance requirement	Exceptions related to		
	Public Procurement <sup>a</sup>	Export promotion and Foreign aid	Compliance with Rule of origin
Not linked advantage	Export requirements, achieve a given level or percentage of domestic content, Technology Transfer	Export requirements, achieve a given level or percentage of domestic content, Local sourcing	
linked to advantage	achieve a given level or percentage of domestic content, Local sourcing	Achieve a given level or percentage of domestic content, Local sourcing	Achieve a given level or percentage of domestic content, Local sourcing

<sup>a</sup> US RTAs include a chapter on public procurement where offset are banned, and performance requirements should be functional.

**Source: Salam Alshareef**

It is important to highlight, that all except one case of investment disputes reported on Investment Policy Hub (11 out of 12 cases), claiming breaches of performance requirements rules, were filed under NAFTA agreement. Moreover, US investors filed 11 out of 12 cases.

The three cases of CPI, Cargill, and ADM against Mexico reported in Box II.4, claimed breaches of performance requirements rules under NAFTA. Although the tribunal recognized that the tax conferred advantages on the sugar industry generally, without distinguishing

<sup>62</sup> US RTAs include chapters on public procurement which restrict the design of offsets (performance requirements in the context of public procurement market).

between domestic and foreign investors in the sugar industry, as included advantages are conditioned on the exclusive use of cane sugar (which the Tribunal believes is domestic) and discriminate against the HFCS industry in which the US companies have made their investment. The tribunal concluded that the Tax is inconsistent with performance requirements rules under NAFTA (Cargel v Mexico, Award report para 220, p 59-60; AMCD v Mexico, Award report Para 211, P 68).

Again, tribunals had contradictory conclusions. The tribunal rejected the same claim in respect to the same policy measure in the CPI v. Mexico case considering that it doesn't represent a performance requirement.

**Table II.9 Autonomy to use performance requirements in TRIMs and RTAs**

	TRIMs	US RTAs	China RTAs
<b>Coverage scope</b>			
Good	Restricted	yes	TRIMs
Services		Restricted	
Non-party		Restricted	
<b>Value-Added related performance requirements</b>	Restricted	TRIMs+	TRIMs
<b>Technology transfer performance requirements</b>	Preserved	TRIMs+	TRIMs
<b>Trade-Related performance requirements</b>	Restricted	TRIMs+	TRIMs
<b>Exception for balance of payment</b>	Preserved	TRIMs+	TRIMs

Restricted: investment chapter includes restrictions or prohibition on the use of the policy measure.

Preserved: not covered by the investment chapter, or covered but autonomy is preserved.

TRIMs+: policy measure is covered under TRIMS, but RTA rules go beyond its commitments.

TRIMs: investment chapters do not have rules on the policy measure.

**Source: Salam Alshareef**

## **II.5) Expropriation Rules in RTAs**

There are two types of “expropriation”. Direct expropriation, it means a mandatory legal transfer of the title to the property or its outright physical seizure. Usually, the expropriation benefits the State itself or a State-mandated third party. Expropriation of this type is undertaken against one or several investments (UNCTAD, 2012e). The second category is the “indirect expropriation”, where it may result from measures that State takes to regulate economic activities, even where such regulation is not directly targeted at an investment or an investor (Nikièma, 2012).

Indirect expropriation is one of most controversial provisions with respect to restriction of state regulatory policy space. Almost by definition, any effective regulation will have an



economic impact, it will alter a production process, ban a product, demand additional technologies, etc. When the effect is deemed significant enough to the interest of foreign investors, the regulation could be considered an “expropriation” requiring governments to pay investors for losses (Bernasconi-Osterwalder et al, 2012).

What situations amount to an indirect expropriation? Can measures taken as a part of the developmental framework, or for a clear public purpose, constitute an indirect expropriation? In fact, there is no “mechanical formula” for determining whether one or more state acts may amount to an indirect expropriation (UNCTAD, 2012e).

In practice, the range of measures that have given rise to expropriation claims is remarkably broad, encompassing the intervention of government-appointed managers<sup>63</sup>, “prejudice” suffered in domestic courts, decrees protecting antiquities, revocation or cancellation of contract to achieve a service, non-renewal of authorizations that are necessary for the operation of a business, tax measures, labor regulations prohibiting the dismissal of staff, financial regulations and rules on compulsory license etc. (UNCTAD, 2012e).

The concept of indirect expropriation raises several concerns for development. Most importantly, indirect expropriation could end up requiring taxpayers to pay investors to change or stop behavior that is contrary to the public interest. The vague definition of “indirect expropriations” leaves host State in an uncertain position, not knowing in advance whether a pending piece of legislation will require costly litigation and compensation. A natural reaction to this uncertainty would be a risk-averse approach in the form of less stringent regulation or no regulation at all leading again to the phenomenon described as regulatory chill (Bernasconi-Osterwalder et al, 2012, Nikièma, 2012). Put it in another way, indirect expropriation concept, just like FET, paralyzes state actions in areas that go well beyond pure economic policy.

Expropriation is a subject of controversy, especially in Law domain, this is why many aspects of this debate are beyond the scope of our study. Provisions on expropriation comport three elements in general. The first highlight the condition under which the act of nationalization does not violate treaties principles. The second treat the modalities of compensation. Third, it might list some measures that should not be considered as expropriation.

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<sup>63</sup> For instance, the Iran- United States Claims Tribunal found an expropriation in a number of cases that involved the appointment by the Iranian Government of temporary managers in the subsidiaries of United States companies or the acts of such appointees.

Expropriation is an internationally recognized sovereign right. Investment treaties do not prevent States from taking expropriation measures. However it introduces restrictions on expropriation measure to be in compliance with the agreement, that it's must not be discriminatory in nature, it should take place under due process of law, must be motivated by public interest and the investor must be compensated for the losses suffered. It should be noted that these conditions apply to both direct and indirect expropriation.

US RTAs provision on expropriation lists conditions to be respected if nationalization to be considered legal and a detailed rule on compensation. Importantly, US RTAs relates due process of law condition of expropriation to the article on the fair and equitable treatment.

Establishing a link between expropriation and FET may aggravate regulatory policy space of expropriation, given the ambivalent character of FET. UNCTAD (2004b) note that the wording due process of law is a direct importation from US own law.

Interestingly, and in contrast to US approach, China defines the National Law as a parameter for the legality of expropriation, rather than due process of law. In the case of South Korea, it should be in accordance with both national laws and international standard of due process of law.

The absence of objective criteria to determine whether a State measure is an indirect expropriation or not is reflected in US RTAs where an annex clarify that the determination of the occurrence of indirect situation requires a “case-by-case” and “fact-based inquiry”. Such inquiry could consider among other factors, the “character of movement action”, whether it “interferes with distinct, reasonable investment-backed expectations” and that the “adverse effect on the economic value of an investment, standing alone, does not establish an indirect expropriation has occurred.” Being illustrative rather than determined criteria, it's unlikely that they would limit the extremely broad scope of measures that could be challenged as expropriatory.

China RTAs with South Korea and Peru contains US alike annex on expropriation, using the same formulations. While South Korea annex is an exact copy of annex found in the US<sup>64</sup>, Peru annex doesn't refer to the problematic concept of “reasonable investment-backed expectations”. In addition, it clarifies that in order to consider a measure as indirect

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<sup>64</sup> See annex 12-b for China-South Korea RTA and annex9 of Peru-China RTA.

expropriation it should be “(a) either severe or for an indefinite period; and (b) disproportionate to the public interest”.

US agreements provide an exception from expropriatory measures to the issuance of compulsory license, revocation, limitation on the creation of IPRs. Nevertheless, such exceptions apply as long as those measures comply with the RTAs IPR rules. This adds a new layer of restriction on IPRs practices permitted under TRIPS, as US RTAs rules on IPR are TRIPS *plus* with respect to compulsory license and revocation. Put it another way, some State practice based TRIPS flexibility that is restricted under the US RTA chapter on IPRS can be challenged as expropriatory under investment chapter.

China provisions on expropriation are less detailed than US model. The wording indirect expropriation was absent from RTAs with Pakistan and ASEAN. Agreement with ASEAN includes specific exceptions about land expropriation, and compulsory license.

**Table II.10 Expropriation rules in RTAs**

	US RTAs	China RTAs			
		Pakistan	ASEAN	Peru	South Korea
<b>Direct expropriation</b>	yes	yes	yes	yes	yes
<b>Indirect expropriation</b>	yes	no	no	yes	yes
<b>Specific exceptions</b>	Compulsory license <sup>a</sup>	Compulsory license and land			

<sup>a</sup> only if compulsory license issuance is in accordance with the RTAs IPR rules which are TRIPS *plus* in respect to the compulsory license. This means that issuance of a compulsory license on a ground not justified in IPRS chapter may be challenged as expropriatory.

**Source: Salam Alshareef**

An interesting case showing how indirect expropriation provision may be interpreted is the *TECMD v Mexico* case (see box II.5). Although the tribunal recognizes that one-year permit term is explicit, it insisted that Tecmed legitimately expected it had secured “a long-term investment” in the Landfill extending over “its entire useful life” (para. 149). While the Tribunal recognized the legitimacy of the decision on non-renewal of the Permit and closure of the Landfill under Mexican domestic law, it held that the decision, (para. 120), permanently neutralized the value of the investment and therefore met the “effects” portion of the expropriation test (para. 139).

With respect to the proportionality analysis, the Tribunal concluded that the TECMD's breaches of the Permit's terms and environmental regulations were generally minor and did not, "compromise public health, [or] impair ecological balance or protection of the environment" (para. 124; see also paras. 127, 130–32). The Tribunal also considered whether public opposition to the Landfill had generated "a genuine social crisis" or "public emergency" justifying non-renewal of the Permit (paras. 124–133). Finding that the opposition did not rise to the level of an "emergency situation", and that the opposition that did exist was due in large part to the location of the Landfill rather than to wrongful conduct by Tecmed, the Tribunal held Mexico's "socio-political" interests were likewise not sufficiently weighty to support permit revocation decision (paras. 139, 142, 147).

In sum, the Tribunal concluded that although the Environmental Protection Agency's resolution on Permit non-renewal and Landfill closure was apparently legitimate under domestic law, the measure permanently stripped Tecmed of the value of its investment, was not sufficiently justified by public interest concerns and, consequently, indirectly expropriated Tecmed's property in violation of the BIT.

## **II.6) Constraints on Capital Account Regulation under GATS and Investment Chapters of US and Chinese RTAs**

The GATS is first and only binding multilateral agreement that has the effect of liberalizing capital account. Some countries may have certain freedoms if the governments in place in the 1990s did not make widespread commitments in the financial services sector. Before the signature of GATS, IMF treaty was the only pact governing capital flows in the international arena (it is not considered as an agreement). GATS measures related to capital liberalization are considered IMF *plus* (Gallagher, 2010). Moreover, some RTAs, especially those of US, included commitments having the effect of liberalizing capital account well beyond GATS.

In what follows the chapter assesses capital account liberalization commitments under GATS Agreement. Then, it analysis transfer provisions in studied RTAs, their impacts on capital account liberalization, and whether they go beyond GATS commitments or not.

## **II.6.1) Capital Account Liberalization under the GATS**

The GATS provides a general framework disciplining policies “affecting trade in services” and establishes a commitment for periodic future negotiations. The GATS is divided into, on the one hand, a part on “General Obligations”, which binds all members. These include the obligation to provide most favored nation treatment to all WTO members (Article II), and some disciplines on non-discriminatory domestic regulations that are still being developed (Article VI). On the other hand, the GATS agreement also includes a part dealing with “Specific Commitments”, which apply only to the extent that countries choose to adopt them by listing them in their country specific schedules. These cover the disciplines of Market Access (Article XVI) and National Treatment (Article XVII). Numerous annexes include rules for specific sectors: the Annexes on Financial Services are of particular relevance for capital account liberalization.

Indeed, capital movements and trade in services do overlap as the result of two factors: (i) international banking services entail the use of foreign capital by domestic consumers or of domestic capital by non-resident, (ii) the establishment of a commercial presence for a service supplier implies a capital movement at least in the establishment phase. Indeed, international investment is by definition a capital movement (Pasini, 2012). Consequently, liberalization of trade in services entails liberalization of the capital account (WTO, 2010).

Under GATS, this corresponds to the mode 1 and 3 of service supply (See Box II.6). The extent of required capital account liberalization is set forth under ‘footnote 8’ to Art. XVI:1 which mandates free movement of capital for Mode 1 and Mode 3. The footnote reads “If a Member undertakes a market-access commitment in relation to the supply of a service through the mode of supply referred to in subparagraph 2(a) of Article I and if the cross-border movement of capital is an essential part of the service itself, that Member is thereby committed to allow such movement of capital. If a Member undertakes a market-access commitment in relation to the supply of a service through the mode of supply referred to in subparagraph 2(c) of Article I, it is thereby committed to allow related transfers of capital into its territory”.

## Box II.6 Modes of service provision covered in GATS

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“Trade in services occurs across the four services modes discussed in the GATS in general:

Mode 1: Cross-border supply is defined to cover services flows from the territory of one Member into the territory of another Member (e.g. banking or architectural services transmitted via telecommunications or mail);

Mode 2: Consumption abroad happens when the consumer travels outside of the country to access a service such as tourism, education, health care and so forth;

Mode 3: Commercial presence occurs when the user of a financial service is immobile and the provider is mobile, implying that the financial service supplier of one WTO Member establishes a territorial presence, possibly through ownership or lease, in another Member’s territory to provide a financial service (e.g. subsidiaries of foreign banks in a domestic territory); and

Mode 4: Presence of natural persons are when financial services are supplied by individuals of one country in the territory of another”

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Source: Gallagher (2010, p.6)

Importantly, although a member may limit market access or national treatment obligations in its sector-specific schedule of commitments,<sup>65</sup> limitations on the obligations on capital transfers contained under ‘footnote 8’ are impermissible as these are minimum non-negotiable obligations (WTO, 2010).

It should be noted that all these restrictions on capital controls could be considered IMF *plus*, as the IMF Treaty provides that members are free to impose restrictions on capital transfers<sup>66</sup>.

### II.6.1.1) Capital Account Control and Cross-border Services

The footnote 8 sets out two criteria in respect to service supply under the Mode 1. First, the movement of capital must be liberalized when it is “an essential part of the service itself”. Second, the transaction must be operated across borders.

In fact, cross-border service supplies (Mode 1) do not imply, necessarily, the establishment of investment in the host State, but it entails situations where a foreign investor in a host state provides or uses cross-border services.

From balance of payments perspective, lending and all the other banking services listed in Article 5<sup>67</sup> are primarily capital movements. The reference to mode 1 has two main

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<sup>65</sup> GATS (Article XX).

<sup>66</sup> Article VI Section 3.

implications. First, the prohibition of capital controls measures that restrict the supply of a service by foreign financial institutions. Conversely, restrictions on capital movements that affect the supply of a service by local financial institutions are permitted. For instance, in Member country where banking services have been liberalized on a mode 1, capital controls measures that prevent domestic customers from purchasing securities from a foreign investment bank, or from opening deposit account abroad, are no more permitted. Furthermore, the same state cannot restrict the inflow of capital by prohibiting its resident from borrowing money from foreign banks (Pasini, 2012).

In contrast, a Member State is allowed to use capital account restrictions that prohibit resident banks from accepting deposits from clients located abroad, or from selling financial instruments to non-resident customers (See Table II.11). Nevertheless, it is important to point out that a restriction on the inflow of capital would not be allowed if the Member were to have committed to open this service on mode 3.

### **II.6.1.2) Capital Account Control and Commercial Presence**

Mode 3 permits a foreign company to access a country to establish a permanent presence to supply certain services to domestic customers. The entry phase entails almost always a capital movement, as it requires a transfer of the financial investment necessary to establish the service. Unlike capital movements connected to mode 1, which are associated only with the provision of financial services, capital flows associated with mode 3 are possible with regard to all services sectors.

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<sup>67</sup> Article 5 of Annex On Financial Services reads “Insurance and insurance-related services  
(i) Direct insurance (including co-insurance):(A) life (B) non-life (ii) Reinsurance and retrocession; (iii) Insurance intermediation, such as brokerage and agency; (iv) Services auxiliary to insurance, such as consultancy, actuarial, risk assessment and claim settlement services.  
Banking and other financial services (excluding insurance)  
(v) Acceptance of deposits and other repayable funds from the public; (vi) Lending of all types, including consumer credit, mortgage credit, factoring and financing of commercial transaction; (vii) Financial leasing; (viii) All payment and money transmission services, including credit, charge and debit cards, travellers cheques and bankers drafts; (ix) Guarantees and commitments; (x) Trading for own account or for account of customers, whether on an exchange, in an over-the-counter market or otherwise, the following: (A) money market instruments (including cheques, bills, certificates of deposits); (B) foreign exchange; (C) derivative products including, but not limited to, futures and options; (D) exchange rate and interest rate instruments, including products such as swaps, forward rate agreements; (E) transferable securities; (F) other negotiable instruments and financial assets, including bullion. (xi) Participation in issues of all kinds of securities, including underwriting and placement as agent (whether publicly or privately) and provision of services related to such issues; (xii) Money broking; (xiii) Asset management, such as cash or portfolio management, all forms of collective investment management, pension fund management, custodial, depository and trust services; (xiv) Settlement and clearing services for financial assets, including securities, derivative products, and other negotiable instruments”

It is important to note that the Footnote 8 regulates only inward the movement of capital related to the establishment of a commercial presence. Therefore, according to Pasini (2012) as long as it does not negatively discriminate between foreign and domestic companies, a Member can impose restrictions on the outflow of capital involving a resident foreign-service supplier without violating any of GATS rules.

The Footnote 8 is not clear whether the post-admission capital movements<sup>68</sup> connected to the supply of the service should also be liberalized. There are two interpretations to this ambiguity. On the one hand, it could be argued that Footnote 8 imposes only the liberalization of capital inflows necessary to establish the commercial presence. Thus, a State could use restrictions on capital inflows that render impossible the provision of services that require foreign currency, even if the same State committed to the liberalization of banking services (Pasini, 2012). On the other hand, Footnote 8 could be interpreted as imposing permanent liberalization of capital inflows connected to the supply of services by foreign resident banks. The result is that Members would have much less discretion over their capital account policies because they could not restrict the capital inflows connected to mode 3 (Gari, 2014).

### **II.6.1.3) Current Transactions Control**

Controls on the inflows or outflows of dividends, interest payments and the like are considered current account restrictions (UNCTAD, 2004b). As defined in the IMF Treaty, payments arising from “current” transactions include a number of investment-related payments in addition to payments related to trade and services so. According to the IMF Treaty, members may not “impose restrictions on the making of payments and transfers for current international transactions” except under the IMF approval<sup>69</sup>.

As this provision applies to the “making”, and not the “receipt”, of current payments and transfers, UNCTAD (2004b) argues that members are permitted to restrict their residents from receiving transfers and payments from non-residents. Accordingly, while this provision protects the ability of a non-resident to repatriate some proceeds of an investment, it does not liberalize transfers and payments related to the making of investments. Put it in another way,

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<sup>68</sup>. This will happen if the activities of the company require transactions in foreign financial assets with the parent company or between the company and domestic residents.

<sup>69</sup> Article VIII, Section 2(a).



this provision liberalizes outward payments and transfers relating to investments, but not the inward payments and transfers associated with the making of new investments.

Article (XI.1) of GATS agreement insists that members “shall not apply restrictions on international transfers and payments for current transactions relating to its specific commitments”, except under authorized exception as regulated by Article XII on balance of payment safeguard. When a state seeks to pursue capital controls related to the current account and such actions are not part of an IMF Financial program, the state has to submit a request to the WTO’s Balance-of-Payments Committee. Again, GATS may be interpreted as IMF *plus*, as it doesn’t clarify whether the permission includes inward or/and outward current transactions.

The IMF may recommend diversion from these rules during a crisis and/or under an IMF financial program. In these circumstances, Article XI, paragraph 2 of the GATS applies. This article states that the IMF has jurisdiction over these types of circumstances and the GATS does not apply<sup>70</sup>. Table (II.11) provides an overview of permitted/prohibited capital control measures under WTO agreement on GATS.

**Table II.11 List of allowed/prohibited restrictions on capital movements in the GATS**

<b>List of allowed/prohibited restrictions on capital movements in the GATS</b>		
	<b>Inflow</b>	<b>Outflow</b>
<b>Prohibited</b>	Restrictions connected to the establishment and continuation of a commercial presence (mode 3)	Prohibitions on resident customers (mode 1) on: Opening deposits abroad Purchasing financial instruments from a non-resident financial institution
	Restrictions on resident consumers (mode 1) on: Borrowing from a non-resident financial institution	
<b>Allowed</b>	Restrictions on resident financial institutions (mode-1) on: Selling financial instruments to non-residents Opening deposits for nonresident customers or forex deposit	Prohibition on resident banks (mode 1) on: Lending money
	Restrictions on personal capital movement connected to mode 4	Restrictions on local customers on bringing abroad currency

**Source: Pasini (2012, p.602)**

<sup>70</sup>. This corresponds to a situation where a country is permitted to pursue capital controls on current transactions, as part of an IMF financial program.

#### II.6.1.4) Exceptions

States can deviate from their GATS obligations under certain circumstances. Members can always impose restrictions on capital flows due to a balance-of-payments problem. To this scenarios must also be added the situation envisaged in Article 2 of the Annex on Financial Services, which permits Members to adopt prudential regulations and emergency measures to protect their financial stability.

##### A) Balance of Payments Safeguard

Article XII of the GATS offers a balance of payments safeguard that allows Members to impose capital account restrictions when necessary to restore a minimum level of reserves.<sup>71</sup>

However, the paragraph specifies that such measures can be deployed only under certain conditions (i) they are not discriminatory, (ii) they are consistent with the IMF articles, (iii) “avoid unnecessary damage” to other members, (iv) do “not exceed those necessary” to deal with the balance of payments problem, and (v) are temporary and phased out progressively.

It may be tough to meet all these conditions, especially that the notion of “necessity” was not defined. Moreover, concern has been expressed about the extent to which the balance of payments exception provides nations with the policy place for restrictions on capital inflows that are more preventative in nature and may occur before “serious” balance of payments difficulties exist (UNCTAD, 2000). However, the use of this derogation requires notifying the WTO’s Balance-of-Payments Committee.

Moreover, Article XII of the GATS does not provide precise definition and criteria to qualify the presence of balance of payments or external financial difficulties. According to Pasini (2012), it is reasonable to suppose that the GATS would adopt the definition of a balance of payments problem as provided in Article XII of the GATT, which defines it as the ‘threat of a serious decline of the monetary reserves of the Member or an already existing low level of monetary reserves’. Therefore, other problems such as inflation, financial stability, or exchange rate misalignments, would in principle be excluded from Article XII (Pasini, 2012).

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<sup>71</sup> Paragraph 1 of Article XII reads “In the event of serious balance-of-payments and external financial difficulties or threat thereof, a Member may adopt or maintain restrictions on trade in services on which it has undertaken specific commitments, including on payments or transfers for transactions related to such commitments. It is recognized that particular pressures on the balance of payments of a Member in the process of economic development or economic transition may necessitate the use of restrictions to ensure, among other things, the maintenance of a level of financial reserves adequate for the implementation of its program of economic development or economic transition”.

Furthermore, Article XII is unclear as to whether a Member State is permitted to restrict both capital inflows and outflows. Indeed, Article XII allows only restrictions on capital outflows connected to mode 1, while restrictions on capital inflows related to mode 3 and mode 1 would be still prohibited (IMF, 2010). The limited coverage of Article XII renders this provision unsuitable for addressing the problems connected to capital movements. First, reserves problems are relevant only to the extent that a country has adopted a fixed exchange rate regime and is suffering from a serious capital flight. Second, regarding macroeconomic policy, restrictions on capital inflows are more important, as they are usually utilized to cope with much broader problems (Ostry et al, 2011).

## B) Restrictions for Prudential and Financial Stability Reasons

This exception was introduced under Article 2(a) of the Annex on Financial Services which reads:

“Notwithstanding any other provisions of the Agreement, a Member shall not be prevented from taking measures for prudential reasons, including for the protection of investors, depositors, policy holders or persons to whom a fiduciary duty is owed by a financial service supplier, or to ensure the integrity and stability of the financial system. Where such measures do not conform with the provisions of the Agreement, they shall not be used as a means of avoiding the Member’s commitments or obligations under the Agreement.”

However, the sentence stating that prudential measures “shall not be used as a means of avoiding the Member’s commitments or obligations under the Agreement” is regarded by some economists as self-cancelling and thus of limited utility (Tucker and Wallach, 2009; Raghavan, 2009)<sup>72</sup>. Still, others point out that, there is no necessity test for the prudential exception in the GATS. For Pasini (2012), the prudential carve-out offers the greatest policy space for the adoption of capital controls. Most capital controls are directed at financial services, and for the large part address concerns over economic stability. Article 2 does not offer a definition of ‘financial stability’, which therefore is open to all possible interpretations.

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<sup>72</sup> Cited from Gallagher (2010).

It should be noted that the prudential carve-out does not cover all capital movements. It applies exclusively to the financial service sector. Therefore, capital flows that are not connected to trade in financial services, such as FDIs in telecommunications, energy, or any other non-financial services sectors, are excluded, even if they undermine financial stability.

This exception has recently been invoked in a dispute as a defense by Argentina, against allegations of, *inter alia*, discriminatory and unfavorable a) restrictions on trading in financial instruments, b) approval requirements when repatriating profits and c) minimum capital requirements in the insurance sector<sup>73</sup>. The panel report recognized argument and evidence provided by Argentina are prudential in nature, and that the effective availability of information about the identity of the customer or owner who orders or effects the transactions, or those that stand behind them, is essential for preventing money laundering and terrorist financing offences (Panel Report, Para 7.942), the panel found that there is no rational relationship of cause and effect between the measures and the prudential reasons, they were not taken “for prudential reasons”. Moreover, the measures taken by Argentina were discredited on the basis of a violation of national treatment standards (See Box II.7).

#### **Box II.7 Argentina’s contested prudential measures under GATS**

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**The first measure:** foreign suppliers of reinsurance services may be authorized to offer reinsurance operations from their country of origin or through a branch in Argentina provided that they meet the following requirements: (i) prove that they have been incorporated and registered in a cooperative country; and (ii) show that they have been incorporated and registered in countries that cooperate in the global fight against money laundering and terrorist financing offences in accordance with the criteria defined by the Financial Action Task Force (FATF). In the case of the non-respect of the above two requirements foreign supplier of reinsurance services operating via supply mode 1 or 3, following rules apply:

In respect to the first requirement, the supplier must prove that it is subject to the control and supervision of a body (i) that fulfills functions similar to those of the National Insurance Supervisory Authority of Argentina and (ii) with which a memorandum of understanding on cooperation and exchange of information has been signed.

In respect to the second requirement, the assessment of the service supplier shall be subject to enhanced due diligence, proportionate to the risks, and that the counter-measures indicated in Recommendation 19 of the FATF and the Interpretive Note thereto may be applied.

According to Argentina, in the event of the insolvency or failure of a foreign reinsurer, Argentina would be unable to collect its claim against that reinsurer, and the original insurer in Argentina would continue to be responsible for paying out claims made under the original insurance contract. Therefore, the collapse of the foreign reinsurer implies an additional burden on the financial capacity of the original insurer, which could lead to the failure of the

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<sup>73</sup> WTO Argentina – Measures Related to Trade in Goods and Services WT/DS - 453.

original insurer producing a "domino effect" in the Argentine insurance market. If the reinsurer is located in a non-cooperative jurisdiction, the Argentine authorities will not have access to information on, among other things, the effective ownership of the reinsurer, whether it is adequately capitalized, whether its sources of funds are legitimate, or whether there is any risk of the transaction being used to launder money (Para.7.787, P 190).

**The second measure:** the following requirements must be met for a stock market intermediary transactions in Argentina (involving the public offering of negotiable securities, forward contracts, futures or options of any nature, or other financial instruments or products) : (i) the persons incorporated, domiciled or residing in non-cooperative countries that give the order to the stock market intermediary must have the status of intermediaries registered with an entity under the control and supervision of a body fulfilling functions similar to those of the Argentine National Securities Commission (CNV) and (ii) the body in question must have signed a memorandum of understanding on cooperation and exchange of information with the Argentine CNV (para 2.36 P24).

According to Argentina, securities operations with non-cooperative jurisdictions expose the Argentine financial market to greater risk of systemic failure, since in such transactions the Argentine regulator is unable to obtain access to information concerning the effective ownership of the party ordering the transaction and the legitimacy of the source of its funds, nor is it able to establish whether the foreign entity is subject to adequate supervision in its home jurisdiction. Argentina, therefore, maintains that securities transactions with entities located in non-cooperative jurisdictions pose risks that may not be present in transactions with entities located in cooperative jurisdictions, including risks of money laundering, tax evasion and non-payment of securities transactions (para 7.789P 190-191).

A cooperative country is the one that (i) have signed with Argentina a tax information exchange agreement or an international double taxation convention with a broad information exchange clause, provided that the information is effectively exchanged; or (ii) have initiated with Argentina the negotiations necessary for concluding such an agreement and/or convention.

It is the mechanism for determining who is cooperative and who is not that the tribunal considered as the fundamental problem.

Practically, Panama was included as a cooperative country for tax transparency purposes as of 2014, after negotiations to conclude an agreement on the exchange of information for tax purposes had been initiated as from November 2013. Nevertheless, Panama did not exchange any tax information with Argentina, as follows from Panama's constant refusal during the proceedings to consider that it had initiated negotiations or that it intended to open negotiations with Argentina to sign a tax information exchange agreement.

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**Source: Panel report WTO Argentina – Measures Related to Trade in Goods and Services WT/DS - 453**

As it is shown in next section, policy space available under GATS to regulate capital flows is eliminated under US RTAs.

## **II.6.2) Capital Account Control under RTAs Investment Chapters**

The level of capital account liberalization under RTAs is determined in particular by (i) the of coverage scope RTAs, i.e. covered sectors (services, financial service, and goods), and

covered investment (investment and investor definitions), (ii) the national treatment standards, whether pre-admission or post-admission, and the corresponding pre or post-admission investment liberalization and (iii) the structure of transfer provision. It should be noted that the level of capital account liberalization is also determined by the inclusion, or not, of a chapter on service and/or financial services liberalization, by the substantive liberalization included therein, and the connection between services and financial services chapters and the investment chapters<sup>74</sup>. However, issues related to services chapters are beyond the scope of this study.

Transfers provisions normally contain four components: (i) the types of transfers protected, (ii) the convertibility requirements, (iii) the cases where transfers could be prevented, and (iv) exceptions that permit host State to restrict transfers.

The types of transfers protected (liberalized) fall into three general categories. The first consists of the outward transfer derived from or associated with protected investments. This includes: (i) returns on investments, which include profits, dividends, interest, capital gains, royalty payments (ii) proceeds from the sale or liquidation of all or any part of the investment (iii) payments under a contract including a loan agreement or payments arising from cross-border credits and (iv) earnings and other remuneration of personnel engaged from abroad in connection with an investment. The second category consists of the outward transfer of payments that the host States is required to make to the foreign investor pursuant to other investment protection obligations such as expropriation, dispute settlement, etc. The third category of transfer consists of the inward transfer to be invested by a foreign investor. This includes two types of inward transfers. The first are transfers made for purposes of making a new investment. The second types are transfers made to develop or maintain an existing investment.

According to UNCTAD (2000), there are two issues of particular importance about convertibility requirements. The first relates to the type of foreign currency that must be available for the transfer. The second issue relates to the exchange rate at which the foreign currency is to be made available at the time of the transfer.

Although investment agreements provide that the currency must be “freely convertible”

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<sup>74</sup> For example, China RTAs with both South Korea and ASEAN include chapters on service and financial service liberalization, but the core provisions of investment chapter, such as NT, do not apply to service chapter. All US RTAs include chapters on financial service liberalization. Furthermore, in US RTAs commitments under investment chapter apply entirely to service and financial service chapter's commitments.

or “freely usable”, US rules do not to define what these terms actually mean. In particular, into what currencies should foreign investors be able to convert the foreign currency that is being made available to them? Where a foreign currency to be qualified as a “freely usable” currency and what type of transactions are relevant for making this assessment? In fact, there is not clarification on this issue under the studied agreements (UNCTAD, 2000).

While most investment treaties provide that the foreign investor should be able to purchase the necessary foreign currency at the market rate of exchange prevailing on the date of the transfer, many of them do not address the case where there may not be such a market rate. Specifically, in circumstances in which a country relies on exchange restrictions, it is possible that the State mandates a rate of exchange for all foreign exchange transactions (UNCTAD, 2000).

The common cases, in studied PTIA, where transfers could be prevented “through the equitable, non-discriminatory, and good faith application of its laws”, are the following “(a) bankruptcy, insolvency, or the protection of the rights of creditors; (b) issuing, trading, or dealing in securities, futures, options, or derivatives; (c) criminal or penal offenses; (d) financial reporting or record keeping of transfers when necessary to assist law enforcement or financial regulatory authorities; or (e) ensuring compliance with orders or judgments in judicial or administrative proceedings”<sup>75</sup>.

The last component of transfer provisions is the exception that permits temporary derogation from general obligation. This normally includes balance of payments and macro-prudential exceptions.

Finally, it should be noted that the obligation that applies to transfers is not relative to local investors but absolute. Thus, the transfer obligation may positively discriminate in favor of foreign investors.

#### **II.6.2.1) Transfer Provisions in the RTAs of US**

Transfers provisions in the RTAs of US introduce a commitment to liberalizing all inward and outward transfers related to covered investment<sup>76</sup>. Transfers should be permitted

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<sup>75</sup> See for example US-Colombia RTA (Article 10.8.4).

<sup>76</sup> The chapeau of the transfer rules states “Each Party shall permit *all transfers* relating to a covered investment to be made freely and without delay *into and out of its territory*” (*Italic added*). See US-South Korea RTA (11.7.1), US-Morocco RTA (10.7.1), US-Oman RTA (10.7.1), US-CAFTA-DR RTA (Article 10.8.1), US-Peru

“without any delay”. This wording raises questions about the ability of host State to apply some regulations specifically in the context of exchange control. For example, when a resident seeks to purchase foreign currency, a written evidence of the payment purpose may be requested by the host State in order to ensure that the currency is not going to be transferred by the resident for the purpose of making its own outward investment, such as the making of a deposit in an offshore bank account (UNCTAD, 2000).

Transfers are not limited to current account transactions, but also capital transfers. The illustrative list of covered transfer types includes the “contribution to capital”. This wording clarifies any GATS ambiguities on whether capital inflows liberalization related to Mode 3 concern only initial capital necessary to the establishment of commercial presence or also additional capital. Thus, under US RTAs it is no more possible deploy restriction on post-establishment capital movement inflows.

Besides, US RTAs don't define on which market rate the freely usable currency should be based on. This could open the possibility to argue that the intended exchange rate is the rate prevailing in international market, which may be different from host State's market exchange rate, as many countries control exchange market<sup>77</sup>.

US chapters on investment don't provide an exception for macro-prudential measures, neither balance of payments safeguard was provided. These GATS exceptions were eliminated under US RTAs.

Only US-South Korea RTAs permits exception. Annex 11g allows the hold of transfers in ‘grave and sudden changes in domestic and foreign economic conditions’ to apply measure under the Article 6 of its Foreign Exchange Transactions Act. This article permits restriction of cross-border transaction. However, its application is conditioned by the use of price-based measure only<sup>78</sup>, for a period of one year, extendable under consultation with the US, it shouldn't affect “investors’ ability to earn a market rate of return in the territory of South Korea on any restricted assets”, and it does not apply to direct investment transfers.

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RTA (Article 10.8.1), US-Chile RTA (Article 10.8.1), US-Panama RTA (Article 10.8.1), US-Colombia RTA (Article 10.8.1).

<sup>77</sup> See US-South Korea RTA (11.7.2), US-Morocco RTA (10.7.2), US-Oman RTA (10.7.2), US-CAFTA-DR RTA (Article 10.8.2), US-Peru RTA (Article 10.8.2), US-Chile RTA (Article 10.8.3), US-Panama RTA (Article 10.8.2), US-Colombia RTA (Article 10.8.2): “Each Party shall permit transfers relating to a covered investment to be made in a freely usable currency at the market rate of exchange prevailing at the time of transfer”.

<sup>78</sup> Footnote 20.



Some RTAs<sup>79</sup> introduce what becomes known as the “cooling off” provision whereby the US cannot file a claim as in violation of the investment rules until a period of one-year after the provision has been deployed. However, the cool off period allows a foreign investor to sue for damages related to capital controls that were implemented during the cool off year, but cannot file the claim until after that year. An investor has to wait one year to file a claim related to capital controls to prevent and mitigate crises, but that claim can be for a measure taken during the cooling off year (Hornbeck, 2003). Even of little interest and significance, this provision has not become a matter of practice (Gallagher, 2010).

However, the host state may prevent a transfer in a non-discriminatory manner in some cases (see exception in the previous subsection).

To summarize, US RTAs result in an almost complete liberalization of capital flows, going well beyond GATS commitments. US investment chapters cover all sectors including services sector. Investment definition includes portfolio investment, debt, and financial derivatives. Moreover, it adopts pre-admission national treatment standard. Combined with a liberal formulation of transfer provisions, the final result is a highly dangerous level of capital account liberalization and the elimination of permissible practices under GATS and IMF treaty.

#### **II.6.2.2) Transfer Provisions in the RTAs of China**

Formulations of transfer rules vary across the 4 RTAs where investment chapters were found. Nevertheless, the essence of these commitments is almost identical. Free Transfer is permitted provided that it complies with State's national regulations in respect to “exchange administration”<sup>80</sup>. Only in China RTAs with South Korea and ASEAN, the list of covered transfers includes “Contributions to capital, including the initial contribution”. The illustrative list in China-ASEAN RTAs permits the transfer of the initial capital “the initial plus any additional capital used to maintain or expand the investments”, still, footnote 7 emphasizes that such transfers only applies after the obtain of approval inward investment from the responsible national agency.

Interestingly, under China RTAs with Peru and Pakistan, only outward transfers are permitted, with no reference to inward transfers<sup>81</sup>. Moreover, Chinese RTAs with Pakistan

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<sup>79</sup> Annex 10-E US-Peru RTA, annex 10-c Chile-US RTA, and Annex 10-E of US-Colombia RTA.

<sup>80</sup> See in China-ASEAN RTA (article 10.4) and China-South Korea RTA (footnote 38).

<sup>81</sup> see China-Peru RTA (article 135.1), China-Pakistan RTAs (article 51.1)

and Peru made it clear that exchange rate of freely usable currency is defined as “prevailing market rate of exchange of the Party accepting the investments on the date of transfer”<sup>82</sup>. As noted above, in the case of South Korea and ASEAN, transfers should comply with exchange regulations of host State.

In contrast to US approach, All China RTAs permit macro-prudential measures that are compatible with IMF treaty. Moreover, these measures are not recognized as exceptions, but as a regular right for host State under IMF treaty<sup>83</sup>. The balance of payments safeguard is recognized either explicitly or as consequence of recognizing IMF treaty. Agreements with South Korea and ASEAN<sup>84</sup> permits restriction not just in case of balance of payments safeguard, but also in the case of “exceptional circumstances”, without defining any criteria to qualify an event as exceptional.

Article on transfer and repatriation of profits in China-ASEAN is followed by a separate article on measures to safeguard balance of payments, where restrictions are permitted not only on transfers but also on investment itself. Interestingly this article recognizes that pressure on balance of payment in the development process necessitates capital controls<sup>85</sup>.

Moreover, the list of cases where transfers could be prevented and delayed comprises distinct elements compared to US RTAs model, such as the case of “non-fulfillment of tax obligations” or “social security, public retirement or compulsory saving schemes”<sup>86</sup>.

The structure of transfer provisions under Chinese RTAs preserve flexibilities present under IMF Treaty and GATS agreements. Though investment definition includes portfolio investment, it should be made in accordance with host State’s regulations, and national treatment is accorded on the post-admission basis. Interestingly, some agreements exclude service investment of Mode 3 from national treatment standards. Consequently, host State preserves substantial policy space to deploy capital control measures aimed at maintaining financial stability.

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<sup>82</sup> see China-Peru RTA (Article 135.2) and China-Pakistan RTA (Article 51.3).

<sup>83</sup> China-ASEAN RTA (Article 5) and Annex 12-c of China-South Korea RTA (Article 3) read “Nothing in this Agreement shall affect the rights and obligations of the Parties as members of the IMF under the Articles of Agreement of the IMF, including the use of exchange actions which are in conformity with the Articles of Agreement of the IMF”.

<sup>84</sup> See Annex 12-c China-South Korea RTA, China-ASEAN RTA (Article 10.5). In China-South Korea RTA It is limited to renewable 1 year.

<sup>85</sup> China-ASEAN (Article 11.1) read “particular pressures on the balance of payments of a Party in the process of economic development may necessitate the use of restrictions to ensure, *inter alia*, the maintenance of a level of financial reserves adequate for the implementation of its program of economic development”

<sup>86</sup> See China-ASEAN Article (10.3(c) and (e)).

Table (II.12) provides an overview of transfer provisions in the investment chapters of the RTAs of both US and China.

**Table II.12 Host State's autonomy to use capital controls under transfer provisions in RTAs**

	US	China			
		ASEAN	South Korea	Pakistan	Peru
<b>Capital account control</b>					
Inflows	GATS+	IMF	IMF	IMF	IMF
Outflows	GATS+	IMF	IMF	IMF	IMF
<b>Current account control</b>					
Inflows	GATS+	IMF	IMF	IMF	IMF
Outflows	GATS+	IMF	IMF	IMF	IMF
<b>Exceptions</b>					
Balance of payment safeguard	Gets	Preserved	Preserved		
Macro-prudential measures	Restricted	Preserved	Preserved	Preserved	Preserved
Exceptional circumstances	Restricted	Preserved	Preserved		
Development related exceptions	Restricted	Preserved			

Restricted: investment chapter includes restrictions or prohibition on the use of the policy measure.

Preserved: not covered by the investment chapter, or covered but autonomy is preserved.

GATS+: policy measure is covered under GATS, but RTA rules go beyond its commitments.

IMF: IMF rules are affirmed, or the policy measure was not covered in the investment chapter.

<sup>a</sup> Commitments contained in the chapter on financial service are not taken into account.

<sup>a</sup> Except US-South Korea RTA that permits only price based regulations.

**Source: Salam Alshareef**

## Conclusion

The investment chapters in both North-South and South-South RTAs are frameworks that incorporate investors' interest, though to different extents, as they discipline host State regulatory function toward foreign capital and investment. Nevertheless, developmental interests of host State are passively incorporated in some RTAs, especially those of China, through some exceptions and limitation to RTAs coverage scope and its substantive rules.

State's autonomy in respect to the regulation of foreign investment admission was extremely reduced under US investment chapters. They include pre-admission liberalization commitment as they establish national treatment standard covering the whole cycle of investment life. In addition, investor definition creates opportunities for treaty shopping practice by investors not conceived to be beneficiaries of the agreement. Moreover, covered investment includes all kind of assets, even financial derivatives, debt, goodwill and commercial reputation, etc. Furthermore, US investment chapters mandate the free transfers of capital and financial transactions into and out of host country territory. Moreover, IMF and GATS rules that permit to deploy capital control measures in some cases were eliminated. Thus, the RTAs of US do liberalize not only all types of foreign capitals admission but also its exit from the host economy. In addition, IPRs are defined as an investment, and their holders have right to be protected under investment rules. Under US investment chapters, the issuance of a compulsory license could be considered as indirect expropriation even if such practice were in accordance with TRIPS agreement.

US investment chapters include provisions on FET and expropriation that restrict considerably public policy measures in respect to the environment, health, etc. What distinguishes the US RTAs from the Chinese at this level is that the US investment agreements are usually used by TNCs to bring cases against host country under the claim of applying expropriatory measures or violating FET. Finally, US RTAs go well beyond WTO in areas covered by TRIMs and GATS agreements.

Compared to US, Chinese RTAs are much less representative of transnational capital interests. Even if they adopt a broad definition of investment encompassing almost all types of assets, they preserve the States' autonomy in respect to the regulation of foreign investment admission, as national treatment standard is accorded in post-admission bases. Furthermore, they exclude from the scope of application some sectors, i.e. public

procurement, and some industrial policy tools such as subsidies and taxes. Investments in services under the mode of commercial presence are excluded from the application of substantive provisions such as national treatment. A significant level of autonomy to use industrial policy measures aimed at realizing FDI investment spillover effects is preserved, as no performance requirement was prohibited. Consequently, conditioning the admission of foreign investment to some operational conditions is possible as the host State conserves the right to regulate foreign investment entry. The same goes for measures aimed at managing interaction and ensuring consistency with other industrial policy areas. Investment chapters in Chinese RTAs permit the State to regulate foreign investment to ensure macroeconomic stability. This is due to the possibility to control foreign capital admission, in addition to transfer provisions mandating transfers approval by national regulatory agencies.

Even though Chinese investment chapters define IPRs as an investment, its chapters on IPR are TRIPS *alike* as will be shown in next chapter. Consequently, States conserve the right to operationalize TRIPS flexibilities in their national patent laws. Still, defining patent as investment holds, at least *de jure*, risks of bringing dispute on IPRs before international investment courts. Moreover, *de jure* public policy space could be constrained under Chinese RTAs as they include provisions on expropriation and FET. Still, not all Chinese RTAs include a provision on indirect expropriation. Finally, Chinese RTAs commitments in areas covered by TRIMs and GATS do not go beyond disciplines contained in those agreements.

It should be noted, that investment chapters in RTAs contain basically the same provisions that are found in BIT model of the studied countries. Hence, results of this chapter apply also on BITs of China and US<sup>87</sup>.

Last but not least, it seems that commitments in US RTAs are highly used by investors in Investor-State dispute settlement. While US BITs and investment chapters included in RTAs are the most used support for claims brought by investors against host States, with 145 known cases, Chinese BITs and RTAs are one of less used in arbitration among capital exporting countries with only 4 cases using Chinese treaties as reference by the end of 2016<sup>88</sup>.

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<sup>87</sup>, However, BITs models for both countries evolved over time. On US BIT models evolution see Akhtar and Weiss (2013), and on Chinese BITs models evolution see (Berger, 2008).

<sup>88</sup> For detailed information on investment disputes see UNCTAD investment policy hub database: <http://investmentpolicyhub.unctad.org/ISDS>



### **III) Chapter Three: Patent Rules in North-South and South-South RTAs**

The revival of interest in industrial policy in development economics is characterized by the growing interest in the evolutionary approach, where development is seen as an evolutionary process, where industrialization is shaped by policies and institutions helping to, inter alia, the accumulation of technological capabilities (see Stiglitz et al, 2009 and Cimoli et al, 2014)

At the core of this literature is the concept of national innovation system that is a “set of distinct institutions which jointly and individually contribute to the development and diffusion of new technologies and which provides the framework within which governments form and implement policies to influence the innovation process. As such it is a system of interconnected institutions to create, store and transfer the knowledge, skills, and artefacts which define new technologies” (Metcalf, 1995, p.425).

As emphasized by Stiglitz (2008) a good innovation system is a one that permits a high level of knowledge generation and diffusion simultaneously. Tight IPRs regime, as part of the innovation system, hinders the diffusion of technologies and knowledge and may be counter-productive in respect to the generation of new technologies.

Importantly, tight IPRs regime blocks also the activities of reverse engineering and imitative experimentation which are at the core of the development process (Dosi and Stiglitz, 2014). One of the well documented historical facts is the laxity or the absence of IPRs in nearly all instances of successful industrialization experience. Moreover, the emulation of the technological leaders can be identified as one of the few constants across those experiences (See Chang, 2002; Kaufer, 1989; Khan, 2002; Kumar, 2002; Machlup, 1958).

In fact, the choice of a flexible IPRs system and, in particular, discrimination against foreigners, was a feature in the legislation of developed countries at earlier stages of their industrial development. For instance, the United States Congress’ Office of Technology Assessment (1986, p.228) noted that “When the United States was still a relatively young and developing country, for example, it refused to respect international intellectual property rights on the grounds that it was freely entitled to foreign works to further its social and economic development”. According to Khan (2002), the American patent law discriminated against foreign inventors. Initially, foreigners were not allowed to obtain a patent at all. Later, a



foreigner could place claims but had to pay patent fees that were about one hundred times as high as those for nationals.

A major change was the incorporation of IPRs in the international trade domain, culminating in the adoption of WTO Agreement on Trade-related Intellectual Property Rights (TRIPS). TRIPS agreement represents a historical impediment to policies aiming at the structural transformation in developing economies as it restricts the access to the technologies and associated knowledge. Hence, much of the flexibility that developed countries enjoyed to design their IPRs system is no longer available to developing countries.

Nonetheless, even if TRIPS Agreement reduces the spaces for policy maneuver, it did not end the “implementation game” at the national level (Deere, 2009). Within the new international framework, there remains room for countries to push for some strategic intellectual property management. TRIPS agreement permits some “flexibilities” that may be further exploited and adapted consistently with industrial policy framework. However, legal feasibility and awareness of the existence of these flexibilities are not sufficient for countries to take advantage of them.

The relative character of the very term “TRIPS flexibilities” should be emphasized here. Some points in TRIPS are considered “flexibilities” when compared, on the one hand, to the orthodox implementation of TRIPS provisions by some countries like the US, and on the other hand, when compared to TRIPS *plus* provisions included in some bilateral trade agreements. In fact, those flexibilities are getting eliminated by some RTAs that incorporate TRIPS *Plus* provision as is the case in US and EU RTAs.

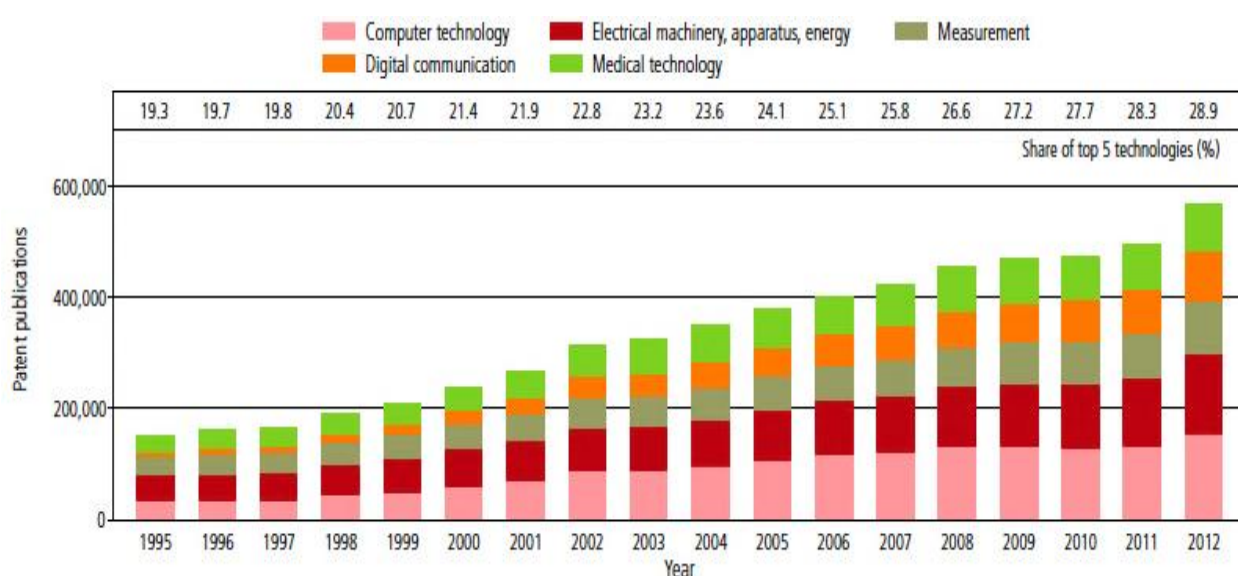
It should be noted that literature on TRIPS “flexibilities” in development economics emphasizes their use in health related issues, especially in pharmaceuticals industries. Much less analysis is done on how TRIPS “Flexibilities” may be operationalized in order to enhance overall industrial development. This may be explained by the inter-sectoral differences in the uses of patents. The weight and impact of patent on technical progress depends on complex interactions between the properties of technologies, the nature of markets and the patterns of competition, the evolution of legislation and its interpretation (Roycroft and Kash, 1999; Kingston, 2001; Cohen et al, 2000)<sup>89</sup>.

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<sup>89</sup> For a literature review, see Orsenigo et Sterzi (2010).

Taking a look at statistics may be helpful to understand in which sectors and industries patents may have particular importance. According to World Intellectual Property Organization (WIPO) statistics handbook (2014), computer technology saw the most published patent applications worldwide, in 2012, followed by electrical machinery, measurement, digital communication and medical technology. The top five technological fields rose from 151,000 published applications in 1995 to 613,000 in 2012. Electrical machinery was the leader until 2001 when computer technology took over (See figure III.1). The combined share of the five went from 19% in 1995 to 28% in 2012.

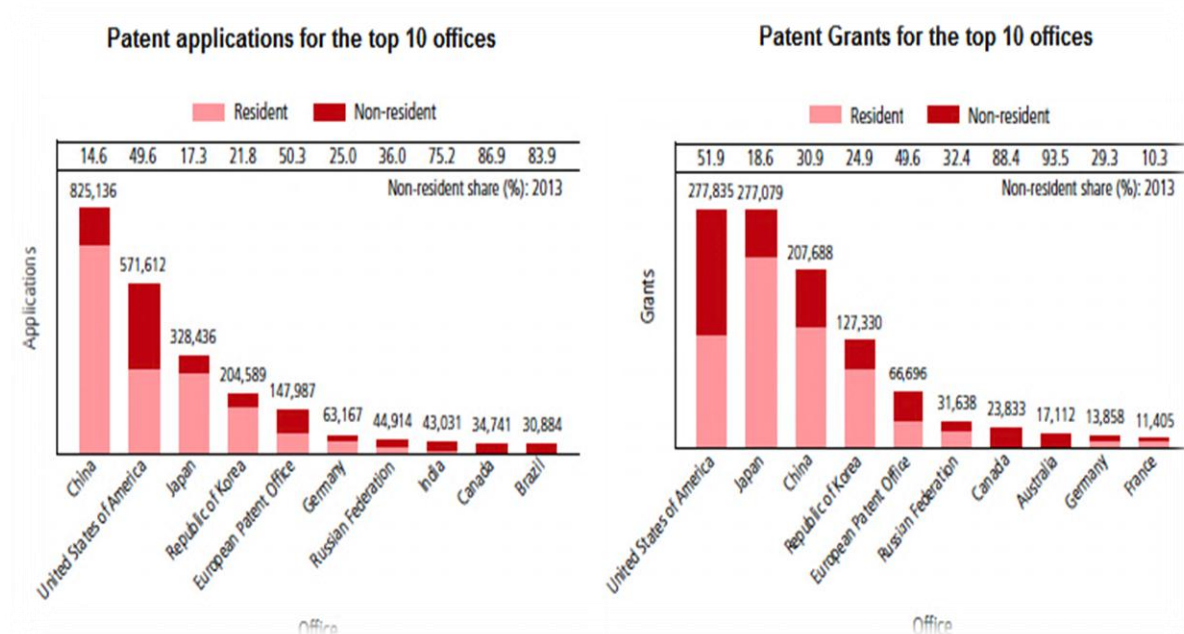
**Figure III.1 Trend in patent applications for the top five technology fields**



Source: WIPO (2014), p.32

Of the top 20 countries origins of the patent applications, only China and India are not high-income countries. Both countries recorded the fastest growth in respect to the number of application in 2013. While China is the first country in respect to the number of patent application, it is the third in the number of granted patent behind the US and Japan (see figure III.2). While the rate of granted patent to the patent application was 49% for the US, it was only 25% in China. This may suggest that China adopts a tighter stance in respect to granting patent compared to the US.

**Figure III.2 Patent applications and grants for the top 10 offices, 2013**



Source: WIPO (2014, p.24 and p.26)

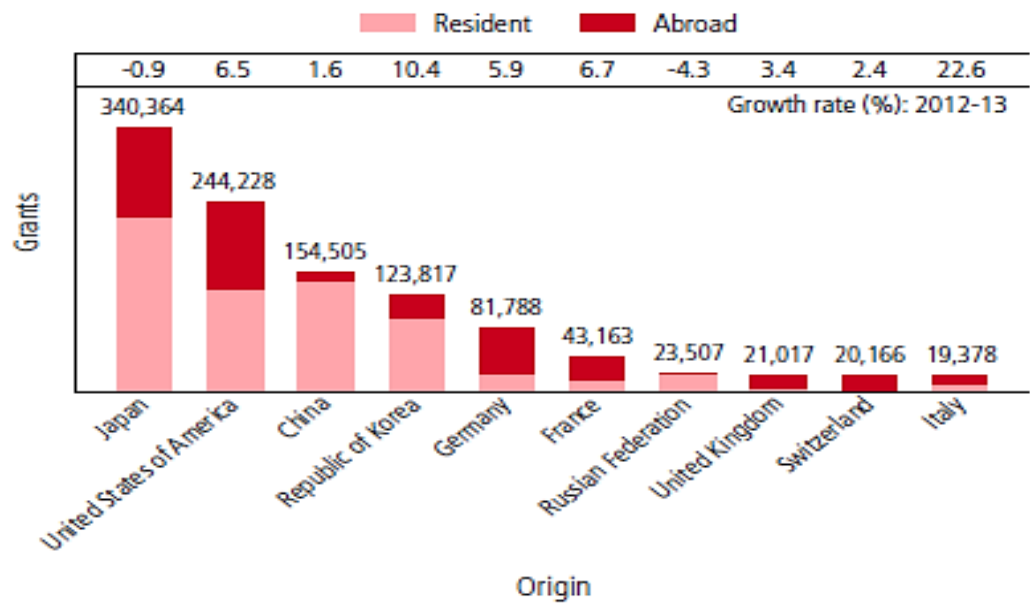
In respect to patenting activities in other countries, Japan and the US had the second or third largest shares at many offices. For instance, US applicants accounted for 44% of applications filed in Australia, Canada, and Mexico. In contrary, Chinese applicants accounted for only 2.6% of claims received by the European Patent Office and the United States Patent and Trademark Office (WIPO, 2014). While first in resident applications, China fields only 30,000 applications abroad, fewer than each of Switzerland and the UK. This may suggest that China is not seeking to internationalize its IPRs. Put it in another way, following infringement elsewhere in respect to the locally produced invention does not seem to be a central component of Chinese international IPRs strategy for now (see figure III.4).

If the sectoral share of issued patent is considered as an indicator of where technological progress and innovation are taking place, WIPO (2014) Statistics shows that China records a remarkable dynamism in the manufacturing sector. Top technology fields for granted patent in China include electrical machinery, apparatus, energy, digital communication and computer technology. More than 25% of issued patents go for these industries.

The economic rise of some Southern countries may widen spaces for policies and practices aiming at fostering the accumulation of production capacities and technological capability in other Southern countries. According to UNCTAD (2012a), a substantial share of high technology exports from the South is directed to developing countries. A country level

disaggregation shows that 54% of China's high-tech exports and 47% of India's high technology exports were imported by other developing countries.

**Figure III.3 Patent grants for the top 10 origin**



Source WIPO (2014, p.28)

Many economists analyzed IPRs rules in RTAs, but they focused almost exclusively on the RTAs of US and EU (For example Shadlen, 2005a, Mercurio, 2006; Drexl, 2014). By consequence, these studies had painted a bleak picture on the state of the TRIPS flexibilities in the context of rising regionalism. It is quite astonishing that little works have been done on IPRs rules in emerging countries’ RTAs, despite the fact that they become major players in different technologies and manufacturing sector; thus, they may be a potential source of technology and products that help for the development of production capacities and technological capabilities. This chapter assesses comparatively Patent rules within RTAs, i.e. North-South and South-South RTAs. This approach results in rather optimistic conclusions, contrary to previous studies, as it shows that the RTAs of China and India do not impede partners’ countries to operationalize TRIPS flexibilities at the national level, in a manner that facilitates the industrial development.

Moreover, the analysis of implications of patent regulations on economic policy in previous studies has focused, almost solely, on health-related issues, while impacts on the overall industrial development were not considered sufficiently. This chapter contributes to filling some of the gaps in the literature by providing comparative insight on IPRs rules in

different types of RTAs, while emphasizing, theoretically, the relation between the nature of patent regulations and the industrial policy.

The chapter provides a comparative examination of patent rules in North-South and South-South RTAs. The chapter investigates the state of the so-called “TRIPS flexibilities” under the RTAs, whether eliminated, kept or affirmed. As an example of North-South RTAs, the study covers 10 agreements of United State and 12 European Union, signed with developing countries. As an example of South-South RTAs agreement, the study covers 6 Chinese agreements and 8 Indian with developing countries. While chapters on IPRs were found in all US and EU studied RTAs, it is found in only 3 Chinese RTAs and none of the Indian RTAs.

Results show that spaces to shape the national patent system in a manner that favors structural transformation are diverse under RTAs. While North-South RTAs limit systematically and profoundly *de jure* possibility to integrate national patent system design into an industrial policy framework, South-South RTAs preserve substantial policy space as they maintain TRIPS flexibilities.

In accordance with previous studies, results show that the RTAs of US are the tightest as they eliminate systematically almost all TRIPS flexibilities. The RTAs of US tighten patent rules in each aspect of TRIPS flexibilities, and with respect to all products but also with respect to specific products, i.e. agrochemical and pharmaceuticals. They extend the scope of patentability by defining loosely the criteria of patentability (inventiveness, novelty, industrial applicability) compared to TRIPS agreement definitions. Moreover, they mandate that patents be available for new uses of known products. In addition, they permit and mandate the patentability of excluded subject matters under TRIPS: plants and animals. Disclosure requirements were softened, protection terms were extended, and the cases justifying patent revocation were limited.

Moreover, general and specific exceptions to exclusive rights of patentee were narrowed or eliminated. Thus, exclusivity of test and clinical data attached to the patent application were imposed, a linkage between patent term and market approval was established, early working exceptions and parallel importation were prohibited in some RTAs. Last but not least, they limit the possibility to issue a compulsory license as result of explicitly narrowing ground upon which issuance could be justified, in addition to the connection established between patent rules and investment chapter.

Patent provisions in EU RTA have changed over time. The earlier version committed parties to adhere to some WIPO treaties that contain TRIPS *plus* provisions. Indeed, as those treaties do not contain dispute settlement mechanism, their inclusion in RTAs makes them enforceable under its dispute settlement. The latest RTAs converge toward the US approach. In particular, they enlarge patentability scope to include excluded subject matter under TRIPS, i.e. plants, they mandate the patentability of new uses of known products (in the case of pharmaceutical and agrochemical products), and finally, they extend patent term. Furthermore, some restrictions are imposed on the possibility to use exceptions to patentee exclusive rights under TRIPS, i.e. the period of data exclusivity, early working exception and by consequent the possibility to issue a compulsory license.

Chinese approaches range from the absence of the mere term “intellectual property Rights” and “patent in some RTAs, to the inclusion of a chapter on IPRs in others without any further engagements beyond TRIPS agreement. Whenever such chapters are present, all TRIPS flexibilities are maintained. More specifically, Chinese rules on patent do not broaden the scope of patentability. Chinese RTAs introduce no restriction on TRIPS exceptions. Finally, while integrating international treaties in IPRs that have TRIPS *plus* rules is a characteristic of both US and EU RTAs, Chinese RTAs are characterized by reference to Doha Declaration that widens grounds upon which compulsory license may be issued and to treaties that were lobbied for by developing countries such as the Convention on Biological Diversity (CBD).

This may suggest a relatively optimistic perspective for developing countries which engage in a structural transformation process, as the national and international approaches to patent system of two major countries showing a considerable technological dynamism in many industries preserve TRIPS flexibilities. The economic rise of some Southern countries may widen spaces for policies and practices aiming at the structural transformation in other Southern countries.

One may argue that the preserved *de jure* policy space with respect to the patent under Chinese and Indian RTAs can be effectively utilized, as both countries may not have interests to adopt a protectionist stance in respect IPRs as they seek themselves to access to knowledge and technologies produced by Northern countries. Moreover, it is less likely that they use dispute settlement mechanism under WTO against policy measures operationalizing TRIPS flexibilities. This argument may be reinforced by the fact that India itself was accused under

dispute settlement mechanism to violate TRIPS commitments, as they operationalized some of the TRIPS flexibilities.

The chapter is structured as follows. Section one presents some arguments of evolutionary approach on the relation between the development process, the IPRs, and the industrial policy. In addition, it presents their critics to the theoretical foundation of the idea that patents are appropriate incentives to innovation, and how they may produce opposite effects. Section two presents the term TRIPS flexibilities, its definition, and its limits and provides results overview on the state of those flexibilities under the studied RTAs. Following sections present in details TRIPS flexibilities, and assess in parallel their state in RTAs. Thus, section three analyses patent granting conditions. Section Four investigates the exceptions to exclusive rights of the patentee. Section Five examines RTAs relation to international treaties on IPRs, and their implications on TRIPS flexibilities. Section six analyses enforcement commitments. The last section concludes.

### **III.1) Evolutionary Views on the Relation between Industrial Policy, Technological Progress and Intellectual Property Rights**

Industrial development is a long-term process of accumulation of diversified production capacities and technological capabilities. The structural transformation entails “the development of pools of competence in various scientific and technological fields” (Cimoli et al, 2014,p.478). It results in a rupture with traditional production methods and an intensification of manufacturing activities able to systematically learn how to generate and carry out new ways of producing new products (Stiglitz et al, 2009). Access to knowledge is an essential condition for the accumulation of technological capabilities.

This process is fundamentally shaped by the opportunities that local producers have to enter and operate in particular markets and technology areas. These opportunities partially depend on the ease of imitation of technological and production knowledge, and the corresponding possibility to avoid the cost of “reinventing the wheel”. However, the ways actors exploit these opportunities are functions of the existence of supporting State's policies and institutions. This entails the regulations of modes through which scientific, knowledge and technological producers can claim the legal rights to the exclusive exploitation of their products (Cimoli et al, 2014). To put another way, production capacities and technological capabilities accumulation are influenced by the nature of IPRs.

The first subsection presents some of the evolutionary arguments on the relation between industrialization process, technological progress, and IPRs. The second subsection presents some evolutionary arguments on the loose theoretical foundation of strong patent protection and its adverse outcomes.

### **III.1.1) Technological Capabilities Accumulation and IPRs Regimes**

Evolutionary economists had developed the concept of national innovation system that is the collection of institutions that promote innovation through providing incentives, allocating resources among researchers and research projects, and even through State's direct implication in scientific and technological production activities. The innovation system focuses on both the production and the dissemination of knowledge throughout the economy, including the production of new goods and the improvement of existing production processes (see e.g. Freeman, 1987; Nelson, 1993; Lundvall, 2010).

As emphasized by Stiglitz (2008) a good innovation system is a one that permits a high level of knowledge generation and diffusion simultaneously. Tight intellectual property rights (IPRs) regime, as part of the innovation system, hinders the diffusion of technologies and knowledge and may be counter-productive in respect to the generation of new technologies.

Tight IPR regimes impede the practice of imitative experimentation and reverse engineering which are at the core of industrialization process. Consequently, they hinder the development of local technological capabilities in general and absorptive capacities in particular (Dosi and Stiglitz, 2014). Absorptive capacity is the ability of a firm to recognize the value of new, external knowledge and information, assimilate it, and apply it in its production (Cohen and Levinthal, 1990), through three processes of exploratory learning, transformative learning and exploitative learning (Lane et al, 2006).

The accumulation of technological capabilities is a process that is shaped by a set of complementary public policies through "knowledge governance approach" that "calls for active and selective industrial policies, as means to promote and support the general accumulation of capabilities." (Burlamaqui and Cimoli, 2014, p.494).

Cimoli et al (2009) noted that these policies historically involved the following elements: (i) State ownership, (ii) selective credit allocation, (iii) favorable tax treatment to selective



industries, (iv) restrictions on foreign investment, (v) local context requirements, (vi) special IPRs regimes, (vii) government procurement, and (viii) promotion of large domestic firms.

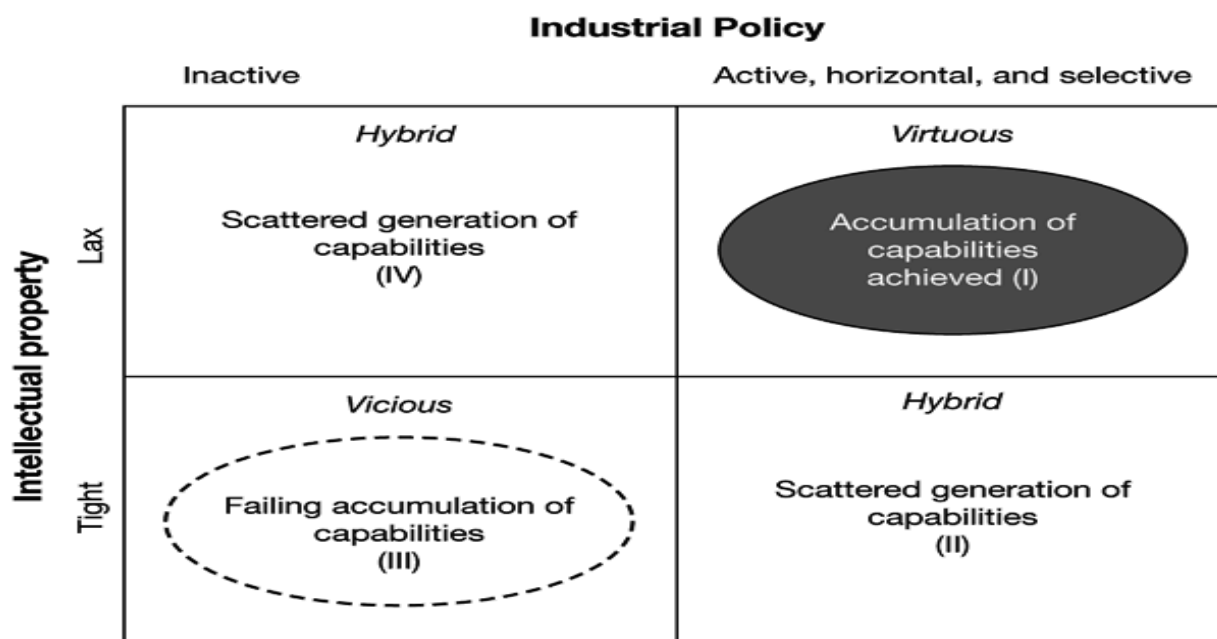
Consequently, IPRs are part of a whole, i.e. part of the industrial policy framework. Furthermore, recent works suggest that IPRs may have a crucial role in determining the success of the overall industrialization strategy. Figure (III.5) illustrates the different outcomes delivered by varying combinations of industrial policies and IPRs regimes. Virtuous knowledge governance corresponds to the quadrant number I where active industrial policies are combined with lax IPR regimes. This case corresponds to all successful industrialization experiences, as is the case for East Asia and industrialized countries like the United States, England, Germany, etc. (Burlamaqui and Cimoli, 2014).

In turn, a dispersed generation of technological capabilities and localized in few specific economic fields (scattered) might occur in either situations where a mix of too tight intellectual property regimes could limit the scope of active, horizontal and selective industrial policies (quadrant II), or passive industrial policy together with lax IPRs regimes take place (quadrant IV). Quadrant number III represent the cases where industrial policy is kept inactive, adopted passively or with pure horizontal incentives in combination with tighter IPRs regimes. Consequently, the processes of accumulation of technological capabilities do not occur in a sustained manner. This has been typically the case for Central America after TRIPS enforcement, where some neglect of industrial policies associated with increased IPR standards has perpetrated a truncated industrialization process and reinforced the specialization pattern in goods with low technology intensity (vicious). Failed development experiences could fit in last three spaces (Burlamaqui and Cimoli, 2014).

These observations go in opposite direction of conventional arguments which insist on the idea that without full appropriability, there will be positive externalities to research, thus, discouraging the investment and the production of knowledge (Dosi and Stiglitz, 2014). It claims that without well-founded IPR regimes there would be no economic incentive for innovative activities. Patents, for example, would work as a reward, ensuring that the rent generated by the innovative firm does not vanish as others start copying the novel product. Under the guarantee of IPRs that the economic benefits will be higher than the costs of innovative processes, firms engage in innovative activities, for the purpose of developing their productive and technological capabilities as well (World Bank, 1991; OECD, 1997b). The conventional perspective can be stylized by the solid (lower) curve in Figure (III.6),

which implies that IPR reinforcement must lead to increased innovation and, therefore, to a higher accumulation of capabilities.

**Figure III.4 Outcomes of different combination of industrial policy types and IPRs regimes**

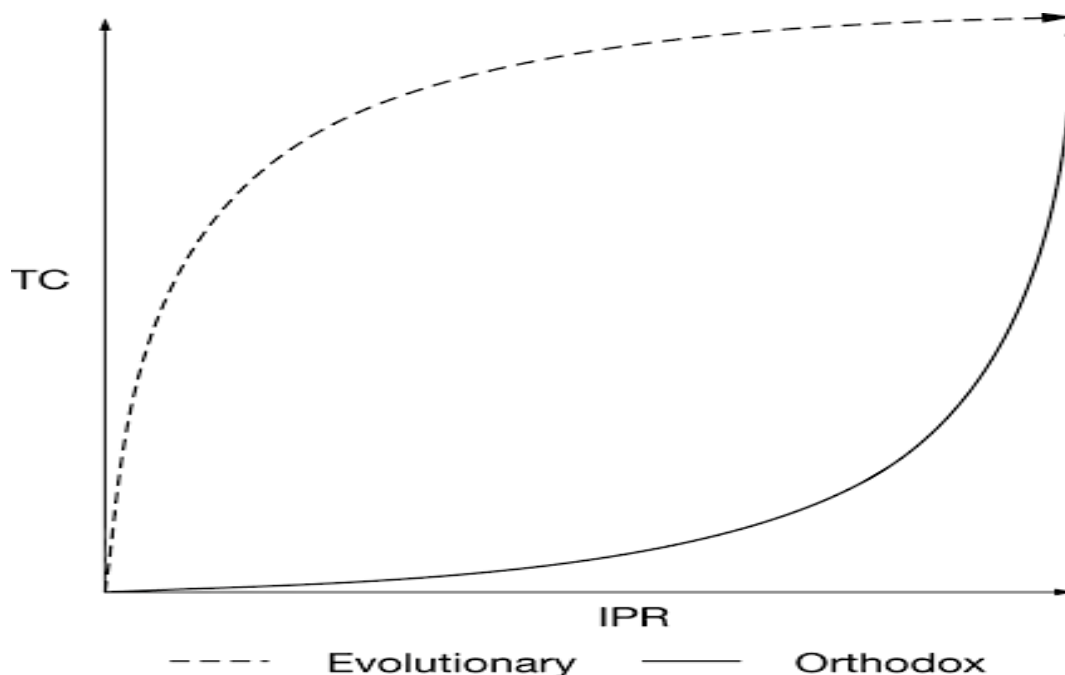


Source: Burlamaqui and Cimoli, (2014, p.495)

In contrast to this normative view, the evolutionary approach suggests a view built on historical observation concerning the relation between IPRs regime and technological capabilities accumulation. It suggests that the relationship is not deterministic or linear (David, 1993; Mazzoleni and Nelson, 1998; Cimoli et al, 2009). It is intrinsically related to the productive structure, in which each sector has its own technological and innovative specific dynamics. It is only when their capabilities are already developed that (frontier) firms, sectors and countries invoke IPRs protection as a mean to preserve national dominance in specific fields, and not the other way around (Cimoli, Coriat, and Primi, 2009). The broken line in Figure (III.6) describes this perspective.

It should be noted that the evolutionary approach does not conclude necessarily on the need of tight IPRs regime once a certain level of development is attained. Stiglitz (2008) suggests an alternative system to patent as a mean of incentivizing private innovation while insisting on the role of public institutions (such as the University) in the innovation process.

**Figure III.5 Accumulation of technological capabilities and IPR: evolutionary vs. orthodox perspective**



Source: Burlamaqui and Cimoli (2014, p.482)

### **III.1.2) Theoretical and Practical Flaws of Patent System**

The presence of market failure argument in knowledge production is the primary rationale for conventional view on the need of tight IPR regime rest upon a standard. Knowledge is seen as a pure public good. By consequent, patents ensure the condition of excludability that is necessary if private actors are to engage in costly innovative efforts (Cimoli et al, 2014). The patent function is to enable the private producer to ensure a larger fraction of the social returns stemming from its innovative activity (Dosi and Stiglitz, 2014).

A second purported function of patent concerns the positive effects of technological information disclosure on the overall innovative activities in the economy. According to the conventional view, patent rights were offered as consideration for the disclosure of inventions that might otherwise be kept secret. Thus, the new knowledge and technologies will be made accessible to other producers (Cimoli et al, 2014).

The collective economic benefits of disclosure fall into three distinct areas. First, patent disclosures permit the reduction of investments in duplicative R&D. Second, disclosure facilitates follow-on inventive activity and promotes a broader diffusion of the technology.

Lastly, patent disclosure can promote diffusion of the technological knowledge, for example by licensing agreements (Cimoli et al, 2014).

The evolutionary approach critics to conventional argumentation could be regrouped under three categories. The first considers the shortcomings of the theoretical rationale for the patent. Second, it questions the underlying conception of knowledge and knowledge production. Thirdly, it discusses counterproductive effects of tight patents system on innovations<sup>90</sup>.

First, concerning the hypothesis that knowledge is a public good and that in the absence of patent the technological knowledge would be freely accessible to third parties, it is argued that this would not apply whenever innovative activities build upon and produce technological knowledge that is partly tacit. Under these circumstances, technological knowledge is not freely available to third parties in the absence of patent.

Moreover, even if knowledge related to a particular innovation were to be made public, it does not follow that every firm could use such knowledge. The use of non-excludable knowledge for the purposes of imitating or adapting an innovative technology would depend on the initial capabilities of the imitator. When such capabilities are inadequate, the availability of knowledge is not sufficient for imitation to take place. Conversely, an organization with strong technological capabilities could not only use the publicly available knowledge but also engage in “inventing around” the legal rights that were to be created to make the original invention excludable (Cimoli et al, 2014).

The disclosure requirements may not offset the adverse effects of the “enclosure of the commons”. The evolutionary approach has long emphasized one of the distinct characters of technology and knowledge, i.e. the tacitness. More generally, transforming information into “useful knowledge” requires experimentation and development activities, partially based on pre-existing knowledge and processes which are quite tacit and embedded in organizations (More in Dosi, 1982, and Dosi and Nelson, 2010).

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<sup>90</sup> Indeed, evolutionary approach envisages also alternative options to patent that attempt to strike a balance between the knowledge producer rights and the dissemination and accessibility to knowledge. On alternative options to patent, see for example Stiglitz (2008).

Furthermore, it seems that very defenders of protection through patent are working against such disclosures. For instance, the America Invents Act of 2011 has significantly deemphasized the need for disclosure in order to enforce patents<sup>91</sup> (Dosi and Stiglitz, 2014).

Second, Evolutionary literature goes further by questioning the basic underlying conception of knowledge and knowledge production in conventional views. It points out that the later do not take into account key aspects in the production of knowledge.

In particular, standard theory considers knowledge like any other form of capital and property. For instance, in contrast to real estate property and other physical goods, the boundaries of the intellectual property are not easy to establish. Knowledge itself is the most important input into the production of knowledge, and where any product in today's complex economy is based on and incorporates a large number of separate and complementary innovations (Stiglitz, 2008). This means that each innovation builds on and works in conjunction with other innovations. It is almost impossible to identify the contribution of one innovation in isolation from others (Stiglitz, 2008). While patents are supposed to be granted only for new knowledge, defining new knowledge is not always easy. Often the patent covers knowledge that already exists. The criticism of patenting traditional knowledge is that the knowledge covered was previously known. Stiglitz (2008, p.1704) comments "Whether a product is novel depends on the state of knowledge throughout the world. It is often difficult for the patent office to determine whether someone in the rest of the world might have had the idea before this patent was granted; in the case of the automobile, it is arguable that others in Europe had the idea before the granting of the 1895 patent. The United States has often been somewhat provincial in its approach to knowledge within the patent system. For instance, the United States gave a patent for basmati rice. Indians had been consuming basmati rice for a thousand or more years".

In addition, conventional view suffers from another deficiency. It considers the private production of knowledge solely, thus, neglecting the everyday interactions between private firms and public institutions in the production of knowledge (governments, universities, etc.). In fact, technological innovation depends heavily on a variety of complementary institutions which are regulated by pure market incentives only to a limited extent (Dasgupta and David, 1994).

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<sup>91</sup> The law and related documents may be viewed at [http://judiciary.house.gov/issues/issues\\_patentreformact2011.html](http://judiciary.house.gov/issues/issues_patentreformact2011.html)

Third, evolutionary approach highlights the negative impacts of strong IPR regimes. Stronger appropriability may result in smaller publicly available knowledge for researchers. In turn, reduced opportunities may lead to reduced innovation since technological opportunities are a major driver of innovation (Dosi and Stiglitz, 2014; Stiglitz, 2008).

Moreover, the monopoly power to which patent give rise may lead to less innovation, because monopolies may have insufficient incentives to innovate. Arrow (1962) suggested that monopolies have far weaker incentives to innovate. Equally, Stiglitz (1988) has illustrated how a monopolist firm can maintain its position by getting only a little bit ahead of its rivals.

Worse still, monopolists use their monopoly power to block innovators endangering their dominant position, thus dis-incentivizing potential innovation (Dosi and Stiglitz, 2014). The literature on counterproductive effects of the patent reports the following expression of such strategy:

(i) The patent thicket that is “a dense web of overlapping intellectual property rights that a company must hack its way through in order to actually commercialize new technology” (Shapiro, 2001, p.120). In fact, products involve many components that are essential to the success of the product. In addition, as knowledge has been subdivided into separate and complementary property claims, the cost of reassembling constituent parts in order to engage research implies a heavy burden. Giving the huge number of patents being issued every year, it is hard to avoid overstep on others’ patent<sup>92</sup>. Consequently, a significant number of time-consuming and costly negotiations are needed to ensure licenses.

(ii) The practices of buying up patents and waiting for a firm to successfully produces a product that might have infringed on the patent, to sue, “holding them up”, for ransom (Shapiro, 2010).

(iii) Me-too patents: where an innovator tries to get part of the rents of existing patent holders. Here the innovation is designed to extend the life of the patent and to ensure the patent holder's monopoly returns. Dosi and Stiglitz (2014) affirm that “me-too” innovations are typical practice in the pharmaceutical industry.

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<sup>92</sup> The most famous recent case involved BlackBerry, whose maker, Research in Motion, was forced to pay hundreds of millions of dollars, under the threat of being forced to shut down, for trespassing on patents, most of which were ultimately declared invalid (Stiglitz, 2008).

Hence, the patent system as observed in reality sets up a distorted set of incentives for innovations, where inventive activity is directed first at creating market power, and then, by others, at overcoming the established market power.

### **III.2) TRIPS Flexibilities in Regional Trade Agreements**

IPRs integration into international trade system, through the signature of the TRIPS Agreement in 1994, introduced for the first time in the history a set of global minimum standards of protection that has significantly reduced the possibility for developing countries to design their patent systems according to their level of development and specific circumstances. The flexible IPRs regime applied during the 19<sup>th</sup> and 20<sup>th</sup> centuries came to an end with the adoption of the TRIPS Agreement.

Nonetheless, even if TRIPS Agreement reduces the spaces for policy maneuver, it did not end the “implementation game” at the national level (Deere, 2009). There remains room for countries having a considerable level of technological development to push for some strategic intellectual property management. TRIPS agreement permits some “flexibilities” that may be further exploited and adapted consistently with industrial policy framework.

The approach of Horn et al (2010) dividing RTAs commitments to WTO *alike* and WTO *Plus*, had been long before used for analyzing patent rules in RTAs in comparison to TRIPS agreement rules. Hence, literature on the subject developed the concept of TRIPS flexibilities, that are the marge of maneuver available under the TRIPS Agreements permitting to adapt national patent system to development needs, and the concept of TRIPS *plus* that is RTAs commitments constraining or prohibiting the use of TRIPS flexibilities (e.g. Shadlen, 2005a; Mercurio, 2006; Dutfiel and Musungu, 2003, Morin, 2004).

This chapter analytical framework that permits to compare RTAs rules on the patent to each other, and to TRIPS agreements, combines “TRIPS flexibilities” as developed by previous literature. The framework reflects the tightest observed commitments in RTAs, in order to permit better comparative comprehension. Practically, patent provisions in RTAs are compared against TRIPS Agreement rules, where the state of the so-called “TRIPS flexibilities” is examined in the studied RTAs, whether eliminated, preserved or affirmed. The Framework investigates four majors issues that have a direct repercussion on TRIPS flexibilities, i.e. patent granting conditions, exceptions to patent right, international treaties on

IPRs referred to in the RTAs, and commitments related to disputes settlement (see Table III.2). TRIPS flexibilities will be discussed in details in section three and four. Flexibilities presented therein are based on works of Correa (2015, 2014, 2007, 2005), Shadlen (2005a), UNCTAD and ICTSD Resource Book on TRIPS (2005), and recently Max Planck Institute published manifesto on TRIPS flexibilities written by some leading economist and specialist in IPRs (Matthias Lamping et al, 2014).

This section starts by presenting the concept of TRIPS flexibilities, and then it presents synthetically and comparatively the overall results.

### **III.2.1) TRIPS Flexibilities Definition**

From the historical point of view, the TRIPS Agreement was a major change in the mode of regulation of access to knowledge and technological progress. It has benefited industrialized countries and industries with greater capacity to generate new knowledge, while introduced additional hurdles to access to technical progress for countries with weaker capacities<sup>93</sup>. However, as a consensual outcome, it has left room for variation across countries, labeled under the term “flexibilities”. This term designates the various legal doctrines and mechanisms that help to mitigate the effects deriving from the exclusive rights conferred to the patentee.

The flexibilities are derived from (i) explicit exceptions to private right of the patent owner, (ii) ambiguities in the text that allow for different interpretations and modalities of implementation, (iii) some provisions indicate the objectives to be met rather than the specific ways in which they may be achieved. The TRIPS flexibilities may be useful for different purposes, ranging from local production to the importation of protected products at the lowest possible price (Correa, 2015). The degree to which such flexibilities are

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<sup>93</sup> While it is quite evident why developed countries sought to include IPRs in the new world trade regime, the question remains as to why developing countries accepted this move, since they displayed an attitude to its incorporation which ranged from concerned to hostile at the beginning (UNCTAD-ICTSD, 2003). Yu (2006) argues that there are four answers to this question (i) ‘bargaining’, (ii) ‘coercion’, (iii) ‘ignorance’ and (iv) ‘self-interest’. The ‘bargaining narrative’ emphasizes that developing countries agreed to TRIPS as a broader bargaining package, in which developed countries made concessions regarding lower tariffs on agriculture and textiles in return. The ‘coercion narrative’ considers TRIPS a neo-imperialistic document that was forced upon the developing countries by threatening to exclude them from the global trading system or by using ‘Section 301’ processes. The ‘ignorance narrative’ emphasizes that developing countries did not understand the full impact and the importance of the issue. However, if this heterogeneous country group was so ignorant about the relevance of IPR protection, it would not have tried to reverse the Paris and Bern Convention in the 1960s and 1980s. The last narrative suggests that developing countries agreed to TRIPS simply because it was in their own interest (Yu, 2006).



incorporated into national laws is one determinant of the room available to adopt measures to upgrade technological capacities of the local economy.

TRIPS *plus* is a concept which refers to the adoption of multilateral, plurilateral, regional and national intellectual property rules and practices which have the effect of reducing the ability of the developing countries to use TRIPS flexibilities. It covers both those activities aimed at increasing the level of protection for right holders beyond that which is given in the TRIPS Agreement, such as softening patentability criteria or extending patent duration, and those measures aimed at reducing the scope or effectiveness of limitations on rights and exceptions, such as limiting ground upon which compulsory license may be issued. TRIPS *plus* includes any new rules that would restrict the ability of these countries to (i) promote technological innovation and to facilitate the transfer and dissemination of technology, (ii) take necessary measures to protect public health and to promote the public interest in sectors of vital importance to their socio-economic and technological development, (iii) adopt appropriate measures to prevent the abuse of IPRs by right holders or the resort by right holders to practices which affect the international transfer of technology (Dutfiel and Musungu, 2003), and (iv) tightening dispute settlement procedures in a manner rendering commitments more likely to be enforceable. Table (III.1) presents the most recognized TRIPS Agreement flexibilities as developed in the literature.

It is maybe appropriate to emphasize the relative character of the very concept “TRIPS flexibilities”. In fact, commitments formulated vaguely may give place to different interpretations in both directions, less or more onerous. For example, while some provisions in TRIPS Agreement are interpreted by many experts in a manner that facilitates the access to knowledge and technology, there exist conventional interpretations for the same provisions seeking to increase the level of protection for intellectual property. Moreover, the conventional interpretations are well “muscle” as they are adopted by countries like US and EU, and enforced by sanctions and threat to sanction.

For example, the office of the US trade representative (USTR) has repeatedly used actions under section 301 of trade act of 1974 to challenge some developing countries interpretation of TRIPS agreement, in combination with threats to withdraw Generalized System of Preferences (GSP) privilege in reprisal (Reichman, 2014). According to USTR (2015), Special 301 Report 13 countries were put on Priority Watch list, and 24 countries were placed on the Watchlist because of their IPRs practice at the national level. Therefore,

the balance of power may be a determinant factor for the type of implemented interpretation of TRIPS flexibilities at the national level.

**Table III.1 TRIPS Agreement “flexibilities”**

	Possible Use	TRIPS Provision
<b>Patent Granting Conditions</b>	Define patentability criteria and disclosure requirements.	Article 27
Patentability Criteria	Establish the level of the inventive step requirement. Whether patent authorities grant narrow versus broad patent affects the ability of third parties to use patented knowledge for innovation.	Article 27
Novelty	Any disclosure, before the product or process gets patented, annuls the novelty characteristic of an invention. The distinction between inventions and discoveries. Allows the exclusion of patents on second uses of known products.	Article 27.1
Industrial Applicability	Ensure that claims to invention address technical problems of relevance for industries.	Article 27.1
Plant and Animals	Permits the exclusion plants varieties or animals, protect certain old and widespread agriculture practices such as seeds saving.	Article 27.3
Disclosure Requirements	Effects nature and amounts of information in public domain and thus available to third parties.	Article 29.1, Article 39
<b>Exceptions to Exclusive Rights of Patentee</b>	These exceptions allow third parties to use patented goods and the knowledge disclosed in patents.	Article 30
Test Data Exclusivity	Approval of generic products may rely on existing test data or prior approval of the originator’s product in the country or abroad.	Article 39
Right Exhaustion and Parallel Import	Prevent market division and price discrimination on a regional or international scale.	Article 6
Early Working Exception	Approval of drugs before the expiry of relevant patents.	Article 30
Research Exception	Invent around a patented product or process. Improve a patented invention. Challenge the validity of a patent.	Article 30
Compulsory Licensing	Permit the local exploitation of patented inventions. Remedy monopoly practices by the patentee.	Article 31, Doha Declaration

Source: based on Shadlen (2005a), Correa (2015), Mathias Lamping et al (2014)

Second, TRIPS flexibilities are considered as such when compared to TRIPS *plus* commitments contained in some RTAs. In fact, these flexibilities are getting eliminated, especially in North-South RTAs.

Finally, while developing countries have the right to exercise the flexibilities under the TRIPS Agreement, in reality, it remains difficult for many of them to make effective use of them because of, among other things, lack of infrastructural and technical expertise and lack of manufacture capacities. Thus, for countries lacking an already significant level of industrial development, those TRIPS flexibilities are simply not existent.

Nevertheless, if these policy spaces remain unexplored and no active industrial policies are effectively implemented, the adoption of stronger IPR regimes will make the process of capacities and capabilities development even more challenging.

### **III.2.2) TRIPS Flexibilities under the US, EU, and Chinese RTAs: Results Overview**

The chapter results are rather appealing contrary to previous literature that had drawn a bleak picture on the state of TRIPS flexibilities in the context of rising regionalism. It affirms hypothesis that spaces to shape the national patent system in a manner that favors structural transformation are diverse within RTAs. While the RTAs of US and EU raise the bar of IPRs restrictiveness beyond TRIPS agreement, Chinese RTAs stick to TRIPS rules and emphasize some of its flexibilities.

US RTAs increase patent protection level in each aspect of TRIPS flexibilities, with respect to all products and with respect to particular products, i.e. agrochemical and pharmaceuticals. They extend the scope of patentability by loosely defining criteria of patentability (inventiveness, novelty, industrial applicability). Moreover, they mandate that patents be available for new uses of known products. In addition, they permit and mandate the patentability of excluded subject matters under TRIPS: plants and animals. Disclosure requirements were softened, protection term was extended, and cases for patent revocation were limited.

Moreover, general and specific exceptions to exclusive rights of patentee were narrowed or eliminated. Thus, exclusivity of test and clinical data attached to the patent application were imposed, a linkage between patent term and market approval was introduced, early

working exceptions and parallel importation were prohibited in some RTAs. US RTAs limit directly and indirectly the possibility to recourse to the issuance of the compulsory license. The latter is an important practice for developing countries that had lobbied and succeeded in softening conditions under which compulsory license could be granted through the Doha Declaration.

US RTAs seem to be consistent over time with little variation from agreement to another. Arguably, RTAs is used by the US to bypass the dead-end debates at the TRIPS Council and to “consolidate” key elements of multilateral IPRs treaties (Morin, 2004). Indeed, the Trade Promotion Authority, under which these agreements were negotiated, explicitly states as a negotiating objective to “ensuring that the provisions of any multilateral or bilateral trade agreement governing intellectual property rights that is entered into by the United States reflect a standard of protection similar to that found in United States law.”<sup>94</sup> This is a key offensive market access interest of the US, supported by private sector<sup>95</sup> constituents for whom the export of intangible assets is commercially gainful.

RTAs of US not only contain forum choice in its dispute settlement chapter, but it also establish Investor –State Dispute Settlement while defining IPRs as an investment as explained in the previous chapter.

It should be noted that all the RTAs of EU and US establish linkage to WIPO treaties that include TRIPS *plus* provisions. Some of the treaties enlarge the scope of patentability, such as the International Union for the Protection of New Varieties of Plants 1991 (UPOV 1991). Others include transparency requirements that facilitate procedural and administrative procedures to grant patents, such as the Budapest Treaty on the International Recognition of the Deposit of Microorganisms, Patent Cooperation Treaty (PCT) and Patent Law Treaty (PLT).

Patent provisions in EU RTA have changed over time. The earlier versions committed parties to the implementation of TRIPS and to “the highest international standards of protection”, with commitments to adhere to many WIPO treaties (where EU is already a member). As will be discussed below, those agreements contain TRIPS *plus* provisions. In addition, as those agreements do not provide dispute settlement mechanism, their inclusion in

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<sup>94</sup> See US Trade Act of 2002, Sec. 2102(b)(4), is accessible at <http://uscode.house.gov/download/pls/19C24.txt>.

<sup>95</sup> On the role of pharmaceuticals and agrochemical industry in pushing toward higher IPRs rules see Drahos and Braithwaite (2002).

RTAs makes them enforceable under RTAs dispute settlement.

However, in the first phase of EU agreements, due to TRIPS nondiscrimination principals, the EU was able to free ride on the highest international standards set by the US in earlier RTAs with the same countries (Watal, 2014). According to TRIPS Article 4, any RTA provision on IPR that enters into force after the TRIPS Agreement and that consists of an “advantage, favor, privilege or immunity” shall be “immediately and unconditionally” accorded to the nationals of all other Members.

EU re-examined its strategy in RTA agreement concerning IPRs, which was manifested by launching the EU Strategy to enforce IPRs in third countries of 2004, in which one of the suggested actions was to review IPRs rules in bilateral agreements, including the clarification and strengthening of the enforcement clauses. The EU applied its Global Europe Strategy, which provides that “[i]n negotiating FTAs, the IPR clauses should as far as possible offer identical levels of IPR protection to that existing in the EU” (European Commission, 2011, p.21).

Hence, the latest RTAs converge toward the US approach. In particular, they enlarge patentability scope to include excluded subject matter under TRIPS, i.e. plants, they mandate the patentability of new uses of known products (in the case of pharmaceutical and agrochemical products), and finally, they extend patent term. Furthermore, some restrictions are imposed on the possibility to use exceptions to patentee exclusive rights under TRIPS, i.e. the period of data exclusivity, early working exception and by consequent the possibility to issue a compulsory license. Finally, the EU RTAs contain forum choice clause in its dispute settlement chapters.

In the image of its own national patent regulations, Chinese RTAs rules on patent do not go beyond TRIPS commitments. Thus, its flexibilities are preserved, even affirmed as they include a commitment to consider Doha Declaration an integral part of the RTAs. All Chinese RTAs emphasize the need to establish a balance between the rights of IPRs holders and the interests of both users and society. In addition, the parties to RTAs engage to prevent practices that abuse IPRs by right holders or adversely influence or limit technology transfer.

Chinese RTAs provide very limited, and at times no, coverage of intellectual property issues. Peter (2015, p.269) comments on the coverage of Chinese IPRs chapters “their coverage is so weak that one has to wonder whether intellectual property issues are included

simply to enable China to make symbolic statements about its growing effort in the area.” The China-Pakistan RTAs mentions the term ‘intellectual property’ only twice: one in relation to border measures (Article 10) and the other in relation to the definition of investment (Article 46). Although China-Chile RTA contains some provisions related to IPRs, they are rhetoric and not introduced in an “independent” chapter; rather they are set out in the chapter on cooperation. The first agreement with developing country to introduce a separate chapter on IPRs is China-Peru RTA in 2009 then the China-Costa Rica RTA in 2010 and China-South Korea in 2015.

One of the characteristics of Chinese RTAs is establishing linkages with international agreements that could have beneficial effects on developing countries, such as the Convention on Biological Diversity (CBD) and the Doha Declaration that affirms some of the key flexibilities to industrial development in TRIPS Agreement.

RTA with South Korea contains the most comprehensive chapter on IPRs and serves as an example of the extreme limit of the provision on patent observed in the Chinese RTAs with developing countries. It, generally, restates commitments under TRIPS. Its IPRs definition includes elements that were not contained in the TRIPS, at least separately i.e. plant varieties and utility model<sup>96</sup>. In contrast, the definition does not mention elements that were covered in the TRIPS, i.e. geographical indication and layout-Designs (Topographies) of integrated circuits<sup>97</sup>. China agreement with South Korea is the only RTA that makes reference to WIPO treaties that weren't included in TRIPS, i.e. the Patent Cooperation Treaty and Budapest Treaty (however, both countries were already members of treaties). Finally, Chinese RTAs raise the bar of IPRs rules enforceability as forum choice is possible under the three of studied Chinese RTAs.

India RTAs do not include practically rules on the patent. Therefore, Indian RTAs preserve all TRIPS flexibilities. Table III.2 reports the number of TRIPS *plus* commitments observed in studied agreements.

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<sup>96</sup> Article on utility models is too brief stating “party agree to enhance cooperation at this level.”

<sup>97</sup> China-South Korea RTA Footnote 52 defines IPRs as following “intellectual property comprises in particular copyright and related rights, trademarks for goods and services, industrial designs, patents, utility model, plant varieties, and undisclosed information”.

**Table III.2 Number of TRIPS *Plus* provisions in studied RTAs**

	US	EU	China	India
<b>Patent Granting Conditions</b>				
Scope of patentability	9	12	0	0
Information disclosure	7	0	0	0
Patent duration extension	9	2	0	0
Patent revocation	9	9		0
<b>Exception to patent right</b>				
Compulsory license	10	2	0	0
Data exclusivity	9	2	0	
Early working	9	2	0	0
Experimentation and research	9	0	0	0
Right exhaustion and parallel importing	8	0	0	0
<b>Reference to International Agreements</b>				
UPOV 1991	10	11	0	0
Budapest Treaty	9	11	1	0
Patent Cooperation Treaty	10	10	1	0
Patent Law Treaty	9	10	0	0
Doha Declaration <sup>a</sup>	0	3	6	
Convention on Biological Diversity <sup>a</sup>	0	3	6	0
<b>Dispute settlement</b>				
Forum Choice	10	12	2	0
Investor-State dispute settlement	9	0	2	0
<b>Total</b>	117	83	6	0

<sup>a</sup>: these two international agreements affirm and expand some of the TRIPS flexibilities

Provisions in white rows on the left side are not TBT *plus*

White Rows: Agreements that emphasize TRIPS flexibilities.

**Source: Salam Alshareef**

Results suggest a relatively optimistic perspective for developing countries which engage in a structural transformation process, as the national<sup>98</sup> and international approaches to patent system of two major countries showing a considerable technological dynamism in many industries preserve TRIPS flexibilities. The economic rise of some Southern States may

<sup>98</sup> For a detailed discussion on Chinese and Indian national patent systems, see, respectively, Zhuang (2013) and Kher (2013).

widen spaces for policies and practices aiming at the development of production capacities and technological capabilities.

One may argue that the preserved *de jure* policy space with respect to the patent under Chinese and Indian RTAs can be effectively utilized, as both countries may not have interests to adopt a protectionist stance in respect IPRs as they seek themselves to access to knowledge and technologies produced by Northern countries. Moreover, it is less likely that they use dispute settlement mechanism under WTO against policy measures operationalizing TRIPS flexibilities, because this will simply backfire on them. This argument may be reinforced by the fact that India itself was accused under dispute settlement mechanism to violate TRIPS commitments, as they operationalized some of the TRIPS flexibilities. Moreover, both countries appear on US Priority Watch list for their IPRs practice (USTR, 2015a).

### **III.3) Patent Granting Conditions**

TRIPS agreement establishes the criteria of patentability and defines the exclusive rights conferred to the patentee. Patent granting conditions involve three essential elements, patent scope of protection i.e. novelty, industrial applicability requirement for protection, excluded subject matter, disclosure of information, i.e. invention should be disclosed in a manner that permits the society and its industries to operate, benefit and make the invention, and finally patent life i.e. duration of protection and cases for revocation. The broader the protection conferred, the higher the risk of being excluded from a particular market (Correa, 2015). There is an inverse relationship between the scope of patent protection and the freedom-to-operate available to local firms.

Results show that US RTAs seek systematically to soften patentability criteria. This applies to (i) novelty and industrial applicability criteria, (ii) mandating patent to new uses of already known products, (iii) the patentability of excluded subject matter under TRIPS, i.e. plants and animals, (iv) introducing a cap on disclosure requirements, (v) extending patent term and tightening patent revocation conditions.

Some of EU RTAs join the US with respect to the patentability of both plants and new uses of known products (in the case of pharmaceutical and agrochemical products) and in respect to extending patent term. By contrast, introduce no commitment going beyond TRIPS agreement.



Consequently, the *de jure* possibility of operationalizing TRIPS flexibilities in a manner that reduces barriers to access to knowledge was extremely reduced under the RTAs of US, and to a lesser extent under the RTAs of EU. In contrast, this possibility is fully preserved under Chinese RTAs.

Table III.3 Patent granting conditions under RTAs of US and EU<sup>99</sup>

	US									
	South Korea	Panama	Colombia	Chile	Peru	CAFTA- DR	Jordan	Oman	Bahrain	Morocco
Scope of patentability										
Novelty definition	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+		TRIPS+	TRIPS+	TRIPS+
Industrial applicability definition	TRIPS+	TRIPS+	TRIPS+		TRIPS+	TRIPS+		TRIPS+		TRIPS+
New uses for known products	TRIPS+	TRIPS+						TRIPS+	TRIPS+	TRIPS+
Plant	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+
Animal	TRIPS+									
Information disclosure	TRIPS+	TRIPS+	TRIPS+		TRIPS+			TRIPS+	TRIPS+	TRIPS+
Patent term	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+		TRIPS+	TRIPS+	TRIPS+
Patent revocation	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+		TRIPS+	TRIPS+	TRIPS+

TRIPS+: policy measure is covered under TRIPS, but RTA rules go beyond its commitments.

<sup>a</sup>: As a result of the commitment to comply with UPOV 1991 that includes TRIPS *plus* rules on plant varieties.

<sup>b</sup>: As a result of the commitment to comply with Patent Law Treaty, that includes TRIPS *plus* rules on patent revocation.

### **III.3.1) Patentability Criteria**

The scope of patentability is defined by the patentable and excluded subject matter, and more importantly by the criteria upon which the patentability is established. Article 27(1) of the TRIPS Agreement requires states to provide patent protection for ‘any inventions [...] in all fields of technology’, being a “process” or a “product”, if (i) it is new, (ii) it involves an inventive step, i.e. it is non-obvious, and (iii) it is capable of industrial application (Article 27.1).

Importantly, the exact meaning of these terms was not defined. States have the latitude to define these terms. TRIPS give an optional and shallow definition for the “inventive-steps” to be the “non-obviousness”, a term that needs to be defined itself. Deciding where to set the bar of inventiveness and non-obviousness, and deciding which approach to adopt to qualify the industrial applicability, are critical aspects of patent policy.

Countries are free to define when there is an “invention” that may be deemed patentable if the relevant patentability requirements are met. It is not required to provide protection for subject matter that States classify as discoveries rather than inventions (Matthias Lamping et al, 2014). Thus, they may exclude from patentability biological materials found in nature and make a clear distinction between “discovery” and “invention”. According to Correa (2015), such approach may be important to create space for the development of a local biotechnological industry based on reverse engineering of existing technologies that may otherwise be constrained by broad patent claims of foreign firms. Patents may be conferred on the basis of a more or less rigorous concept of “inventive step”. In fact, from the perspective of an industrial policy aiming at expanding the freedom-to-operate of local firms, the rigorous application of the test of inventive step is what makes sense (Correa, 2011). The number of patents granted may thereby be limited.

Novelty requirements generally mean that the information must not have been available to the public prior to the original application date. Since the inventor is granted

a patent for disclosing something new, it follows that if the invention has already been disclosed in literature available to the public, the applicant can disclose nothing new in return for the grant, and is either not entitled to be granted a patent, or if one has been granted, is liable to have it revoked (UNCTAD and ICTSD, 2005). Practically, before initiating the costly and complicated steps to patent the invention, the inventor may search for financing or test the market. In most countries, any disclosure before the product or process gets patented annuls the novelty characteristic of an invention.

Concerning novelty criteria, States are free to decide whether to allow the patentability of the uses of known products and process. This question is particularly important for chemical products and process, for pharmaceutical and agrochemical industries.

The footnote of Article 27.1 sets an optional definition of the industrial applicability criteria as “useful”. The invention must be capable of being used in any industry. States considerably differ in their treatment of industrial applicability. Indeed, most jurisdictions have traditionally defined inventions as comprising ‘technical aspects’, solving a ‘technical problem’ or exhibiting a ‘technical effect’ (Matthias Lamping et al, 2014). Consequently, States are not required to provide patent for inventions that they do not consider as being of a technical nature.

Industrial applicability may be applied in such a manner as to limit patents to technical developments that lead to the generation of products and avoid the use of patents on minor or trivial developments to deter competitors or subject them to costly litigation (Correa, 2015).

Matthias Lamping et al (2014) note that the non-discrimination principle in Article 27(1) of the TRIPS Agreement does not prevent States from adapting the subject matter and requirements of patentability to the characteristics inherent in the technology at issue. They may, for example, apply (i) different demarcation line between inventions and discoveries in different fields of technology, (ii) different standards of novelty, non-obviousness, and disclosure depending on the technology's maturity and dissemination.

Finally, TRIPS agreement permits States to exclude from patentability diagnostic, therapeutic, surgical methods, plants and animals other than micro-organisms, and essentially biological processes for the production of plants or animals other than non-biological and microbiological processes (article 27.3(a, b)). However, countries have to provide protection of plant varieties either by patents or by an effective *sui generis* system or by any combination.

According to Correa (2014), TRIPS exceptions for patentability permits the exclusion of plants, plants varieties and parts of plants (plant cells, genes, and other sub-cellular components, whether claimed as they are found in nature or artificially made).

The RTAs of US eliminate many of the above-mentioned flexibilities. They broaden the patentability scope through exporting liberal interpretation to ambiguities that exist under TRIPS. They define “novelty” in a more expansive way, where goods can pass the novelty test and be granted a patent if the knowledge has been disclosed within the year prior to application.<sup>100</sup>

In addition, they mandate that patents be available for new uses of known products. The effect of this provision is to allow a first registrant of a new chemical product (especially pharmaceutical) to obtain protection even in the case of old and well-known products, extending the patent term. The US put Brazil in Priority Watch list as target for enforcement through trade preference programs, as a result of Brazil refuse to grant a patent for the second use of a known product (See USTR, 2009).

US own definition of industrial applicability that emphasizes the “usefulness”, was exported to through its RTAs<sup>101</sup>. This definition permits the patentability of purely

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<sup>100</sup> US-Bahrain RTA Article 14.8.8, US-CAFTA-DR RTA Article 15.9.7, US-Chile RTA Article 17.9.7, US-Colombia RTA Article 16.9.7, US-Morocco RTA Article 15.9.8, US-Oman RTA Article 15.8.8, US-Panama RTA Article 15.9.7, US-Peru RTA Article 15.9.7, and US-South Korea RTA Article 18.8.7. All this agreements stipulate that: “Each Party shall disregard information contained in public disclosures used to determine if an invention is novel or has an inventive step if the public disclosure was (a) made or authorized by, or derived from, the patent applicant and (b) occurs within 12 months prior to the date of filing of the application in the Party”.

<sup>101</sup> US-Panama RTA Article 15.9.11, US-Peru RTA Article 16.9.11, US-South Korea RTA Article 19.8.10, US-Oman RTA Article 15.8.11, US-Morocco RTA Article 15.9.11, US-Colombia RTA Article 15.9.11 and US-CAFTA-DR RTA Article 15.9.11 specify that: “Each Party shall provide that a claimed invention is industrially applicable if it has a specific, substantial, and credible utility”. US-South Korea footnote 19 clarify that the party may treat the term ‘capable of industrial applicability’ as a synonym with ‘useful’.

experimental inventions that cannot be made or used in industry, or that do not produce a technical effect.<sup>102</sup>

Moreover, they permit the patentability of excluded subject matter under TRIPS agreement, plants and animals. The strongest RTA in this regard is US-Morocco, which explicitly mandates the provision of patent protection for life forms. Where plant patenting is not required, it introduces an obligation to undertake efforts to make such patent protection available. In the absence of plant patents, at the very least, a UPOV 1991 system should be granted.

European Union provisions on patent expand patentability scopes, through broadening intellectual property definition and permitting the patentability to new uses of known chemical entities. The definition sometimes goes beyond the one used in the TRIPS Agreement, as it includes issues, which are still being discussed multilaterally (e.g. rights to traditional knowledge, folklore, and genetic resources) or have not been discussed at all (e.g. protection of non-original databases, utility model). The agreement with CARIFUM and Andean community incorporate the protection of plant varieties in the definition of intellectual property. In addition, it emphasizes that patent includes biotechnological inventions.

EU-Andean Community RTA defines the new chemical product as “the one which has not been previously approved in the territory of the Party for its use in a pharmaceutical or chemical agricultural product”<sup>103</sup>. Consequently, it forces parties to accord patent for already known chemical entities.

New RTAs of EU include contradictory requirements on plant varieties. The EU-CARIFORUM RTA, on the one hand, leaves the parties the freedom to provide for

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<sup>102</sup> Under US law, the applied concept is "utility". Hence, certain developments that do not lead to an industrial product may be patented in the USA: an invention only needs to be operable and capable of satisfying some function of benefit to humanity (i.e. be useful). A Large number of patents granted in the US is for methods of doing business, and by the patenting of research tools (see UNCTAD and ICTSD, 2005).

<sup>103</sup> See EU-Andean Community RTA Article 231.3.

exceptions to the so-called plant breeders' rights<sup>104</sup>, and on the other hand, by requiring the parties to accede to UPOV 1991, it prevents them from exchanging or transferring the saved material to others (Nadde-Phlix, 2014).

The EU RTA with Andean Community and with South Korea<sup>105</sup> is clearer regarding the protection of plant varieties, where the protection for plant varieties should be accorded on the basis of UPOV 1991.

Chinese RTAs don't go beyond TRIPS agreement with respect to the patent granting conditions. China-South Korea RTA provision include a provision on plant varieties restates some commitments under UPOV 1978, where the two countries are already members<sup>106</sup>. Under UPOV 1978, the prior permission of the breeder is required for the production for commercial marketing, the offering for sale, and the marketing of the reproductive or vegetative propagating material of the protected variety<sup>107</sup>. Thus, farmers are impliedly free to save and re-sow propagating material from the previous year's harvest, as the permission of the breeder is only required for the production for "commercial marketing", the so-called "farmer's privilege". Breeder's permission is not also required, either for utilization of the protected variety for the purpose of breeding additional new varieties or for the marketing of such varieties, the so-called "breeder's privilege", which is expressly recognized<sup>108</sup>. However, parties engage to respect their respective regulations on new plant varieties protection.

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<sup>104</sup> EU-CARIFORUM Article 149.1 states "the right to provide for exceptions to exclusive rights granted to plant breeders to allow farmers to save, use and exchange protected farm-saved seed or propagating material".

<sup>105</sup> EU-Andean Community RTA Article.232 and EU-South Korea RTA Article 10.39.

<sup>106</sup> Article 15.18.3 of China-South Korea RTA stipulate: "The Parties shall respect regulations on new plant varieties protection of the other Party and grant adequate and effective protection to breeders of new plant varieties". And it establishes that the propagating material of the protected variety shall require the authorization of the breeder: (a) production or reproduction (multiplication) for commercial marketing; (b) conditioning for the purpose of commercial propagation; (c) offering for sale; (d) selling or other marketing; and (e) importing or exporting".

<sup>107</sup> UPOV 1978 Article 5(1).

<sup>108</sup> UPOV 1978 Article 5(3).

### III.3.2) Information Disclosure

The disclosure of the invention is one of *raison d'être* of the patent. It has two functions. First, it helps ensure that inventions meet the criteria of novelty, inventive step and industrial application to be granted exclusive rights. Secondly, it makes the invention and technical information available to the public, so others can recreate the invention and improve upon it.

A patent application has two main parts, the specification, and the claims. The invention specification is written as a science or engineering report describing the problem the inventor faced, the prior art and the measures taken to solve the problem. The purpose here is to prove the completion of the act of invention, i.e. whether the inventor has effectively made a patentable invention and, if the patent is issued, has brought the invention into the public domain by enabling others to re-create it. The second part of the patent application is a set of claims which define the precise scope of the invention. The patent claims permit to distinguish the inventor's intellectual property from the surrounding terrain, i.e. the technological territory that cannot be accessed by third parties without risking an infringement suit. The specification and claims are related. The former should “support” the latter, in order to ensure that the exclusivity granted to the patent owner is justified by the actual technical contribution to the art (UNCTAD and ICTSD, 2005).

TRIPS Agreement establishes the minimum standard for disclosure to be contained in national patent legislation<sup>109</sup>. It requires the disclosure of the invention “in a manner sufficiently clear and complete for the invention to be carried out by a person skilled in the art.” This requirement (called the enablement requirement) aims at ensuring that patents perform the supposed informative function.

A skilled person must be able to carry out the invention without any additional information other than that provided in the patent application. However, despite the strict

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<sup>109</sup> Article 29 stipulates “Members shall require that an applicant for a patent shall disclose the invention in a manner sufficiently clear and complete for the invention to be carried out by a person skilled in the art and may require the applicant to indicate the best mode for carrying out the invention known to the inventor at the filing date or, where priority is claimed, at the priority date of application”.



disclosure requirements in Article 29 of the TRIPS Agreement, the information actually contained in a patent alone is often insufficient to enable others to practice the invention. Third parties thus depend on additional know-how that only the patent holder possesses. This is of particular importance when the third party has no contractual relationship with the patent holder that entitles it to a transfer of know-how, as in the case of a compulsory license. In such cases, authorities may impose an obligation on the patent holder to provide the licensee with the know-how that is needed to exploit the protected invention. Access to such know-how may only be denied if the balance of hardships tips towards the patent holder as a result of overriding confidentiality reasons within the purview of Article 39 of the TRIPS Agreement (Matthias Lamping et al, 2014).

In addition, the person skilled in the art for whom disclosure must be sufficiently clear and complete is not necessarily the same person for whom the invention must be new and non-obvious. Whereas the latter may be defined as a recognized expert with extensive practical know-how, the former may be defined as an average engineer with average skills and experience (Matthias Lamping et al, 2014).

In the case where several embodiments of an invention are claimed, TRIPS leaves State the extent to which the applicant should provide sufficient information to enable the reproduction of each claimed embodiment. A strict “enablement” requirement may mandate the disclosure of each embodiment in order to prevent broad patents covering embodiments that have not been disclosed (UNCTAD and ICTSD, 2005).

Finally, one of the unresolved issues is whether national rules may mandate the applicant to disclose the country of origin of the biological material. Such requirement aims to avoid possible bio-piracy of genetic resources and associated knowledge and to permit the benefits sharing between the applicant and the country of origin.

Disclosure provisions wording in US RTAs<sup>110</sup> introduce a ceiling to the disclosure requirement. For instance, the expressions “to be made and used” and “without undue

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<sup>110</sup> RTAs with US-Panama RTA Article 15.9.9, US-Peru RTA Article 15.9.9, US-South Korea RTA Article 18.8.9 US-Oman RTA Article 15.8.10, US-Morocco RTA Article 15.9.10, US-Colombia RTA Article 16.9.9 and US- Bahrain RTA Article 14.8.10 state that “A disclosure of a claimed invention is considered

experimentation” are directly imported from US law (Morin, 2004)<sup>111</sup>. Indeed, this provision appears to forbid countries from asking for more than “information that allows the invention to be made and used” in order to accept a disclosure as sufficiently clear and complete. Experimentation is permitted under TRIPS<sup>112</sup> when operationalized at the national level. Here again, US RTAs limit this flexibility when specifying that “undue experimentation” is not permitted. However, they do not set criteria about what do constitute “undue” experimentation.

These provisions limit the ability to require the disclosure of the origin of genetic resources used in the development of biotechnological inventions. Finally, disclosure rules in US RTAs eliminate the facultative requirements under TRIPS to demand the best mode of carrying out the invention.

### **III.3.3) Patent Protection Term and Patent Revocation**

Patents are granted for a limited period. Article 33 of TRIPS defines the term of protection to be twenty years at least from the patent filing date. Normally, members are not mandated to extend the patent term to compensate delays in approving the patent or registering the product.

By contrast, US RTAs engage parties to ‘compensate’ any ‘unreasonable’ delay in examining an application for registration, by extending the patent term in the same amount of time as the ‘unreasonable’ delay (often stated as a period extending beyond five years from the date of the filing or three years after a request for an extension)<sup>113</sup>.

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sufficiently clear and complete if it provides information that allows the invention to be made and used by a person skilled in the art, without undue experimentation [...]”

<sup>111</sup> United States Code, Title 35, Section 112. See also In re Vaeck, 947 F.2d 488, 495 (Fed. Cir. 1991) (Cited from Morin, 2004).

<sup>112</sup> TRIPS don't regulate this aspect, leaving a room for maneuver at the national level.

<sup>113</sup> For example, Article 15.9.6 of the CAFTA-DR states: “Each party, at the request of the patent owner, shall adjust the term of a patent to compensate for unreasonable delays that occur in granting the patent. For the purposes of this paragraph, an unreasonable delay shall at least include a delay in the issuance of the patent of more than five years from the date of filing of the application in the Party, or three years after a request for examination of the application has been made, whichever is later”. Similarly, Article 15.10.2 of the CAFTA-DR relating to delays in market approval continues: “With respect to any pharmaceutical product that is subject to a patent, each Party shall make available a restoration of the patent term to

Recent RTAs of EU<sup>114</sup> Join US approach where patent term extension is mandated in case of delays resulting from marketing approval procedure.

A patent is generally granted after an examination by the patent office to establish whether the claimed invention meets the patentability standards (novelty, inventive step and industrial applicability or utility). They are granted as result of a deliberate policy decision, and not because inventors enjoy a ‘natural’ right over the invention. The decisions to grant a patent are often based on incomplete information, or on incorrect judgments. For instance, a publication that anticipated the invention and, hence, destroys its novelty, may be found after the patent was granted, particularly when competitors affected by the patent undertake detailed patent searches with tools more sophisticated than those available to the patent office (Correa, 2015).

Article 32 of TRIPS agreement grants the Member States some freedom to determine the ground and conditions of patent revocation and forfeiture within their domestic laws as long as they provide a judicial review mechanism for individuals to challenge the revocation or forfeiture of the patent nationally. The challenge may take place after the decision had been mad<sup>115</sup>.

The revocation may proceed with regard to the patent as a whole or in respect of some of the claims. In countries where the law requires that one principal and one or more subordinated claims be submitted, the invalidation of the principal claim means the revocation of the whole patent (UNCTAD-ICTSD, 2005).

US RTAs restrict the ability to revoke to be “only on grounds that would have justified a refusal to grant the patent”<sup>116</sup>. In addition, pre-grant patent oppositions were forbidden<sup>117</sup>. Some US RTAs<sup>118</sup> call Article 5.A.3 of Paris Convention as a condition for

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compensate the patent owner for unreasonable curtailment of the effective patent term as a result of the marketing approval process”.

<sup>114</sup> EU-Andean Community RTA Article 230.4 and EU-South Korea RTA Article 10.35.

<sup>115</sup> TRIPS Article 32 stipulates that "Revocation/Forfeiture An opportunity for judicial review of any decision to revoke or forfeit a patent shall be available.."

<sup>116</sup> US-Morocco RTA Article 15.9.5, US-Bahrain RTA Article 14.8.4, US-Oman RTA Article 15.8.4, US-Chile RTA Article 17.9.4 and US-South Korea Article 18.8.4.

<sup>117</sup> US-Morocco RTA Article 15.9.5, US-Oman RTA Article 15.8.4, US-Bahrain RTA Article 14.8.4 state that "Where a Party provides proceedings that permit a third party to oppose the grant of a patent a Party shall not make such proceedings available prior to the grant of the patent."

the revocation, where forfeiture could not take place except in the case where the compulsory license would not compensate the claimed abuse. In addition, the article prevents any proceeding before two years from the granting of a compulsory license<sup>119</sup>. Thus, the space for refusal of a patent is narrowed, and the function of the compulsory license is counterbalanced to become a vehicle to protect patent holder in case of possible revocation.

Investment chapters interact with patent revocation as the revocation/forfeiture of a patent puts back into the public domain the protected subject matter. There is no taking as such of the property, but the value of the IPR as an investment is affected and arguments about indirect or *de facto* expropriation could be made.

Revocation conditions under IPR chapters in US RTAs are not only TRIPS *plus*, as mentioned above, but also many polyvalent investment commitments, such as fair and equitable treatment, apply on them.

### **III.4) Exceptions to Patentee's Exclusive Rights**

Contrary to many WTO agreements that have a separate article dealing with “general exceptions”, e.g. for public health or other legitimate policy objectives, TRIPS Agreement includes no general exceptions. Instead, the TRIPS Agreement only provides for “limited exceptions”<sup>120</sup>.

The general conditions to apply exceptions to the patentee exclusive rights were established in Article 30 of the TRIPS Agreement. It contains three rules: (i) exceptions must be limited (ii) exceptions should not “unreasonably” conflict with the normal exploitation of the patent and (iii) exceptions should not “unreasonably” prejudice the legitimate interests of the patent holder, taking into consideration the legitimate interests

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<sup>118</sup> US-Panama RTA Article 15.9.4, US-CAFTA-DR RTA Article 15.9.4, US-Peru RTA Article 16.9.4, US-Colombia RTA Article 16.9.4.

<sup>119</sup> Article 5.A.3 of Paris Convention states “Forfeiture of the patent shall not be provided for except in cases where the grant of compulsory licenses would not have been sufficient to prevent the said abuses. No proceedings for the forfeiture or revocation of a patent may be instituted before the expiration of two years from the grant of the first compulsory license”.

<sup>120</sup> In the case of trademarks article 17, Article 26 industrial design, Article 30 patent.

of third parties. In respect to these conditions, Matthias Lamping et al (2014) provide several useful clarifications on how they could be operationalized at the national level in a manner that reinforces access to knowledge and technical progress:

- (i) The three conditions are not cumulative. If one of the three conditions is not met, this does not mean that the exception will be disallowed.
- (ii) The limited exception does not mean necessarily a narrow exception. Exception should be “limited” within the meaning of Article 30 of the TRIPS Agreement: (a) the scope of the exception is reasonably proportionate to its objective and purpose, (b) It must be used for a legitimate purpose, be adequate to achieve that purpose, and (c) not exceed what is necessary and sufficient to achieve it. An exception can be considered as conflicting unreasonably with the “normal exploitation of the patent”, only if it undermines its functional efficiency as a price-setting mechanism. This is the case only when the exception curtails the innovation rewards provided by the market.
- (iii) Finally, all involved interests should be considered, including those of a) the patent holder and actual and potential licensees, b) follow-on inventors, c) scientific and academic researchers, d) competitors who need to operate on the market under conditions of effective competition, e) the public interests at large.

Results show that the most recognized exceptions to patentee exclusive rights under TRIPS agreement were restricted under the RTAs of US and EU. Both countries’ approaches:

- (i) Introduce a period of exclusivity on data related clinical test which is necessary to obtain market approval for patented products.
- (ii) Restrict the possibility to use early working exceptions.
- (iii) Restrict the possibility to issue compulsory license indirectly, as a result of the previous restriction, and directly (only in the case of US) as result of limiting explicitly the ground upon which compulsory license could be justified (in Both IPRS and investment chapters).

Furthermore, some RTAs of US prohibit parallel import exception.

In contrast, Chinese RTAs introduce no restriction on TRIPS exceptions to patentee exclusive right. On the contrary, they affirm and expand compulsory license exception through the systematic affirmation of Doha Declaration (see Section 5.4).

Table III.4 Exception to patentee’s rights under the RTAs of US an EU<sup>121</sup>

	US								
	Panama	Colombi a	Chile	Peru	CAFTA- Dr	Jordan	Oman	Bahrain	Morocco
	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+		TRIPS+	TRIPS+	TRIPS+
	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+		TRIPS+	TRIPS+	TRIPS+
	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+		TRIPS+	TRIPS+	TRIPS+
	TRIPS+ <sup>a</sup>	TRIPS+ <sup>a</sup>	TRIPS+ <sup>a</sup>	TRIPS+ <sup>a</sup>	TRIPS+ <sup>a</sup>		TRIPS+ <sup>a</sup>	TRIPS+ <sup>a</sup>	TRIPS+ <sup>a</sup>
						TRIPS+			

TRIPS+: policy measure is covered under TRIPS, but RTA rules go beyond its commitments.

<sup>a</sup>: Prohibition to export pharmaceutical products, i.e. these countries cannot be a source of parallel importation of other countries.

### **III.4.1) Test Data Exclusivity**

In order to obtain approval to market drugs, for example, pharmaceutical firms should submit data, obtained through clinical trials, attesting on the effectiveness of the product to be patented. What is at issue is whether producers of generic medicines can use data to secure regulatory approval. Alternatively, a great deal of repetitive clinical investigation will be required, which will be wasteful. Such reasoning is grounded on the pro-competitive effects of low entry barriers for the pharmaceutical product. The affordability of medicines at the lower price is likely to increase as a result of the early entry of generic product.

Article 39.3 of the TRIPS Agreement does not prevent its parties from relying on clinical test data in order to demonstrate the safety and efficacy of bioequivalent generic<sup>122</sup> products, even if it may prohibit the disclosure of this data to third parties. Consequently, market approval applications for generic drugs can be processed even before the expiry of the patents (Correa, 2002).

Based on Article 39.3, a Member can impose a requirement to submit data in exchange for obtaining the marketing approval of pharmaceutical or agrochemical products. This provision does not apply when it is not necessary to submit such data when marketing approval is granted by the national authority relying on the existence of a prior registration elsewhere (UNCTAD-ICTSD, 2005; Correa, 2002; Reichman, 2004).

The data to be protected must relate to a “new chemical entity”. The Agreement does not define what should be meant by “new”. Members may consider that a chemical entity is “new” if there were no prior application for approval of the same entity. Thus, Article 39.3 would not apply to new uses of known products, nor to dosage forms, combinations, new forms of administration, etc., of existing drugs. In addition, Article 39.3 does not

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<sup>122</sup> Article 39.3 of the TRIPS states “Members, when requiring, as a condition of approving the marketing of pharmaceutical or of agricultural chemical products which utilize new chemical entities, the submission of undisclosed test or other data, the origination of which involves a considerable effort, shall protect such data against unfair commercial use. In addition, Members shall protect such data against disclosure, except where necessary to protect the public, or unless steps are taken to ensure that the data are protected against unfair commercial use”.



clarify either whether newness should be absolute (universal) or relative (local) (UNCTAD-ICTSD, 2005; Reichman, 2004).

Moreover, Article 39.3 has not defined some of its key terms: (i) it mandates protection when obtaining the data involved “a considerable effort”. The text is not clear about the nature of the effort, technical or economic, and also with respect to its magnitude (when would it be deemed “considerable”). (ii) The protection of data is twofold: against “unfair commercial use” and against disclosure of the relevant protected information. There exists controversy about the interpretation of the extent of the obligation to protect against “unfair commercial use”. The meaning of “unfair commercial use” depend on the kind of practices that domestic and foreign trade secret laws have regarded as unfair (Reichman, 2004)<sup>123</sup>.

However, protection is to be ensured against disclosure is subject to the two exceptions mentioned in Article 39.3: i) when disclosure is necessary to protect the public, and ii) when steps are taken to ensure that the data will not be used in a commercially unfair manner. Under these exceptions, disclosure may be permitted in order to allow a compulsory licensee to obtain a marketing approval (UNCTAD-ICTSD, 2005).

US RTAs<sup>124</sup> and recent RTAs<sup>125</sup> of EU prevent the later applicant and the national authority from disclosing or relying on the clinical data when seeking to get market approval for a generic version of the drug or the agriculture chemical product during a

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<sup>123</sup> According to one view, the sole or most effective method for complying with this obligation is by granting the originator of data a period of exclusive use thereof, as currently mandated in some developed countries. Under this interpretation, national authorities would not be permitted, during the exclusivity period, to rely on data they have received in order to assess subsequent applications for the registration of similar products. According to another view, Article 39.3 does not require the recognition of exclusive rights, but protection in the framework of unfair competition rules. Thus, a third party should be prevented from using the results of the test undertaken by another company as background for an independent submission for marketing approval, if the respective data had been acquired through dishonest commercial practices. However, under that provision, a governmental authority would not be prevented from relying on the data presented by one company to assess submissions by other companies relating to similar products (Reichman, 2004).

<sup>124</sup> These provisions are found in RTAs of US with CAFTA-DR Article 15.10.1, Morocco Article 15.10.2, Bahrain Article 14.9.1, Panama Article 15.10.1, Peru Article 16.10.1., Colombia Article 16.10.1 and South Korea RTA Article 18.9.1.

<sup>125</sup> See EU-Andean Community RTA Article 231.2 and EU-South Korea RTA Article 10.36.3 and Article 10.37.3.

defined period of time following the first registration (5 years for pharmaceutical and 10 years chemical agriculture product). US RTAs include a provision that requests the same period of data exclusivity from the approval date in another country even if the product is not registered in that particular country. Thus, a generic manufacturer must either conduct on its own clinical test and submit its findings to the national authority, or wait until the expiration of data exclusivity period.

In addition, certain RTAs eliminate the Article 39.3 requirement in TRIPS which protects data with respect to only 'new chemical entities' and where the generation of data involves considerable effort<sup>126</sup>. Some RTAs require data exclusivity to any new product, giving that the latter is loosely defined as 'one that does not contain a chemical entity that has previously been approved by the Party'<sup>127</sup>. Protection may be granted without evaluating whether any effort was spent in the generation of the data.

It is worth noting that under US RTAs the data exclusivity operates independently of the patent status, i.e. data exclusivity applies even where products are not patented (Shadlen, 2005a).

Moreover, in the case of pharmaceutical products, US RTAs establish a link between the patent term and the test data protection, approval may not be obtained for generic products at any time during the patent period without the consent of the patent holder<sup>128</sup>. According to Mercurio (2006), this provision represents a significant shift from traditional operating standards, where the market approval of a drug has not been linked to a drug patent status. Thus, the patent status of a drug has never had a bearing on whether a drug is of sufficient quality, safety, and efficacy to be marketed in a particular nation or region.

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<sup>126</sup> See US RTAs with CAFTA-DR Article 15.10.1.c, Morocco Article 15.10.1, and Bahrain Article 14.9.1.c. There are no similar provisions in US-Chile or US-Jordan.

<sup>127</sup> This extends the provision found in US-Jordan RTA and US-South Korea which restrictively defined 'new chemical entity'.

<sup>128</sup> These rules are embodied in US RTAs with CAFTA-DR Article 15.10.2, Morocco Article 15.10.4, and Bahrain Article 14.9.4. "that Party shall implement measures in its marketing approval process to prevent such other persons from marketing a product covered by a patent during the term of that patent, unless by consent or with the acquiescence of the patent owner".

Furthermore, several US RTAs<sup>129</sup> introduce provisions which charge national authorities to oversee the application of this commitment. This constitutes a departure from traditional practice where patent holder has the responsibility to enforce its rights. According to Mercurio (2006, p.225) “In practice, this entails the patent holder bringing suit against the alleged infringer in an effort to prevent further sales of the infringing product and recover damages. This process can be lengthy and costly but ensures the validity of a patent before enforcing the rights asserted by the plaintiff. In addition, IPRs have always been recognized as ‘private rights’ and it seems logical that the owner of private rights should be responsible for their enforcement. The newly delegated role of the regulatory authority as an ‘enforcer’ of a private right is, therefore, a significant benefit to the rights holder”.

This linkage plays as *de facto* patent, conferring a period of monopoly for pharmaceutical companies. Furthermore, The Data exclusivity and the linkage between market approval and patent could prevent the effective use of the compulsory license as a result of the need to repeat the time-consuming and costly clinical tests (Mercurio, 2006).

#### **III.4.2) Research and Early Working Exceptions**

The research and experimental use exception is aimed at ensuring that scientific research aimed at generating new knowledge is not impeded by patents. It permits exempting experimentation acts for purposes such as inventing around a patented product or process, improving on the invention or for the purpose of challenging the validity of a patent (Correa, 2007; UNCTAD and ICTSD, 2005).

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<sup>129</sup> See Article 19.5.3 of US-CAFTA-DR RTA; Article 17.9.4 of US-Chile RTA; Article 15.9.6 of US-Morocco RTA; Article 14.8.5 of US-Bahrain RTA, Article 15.10.4 of US-Panama RTA, Article 16.9.5 of US-Colombia RTA, Article 16.9.5 of US-Peru RTA and Article 15.8.5 of US-Oman RTA. Identical language in several agreements states: “If a party permits a third person to use the subject matter of a subsisting patent to generate information necessary to support an application for marketing approval of a pharmaceutical... that Party shall provide that any product produced under such authority shall not be made, used, or sold in the territory of that Party other than for purposes related to generating information to meet requirements for approval to market the product once the patent expires, and if the Party permits exportation, the product shall only be exported outside the territory of that party for purposes of marketing approval requirements of that Party”.

The early working exception or “Bolar Exception”<sup>130</sup> permits to use the invention without the authorization of the patentee and before the expiration of the patent term to undertake necessary steps for obtaining regulatory approval and registration of a generic product. The exception is intended to ensure availability of the generic versions on the market immediately after the expiry of the patent term (Shadlen, 2005a). In contrast, without Bolar exception, a company may only apply for registration after the patent expires, in which case, the effective life of the patent is extended subject to the time it takes to complete said registration processes (usually 6 months to two years).

The research and experimentation and early working exceptions are the two commonly accepted exceptions under Article 30, although not mentioned in the TRIPS agreement. It should be noted that the WTO Dispute Settlement Body in Canada Patent Protection confirmed the TRIPS consistency of the ‘Bolar exception’ for Pharmaceutical Products<sup>131</sup>.

Finally, patent rights and marketing approval are to be considered separately. The decision to grant a patent does not involve the discretion of regulatory authorities, nor does it depend on the eligibility of the product for marketing approval. In the same vein, the decision to give marketing approval to a new product is not contingent on the existence of a valid patent for that product. This means that patent protection should not prevent the successful registration and approval of a generic version of the patented product with the regulatory authorities (Mercurio, 2006).

However, all these exceptions are de facto prohibited under US RTAs, as a result of raising the level of test data exclusivity and the link established between data exclusivity and patent term.

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<sup>130</sup> It is named “Bolar” after a case judged by US courts in Roche Products Inc. vs. Bolar Pharmaceutical Co.

<sup>131</sup> See Canada - Patent Protection for Pharmaceutical Products, Report of the WTO Panel, WT/DS114/R (2000).

### **III.4.3) Patent Right Exhaustion and Parallel Import**

Under the exhaustion doctrine, the rights of an intellectual property owner terminate after an exercise of the rights by the owner. The exhaustion doctrine states that after the intellectual property owner has made the first sale of a commodity that embodies the owner's intellectual property, the owner no longer has the right to prohibit sales of that particular commodity (Ghosh, 2013).

The regime of exhaustion has an effect on the parallel import which refers to a situation where a third party imports a foreign product put on the market abroad by the patent holder, without the authorization of the patent holder. Parallel importation is used as a tool to avoid markets division and price discrimination on regional or international scales.

Under Article 6 of the TRIPS Agreement, as confirmed by the Doha Declaration, WTO Members have the freedom to adopt their own regime of exhaustion of rights. In addition, all matters related to the issue of exhaustion are excluded from dispute settlement mechanism<sup>132</sup>.

Concerning the scope of exhaustion, Matthias Lamping et al (2014) argue that under Article 27 of the TRIPS Agreement the States are not prevented from differentiating and discriminating between different industries or fields of technology. Some industries may be more affected by parallel imports than others, and some may depend more on price differentiation than others. States have the freedom to adopt the adequate regime of exhaustion to the development of a particular industry.

Some of the US RTAs prohibit parallel importation<sup>133</sup>. However, a number of US RTAs with developing countries, including Chile, Jordan, and CAFTA-DR, are silent on the exhaustion of patent rights. However, the article linking market approval to patent status contains obligation stating that party couldn't export a patented product for reason

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<sup>132</sup> Article 6 of the TRIPS Agreement specifies that for the purposes of dispute settlement "nothing in this Agreement shall be used to address the issue of the exhaustion of intellectual property rights."

<sup>133</sup> US-Morocco RTA Article 15.9.4.

other than for marketing approval requirements<sup>134</sup>. This provision may prohibit member countries to be a source of parallel importation.

Conversely and as result of the systematic recognition of Doha Declaration (see section III.5.4), the Chinese RTAs affirm partner State's freedom to establish its own regime of IPRs exhaustion, thus permitting parallel imports.

#### **III.4.4) Compulsory License Exception**

According to WIPO definition, the “compulsory license” is a license granted by an administrative or judicial body to a third party to exploit an invention without the authorization of the patent holder. This type of license is commonly referred to as a non-voluntary license connoting the lack of consent by the patent holder<sup>135</sup>.

According to Matthias Lamping et al (2014, p.9) “two kinds of compulsory licenses may be distinguished: those that serve to maintain the functional efficiency of the system of protection, and those that serve to accommodate other public interests. Compulsory licenses ensure an efficient operation of innovation markets by avoiding the risk that patents themselves become barriers to invention and innovation. This includes the issuance of compulsory licenses for improvement patents (*i.e.* when a later patent cannot be exploited without infringing an earlier patent), for enabling the use of biotechnological inventions as research tools or as a remedy against abuse or other inappropriate conduct by the patent holder.”

As a policy tool, the compulsory licenses may ensure a balance between the patent and other socio-economic interests. Compulsory licenses may be granted for the public interest if the demand for the patented invention has not been met to an adequate extent or on reasonable terms or when the development of domestic industries is hindered as a result of patent holder refusal to grant a voluntary license (Matthias Lamping et al, 2014).

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<sup>134</sup> Article 19.5.3 of CAFTA-DR; Article 17.9.4 of US-Chile; Article 15.9.6 of US-Morocco; Article 14.8.5 of US-Bahrain, Article 15.10.4 of US-Panama, Article 16.9.5 of US-Colombia, Article 16.9.5 of US-Peru, Article 15.8.5 of US-South Korea and Article 15.8.5 of US-Oman. They state “if the Party permits exportation, the product shall only be exported outside the territory of that party for purposes of marketing approval requirements of that Party.”

<sup>135</sup> WIPO definition, see <http://apps.who.int/medicinedocs/en/d/Js4968e/6.1.1.html>

A list of detailed conditions under which State can use compulsory license was provided in Article 31 of TRIPS, such as granting a license on a case-by-case basis, providing evidence of an unsuccessful prior request for a voluntary license, the non-exclusivity of the license and the requirement for compensation.

When operationalizing these conditions in terms of national law, countries are left with lots of flexibility. Third parties must attempt to gain authorization from the patentee, and the State may only grant a compulsory license if negotiations are not successful within a “reasonable period of time,” but the determination of “reasonable” is left to individual countries. Likewise, under the requirement that “adequate remuneration” be paid to the patentee<sup>136</sup>, can establish their own definitions of “adequate”. In both instances, with regard to negotiations and compensation, Article 31.j of TRIPS permits national-level interpretation and adjudication to be administrative, not necessarily judicial, which significantly increases the ease of requesting and acquiring compulsory licenses (Shadlen, 2005s; UNCTAD and ICTSD, 2005).

Under certain conditions, prior negotiation with the patent holder need not be pursued. These are the cases of “national emergency”, “other circumstances of extreme urgency” or “public non-commercial use”. The language used to define each of these cases leaves room for interpretation (UNCTAD and ICTSD, 2005).

There are many ways that the terms “public non-commercial use” may be defined. The term “public” could refer to use by a government, as opposed to a private entity. The term may also refer to the purpose of the use, that is, use for “public” benefit. A private entity could be charged with exploiting a patent for the benefit of the public (UNCTAD and ICTSD, 2005).

“Non-commercial use” may be defined either in relation to the nature of the transaction or in relation to the purpose of the use. Regarding the nature of the transaction, “non-commercial” may be understood as “not-for-profit” use. Regarding the purpose of the use, “non-commercial” may refer to the supply of public institutions that are not functioning as commercial enterprises. The supply of a public hospital operating

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<sup>136</sup> TRIPS Article 31.h.

on a non-profit basis may be a “noncommercial” use of the patent (UNCTAD-ICTSD, 2005).

The waiver of prior negotiations in the context of a national emergency or extreme urgency applies to grants of compulsory licenses for private commercial as well as public purposes.

In some cases, like remedying against abuse or other inappropriate conduct of patent holder, the issuance of a compulsory license does not require (i) engagement in prior negotiations with the patent holder<sup>137</sup> or (ii) that the license is authorized for the supply of the domestic market<sup>138</sup> (Matthias Lamping et al, 2014). According to its proponents, patents are means of competition. Thus, any illegitimate exploitation of the patentee exclusive rights may be deemed as ‘anticompetitive’ within the meaning of Article 31(k) of the Agreement.

Furthermore, it may be necessary to extend the scope and duration of a compulsory license beyond what would be sufficient to deal with the circumstances that led to it. In particular, the commercial interests of licensees should be taken into account<sup>139</sup>. If the compulsory licensee is denied the possibility of obtaining an adequate return on investments, he or she will have little incentive to apply for a compulsory license. Indeed, Article 31(g) of the Agreement does not consider the termination of a compulsory license only on the ground that the circumstances that led to it have ceased to exist (Matthias Lamping et al, 2014).

Here, it is important to emphasize that countries can issue a compulsory license for whatever reasons they chose as TRIPS does not define grounds upon which the issuance is permitted. Although some conditions to be met are stipulated by TRIPS for such issuance, it leaves the grounds for doing so as a matter of national policy. This was confirmed by paragraph 5.c. of the Doha Declaration stating “each member has the right to determine what constitutes a national emergency or other circumstances of extreme urgency.”

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<sup>137</sup> TRIPS Article 31(b).

<sup>138</sup> TRIPS Article 31(f).

<sup>139</sup> TRIPS Article 31(c).



Moreover, Members of the WTO agreed under Article 40 of the TRIPS Agreement that some licensing practices pertaining to IPRs that restrict competition may “have adverse effects on trade and impede the transfer and dissemination of technology.” Accordingly, the TRIPS Agreement allows countries to take measures against such anticompetitive practices that constitute an abuse of IPRs. Members are free to determine what constitutes restrictive practices.

Nonetheless, the RTAs of US has restricted the majority of flexibilities mentioned above. The restrictions placed on compulsory licensing through RTAs exist at two levels.

First, compulsory licensing is indirectly restricted as a result of the data exclusivity and the linking of market approval to patent status (Mercurio, 2006). Second, direct restrictions stem from the clear limits imposed on the grounds on which compulsory licenses can be issued. Unlike TRIPS, the grounds are drawn in the negative and confine the use of compulsory licenses to limited cases. These include failure to meet working requirements, national emergencies, public non-commercial contexts, remedying an anti-competitive practice and cases of extreme urgency<sup>140</sup>.

As result of the systematic recognition of Doha Declaration (see section III.5.4), the Chinese RTAs affirm TRIPS flexibility with respect to compulsory licensing, expanding grounds upon which it may be issued and permitting partner country to define the meaning of “national emergency” and “other circumstances of extreme urgency” under which negotiation is not required prior to the issuance of compulsory license.

The investment agreements encumbered the flexibilities and regulatory discretions available under the TRIPS Agreement with additional requirements and limitations on their application. For instance, patent regulations, concerning compulsory license may be contradictory with both expropriation and performance requirements rules of US

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<sup>140</sup> Such provisions appear in US RTA with Jordan Article 4.20 which states “Neither Party shall permit the use of the subject matter of a patent without the authorization of the right holder except in the following circumstances: (a) to remedy a practice determined after judicial or administrative process to be anti-competitive; (b) in cases of public non-commercial use or in the event of a national emergency or other circumstances of extreme urgency, provided that such use is limited to use by government entities or legal entities acting under the authority of a government; or (c) on the ground of failure to meet working requirements, provided that importation shall constitute working. Where the law of a Party allows for such use pursuant to sub-paragraphs (a), (b) or (c), the Party shall respect the provisions of Article 31 of *TRIPS* and Article 5A(4) of the *Paris Convention*”.

Investment Chapters. the compulsory license is exempted from the application of these provisions as long as it complies with IPRs chapters included in the RTAs of US. Nevertheless, compulsory license rules in these chapters are TRIPS *plus* as they limit the ground upon which compulsory license may be issued. Consequently, implanting TRIPS rules on compulsory license on the basis of above-mentioned interpretations may put State under the danger of Investor-State dispute settlement.

Moreover, US provisions on performance requirements indicate explicitly “patent does not confer market power”. This eliminates the possibility to grant a compulsory license on the ground of anti-competitive practice.

Where the compulsory license is in violation of the fair and equitable standard of treatment, the investment agreements protect the IPRs, which are the subject of such measures. In cases of dispute on the amount of the remuneration subsequent to the issuance of a compulsory license, the standard for payment and the assessment of the value varies between the TRIPS and investment agreements. The TRIPS Agreement requires only the payment of adequate remuneration taking into account the economic value of the authorization for a compulsory license. The compulsory license granting authority determines the royalty payment commensurate with the expected economic value that the implementation of the specific compulsory license could bring and the objective of the license but not to the market value of the patent, which could be higher, especially under a restrictive licensing practice that triggered the compulsory license. Conversely, investment agreements provide for a payment of compensation to the fair market value of the expropriated investment asset itself. As a result, where there is a dispute on the fairness of the issuance of the compulsory license, the payment and the amount of the remuneration for a compulsory license against the IPRs of covered investment, investment agreements can result in a TRIPS *plus* standard (Biadgleng, 2006).

### **III.5) Links between RTAs and International Treaties on IPRs**

In the 19th century, the lack of international agreements on IPRs led most advanced countries to turn to other instruments in order to restrict access to their knowledge and technological assets, examples being the prohibition of emigration of skilled workers or machinery exports. Some European countries also protected intellectual property through bilateral commercial treaties (UNCTAD-ICTSD, 2005). By the end of the 19th century, these measures were deemed insufficient. It was not until 1883 that the first convention on that subject was ratified. The “Paris Convention of the International Union for the Protection of Industrial Property” was ratified by 11 countries and covered patents and trademarks. In 1886 a subsequent Convention on Copyrights was signed in Bern. The secretariats for the Paris and the Bern Conventions were merged in 1893 and were replaced by the World Intellectual Property Organization (WIPO) in 1967 (Chang, 2001).

Later WIPO became a specialized agency of the United Nations. The Paris and the Bern Conventions, which were both revised numerous times, constituted the core principle of the international IPR regime for more than 100 years (Drahos, 1998). The main provisions of the Paris Convention were “national treatment” and “preferential filing”. “National treatment” simply implies that nationals and foreigners were treated equally, while “preferential filing” or “priority rights” give inventors the exclusive right to file a patent on their invention in any member country within one year of the first application. The signatory countries mostly retained control over the design of their national patent laws, for instance, regarding the issue of compulsory licensing or the patentability criteria (Siebeck et al., 1990).

The substantive provisions of the main international IPRs conventions of the WIPO (the Paris and Berne Conventions) are incorporated by reference into the TRIPS agreement and have to be complied with, the exception of the moral rights of authors under copyright. Nevertheless TRIPS agreement does not include or refer to the engagements of the relatively recent WIPO treaties that were signed after the conclusion of WTO agreements.

Meanwhile, All the RTAs of EU and US establish direct linkage with these treaties.

Some of the treaties enlarge the scope of patentability, such as the International Union for the Protection of New Varieties of Plants 1991 (UPOV 1991). Others could be seen as transparency related Agreements that aim at facilitating procedural and administrative procedures to grant patents, such as the Budapest Treaty on the International Recognition of the Deposit of Microorganisms, Patent Cooperation Treaty (PCT) and Patent Law Treaty (PLT).

The RTAs of US and EU contain three types of commitment: the accession to a treaty within a specified deadline, the endeavor to accede to a treaty and compliance with a treaty. China agreement with South Korea is the only RTA that makes reference to WIPO treaties that weren't included in TRIPS, i.e. the Patent Cooperation Treaty and Budapest Treaty.

The impact of WIPO treaties is the same as that of any other TRIPS *plus* provisions. For Ho (2011) these treaties have the effect of amending TRIPS Agreement even though the amendment is not applicable to all WTO Members. More importantly, If WIPO treaties lack its own dispute settlement body, its inclusion in a RTA makes their enforcement possible through the dispute settlement procedures.

Some RTAs establish linkages with an international agreement that could have beneficial effects on developing countries, such as the Convention on Biological Diversity (CBD) and the Doha Declaration that affirms some of the key flexibilities to industrial development in TRIPS Agreement. Linkage to these agreements is characteristic of Chinese RTAs.

To sum up, while integrating international treaties in IPRs that have TRIPS *plus* rules is a characteristic of both US and EU RTAs, Chinese RTAs are characterized by systematic reference to treaties that were lobbied for by developing countries. Table III.5 present results in respect to TRIPS extra treaties that were referred to in studied RTAs.

Table III.5 Reference to international Agreements on IPRs in RTAs

	US												
	Morocco	Bahrain	Oman	Jordan	CAFTA-DR	Peru	Chile	Colombia	Panama	South Korea	MED	Mexico	South Africa
	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+		TRIPS+
	TRIP+	TRIPS+	TRIPS+		TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+ <sup>a</sup>		
	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+		
UPOV 1991	TRIPS+	TRIPS+	TRIPS+		TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+		TRIPS+
Patent Law Treaty	TRIP+	TRIPS+	TRIPS+		TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+ <sup>a</sup>		
Patent Cooperation Treaty	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+		
Budapest Treaty	TRIPS+	TRIPS+	TRIPS+		TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+		TRIPS+
Convention on Biological diversity													
Doha Declaration													

TRIPS+: Agreement is not referred to under TRIPS, but RTA establish a link to it.

<sup>a</sup>: Except EU-Egypt RTA.

<sup>b</sup>: Non-obligatory commitment to adhere to the treaty.

White rows correspond to treaties that expand TRIPS flexibilities (Doha Declaration) or were lobbied for by Developing countries (CBD).

### **III.5.1) The International Union for the Protection of New Varieties Of Plants 1991**

Under the TRIPS Agreement freedom is left to country on the matter of whether to protect new plant varieties using a patent or by effective *sui generis* system or by any combination thereof. Thus, developing countries are not obliged to provide for the protection of plant varieties under patents or to comply with UPOV 1991 commitments.

Contrary to UPOV 1987 act, the 1991 Act abandon the explicit prohibition on double protection (*sui generis* system and patent), so that a member state is free to protect varieties, in addition to the grant of a breeder's right, by the grant patents (El-saghir et al, 2007).

In addition, a comprehensive coverage of plant varieties is required under UPOV 1991. States that have been members of the Convention have a five year transition period to meet this requirement. New members to the Union are required<sup>141</sup> to protect 15 genera or species on accession (5 for UPOV 1978) and include all genera and species within 10 years (a minimum of 24 after 8 years).

Under the 1991 Act, the breeder's right in respect to the production of propagating material is not limited to "production for the purpose of commercial marketing", rather it is extended to all production. Thus, breeder's authorization is needed in respect of the propagating material of a protected variety, any production or reproduction, conditioning for the purpose of propagation, offering for sale, selling or other marketing, exporting, importing and stocking. As a general rule, farmer' would no longer be able to freely save and re-sow propagating material from the harvest of the previous year, though this is the common practice in developing countries. However, there is an optional exception that permits States to restrict the breeder's rights in order to allow farmers to use the propagating material from the previous year's harvest, for propagating purposes<sup>142</sup>. Still, such exception is valid only for varieties which are essentially derived from the protected

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<sup>141</sup> UPOV 1991, Article 5.

<sup>142</sup> UPOV 1991, Article 15(2).

variety, where the protected variety is not itself an essentially derived variety, and for varieties which are not clearly distinguishable (El-Saghir et al, 2007).

Article 14(5), which provides for the inclusion of essentially derived varieties<sup>143</sup> of protected varieties within plant breeders' rights, seeks to strengthen the rights of the breeder by bringing within protection “essentially derived and certain other varieties” of the protected varieties. Under this provision, the so-called “research exemption” available under UPOV 1978, which allowed breeders to freely use protected varieties for research purposes and for breeding new varieties, was eliminated (Dhar, 2002).

Finally, under the UPOV 1991 the protection period of breeders right for plant varieties was extended to not less than twenty years (While it was 15 years in UPOV 1978), and for trees and vines, the period should not be less than twenty-five years.<sup>144</sup> Wording renders clear that these are the minimum period, and that states are free to require a longer period of protection.

The RTAs of EU and US establish a linkage to UPOV 1991 treaty, thus widening the scope of patentability to include plants varieties.

### **III.5.2) The Budapest Treaty on the International Recognition of the Deposit of Microorganisms**

This treaty was signed in 1977 as a means of facilitating compliance with the requirement of “disclosure” in the procedure for obtaining a patent. Typically, a written description of the invention is required to obtain a patent. Since such a description is difficult in cases where the invention involves a microorganism, the Budapest Treaty allows the deposit of microorganisms to be considered sufficient disclosure in these cases, and also provides international authorities with which this deposit may be made (Vivas-Eugui and Oliva, 2010).

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<sup>143</sup> Essentially derived varieties are varieties predominantly derived from the initial variety, or from a variety that is itself predominantly derived from the initial variety.

<sup>144</sup> UPOV 1991 Article 19.

As the term “microorganism” is interpreted broadly, encompassing any biological material whose deposit is necessary for purposes of disclosure, particularly in the food and pharmaceutical sectors, these rules can also be interpreted as tactics for facilitating and promoting patents on plants and animals. Although the Budapest Treaty does not affect patentability criteria, it complements and facilitates the description of the invention, thus facilitating the obtaining of a patent.

The RTAs of EU and US establish a linkage to the Budapest Treaty. Only the China-South Korea RTA makes a reference to Budapest treaty where, however, both countries were already members.

### **III.5.3) Patent Cooperation Treaty and Patent Law Treaty**

The Patent Cooperation Treaty (PCT) provides patent owners with an easy and cost-effective mechanism to globally file patent applications. While individual nations still examine whether an application meets national criteria of patentability, a PCT application streamlines the process with an initial single application, and national examination occurs later (Ho, 2011).

It provides the applicant with several benefits. First, the applicant can initiate a request for a patent in all countries that are members of the PCT avoiding the high costs of many parallel national applications. The lag time also enables an applicant to delay a decision concerning which countries are desirable for patent protection. Second, the applicant is entitled to a preliminary examination of its patent application through the PCT, which, if negative, may enable the applicant to select not to pursue some or all national applications. While this may seem a small procedural detail, it may have significant implications, given that countries that are not members of the PCT are likely to have few patents filed (Ho, 2011).

Some countries have obligation to comply with or accede to Patent Law Treaty (PLT) established in 2001. The main objective of PLT is to harmonize the formal requirements relating to the procedures for applying for, obtaining and maintaining patents. The treaty contains a set of standardized formal requirements for national and



regional patent offices to apply when dealing with patent applications. It covers filing date, standardized forms, procedures for examination, compliance with time limits, means for avoiding unintentional loss of rights and electronic filing (Dutfiel and Musungu, 2003).

The PLT, in effect, will enhance the position of patent owners by combining deregulatory measures with safeguards for them. For example, Article 10 provides that non-compliance by a patent holder with one or more of the formal requirements under the treaty may not be a ground for revocation or invalidation of a patent except where the fraudulent intention is proven. The burden of proof for fraudulent intention is usually very high (Dutfiel and Musungu, 2003). Besides it includes obligation to give the patent applicant the opportunity to make observation, amendments, and corrections, where such practice are “permitted under applicable law”.

These tow treaties, in addition to Budapest treaty, serve to eliminate indirect obstacles that could be used by national authorities in order to delay the deliverance of patent or to refuse it. After all, even if domestic laws offer the type of patent protection desired that protection is elusive if there are too many logistical hurdles to obtaining patent protection. The ability to use a PCT application removes such hurdles.

Helble et al (2009) and Wolfe (2003, 2013) associate transparency with both predictability and simplicity. Helble et al (2009) argue that trade transaction cost is not just affected by what governments do, but also by how they do it. The argument is based on the recognition that the trading environment has a procedural aspect. Accordingly, unpredictability and undue complexity in the design, implementation, and administration of trade policy can constitute independent sources of transaction costs. The predictability is a way of reducing “soft” transaction costs stemming from uncertainty while the simplification reduces information costs related to an overly complex environment.

Transparency is a pivotal element to ensure the effectiveness and the enforceability of RTAs commitments. On the one hand, its subjects, information asymmetries, and procedural complexity might be seen as non-tariffs barriers. Thus, transparency requirements reduce these costs. On the other hand, transparency is necessary to the

verification of the implementation of supranational rules, and thus, to the well-functioning of enforceability mechanism, i.e. dispute settlement.

The RTAs of EU and US establish a linkage to the Budapest Treaty. Again, only the China-South Korea RTA makes a reference to PCT where, however, both countries were already members.

### **III.5.4) Doha Declaration**

Although the Doha Declaration focused on IPRs related to public health, it is relevant to IPRs in any field of technology. Paragraph 5 of the Doha Declaration<sup>145</sup> specifies some of the flexibilities available to facilitate access to pharmaceutical products. The wording of the chapeau of this paragraph makes it clear that it only enumerates some of the possible flexibilities. Paragraph 5 is particularly relevant to the implementation of measures intended to expand domestic production with the use of protected technologies (Correa, 2014). Sub-paragraph (a) confirms the relevance of Article 7 of the TRIPS Agreement<sup>146</sup> for the interpretation of its provisions, thereby suggesting that the TRIPS Agreement must be interpreted in a manner that favors access by third parties to technology necessary to further innovation and domestic production. Sub-paragraph (b) affirms the liberty of members to define the ground upon which they issue a compulsory license.

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<sup>145</sup> It states “while maintaining our commitments in the TRIPS Agreement, we recognize that these flexibilities include:

a. In applying the customary rules of interpretation of the public international law, each provision of the TRIPS Agreement shall be read in the light of the object and purpose of the Agreement as expressed, in particular, in its objectives and principles.

b. Each member has the right to grant compulsory licences and the freedom to determine the grounds upon which such licences are granted”

<sup>146</sup> This article provides that the protection and enforcement of intellectual property rights “should contribute to the promotion of technological innovation and to the transfer and dissemination of technology”. The Agreement should not be regarded as a charter of absolute rights to control the exploitation of protected technologies, but rather as an instrument that requires the use of such technologies “to the mutual advantage of producers and users of technological knowledge and in a manner conducive to social and economic welfare”(Article 7).

Furthermore, it specifies that States are free to determine what constitutes a “national emergency” or “other circumstances of extreme urgency” under which the issuance of the compulsory license does not require prior negotiations with the patentee.

Chinese RTAs contain an article on the intellectual property and public health that recognizes principals established in Doha declaration<sup>147</sup>. This reference is of great significance, given the existence of some flexibilities in the TRIPS Agreement that have been confirmed by the WTO Ministerial Conference, the highest WTO body, through the Doha Declaration on the TRIPS Agreement and Public Health. The Declaration is the first WTO instrument to specifically use the concept of ‘flexibility’ with regard to the TRIPS Agreement.

Furthermore, Doha declaration recognizes that States are free to establish their IPRs exhaustion regime, thus, legitimizing the parallel imports practice (See Article 5.d).

By contrast, the US RTAs don’t establish a linkage to Doha Declaration. Only two RTAs of EU make a shallow reference to Doha Declaration. The EU-Andean community RTA provides that in interpreting and implementing the rights and obligations under the RTAs “the Parties shall ensure consistency with this Declaration”<sup>148</sup>. The EU-CARIFURM RTA use a shallow language, which “recognize the importance” of the Doha Declaration on the TRIPS<sup>149</sup>.

### **III.5.5) The Convention on Biological Diversity**

The Convention on Biological Diversity (CBD) is a multilateral treaty under the auspice of the United Nations, addressing all aspects of biological diversity: genetic resources, species, and ecosystems. The Convention has three main goals: conservation of biological diversity (or biodiversity), sustainable use of its components, and fair and equitable sharing of benefits arising from genetic resources. Thus, the CBD addresses the issue of appropriation of the traditional knowledge and the genetic resources.

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<sup>147</sup> China-South Korea Article 15.5, China-Peru Article 144.6, China-Costa Rica Article 112, and China-Chile Article 111.

<sup>148</sup> EU-Andean Community RTA Article 197.2.

<sup>149</sup> EU-CARIFURM RTA Article 197.b.

Traditional knowledge is knowledge, know-how, skills, innovations or practices that are passed between generations and that form part of the traditional lifestyle of indigenous and local communities who act as their guardian or custodian. Traditional knowledge can be, for example, agricultural, environmental or medicinal knowledge, or knowledge associated with genetic resources (WIPO, 2015).

Genetic resources are parts of biological materials that contain genetic information of value and are capable of reproducing or being reproduced. Examples include material of plant, animal, or microbial origins, such as medicinal plants, agricultural crops and animal breeds (WIPO, 2015).

Some traditional knowledge is closely associated with genetic resources: through the utilization and conservation of the resource and through their common use in modern scientific research, because traditional knowledge often provides researchers with a lead to isolate valuable active compounds within genetic resources.

“Bio-piracy” has been defined as the process through which the rights of indigenous cultures to genetic resources and knowledge are “erased and replaced for those who have exploited indigenous knowledge and biodiversity” (Shiva et al, 1997, p.31)<sup>150</sup>. In fact, a large number of patents have been granted on genetic resources and knowledge obtained from developing countries, without the consent of the possessors of the resources and knowledge. There has been extensive documentation of IPRs being sought over resources “as they are”, without further improvement<sup>151</sup> and on products based on plant materials and knowledge developed and used by local and indigenous communities<sup>152</sup>.

There is no any reference to CBD in the RTAs of US. This is not astonishing giving that the CBD is not ratified in the US as its commitments are not consistent with US own regulations. According to section 102 of the US patent law, information that has been published in a written form in the US or in any other country is not patentable. But if the information was publicly used but not documented in a foreign country, novelty is not

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<sup>150</sup> Quoted in Correa (2001).

<sup>151</sup> Examples include US patent No. 5,304,718 on quinoa granted to researchers of the Colorado State University, and US Plant patent No. 5,751 on ayahuasca, a sacred and medicinal plant of the Amazonia.

<sup>152</sup> Such as the cases of the neem tree, kava, barbasco, endod and turmeric.

lost. Unless this relative standard of novelty is modified, the problems of appropriation of Traditional Knowledge under US patents will remain unsettled (Correa, 2001).

The protection of traditional knowledge and biodiversity is a new component in the IPRs chapters of new RTAs of EU, starting with the EU-CARIFORUM RTA. The related provisions reflect some existing obligations under the CBD in addition to recognizing the importance of the CBD's objectives and principles<sup>153</sup>.

EU-CARIFORUM RTA allows the parties to require “that the applicant identifies the sources of the biological material used by the applicant and described as part of the invention”<sup>154</sup> as a part of administrative requirements. This provision is optional, as it authorizes but does not mandate national governments to apply it. Accordingly, the CARIFORUM States can make use of its provision, but they cannot oblige the EU to apply it, especially that it does not mention the consequences of non-compliance. According to Vivas-Eugui and Oliva (2010) the word “source”, rather than “origin”, gives wider connotation and includes both geographical origins as the origin and/or supplier. This provision may reflect the European Biotechnology Directive approach which provides for voluntary disclosure of the geographical origin of biological material (Vivas-Eugui and Oliva, 2010).

Provisions on genetic resources and traditional Knowledge in EU-South Korea RTA are similar to those found in the EU-CARIFORUM RTA, but, importantly, it excludes any reference to the disclosure requirement issue<sup>155</sup>.

The EU-Andean Community RTA acknowledges “the usefulness of requiring the disclosure of the origin or source of genetic resources and associated traditional knowledge in patent applications”<sup>156</sup>. It also adds “the Parties will provide, in accordance with their domestic law, for applicable effects of any such requirement so as to support

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<sup>153</sup> See Article 150 of the EU-CARIFORUM RTA, Articles 196.4 and 201 of the EU-Colombia and Peru RTA, and Article 10.40 of the EU-South Korea RTA. In this context, it is worth mentioning that the EU, Peru, Colombia, Central America, South Korea and the CARIFORUM States are members of the CBD and therefore are bound by its provisions. Many of these countries are also signatories of the Nagoya Protocol and hence will be bound by its provisions once the Protocol enters into force.

<sup>154</sup> EU-CARIFORUM RTA Article 150.4.

<sup>155</sup> Article 10.40 of the EU-South Korea RTA.

<sup>156</sup> EU-Andean Community RTA Article 201(7).

compliance with the provisions regulating access to genetic resources and associated traditional knowledge, innovations and practices”<sup>157</sup>.

Although one scholar interprets this provision as an obligation that would require the EU to amend its current Directive on Biotechnology in order to determine the effects of the non-fulfillment (Vivas-Eugui and Oliva, 2010), another scholar suggests that Article 201 of the EU-Andean Community RTA states principles of protection are “subject to national legislation”, thus failing to create clear obligations of the EU to protect Genetic resource and traditional knowledge (Drexler, 2014).

In sum, it seems that the EU limits itself to concessions that reflect the level of protection available at the Community level (Nadde-Phelix, 2014). However, a safeguard clause has been included in most EU RTAs which enables parties to the Agreements to review the provisions relating to biodiversity and traditional knowledge in the light of the results of the related multilateral discussions<sup>158</sup>.

One of the characteristic of Chinese RTAs is the provision of genetic resource, traditional knowledge, and folklore, recognizing its contribution to scientific, cultural and economic development. The three agreements containing a chapter on IPRs reaffirm the principles and provisions established in the CBD and encourage the effort to build a mutually supportive relationship between the CBD and TRIPS Agreement regarding genetic resources and the protection of traditional knowledge and folklore. The agreement with South Korea was signed after the conclusion of Nagoya protocol, so Article 15.17.2 affirms the “respect” to its requirement, “specially those on prior informed consent and fair and equitable sharing of benefits”.

In addition, Chinese RTAs affirm each country’s right to “adopt or maintain measures to promote the conservation of biological diversity and the equitable sharing of benefits arising from the use of genetic resources and traditional knowledge.” Finally,

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<sup>157</sup> EU-Andean Community RTA Article 201(8).

<sup>158</sup> Article 150(6) of the EU-CARIFORUM RTA, Article 201(13) of the EU-Colombia and Peru RTA and Article 10.40(3) of the EU-South Korea RTA.

they leave open the possibility to negotiate in the future on the question of resource disclosure and prior informed consent obligations in patent applications<sup>159</sup>.

The textual language in the provision therefore clearly indicates that the protection of genetic resources, traditional knowledge, and traditional cultural expressions is merely optional, not mandatory. Moreover, the protection the provision calls for is consistent with the intellectual property laws and policies of China. Article 26 of the amended Chinese Patent Law requires patent applicants to disclose the traditional knowledge and genetic resources used in their inventions (Peter, 2015).

### **III.6) The Dispute Settlement**

The TRIPS agreement makes disputes between WTO members on compliance with the agreement obligations subject to the WTO dispute settlement procedures. This feature has been one of the reasons for bringing the subject of intellectual property into the Uruguay Round (Taubman et al, 2012). TRIPS Agreement provides for the first time in international IPRs law, detailed provisions on civil and administrative procedures and remedies, provisional measures, special requirements related to border measures, and criminal procedures. These provisions specify the minimum procedures and remedies that must be available so that rights holders can effectively enforce their private rights in domestic judicial or administrative institutions, in accordance with certain general principles.

The march toward enforcing IPRs rules in trade agreements has continued after Uruguay Round through RTAs. The inclusion of dispute settlement mechanism applicable to IPRs chapters in RTAs raises some concerns. Drahos (2007) focus on four issues in respect “bi-lateralization” of enforcement mechanism.

First, as the above-presented WIPO treaties lack their own dispute settlement bodies, their inclusion in a RTA makes enforcement possible through the dispute settlement procedures established in the RTA. This constitutes a significant departure from the

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<sup>159</sup> Article 145 China-Peru RTA, Article 111 of China-Costa Rica RTA, and Article 15.17.4 China-South Korea RTA.

previous situation where challenges could only be brought before the International Court of Justice, where jurisdiction is consent-based.

Second, the proliferation of RTAs coupled with the high membership of the WTO results in a situation where a State breaches an obligation it has under more than one agreement. Some RTAs contain specific choice-of-forum provisions that allow the complaining party to choose the forum in situations where an obligation is binding under two or more agreements. In areas such as IPRs the overlap of obligations is considerable and so the choice of forum is likely to arise. According to Drahos (2007), choice-of-forum clauses benefit developed and net-exporting countries which are more likely to bring a violation claim, and which have greater capacity and expertise to take advantage of more sympathetic fora.

Third, opportunities for coalition building for developing countries are reduced under bilateral dispute resolution (Drahos, 2007). The third party procedures of the dispute settlement create the possibility of coalition building by a weak actor involved in a dispute with a strong actor<sup>160</sup>. A coalition offers a weak actor the opportunity of enrolling capacities that the weak actor lacks and it also signals to a panel that there are aggregated interests of the WTO membership at work in the dispute rather than just the individual interests of one strong State and one weak State. Any dispute in TRIPS-related to public health and patents and that affects developing countries would attract a large number of third parties. This signaling function of coalitions will be substantial if they may lead WTO panels down an interpretive path that is sensitive to the interests of the WTO as a polity<sup>161</sup>. In either case, a dispute under WTO auspice or RTAs, the superior bargaining power of a strong State also remains. However, in a future hypothetical case where some leading southern countries intend to reform some aspect in international trade system,

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<sup>160</sup>. Third party participation in a dispute between two WTO Members can take place as early as the consultation stage. The third party must have a substantial trade interest and the consultations must be based on Article XXII of GATT and the WTO Member to which the consultations were initially addressed has to agree to the third party being joined (See Article 4.11 of the Dispute Settlement Understanding). At the panel stage, third parties have a right to be heard, to make written submissions, to receive written submissions and ultimately to bring their own action (See Article 10 of the Dispute Settlement Understanding). Third parties may not appeal a decision, but if an appeal is taken, then a third party has a right to be heard and make written submissions.

<sup>161</sup> See Article 10 of the Dispute settlement.



dispute settlement and the coalition building may be a major forum where pro-developing countries interpretations of WTO rules may be fought for.

Fourth, the third party benefits of two States obtaining a ruling to a dispute under a multilateralized dispute resolution mechanism due to MFN principle may be considerable. By contrast, the bilateral dispute resolution proceedings support preferential trading arrangements that operate outside of the scope of the MFN principle.

In fact, all RTAs of US contain forum-choice-clause in its dispute settlement chapter. The same goes for EU RTAs<sup>162</sup>, though there are slight differences in the choice-of-forum clauses included in recent EU bilateral agreements. In RTAs with CARIFORUM and South Africa, it is stated that regional arbitration bodies will not consider dispute<sup>163</sup> on rights and obligations under the Agreement establishing the WTO. Meanwhile, Correa (2014) argue that the CARIFORUM text makes it clear that the parties must comply, on the one hand, with the TRIPS Agreement and, on the other, with the additional obligations established in the RTA. As a result, a country party to the RTA may invoke, under the agreement dispute settlement system, the violation of a particular TRIPS *plus* obligation established by a RTA as well as a violation of a TRIPS obligation.

Importantly, RTAs having investment chapters that adopt investment definition that refers to IPRs have significant implication on TRIPS flexibilities as discussed above. Importantly those chapters provide for the most effective enforcement mechanism that involves Investor-State dispute, going well beyond TRIPS agreement enforcement mechanisms. Under investment agreements, unlike the TRIPS Agreement<sup>164</sup>, violation of the standard of treatment of investment may give rise to state-to-state or investor- to-state dispute settlement.

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<sup>162</sup> Article 319.2 of EU-Andean Community RTA states clearly "disputes related to the same measure arising from this Agreement and by virtue of the WTO Agreement, may be settled under this title or under the DSU at the discretion of the complaining party."

<sup>163</sup> Article 104.10 of EU-South Africa. Article 222 of EU-CARIFORUM uses the term "Shall not adjudicate"

<sup>164</sup> Violations of the standards for acquisition, protection and enforcement of IP rights are sanctioned by the WTO dispute system in accordance with Article 64.1 of the TRIPS Agreement, Article XXII and XXIII of the GATT 1994 and the Understanding on the Rules and Procedures Governing the Settlement of Disputes, to which only states have access.

Forum choice is also possible under the two of studied Chinese RTAs. Moreover, Peru-China permit claims to be filed to Investor-State dispute settlement, with some exclusion of MFN and some limitations to expropriation claims filed in relation to taxation measures. Table III.6 presents results with respect to IPRs rules enforcement under the studied RTAs.

Last but not least, the inclusion of investment chapter in some RTAs where IPRs, including patent, are defined as an investment and Investor-State dispute settlement is established, offers the patentee third types of forum where they can enforce their rights, as is the case in all US RTAs and some Chinese RTAs. Such a possibility may well circumscribe the *de jure* autonomy to operationalize some of TRIPS flexibilities especially in the RTAs of US containing TRIPS *plus* rules and where investment chapters itself introduce TRIPS *plus* rules such as specifying that patent does not confer market power to the patentee, thus, limiting grounds upon which compulsory license may be issued. These scenarios are not theoretical speculations as it was shown by some disputes.

Following the invalidation of patents for two drugs, Strattera and Zyprexa by Canadian courts, US-based pharmaceutical company Eli Lilly initiated investment arbitration proceedings in 2012 under investment chapter NAFTA against Canada<sup>165</sup>. Lilly complains about “too strict” patentability requirements as applied by the Canadian Courts since 2005. Lilly alleges that the courts interpret the utility standard for patent protection and the requirement to disclose the invention in a way that leads to frequent invalidation of its pharmaceutical patents in Canada<sup>166</sup>. It complains that the patentability requirements resulting violate Canada's international IPRs obligations not only under NAFTA but also under TRIPS and the Patent Cooperation Treaty (PCT). Eli Lilly claims, among other things, that the invalidation of both patents constitutes an “expropriation” of “intangible property” acquired in the expectation of economic benefit. Although stopping

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<sup>165</sup> See Eli Lilly and Company vs. Canada, Notice of Intent to Submit a Claim to Arbitration under NAFTA Chapter 11.

<sup>166</sup> The Notice of Intent alleges that Canadian federal courts have created a so-called “promise doctrine” that takes for granted what the patent application has described as useful effect of the invention and holds the applicant responsible for fulfilling this ‘promise’ of utility. If the patented invention later is found not to meet this promise, the patent can be revoked. Lilly claims that this doctrine has led to a dramatic increase in the number of invalidated patents.

short of alleging breaches of TRIPS, NAFTA or the PCT, the United States. USTR (2014) Special 301 Report criticized Canada's patentability requirements in respect to utility and its serious impact on patents held by US pharmaceutical companies (for more details on this case, see Ruse-Khan, 2014).

In 2007, for example, Brazil's decision to issue a compulsory license on the patented anti-Human Immunodeficiency Virus drug Efavirenz prompted a hostile statement from Merck & Co. characterizing the Brazilian government's move as an expropriation of its property (Gibson, 2010).

Like compulsory licensing, the disclosure of clinical trial data may also be deterred by the threat of Investor-State disputes launched by foreign pharmaceutical companies. In 2010, the European Medicines Agency adopted a policy of greater transparency in clinical trial data, triggering the release of nearly two million pages of data. In 2013, two US drug companies, AbbVie and InterMune, obtained an interim injunction against the European Medicines Agency preventing the release of "commercially sensitive" information and the European Medicines Agency stopped releasing trial data for fear of further legal action from other pharmaceutical companies (Dyer, 2013).

Hence, the interaction between IPRs rules in RTAs, TRIPS Agreement, WIPO treaties and investment chapters in RTAs may be translated into higher level of protection for patent holders, while actually constraining State's autonomy to design national patent system in a manner that facilitates the development of production capacities and technological capabilities.

Table III.6 Enforceability of IPRs rules under RTAs

	Morocco	Bahrain	Oman	Jordan	CAFTA-DR	US	Peru	Chile	Colombia	Panama	South Korea	MED	Mexico	South Africa
Forum choice clause	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+
Investor-State dispute settlement	TRIPS+	TRIPS+	TRIPS+		TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+	TRIPS+			

TRIPS+: the disposition is not possible under TRIPS, but RTA rules allow it.  
<sup>a</sup>: MFN commitment is excluded from the application of Investor-State dispute settlement.

## Conclusion

Results show the systematics and apparent tendency of North-South RTAs to eliminate, even to varying degrees, the TRIPS flexibilities, contrary to South-South RTAs that preserve these flexibilities.

US approach is the tightest as the majority of TRIPS flexibilities are restricted. Results show that US RTAs seek systematically to soften patentability Criteria. This applies to (i) novelty and industrial applicability criteria, (ii) mandating patent to new uses of already known products, (ii) the patentability of excluded subject matter under TRIPS, i.e. plants and animals, (iv) introducing a cap on disclosure requirements, and (v) extending patent term and tightening patent revocation conditions. Some RTAs of EU join US approach with respect to the patentability of both plants and new uses of known products and in respect to extending patent term.

Results show that the most recognized exceptions to patentee exclusive rights under TRIPS agreement were restricted under the RTAs of US and EU. Both countries' approaches introduce a period of data exclusivity and limit the possibility to use early working exceptions. Importantly, while US RTAs limit explicitly the ground upon which compulsory license could be justified, both countries restrict indirectly the possibility to issue the compulsory license as a result of data exclusivity. Furthermore, some RTAs of US prohibit parallel import exception.

While Indian RTAs have almost no reference to IPRs related issues, rules on the patent are either absent from Chinese trade agreements or covered limitedly. Patent provisions in Chinese RTAs are shallow, rhetoric and contain no additional commitments relative to parties' previous engagements. Overall results show that under Chinese RTAs neither patentability criteria were softened, nor exceptions to patentee exclusive rights were restricted. On the contrary, they affirm and expand compulsory license exceptions through the systematic affirmation of Doha Declaration.

Additionally, integrating international treaties in IPRs that have TRIPS *plus* rules is a characteristic of both US and EU RTAs, contrary to Chinese RTAs that are characterized by systematic reference to treaties that were lobbied for by developing countries, especially Doha Declaration and Convention on Biological Diversity.

In respect to IPRs enforcement rules under the studied RTAs, concerns are raised because of allowing forum-choice practice in all US and EU RTAs and some Chinese RTAs, in addition to the linkage to investment chapters in the presence of Investor-State dispute settlement.

To summarize, results show that international approaches to patent system of two major countries showing a considerable technological dynamism in many industries preserve TRIPS flexibilities. China and India approaches, contrary to US and EU ones, do not restrict the ability their partners to operationalize TRIPS flexibilities at the national level, in a manner that care for the development of production capacities and technological capabilities. The economic rise of some Southern countries may widen spaces for policies and practices aiming at the structural transformation in other Southern countries.

The chapter results are rather appealing contrary to previous literature that had drawn a bleak picture on the state of TRIPS flexibilities in the context of rising regionalism. It affirms hypothesis that spaces to shape the national patent system in a manner that favors structural transformation are diverse within RTAs.



#### **IV) Chapter Four: National Standardization Space under WTO Agreement on TBT and North-South and South-South RTAs**



Standards are ubiquitous. There are hundreds of thousands of standards in existence that affect all aspects of daily production activities and which have an impact on the processes, products, and services which make up countries' GDP. A product standard may be defined as a specification or set of specifications that relates to some characteristic of a product or its manufacture (Stephenson, 1997). These specifications relate to size, dimensions, weight, design, function, components, and some other products attributes, production process, etc.

Technical standards are established norms or requirements applied to technical systems. They are crucial aspects of almost all industries, and the success of firms may depend on the consequences of standard based competition (Narayanan and Chen, 2012). As information technology is rapidly developing, the role and impact of standards have been increasing, especially in growing information and communication technology industries.

Standardization is a key element in promoting industrial and economic development. The manufacturing process itself is organized according to standards. The standardization of parts and processes allows for repetitive production, reduced inventories and flexibility in substituting components on the assembly line. It allows economies of scale, easier understanding among producers and providers, as well as compatibility and interoperability among products and components. Standards embody technology and thus play a key part in the process of technology diffusion as other firms in the industry use the technological advance incorporated into standards by the developer. This process raises productivity through increasing efficiency as companies can adopt standardized approaches rather than having to reinvent a similar technology (Stephenson, 1999).

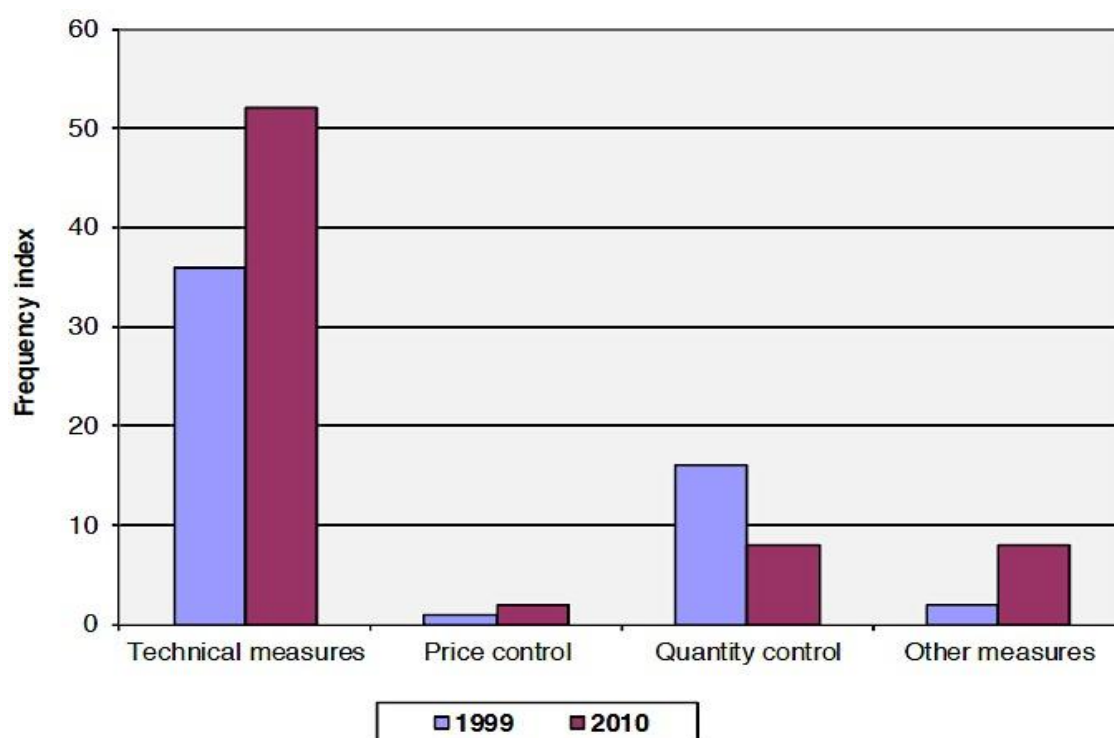
National policies on standards in developing countries have for the most part been neglected in favor of a focus on other industrial policy instruments. Moreover, standards and technical regulations have received little attention in the debate on industrial policy in development economics. This can be mirrored in the widespread reduction of standards functions to an only instrument of public and trade policies.

Interestingly, there does exist a body of literature, both theoretical and empirical, on the economics of standards that highlights the contribution of standards to both overall growth and productivity growth. The industrial organization literature has well-studied standards role in industries, but it has focused on the impact of standards on industries characterized by network externalities such as mobile phones, consumer electronics, and computers, etc.

Contrary to a widespread reduction of standards functions to trade and public policies instruments, the present chapter analysis is based on the idea that standards may be used as instruments of industrial policy. To our knowledge, development economics has not studied standards from this point of view. One of this chapter contribution is the formulation of a simple theoretical argument on (i) standards as tools to overcome investment coordination failure and create an reinforce cohesion and compatibility of complementary industries, and (ii) standard as a component of control mechanism that should accompany State's distributed support to domestic investment.

Standards and technical regulations are classified as Non-Tariff Measures (NTMs) that have become prominent features in the regulation of international trade in goods. This was illustrated through a study conducted by the UNCTAD and the World Bank on a selection of 26 countries. While technical regulations were used on almost 37 per cent of tariff lines in 1999, the equivalent figure for 2010 is more than 50 percent as illustrated in Figure IV.1.

**Figure IV.1 Number of products covered by NTMs (years 1999 and 2010)**



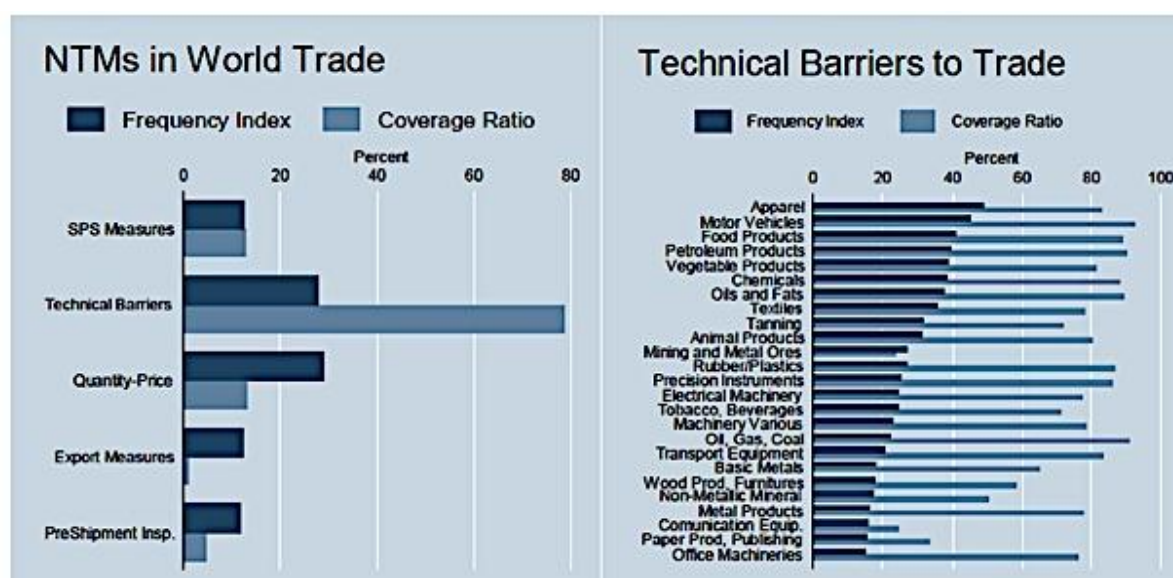
Source: Gourdon and Nicita (2013, p.17)

The bulk of technical regulations is grouped into two broad categories, namely sanitary or phytosanitary (SPS) measures and technical barriers to trade (TBTs). The former includes regulations to protect human, animal or plant life or health, while the latter addresses all other

technical regulations, standards and conformity assessment procedures. While sectors related to agriculture tend to be regulated by SPS, TBTs are more commonly used to regulate manufacturing products (UNCTAD, 2013a). SPS measures and TBTs are the objects of two World Trade Organization (WTO) agreements.

According to UNCTAD (2014), more than 25 percent of product lines and almost 80 percent of world trade is regulated by TBT (UNCTAD, 2014b). Figure (IV.2) illustrates the distribution of NTMs across five broad categories in 2013. For each category, both the frequency index (i.e. the percentage of Harmonized System 6 digit lines covered) and coverage ratio (i.e. the percentage of trade affected) are reported. Figure (IV.2) illustrates the coverage ratio and the frequency index of TBT measures for manufacturing products

**Figure IV.2 Prevalence of non-tariff measures, by type and broad category (2013), technical barriers to trade, by sector (2013)**



UNCTAD (2014, p.16; p.18)

According to standards liberalization proponents, barriers to trade in the area of standards can arise in several ways. They may result from (i) heterogeneity across national markets in the type of product and process standards, technical regulations or conformity assessment procedures, and (ii) from the unnecessary costly testing and procedures associated with separate conformity assessment requirements.

Still, standards and technical regulations are unusual instruments to liberalize not only due to their technical nature but also because the use of domestic regulations and standards, as a

way to disguise protectionist trade policy has become a prominent practice in some industrialized countries (Waston and James, 2013).

The WTO Agreement on TBT constituted the first multilateral agreement that envisages the liberalization of standardization process at national level. It strengthened and clarified the provisions of the “Standards Code”, the original plurilateral Agreement on TBT governing regulations and standards concluded in Tokyo Round 1979.

The TBT Agreement is part of a broader category of WTO agreements dealing with NTMs. Although constraints of many WTO agreements on different NTMs were analyzed, the restrictions of WTO Agreement on TBT on standardization process at the national level have not been assessed. In line with thesis objectives, the present chapter examines the extent to which the international trade regime leaves States the necessary space to deploy standards and technical regulations as tools of industrial policy. In particular, it assesses, on the one hand, the extent to which the WTO Agreement on TBT leaves members States national standardization space. On the other hand, it examines the extent to which North-South and South-South RTAs eliminate or preserve national standardization space available under WTO Agreement on TBT.

The chapter identifies *de jure* space that enjoys developing countries to design national standards according to their development objectives under WTO Agreement on TBT. Based on this space it develops a framework that permits to analyze comparatively TBT provisions in RTAs of US, EU, China, and India among each other and against WTO Agreement on TBT.

Chapters on TBT were found in 9 US RTAs<sup>167</sup>, 12 EU RTAs, and 6 Chinese RTAs. Only three Indian RTAs include provisions on TBT but of symbolic nature. The results show the existence of considerable standardization space under WTO Agreement on TBT. The possibility to design standards at national level according to “legitimate objectives” is part of agreement commitments, though conditioned to the fulfillment of some ambiguous and indefinite criteria. Moreover, as part of SDT provisions, developing countries are not expected to use international standards as a basis for their standards.

Although WTO disciplines on standards design are relatively modest, compared to other policy instruments, North-South RTAs have considerably limited standardization autonomy. Results show that the liberalization of TBT under EU and US RTAs go systematically beyond commitments of the WTO Agreement on TBT.

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<sup>167</sup> US-Jordan RTA is the only RTA that does not include rules on TBT.

The RTAs of both EU and US enlarge the liberalization coverage to include new instrument, i.e. metrology, and new sectors, i.e. public procurement. EU adopts the most restrictive liberalization approach with Mediterranean countries, i.e. hegemonic harmonization. Importantly, the right to design standards in accordance with legitimate national objectives was eliminated under some RTAs of EU.

The US adopts accepting as equivalent with respect to technical regulations and introduces various commitments to advance liberalization of conformity assessment procedures. Regarding transparency requirements, the RTAs of US introduce national treatment clause for the accreditation and recognition of conformity assessment bodies in the territory of another Party, and for the participation of investors of another Party in the development of its national standards, technical regulations, and conformity assessment procedures. Finally, commitments in the RTAs of US are highly enforceable as consultation on the standard may take place under the RTAs dispute settlement mechanism.

Consequently, RTAs of US and EU introduce substantial restrictions on the integration of standardization process into an overall industrial policy framework. Observed commitments serve rather to export industrial countries standards, indirectly, through the harmonization towards international standards, which are mainly developed by the same producers with which developing countries are competing. And directly through the harmonization toward industrial countries own standards, as is the case in EU approach. Obviously, the outcome of these commitments is further liberalization of trade in goods. Still, the question is: whose goods?

While the rules on TBT in US and EU RTAs are more or less stylized in the sense that they show little variations from RTA to another, Chinese RTAs seems to adopt varied approaches. Some Chinese RTAs affirm engagements under WTO Agreement on TBT but consolidate them by establishing institutions to administrate the engagements. Some RTAs encourage the acceptance as equivalent for technical regulation, but it is not mandatory. Importantly, Chinese RTAs affirm explicitly parties' right to design standards according to legitimate objectives.

It is clear that some Chinese RTAs contain adapted versions of partners' countries commitments with the US in respect to TBT, especially in the case of Peru and Chile. Adaptation passes through the elimination of some binding formulations in the original

commitments found in US RTAs.

The RTAs of India adopt an approach that affirms the commitment to the WTO Agreement on TBT, with no additional engagements. Interestingly, one of its RTAs introduces derogation that permits the use of non-tariff restriction for reasons of protection of local industries.

Both Chinese and Indian RTAs have preserved *de jure* space to design standards and technical regulation at the national level in accordance with “legitimate objectives” without any obligation to base them on international standards. Hence, Chinese and Indian RTAs do not impose restrictions that reduce the standardization space substantially at the national level.

The rest of the chapter is structured as follows. Next section provides a brief and selective survey of theoretical and empirical literature on standards role in industrial development. In addition, it develops a simple argument on standard as an instrument to overcome investment coordination failure, and as a component of the control mechanism. Section two presents methods of standards liberalization under WTO Agreement on TBT. It analyses the standardization policy space available therein. Section three examines standards liberalization under the studied RTAs. It develops an analytical framework that permits comparing RTAs to WTO Agreement on TBT and to each other. Then, an overall results overview is provided before presenting the results for each country. Finally, the chapter concludes.

#### **IV.1) The Economics of Standards**

Although economists have long surmised that standardization might have important benefits, the development of an economic literature that theoretically and empirically examines the role of standards is a relatively recent phenomenon. Meanwhile, the analysis of standards role in industrial development is almost nonexistent in Development Economics. In addition, standards economic functions are reduced to be “technical barrier to trade” that should be eliminated. This section briefly sheds light on a relatively recent body of literature analyzing the economic contributions of standards to industrial development. In addition, the section develops an argument on standards as a tool to address investment coordination failure.

#### IV.1.1) Standards Definitions

There are several definitions of standards. One definition is that standards “define any common set of product features, which can range from loose sets of product characteristics to precise specifications for technical interfaces” (Grindley, 1995:21). Summarizing the available sources, De Vries (1997) developed more comprehensive definition of standardization as an activity of establishing and recording a limited set of solutions to actual or potential matching problems directed at benefits for the party or parties involved, balancing their needs and expecting that these solutions will be repeatedly or continuously used during a certain period by a substantial number of the parties for whom they are meant. The official definition by the International Standardization Organization (ISO) and the International Electrotechnical Commission (IEC) is the following: a standard is a “document, established by consensus and approved by a recognized body , that provides, for common and repeated use, rules, guidelines or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context” (ISO and IEC, 2004, p.12).

Standards cover a wide variety of activities undertaken by businesses in the production of their products or services and in supplying their customers. A summary of the main types of standards is provided in Table 1.

**Table IV.1 Summary table of the main types of standards**

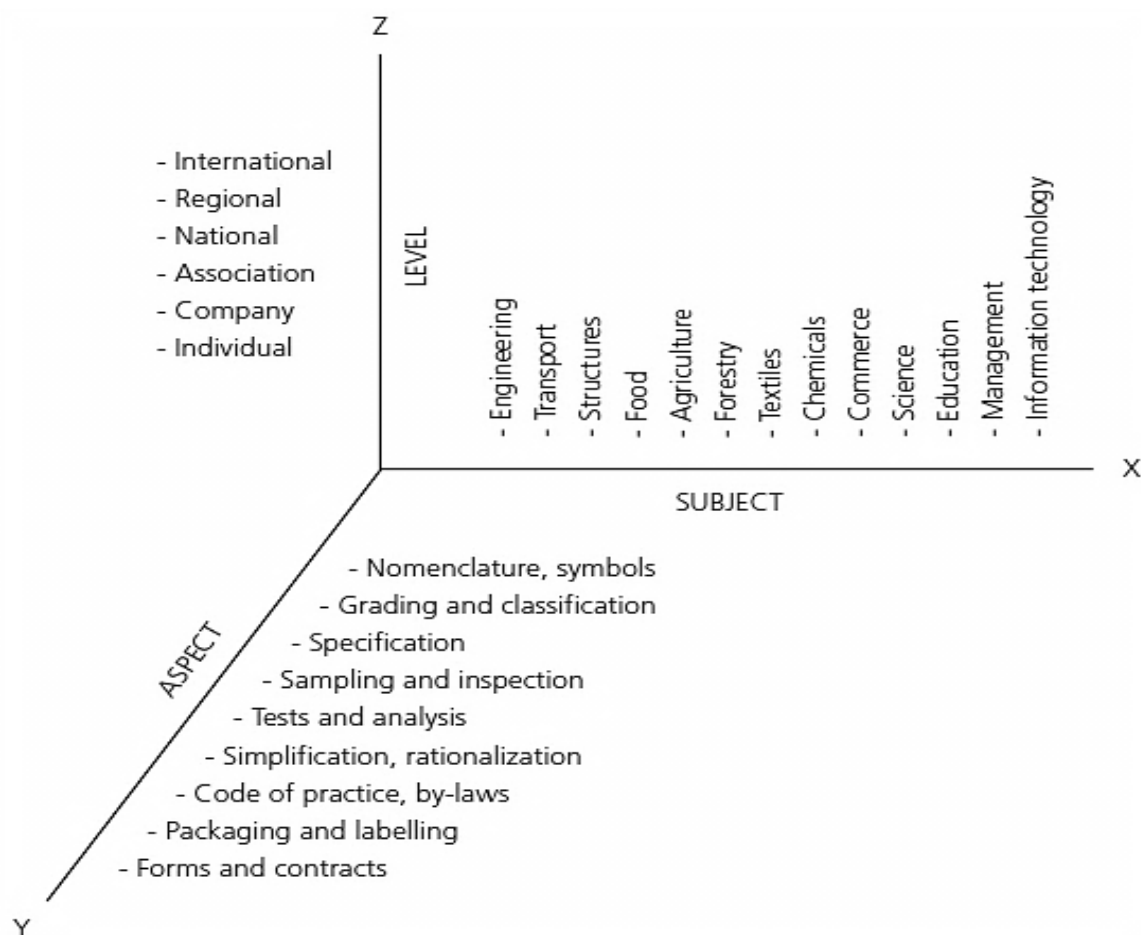
Standard type	Description	Example
Quality management	Help companies achieve cost-effective and quality assurance methods through a system of continual improvement	ISO 9001 quality management system (QMS) ISO 13485 QMS for medical device industry ISO 16949 QMS for automotive industry
Health & safety	Set out systems for health and safety management and the minimization of operational risk	OHSAS 18001 Occupational health & safety BS ISO 31000 Risk management BS 5839 Fire detection and fire alarm systems for buildings
Technical	Set out the technical characteristics of a product or a production process, allowing efficient application and replication	BS 7671 Requirements for electrical installations BS EN 1090 Execution of steel structures and aluminium structures
Environmental	Enable companies to identify and control their environmental impact and improve their environmental performance	ISO 14001 Environmental management systems
Code of Practice	Provide best practice guidelines in the implementation of a process or procedure	BS 5266 Code of practice for the emergency escape lighting of premises

Management	Provide systems for the effective management of specific functions within organizations	ISO/IEC 27001 Information Security Management
Organizational governance	Provide guidance on effective structures and practices for the governance of organizations	BS 13500 Code of practice for delivering effective governance

Source: CEBR (2015, p.16-17)

A standard generally has three attributes: (i) *Level*, such as at the company, national or international level, (ii) *Subject*, such as engineering, food, textile or management and (iii) *Aspect*, such as specification, testing and analysis, packaging and labeling. Figure (3) shows a standardization diagram that refers to the level, subject, and aspects of standards (UNIDO, 2006)<sup>168</sup>.

**Figure IV.3 Standardization diagram**



Source: UNIDO (2006, p.6)

<sup>168</sup> The diagram was created by Dr. Lal C. Verman founder and Director General of the Bureau of Indian Standards, that is the national standards body of India (UNIDO, 2006).



#### **IV.1.2) Standards, Economic and Productivity Growths**

The relationship between standards and national economic performance has become an increasingly well-researched topic over the past decade. The studies undertaken by national standardization institutes of industrial countries such as Germany, United Kingdom, Canada, France and Australia have drawn on classical growth theory to empirically delineate a consistently positive and strong association between standards and sustainable economic growth using standards to represent the diffusion of technological knowledge throughout the economy.

The DTI (2005) investigates the relationship between standards and labor productivity. The results demonstrate that standards and the capital to labor ratio are positively associated with labor productivity. Specifically, the analysis revealed that 1% change in the stock of standards was indirectly associated with a 0.054% change in labor productivity.

CEBR (2015) published an interesting report on the economic contribution of standards to UK economy. The analysis found a positive and significant contribution of standards to productivity, supporting 37.4% of annual labor productivity growth in the UK economy over the period 1921 to 2013, which translates into approximately 28.4% of annual GDP growth.

The DIN (2011) study sought to update and improve upon the initial investigation of The Economic Benefits of Standardization (DIN, 2000). This research estimated the value of labor, capital, standards, patents and licenses to output as measured by Gross Value Added (GVA). The study shows that a 1% change in the stock of standards is positively associated with a 0.7% to 0.8% change in economic growth following German reunification.

Haimowitz and Warren (2007) realized a study for The Conference Board of Canada on the influence of standards and the capital-to-labor ratio on Canadian labor productivity from 1981 to 2004. Their results indicate that standards have a direct, significant and positive association with labor productivity such that a 1% change in the stock of standards is associated with a 0.356% change in labor productivity.

AFNOR (2009) conducted a macroeconomic investigation on the impact of standards on economic growth as measured by the total factor productivity. Their results indicate that on average since 1950, the incidence of standards on economic growth has been significant and

positive such that a 1% change in the stock of standards is positively associated with a 0.12% change in total factor productivity.

BERL (2011) conducted a two stages estimation procedure to determine the relationship between standards, patents, and total factor productivity in New Zealand, and finally the capital-labor ratio and total factor productivity on labor productivity. The results show a significant and positive relationship between standards and total factor productivity such that a 1% change in the stock of Standards is associated with a 0.10% increase in total factor productivity and therefore a 0.054% increase in labor productivity.

Equally, the CIE (2006) study showed a positive relationship between the stock of standards and productivity. Over the 40 years to 2002, a 1 percent increase in the number of standards in Australia is associated with a 0.17% growth in productivity across the economy. Additionally, Standards Australia Institute argues that standards can be considered, together with R&D expenditure, as contributing factors to the stock of knowledge. The study finds that a 1 percent increase in the joint stock of knowledge leads to a 0.12 percent increase in economy-wide productivity. In an updated study for Standards Australia (2013), standards have been shown to exhibit a positive relationship with GDP such that a 1% increase in the production of standards is associated with a 0.17% increase in GDP, which translates to approximately \$2.78 billion in 2009.

The findings of the above-mentioned studies should be interpreted with some degree of caution as they are mostly based on “black box” econometric models linking standards with productivity, growth, trade and innovation. These studies tell little about the mechanisms by which standards have beneficial economic effects. Standards are used as a proxy for the dissemination of knowledge within the economy (Swann, 2010). Furthermore, the results do not capture all the benefits of standards.

#### **IV.1.3) Dynamic Standardization as Catalyst for Innovation**

Economic growth is dependent not only on the traditional inputs such as capital and labor but also on the productivity with which these inputs are applied to the creation of valuable outputs. A key component of this productivity is not only the development of innovative technological knowledge but also the diffusion of these technological innovations through the

economy. It is in the latter that standards play a central role in many economies throughout the world.

Before reviewing the effects of standards on innovation, the relationships between standards and intellectual property rights should be addressed. According to Stephanson (1997), standards embody technology and thus play a key part in the process of technology diffusion as other firms in the industry use the technological advance incorporated into standards by the developer. Therefore, without the direct purchase of a patent, the acquisition of a product with embodied technology and a specific, traceable standard can help a firm to develop a similarly sophisticated product. Nevertheless, intellectual property rights and standards have been an intensely debated issue, as the two conflict each other. Intellectual property rights provide special challenges to standard developers. The objective of a standard is to distribute products or services to the market to help consumers use them more easily. On the other hand, the role of intellectual property rights is to ensure private rights of the patentee, thus, rendering patented product or process less accessible. In other words, a standard is a tool for diffusing innovation, and intellectual property rights are tools for securing the private right of innovators. Open standards work as a public infrastructure for innovation. In contrary, patents are proprietary and may be used to maintain exclusivity.

Standards are considered to have a catalytic effect on innovation – in the sense that standards facilitate innovation but usually do not themselves directly contribute to the creation of new innovative products and services. Swann (2010) survey reported some of the ways through which standards might help innovation. The report emphasized the following channels:

- (i) standardization process permits to ensure the focus, cohesion and critical mass in the formative stages of a market (e.g. Krechmer, 1996),
- (ii) the state of the art technology and best practice get codified and diffused through standards (e.g. Krechmer 2000; Blind and Grupp, 2000),
- (iii) open standards enable a competitive process of innovation-led growth (Krechmer, 1998; Swann, 1990)<sup>169</sup>.

Blind (2009, p. 30) summarizes these catalytic properties as follows: “first, the standardization process reduces the time to market of inventions, research results and

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<sup>169</sup> References are cited from Swan (2010).

innovative technologies. Second, standards themselves promote the diffusion of innovative products, which is most important for the economic impact of innovation. A third more indirect, but important function of standards is that they level the playing field and therefore promote competition and consequently innovation. Fourth, compatibility standards are the basis for innovation in network industries e.g. for communication networks (e.g. GSM), which are increasingly penetrating our economies. In network industries, standards also facilitate the substitution of old technologies by new ones, e.g. by forward and backward compatibility, and also to allow the coexistence of old and new technologies.”

Nevertheless, some works suggest that standards have both informing and constraining effects in innovation. David (1995) describes standards as the “flux between freedom and order”, and Hanseth et al (1996) consider the “tension between standardization and flexibility”.

The DTI (2005) study used survey data to gauge the extent to which standards are a constraint to innovation and the extent to which standards provide information that aids innovation. Two key observations emerged. First, they found that standards constrain innovation most when they are either very old or very new. When standards are brand new, they can limit innovation because innovators are still learning about the standards and the impact of those standards. When standards become old, they can constrain innovation because they lock innovators into outdated systems. Second, the study found that standards provide the least information when they are either very new or very old. When standards are brand new, they have not diffused enough to provide much information to innovators. When standards become old, they lose their relevance and, hence, have little information content.

The CEBR (2015) provides evidence that where there is a higher pace of technological advancement, in sectors such as life sciences, energy and information and communication technology industries, companies are more likely to experience a lag between the development of standards and the latest technological developments.

Blind (2009) argues that governments should act to promote and support these catalytic effects wherever possible and to avoid or restrict the negative consequences, such as the prescriptive nature of some technical standards, the effect of the consensus approach in standards development on bringing forward the most advanced technologies, and the lock-in effect when standards have no provision for follow-on technologies.

Although studies about the impacts of standards on innovation have conflicting views to some extent, they generally agree that standardization policies have positive effects on the national innovation policy for economic growth. Specifically, from the perspective of national technology policies, standardization activities are utilized as core tools for improvement of technological knowledge. Standards can make a significant difference in the success of innovation by creating a shared framework for innovation. Standards establish the framework by defining common vocabularies, setting the essential characteristics of a product or service, and by detecting the best practice within the ecosystems that will ensure fruitful results (Lundvall and Borrás, 2005).

#### **IV.1.4) Functional Typology of Standards**

The development of standards is driven by demand from industry. Standards help to solve fundamental process, organizational and technical problems. A common classification of standards in the literature relates to the economic issues they resolve (Swann, 2000). This classification shows that standards play a direct or indirect role in the productivity and efficiency of companies. Most standards serve several purposes and cannot be classified into a single category. Furthermore, standards with different functions may ultimately have very similar economic effects.

Four basic categories of standards functions can be distinguished (DTI, 2005; Swann, 2000; Blind, 2004; Guasch et al, 2007). The first category is compatibility standards that define physical or virtual relationships between independent entities for the purpose of interoperability or communication. Most of a country's infrastructure uses compatibility standards to connect some disparate entities.

Indeed, parallel developments of processes, products or services, which are required to be used in combination, pose problems if they are not compatible. One of the aims of standardization is ensuring compatibility, that is, suitability of processes, products or services to be used together under specific conditions to fulfill the relevant requirements. For example in electronic data processing, information has to be coded for storage, transmission and retrieval in the form of electronic pulses. To make the code recognizable for any machine and all times, it has to be standardized. Such standardization helps to establish compatibility between various machines or subsystems and permits information exchange amongst different systems (UNIDO, 2006).

According to Swann (2000), economic thinking recognizes two particular economic phenomena that influence producer decisions. First, producers face switching costs. Before they are committed to a particular standard, they are relatively free to choose between different configurations. But once they have invested in a particular standard they will find it expensive to switch to another. Second, producer choices are influenced by what are called network effects, or sometimes, network externalities. A network externality will exist when the valuation of a product increases as the number of users increases. Swann (2000, 2010) argues that compatibility and interface standards help to expand market opportunities because they contribute to increasing both direct and indirect network effects. When both phenomena exist, there is a risk that production process can get locked into inferior designs because producers are hesitant to switch to a new product unless they can be sure that all participant in the network will do so. This has been described as the technological lock-in problem (David, 1985).

Some research pointed out the presence of “standards races” in network technologies such as computers, audio recording media, etc. emphasizing that the winner is not necessarily the “best” technology from the perspective of technological performance (David, 1985; Grindley, 1995). The winner is the one that has been most effective in building a wide network of followers, in addition to support products from third-party producers (e.g. software) that conform to his standard (Swann, 2000).

The second category is minimum quality and safety standards that can reduce what economists call transaction costs and search costs (Hudson and Jones, 1997). If the standard defines the product in a way that reduces consumers’ uncertainty, there is less need for the consumers to spend costly and time-consuming efforts to evaluate the product (Swann, 2000).

For example, quality management system standards, such as ISO 9001 are some of the most widely used standards worldwide. According to ISO, in 2013 there were 1.2 million companies worldwide certified to a quality management system standard. Quality management system standards help companies to ensure quality and boost efficiency. This is achieved through the implementation of management system frameworks that facilitate continual improvement in performance. These frameworks consist of processes that are designed to identify more efficient and time-saving procedures and to proactively reduce errors and defects (CEBR, 2015).

The third category is variety reduction or focusing devices standards. Variety reduction is one of the aims of standardization through the selection of the optimum number of sizes, ratings, grades, compositions and practices to meet prevailing needs. The majority of standards fall into this category (Guasch et al, 2007).

Variety reduction standards perform two different functions. First, it seeks to exploit economies of scale by reducing the wasteful proliferation of minimally differentiated products. Second, in the formative stages of a market for a new technology, standards can play vital role in ensuring focus and cohesion amongst the pioneers. Swann and Watts (2000) argue that the development of better technology can get blocked due to the dispersion of suppliers and users, i.e. the lack of focus or critical mass in developing a market for that technology. The variety-reducing standard can help to achieve that focus.

The fourth category is information and reference standards, also called measurement standards. It establishes a common technical language in which to compare physical attributes and convey descriptive technical information. They include unit standards, such as the number system, which were probably the first technical standards. These standards also include information standards, which present rules on how to communicate product characteristics (Guasch et al, 2007). Standards spread technical knowledge by making information accessible to firms. This allows for an efficient and less costly inter-firm exchange of information (CEBR, 2015). Table (IV.2) presents the four economic functions of standards.

**Table IV.2 Functional typology of standards**

Type	Positive impacts	Negative impacts
<b>Facilitating interoperability of products and processes</b>	<ul style="list-style-type: none"> <li>· Network externalities</li> <li>· Avoids lock-in of old technologies</li> <li>· Increases choice of suppliers</li> <li>· Promotes efficiency in supply chains</li> </ul>	<ul style="list-style-type: none"> <li>· Can lock in old technologies in the case of strong network externalities</li> </ul>
<b>Efficient reduction in the variety of goods and services</b>	<ul style="list-style-type: none"> <li>· Generates economies of scale</li> <li>· Fosters critical mass in emerging technologies and industries</li> </ul>	<ul style="list-style-type: none"> <li>· Can restrict choice</li> <li>· Can increase market concentration</li> <li>· Can lead to premature selection of technologies</li> </ul>
<b>Ensuring quality and promoting efficiency</b>	<ul style="list-style-type: none"> <li>· Helps avoid adverse selection</li> <li>· Creates trust</li> <li>· Reduces transaction costs</li> </ul>	<ul style="list-style-type: none"> <li>· Can be misused to raise rivals' costs</li> </ul>
<b>Efficient distribution of technical information</b>	<ul style="list-style-type: none"> <li>· Helps reduce transaction costs by helping to eliminate information asymmetries</li> <li>· Diffuses codified knowledge</li> <li>· Can result in excessive influence of dominant players on regulatory agencies</li> </ul>	<ul style="list-style-type: none"> <li>· Can result in excessive influence of dominant players on regulatory agencies</li> </ul>

Source: CEBR (2015, p.21) based on Swann (2000)

#### **IV.1.5) Standard, Investment Coordination Failure, and Control Mechanism**

The presence of overwhelming coordination failure in investment is one of the principal arguments in favor of the industrial policy. This argument is traced back to the early year of Development Economics, and especially to works of Rosenstein-Rodan (1943) on the complementarities of intra-industry demand. Recently, the argument found its significance again. According to Rodrik (2004) coordination problems typically arise when “new industries fail to develop unless upstream and downstream investments are coaxed simultaneously [...] More generally, coordination failures can arise whenever new industries exhibit scale economies and some of the inputs are non-tradable” (Rodrik 2004, p.13).

The literature on the economics of standard recognizes its function as coordinator between different entities in network industries. Network industries can be defined as those where the firm or its product consists of many interconnected nodes, where a node is a unit of the company or its product, and where the connections among the nodes define the character of commerce in the industry. An example of network industries includes transportation, communications, information, Energy, electricity, and railroad networks. Information technology industry is considered network industry as it consists of a virtual network that is a collection of compatible goods that share a common platform (Gottinger, 2003).

The central feature of the market that determines the scope of the relevant network is whether the product of different firms may be used together (Katz and Shapiro, 1985). Two relevant sources of such externalities

(i) Direct externalities (direct physical effect), where the increase in the number of users increases the utility of all participants in the network.

(ii) Indirect externalities, it arises for products that require the presence of a complementary good or service.

In network industries, many products have very little or no individual value but produce value only when combined with other products. Since a product involves lots of technologies or is made of different components, or a product system combines several goods and services, the demand for those technologies or intermediate goods or services are thus often interrelated. That is to say they are strongly complementary. Those complementary products are usually described as forming systems, which refer to a collection of two or more components together with an interface that allows these components to work together. Nevertheless, different



manufacturers usually provide those components, products, or services. The products, components, or services need to be compatible with each other in order to combine the components into operable systems (Gottinger, 2003).

Complementary and compatibility questions may apply to almost all economic sectors. In an interesting paper, Economides (1996) argued that many important non-network industries share many essential economic features with network industries. Strong complementary relations characterize these non-network industries. Thus, the lessons of networks can be applied to industries where vertical relations play a crucial role.

However, in the case of an established network, externalities may produce dynamic inefficiencies leading to excess inertia or excess momentum (Katz and Shapiro, 1985). In addition, supply-side mechanisms can result in excess inertia, since in industries characterized by network externalities the dominant firm usually sets the standard. Consequently, a distinction should be made between network externalities that correspond to the actual structure of the economy to be changed and the network externalities that facilitate and accelerate the structural transformation.

When the input of firm A is the output of the firm B, then ensuring the correspondence of quality and characteristics of the firm B product with requirements of firm A is a determined matter if cooperation between the two firms is to take effect. Here compatibility standards might be seen as a pivotal tool in dealing with the investment coordination failure.

Accordingly, the dynamic design and the continuous upgrading of standards could be seen as an important tool to be integrated into the industrial policy framework. In general, one can say that compatibility standards are necessary instruments, but not sufficient by itself, for effecting other industrial policy measures aiming at overcoming investment coordination failure and enhancing domestic investments complementary.

Today, many of development economists share the view that the key difference between failed and succeeded industrialization experiences is the presence or not of effective control mechanisms that accompany the different types of support provided by the state for local investors and that is based on the principle of reciprocity (Amsden, 2001; Lall, 2004).

In her influential work, Amsden (2001) defines the control mechanism as “a set of institutions that imposes discipline on economic behavior.” She adds, “A control mechanism involves a sensor, to detect the “givens” in the process to be controlled; an assessor, to

compare what is happening with what should happen; an effector, to change behavior; and a communications network, to transmit information between all functions” (Amsden, 2001, p.9).

Standards could be an element of the control mechanism. The compatibility standards for complementary investments permit to give signs by involved producers about the conformity of their production inputs (which are outputs of others producer in the network) to an established standard. In addition, Standards are clearly adapted to the function of a communication network.

Moreover, standardization process and forum provide an appropriate place to assess economic performance of national industries. Standardization process brings together technical committees of experts. These include representatives from industry, professional institutions, trade associations, certification bodies, testing and inspection bodies, research organizations, consumer interest organizations, educational bodies and government departments. Dynamic standardization process might be seen in a wider perspective as a forum for interactions among domestic producers and between concerned State’s bodies.

Thus, standardization process is adapted to fulfill functions of the control mechanism as it provides a forum that permits interaction among producers, and between the latter and the State, mutual elaboration of standards, and feedback among them and concerned State’s body.

In what follows, the study explores state autonomy in designing standards giving multilateral and bilateral trade agreements disciplines.

#### **IV.2) Standards Liberalization under WTO Agreement on TBT**

Just like other policy instruments, standards liberalization passes through the establishment of non-discrimination principles. Under the WTO Agreement on TBT, governments must ensure that TBT measures do not discriminate against foreign products, or between foreign producers. These disciplines apply to all three categories of measures covered by the TBT Agreement: technical regulations (Article 2.1), conformity assessment procedures (Article 5.1.1) and standards (Annex 3 D)<sup>170</sup>.

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<sup>170</sup> Article 2.1 on Technical regulations reads: “Members shall ensure that in respect of technical regulations, products imported from the territory of any Member shall be accorded treatment no less favourable than that accorded to like products of national origin and to like products originating in any other country”. Standards (paragraph D of Annex 3, under ‘substantive provisions’). In respect of standards “the standardizing body shall

Nevertheless, liberalization of standards calls for special methods because of the process of its production<sup>171</sup> and the very nature of standards itself as a non-tariff measure, i.e. its highly technical character. Owing to their technical complexity, product norms are often written, directly or indirectly, by domestic firms to which they apply. Quite naturally, these firms write the norms in a way that favors their products or at least disfavors foreign products. When regulating a technical field, obscurity abounds. The government, which probably does not employ many experts in all technical fields, asks the opinions of domestic producing firms. Given the obscurity factor, it is hard to separate the protectionist and public interest content of a particular norm (Baldwin, 2000; Marceau and Trachtman, 2014).

Consequently, negotiating in the area of standards and technical regulations is quite different from negotiating the elimination of traditional measures for market access. Standards and conformity assessment are far less clear-cut for the purpose of negotiations than, for example, tariffs or quotas, and their liberalization is necessarily of a different nature. Standards and technical regulations cannot be reduced or eliminated through reciprocal concessions but must be made subject to rules for their preparation and application (Stephenson, 1999).

Hence, the preparation and application of regulatory measures call for specific liberalization methods: harmonization or recognition of other parties' standards as being compatible with national standards, either mutually or unilaterally.

Liberalization addresses two distinct aspects of standardization process: the content of the norm, which are standards and technical regulations, and testing procedures necessary to demonstrate that a product complies with the norm, that's conformity assessment procedures (see Box IV.1 for the definitions of these terms). A major distinction between a technical regulation and a standard is that compliance with the regulation is mandatory.

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accord treatment to products originating in the territory of any other Member of the WTO no less favorable than that accorded to like products of national origin and to like products originating in any other country."

In respect to conformity assessment procedures Articles 5.1 reads: "members shall ensure that, in cases where a positive assurance of conformity with technical regulations or standards is required, their central government bodies apply the following provisions to products originating in the territories of other Members: 5.1.1 conformity assessment procedures are prepared, adopted and applied so as to grant access for suppliers of like products originating in the territories of other Members under conditions no less favourable than those accorded to suppliers of like products of national origin or originating in any other country, in a comparable situation; access entails suppliers' right to an assessment of conformity under the rules of the procedure, including, when foreseen by this procedure, the possibility to have conformity assessment activities undertaken at the site of facilities and to receive the mark of the system."

<sup>171</sup> Standards may arise 'de facto', that is without formal sponsorship but through widespread common usage. When a particular set of product or process specifications acquires a sufficient market share so that it takes on authority or influence, then it can be considered a de facto standard. Standards may also arise through 'voluntary consensus' or through a formal coordinated process led by industry in which key participants in a given market seek consensus on a standard (Stephenson, 1997).

The scope of liberalization is defined by covered subject matters, which include (i) covered standardization tools, i.e. technical regulation, conformity assessment procedures, metrology, labeling, etc. and (ii) covered economic sectors, i.e. whether those standardization tools are liberalized for all or some products and sectors, (iii) the administrative level on which commitments apply, central, regional or local.

#### **Box IV.1 Technical barriers to trade definition**

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Technical Barriers to Trade include three components:

**“Technical Regulations:** Technical regulations are a set of rules which lay down: (i) the characteristics of a product; (ii) related processes and production methods; and (iii) applicable administrative provisions, compliance with which is process or production method will be considered "related" if it has an effect on the quality or characteristics of the product.

**Standards:** Standards are formulations approved by a recognized body, providing for rules and guidelines on characteristics of products and related processes and production methods. These may also cover terminology, symbols, packaging, marking or labeling applicable to a product or process or production method. Standards are not mandatory, but their importance lies in the fact that products conforming to them are often accepted by consumers as being of assured quality.

**Conformity Assessment Procedure:** The conformity assessment procedure is used, directly or indirectly, to determine that relevant requirement in technical regulations or standards are fulfilled. These may include procedures for (i) sampling, testing and inspection; (ii) evaluation, verification and assurance of conformity; and (iii) registration, accreditation and approval”.

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**Source: Annex I of WTO Agreement on TBT**

The WTO Agreement on TBT covers all goods (Article 1.3), but it excludes government procurement transactions and measures related to the sanitary and phytosanitary (article 1.5). While the latter was regulated at the multilateral level during the Uruguay Round, the former was the subject of a plurilateral Agreement where limited number of countries are signatory.

The WTO Agreement on TBT applies to a wide range of bodies and systems, local, national, regional and international, governmental and non-governmental. Rights and obligations under The WTO Agreement on TBT vary depending on the type of body concerned. For instance, technical regulations prepared by central government bodies are subject to the highest level of obligations under the Agreement.

Indeed, the scope and effects of liberalization depend on the method adopted to eliminate the TBT, i.e. harmonization, equivalence, (mutual) recognition of conformity assessments procedures and results. All methods of liberalization of TBT deprive decision makers of a tool that could be used to create, ameliorate and enhance the productive capacities of the domestic economy. However, it is still important to study the relative differences of each liberalization methods of standards and regulatory measures.

#### **IV.2.1) Harmonization**

In general, harmonization stands for replacement of different domestic product standards and domestic regulatory policies by uniform standards. Harmonization can be full or limited to essential requirements. Full harmonization requires that countries define on a product-by-product basis a common standard, including the design of detailed characteristics of the product. This approach entails long and tedious negotiations among countries about the specific contents of a product standard. Harmonization of minimal standards consists of defining common essential requirements among countries that liberalize their trade while leaving each country (or firm) free to design the specific characteristics of the product in the way they most like.

In general, harmonization consists of a process that could take less or more time, and where parties could, deliberately, introduce obstacles to gain time, especially when international standards doesn't exist. However, the outcome of such a possibility shouldn't be overestimated, given the asymmetric bargaining powers of countries involved in negotiations.

Harmonization could be based on both international standards and a party's standards. Baldwin (2000) calls full and minimal standards harmonization "negotiated harmonization" and harmonization on the basis of a party's own standards as "hegemonic harmonization". He argued that negotiated harmonization does not work, as shown by the historical experience of harmonization European Union standards in the 1970s. As a matter of fact, the "failure" took the form of interminable delays. One famous example, it took eleven years to set norms for mineral water (Matutes and Regibeau 1996).

Baldwin (2000, p.272) comments on difficulties facing negotiated harmonization "International negotiations must strive for a balance of commercial gains since each government must align a political consensus behind the final liberalization package. Moreover,

when it comes to product norms, all governments must be convinced that the synchronized norm meets their governance goals. Obscurity renders both tasks enormously difficult. It is difficult and time-consuming to determine the commercial impact of each proposed norm. Further complexity is added by the need to determine whether each proposed norm permits an appropriate level of regulatory protection in each nation. Given that a typical international negotiation involves many proposals, and many modifications of each of these lead one to the conclusion that obscurity can quickly render such negotiations impractical. In fact, obscurity induced delays are important enough to make the negotiated harmonization approach a nonstarter”.

Harmonization toward international standards is the main approach of liberalization adopted by The WTO Agreement TBT. It introduces multifaceted commitment:

(i) The Agreement on TBT clearly lays down the primacy of international standards. National TBT should be based on international standard, whenever they do exist. TBT Agreement permits the non-adoption of international standards as a basis for national technical regulation if those standards are “ineffective” or “inappropriate” to fulfill “legitimate objectives”. Still, the proposed technical regulation should not create “unnecessary obstacles to trade”, and should not be more trade restrictive than what is necessary to fulfill a legitimate objective (See below discussion on standardization policy space under WTO Agreement on TBT).

(ii) An incentive to use international standards is provided by the presumption that a national regulation will not be considered as creating an “unnecessary obstacle to international trade”, if it is based on international standards. However such presumption is rebuttable by any affected member.

The central question here is whether international standards are compatible with developing countries needs and their level of development, technical expertise and more importantly with development strategy guided by the objective of structural transformation. A priori, both the demand for standards and the capacity to develop standardization infrastructure and activities depend to a large extent on factors correlated with a country’s level of development. As noted by WTO report (2005, p.93) “Demand for network externality standards (compatibility/interface) that emanates from producers clearly increases with the level of industrialization and development of the country. Similarly, demand for information asymmetry standards and environmental standards tends to increase with the level of income

and development. On the supply side, setting up a full-fledged standardization infrastructure with all the responsibilities generally assigned to such infrastructure is very costly and takes time”.

Standardization infrastructure in developing countries has thus often been non-existent or relatively basic. The problem exists as to whether developing countries can effectively participate in deliberations of international standard-setting bodies, as they might lack the technical expertise to influence the creation of some technical standards (WTO, 2005).

WTO (2005) reported the results of a survey that was conducted by ISO in 110 developing countries showed that the level of participation of respondent countries in international standardization work was still very low and that only a minority of their standards and technical regulations were based on international standards. In 70% of respondent countries, more than half the standards were not based on international standards and in 61% of the countries, more than half the mandatory technical regulations were not based on international standards. 42% per cent of the respondent countries were not registered as members of any ISO technical committee, and 52% of the respondent countries had not attended any meetings of these technical committees in the last two years. 48% of the respondent countries did not even follow the work by correspondence.

Morikawa and Morrison (2004) examine the regional representation in ISO technical committees (see table IV.3). Their study illustrates that “ISO standards have historically, and continue to be, dominated by industrialized nations, especially Western European countries” (Morikawa and Morrison, 2004, p.25). The study shows that even when developing countries do establish Participating Member status in technical committees, evidence suggests their involvement in standards development is typically not as substantive as developed countries, which tend to send far more delegates to meetings and to hold more leadership positions within technical committees.

Consequently, one may assume that international standards were developed by the same foreign firms with which developing countries firms compete. Hence, adopting its concurrent regulations combined with low profile industries is clearly not the most appropriate way to advance on the structural transformation path.

**Table IV.3 Participation in ISO technical committees by regions**

	% ISO membership bodies (full members)	Average committees membership	technical participating-	% technical committees Chairs	% technical committees secretariat
<b>Western Europe</b>	12%	48%		47%	58%
<b>North America</b>	2%	7%		22%	19%
<b>Asia</b>	25%	22%		8%	10%
<b>Central &amp; East Europe</b>	15%	13%		2%	3%
<b>Central &amp; South America</b>	14%	3%		0%	1%
<b>Africa</b>	30%	4%		2%	3%

Source: Based on Morikawa and Morrison (2004)

Concerning trade effect, harmonization toward a party's standards could seriously impact developing countries by reducing their trade with a third party. The probability of such outcome is very considerable, especially in the context of developing countries' lack of resources, both financial and technical, to establish multiple production lines in conformity with the multiple standards requirements. Piermartini and Budetta (2009), conclude that harmonization on a regional basis locks countries into some markets and reinforces hub-and-spoke trade structures. Disdier et al (2013) empirical study shows that hub-and-spoke trade structures are not only promoted and enhanced by hegemonic harmonization, but also by harmonization based on the international standard in the case of North-South RTAs.

#### **IV.2.2) Acceptance as Equivalent**

Acceptance as equivalent implies that a country recognizes that the exporting country's product standard, although characterized by a different technical specification, is effective in pursuing the same objective of the importing country's technical requirements, and it can, therefore, enter the domestic market.

The WTO Agreement on TBT introduces soft obligations to "give positive consideration to accepting as equivalent technical regulations of other Members", and to accept as



equivalent, “whenever possible”, other Members conformity assessments results and procedures<sup>172</sup>.

In contrast to harmonization which is a process that could take a long period and where parties can introduce obstacles leading stalemate in negotiations, acceptance as equivalent does not require an extensive phase of preparation.

Moreover, when non-acceptance of party’s standards as equivalent needs to be justified, as is the case in RTAs of US, technical expertise asymmetries could lead to *de facto* asymmetric liberalization in the interest of industrialized countries. Therefore, equivalence might be translated into unilateral liberalization of TBT for developing countries without even obtaining market access for products where they are supposed to have a comparative advantage. Consequently, equivalence as an approach of liberalization may not only restrict the ability of developing countries to design their standards as part of an industrial policy framework, but it might also deprive them from gaining market access in sectors where they have comparative advantage, which is supposed to be the *raison d’être* of standards liberalization.

Some economists argue that even if mutual recognition eliminates barriers to trade, it provides inferior treatment to imports of goods from non-beneficiary States. This could arguably violate the MFN obligation (Trachtman, 2003). Baldwin (2000) argues that liberalization through hegemonic harmonization or mutual recognition of rules and test, entail preferential arrangements among rich nations, creating, in essence, a two-tier system of market access with developing nations in the second tier. He argues that mutual recognition, just like hegemonic harmonization, undermines the rule-based world trade system.

#### **IV.2.3) Mutual Recognition of Conformity Assessments Procedures**

Conformity assessment is a very important component of the standards universe, relating not to the determination of a product standard and/or quality but rather to its acceptance and use in a given market. Measures to evaluate and ensure conformity are of as much or more significance than the standards themselves.

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<sup>172</sup> Article 2.7 of WTO Agreement on TBT.

Conformity assessment is the process whereby a product, process or/and service is evaluated against specified requirements. It is the technical proof that a product complies with the regulations of the country where it is sold.

Conformity assessment covers four areas. The first area of conformity assessment is that of the manufacturer's declaration of conformity which involves an evaluation by the manufacturer of the quality of his product based on his own, internal testing and quality assurance mechanisms. The second area is that of the testing of products, parts, and materials which is performed by independent laboratories upon the request of manufacturers. The third area is the certification or formal evaluation by an unbiased third party that a product conforms to specific standards. The fourth area is quality system registration which involves an independent audit and approval of the manufacturer's quality system or the system of management used for ensuring consistency in product quality, including procedures, training, and documentation. Outside of the first area, all activities are carried out by third parties, or parties exterior to the manufacturer (NRC, 1995).

Not all levels of conformity assessment activity necessarily involve the government. Assessment, accreditation and quality system registration may be carried out by either private or government bodies. Recognition of bodies for testing and accreditation purposes with respect to mandatory regulations rests in the hands of the government. However, statistics show that conformity assessment has become a growing industry, particularly in developed countries and the present size of this activity gives some indication of what type of obstacle it may pose in international trade<sup>173</sup>.

It is often the case that such testing and certification requirements are used to shelter domestic companies from competition. A frequent source of US-Japan trade tensions in the 1990s was asymmetric testing procedures. For example, Japanese manufacturers, who were trusted by Japanese regulators, could establish compliance with regulations by having a few units tested periodically while foreign firms had to have each import shipment tested (Sykes, 1995).

Barriers to trade may arise as exporters often have to test or certify their products in each of the countries to which they are exporting. This can substantially increase the costs of

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<sup>173</sup> The National Research Council study pointed out an annual expansion of 13.5 percent of the activities of testing laboratories in the United States which carried out conformity assessments valuation from 1985 to 1992. Adding the revenue from all firms involved in testing activities shows that this industry is estimated to involve around \$10.5 billion annually (NRC, 1995).

exports, in a number of ways. First of all, exporters incur the costs of redundant testing and certification for each of the destination markets. Second, they face the risk of higher transportation costs if the goods are rejected by the importing country after shipment. Third, there is a cost in terms of time required for complying with administrative requirements and inspections by the importing country's authorities. For some time-sensitive products, the time delays associated with product testing and certification in the importing country can severely impact on profitability and the ability to enter the market (Stephenson, 1997).

In order to reduce such costs, the (mutual) recognition of conformity assessment procedures has been negotiated among different countries. The importing country recognizes the competence of the exporting country's conformity assessment bodies to test and certify that a product complies with the regulations of the country where it is sold.

TBT Agreement encourages members to enter in negotiation with other parties to conclude mutual recognition agreements, but there is no real obligation in this respect. In contrast, some RTAs, especially those of EU, introduce clear obligation to accept EU own conformity assessment procedures. In addition, the partner country is engaged to harmonize its own conformity assessment procedures toward EU ones.

Concerning trade effects, Chen and Mattoo (2008) empirical study finds that mutual recognition arrangement with rules of origin creates a hub-and-spoke pattern, impeding trade with third parties.

#### **IV.2.4) Transparency**

Transparency is the process whereby the preparation and application of technical regulations, standards, and conformity assessment procedures are made public, and opportunities are provided for the public to comment on proposed technical regulations, standards and conformity assessment procedures.

There are cases when neither recognition nor harmonization is feasible. In these cases, countries can still liberalize different standards by increasing the transparency of national standards and technical regulations. Notification of standards and technical regulations and the setting up of enquiry points for standards may, in fact, facilitate trade by reducing the searching costs required for acquiring information about the standards adopted in another country (Piermartini and Budetta, 2009).

In the case that member countries envisage to adopt a TBT not based on international standard, the WTO Agreement on TBT introduces many transparency requirements. The member should notify other Members through the WTO Secretariat of the purpose of the proposed measure. In such circumstances, Members must allow “reasonable time” for other Members to comment on proposed technical regulations and conformity assessment procedures, which the WTO TBT Committee has recommended to be “at least 60 days”. In addition, the Member should take comments it receives from other Members into account (Art. 2.9 and 5.6).

Helble et al (2009) and Wolfe (2003, 2013) associated transparency with both predictability and simplicity. Helble et al (2009) argue that trade transaction cost is not just affected by what governments do, but also by how they do it. The argument is based on the recognition that the trading environment has a procedural aspect. Accordingly, unpredictability and undue complexity in the design, implementation and administration of trade policy can constitute independent sources of transaction costs. The predictability is a way of reducing “soft” transaction costs stemming from uncertainty while the simplification reduces information costs related to an overly complex environment.

Wolf (2013) argues that transparency, in general, serves three purposes. First, it lets actors know what others are doing, so they can act accordingly. Second, transparency is the basis for one actor to try to influence another actor to act differently. Third, transparency is the basis on which an actor can be held accountable for obligations.

As a result, transparency is a key element for the functioning of the whole system of trade liberalization. On the one hand, information asymmetries and procedural complexity might be seen as non-tariffs barriers. Therefore, transparency requirements reduce costs for the access of foreign goods. On the other hand, transparency is necessary to the verification of the implementation of international rules, and thus, to the well-functioning of enforceability mechanism. This is why Wolf (2013) pointed out that the systemic stability is the ultimate objective of transparency.

Therefore, notification about the modification and introduction of new standards and technical regulations, and the establishment of enquiry points to facilitate day to day communication between standard bodies, could be seen as a necessary complementary element of standard liberalization whatever approach is adopted.

#### IV.2.5) National Standardization Space under WTO Agreement on TBT

Indeed, a certain degree of coordination of standards is desirable, but the question is of compatibility of one standards design to different countries should not be dropped out of the analysis. In fact, countries differ regarding development levels and national economic policy preferences. By consequence, it is natural that optimal national standards differ across countries, giving that it is rare that countries have identical policy objectives.

National standardization space is the autonomy that disposes the national State to design standards according to the industrial development strategy that considers standards as an industrial policy instrument that can achieve specific functions beyond their use as protectionist measures.

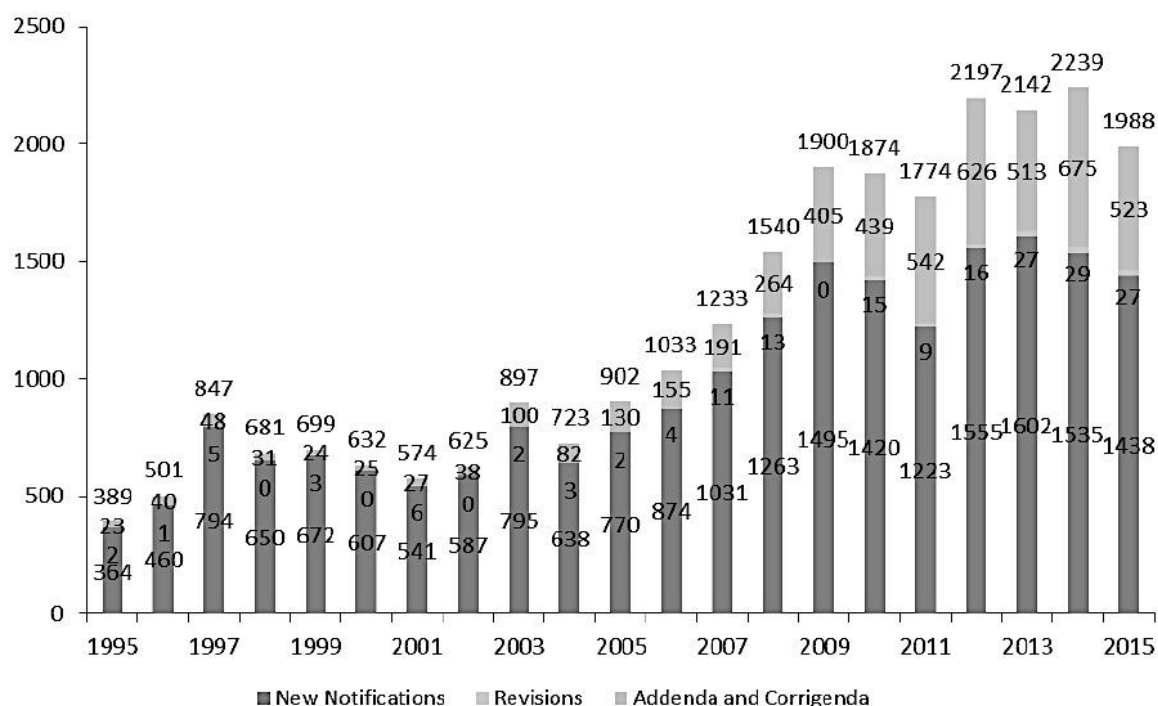
Although the WTO Agreement on TBT constitutes a turning point in multilateral trade system as it addresses regulatory measures, its overall formulation leaves developing countries substantial *de jure* space to formulate standards according to their development project objectives. The design of national standards according to legitimate local objectives is an integral part of the agreement commitments. The primary approach of liberalization adopted by the WTO Agreement on TBT is the harmonization toward international standards. In respect to liberalization through equivalence, parties are only encouraged to accept other parties' standards<sup>174</sup>, technical regulations, and conformity assessment procedures. Transparency requirements are other central tenets of the WTO Agreement on TBT.

The bottom line is that the design of standards on the basis of national objectives without basing on international standards is right that can be practiced under certain conditions. This can be illustrated by the increasing numbers of TBT notification that are not based on international standards. The TBT agreement became an important club for the notification and discussion of national and international standards and technical regulations. Between 1995-2015, 128 Members have submitted a total 25,390 notifications on new or modified standards (see Figure IV.4). In total, 73 Members submitted 1,988 TBT notifications only in 2015. The US is the most active notifier, followed by Brazil, European Union, and China.

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<sup>174</sup> The word "equivalence" is not mentioned in the Code of Good Practice (applicable to standards), but the engagement in respect to equivalence is extended to standards through Article 6.1 (conformity assessment procedures).

**Figure IV.4 Total TBT notifications, 1995-2015**



New notifications “notify the draft text of a proposed technical regulation or conformity assessment procedure”; addenda “to notify additional information related to a notification or the text of a notified measure”; corrigenda “to correct minor administrative or clerical errors (which do not entail any changes to the meaning of the content)”.

Source: WTO (2016, p.4)

WTO Agreement on TBT leaves considerable standardization space at the national level as a result of two factors:

(i) Members have full right to design their own standards and regulation when there does not exist international “relevant” standards. Furthermore, States can design national standards that are not based on existed international standard, though, under some indefinite conditions.

(ii) Key commitments are formulated using ambiguous terms that were not clearly defined. Hence, States may adopt definitions that permit wider standardization space at the national level.

(iii) Under special and differential treatment provision, developing countries are “not expected” to base their standards on international standards.

The WTO Agreement on TBT encourages countries to use “relevant” international standards “as a basis” for their technical regulation. First, according to Wijkström and McDaniels (2013), the word “relevant” itself (in articles 2.4 and 5.4) leaves room for a

Member to argue that an international standard is not relevant in light of the particular policy situation. This concerns the question of which international standardizing bodies' standards are to be considered as "relevant"?

This ambiguity was mirrored by WTO disputes results in this regard. In the dispute involving "US-Tuna II", WTO adjudicators focused on the procedures used by the standardizing body. This dispute concerned various US measures affecting the labeling of tuna products as "dolphin-safe". In particular, the measure implies that the "dolphin-safe" label could not be used on tuna fished with "purse-seine nets" under the fishing technique of "setting on" dolphins<sup>175</sup>. In this case, it was found that the "dolphin-safe" definition and certification under the framework of the Agreement on the International Dolphin Conservation Program, to which new parties can accede only by invitation, was not a relevant international standard. Therefore, the United States was not under the obligation to base its measures on it<sup>176</sup>. Significantly, in this dispute, reference was made to the "Six Principles", which provide guidance in the areas of transparency, openness, impartiality and consensus, effectiveness and relevance, coherence, and development. The Six Principles were agreed on by the TBT Committee with a view to guiding members in the development of international standards, and they were referred to as a means of informing the understanding of certain terms and concepts contained in the TBT Agreement (such as "open" and "recognized activities in standardization"). The Appellate Body found that Members are only required to use international standards if the international standardizing body that produces them is "open to at least all Members". Some specialists think that "the full and slavish adherence to the Six Principles is unrealistic proposition" (Wijkström and McDaniels, 2013, p.21).

The approach adopted in WTO Agreement on TBT in defining the relevant international standardizing bodies is markedly different from the WTO Agreement on SPS which explicitly names three bodies (Wijkström and McDaniels, 2013). This should be seen as a consensual

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<sup>175</sup> This technique involves chasing and encircling the Dolphins with a "purse seine net" in order to catch the tuna swimming beneath the Dolphins: it is used in the Eastern Tropical Pacific Ocean, where this phenomenon occurs.

<sup>176</sup> The situation was different in a previous dispute involving "EC-Sardines" that focused almost entirely on Article 2.4 of the TBT Agreement: it was about the marketing of "preserved sardines" in the European Union. The measure at issue included a specification that only products prepared from *Sardina pilchardus Walbaum*, which is mainly found in Europe, could be marketed as "preserved sardines" in the EU. Peru complained that this measure was inconsistent with the TBT Agreement because it prevented Peruvian exporters from marketing *Sardinops sagax sagax*, mainly found in South American waters, as "preserved sardines". The final ruling found that the measure at issue was inconsistent with the TBT Agreement because it was not based on a "relevant international standard" from the Food and Agriculture Organization of the United Nations and the World Health Organization - administered Codex Alimentarius Commission. This was an international standard for preserved sardines and sardine-type products that allowed, under certain conditions, both *Sardinops sagax sagax* and *Sardina pilchardus Walbaum* to be marketed as sardines.

outcome, meant to leave State some room for maneuver. The issue of “relevance” of international standards has come up in the context of the Doha Round negotiations. Some members supported the explicit identification of particular standardizing bodies. Other members oppose the designation of any particular international standardizing body, stressing that the standard itself should be the focus of attention, not the body that sets it.

Thus, countries not only have different opinions on what a standard is, but also tend to disagree on which standards-setting bodies are “relevant” for the purposes of the WTO Agreement on TBT. It is thus for WTO Members themselves to further define their intentions with regard “International standardizing body” which standards are considered relevant (Marceau and Trachtman, 2014).

Second, Members have an obligation to use the relevant standard “*as a basis*” for regulation. This leaves room in terms of application in the sense that the standard does not necessarily have to be applied word-for-word.

The Appellate Body in EC-Sardines analyzed the meaning of the term “use as a basis”<sup>177</sup>. It stated that an international standard is used “as a basis for” a technical regulation when it is used as the “principal constituent” or “fundamental principle” for the purpose of enacting the technical regulation. There had to be a “very strong and very close relationship” between the measure and the standard in order to be able to say that one is the basis for the other. At a minimum, there could not be a contradiction between the used standard and the international standard (paras. 243 – 248, 257)<sup>178</sup>. Still, stated criteria by the appellate body may be implemented differently, according to the technical and specific characteristic of the standardized process or product.

Wijkström and McDaniels (2013) note that the term “use as a basis” leaves important flexibility in respect of how the chosen international standard is actually applied. For example, a technical regulation may reproduce the wording of the standard itself or part of it. In other cases, the standard is “incorporated” by simple reference, or as a source of guidance, but the wording is not actually reproduced.

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<sup>177</sup> European Communities – Trade Description of Sardines, Report of the Panel, (29 May 2002), (02- 2894), WT/DS231/R.

<sup>178</sup> See European Communities – Trade Description of Sardines, Report of the Appellate Body (AB 2002-3), (26 September 2002), (02-5137), WT/DS231/AB/R.



Importantly, countries are permitted to formulate their own standards and technical regulations, even where an international standard does exist, if the latter is “ineffective” or “inappropriate” to the fulfillment of “legitimate objectives”, even where such standard will restrict trade. One can wonder to which level such permission could be considered an exception to the general rule as it is formulated as an integral part of the commitments itself.

Again, the terms “ineffective” and “inappropriate” were not defined. Instead, an illustrative examples of reasons that may lead to such situation were given, i.e. fundamental climatic or geographical factors or fundamental technological problems. Consequently, countries can list other situations related to their development strategy and level of industrial development.

The Appellate Body in EC-Sardines has stated that an “ineffective” mean is a mean which does not have the function, or the result, of accomplishing the legitimate objective pursued. An “inappropriate” mean is a mean which is not especially suitable for the fulfillment of the legitimate objective pursued, due to the nature of the standard.<sup>179</sup> It should be highlighted that it is up to the complainant to make a *prima facie* case that the international standard is effective and appropriate for the achievement of the legitimate objectives sought by the measure<sup>180</sup>.

Equally, legitimate objectives were not defined. Instead, a non-exhaustive list of such case was provided. These objectives include: (i) national security requirements, (ii) prevention of deceptive practices, (iii) protection of human health or safety, (iv) protection of animal life or health, (v) protection of plant life or health and (vi) protection of the environment (Article 2.2). Again, countries may lay down other objectives that have not been specified. Ensuring the interoperability of domestic investment products and the cohesion of domestic investments may well be considered as a legitimate objective.

Statistics show that the most cited objectives for notified TBT for the period 1995-2015 are the protection of human health or safety was predominately cited by Members, followed by prevention of deceptive practices and consumer protection, protection of the environment, and quality requirements (WTO, 2016).

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<sup>179</sup> Both the recent US-COOL and US-Tuna II panels referred to Appellate Body findings in EC-Sardines with respect to this issue. See, in particular: Panel Report, US-Cool. para. 7.730; Panel Report, US – Tuna II. paras.7.721 and Panel Report, EC-Sardines, para. 7.116.

<sup>180</sup> See EC-Sardines Appellate Body Report, WT/DS231/AB/R, para. 287.

It is important to emphasize that the Agreement is not about removing all barriers to trade, but only those that unnecessarily restrict trade. Nevertheless, the right to impose technical regulations that may cause impediments to trade is recognized (Marceau and Trachtman, 2014; WTO, 2013). Moreover, the Agreement gives members the sole prerogative to determine the level of protection they deem appropriate for their citizens under a legitimate objective<sup>181</sup>.

At the same time, the right to formulate its own standards should be balanced against the need to ensure that they are not prepared, adopted or applied so as to create unnecessary obstacles to international trade. But what is the benchmark for necessity? The Agreement says that technical regulations shall not be more trade-restrictive than necessary to fulfill a legitimate objective, and that account must be taken of “the risk of non-fulfillment”.

This may be seen as involving a degree of proportionality between a measure's trade restrictiveness and the risk that the measure seeks to mitigate. The evaluation involves several factors, including how much the measure contributes to the achievement of the objective, the types of risks and the potential consequences from the non-fulfillment of the objective, and the trade-restrictiveness of the measure. Considering alternative measures is also part of the assessment. For instance, if a less trade-restrictive alternative measure that would equally fulfill the policy objective were reasonably available, that measure would be preferable (WTO, 2013).

This procedure was confirmed by the WTO US-Tuna II case, where the Appellate Body noted that, after determining the legitimate objective pursued, the panel must undertake a ‘relational analysis’ of three factors and, in most cases, a comparison to reasonably available alternatives in order to determine whether or not the technical regulation trade restrictiveness is ‘necessary’. The relational analysis compares the measure contribution to the legitimate objective, the risks that non-fulfillment of the legitimate objective would create, and the overall trade restrictiveness of the measure to potentially available alternatives. Moreover, the appellate body confirmed that as under the GATT, a Member is free to impose technical regulations ‘at the levels it considers appropriate’, as clearly stated in the preamble of WTO Agreement on TBT.

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<sup>181</sup> Treaty preambles states : “*Recognizing* that no country should be prevented from taking measures necessary to ensure the quality of its exports, or for the protection of human, animal or plant life or health, of the environment, or for the prevention of deceptive practices, at the levels it considers appropriate, subject to the requirement that they are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail or a disguised restriction on international trade, and are otherwise in accordance with the provisions of this Agreement”.

Again, the criteria for the risk assessment were not defined. Instead, illustrative elements for consideration were given, though ambiguous: (i) available scientific and technical information, (ii) related processing technology, and (iii) intended end-uses of the product.

Interestingly, The TBT Agreement does not explicitly regulate risk assessments or require scientific basis for applied technical regulation. While necessity or proportionality or other criteria applicable under the TBT Agreement may implicitly require some scientific basis, such an implicit requirement can be expected to be significantly less rigorous than the explicit requirements of the WTO Agreement on SPS.

What about a situation in which not enough is known about a possible risk? Information about a particular risk may be incomplete or even non-existent, and in some situations, a country might need to address a perceived risk. The Agreement on SPS contains a specific article that refers to cases “where relevant scientific evidence is insufficient” (Article 5.7 of the SPS Agreement), but the Agreement on TBT does not.

To date, no member has been found (at the appeal stage) to be in violation of Article 2.2 of the TBT Agreement. In US-Clove Cigarettes dispute<sup>182</sup> concerned a prohibition by the United States on the production or sale of cigarettes containing flavors other than tobacco or menthol. The objective of the measure was to reduce youth smoking. Indonesia, while not disputing the importance of reducing smoking, complained that the measure prevented it from exporting clove-flavored cigarettes to the United States. It argued, among other things, that the prohibition of one flavor (clove) but not the other (menthol) was discriminatory. WTO adjudicators found that Indonesia had not demonstrated that there were less trade-restrictive alternatives available to the United States and that the measure could make a “material contribution” to the objective of reducing youth smoking. There was evidence to suggest that the measure contributed to reducing smoking among the young.

In US-Tuna II case<sup>183</sup>, WTO adjudicators found that the US “dolphin-safe” labeling provisions were not more trade-restrictive than necessary to fulfill their legitimate objectives: informing consumers on whether tuna products contained tuna caught in a manner that adversely affects dolphins, and discouraging the use of fishing techniques that are harmful to

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<sup>182</sup> See United States -Measures Affecting the Production and Sale of Clove Cigarettes, Report of the Appellate Body (AB-2012-1), (4 April 2012), (12-1741), WT/DS406/AB/R.

<sup>183</sup> United States – Measures concerning the importation, marketing, and sale of tuna and tuna products, Report of the Appellate Body (AB 2012-2), (12-2620), WT/DS381/AB/R.

dolphins. And, finally, in the US-COOL case<sup>184</sup>, due to the absence of relevant factual determinations and undisputed facts, WTO adjudicators were unable to determine whether the US measures at issue were “more trade-restrictive than necessary to fulfill a legitimate objective”.

Interestingly, Article 12 on Special and Differential Treatment of Developing Countries requires Members to recognize and to take into account the special needs of developing countries in the promulgation and application of technical regulations, standards and conformity assessment procedures. Factors to be recognized include the developmental, financial and trade needs of developing country, and the preservation of indigenous technology and production methods. There is no reason to expect that such permission is limited to the “preservance” of indigenous technology and production methods, rather it could be used for the development of their present productive capacities and technological capabilities. Article (12.5) recognized that developing country “should not be expected” to base their technical regulations, standards, including test methods, on international standards which are not appropriate to their development, financial and trade needs.

These two articles of special and differential treatment for developing countries constitute key justification for interpreting above-mentioned ambiguities and flexibilities in a manner that favors the integration of standards design into the overall industrial policy framework.

The growth in standard and regulation notifications to TBT Committee since 2005 has been driven by increasing engagement of some developing countries. This trend continued in 2015 as developing Members submitted significantly more new notifications in 2015 than developed Members (69% of new notification in 2015 were from developing countries). Nevertheless, developing countries activism is concentrated in few countries.

According to WTO (2016), a new trend indicating more notifications from Members that had been historically less active is appearing. Three consecutive years of significant notification activity has placed Ecuador (126 in 2015; 420 in 2014; 103 in 2013) among the ten Members that have notified most measures over the period of 1995-2015. However this

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<sup>184</sup> The US-COOL dispute concerned various US measures that set out the country of origin labeling (COOL) requirements for certain meat products. See United States-Certain Country of Origin Labelling (Cool) Requirements, Reports of the Appellate Body (AB-2012-3), (12-3450), WT/DS384/AB/R and WT/DS386/AB/R.

doesn't go without resistance as Ecuador was the first most subjected country to Specific Trade Concerns<sup>185</sup> procedures in 2015, and 8<sup>th</sup> in the period from 1995-2015.

Under WTO Agreement on TBT Members must ensure that unnecessary obstacles to exports from developing country Members are not created due to their standards (Article 12.3). Again, as an unnecessary obstacle to trade is an ambiguous term, such obligation on the part of industrial countries would not be, probably, enforceable. In addition, the Committee on Technical Barriers to Trade is authorized to grant specified time-limited exceptions from obligations in the case of developing countries.

Basu et al (2012) paper analyses NTMs-related information from over 2,120 small and medium size firms from seven developing countries (Brazil, Chile, India, the Philippines, Thailand, Tunisia and Uganda) to gauge how firms in those countries are affected by NTMs, both at home and abroad. The results clearly indicate high shares of TBTs in all countries with a share 51 per cent out of 6,225 reported cases of NTMs, of which the number of cases related to exporting firms was 4,714 (75.7%), while the number of importing firms was 1,511 (24.3%). The majority of reported cases concerned TBT measures (51% of all measures). The majority of the reported cases were found to be import measures, that is, exporting firm in country A complaints against country B NTM impeding the access of their exports. While only 25 per cent policies importing firm in country A complaints against its own country for imposing trade policy measures. In all countries surveyed, a majority of the NTMs complaints reported by exporting firms were related to non-agricultural products<sup>186</sup>. Though this paper does not indicate trade partners in studied case, it clearly shows how standard and regulations impede significantly developing countries exports.

Still, UNCTAD (2014) provides statistics that correlates the prevalence of technical non-tariff measures (SPS and TBT) and non-technical measures (quantity, price and export measures) with gross domestic product (GDP) per capita. In general, the importance of technical NTMs in regulating imports tends to increase with GDP per capita both in terms of trade and tariff lines. Furthermore, more than 71% of cases (52 case) raised under dispute

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<sup>185</sup> Members have used the TBT Committee as a forum to discuss trade issues related to technical regulations, conformity assessment procedures and standards, prepared, adopted and applied by other Members. These discussions are referred to as "specific trade concerns" (STCs) and relate either to proposed measures or measures currently in force. TBT Committee meetings afford Members the opportunity to review STCs in a multilateral setting, to seek further information and clarification on the measures in question, and to work towards mutually acceptable solutions.

<sup>186</sup> Beverelli et al (2014) results on the sectoral distribution of STCs, show that TBT measures can be found across a wide array of sectors. TBT concerns are much less concentrated than SPS and also cover sectors such as Chemicals & Allied Industries, Plastics / Rubbers, Textiles and Footwear and Machinery / Electrical.

settlement mechanism referring to WTO Agreement on TBT targeted developed countries, of which 60% target European community (20 cases) and US (11 cases)<sup>187</sup>.

Indeed, there does exist some indications that the practice of using domestic environmental or consumer safety regulations as a way to disguise protectionist policy has become a prominent practice in some developed countries. According to Waston and Jam (2013, p.2) “Regulatory protectionism is evident in a variety of US policies. A particular regulatory scheme may be supported and promoted by activists with genuine concern about social or economic problems, but self-interested domestic industries have learned to use their own political clout in Washington to champion regulations that provide protection from foreign competition. Recent high-profile examples, include a food safety inspection regime for catfish that imposes huge burdens on importers; a ban on flavored cigarettes from Indonesia; labeling rules for dolphin-safe tuna that are stricter for Mexican tuna; a country-of-origin label requirement for beef that prevents efficient integration of US and Canadian supply chains; record-keeping requirements meant to prevent illegal logging that are impossible for lumber importers to follow; and a longstanding ban on commercial trucks operated by Mexican nationals on US. roads”.

Consequently, it is, probably, not in the interest of industrialized countries to limit the considerable autonomy available under multilateral trade system in designing standards and regulations.

Important to note is that autonomy in designing standards at the national level may be constrained *de facto* and/or *de jure*. *De facto* constraints arise in the course of trade, where national standards according to which exported goods were produced, may not conform to importing countries own standards. By contrast, a domestic product that does not conform to other countries standards or to international standards may not be detected if it is destined to the domestic market and/or to countries that have similar standards.

Consequently, real standardization autonomy at the national level depends on the *de facto* and *de jure* constraints interactions. Put it in another way, the same *de jure* disciplines may take effect differently, depending on trade partners’ standards and regulations, especially that international trade is characterized by a hub and spoke relations where Northern countries act

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<sup>187</sup> See [https://www.wto.org/english/tratop\\_e/dispu\\_e/dispu\\_agreements\\_index\\_e.htm?id=A22#](https://www.wto.org/english/tratop_e/dispu_e/dispu_agreements_index_e.htm?id=A22#). Consulted 29.07.2016.

mainly as hubs. However, trade geography is transforming with increasing trade dynamism of some emerging countries, especially China and India.

Therefore, standardization space at the national level depends on the nature of development strategy, i.e. where export-led growth strategy is the dominant approach, “standards conflicts” in traded goods would be more probable. Thus, autonomy in standard design would be constrained at least *de facto*. In contrast, where domestic demand led-growth is a major component in development strategy, “standard conflict” with trade partners would be less probable.

However, industrial policy implies a relative shift toward domestic demand-led growth strategy at the expense of export led-growth strategy. The crisis of 2008 made such a shift not only a choice among others, but also a necessity as export market become increasingly narrow (see Palley, 2011).

To summarize, under WTO Agreement on TBT developing countries have the ample *de jure* policy space to formulate standards as instruments of industrial policy. A situation that came under attack in North-South RTAs, as it illustrated in next section.

#### **IV.3) Standards Liberalization in RTAs**

In order to examine the extent of standard and technical regulations liberalization in the RTAs, the chapter constructs a framework that permits the comparison of the RTAs commitments to WTO Agreement on TBT and to each other. It builds on Piermartini and Budetta (2009), but it is significantly different as it was designed *a posteriori*, i.e. after the analysis of RTAs. This is why the framework serves to present the observed results in a manner that reflects the tightest engagements. Moreover, the framework inquires some critical aspects that were not reported in Piermartini and Budetta (2009), e.g. the right of parties to design standard according to national legitimate objectives, the justification of non-acceptance of other party standards in order to take corrective actions, and the establishment of national treatment standard for the participation in the development of national standards etc.

The framework objective is to detect TBT *plus* provisions, i.e. provisions that go beyond WTO Agreement on TBT commitments. It reports some commitments that may be considered TBT minus, i.e. provisions that free parties from one of WTO Agreement on TBT commitment.

### IV.3.1) Analytical Framework

The tightness of overall commitments from the perspective of the possibility to design national standard in function to national development objectives depends on two factors: (i) liberalization coverage scope at both sectoral and instrumental levels, and (ii) the specific combination of different liberalization approaches. Hence, extensive transparency provisions accompanied with a limited coverage and unbinding commitments to harmonize toward international standards can be considered less liberal than an approach that adopts hegemonic liberalization without any transparency requirements.

It should be noted that affirmation or not of commitments and rights under WTO may influence the restrictiveness of RTAs commitments, thus, affirming or removing its flexibilities. Table (IV.4) report the number of TBT *plus* provision that were found in countries' studied RTAs. Quantitatively, it is the US RTA that contains the highest number of TBT *plus* provisions, but as it will be discussed below; EU rules on TBT are the most restrictive, though with a limited number, relative to the US, of TBT *plus* provisions.

Concerning coverage scope, it is defined by (i) the covered standardization process tools, and by (ii) the covered economic sectors. At this level, the framework investigates if the studied RTAs broaden the coverage of liberalization through including other components of standardization process than technical regulation, standards, and conformity assessment procedures. For instance, EU and US RTAs extend coverage to Metrology (measurement systems).

At the sectoral level, while examining the contents of RTAs chapters on sanitary and phytosanitary measures is beyond the scope of the chapter, the framework considers whether the studied RTAs contain a chapter on public procurement that includes commitment limiting State's autonomy in designing standards. Again EU and US RTAs commit partner countries to liberalize technical regulation design in public procurement sector.



**Table IV.4 Number of TBT *plus* provisions in RTAs**

	RTAs of			
	US (of 10 <sup>a</sup> )	EU (of 12)	China (of 6)	India (of 8)
<b>Coverage scope</b>				
Public procurement	9	4	0	0
Metrology	6	10	0	0
<b>Harmonization</b>				
Based on international standard	0	6	2	0
Based on a party's standards	0	5	0	0
Eliminate the right to design national standards to fulfill legitimate objectives	0	5	0	0
<b>Accepting as equivalent</b>				
Based on international standards	5	0	4	0
Justification in case of non-acceptance in order to take corrective actions	5	0	0	0
<b>Recognition of Conformity Assessment Procedures and Results</b>				
Based on a party's standards	0	7	0	0
Justification in case of non-acceptance as equivalent	9	0	4	0
Justification in case of declining negotiation request	9	0	2	0
Illustrative list of recognition mechanism	9	2	2	0
National Treatment for accreditation of conformity assessment bodies	9	1	2	0
<b>Transparency</b>				
Comments period extension	2	0	1	0
Comments period elimination in case of urgency	0	0	2	0
Shortening of notification period	0	0	3	0
Justification if not taking party's comments into account	9	0	1	0
National treatment for participation in developing national TBT	8	0	0	0
Defined delay for application of transparency provisions	9	0	1	0
<b>Administrative structure</b>				
Committee on TBT	9	0	5	
Consultation under dispute settlement	5	0	0	0
<b>Reference to WTO-TBT</b>	9	2	6	0
<b>Total</b>	94	40	22	

a: US-Jordan RTA is the only agreement that does not contain rules on TBT

Provisions in white rows on the left side are not TBT *plus*

Source: Salam Alshareef

While harmonization based on international standards is the primary liberalization method under WTO Agreement on TBT, the design of standards according to local circumstances is an integral part of the harmonization commitment itself. Moreover, Special and Differential Treatment provisions are dispense developing countries from harmonization commitments. At this level, the framework examines if:

- (i) RTAs commit to harmonize on the base of international standards.

(ii) RTAs commit to harmonize on the basis of one party's own standards (hegemonic harmonization).

(iii) RTAs eliminate the right to design standards and technical regulations according to legitimate objectives and not on the base of international standards.

Similar to Piermartini and Budetta (2009), the framework considers that the policy adopted is harmonization where the text of the agreement states that parties should “bridge the gap”, ‘reduce divergence’ or ‘make compatible’ their standards, technical regulations or conformity assessment procedures.

This right to design standards according to legitimate national objectives and not based on international standards will be considered as eliminated if two combined conditions are met: the first, RTA does not make any explicit reference to this right, and second, RTAs does not affirm rights and obligations under WTO Agreement on TBT.

EU commits partner countries to harmonize toward both international and its own standards (hegemonic liberalization). Exceptions that permit the design of standards in accordance with legitimate national objectives are not included, except in two RTAs. Moreover, there is no reference in its RTAs to obligations and rights under WTO Agreement on TBT. Consequently, the ability of partners' countries to design standards for traded product with EU according to local industries priorities seems highly weakened.

In respect to acceptance as equivalence, the WTO Agreement on TBT introduces a rather symbolic provisions to “give positive consideration to accept as equivalent technical regulations of other Members”, and to accept as equivalent, “whenever possible”, other Members conformity assessments results and procedures. The framework reports whether the bar of commitments was raised in studied RTAs. RTAs of US and China encourage the acceptance as equivalence of other parties' standards, but in the case of non-acceptance, the decision should be justified. US RTAs go further by defining the objective of justification to take corrective actions if necessary. The framework examines if acceptance as equivalent should be:

(i) Based on international standards.

(ii) If the importing country must provide reasons in case of non-acceptance as equivalent and corrective actions may take place if necessary.

Concerning the recognition of conformity assessment procedures and results of other countries, many RTAs go some step beyond WTO commitments. US RTAs provide for an illustrative list of mechanisms for the mutual recognition. Furthermore, they introduce national treatment principle for the accreditation of conformity assessment bodies. RTAs of EU engage other parties to harmonize their conformity assessment procedures on the basis of EU own procedures. The framework reports the following points:

- (i) If recognition should be based on international standards.
- (ii) If recognition should be based on a party's own standards.
- (iii) If RTAs introduce an illustrative list of mechanisms for mutual recognition of conformity assessment results and procedures.
- (iv) If Justification is needed in case of non-acceptance as equivalent.
- (v) If the burden of declining a negotiation request for mutual recognition in specific sectors is on the refusing party.
- (vi) If it introduces national treatment provision for the accreditation of conformity assessment bodies.

In the case where a member country envisages to adopt a standard not based on international standard, the WTO Agreement on TBT introduces many transparency requirements. Some RTAs, such as US RTAs, go well beyond WTO by adding obligations to permit other parties to participate in the design of their national standards. At this level, the framework investigates whether transparency commitments were consolidated through:

- (i) An obligation to permit other parties to participate in the development of its own TBT.
- (ii) Whether RTAs rules extend the time period for notification beyond sixty days or it promotes its extension.
- (iii) If justification is requested in case of not considering another party comments.
- (iv) If it defines a delay for the application of transparency requirements.

The framework also reports some TBT minus provisions that were found in some Chinese RTAs such as eliminating requirements to notify TBT modifications in case if urgency or shortening notification period to less than 60 days.

Indeed, there may be considerable differences between the text of the agreement and the extent to which commitments are implemented. Hence, similar provisions in two different RTAs may correspond to different practices. In general, the gap between the law and the practice is likely to depend on the institutional settings and administrative procedures (Piermartini and Budetta, 2009). At this level the US RTAs are the most enforceable agreements. Two points are investigated:

(i) If the RTA establishes a Committee on TBT.

(ii) If consultation may be undertaken under dispute settlement chapter.

Table (IV.5) presents the framework and the study results in respect to all analyzed agreements. Before presenting each country adopted approach, next sub-section provides comparative results overview.

### Table IV.5 RTAs rules on TBT

[illegible]

#### **IV.3.2) Comparative Results Overview**

It is in the domain of standards and technical regulation liberalization that the approach of EU may be considered as the most restrictive among the three studied policy instrument, as some partners countries should design standards on the basis of European ones.

Even though approaches of US and EU broaden the coverage of liberalization to include new sectors and new standardization process elements, there are many essential differences between the two approaches:

(i) While EU TBT chapters include provisions in all area of TBT, the US Chapters focus on technical regulation and conformity assessment.

(ii) While EU approach adopts harmonization toward both EU and international standards, US approach adopts acceptance as equivalent of the technical regulation and the conformity assessment of another party.

(iii) In contrast the EU RTAs, the US RTAs include an extensive provision on transparency and enforcement.

This may be explained by different patterns of authority setting standards in the context of the EU and the US. In the US, standardization is usually presented as fragmented and organized on a sectoral basis. The system follows a model of direct participation, where companies have direct access to standard-setting activities with international claims. In contrast, the European standardization system is coordinated and centralized and operates under a higher degree of government control (Graz and Hauert, 2014). The European standardization bodies follow a model of national participation where a national body holds the voting rights within the international or regional standardization bodies such as the ISO and the International Electrotechnical Commission (IEC). According to Graz and Hauret (2014, p.119) “in spite of their differences, the European and American standardization systems have common characteristics. Both rely on private organizations to shape standards on a voluntary basis”. From the American point of view, the national participation model in the European standardization bodies gives them a substantial advantage at the international level<sup>188</sup>. From the European point of view, the decentralized and fragmented standard-setting procedures in the US represent a barrier to the US market. Finally, the international reach of

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<sup>188</sup> See Zuckerman (1999, p.40) and Czaya and Hesser (2001, p.32). Cited from Graz and Haeurt (2014).

standards developed in the US tends to undermine the authority of formal standardization arenas such as the ISO (Graz and Hauert, 2014).

While the EU adopts harmonization toward both its own standards and international standards as liberalization approaches, the US adopt accepting as equivalent approach. This rather confirms Baldwin (2000) prevision that negotiated harmonization will not work if standardization liberalization to deepen and paths would be only for hegemonic harmonization and acceptance as equivalent.

Contrary to US and EU, Chinese RTAs do not broaden the scope of liberalization. Chinese approach, whenever the RTA includes a chapter on TBT, consists of encouraging parties to give positive consideration to the acceptance as equivalent, both the technical regulation and the conformity assessment procedures and result of another party, and to harmonize at the basis of international standards. While US approach requires that the positive consideration of acceptance as equivalent should take place even where importing country does not provide that foreign technical regulations fulfill its own regulations objectives, the Chinese RTAs provide that importing country should be “satisfied” that these regulations meet its own regulations objectives. In the case of harmonization, the right of partner country to design its own standards in accordance with legitimate national objectives was affirmed explicitly in Chinese RTAs.

Moreover, in the case of non-acceptance of other party's standards, refusing country should justify its decision in both Chinese and US RTAs. While some US PTAS<sup>189</sup> define the objective of justification “in order to take corrective action”, the Chinese approach still silent, making the commitment of informative nature. Moreover, all US RTAs include an illustrative list of mechanisms for accepting as equivalent conformity assessment results. China does not include such list except in its RTA with Chile.

RTAs involving China have an extensive provision on transparency, especially with respect to the comments period. Again, US approach in respect to transparency introduces deep commitments, such as permitting persons of a third party to participate in the development of its own TBT on the basis of national treatment standard.

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<sup>189</sup> US RTAs with Peru and Colombia.

Similar to the US approach, RTAs that involve China introduce sub-committees on TBT. By contrast, their functions are less clearly and extensively defined compared to US chapters, and more importantly, consultations may not take place under dispute settlement procedure.

It is clear that Chinese RTAs with some countries contain adapted versions of these countries' commitments with the US in respect to TBT, especially in the case of Peru and Chile. Importantly, the final results of this adaptation are, in most cases, the elimination of some binding formulation in the commitments. It is important to note that the majority of provisions going beyond WTO are contained in RTAs with countries that have another RTA with the US, especially Peru and Chile. By contrast, RTA with Costa Rica, who is a member of US-CAFTA RTA, does not go beyond commitments under WTO. Consequently, questions are raised whether China or its partners proposed these provisions? Such question gain momentum, giving that those obligations are introduced in RTAs with countries, such Chile and Peru, who demonstrated a relatively liberal stance in their trade negotiations.

India's RTAs include symbolic provisions on TBT. Some agreements don't have a clear reference to TBT<sup>190</sup>. However, whenever a direct reference to TBT does exist, it consists of affirming obligations and rights under TBT Agreement in WTO<sup>191</sup>. Although there is no reference to TBT in RTA between India and Bhutan, it, interestingly, introduces derogation that permits the use of non-tariff restriction "on the entry into Bhutan of certain goods of Indian origin as may be necessary for the protection of industries in Bhutan", and it permits to impose such measures on goods of a third country.

Consequently, While Chinese and Indian RTAs, preserve standardization space under WTO agreements on TBT, the RTAs of US and EU introduce substantial restrictions on the possibility to integrate the standardization process into an overall industrial policy framework.

#### **IV.3.3) Standards Liberalization in the RTAs of EU**

The RTAs of EU broaden the scope of TBT liberalization, at the sectoral level, to include the public procurement. Chapters on public procurement introduce many disciplines on the

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<sup>190</sup> See India-ASEAN RTA Article.8

<sup>191</sup> Agreements with MERCOSUR, Chile and SAFTA contain a provision on cooperation in the area of standards, technical regulations and conformity assessment procedures (MERCOSUR Article 19, Chile Article XII, SAFTA Article.8).



design of the “technical specification”<sup>192</sup>. While there is no reference to metrology in the WTO Agreement on TBT, RTAs of EU broaden coverage to include metrology. Some RTAs aim only to cooperate in respect to metrology<sup>193</sup>, and others include an obligation to adopt EU rules on metrology<sup>194</sup>.

The dominant liberalization approach in the EU RTAs is the harmonization. To achieve this aim, two different methods are used<sup>195</sup>:

(i) Harmonization toward standards and technical regulation of EU (hegemonic harmonization)<sup>196</sup>. It is found in RTAs with Mediterranean countries<sup>197</sup>. While using the term harmonization, what is observed here is rather a unilateral recognition by one party of EU standard, with engagement to adapt its own standard to the European ones. In the case of conformity assessment for Mediterranean countries, the commitment to the harmonization based on EU conformity standard is combined with article implying that eventual “mutual recognition” could take place when these countries’ laboratories are upgraded. Thus, costs of adaptation are on the charge of Mediterranean countries only.

(ii) The second method adopts harmonization toward international standards. This approach is observed for agreements with Mexico, Andean Community, CARIFORUM, South Korea and South Africa<sup>198</sup>.

Concerning transparency requirements, only EU-Andean Community RTA encourages the extension of the comment period when TBT measures are modified<sup>199</sup>.

The RTAs of EU with Mediterranean countries have no reference to the WTO Agreement on TBT, nor to the right of parties to design their national standard according to legitimate

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<sup>192</sup> See, for example, EU-CARIFORUM Article 166.16 for Technical Specification definition. It states “technical specifications’ means a specification which lays down the characteristics of the products or services to be procured, such as quality, performance, safety and dimensions, symbols, terminology, packaging, marking and labelling, or the processes and methods for their production and requirements relating to conformity assessment procedures prescribed by the procuring entities covered by this Chapter”

<sup>193</sup> EU-CARIFORUM RTA Article 51.2.a, EU-CA RTA Article 75, EU-Egypt RTA Article 47.a, EU-Chile RTA Article 87.4, EU-South Korea RTA Article 4.4.1.b and Article 4.5 and EU-South Africa RTA Article 47.

<sup>194</sup> EU-Tunis RTA Article 51, EU-Morocco RTA Article 51, EU-Jordan RTA Article 68, and EU-Algeria RTA Article 55.

<sup>195</sup> The agreement with EU-Chile Article 18.2.b combines both methods for the Technical Regulation and Standards.

<sup>196</sup> EU-Tunisia RTA Article 51, EU-Algeria RTA Article 55, EU-Jordan RTA Article 68a, EU-Morocco RTA Article 51.a

<sup>197</sup> Except in the case of RTAs with Egypt and Lebanon where there is no reference to EU rules. See EU-Egypt RTA Article 47, EU-Lebanon RTA Article 48.

<sup>198</sup> See EU-Andean Community RTA Article 76.1 77.1, EU-CARIFORUM RTA Article 51.2.d and EU-South Africa RTA Article 47.a.

<sup>199</sup> EU-Colombia and Peru RTA Article 79.3.

objectives without basing them on international standards. Consequently, it is considered that this right was eliminated in the RTAs of EU.

#### **IV.3.4) Standards Liberalization in the RTAs of US**

Similarly, the RTAs of US broaden the scope of TBT liberalization. It includes chapters on public procurement that introduces disciplines on the design of “technical specification”<sup>200</sup>. In general, those disciplines are the same as those found in EU public procurement chapter. In addition, US agreement with Colombia, Peru, CAFTA-DR and Panama include footnotes that affirm that any reference to “standard, technical regulation or conformity assessment procedure includes those related to metrology”<sup>201</sup>.

The dominant liberalization approach is the acceptance as equivalent of other parties’ standards. Concerning technical regulation, RTAs of US push toward acceptance as equivalents<sup>202</sup>. Party refusing to accept as equivalent other party technical regulation, should justify its decision<sup>203</sup> even if it provides that foreign technical regulation may not be accepted as equivalent to its own ones.

Concerning the conformity assessments, all US RTAs foster initiatives to develop mutual recognition, and, they enumerate list of mechanisms to achieve this aim. Moreover, when a country does not accept the result of conformity assessment procedures of another party, it must justify its decisions<sup>204</sup>. The RTAs with Peru and Colombia define the aim of justification as “to take corrective action”.

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<sup>200</sup> Technical Specification definition is identic across US RTAs. For example, US-Peru Article 9.16 states “technical specification means a tendering requirement that: (a) sets out the characteristics of: (i) goods to be procured, including quality, performance, safety, and dimensions, or the processes and methods for their production; or (ii) services to be procured, or the processes or methods for their provision, including any applicable administrative provisions; or (b) addresses terminology, symbols, packaging, marking, or labeling requirements, as they apply to a good or service”.

<sup>201</sup> US-Colombia RTA Footnote 1 of Article 7.2, US-Peru RTA Footnote 1 of Article 7.2, US-CAFTA-DR RTA Footnote 1 of Article 7.2, US-Panama RTA Footnote 1 of Article 7.2.

<sup>202</sup> Except in the case of US-South Korea RTA, where commitments in relation to technical regulations are sector-specifics (the motor vehicles industry). These commitments reiterate TBT-WTO concerning the formulation of technical regulation.

<sup>203</sup> US-Peru RTA Article 7.5 and US-Colombia RTA Article 7.5 use the term “Shall” justify its decision, while US-Chile RTA Article 7.5, US-CAFTA-DR RTA Article 7.6 and US-Panama RTA Article 7.6 provide lesser obligation as they use the term introducing the term “may” justify its decision.

<sup>204</sup> US-Peru RTA Article 7.4.1 and 7.4.2, US-Colombia RTA Article 7.4.1 and 7.4.2, US-Chile RTA Article 7.6.1 and 7.6.2, US-CAFTA-DR RTA Article 7.5.1 and 7.5.2, US-Panama RTA Article 7.5.1 and 7.5.2, US-Bahrain RTA Article 7.5.1 and 7.5.2, US-Oman RTA Article 7.5.1 and 7.5.2, US-Morocco RTA Article 7.5.1 and 7.5.2.

The RTAs of US introduce national treatment provision for the accreditation and the recognition of conformity assessment bodies in the territory of other parties<sup>205</sup>. In the case of non-compliance, the refusing country must provide reasons behind its decision “so that corrective action may be taken, if necessary”<sup>206</sup>. This provision clearly goes beyond the WTO commitments that only encourage parties to permit such participation (Art. 6.4, WTO Agreement on TBT). Again, the RTAs of US go beyond WTO Agreement on TBT that only encourages countries to enter into negotiations to conclude mutual recognition agreements, as they ask the country that decline a request for such negotiations to justify its decision<sup>207</sup>.

In addition, the RTAs of US with Peru and Colombia introduce a novelty that consists of engaging member States to accept comments on proposed technical regulation from Persons, i.e. from investors not only from States<sup>208</sup>. Moreover, the RTAs of US introduce an obligation to permit investor of another party to participate in the development of its standards, technical regulations, and conformity assessment procedures on terms no less favorable than those accorded to its nationals or other parties<sup>209</sup>. Furthermore, it defines a time period for the implementation of transparency requirements “in no event later than three years”<sup>210</sup>.

The RTAs of US establish enforcement bodies. For some countries, the agreement establishes a committee<sup>211</sup>, for others, it establishes a coordinator<sup>212</sup>. The difference in names reflects differences in the structure and the functions. The main difference is that in RTAs establishing a Committee, consultation may take place under the chapter on dispute settlement if the issue on the question was not resolved by normal consultation.

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<sup>205</sup> US-Peru RTA Article 7.4.3, US-Colombia RTA Article 7.4.3, US-Chile RTA Article 7.6.3, US-CAFTA-DR RTA Article 7.5.3, US-Panama RTA Article 7.5.3, US-Bahrain RTA Article 7.5.3, US-Oman RTA Article 7.5.3, US-Morocco RTA Article 7.5.3, and US-South Korea RTA Article 9.5.3.

<sup>206</sup> US RTAs with Peru and Colombia.

<sup>207</sup> US-Peru RTA Article 7.4.4, US-Colombia RTA Article 7.4.4, US-Chile RTA Article 7.6.4, US-CAFTA-DR RTA Article 7.5.4, US-Panama RTA Article 7.5.4, US-Bahrain RTA Article 7.5.4, US-Oman RTA Article 7.5.4, US-Morocco RTA Article 7.5.4.

<sup>208</sup> US-Peru RTA Article 7.6.3, US-Colombia RTA Article 7.6.3

<sup>209</sup> US-Peru RTA Article 7.6.1, US-Colombia RTA Article 7.6.1, US-Chile RTA Article 7.7.1, US-CAFTA-DR RTA Article 7.7.1, and US-Panama RTA Article 7.7.1. Some agreement commit for only national treatment, see US-Bahrain RTA Article 7.6.1, US-Oman RTA Article 7.6.1, US-Morocco RTA Article 7.6.1 and US-South Korea RTA Article 9.6.1.

<sup>210</sup> US-Peru RTA Article 7.6.7 and Colombia. 7.6.7. The period is five years for other agreements: US-Oman RTA Article 7.6.6, and US-Morocco RTA Article 7.6.6, US-Bahrain RTA Article 7.6.6, US-CAFTA-DR RTA Article 7.7.8, US-Chile RTA Article 7.7.7, US-Panama RTA Article 7.7.8.

<sup>211</sup> US-Peru RTA Article 7.7, US-Colombia RTA Article 7.7, US-Chile RTA Article 7.8, US-CAFTA-DR RTA Article 7.8, and US-Panama RTA Article 7.8.

<sup>212</sup> US-Bahrain RTA Article 7.7, US-Oman RTA Article 7.7, and US-Morocco RTA Article 7.7.

#### **IV.3.5) Standards Liberalization in the RTAs of China**

The core commitments of Chinese RTAs in respect to technical regulation are mainly a restatement of two engagements of WTO Agreement on TBT. The first is to use international standard or “relevant parts of them” as a basis for their technical regulations and related conformity assessment where international standards exist. Second, the commitment to give positive consideration to accepting as equivalent, technical regulations of another Party, if it fulfills the objectives of its own regulations.

Four out of six agreements<sup>213</sup> go further as they include a commitment to provide an explanation, under another party request, in the case where technical regulations of that Party were not accepted as equivalent. Concerning standards, it refers to Code of the Good Practice under the WTO agreement on TBT.

Importantly, Chinese RTAs affirm explicitly parties’ right to design standards according to legitimate objectives, except the RTA with Peru.

Four agreements<sup>214</sup> recognize the existence of broad mechanisms to facilitate the acceptance of conformity assessment procedures and its results but without providing an illustrative list, except in the cases of RTAs with Chile and South Korea. Three agreements put the burden of justifying the non-acceptance of conformity procedures or results of another party on the refusing State<sup>215</sup>. Agreements with Chile and Peru commit parties to provide justification in case of rejecting negotiations<sup>216</sup>.

In respect to transparency requirements, China-Peru RTA introduces provision similar to those found in RTAs of US which seek to extend comments period under party request. Moreover, the party requesting an extension of comment period can ask for justification in the case where its request was refused. China-Chile RTA introduces a time limit of 3 years as a period for the implementation of transparency provision.

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<sup>213</sup> China-Chile RTA Article 65.2, China-Peru RTA Article 97.2, China-ASEAN RTA Article 5.3 and China-South Korea RTA Article 6.5.2.

<sup>214</sup> China-ASEAN RTA Article 7.2, China-Peru RTA Article 98.1, China-Chile RTA Article 66.1, China-Costa Rica RTA Article 74.1.

<sup>215</sup> China-ASEAN RTA Article 7.6, China-Peru RTA Article 98.3, China-Chile RTA Article 66.4. It should be noted that US RTAs with both Chile and Peru do have the same with the US. Engagement included in China-ASEAN RTA is more sophisticated and more liberal as a separate agreement on mutual recognition of conformity assessment procedures is signed.

<sup>216</sup> China-Chile RTA Article 66.4, China-Peru RTA Article 98.3.

It is worth noting that some Chinese RTAs<sup>217</sup> contain what can be considered as TBT minus provisions which exempt parties from the obligation to allow 60 days for comments on proposed technical and conformity assessment in case of urgency.

Concerning the enforcement body, the Chinese RTAs established committees on the technical barrier to trade with a contact point<sup>218</sup>. The committee has to meet once each two years unless the Parties otherwise agree<sup>219</sup>. Finally, only RTAs with Peru and Chile provide the possibility to recourse to dispute settlement mechanism established by the agreement<sup>220</sup>.

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<sup>217</sup> China-ASEAN RTA Article 8.3, China-Costa Rica RTA Article 75.1.

<sup>218</sup> China-Pakistan RTA article 41, China-Peru RTA Article 101, China-Chile RTA Article 69, China-Costa Rica RTA Article 77.

<sup>219</sup> China-Peru RTA Article 101.5, China-Costa Rica RTA Article 77.2. In China-Chile RTA Article 69.7 meeting is each one-year.

<sup>220</sup> China-Peru RTA Article 101.4, China-Chile RTA Article 69.5.

## Conclusion

In contrast to the widespread reduction of standards functions to a trade policy instrument, the chapter analysis focuses on standard as an instrument of industrial policy. It formulated a simple theoretical argument on (i) standards as an instrument to overcome investment coordination failure and to ensure cohesion and compatibility of complementary industries, and (ii) standards as a component of control mechanism that should accompany State's distributed supports to local producers.

The problematic of "policy space" was applied to the WTO Agreement on TBT. Although the WTO Agreement on TBT constitutes a turning point in the multilateral trading system as it addresses regulatory measures, its overall formulation leaves developing countries substantial *de jure* space to design their standards according to development strategy objectives. The design of national standards according to legitimate national objectives is an integral part of agreement commitments. While harmonization toward international standards is the primary liberalization approach, commitments were formulated with ambiguous and indefinite terms, thus, leaving important room for interpretations. As a part of special and differential treatment for developing countries, they were exempted from the obligation to harmonize toward international standards.

Based on flexibilities of WTO Agreement on TBT, the chapter provided an analysis comparing rules on standards contained in the RTAs of US, EU, China, and India, to WTO rules and to each other.

Results show that the liberalization of TBT under the RTAs of EU and US goes systematically beyond commitments of the WTO Agreement on TBT. The RTAs of both EU and US enlarge the liberalization coverage. EU adopts the most restrictive liberalization approach, i.e. hegemonic harmonization. Importantly, the right to design standards in accordance with legitimate objectives was eliminated under some EU RTAs.

The RTAs of US adopt accepting as equivalent as an approach of liberalization in respect to technical regulations and affirm the presence of specific mechanisms to recognize the conformity assessment procedures and results of another party. In respect to transparency requirements, the RTAs of US go deeply beyond WTO Agreement on TBT, as they introduce national treatment clause for the accreditation and recognition of conformity assessment bodies in the territory of other parties, and for the participation of investors of another party in

the development of its national standards, technical regulations, and conformity assessment procedures. Finally, commitments in the RTAs of US are highly enforceable as consultation on standards may take place under dispute settlement mechanism chapter.

Chinese RTAs affirm commitments under WTO Agreement on TBT and consolidate them through the establishment of institutions to administrate commitments. Others RTAs introduce non-obligatory commitment to accept as equivalent technical regulation of another party. It is clear that Chinese RTAs with Peru and Chile contain adapted versions of their commitments with the US in respect to TBT.

The RTAs of India affirms engagements under WTO Agreement on TBT, with no additional disciplines.

In contrast to the RTAs of US and EU, both Chinese and Indian RTAs have preserved *de jure* possibility to design standards and technical regulation at the national level in accordance with “legitimate objectives” not according to international standards. Hence, Chinese and Indian RTAs do not impose any substantial restrictions that reduce the standardization space at the national level.





## General Conclusion

Many economists, in post-Washington consensus era particularly, have underlined the need to avoid the “one size fits all” approach in development economics (e.g. Stiglitz 2009, Rodrik, 2009, Wade, 2012). This thesis is in line and extension of this perspective. Specifically, it attempts to understand whether international economic environment imposes unique and undifferentiated types of obligations that shape developing countries strategic choices, or on the contrary, States have sufficient room for maneuver to adopt appropriate development strategies to their particular circumstances. Accordingly, the thesis used purposefully the concept of “policy space” that was developed by the UNCTAD and placed at the core of a new consensus on development: Sao Paulo Consensus. However, the thesis is distinguished from UNCTAD global approach in three main aspects.

First of all, it focuses on industrial policy space, as a part of State’s overall policy space. Industrial policy role in successful industrialization experience is now widely recognized by economists though to different degrees (e.g. Amsden, 2001, Chang and Lin, 2009 World Bank, 1993).

Second, the thesis examines comparatively constraints on industrial policy space under two modes of regulation of international economic relations, i.e. North-South and South-South.

Third, the effects of global economic environment on developing countries’ policy choices are studied through the assessment of regional trade agreements as tools of regulating international investment and trade relations. The rapid expansion in numbers of regional trade agreements has important effects on policymaking process, as they become primary vehicles for advancing liberalization of industrial policy instruments, in particular, non-tariff measures, which were limitedly liberalized through successive multilateral trade negotiation cycles.

Thus, the thesis provided a qualitative and comparative assessment of constraints on integrating the design of some NTMs into an overall industrial policy framework, giving disciplines of North-South and South-South RTAs. Commitments on three interrelated policy areas were studied: foreign investment regulation, patent rules, and standardization. The trade agreements of the US and the EU with developing countries served as examples of North-

South RTAs, and the trade agreements China and India with other developing countries served as examples of South-South RTAs.

The thesis provided elements of answers to some unavoidable questions in respect to the applicability of industrial policy, in particular: do South-South modes of regulation of trade and investment relations, as exemplified by the RTAs of China and India, provide developing countries larger industrial policy space than do North-South modes of regulation of trade and investment relations as exemplified by the RTAs of US and EU?

Some specific question were derived from the above general question: to which extent the RTAs of the US and the EU go beyond WTO agreements disciplines on industrial policy instruments in respect to foreign investment regulation, patent rules, and standardization? To which extent both countries' RTAs restrict industrial policy space in these three areas? To which extent the RTAs of China and India preserve and affirm WTO agreements flexibilities with respect to foreign investment regulation, patent rules, and standardization? Do the RTAs of China and India preserve significant industrial policy space in these three areas?

Results show that North-South modes of regulation of investment and trade relations, as exemplified by RTAs of US and EU, go systematically beyond WTO Agreements commitments with respect to the three studied policy areas, narrowing or/and eliminating flexibilities available therein. As a result, *de jure* industrial policy space of partner countries shrinks to a historically low level. In turn, the South-South modes of regulation of trade and investment relations, as exemplified by the RTAs of China and India, generally preserve “WTO flexibilities” to a large extent, as result of explicit affirmations of these flexibilities, and/or the non-inclusion of substantial commitments going beyond WTO agreements. There exist some exceptions in some Chinese investment chapters which regulate WTO *extra* policy area, thus, going inherently beyond WTO commitments. Still, Chinese RTAs rules on investment are much less restrictive than the US rules, as host States’ autonomy in vital areas, e.g. foreign investment admission, were systematically preserved.

Contrary to the North-South RTAs, the *de jure* possibility to integrate the design of examined NTMs into an overall industrial policy framework is generally preserved under South-South RTAs with respect to: (i) measures aimed at regulating foreign investments in a manner that permits to trigger its potential industrial development benefits and avoid its associated risks, (ii) the design of national patent system in manner that facilitates the access

to and diffusion of technologies and knowledge, and (iii) the use of standards and technical regulations as instruments to overcome investment coordination failure, and as tools of control mechanism that should be associated with the State's distributed supports to local producers.

Accordingly, the central thesis hypothesis was confirmed: South-South RTAs, as exemplified by Chinese and Indian agreements, offer developing countries larger industrial policy space than do North-South RTAs, as exemplified by the agreements of US and EU. Thus, it would be more accurate to speak about industrial policy spaces in the plural rather than in the singular. Under the actual international trade and investment regime, there do exist multiple and different industrial policy spaces, depending, among other things, on the choice of partner economies, Southern or Northern, and the corresponding modes of regulation of trade and investment relations.

Thesis conclusions on Chinese and Indian modes of regulation of trade and investment relations may be extended to States having investment and commercial ties with these countries without signing trade and investment agreements with them.

While trade and investment laws have an important role in shaping States' conducts, concrete and real practices do not always correspond to legal commitments. However, it is beyond the thesis scope to examine the extent to which legal commitments and implementations are correspondents. Nevertheless, efforts were made to respond to the need to have an insight on how the studied legal rules may be implemented or used against some policy measures. Some international investment arbitrations and some WTO cases in respect to standards and technical regulation measures were discussed in order to understand how some key commitments were interpreted and implemented.

The thesis is unable to capture restrictions and/or flexibilities in respect to studied policy instruments that are included in chapters which examination is beyond the thesis scope. The study of RTAs from policy space perspective necessitates a comprehensive analysis of the text of the agreements in order to obtain a more accurate assessment, as some policy instruments are regulated by several chapters. For example, general rules on investment admission are contained in investment chapter, but specific rules apply to service and financial services sectors are contained in separated chapters. The same goes for technical regulation formulation for public procurement, where the RTAs of US and EU include

separated chapters on public procurement with restrictive engagements in respect to the formulation of technical regulation.

The results show that there is no clear and promoted model of South-South partnership or cooperation, at least in studied RTAs and studied policy areas. Adopted commitments vary from country to another and from agreement to another. While Indian RTAs do not even include commitments on investment and on IPRs and include short and rhetoric commitments on standards, China adopts a more pragmatic approach where commitments were included on the three studied domains (but not in all agreements). Generally, Chinese commitments are characterized by their WTO *alike* contents.

Nevertheless, there are some essential common characteristics for both Chinese and Indian RTAs from the perspective of industrial policy space. Both countries preserve WTO flexibilities, either explicitly, through referring to rights and engagements under WTO agreement as integral part of RTAs and affirming some specific flexibilities, or implicitly through the non-inclusion of WTO *plus* commitments. This may reflect a will to preserve their industrial policy space.

Thus, from policy space perspective, the common characteristic of both Indian and Chinese approaches is the almost absence of restrictive commitments, rather than the presence of rules that affirm or expand industrial policy space. This may be seen as an outcome of strategy seeking to ensure their industrial policy space while seeking access to foreign markets.

Moreover, Thesis results illustrated the diversity of Chinese commitments both at the formal and substantive levels (within limits). This confirms some other studies observation that one of the Chinese characteristics in the domain of RTAs negotiations is its flexibility and the ability to adapt to the circumstances and needs of each partner on a case-by-case basis. China tends to design individually tailored RTAs that address the varied preferences of its partners, resulting in agreements that are highly differentiated regarding their substance (Wong, 2012, Berger, 2013, 2015). Based on interviews with the Peruvian negotiation team Berger (2013, p 21) affirms that “it was Peru that successfully pushed China to accept the Peruvian model text as a basis for the negotiations.” Nonetheless, such flexibility has its limits, where China refuses to go beyond a certain degree of liberalization (Berger, 2013; Zhao and Webster, 2011; Yu, 2010). According to Berger (2013, p.13) empirical study

“China has been flexible and responsive to the model texts proposed by the respective partner countries [...] The only limiting factor to China’s pragmatism was the inclusion of liberalization commitments in its RTAs that are not in line with China’s industrial policy, which relies on a selective admission system that results in discriminatory treatment against domestic and foreign investors”.

It may be useful to note that US treaty language diffuses from some partner countries, Peru and Chile in particular, to Chinese RTAs. This confirms OECD (2014, p.18) observation that “Through these North-South partnerships [...] deep practices have been transferred to a wide range of emerging, middle-income economies. These non-OECD economies that have signed North-South RTAs have in some cases incorporated the same measures in South-South RTAs with less developed economies. Economies such as Chile improve the template shaped in North-South with other South partners. In the Andean Community, some of the practices of US-Peru and US-Colombia have become models for the South-South accord”.

It is clear that some Chinese RTAs contain adapted versions of partners' countries commitments with the US in respect to TBT, especially in the case of RTAs with Peru and Chile. Generally, the US RTAs language diffuses to the Chinese RTAs, but the original formulations are modified through the elimination of some binding parts, thus, altering the final outcomes. Nonetheless, it's quite clear that the majority of provision going beyond WTO agreements were found in RTAs with Peru and Chile as is the case of forum choice clause, Investor-State dispute settlement, consultation on standard related issues under RTAs dispute settlement, the inclusion of provision on indirect expropriation, and the inclusion of illustrative list on mechanism for the mutual recognition of conformity results and procedures.

However, the thesis is unable to tell preferences of each country at the beginning of RTAs negotiations, nor which preferences and in which proportion prevailed in the final text.

International trade and investment regimes are social constructions where international, regional and national rules interact and define legal playground for economic actors whether national or transnational. Consequently, the study of international and regional trade and investment laws from a policy perspective is unavoidable for development economist if their policy recommendations to have a chance to take effect in real life. Observing different modes of regulation of economic relations between partners States is an unavoidable step in order to define the range of different possible policy spaces. In turn, this permits to determine the gap between the “possibilities” from the point of view of legal commitments of various

instruments of regulation of relations, e.g. RTAs, and the “necessities” from the point of view of industrial policy. Defining this gap permits to move forward to the next step that concerns the question: what should be done at the international, regional and national levels in order to bridge the gap?

The thesis is a step in the efforts to observe the “possibilities” to ensure substantial industrial policy space while integrating into the international economy.

As emphasized in the general introduction, the thesis does not aim, through the comparative analysis, to choose the more appropriate RTA to sign. RTAs assessment provides a proxy to understand international trade and investment regulation strategies of key economies, in order to assess whether there exist modes of regulation of investment and trade relations that preserve significant industrial policy space. Its results may be interrupted as following: today’s international economy configurations hold not only challenges but also opportunities, as South-South economic partnership allow preserving significant room for maneuver to implement industrial policy. The later seems to be, up to now, a project to build rather than coherent and consistent rules and practices. It is beyond the thesis scope to discuss the fundamental question of: which types of South-South partnership is the most appropriate from the perspective of industrial development?

An important issue is the future evolution of Chinese and Indian modes of regulation of investment and trade relations with other developing countries, in particular, whether they will converge toward US and EU approaches or not. In this respect, there is an interesting literature on China, in the international political economy discipline, whether it will abandon its developmental State’s policy style and adhere to the neoliberal international economic governance, or it will challenge it and attempt to reform it. On the one hand, Harvey (2005) argue that Chinese economy is already neoliberal and will transform towards authoritarian neoliberalism. On the other hand, Arrighi (2007) argues that China’s rise is a core process in the unraveling of neoliberalism rather than a further consolidation of it. Strange (2011), argues that China, as a globally oriented developmental State, has opposed neoliberalism by constructively engaging with liberal global governance, in both IMF and WTO, in order to exercise global influence to ensure the necessary autonomy to sustain its development in a globalized world.

For now, however, the thesis allows to conclude that not only “one size” does not “fit all”, but, importantly, today’s international economic environment offers developing countries different “sizes” that could be tailored, to a certain extent, according to their particular circumstance. To put it in other words, today’s global economic environment not only holds challenges to the industrial policy-making, but it also holds opportunities.





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## **Résumé extensif de thèse en Français**

## **Des Contraintes sur l'Espace de la Politique Industrielle dans le Contexte des Accords Commerciaux Régionaux de Types Nord-Sud et Sud-Sud.**

**Salam Alshareef**

La politique industrielle ont longtemps été rejetées sur la base de l'argument qu'elles manquaient de bases économiques et historiques. Comme Stiglitz et al. (2009, p.1) l'écrivent, « There has been a time when 'industrial policies', for both developed and developing countries were bad words not to be spoken either in public or in private by respectable people. It was the time of the (in)famous 'Washington Consensus' on development ».

Cependant, l'intérêt pour la politique industrielle s'est rapidement diffusé durant la dernière décennie, même parmi les institutions qui l'avait rejetées pendant longtemps, telles que la Banque mondiale (voir Rodrik, 2008 ; Yusuf, 2012). L'intérêt pour la politique industrielle et la transformation productive a fait un retour remarquable tant dans les milieux académiques que dans les politiques mises en place dans de nombreux pays en développement et pays industriels (voir Warwick, 2013 sur les programmes de politique industrielle appliquées par ces pays).

Bien que la politique industrielle se retrouve une nouvelle fois au centre du débat, les désaccords entre les économistes persistent et ce sur plusieurs points : sa nature, sa portée, les objectifs des interventions de l'Etat et sa définition même.

La thèse adopte une perspective théorique issue de différentes approches au sein de l'économie du développement, particulièrement, les approches évolutionnistes et structuralistes. Ces approches ont pour point commun de partager les caractéristiques suivantes : (i) la reconnaissance de la présence des différences intrinsèques, tant qualitatives que quantitatives entre les secteurs et les activités économiques, (ii) une conception plus large de la notion d'efficacité économique qui ne se réduit pas à l'efficacité d'allocation, mais qui considère aussi l'efficacité innovatrice et l'efficacité de la croissance, (iii) la mise en avant des spécificités de la connaissance et de la technologie en tant qu'intrants dans le processus de production tout en reconnaissant leur rôle catalyseur dans le développement économique, et (iv) l'absence des mécanismes d'ajustement automatiques. Dans cette perspective, le processus de transformation structurelle rencontre des barrières qui rendent nécessaire l'intervention ad hoc de l'Etat afin de les surmonter. Ces interventions comportent la création des asymétries

favorisant des activités et des secteurs considérés comme des locomotives pour la croissance à long terme, surtout le secteur manufacturier (Peres et Primi, 2009).

La thèse adopte une définition de la politique industrielle mettant l'accent sur trois aspects : la stratégie de développement dans laquelle elle s'inscrit, ses objectifs et son orientation. Par orientation on entend les types d'interventions de l'Etat et l'ensemble des instruments qu'elles exigent. Sur ces bases, la politique industrielle peut être définie comme un processus concerté visant à établir et à promouvoir certaines industries et secteurs, en particulier le secteur manufacturier, s'inscrivant dans le cadre de la stratégie de transformation structurelle, qui vise à la diversification de l'économie et qui nécessite divers types d'interventions de l'État, tant horizontales que verticales.

Dans cette perspective, le rôle de l'Etat va de la promotion et de l'articulation de mesures conçues pour renforcer des liens entre les agents, jusqu'à l'implication directe dans la production.

Après une longue période de sous-estimation, voire de rejet, le rôle de la politique industrielle dans le processus de développement est aujourd'hui reconnu par beaucoup d'économistes conventionnels. Paradoxalement, au même moment sa mise en œuvre se trouve légalement restreinte par le mode néo-libéral de régulation des relations économiques internationales. La reconnaissance du rôle de la politique industrielle est importante, mais assurer les conditions nécessaires pour la mettre en œuvre efficacement devient une question centrale pour que les recommandations des politiques ne soient pas déconnectées des réalités concrètes.

### **L'espace de la politique industrielle**

*L'espace politique* se réfère essentiellement à la liberté et à la capacité d'un État de poursuivre les politiques économiques et sociales les plus appropriées à ses circonstances particulières et spécifiques. Le consensus de São Paulo (UNCTAD, 2004) se réfère à l'espace de la politique économique nationale comme «la marge d'action dont les pays jouissent en matière de politique économique intérieure, en particulier dans les domaines du commerce, de l'investissement et du développement industriel» et mettent l'accent sur l'idée selon laquelle les gouvernements devraient avoir la marge de manœuvre pour « évaluer les avantages

découlant de ces règles et engagements internationaux et les contraintes dues à la perte d'autonomie » (UNCTAD, 2004, p.2-3).

Ce concept a été développé en opposition à l'approche de développement basée sur une logique de « prescription unique et uniforme pour tous » (« *one size fits all* ») de la Banque mondiale, du Fonds monétaire international (FMI) et de l'Organisation mondiale du commerce (OMC) dont l'autorité sur les États nationaux a été considérablement étendue tout au long des années 1980 et 1990. Les pays qui sollicitent une assistance financière ou un rééchelonnement de leur dette auprès de la Banque mondiale ou du FMI ont dû adopter des programmes d'ajustement structurel exigeant la libéralisation du commerce, la privatisation des entreprises publiques, la déréglementation financière etc. De même, les négociations commerciales du Cycle d'Uruguay ont étendu l'autorité de l'OMC sur les services, l'agriculture, la propriété intellectuelle, les normes et les réglementations techniques, restreignant ainsi les choix des politiques économiques permises aux pays en développement.

La libéralisation financière affaiblit *de facto* le contrôle du processus de développement économique national, tout en permettant aux actions et aux conditions externes d'influer sur les cibles de la politique macroéconomique nationale. La réduction de l'efficacité et de la capacité de contrôler les objectifs de la politique nationale est la plus importante dans le domaine de la politique macroéconomique. En revanche, les règles et les disciplines multilatérales, ainsi que les engagements résultant d'accords bilatéraux, réduisent l'autonomie *de jure* de l'utilisation des instruments de la politique économique (Mayer, 2009). La séparation entre des restrictions *de facto* et *de jure* n'est pas toujours claire. Par exemple, les règles sur l'investissement dans les traités d'investissement, limitent non seulement l'autonomie *de jure* de l'État pour réguler les investissements étrangers, mais elles induisent aussi la libéralisation du compte financier, réduisant ainsi l'autonomie *de facto* de la politique macroéconomique.

Et avec l'enlisement des négociations commerciales multilatérales au cours de la dernière décennie, les accords commerciaux régionaux (ACR) ont acquis une place centrale dans les politiques commerciales de nombreux pays. Tous les membres de l'OMC sont Parties d'au moins un ACR – définis par l'OMC comme des accords commerciaux réciproques entre deux ou plusieurs partenaires. Ils comprennent tant des accords de libre-échange que d'unions douanières.

Peu d'avancées ont été accomplies dans la libéralisation des mesures non tarifaires au niveau multilatéral. Cela signifie que l'État national possède une autonomie considérable pour intégrer la conception de ces mesures dans un cadre global de politique industrielle. Néanmoins, la libéralisation de ces mesures figure en tant que priorité dans certains accords régionaux dits « profonds », surtout ceux des États Unies de l'Union Européen.

Une nouvelle série d'instruments de la politique industrielle semble être une priorité dans l'ordre du jour du processus de libéralisation de certaines grandes économies, notamment les États-Unis et l'Union européenne. Une telle entreprise comporte le risque d'élimination de l'espace résiduel de la politique industrielle.

Ces accords commerciaux régionaux (appelés également les accords de libre-échange) devenant une pierre angulaire de la structure internationale et ayant une autorité sur les politiques économiques des États membres, la thèse examine les effets du régionalisme sur l'espace de la politique industrielle.

### **Les objectifs de la thèse**

Étant donné les contraintes imposées sur les instruments de la politique industrielle dans le cadre des accords commerciaux et d'investissement, la présente thèse cherche à contribuer au débat sur la politique industrielle en se focalisant sur la question du « comment » et, plus précisément, en s'interrogeant sur les modalités permettant de préserver les marges de manœuvre nécessaires pour combiner le choix de l'insertion internationale et la mise en œuvre de la politique industrielle. La thèse s'efforce d'évaluer l'état des mesures non tarifaires considérées comme des instruments de la politique industrielle, dans les ACR. La thèse produit des résultats empiriques et analytiques originaux sur les effets des ACR sur les instruments de la politique industrielle.

Plus précisément, elle fournit une évaluation qualitative et comparative des contraintes *de jure*, contenues dans les ACR de types Nord-Sud et Sud-Sud, sur le *design* de certaines mesures non tarifaires, dans un cadre de politique industrielle.

Parmi les critères utilisés pour classer les différents types d'ACR, l'un est le niveau de développement de ses membres. Dans cette approche, les ACR sont classés en trois types (i) Nord-Nord, (ii) Nord-Sud, (iii) Sud-Sud. Le « Nord » désigne les pays développés selon la classification de l'OCDE, tandis que le « Sud » désigne les pays moins développés (autres que

les pays développés). Les ACR des Etats-Unis et de l'Union européenne avec les pays en développement servent d'exemples d'ACR de type Nord-Sud, et les ACR de la Chine et de l'Inde avec d'autres pays en développement servent d'exemple d'ACR de type Sud-Sud.

L'étude est à la fois empirique et analytique. Empirique dans le sens qu'elle cartographie les engagements des ACR qui influent sur les instruments de la politique industrielle dans trois domaines interdépendants : la régulation des investissements étrangers, les règles relatives aux brevets, et la normalisation. Elle examine 36 ACR de types Nord-Sud et Sud-Sud : 10 accords de libre-échange des Etats-Unis, 12 accords d'association et de partenariat économique de l'UE, 6 accords de libre-échange de la Chine et 8 accords de commerce indien. Le Tableau (1) présente les ACR étudiés.

Alors qu'elle emprunte des approches méthodologiques développées dans la littérature, la thèse adopte une perspective analytique distincte puisqu'elle (i) évalue les engagements des ACR sous la perspective de la politique industrielle dans les trois domaines étudiés et (ii) compare deux types d'ACR de types Nord-Sud et Sud-Sud.

**Tableau (1) Accords de commerce régionaux étudiés**

	Etats Unis	Union Européenne	Chine	Inde
	CAFTA-DR <sup>a</sup> (2006)	Maroc (2000)	Chili (2010)	Afghanistan (2003)
	Chile (2004)	Algérie (2005)	Pérou (2010)	Bhoutan (2006)
	Pérou (2009)	Tunisie (1998)	ASEAN <sup>c</sup> (2007)	Népal (2009)
	Colombie (2012)	Egypte (2004)	Costa Rica (2011)	Sri Lanka (2001)
	Panama (2012)	Jordanie (2002)	Pakistan (2009)	MERCOSUR <sup>d</sup> (2009)
	Bahreïn (2006)	Liban (2003)	Corée du Sud(2015)	SAFTA <sup>e</sup> (2006)
	Oman (2009)	Chili (2005)		ASEAN <sup>c</sup> (2010)
	Jordanie (2001)	Mexique (2000)		Chili (2007)
	Maroc (2006)	Pérou et Colombie (Communauté Andine) (2013)		
	Corée du Sud (2012)	Afrique du Sud (2000)		
		CARIFORUM <sup>b</sup> (2008)		
		Corée du Sud (2011)		

<b>Total l par pays</b>	10	12	6	8
<b>Total</b>	<b>36</b>			

<sup>a</sup>: L'accord du libre-échange de la République Dominicaine - Amérique Centrale (CAFTA-DR) regroupe le Costa Rica, El Salvador, le Guatemala, le Honduras, le Nicaragua et la République Dominicaine.

<sup>b</sup>: Forum des Etats Caribéens: Antigua et Barbuda, Bahamas, Barbades, Belize, Cuba, République Dominicane, Grenade, Guyana, Haiti, Jamaïque, St. Kitts et Nevis, Sainte Lucie, St. Vincent et les the Grenadines, Suriname, Trinidad et Tobago.

<sup>c</sup> : L'Association des Nations de l'Asie du Sud Est (ASEAN) regroupe Brunei Darussalam, le Cambodge, l'Indonésie, le Laos, la Malaisie, Myanmar, les Philippines, Singapour, la Thaïlande, le Viet Nam.

<sup>d</sup> : Le Marché commun du Sud (MERCOSUR) regroupe l'Argentine, le Brésil, le Paraguay, l'Uruguay, le Venezuela

<sup>e</sup> : L'Accord de Libre-Echange de l'Asie du Sud (SAFTA) regroupe le Bangladesh, le Bhoutan, l'Inde, les Maldives, le Népal, le Pakistan et Sri Lanka.

Les raisons du choix des instruments de politique étudiés sont multiples. Historiquement, les règles sur l'établissement des investissements étrangers, leurs opérations, leurs liquidations etc. dans le pays d'accueil sont incluses dans les Traités bilatéraux d'investissement. A partir de la signature de l'accord de Libre-Echange Nord-Américain, les ACR des pays exportateurs de capitaux ont commencé à intégrer un chapitre sur l'investissement. À notre connaissance, les règles des accords et des chapitres sur l'investissement, sont peu, voire pas du tout, analysées sous l'angle de leurs conséquences sur l'autonomie des différents instruments de la politique industrielle. En effet, ces règles d'investissement sont davantage analysées par des chercheurs en droit et, par conséquent l'approche juridique domine leur étude. Le chapitre deux contribue à combler ce manque en construisant un cadre simple de régulation de l'investissement étranger permettant d'analyser les impacts sur les instruments de la politique industrielle des règles d'investissement contenues dans les ACR.

Les droits de propriété intellectuelle contenus dans les ACR ont été analysés par les économistes, mais en se concentrant uniquement sur ceux des Etats Unis et de l'UE (par exemple Shadlen, 2005, Mercurio, 2006, Drexler, 2014). Par conséquent, ces études avaient dépeint un tableau sombre sur l'état des flexibilités de l'accord sur les aspects des droits de propriété intellectuelle dans le contexte du régionalisme croissant. Il est assez étonnant que peu de travaux se soient concentrés sur les règles de propriété intellectuelle contenus dans les ACR des pays émergents, alors que ces derniers deviennent des acteurs majeurs dans certaines industries et dans différentes technologies. Ainsi, ils peuvent être une source potentielle de technologie et de connaissances qui permettent le développement des capacités productives et des capacités technologiques. En outre, la littérature analysant les

conséquences des règles sur les brevets contenus dans l'accord de l'OMC ou dans les ACR, a mis l'accent presque exclusivement sur des questions liées à la santé (surtout l'accès aux médicaments), tandis que les incidences sur le développement industriel dans son ensemble n'ont pas été suffisamment étudiées.

La thèse procède à un examen comparatif des règles de propriété intellectuelle dans différents types d'ACR, tout en soulignant, théoriquement, la relation entre la nature des règles sur les brevets et la politique industrielle.

Les normes sont également un instrument important de la politique industrielle, qui a reçu peu d'attention dans le domaine de l'économie du développement. Théoriquement, cela se reflète dans la réduction généralisée des fonctions des normes à un simple instrument de politique publique et de politique commerciale (voir par exemple Baldwin, 1970 ; Fischer et Serra, 2000). Ce qui explique que différents types et phases du processus de normalisation sont regroupés sous le terme « Obstacles techniques au commerce ». Contrairement à cette réduction, la thèse considère la fonction de normes en tant qu'instrument de la politique industrielle.

Il existe des raisons et des objectifs différents derrière le choix des ACR étudiés. En effet, l'étude de ces ACR permettraient d'évaluer s'il existe des différences significatives entre les ACR des économies émergentes et ceux des pays développés d'une manière ayant un impact sur la possibilité d'utiliser les mesures étudiés comme des instruments de la politique industrielle. La recherche fournit une contribution empirique à la discussion sur les effets de l'émergence du Sud sur le mode gouvernance de relations économiques internationales. En particulier, elle permet d'évaluer si des pays émergents restreignent également l'espace de la politique industrielle à l'image des pays de Nord, ou tout au contraire, s'ils offrent la possibilité aux pays en développement d'élargir l'espace de la politique industrielle – un espace qui a été significativement restreint tout au long de l'ère néolibérale. Les résultats de la thèse fournissent des données empiriques sur la conduite de deux des pays émergents majeurs, la Chine et l'Inde, dans le domaine des négociations des ACR, considérés comme un des outils de régulation des relations commerciales et d'investissement.

L'observation des différents modes de régulation des relations économiques tout en considérant leurs impacts correspondant sur l'espace de la politique industrielle, est une étape nécessaire pour répondre à la question du "comment" mettre en œuvre la politique industrielle



tout en s'intégrant à l'économie internationale. Une telle observation est une condition sine qua non pour définir les partenaires économiques les plus appropriés du point de vue de l'espace de la politique industrielle. Cela permet d'avancer vers l'étape suivante où la question centrale devient celle du modèle de partenariat économique le plus adéquat. Toutefois, l'objectif de la thèse à ce niveau se limite à observer les effets des différents modes de réglementation des relations commerciales et d'investissement sur l'espace de la politique industrielle.

En outre, le poids relatif des relations commerciales et économique de type Sud-Sud est en plein essor. Selon l'UNCTAD (2012), en 2010, 57 % des importations en provenance des pays en développement étaient issues d'autres pays en développement, alors que cette proportion était de 37% en 1995. En moyenne, plus de 53 % des produits de haute technologie importés par les pays en développement provenaient de pays en développement. Cela signifie que les pays du Nord dirigeant la marche vers de normes de protection plus élevées des droits de propriété intellectuelle ne sont plus la source unique de la technologie. Au contraire, les pays émergents caractérisés par un dynamisme de développement technologique en plein essor, avec un régime d'accès aux droits de propriété intellectuelle relativement permissif, pourraient constituer un complément et une alternative au Nord en tant que source de technologie et de savoir-faire (Abbott et al, 2013). En outre, les pays émergents jouent un rôle croissant dans les sorties d'investissements étrangers, surtout la Chine qui est devenue la troisième source d'investissements étrangers la plus importante dans le monde en 2014 (UNCTAD-WIR, 2016).

De plus, l'Inde et la Chine sont de plus en plus impliquées dans les négociations des ACR. Par conséquent, il devient nécessaire d'examiner leurs approches dans les négociations des accords commerciaux. En outre, l'Asie de l'Est et du Sud-Est devient un terrain majeur où se constituent des blocs économiques, dans un contexte de compétition accrue entre la Chine et les Etats Unis.

Ici, il convient de souligner que la thèse ne vise pas, par le biais de l'évaluation comparative, à désigner quel(s) serai(en)t le(s) partenaire(s) le(s) plus approprié(s) du point de vue de l'espace de la politique industrielle. Elle se limite à désigner les instruments et clauses sur lesquels les pays du Sud appelés à passer des accords devraient être particulièrement attentifs s'ils entendent préserver – voire ouvrir - l'espace de leur politique industrielle

## Questions et hypothèses

Trois questions principales sont soulevées, la première est générale, les deux autres sont plus spécifiques :

(i) Est ce que les modes de régulation des relations commerciales et d'investissement de type Sud-Sud, tels qu'illustrés par les ACR de la Chine et de l'Inde, garantissent pour les pays en voie de développement une espace de la politique industrielle plus large que les modes de régulation des relations commerciales et d'investissement de type Nord-Sud tels qu'illustrés par les ACR des Etats Unis et de l'Union Européenne ?

(ii) Jusqu'à quel niveau les ACR des Etats Unis et de l'Union Européenne vont-ils plus loin dans les restrictions imposées que celle des accords de l'Organisation mondiale du commerce sur les instruments de la politique industrielle relatif à la régulation des investissements étrangers, aux règles sur les brevets et à la normalisation ? Jusqu'à quel niveau ACR des Etats Unis et de l'Union Européen limitent-ils l'espace de la politique industrielle dans ces trois domaines?

(iii) dans quelle mesure les ACR de la Chine et l'Inde, préservent-ils et affirment-ils les flexibilités des accords d'Organisation mondiale du commerce eu égard à la réglementation des investissements étrangers, aux règles sur les brevets et à la normalisation ? Les ACR de la Chine et l'Inde préservent-ils un espace substantiel à la politique industrielle dans ces trois domaines ?

Des études antérieures ont illustré que les ACR des EU et de l'UE vont systématiquement au-delà des engagements de l'OMC, limitant considérablement l'espace de la politique industrielle. Bien que les ACR soient généralement des outils servant à la libéralisation et à l'accès aux marchés externes, la thèse constate que les ACR de la Chine et de l'Inde tendent relativement à préserver l'espace de la politique industrielle encore disponible dans les accords de l'OMC régulant les trois domaines étudiés.

Par conséquent, l'hypothèse interprétative de base est : Il existe différents espaces de la politique industrielle, dont l'étendue dépend entre autre du mode d'intégration dans l'économie internationale tel qu'exprimé par (i) le choix des économies partenaires, du Sud ou du Nord et (ii) le mode de la régulation des relations commerciales et d'investissement correspondant. Plus spécifiquement, les ACR de la Chine et de l'Inde ont tendance à préserver

les *flexibilités* de l'OMC. Ainsi, ils offrent aux économies partenaires en développement un espace de la politique industrielle plus large que les ACR des Etats-Unis et de l'Union européenne qui contraignent systématiquement la possibilité d'utiliser les instruments étudiés de la politique industrielle.

### **La méthodologie de la thèse**

La thèse adopte une méthodologie qualitative qui combine trois composantes analytiques liées entre elles :

(i) les concepts de base de la théorie de la politique économique de Tinbergen, qui permet d'identifier les instruments nécessaires pour atteindre les objectifs de la politique industrielle.

(ii) la notion de *flexibilités* de l'OMC qui permet d'évaluer les restrictions sur les instruments de la politique industrielle sous les accords de l'OMC. Cela permet d'identifier l'espace de la politique industrielle disponible sous les accords de l'OMC et d'en faire usage comme socle de comparaison des ACR étudiés.

(iii) l'approche développée par Horn et al (2010) qui classifie les engagements des ACR, en comparaison aux engagements et aux portées des accords de l'OMC, à ce qu'il nomme OMC plus et OMC extra.

Tout d'abord, la méthodologie s'appuie sur la théorie de la politique économique, datant de Tinbergen (1952, 1956), dont les concepts de base permettent d'examiner la teneur opérationnelle de la notion d'espace politique (Mayer, 2009). La théorie adresse les conditions générales de la contrôlabilité d'un système économique. Cette théorie est préoccupée par les cibles de la politique économique, les instruments disponibles pour les réaliser ainsi que les relations entre les cibles et les instruments de la politique.

Une cible est un objectif de politique économique qui est habituellement mesurée en fonction d'une variable économique. Un instrument est une autre variable économique qui peut être utilisée pour induire l'économie pour atteindre la cible, c'est-à-dire pour modifier la valeur de la variable cible dans la direction souhaitée. La capacité des instruments à influencer les cibles est déduite de l'analyse économique, qui identifie les relations entre les variables économiques, nous donnant de ce fait une idée de la possibilité que l'ajustement des instruments ait un effet sur la cible.

Tinbergen considère que la conception de la politique économique inclut la spécification d'un certain nombre de variables cibles distinctes. Chacune de ces variables cibles pourrait être quantifiée. Une fois fait, le processus d'élaboration des politiques serait composé des étapes suivantes : (i) sélectionner les instruments adéquats pour atteindre les cibles, (ii) formuler les liens entre les cibles et les instruments, (iii) déterminer les valeurs quantitatives exigées pour les instruments. La *règle d'or* de Tinbergen stipule qu'un décideur peut atteindre les cibles si le nombre de différents instruments est au moins égal au nombre de ses cibles.

La deuxième composante de la méthodologie s'appuie sur le concept des « flexibilités OMC » qui a été utilisé, notamment, dans l'analyse des accords de l'OMC sur les aspects des droits de propriété intellectuelle, les mesures sur les investissements liés au commerce (MIC) et les subventions et les mesures compensatoires (SCMs). Bien que les accords de l'OMC aient imposé des contraintes significatives sur les instruments de la politique industrielle ils laissent, de l'avis général une certaine marge de manœuvre pour les États membre au niveau national. Cette marge de manœuvre est le résultat :

(i) des domaines et des instruments qui n'ont pas été régulé sous les accords de l'OMC, soit en raison de la non-couverture pour tous les pays membres, soit comme résultat du traitement spécial et différencié pour les pays en développement. Ce dernier correspond aux actions que les pays en voie développement peuvent entreprendre grâce à des exemptions d'engagements par ailleurs applicables aux membres en général, ou à un niveau réduit d'engagements pour les pays en développement. Par exemple, les pays en développement ne sont pas obligés de formuler leurs normes sur la base des normes internationales.

(ii) des engagements indéfinies qui ont été formulés vaguement, donnant lieu à des interprétations et des implémentations différentes au niveau national, par exemple, les motifs justifiant le recours à des licences obligatoires pour les brevets.

La thèse utilise le terme de «flexibilités», en tant qu'équivalent à la possibilité d'utiliser un instrument de la politique industrielle grâce au traitement spécial et différencié pour les pays en développement, aux exceptions générales ou aux formulations ambiguës d'engagements.

Toutefois, il convient de souligner le caractère relatif de la notion de «flexibilités». Tout d'abord, les engagements formulés vaguement peuvent donner lieu à des interprétations

différentes dans les deux sens, moins ou plus restrictives. Par exemple, alors que certaines dispositions de l'Accord sur les aspects des droits de propriété intellectuelle sont interprétées par de nombreux experts d'une manière facilitant l'accès aux technologies et aux savoir-faires, il existe des interprétations pour les mêmes dispositions impliquant un niveau de protection plus élevé de la propriété intellectuelle. En outre, ces dernières sont renforcées quand elles sont adoptées par des puissances économiques et politiques comme les Etats-Unis et l'UE qui sanctionnent et/ou menacent de sanctionner les partenaires en cas de non-respect de ces interprétations. Par exemple, 13 pays en développement apparaissent sur la liste de surveillance prioritaire des Etats-Unis, y compris la Chine et l'Inde à cause de leurs pratiques nationales sur les droits de propriété intellectuelle (USTR, 2015). Par conséquent, les rapports de forces sont des facteurs déterminants pour l'interprétation des flexibilités OMC mises en œuvre au niveau national.

Deuxièmement, alors que les pays en développement ont formellement le droit d'utiliser les flexibilités OMC, il reste difficile de les mettre en place effectivement en raison du manque de capacité industrielle, technologique et d'expertise technique. Autrement dit, l'utilisation d'un grand nombre d'éléments de flexibilité OMC nécessite un niveau considérable du développement industriel.

Troisièmement, les *flexibilités* OMC est terme relative. Certain dispositifs de l'OMC sont considérés en tant que flexibilités une fois comparés aux engagements de types OMC plus contenus dans certain ACR de types Nord-Sud qui éliminent systématiquement ces flexibilités.

Pourtant, si ces marges de manœuvre restent inexplorées, certains pays ayant des capacités économiques considérables passeront à côté de la possibilité d'en faire pleinement usage. Plus important encore, définir ces flexibilités apparaît comme une étape nécessaire pour construire un projet d'un « régionalisme productif ».

La dernière composante de la méthodologie de la thèse est l'approche développée par Horn et al (2010) qui classifie le contenu des ACR des EU et de l'UE en comparaison avec la portée et les engagements des accords de l'OMC. Cette approche divise les engagements des ACR en trois catégories : OMC, OMC plus (OMC +) et OMC extra (OMC-X). La première et la deuxième catégorie correspondent aux dispositions des ACR relevant du mandat actuel de l'OMC. A ce niveau, les ACR affirment les engagements de l'OMC, ou incluent des

engagements supplémentaires. La première catégorie correspond aux cas où les ACR ne vont pas au-delà des engagements des accords de l'OMC. La deuxième catégorie correspond aux cas où les engagements des ACR vont au-delà des engagements des accords de l'OMC. Un exemple est fourni par l'extension du terme du brevet.

En revanche, la catégorie d'OMC-X comprend les dispositions des ACR traitant de domaines non couverts par les accords multilatéraux de l'OMC. Elle correspond à une obligation dans un domaine qualitativement nouveau, dans le sens qu'il désigne un instrument de politique qui n'a pas déjà été régulé sous l'OMC. Un exemple est fourni par les chapitres relatifs aux investissements qui visent à libéraliser l'admission de l'investissement étranger dans le secteur des biens.

La méthodologie de thèse procède de manière suivante : dans un premier temps, les fonctions des mesures étudiées en tant qu'instruments de politique industrielle sont soulignées. Dans un second temps, les engagements de l'OMC qui contraignent l'utilisation des instruments sont analysés, alors que les flexibilités sont identifiées. Puis, sur la base de ces flexibilités un cadre analytique est élaboré pour chacun des secteurs étudiés. Enfin, ces cadres servent de dispositifs analytiques pour évaluer comparativement la situation des instruments étudiés dans les ACR, plus précisément pour examiner si les flexibilités d'OMC ont été éliminées, préservées ou affirmées.

Comme aucun accord multilatéral régulant l'investissement n'a été signé sous l'auspice de l'OMC, l'inclusion des chapitres relatifs aux investissements dans les ACR est un engagement de type OMC extra. Cependant, il existe des accords qui touchent à des aspects liés aux investissements, surtout, l'accord général sur les échanges des services (AGCS) et l'accord sur les Mesures concernant les investissements et liés au commerce (TRIMs). Une fois regroupés, ces accords ne couvrent pas la portée des chapitres sur les investissements dans les ACR. Pour combler ce manque, le chapitre 2 développe un cadre réglementaire des investissements étrangers pour analyser l'influence des engagements des ACR sur la composante de la politique industrielle qui vise la régulation de l'admission et de l'opération des investissements étrangers.

Les règles sur les brevets dans les ACR sont analysées contre les engagements contenus dans l'accord OMC sur l'Accord sur les aspects des droits de propriété intellectuelle (TRIPs). A ce niveau la thèse ne développe pas un cadre analytique, mais combine tout simplement les

flexibilités de l'accord sur les aspects des droits de propriété intellectuelle comme elles sont développées dans la littérature précédente et les emploie en tant que cadre analytique. Puis, l'état de ces flexibilités dans les ACR est examiné, pour vérifier si elles ont été éliminées, préservées ou affirmées.

Le chapitre 4 sur les normes évalue l'espace national de la normalisation sous l'accord OMC sur les barrières techniques au commerce (BTC). L'espace national de la normalisation peut être défini comme l'autonomie dont dispose l'Etat national dans la conception des normes. Cette autonomie lui permet de les concevoir en fonction de la stratégie de développement qui les mobilise en tant qu'instrument de la politique industrielle, doté des fonctions spécifiques au-delà de leur utilisation comme mesures de protections. Enfin, le chapitre étudie si les flexibilités de l'accord sur les BTC dans les ACR ont été préservées, ou tout au contraire si des engagements de type « BTC plus » y ont été introduits.

## **Résultats**

Tandis que les chapitres et les règles des Etats -Unis dans les trois domaines sont presque identiques au niveau du contenu et de la formulation (même les numérations des dispositions sont identiques dans bien des cas), les règles de l'Union Européenne sont relativement moins homogènes au niveau de la formulation et du contenu. Les formulations des dispositions changent dans les ACR chinois, mais les résultats finaux sont assez semblables du point de vue de la politique industrielle. Il convient également de noter que le langage des ACR des EU se diffuse dans certains pays partenaires, le Pérou et le Chili en particulier, aux ACR chinois. Les ACR de l'Inde convergent vers une absence de tout engagement à l'égard de l'investissement et des droits de propriété intellectuelle.

Les résultats montrent que les modes de régulation de l'investissement et des relations commerciales de type Nord-Sud, à l'exemple des ACR des EU et de l'UE, dépassent systématiquement les engagements des accords de l'OMC, rétrécissant ou/et éliminant leurs flexibilités. En conséquence, l'espace de la politique industrielle *de jure* des pays partenaires se rétrécit à un niveau historiquement bas. Alors que les États-Unis ont les approches les plus restrictives à l'égard de la régulation des investissements étrangers et des brevets, il semble que l'approche de l'UE sur les normes soit la plus restrictive.

Alternativement, les modes de régulation des relations commerciales et de l'investissement de type Sud-Sud, comme illustrés par les ACR de la Chine et de l'Inde, préservent, dans une large mesure, les flexibilités de l'OMC comme résultat de (i) l'affirmation explicite de ces flexibilités et (ii) la non-inclusion des engagements substantiels allant au-delà des accords de l'OMC. La seule exception où deux ACR de la Chine incluent des disciplines importantes est l'inclusion de chapitres sur les investissements qui, par définition, règlent des domaines de la politique économique de type OMC extra, de ce fait, dépassant intrinsèquement des engagements de l'OMC comme l'inclusion de mécanisme de règlement des différends entre investisseurs et États. Néanmoins, les règles des ACR chinois en matière d'investissement sont beaucoup moins restrictives que les règles américaines, puisque l'autonomie dans certains domaines considérés comme vitaux a été systématiquement conservée (exemple : l'entrée d'investissements étrangers).

Tout d'abord, il convient de noter que tous les ACR étudiés ne contiennent pas des règles et des engagements sur les trois domaines étudiés. Alors que les investissements et les droits de propriété intellectuelle ne sont pas intégrés dans les ACR de l'Inde, les dispositions relatives aux normes sont si brèves que l'on peut considérer qu'elles ne sont pas couvertes.

Dans le cas des ACR de l'UE, aucun chapitre sur l'investissement n'a été observé car la Commission Européenne n'avait pas, jusqu'à ces derniers temps, le mandat de négociation au nom des pays membres dans le domaine de l'investissement.

Les résultats montrent que les chapitres sur l'investissement dans les ACR des EU adoptent un modèle libéral qui élimine la possibilité *de jure* pour l'État hôte d'utiliser les mêmes instruments de politique qui permettent de tirer les bénéfices de l'investissement étranger sur le développement industriel. L'autonomie de l'Etat est fortement restreinte par rapport à la réglementation de l'admission de l'investissement étranger. Cette admission a été libéralisée sur des bases de la clause du traitement national applicable dans la phase de pré-établissement. Plusieurs mesures de la politique industrielle visant à stimuler des effets d'entraînement positifs ont été sanctionnées en raison de la restriction imposée sur l'utilisation des exigences de performance. Il en va de même pour les mesures visant à gérer les interactions et assurer la cohérence avec d'autres domaines de la politique industrielle. Plusieurs mesures de contrôle du compte financier, autorisées en vertu de l'AGCS et des règles de FMI, ont été prohibées en raison de la libéralisation du secteur des services en combinaison avec des règles libérales de transfert. Les droits de propriété intellectuelle sont



définis comme investissement, et leurs titulaires ont donc le droit d'être protégés sous les règles de l'investissement. En outre, la possibilité d'accorder une licence obligatoire pour des causes généralement reconnues est éliminée. En outre, les ACR des EU disciplinent les différentes mesures que mobilisent les États hôtes afin de promouvoir et de protéger les investissements nationaux en raison de l'inclusion de la clause du traitement national pré-admission. Enfin, les règles des ACR des EU dans les domaines couverts par l'accord sur les mesures concernant les investissements et liées au commerce et l'accord général sur le commerce des services vont bien au-delà des disciplines figurant dans ces accords.

A l'opposé, les chapitres sur l'investissement inclus dans les ACR de la Chine garantissent aux États partenaires une autonomie substantielle en ce qui concerne (i) la régulation de l'admission des investissements étrangers en vertu du principe du traitement national après admission, (ii) l'utilisation de mesures visant à effectuer les effets d'entraînement des IDE, car les exigences de performance ne sont pas restreintes, et (iii) l'utilisation des mesures visant à assurer la cohérence avec d'autres domaines de la politique industrielle. L'État préserve une autonomie considérable pour assurer la stabilité macroéconomique car le secteur des services est exclu de la portée du chapitre sur l'investissement, les règles de transfert imposent le respect de la réglementation de l'État hôte et ce dernier garde la main au-dessus de l'admission du capital. Néanmoins, les droits de propriété intellectuelle sont définis comme des investissements et leur titulaire peut jouir des droits des investisseurs à la protection sous les ACR. En outre, certains ACR établissent un mécanisme du règlement des différends entre l'État et l'investisseur, tout en limitant son champ d'application.

Il est important de noter que certains instruments de la politique industrielle sont exclus de la portée des chapitres sur l'investissement des ACR chinois, tels que les taxes, les subventions et les marchés publics. Ces instruments peuvent être mobilisés afin de promouvoir et soutenir les investissements domestiques. Enfin, les engagements des ACR chinois dans les domaines couverts par l'accord sur les mesures concernant les investissements et liées au commerce et l'accord général sur le commerce des services ne vont pas au-delà des disciplines contenues dans ces accords. En général, dans le cadre des ACR chinois, il est possible de favoriser les secteurs et les industries domestiques ciblés tant que la mesure utilisée est autorisée dans le cadre des accords de l'OMC et que les investissements

étrangers n'ont pas été admis dans le secteur concerné. Le tableau (2) synthétise les résultats de la thèse concernant les règles sur l'investissement étrangers dans les ACR.

**Tableau (2) Les règles des ACR sur l'investissement étranger**

Réglementation relative aux investissements étrangers				
	Libéralisation de l'admission	Effectuer les effets d'entraînement positifs	Assurer la cohérence avec d'autres domaines de la politique Industrielle	Règlement de différends entre Etats et Investisseurs
Etats Unis	OMC extra	OMC+	AGCS+/MIC+/ADPIC+	OMC extra
Union Européenne	-	-	-	-
Chine	non	OMC	OMC/ADPIC+	OMC extra <sup>a</sup>
Inde	-	-	-	-

AGCS+ : Les règles de l'ACR vont au delà de l'accord de l'OMC sur l'AGCS.

MIC+ : Les règles de l'ACR vont au delà de l'accord de l'OMC sur le MIC.

ADPIC+ : Les règles de l'ACR vont au delà de l'accord de l'OMC sur l'ADPIC.

Source : Salam Alshareef (2017)

L'analyse des dispositions relatives aux brevets dans les ACR des États-Unis et de l'UE illustre leurs efforts pour éliminer les flexibilités de l'Accord sur les aspects des droits de propriété intellectuelle, même si c'est à des degrés divers. Les ACR des États-Unis renforcent les règles sur les brevets à l'égard de tous les produits, mais également à l'égard des produits spécifiques, à savoir les produits agrochimiques et pharmaceutiques. Ils prolongent le champ de la brevetabilité en desserrant les définitions des critères de la brevetabilité (l'inventivité, la nouveauté et l'applicabilité industrielle) comparés aux définitions adoptées dans l'Accord sur les aspects des droits de propriété intellectuelle. En outre, ils exigent que les brevets soient accordés pour de nouvelles utilisations de produits connus. De plus, ils autorisent et exigent la brevetabilité des objets exclus du champ d'application dans le cadre de l'Accord sur les aspects des droits de propriété intellectuelle : les plantes et les animaux. Les exigences de divulgation ont été adoucies, les termes de protection ont été prolongés et les cas justifiant la révocation des brevets sont bornés.

En outre, des exceptions générales et spécifiques aux droits exclusifs du titulaire du brevet ont été réduites ou éliminées. Ainsi, l'exclusivité des données cliniques accompagnant la demande de brevet a été imposée. La liaison entre le terme du brevet et l'autorisation de la

commercialisation a été établie. L'exception d'exploitation précoce (ou l'exception Bolar) et l'importation parallèle ont été interdites dans certains ACR. Enfin, ils limitent la possibilité de délivrer des licences obligatoires puisque les motifs à la base desquels ces licences pourraient être justifiées ont été réduits explicitement. A cela s'ajoute la connexion établie entre les règles sur les brevets et le chapitre sur les investissements.

L'approche chinoise va de l'absence pure et simple des termes «droits de propriété intellectuelle» et «brevets» dans certains ACR, à l'inclusion d'un chapitre sur les droits de propriété intellectuelle dans d'autres. Néanmoins, les règles contenues dans ces chapitres préservent toutes les flexibilités de l'Accord sur les aspects des droits de propriété intellectuelle. Plus précisément, les règles chinoises sur les brevets n'élargissent pas la portée de la brevetabilité, et elles n'introduisent aucune restriction aux exceptions contenues dans l'Accord sur les aspects des droits de propriété intellectuelle.

Enfin, alors que l'intégration des traités internationaux sur les droits de propriété intellectuelle contenant des règles de type ADPIC plus est une caractéristique des ACR des EU et de l'UE, les ACR chinois se caractérisent par la référence systématique à la déclaration de Doha qui élargit les motifs justifiant le recours à la licence obligatoire, et aux traités favorisant des intérêts commerciaux des pays en développement tels que la Convention sur la Diversité Biologique. Le tableau (3) synthétise les résultats de la thèse en ce qui concerne les règles de brevet dans les ACR.

**Tableau (3) les règles de brevet dans les ACR**

Les règles de brevets				
	Conditions de brevetabilité	Exceptions aux droits du breveté	Liens aux accords internationaux	Règlement des différends
<b>Etats Unies</b>	ADPIC+	ADPIC+	ADPIC +	ADPIC+
<b>Union Européenne</b>	ADPIC+	ADPIC / ADPIC+	ADPIC+	ADPIC+
<b>Chine</b>	ADPIC	ADPIC	ADPIC	ADPIC / ADPIC+

ADPIC+ : Les règles de l'ACR vont au delà de l'accord de l'OMC sur l'ADPIC.

ADPIC : pas de règles allant au delà de l'ADPIC.

Source : Salam Alshareef (2017)

Concernant les normes, les résultats montrent que l'étendue de la libéralisation dans le cadre des ACR de l'UE est la plus vaste, allant systématiquement au-delà des engagements de l'Accord de l'OMC sur les obstacles techniques au commerce. Ils élargissent la portée de la libéralisation pour inclure de nouveaux instruments, c'est-à-dire la métrologie, et des nouveaux secteurs, c'est-à-dire les marchés publics (il en va de même pour les ACR des États-Unis). L'UE a adopté l'harmonisation hégémonique (harmonisation à la base de ses propres normes) comme une approche de libéralisation dans ses accords d'association avec les pays de la méditerranée. En outre, certains ACR éliminent le droit de concevoir les règlements et les normes conformément "aux objectifs nationaux légitimes" et non pas à la base des normes internationales.

Les ACR des États-Unis adoptent l'équivalence comme une approche de la libéralisation en matière des règlements techniques, et spécifient des mécanismes pour reconnaître les procédures et les résultats d'évaluation de la conformité d'autres parties. En ce qui concerne les exigences de transparence, les ACR des États-Unis vont bien au-delà des règles de l'accord de l'OMC sur les obstacles techniques au commerce, puisqu'ils introduisent une clause de traitement national pour l'accréditation et la reconnaissance des organismes d'évaluation de la conformité, et pour la participation des investisseurs d'une autre Partie dans l'élaboration de ses propres normes, règlements techniques et procédures d'évaluation de la conformité. Enfin, les engagements dans les ACR des États-Unis sont éminemment exécutoires, car la consultation sur les différends relatifs aux normes peut avoir lieu dans le cadre du mécanisme de règlement des différends de l'ACR.

Bien que les ACR chinois adoptent diverses approches en ce qui concerne les normes, ils confirment tous les engagements dans le cadre de l'accord de l'OMC sur le TBT, tout en les consolidant à travers l'établissement des institutions pour administrer les engagements. Certains ACR encouragent les parties, sans une claire obligation, à libéraliser le règlement technique par l'approche de l'équivalence. Toutefois le plus important est l'affirmation explicite du droit des pays en développement à concevoir leurs propres règlements et normes conformément aux "objectifs nationaux légitimes" et non pas sur la base des normes

internationales. Il est clair que certains ACR chinois contiennent des versions adaptées des engagements des pays ayant un ACR avec les États-Unis. L'adaptation passe par l'élimination des formulations rendant aux engagements un caractère obligatoire.

Les ACR de l'Inde affirment l'engagement à l'accord de l'OMC sur les obstacles techniques au commerce, sans aucun engagement supplémentaire. Plus intéressant encore, un des ACR de l'Inde introduit des dérogations qui permettent l'utilisation de "restrictions non tarifaires" afin de protéger les industries locales. Le tableau (4) résume les résultats de la thèse concernant les règles des ACR sur les normes.

Pour résumer, contrairement aux ACR de type Nord-Sud, la possibilité *de jure* d'intégrer la conception de mesures non tarifaires examinées dans un cadre global de politique industrielle est considérablement préservée sous les ACR de types Sud-Sud en ce qui concerne : (i) les mesures visant à réguler les investissements étrangers d'une manière qui lui permette de contribuer au développement industriel, tout en évitant les risques associés à ce types d'investissement, (ii) la mise en place d'un système national de brevet facilitant l'accès à et la diffusion des technologies et des connaissances et (iii) l'utilisation des normes et des règlements techniques comme instruments pour surmonter le problème de l'inefficience de la coordination des investissements, ainsi que comme une outil du mécanisme de contrôle accompagnant les différentes soutiens alloués par l'Etat aux producteurs locaux.

**Tableau (4) : les règles des ACR sur les normes**

	Libéralisation des normes					
	Porté e	Harmonisati on	Équivalenc e	Reconnaissance des organismes d'évaluation de la conformité	Transparen ce	Règlement de différends
<b>Etats Unis</b>	OTC+	-	OTC+	OTC+	OTC+	OTC+
<b>Union Européenne</b>	OTC+	OTC+	-	OTC+	-	-
<b>Chine</b>	OTC	OTC	OTC	OTC	OTC+/ OTC-	OTC/ OTC+
<b>Inde</b>	OTC	OTC	OTC	OTC	-	-

OTC+ : Les règles de l'ACR vont au delà de l'accord de l'OMC sur l'OTC.

OTC : pas de règles allant au delà de l'ADPIC.

OTC- : Les règles de l'ACR vont au-delà de l'accord de l'OMC sur l'OTC.

**Source : Salam Alshareef (2017)**

L'hypothèse centrale de thèse est donc confirmée : les ACR de type Sud-Sud, comme illustrés par les accords chinois et indiens, offrent aux pays en développement un espace de politique industrielle plus large que les ACR de type Nord-Sud, tels qu'illustrés par les accords des États-Unis et de l'UE. Ainsi, sous le régime actuel de l'investissement et du commerce international, il existe des espaces multiples et différents de la politique industrielle, dont l'étendue dépend, entre autres, du choix des partenaires économiques, du Sud ou du Nord, et des modes de régulation des relations commerciales et d'investissement correspondants.

Les résultats montrent l'absence d'un modèle type promu de partenariat et de coopération Sud-Sud, au moins dans les ACR et les domaines étudiés. Les engagements observés varient d'un pays à l'autre et d'un accord à l'autre.

Néanmoins, les ACR Chinois et Indiens ont des caractéristiques communes au regard des perspectives qu'ils ouvrent en matière l'espace pour la politique industrielle de leurs partenaires. Les deux pays préservent explicitement les flexibilités OMC en les considérant comme une partie intégrale des ACR. Ou bien, ils les protègent implicitement par la non-inclusion des engagements de type OMC plus. On peut l'interpréter comme une volonté par ces deux économies de préserver leurs espaces de la politique industrielle.

Ainsi, la caractéristique commune des approches indiennes et chinoises est la quasi absence d'engagements restrictifs, plutôt que la présence de règles qui élargissent ou affirment l'espace de la politique industrielle.

Les résultats de la thèse illustrent la diversité des engagements chinois tant au niveau de la forme qu'au niveau de la substance (avec des limites bien sûr). Cela confirme les résultats d'autres études indiquant que la Chine se caractérise par une approche flexible et adaptative aux circonstances et aux besoins de chaque partenaire dans les négociations des ACR. La Chine tend à concevoir ses accord au cas par cas afin de tenir compte des préférences diverses de ses partenaires, ce que donne lieu à des accords fortement différenciés en termes de substance (Berger, 2013). Sur la base d'entretiens avec l'équipe de négociation péruvienne d'un ACR avec la Chine, Berger (2013, p 21) affirme que « c'était le Pérou qui a avec succès poussé la Chine pour accepter le texte du modèle péruvien comme base pour les négociations ». Néanmoins, une telle flexibilité a ses limites, comme la Chine refuse de dépasser certains degrés de libéralisation (Berger, 2013; Yu, 2010). Selon l'étude empirique

de Berger (2013, p.13) « la Chine a été flexible et sensible aux textes modèles proposés par les pays partenaires respectifs [...] La seule limite au pragmatisme de la Chine était l'inclusion des engagements de libéralisation dans des ACR qui ne sont pas en conformité avec la politique industrielle de la Chine, fondée sur un système sélectif d'admission qui donne lieu à traitement discriminatoire à l'égard des investisseurs domestiques et étrangers ».

Il faut noter également que le langage des ACR des EU se diffuse depuis certains pays partenaires, le Pérou et le Chili en particulier, vers les ACR chinois. Ceci confirme l'observation de l'OCDE (2014, p.18) selon laquelle « à travers ces partenariats de type Nord-Sud [...] des mesures profondes ont été transférées à un éventail d'économies émergentes et à revenu moyen. Ces économies qui ne font pas partie de l'OCDE et qui avaient signé des ACR de type Nord-Sud dans certains cas ont incorporé les mêmes mesures dans des ACR de type Sud-Sud signés avec des économies moins développées. Des économies comme le Chili améliorent le modèle formé dans le Nord-Sud avec d'autres partenaires du Sud. Dans la Communauté andine, certaines des pratiques EU-Pérou et EU-Colombie sont devenues des modèles pour les accords de type Sud-Sud ».

Il est clair que certains ACR chinois contiennent des versions adaptées des engagements des pays ayant un ACR avec les États-Unis. Généralement, les formulations des ACR des États-Unis se diffusent aux ACR chinois, mais celles d'origine sont modifiées par l'élimination des parties rendant l'engagement obligatoire. Néanmoins, la majorité de disposition allant au-delà des accords d'OMC ont été trouvées dans les ACR avec le Pérou et le Chili comme en atteste la possibilité de recours à la pratique de choix de forum par rapport aux droits de propriété intellectuelle, le mécanisme de règlement de différends entre Etat et Investisseur, la possibilité de mener la consultation sur des questions liés aux normes sous le mécanisme du règlement de différends de l'ACR, l'inclusion d'une disposition sur l'expropriation indirecte, et l'inclusion d'une liste illustrative des mécanismes pour la reconnaissance mutuelle des résultats et des procédures d'évaluation de conformité.

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## Résumé

L'intérêt pour la politique industrielle a fait un retour remarqué dans le contexte post consensus de Washington. Mais ce regain d'intérêt de la littérature survient dans un environnement international qui pose des défis majeurs pour la conduite de politiques industrielles. En effet, le mode dominant d'insertion dans l'économie mondiale au cours des trois dernières décennies a été celui de la libéralisation des comptes courants et de capitaux, réduisant les marges de manœuvre des gouvernements pour le choix et la conduite de politiques industrielles aussi bien *de facto* que *de jure*. La thèse procède à une évaluation qualitative et comparative des contraintes sur l'utilisation des instruments de la politique industrielle sur 36 Accords Commerciaux Régionaux de types Nord-Sud et Sud-Sud : 10 accords avec les Etats-Unis, 12 avec l'Union Européen, 6 avec la Chine et 8 avec l'Inde. La thèse cartographie les engagements de ces accords qui influent sur les instruments de la politique industrielle dans trois domaines interdépendants : la régulation des investissements étrangers, les règles sur les brevets, et les règles relatives à la normalisation. Les résultats de cette étude établissent que les accords de type Nord-Sud dépassent systématiquement des engagements des accords de l'OMC, donc rétrécissent voire éliminent leurs flexibilités. En conséquence, l'espace de politique industrielle *de jure* des pays partenaires se rétrécit à un niveau historiquement bas. Alternativement, les modes de régulation de type Sud-Sud préservent, dans une large mesure, les flexibilités de l'OMC comme résultat de (i) l'affirmation explicite de ces flexibilités ; (ii) la non-inclusion des engagements substantiels allant au-delà des accords de l'OMC. Contrairement aux accords des Etats Unis et de l'Union Européen, la possibilité *de jure* d'utiliser les mesures de la politique industrielle est donc largement préservée dans le cadre des accords avec la Chine et l'Inde en ce qui concerne : (i) les mesures relatives à la régulation des investissements étrangers qui garantissent leur contribution au développement industriel, tout en évitant les risques associés à ce type d'investissement ; (ii) la mise en place d'un système national de brevet facilitant l'accès à et la diffusion des technologies et des connaissances ; (iii) l'utilisation des normes et des règlements techniques comme instruments pour surmonter les problèmes de coordination inefficace des investissements, ainsi que comme mécanisme de contrôle accompagnant les différents soutiens apportés par l'Etat à la production locale.

**Mots clés :** Espace de la Politique Industrielle, Accords Commerciaux Régionaux, Organisation Mondiale du Commerce, Réglementation des Investissements Étrangers, Brevets, Normalisation, Etats-Unis, Union Européen, Chine, Inde.

## Abstract

Lately, interests in industrial policy have made a remarkable comeback in an international environment that holds serious challenges as the integration into the world economy that took the form of trade, investment, and financial liberalization, in last three decades, has reduced *de facto* and *de jure* industrial policy space. The thesis provides a qualitative and comparative assessment of constraints on the use of industrial policy instruments in the context of the rising regionalism. It reviews 36 North-South and South-South regional trade agreements: 10 Agreements of the United States, 12 Agreements of European Union, 6 Chinese Agreements and 8 Indian Agreements, all with developing countries. It maps commitments that affect industrial policy instruments in three interrelated areas: foreign investment regulation, patent, and standardization. It compares the agreements' engagements against WTO obligations and each other. Results show that North-South modes of regulation of investment and trade relations go systematically beyond WTO Agreements commitments, narrowing and eliminating its "flexibilities". As a result, *de jure* industrial policy space of partner countries shrinks to a historically low level. In turn, the South-South modes of regulation of trade and investment relations preserve WTO "flexibilities" to a large extent, as result of (i) explicit affirmation of these flexibilities, and (ii) the non-inclusion of substantial commitments going beyond WTO agreements. Contrary to the agreements of the United States and the European Union, the *de jure* possibility to use industrial policy instruments is substantially preserved under the agreements of China and India with respect to: (i) measures aimed at regulating foreign investments in a manner that permits to trigger its industrial development benefits and to avoid its associated risks, (ii) the design of national patent system in manner that facilitates the access to and diffusion of technologies and knowledge, and (iii) the use of standards and technical regulations as instruments to overcome investment coordination failure, and as tools of control mechanism that should be associated with the State's distributed rent to local producers.

**Keywords:** Industrial Policy Space, Regional Trade Agreements, World Trade Organization, Foreign Investment Regulation, Patent, Standard, United States, European Union, China, India.