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**INTELLECTUAL PROPERTY PROVISIONS
IN REGIONAL TRADE AGREEMENTS**

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WTO

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INTELLECTUAL PROPERTY PROVISIONS IN REGIONAL TRADE AGREEMENTS

by **Raymundo Valdés and Tavengwa Runyowa**¹

ABSTRACT

This paper assembles detailed information about the intellectual property (IP) provisions contained in 194 active regional trade agreements (RTAs) that had been notified to the WTO by November 2010. IP provisions in RTAs have been the subject of much study and commentary. However, much of this work has focused on a relatively limited number of RTAs, with a concentration on parties with narrow geographical and economic profiles. The goal of the current study was to expand beyond the more commonly studied RTAs, to make an initial review of the full array of RTAs notified to the WTO, and in that way to lay the groundwork for a more comprehensive overview that would enable consideration of the broader system implications of this more diverse range of norm-setting activity. This was tackled by conducting a comprehensive mapping of the IP content in a larger number of RTAs involving parties from all regions and across different levels of development. This broad approach is necessary to better understand cross-cutting trends in RTAs, and how all the parts of the international IP framework influence each other.

The methodology followed involved surveying each RTA in the sample to determine whether it made reference to any of 30 different IP-related provisions. The relevant provisions are discussed in detail and summary statistics used to identify patterns over time and by continent, level of economic development, and selected traders. The number of IP provisions in each RTA is then used to classify agreements according to their level of IP content.

The first significant identified trend is the acceleration in the conclusion of RTAs with IP provisions after the creation of the WTO and the entry into force of the WTO TRIPS Agreement. A significant proportion of those RTAs contain some type of IP provision, but the number and type of those provisions vary widely across agreements. More than two-thirds of the RTAs surveyed include provisions on border measures or statements of general commitment to IP protection or cooperation. A smaller proportion contains explicit provisions on specific fields of IP law, such as geographical indications, patents, trademarks and copyright. The inclusion of even more detailed provisions elaborating on specific areas of IP law is less common. As a result, the actual IP content of RTAs differs greatly across the sample, with about 40% of these agreements found to have negligible substantive IP standards.

A significant number of RTAs containing more detailed IP provisions are characterized by a hub-and-spoke architecture in which the wording and structure of IP provisions converged around the RTAs of specific countries or blocs. The largest systems are grouped around the EFTA, the European Union and the United States with countries like Chile, Japan and Mexico constituting other hubs. The hub-and-spoke architecture seems to have encouraged the convergence of domestic IP regimes among the respective RTA signatories. The mechanics of this potentially crucial process and its economic implications require further investigation. The analytical methodology followed in this paper also needs additional development to take better advantage of the information gathered together in the course of this study and other data.

Keywords: Regional Trade Agreements, Intellectual Property Rights, WTO, TRIPS

JEL Classifications: F13, F15, F53, O34

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A. INTRODUCTION

1. Non-discrimination, as embodied in the most-favoured-nation (MFN) principle established by Article 1 of GATT, Article 2 of GATS and Article 4 of TRIPS, is one of the cornerstone principles of the multilateral trading system. A Member departs from this principle when it enters into a regional trade agreement (RTA) granting more favourable trade conditions to its fellow signatories than it does to other parties.²

2. WTO Members are permitted to depart from the MFN principle under specific conditions. These are spelled out in paragraphs 4 to 10 of Article XXIV of GATT (as clarified in the Understanding on the Interpretation of Article XXIV of the GATT 1994) providing for the formation and operation of customs unions and free-trade areas covering trade in goods; Article V of GATS governing the conclusion of economic integration agreements in the area of trade in services; and the Enabling Clause (Decision on Differential and More Favourable Treatment Reciprocity and Fuller Participation of Developing Countries) which provides the legal basis for preferential agreements between developing countries. No equivalent derogation from the MFN principle is available under the TRIPS.

3. Using the scope available under WTO rules to depart from the MFN principle, WTO Members have actively engaged in the formation of RTAs. As a result, one of the most prominent features of international trade policy in recent years has been the rapid increase in the number of those agreements. As of October 2012, some 351 RTAs had been notified to the GATT/WTO and were in force.³ Of these, 208 RTAs were notified under the GATT, 108 under the GATS and 36 under the Enabling Clause.⁴ Apart from Mongolia, all WTO Members are currently party to at least one notified RTA.

4. This paper is based on the 194 RTAs notified to the WTO and in force by the beginning of the study in November 2010.

5. Compared with the extensive literature on regionalism, relatively few comprehensive analyses have been carried out on the actual intellectual property (IP) content of RTAs involving parties from across the WTO membership.⁵ Moreover, many of those analyses have focused on RTAs comprising parties with narrow geographical and economic profiles. This paper seeks to make a contribution towards closing this gap by conducting a comprehensive mapping of the IP content in a larger number of RTAs involving parties from all regions and across different levels of development. The paper also aims to complement the coverage of other RTA-related issues contained in the 2011 World Trade Report (WTO 2011a).⁶

6. The paper is organized as follows. Section B contains a brief description of WTO's Agreement on Trade-Related Aspects of Intellectual Property Rights. Section C explains the methodology used to identify the IP provisions contained in RTAs, and provides a detailed description of each category. Section D develops a classification of RTAs according to their level of IP content.

² This paper uses the term RTA to follow the usage in WTO's database on trade agreements under Article XXIV of GATT, Article V of GATS or the Enabling Clause. Note, however, that in practice an "RTA" need not define a geographical region as such, and a number of relevant agreements are bilateral trade deals between geographically distant countries. The terms free trade agreement (FTA) and preferential trade agreement (PTA) have narrower definitions than RTA within the WTO system but in practice both are often used interchangeably with the term RTA.

³ Counting goods and services notifications separately.

⁴ For further details see http://www.wto.org/english/tratop_e/region_e/region_e.htm

⁵ Recent exceptions include Baccini (2011) and Fink (2011).

⁶ The World Trade Report is WTO's flagship publication on trade policy trends.

Section E investigates the architecture of RTAs containing IP provisions, and Section F discusses some possible regulatory and economic implications of such an architecture.

B. THE AGREEMENT ON TRADE-RELATED ASPECTS OF INTELLECTUAL PROPERTY RIGHTS

7. The WTO's Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) was negotiated during the 1986-94 Uruguay Round of trade negotiations. That Agreement was the first to introduce extensive intellectual property rules into the multilateral trade law system.

8. Intellectual property rights (IPRs) refer to the exclusive rights that allow creators to prevent others from using their inventions, designs, distinctive marks or other creations without their permission. The TRIPS Agreement covers the following specific types of IPRs:

- copyright and related rights;
- trademarks;
- geographical indications;
- industrial designs;
- patents;
- layout-designs (topographies) of integrated circuits; and
- protection of undisclosed information.

9. The TRIPS Agreement also contains provisions on the control of anti-competitive practices in contractual licences, and it incorporates standards on suppression of unfair competition from the WIPO-administered Paris Convention on the Protection of Industrial Property.

10. The Uruguay Round established new internationally-agreed trade rules for IPRs in order to provide minimum standards of IP protection, and to provide for the systematic settlement of IP-related disputes. The TRIPS Agreement seeks to strike a balance between the long term benefits resulting from increased creation and invention, and the societal costs that may arise from the exclusive private rights defined by IPRs. Under TRIPS, governments are allowed to address these potential pitfalls through various exclusions from the subject matter of protection (such as an exclusion of morally unacceptable technologies from patent protection) and exceptions and limitations on exclusive rights (for example, research exceptions to patent rights).

11. The TRIPS Agreement is structured in five parts which cover:

- general provisions and basic principles of IP in the WTO system, including those incorporated into the TRIPS from other international agreements;
- standards concerning the availability, scope and use of IPRs;
- the enforcement of IPRs;
- the acquisition and maintenance of IPRs and related *inter-partes* procedures;
- settlement of IP disputes between WTO Members;
- transitional arrangements during the period when the Agreement was introduced; and
- institutional arrangements, which include the delineation of the TRIPS Council's duties, as well as provisions on international cooperation, review and amendment.

12. In addition to the MFN obligation, another important principle of the TRIPS Agreement is the national treatment obligation that requires each Member to treat foreigners no less favourably than it treats its own nationals. National treatment is also a key principle found in other IP agreements outside the WTO system. The TRIPS Agreement also contains an important additional principle: the WTO's IP regime should also contribute to technical innovation and the transfer of technology.

13. The TRIPS Agreement sets the minimum benchmark for IP protection in the territories of WTO Members. The Agreement incorporates some of the main international agreements of the World Intellectual Property Organization (WIPO) that already existed before the WTO was created. These include the Paris Convention for the Protection of Industrial Property and the Berne Convention for the Protection of Literary and Artistic Works (copyright). However, the TRIPS Agreement covers additional areas of IP and introduces higher standards of protection than provided under the two WIPO conventions.

14. A key feature of the TRIPS Agreement is its provisions on enforcement and administration of IPRs, areas of regulation which had not been extensively covered in earlier multilateral agreements. TRIPS requires WTO Members to ensure that IPRs can be effectively enforced under their laws, and that the penalties punish and deter violations. The procedures must be fair and equitable; not unnecessarily time-consuming, complicated or costly; and should not present barriers to legitimate trade. They should offer the possibility of asking courts to review an administrative decision or of appealing a lower court's ruling. The TRIPS Agreement requires that commercial scale trademark counterfeiting and copyright piracy should be treated as criminal offences. It also provides that rights owners should have the assistance of customs authorities to prevent imports of counterfeit and pirated goods, subject to safeguards for legitimate traders.

C. INDIVIDUAL IP PROVISIONS CONTAINED IN RTAS

1. Methodology

15. The primary source of information for this paper was the WTO's database on RTAs.⁷ This database contains official information notified by Members through the WTO's notification system. The notification obligations for RTAs are contained in the GATT 1994, the GATS, the Enabling Clause and the Transparency Mechanism for RTAs. No equivalent notification obligations exist under the TRIPS.

16. The WTO's database on RTAs maintained by the WTO Secretariat provides comprehensive information on individual agreements. The database is, however, incomplete since only about two-thirds of the RTAs in force had been notified to the GATT/WTO. As of November, 2010, the database identified 194 agreements in force (counting as one goods and services components/notifications). This group constitutes the sample for the analysis offered in this paper. Annex I provides basic information about those 194 RTAs. A constraint on this database is that – due to the basis of the notification requirements for RTAs falling under the GATT and GATS, and not TRIPS itself – bilateral or regional agreements that deal with IP in particular, with co-operation on IP administration, or with specific areas of IP protection (such as geographical indications) are not notified through this system.⁸

17. The specific IP provisions in each of the RTAs in the sample were established by examining the text of each agreement for references to a particular variable or topic of interest. Examples include the presence of provisions on patents, affirmations of the TRIPS Agreement, compulsory licensing or provisions of special interest to the public health and pharmaceuticals sector (on the latter, see section C(3)(c) below). The map of provisions was drawn almost exclusively from the texts of the RTAs. Based on the examination of these texts, each variable or topic was coded with a tick (✓) if it was directly mentioned in the text, or left blank where no such reference could be found. See Baccini et al. (2011) for a recent survey of similar approaches to coding the provisions contained in RTAs.

⁷ The database is publicly accessible at <http://rtais.wto.org/UI/PublicMaintainRTAHome.aspx>.

⁸ In this connection, it is noteworthy that a number of WTO Members have updated the TRIPS Council on bilateral agreements specifically relating to the protection of geographical indications, following a proposal by the delegation of China (WTO 2010).

18. It is important to note that actual national laws and their effect should be distinguished from the provisions of RTAs, which for many countries will not automatically carry through to domestic law. Further, given the complexity and sensitivity of interpreting legal texts, no attempt was made to establish whether the obligations matched or exceeded to those in the TRIPS Agreement. Neither was an assessment made of the substantive validity or legal enforceability of the RTA's provisions, except to some measure in the case of the European Union.

19. Some RTAs involving the European Union contain provisions in the form of loosely formulated treaty language referring to IP protection standards in a general sense (e.g., "Parties shall grant and ensure adequate and effective protection of intellectual property rights in accordance with the highest international standards").⁹ Such agreements were categorized as lacking distinct, substantive provisions on the protection of IPRs because the language was general in character and could not be construed in terms of specific obligations to protect IP to a certain, defined standard. If instead it had been assumed that the same language required parties to provide a level of protection similar to the prevailing standard in the European Union, then the aggregate number of IP provisions in the RTAs involving the European Union would have increased significantly.

20. For the Andean Community, the European Union and EFTA members, the mapping reflects regulations (directives or decisions) enacted after the original RTAs came into force. In the case of the Andean Community, this reflects the requirement in the Cartagena Agreement establishing the Community, that a common Andean IP regime be established.¹⁰

2. IP provisions of any type included in RTAs

21. Following the methodology described above, out of the initial 194 RTAs, 165 were classified as containing some type of IP provisions. These RTAs are identified as Group 1 in Chart 1. The 194 individual RTAs covered by the analysis in this paper are listed in Annex I.

22. Chart 2 plots all 194 RTAs as well as the subset of those identified as containing IP provisions by date of entry into force. The chart confirms that the pace of adoption of RTAs has accelerated over time. 110 of the 165 RTAs containing IP provisions have been concluded since 2000. Only 26 RTAs containing IP provisions entered into force before 1995, starting with the EC Treaty in 1958.¹¹ In contrast, 139 notified RTAs containing IP provisions have entered into force since the establishment of WTO in 1995.¹² On the whole, the number of RTAs in general more than doubled between 1990-1995, and then more than quadrupled until 2010.

23. Table 1 shows key summary statistics for the RTAs containing any type of IP provisions. The table shows that the proportion of new RTAs that include IP provisions has increased slightly over time, from some 82% before 1995 to almost 87% during 2005-2009. All the RTAs that entered into force after 2009 contained IP provisions, but this period may not be fully representative as it is likely that some RTAs that entered into force during this recent period have not yet been notified to the WTO.

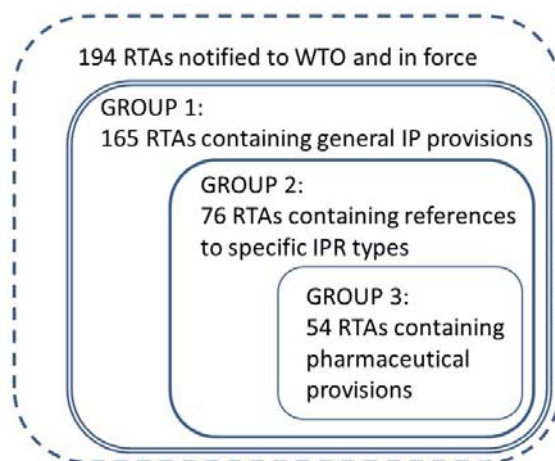
⁹ The RTAs in this situation include the agreements between, on the one hand, the European Union and, on the other hand, Algeria, Cameroon, Egypt, Israel, Jordan, Lebanon, Morocco or Tunisia.

¹⁰ Article 52 of the Cartagena Agreement requires that "Before December 31, 1970, the Commission, shall at the General Secretariat's proposal, approve and submit to the Member Countries for their consideration a common regime on the treatment of foreign capital and, among others, about trademarks, patents, licenses, and royalties. The Member Countries shall take the necessary measures to put this regime into effect within six months following its approval by the Commission."

¹¹ Formally, the Treaty of Rome establishing the European Economic Community.

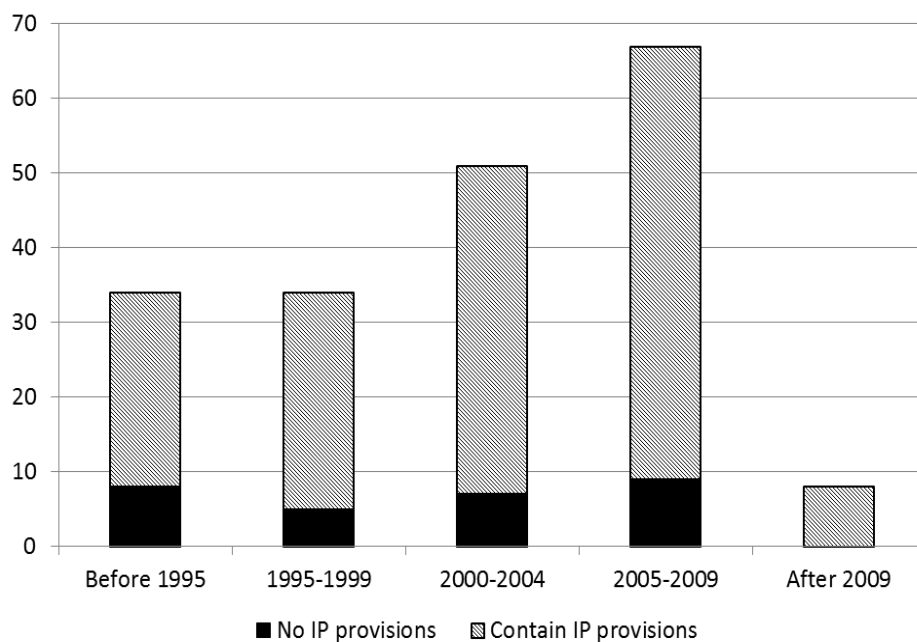
¹² The recent increased in RTAs with pharma-related provisions would be even more apparent if the agreements establishing the EEC, EFTA and the Andean Community were excluded from the count as initially they did not contain significant pharma-related provisions as such but rather established the legal frameworks within which such provisions were subsequently introduced.

Chart 1. Groups of RTAs by IP content.



Source: Annexes I to IV

Chart 2. RTAs by date of entry into force.



Source: Annex I.

Table 1. Number of RTAs containing any type of IP provisions

	Before 1995	1995- 1999	2000- 2004	2005- 2009	After 2009	Total
Type:						
Free Trade Agreement (FTA)	14	22	19	20	4	79
Customs Union (CU)	3	2	3	0	0	8
Economic Integration Agreement (EIA)	1	0	0	0	0	1
Partial Scope Agreement (PSA)	2	0	0	1	0	3
FTA and EIA	3	5	22	36	4	70
CU and EIA	3	0	0	0	0	3
PSA and EIA	0	0	0	1	0	1
Coverage:						
Goods	19	24	22	21	4	90
Services	1	0	0	0	0	1
Goods and Services	6	5	22	37	4	74
Continent:						
Africa	2	1	2	0	0	5
Americas	4	5	8	7	0	24
Asia (incl. Oceania)	3	0	4	18	4	29
Europe	13	17	13	8	3	54
Americas - Asia	1	1	5	9	1	17
Americas - Europe	0	0	4	1	0	5
Africa - Americas	0	0	0	1	0	1
Africa - Europe	0	2	3	9	0	14
Asia - Europe	3	3	5	5	0	16
Type of economy:						
Developed only	6	0	0	2	0	8
Transition only	5	16	4	2	0	27
Developing only	2	5	13	19	4	43
Developing - Developed	7	7	24	29	1	68
Developing - Transition	0	0	1	2	0	3
Developing - LDC	5	1	2	2	2	12
Developing - LDC - Developed	0	0	0	2	1	3
Developing - LDC - Transition	1	0	0	0	0	1
RTAs containing IP provisions	26	29	44	58	8	165
Memorandum items:						
RTAs not containing IP provisions	8	5	7	9	0	29
All RTAs	34	34	51	67	8	194

Source: Annexes I and II.

24. The types of economic integration implicit in RTAs can vary substantially, from partial scope agreements (PSA), to free trade agreements (FTAs), customs unions and Economic Integration Agreements (EIAs).¹³ Approximately 79 RTAs containing IP provisions are FTAs, while a further 70 of these agreements involve the higher degree of integration implicit in the combination of an FTA

¹³ This terminology corresponds to that used in WTO's database on RTAs. PSAs typically involve the elimination of import tariffs in only a few sectors. FTAs entail the elimination of import tariffs in most sectors but FTA members retain independent trade policies. Customs unions build on FTAs by requiring participants to harmonize their external trade policy, including establishing a common external tariff. EIAs involve the liberalization of trade in services. Either FTAs, customs unions or EIAs may include commitments in intellectual property.

and an EIA. In earlier years, a few RTAs containing IP provisions took the form of a customs union. However, this form of close economic integration seems to have lost attractiveness. No customs union containing IP provisions has been concluded since 2005. In fact no notifications have been made to WTO of the entry into force of new customs unions since that year, which may reflect a degree of disillusionment with customs unions, many of which have fallen short of their stated objectives in practice, as documented for the Western Hemisphere in Valdés (2010).

25. Closely related to the above patterns, 74 of the 165 RTAs containing IP provisions covered trade in both goods and services, which is a considerably higher proportion than for RTAs in general (only about one-third of all RTAs contain service commitments).¹⁴

26. Table 1 also shows the RTAs containing IP provisions by continent. The table indicates considerable diversity within and across continents. Europe is the clear leader in terms of intra-regional RTAs, accounting for almost one-third of all agreements containing IP provisions. The Americas occupied the second place in earlier years, but have been overtaken by Asia where most intra-regional RTAs have been established in recent years. By contrast, the participation of African countries is very modest.

27. Almost one-third of RTAs containing IP provisions are inter-regional, with Europe again playing a leading role. However, both Asia and the Americas have also become significant participants in this type of agreement.

28. The level of participation in RTAs containing IP provisions by the parties' level of development is also indicated in Table 1. Some 78 of these RTAs involve partners falling within the same level of development (developing, developed or transition economy), with the rest including partners at different levels.¹⁵ Of those same RTAs, 130 had at least one developing country signatory, while 79 included at least one developed economy (considering the European Union as a single unit), and 31 involved transition economies. LDC parties were signatory to 16 RTAs.

29. The sizeable participation of developing countries in RTAs with IP provisions is expected since these countries constitute the majority of WTO Members. However, this high level of participation is still notable given the common assumption that developing countries do not have positive IP interests to progress in trade negotiations.

30. The participation of LDCs in RTAs with IP provisions is also somewhat unexpected since these countries have successfully argued for their (transitional) exclusion from implementing the most substantive obligations of the TRIPS Agreement. Some RTAs involving LDCs are characterized by a moderate level of IP provisions, for example the ASEAN Free Trade Area and some agreements between ASEAN and other countries.¹⁶ However, the IP content of most RTAs involving LDCs is negligible. Whether LDCs are excluded from IP obligations under RTAs that include IP provisions was not investigated.

3. Particular categories of IP provisions contained in RTAs

31. IP provisions in RTAs vary widely in terms of nature, scope and depth. The following sections describe the different types of provisions contained in RTAs, which are classified in three

¹⁴ The EEA is the one RTA notified as an EIA only, and also as covering trade in services alone.

¹⁵ The following were classified as transition economies: Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyz Republic, Moldova, Russian Federation, Tajikistan, Turkmenistan, Ukraine and Uzbekistan.

¹⁶ The concepts of moderate and negligible IP contents are defined in section D(2) below. The LDC members of ASEAN are Cambodia, Lao People's Democratic Republic and Myanmar.

groups: (a) "general IP provisions"¹⁷, (b) provisions related to specific IPRs and (c) provisions of special interest for public health and the pharmaceutical sector. The eight different types of general IP provisions surveyed are listed in Annex II, which also indicates the particular provisions that apply to each of the RTAs under consideration.

32. The next three sections follow the binary coding methodology explained above, i.e., an examination of the text of each RTA, and the attribution of a tick (✓) if an IP category or topic is explicitly mentioned in the text, or a blank where no such reference is present. The ticks attributed to each provision contained in a particular RTA are indicated in Annexes II, III and IV. The information in those three annexes constitutes the foundation for the rest of the analytical work in this paper.

33. It should be noted that in addition to the IP provisions contained in the main text of RTAs, IP-related requirements are also contained in side letters to some agreements. These letters cover IP-related areas such as public health, pharmaceutical products, enforcement or traditional knowledge. The subject matter of side letters is included in this paper to the extent that these letters generally elaborate on issues mentioned in the agreement itself.

(a) General IP provisions in RTAs

34. Chart 3 illustrates the incidence of general IP provisions with respect to the 165 RTAs in the sample (Group 1 in Chart 1) The chart shows that the incidence of general IP provisions in those agreements varies widely. Just over 80% of the agreements in the sample (i.e., 132 agreements) contain provisions on border measures, while only about half that figure (68 agreements) incorporate provisions on the MFN or national treatment principles in their IP chapters.

35. Table 2 contains summary statistics on the group of RTAs illustrated in Chart 3. The table presents data by period, continent, type of economy and selected WTO Member or group of WTO Members. Each IP provision identified in Chart 3 corresponds to one column in the table. The values shown under each column correspond to the percentage of RTAs falling in a particular category (i.e., a particular row). For example, the value of "50" at the intersection of the column on "General statement of commitment to IP protection" and the row (category) labelled "Before 1995", means that 50% of the RTAs entering into force before 1995 contained provisions related to a commitment to IP protection.

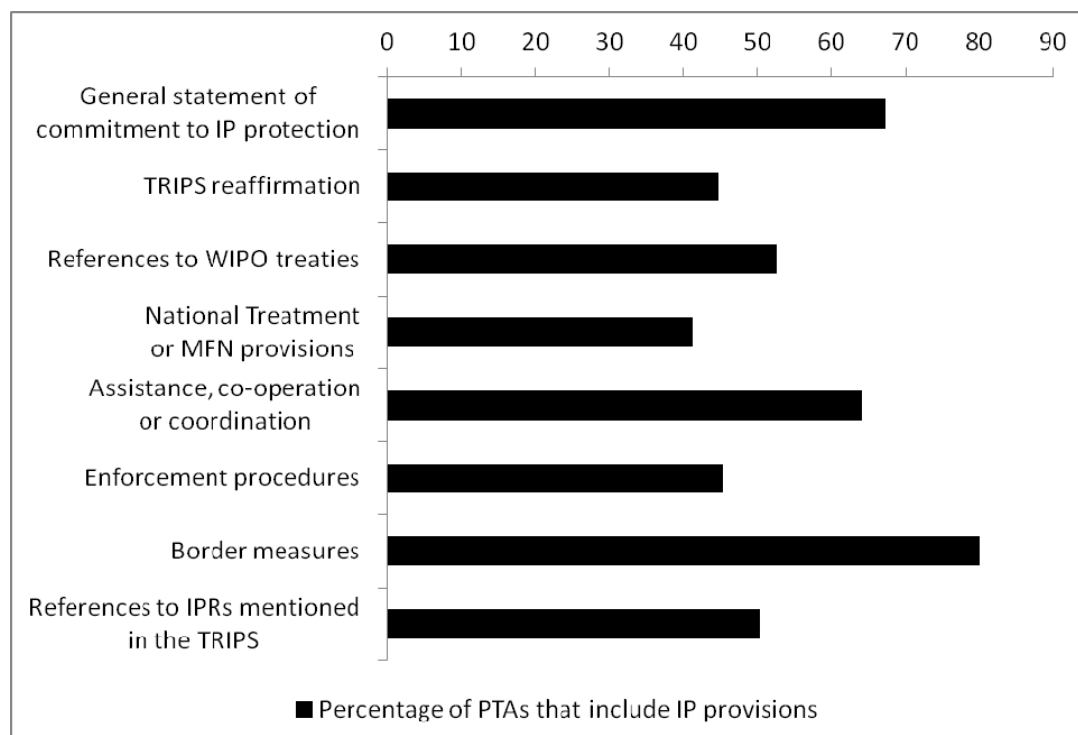
36. The last column of Table 2 shows the actual number of RTAs containing IP provisions per category.¹⁸ For instance, that column shows that 26 RTAs entered into force before 1995.

37. Each of the eight types of general IP provisions included in Chart 2 and Table 2 are discussed in detail in the following sub-sections.

¹⁷ General IP provisions include statements involving declarations on IP protection, enforcement, international co-operation or MFN and national treatment as well as references to international IP agreements or to the IPRs mentioned in the TRIPS.

¹⁸ As a particular RTA falls within only one category, RTAs in all categories under a given heading add up to 165. The exception to this is the categorization by WTO Member or group, since a RTA includes multiple WTO Members.

Chart 3. Agreements containing general IP provisions



Source: Table 2.

(i) *Commitment to IP protection*

38. The question of whether a RTA affirms a commitment to IP protection was explored to assess the general attitudes that parties have towards the issue in the context of their preferential relationship. This provides a snapshot of how the range of approaches adopted by parties determines the nature and assertiveness of IP enforcement regimes that prevail across their territories.

39. There is significant diversity in how the parties express their attitudes, objectives and expectations with respect to protecting IP. In some cases, RTAs include single sentences affirming their commitment to protecting IP in general.¹⁹ A significant number of RTAs provide more detailed provisions elaborating on why effective protection is an important goal.²⁰ Of these, some expressly provide that parties may exceed the standards of the TRIPS Agreement.²¹ A significant number of

¹⁹ For example, a single bullet point in Part III of the Common Economic Zone Agreement provides simply for the, "pursuance of a uniform policy of protecting intellectual property rights."

²⁰ See Part 6: Chapter 17 of the *North American Free Trade Agreement (NAFTA)*. Article 10.1.3 of the *Trans-Pacific Strategic Economic Partnership RTA* states that: "The Parties recognise the importance of intellectual property in promoting economic and social development, particularly in the new digital economy, technological innovation and trade." In sub-articles (a) - (c) it elaborates on how IP protection seeks to facilitate international trade and development, provide certainty to rights holders and users, and to promote the enforcement of IP rights. Further, elaboration on commitments to IP protection in some RTAs is expressed outside the main text, through Annexes obliging compliance or eventual accession to specific IP treaties (e.g., US - Australia which has Annexes and sides letters concerning a range of areas ranging from pharmaceuticals to blood plasma, phonograms, whiskey, and ISP liability. See also Annex 2 of the *EC - Lebanon RTA*).

²¹ *North American Free Trade Agreement*, Article 1702: "A Party may implement in its domestic law more extensive protection of intellectual property rights than is required under this Agreement, provided that such protection is not inconsistent with this Agreement." This wording is identical to that of Article 16.2 of the *Korea - Chile RTA*, which is between entirely different parties.

RTAs also provide general affirmations of their commitment while also elaborating on the framework of protection for a specific IP category such as geographical indications.²²

40. In some cases, RTAs provide implicit commitment to IP protection.²³ In others an explicit commitment is briefly stated and followed by the parties' express intention to elaborate on their IP protection regime at a later stage following the conclusion of the agreement.²⁴ Another interesting feature is reflected in RTAs that adopt a "defensive" or "hesitant" stance with respect to IP protection.²⁵ The language used in the relevant provisions reflects the parties' mere intention to comply with their international legal obligations, rather than a proactive recognition that effective IP protection is central to their interests or relationship.

41. Some RTAs express no position on the importance of protecting intellectual property. This group includes RTAs that only acknowledge IP as a factor that they must account for within the RTA relationship. However, they stop short of an express commitment to provide for effective IP protection.²⁶

42. Table 2 shows that two-thirds of RTAs containing IP provisions include commitments to protect IP generally. The frequency with which such commitments have been included in RTAs has increased over time, from just half of the agreements before the TRIPS entered into force to almost 90% in the most recent RTAs. The table shows strong variations by continent. However, these general commitments are more common in inter-continental RTAs than they are in intra-continental agreements. This type of commitment is also more common in RTAs involving both developed and developing economies.

43. Commitments to IP protection are also more frequent in the RTAs signed by countries with higher numbers of RTAs in force. As shown at the end of Table 2, WTO Members identified as particularly active in RTAs include both developed economies (EFTA members, the European Union, Japan and the United States) and developing countries (Chile, Mexico and Turkey). Each of these three developing countries has more RTAs with IP provisions than has the United States, reflecting in part the larger number of RTAs that those three countries have individually signed.

²² *Chile - China*: Article 10 and Annex 2B.

²³ *Panama and the Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu*. Chapter 16 of this RTA has extensive provisions providing for IP protection framework. However, the language used is neutral. It does not state the objectives of such protection. Nor does it state that protecting IP is a positive and desirable goal. That said, the detailed standards of protection in Chapter 16 provide an implicit acknowledgement that the parties recognize the importance of a strong and pronounced IP protection regime. For similar situation, see also Chapter 9 of *Japan - Vietnam* RTA.

²⁴ *Faroe Island - Norway*: Article 17.1 provides that, "The Contracting Parties shall co-operate with the aim of gradually improving the non-discriminatory protection of intellectual property rights, including measures for the grant and enforcement of such rights. Rules between the Contracting Parties concerning the protection of intellectual property rights shall be elaborated. These rules shall ensure a level of protection similar to that prevailing in the member states of the European Communities and in the member states of the European Free Trade Association."

²⁵ *Ukraine - Former Yugoslav Republic of Macedonia*: Article 28.1: "The Contracting Parties confirm their willingness to cooperate in the area of issues related to the trade-related intellectual property rights, and, if necessary, to apply measures provided for in Annex I C to the Marrakech Agreement establishing the WTO, as well as other multilateral agreements on issues concerning intellectual property protection, to which both Contracting Parties are parties; this list is included in Annex II." See also Article 19.1 of the *Ukraine - Moldova* RTA.

²⁶ *Pakistan - Malaysia*: Article 104.1 states that: "The Parties recognise the importance of intellectual property in promoting economic and social development, particularly in the new digital economy, technological innovation and trade."

Table 2. RTAs containing general IP provisions, % of agreements in each category

	General statement of commitment to IP protection	TRIPS reaffirmation	References to WIPO treaties	MFN or National Treatment provisions	Assistance, co-operation or coordination	Enforcement procedures	Border measures	References to IPRs mentioned in the TRIPS	Memorandum: number of RTAs in category
By period of entry into force:									
Before 1995	50	12	42	31	54	35	69	54	26
1995-1999	41	10	28	21	31	34	90	31	29
2000-2004	73	50	57	41	70	48	82	57	44
2005-2009	81	67	64	55	76	55	78	55	58
After 2009	88	88	75	50	100	38	88	38	8
By continent:									
Africa or Africa-Americas	67	17	17	17	50	17	33	33	6
Africa-Europe	93	57	64	43	100	64	86	36	14
Americas only	67	38	58	46	58	63	75	83	24
Americas-Asia	82	88	82	71	53	65	76	94	17
Americas-Europe	100	80	80	40	100	100	100	100	5
Asia (incl. Oceania) only	66	62	59	38	76	38	66	41	29
Asia-Europe	94	44	69	44	88	63	81	56	16
Europe (incl. CIS) only	46	22	31	33	46	24	93	26	54
By type of economy:									
Developed only	63	25	63	63	63	63	88	63	8
Developed-Developing	90	62	78	59	82	72	85	78	68
Developed-Developing-LDC	67	33	67	67	100	67	33	33	3
Developing only	67	51	42	33	67	42	77	44	43
Developing-LDC	67	33	42	17	67	0	33	33	12
Developing or LDC-Transition	100	50	75	100	100	25	100	25	4
Transition only	7	4	4	4	4	0	93	0	27
By selected WTO Member or group:									
Chile	77	62	62	46	62	54	62	92	13
EFTA	90	62	76	81	90	90	76	81	21
European Union	82	32	68	29	86	61	96	57	28
Japan	82	73	82	82	100	64	91	82	11
Mexico	92	25	83	83	83	83	92	92	12
Turkey	94	50	38	44	94	25	88	19	16
United States	100	64	100	100	45	91	91	100	11
Other	38	40	29	15	40	19	74	25	68
All RTAs with IP provisions	67	45	53	41	64	45	80	50	165

Source: Calculations based on Annex 2.

(ii) *TRIPS reaffirmation*

44. The TRIPS reaffirmation criterion is a narrower conception of the general commitment to IP protection. It may take the form of a phrase mandating compliance with the TRIPS Agreement itself, or requiring the application of TRIPS standards in the bilateral context.²⁷ This criterion deserves independent investigation for two reasons. First, though compliance with the TRIPS Agreement is compulsory for all WTO Members, overt reaffirmation could be regarded as a strong indicator that the parties proactively embrace their rights and obligations under the Agreement. It may be seen as an acceptance of TRIPS provisions, including substantive standards and public policy safeguards and flexibilities, and thus recognition that it may serve as a kind of benchmark for a balanced and comprehensive IP system.

45. Further, even some of the RTAs that affirm the TRIPS may, arguably, diverge from this Agreement. This group mainly includes RTAs that express the intention to exceed TRIPS standards. Though the TRIPS Agreement does allow Members to go beyond the TRIPS standards of IP protection, certain WTO Members have highlighted the systemic implications of what they have termed TRIPS-plus initiatives, which "could disturb the fine balance of rights and obligations that had been provided in the TRIPS Agreement and could negate decisions like the Doha Declaration on Public Health" (WTO 2012).

46. The second reason for investigating the presence of TRIPS reaffirmations in RTAs is that the accession of some non-WTO Members to the TRIPS Agreement is mandated in RTAs. Such accessions are often scheduled to occur by a particular date. This situation raises some interesting and potentially problematic legal issues since accession to the TRIPS alone is not possible without accession to the WTO. For example, in the case of the *EC - Algeria* RTA Algeria was required to have acceded to the TRIPS Agreement by 2009 (and not merely adopt TRIPS standards).²⁸ As Algeria is still not a WTO Member, the legal effect and significance of such accession mandates is doubtful.

47. Further, in cases where RTAs require non-WTO Members to comply with the TRIPS Agreement, it is uncertain whether such compliance is restricted to the text of the Agreement or the accompanying body of TRIPS and WTO jurisprudence. It is also uncertain whether a TRIPS ruling at the WTO would necessitate the retroactive reversal or jurisprudential adjustment of a RTA ruling.

48. Table 2 shows that TRIPS reaffirmations appear in 45% of all RTAs containing IP provisions, with the frequency of inclusion of those reaffirmations steadily increasing. Strong variations across continents generally correspond to those identified for general statements of commitment to IP protection. However, the latter statements are more common than TRIPS reaffirmations, except in the Americas – Europe RTAs. TRIPS reaffirmations are particularly frequent in RTAs involving developed and developing countries but are seldom included in RTAs amongst transition economies. Japan has incorporated such reaffirmations in almost three-quarters of its RTAs; in contrast, Mexico has included them in only a quarter of its own agreements.

²⁷ *New Zealand - Singapore*: Article 57 provides that "The Parties agree that the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights shall govern and apply to all intellectual property issues arising from this Agreement", while *Turkey - Palestinian Authority*: Article 25.1 provides that, "The Parties shall grant and ensure adequate effective protection of intellectual, industrial and commercial property rights in line with the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs) and other international Agreements. This shall encompass effective means of enforcing such rights."

²⁸ *EC - Algeria*, Annex 6 on Intellectual Property: "Before the end of the fourth year from the entry into force of this Agreement, Algeria and the European Communities and/or their Member States shall, to the extent they have not yet done so, accede to, and ensure an adequate and effective implementation of the obligations arising from, the following multilateral conventions.... Agreement on Trade-Related Aspects of Intellectual Property Rights (Marrakech, 15 April 1994), taking into consideration the transitional period provided for developing countries in Article 65 of that Agreement".

(iii) *References to WIPO conventions*

49. The purpose of analysing references to the WIPO treaties and the UPOV Convention is to determine the importance that RTA parties place on these agreements.²⁹ Affirmation would increase the probability that the RTA parties' IP laws and policies would be in line with a significant part of the extensive WIPO framework. Affirmatory references to WIPO treaties provide WTO (and WIPO) Members a significant degree of predictability in terms of how any given RTA could alter, depart from, or re-conceptualise the common understanding of the international IP framework.

50. An additional effect of mandated compliance with certain WIPO treaties is the facilitation of a more harmonized global IP regime. This would occur primarily through the extension of the WIPO system into the national laws of RTAs parties regardless of whether they are members of WIPO or not.

51. References to WIPO treaties may take different forms. One approach is the mere reaffirmation of existing obligations of the parties under WIPO treaties that they have in common.³⁰ A related variation is one in which the same treaty divides WIPO treaties into two categories under separate provisions. The wording of the affirmation differs slightly between the two affirmatory provisions.³¹

52. Another group of RTAs mandates compliance with the substantive provisions of certain WIPO treaties without requiring accession to the agreements themselves.³² Other treaties go a step further and actually mandate the eventual accession of some parties.³³ A third manifestation of such references provides a “soft” mandate that encourages parties to make their “best efforts” to join WIPO

²⁹ Detailed information on the 24 treaties administered by WIPO may be found at <http://www.wipo.int/treaties/en/>. Information on the UPOV Convention is available at <http://www.upov.int/overview/en/>.

³⁰ *Japan – Switzerland* Article 107.3: “The Parties reaffirm their commitment to comply with the obligations set out in the international agreements relating to intellectual property to which both Parties are parties at the date of entry into force of this Agreement and any amendment thereto which becomes effective for both Parties, including the following...”. The list includes the Patent cooperation Treaty; The Strasbourg Agreement; The Budapest Treaty; The Madrid Agreement and other non-WIPO treaties such as the TRIPS and UPOV Agreement.

³¹ For example, Article 46.3 of the *EC – South Africa* RTA states that: “The Community and its Member States confirm the importance they attach to the obligations arising from the:...”. The provision then lists the Madrid Convention, the Rome Convention and the Patent Cooperation treaty. However, Article 46.5 then says, “The Parties confirm the importance they attach to the following instruments:...”. The provision then lists the Nice Agreement; Berne Convention; UPOV Convention; Budapest Treaty; Paris Convention; and WIPO Copyright Treaty.

Article 46.3 affirms the importance of obligations arising from one set of WIPO and UPOV treaties while Article 46.5 affirms the importance of other WIPO “instruments”. The meaning and significance of the phrase “obligations arising from” and the word “instruments” is unclear.

³² *North American Free Trade Agreement* (NAFTA) Article 1701.2: “To provide adequate and effective protection and enforcement of intellectual property rights, each Party shall, at a minimum, give effect to this Chapter and to the substantive provisions of:” The list includes the Berne Convention; the Paris Convention; the Geneva Convention for the Protection of Producers of Phonograms Against Unauthorized Duplication of their Phonograms; and the UPOV Convention.

³³ *EC – Morocco* Annex 7, Article 1: “By the end of the fourth year after the entry into force of the Agreement, Morocco shall accede to the following; multilateral conventions on the protection of intellectual, industrial and commercial property; International Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organisations (Rome, 1961); Budapest Treaty on the International Recognition of the Deposit of Micro-Organisms for the Purposes of Patent Procedure (1977, amended in 1980); Patent Cooperation Treaty (1970, amended in 1979 and modified in 1984); International Convention for the Protection of the New Varieties of Plants (Act of Geneva, 1991).” See also Annex XII, Article 2.2 of the EFTA – Chile RTA.

treaties they are not already party to.³⁴ In other cases, WIPO treaties are cited by implication in a number of RTAs. In these cases, the parties affirm their obligations under international IP agreements that are "in effect between the parties".³⁵

53. Table 2 shows that references to WIPO treaties appear in slightly more than half of all RTAs that include IP provisions. The pattern of those references follows closely that of commitments to IP protection. Among the differences is the low number of references to WIPO treaties in RTAs involving Africa, and those including Turkey.

(iv) *MFN or national treatment declarations*

54. The rationale for including MFN and national treatment provisions in this study is to determine whether the RTAs supplement the corresponding standards of the TRIPS Agreement. Some RTAs provide the TRIPS Agreement as the substantive benchmark for the application of MFN and national treatment standards.³⁶ Consequently, the corresponding standards of the Berne and Paris Conventions constitute a part of this benchmark as provided for by Article 1 of the TRIPS Agreement.

55. Some RTAs define and address issues related to intellectual property in their investment provisions. Therefore, national treatment and MFN requirements in these RTAs have largely been phrased in the context of investment protection.³⁷ Certain MFN provisions are narrower in scope. Some mandate parties to provide for treatment no less favourable than they grant to their partners in other RTAs.³⁸

56. Around 41% of RTAs containing IP provisions address the MFN and/or national treatment principle in some capacity. The coverage of MFN and national treatment has increased over time and varies across the RTAs. Only a minority of the Americas-Europe RTAs include MFN and national treatment provisions even though the bulk of them cover other general IP provisions. This probably reflects the fact that MFN or national treatment is not typically part of the RTAs involving Chile and the European Union.

57. Section F.1 below contains a further discussion of MFN and National Treatment in the context of RTAs including IP provisions. It is noted there that the application of IP commitments would be on an MFN basis regardless of whether the RTA specifically states so.

(v) *Statements on assistance, cooperation or coordination*

58. Some provisions promote technical assistance for the primary benefit of the developing country parties. These include programmes that fund or facilitate technology transfer, IP education, and legal assistance. The *ASEAN - Australia - New Zealand* agreement is an example of a developing

³⁴ *Nicaragua – Taiwan* Article 17.03(3): "The Parties confirm that if either of them that is not a party to one or more of the multilateral treaties listed in Article 17.01, it commits itself to put forth its best efforts to seek to join those treaties in due time." See also *Japan – Indonesia* Article 106.6 which encourages accession using the words, "Each Party shall endeavor to become a party if it is not a party, to the following international agreements in accordance with its necessary procedures". The list of treaties includes the Madrid Agreement, the International Convention for the Protection of Performers, Producers of Phonograms; and the UPOV Convention.

³⁵ *Pakistan – Malaysia* Article 105: "The Parties reaffirm and shall comply with their existing rights and obligations with respect to each other under the TRIPS Agreement and any other multilateral agreement relating to intellectual property to which they are both parties."

³⁶ *EFTA Treaty* Articles 19.2 and 19.3; *Egypt – Turkey*, Article 24.2 and 24.3.

³⁷ *Singapore - Australia* Article 3; *Peru – Singapore*, Article 10.3 and 10.4; *Korea – Chile*, Articles 10.3 and 10.4; *Japan – Mexico*, Article 73.2.

³⁸ An example of such an agreement which limits the scope of its MFN mandate is the *EU - Serbia* RTA. Article 40.2 of this agreement provides that: "...in respect of the recognition and protection of intellectual, industrial and commercial property, treatment no less favourable than that granted by them to any third country under bilateral Agreements."

– developed RTA that is mostly concerned with providing assistance to parties with insufficient capacity to implement the IP provisions of the treaty.³⁹ Another example is Article 58.3(a) of the *EC-Cameroon* RTA.⁴⁰ Other RTAs contained "mutual benefit" provisions that could be interpreted as providing balanced benefits to all parties.⁴¹

59. Another group of RTAs is distinguishable by the parties' narrow focus on one or several areas of IP. The *Canada - Peru* RTA only provides for co-operation in e-commerce.⁴² The *China - Hong Kong, China* RTA provides for cooperation in the area of traditional Chinese medicine.⁴³

60. Coordination and capacity building efforts often include the establishment of bodies to facilitate these goals. Of the RTAs between developed and developing parties, some focus solely on improving the ability of the latter to better protect IP rights. Another group focuses on assistance that is meant to benefit developing parties. The RTAs in which the United States is a party tend to provide comprehensive packages encompassing all these approaches.

61. Table 2 confirms that the greatest incidence of RTAs containing statements on technical assistance, cooperation or coordination is found amongst agreements involving developed and developing countries or LDCs. However, such incidence is also high among RTAs involving, on the one hand, developing countries and, on the other hand, LDCs or economies in transition.

(vi) *Enforcement procedures*

62. Enforcement provisions can reflect parties' perceptions that they have a positive interest in the effective protection of IP rights in their trading partners, recognition of the need for cooperation on enforcement called for by TRIPS, and/or a concern that IP enforcement does not create a barrier to legitimate trade, and is balanced and consistent with principles of natural justice. Most of the RTAs studied do not provide substantive procedures for enforcement.

63. The RTAs that contain enforcement provisions range from those with detailed and punitive provisions on one end, to those that merely require the parties to provide for enforcement frameworks in their national laws. For example, some RTAs provide for criminal sanctions that expressly mandate imprisonment to be available as a sanction for some forms of infringement.⁴⁴ Other RTAs

³⁹ *ASEAN - Australia - New Zealand*, Article 9.1. "The Parties acknowledge the significant differences in capacity between some Parties in the area of intellectual property. Mindful of this, where a Party's implementation of this Chapter is inhibited by capacity constraints, each other Party shall, as appropriate, and upon request, endeavour to provide co-operation to that Party to assist in the implementation of this Chapter." Article 9.2 also provides that, "At the request of a Party, any other Party may, to the extent possible and as appropriate, render assistance to the requesting Party in order to enhance the requesting Party's national framework for the acquisition, protection, enforcement, utilisation and creation of intellectual property, with a view to developing intellectual property systems that foster domestic innovation in the requesting Party." See also Article 166 of the *China - New Zealand* RTA

⁴⁰ The provision states that "cooperation shall be directed at supporting the implementation of each Party's commitments and shall extend to the following areas inter alia... reinforcement of regional integration initiatives in Central Africa with a view to improving regional regulatory capacity, regional laws and regulations." The rest of Article 58 is similarly focused on increasing capacity to protect intellectual property.

⁴¹ For example, Article 15.1.16 of the *US - Dominican Republic* RTA provides for "coordination, training, specialization courses, and exchange of information between the intellectual property offices and other institutions of the Parties". It also calls for the enhancement of "knowledge, development, and implementation of the electronic systems used for the management of intellectual property." Further, the agreement provides for trade capacity building efforts that are coordinated through the joint Committee on Trade Capacity Building.

⁴² *Canada - Peru*, Article 1508(b)

⁴³ *China - Hong Kong, China*, Article 17D.

⁴⁴ *US - Australia* Article 17.11.27(a): "In cases of wilful trademark counterfeiting or copyright piracy on a commercial scale, each Party shall provide: (a) penalties that include imprisonment and monetary fines sufficiently high to provide a deterrent to infringement consistent with a policy of removing the monetary

also provide for criminal remedies, but do not specifically provide imprisonment as an option.⁴⁵ A third category of RTAs merely provides for cooperation in the area of enforcement without elaborating on the types of sanctions that must be available within the laws of each party⁴⁶. A typical approach is the inclusion of a brief statement obliging parties to "provide in their respective laws for the enforcement of intellectual property rights consistent with the TRIPS Agreement."⁴⁷

64. On the other hand, RTAs involving the United States stand out by their level of detail and enforcement mechanisms. They require extensive protection of IP rights in a variety of ways. Several examples are worth noting. Article 15.10.3 of the *US – Oman* RTA provides that "The Parties understand that a decision that a Party makes on the distribution of enforcement resources shall not excuse that Party from complying with this Chapter." Another example is Article 15.10.7 on the amount of damages available under civil judicial proceedings.⁴⁸ Article 15.10.29 also provides extensive procedures regulating internet service providers who, among other obligations, are required to cooperate with copyright owners and play an anti-piracy role. The *Australia - Chile* agreement mirrors the structure and language on IP enforcement in general of those in which the United States is a party (both Australia and Chile are separately parties to bilateral agreements with the United States).

65. Another approach to incorporating enforcement procedures in some RTAs is by reference to other treaties. For example, enforcement procedures with respect to patent rights in some of the EFTA agreements are provided by explicit reference to the TRIPS Agreement.⁴⁹ Other RTAs also provide for enforcement procedures by implicit incorporation of TRIPS enforcement provisions as well as those of other multilateral IP treaties.⁵⁰

66. Overall, some 45% of all RTAs containing IP provisions include references to enforcement procedures, as indicated in Table 2. The table also shows that a high proportion of RTAs involving countries at different levels of economic development include enforcement procedures. Unsurprisingly, slightly more than 90% of RTAs involving the United States refer to enforcement procedures; less expected, 83% of the RTAs involving Mexico, a developing country, also include

incentive of the infringer. Also, each Party shall encourage its judicial authorities to impose fines at levels sufficient to provide a deterrent to future infringements". See also *Japan – Indonesia*, Article 120; *Japan – Philippines*, Article 129.3.

⁴⁵ Article 125.3 of the *Japan – Switzerland* is an example. The provision mandates the institution of sanctions for infringement but leaves it up to each party and its national laws to determine the exact nature of the sanction. "Each Party shall provide for, where permitted by its laws and regulations, stricter or separate penalties to offences listed in subparagraphs 1(a), 1(b) and 1(d) committed in connection with corporate activities or on a commercial scale." Other sub-paragraphs of Article 125 use similarly deferential language.

⁴⁶ *Malaysia – Pakistan*, Article 48: "The customs authorities shall, wherever possible, cooperate and exchange information in their enforcement against importation and exportation of goods suspected of infringing intellectual property rights." See also *Singapore – Australia* Article 5; *Thailand – New Zealand*, Article 12.4.

⁴⁷ *Korea - India* Article 12.4.

⁴⁸ "In civil judicial proceedings, each Party shall, at least with respect to works, phonograms, and performances protected by copyright or related rights, and in cases of trademark counterfeiting, establish or maintain pre-established damages, which shall be available *on the election of the right holder*. Pre-established damages shall be in an amount sufficient to constitute a deterrent to future infringements and to compensate fully the right holder for the harm caused by the infringement. In civil judicial proceedings concerning patent infringement, each Party shall provide that its judicial authorities shall have the authority to increase damages to an amount that is up to three times the amount of the injury found or assessed."

⁴⁹ For example, Annex XII, Article 5 of the *EFTA - Turkey* RTA: "The States Parties to this Agreement shall provide for enforcement provisions under their national laws of the same level as that provided in the TRIPS Agreement, in particular Articles 41 to 61".

⁵⁰ See also *EFTA - SACU* Article 26.2 which simply provides, "The Parties shall grant and ensure adequate, effective and non-discriminatory protection of intellectual property rights, and provide for measures for the enforcement of such rights against infringement thereof, counterfeiting and piracy, in accordance with the provisions of this Article and the obligations set out in the international agreements to which they are parties."

such procedures, a proportion substantially higher than for the EFTA members or the European Union.

(vii) *Border measures*

67. The wording of a number of RTAs with provisions on IP-related border measures presents such measures as permissible rather than imperative to IP protection. A typical example is the *Armenia - Moldova* RTA.⁵¹ Other RTAs may be equally brief in their coverage of border measures, but are more proactive in their language.⁵²

68. Consistent with the pattern reflected under the enforcement procedures section, RTAs involving the United States also have the most extensive provisions relating to border measures. For instance, the *US - Australia* RTA provides extensive coverage on border measures for which both sides are compelled to enact appropriate legislation.⁵³

69. A notable feature of many of the RTAs involving the United States is that most require the parties to provide for *ex officio* action by customs authorities in the absence of a formal complaint by a rights holder.⁵⁴ Article 58 of the TRIPS Agreement allows, but does not mandate Members to provide for *ex officio* action. Therefore, the decision to provide for such action is a clear indicator that the parties to RTAs involving the United States intend to provide a high and proactive level of IP protection through rigorous border measures.

70. In general, border measures are the most common of all general IP provisions incorporated in RTAs, Table 2 showing that references to such measures appear in some 81% of all RTAs that include IP provisions. Their common use has been a constant over time, and is prevalent among most continents and types of economy. More than 90% of RTAs involving the European Union, Japan, Mexico and the United States contain references to border measures; almost the same proportion of Turkey's RTAs include border measures, as do 76% of EFTA's agreements.

(viii) *References to IPRs mentioned in the TRIPS*

71. As noted above, the TRIPS Agreement covers specific categories of IP law, such as on geographical indications, patents, trademarks or and copyrights. Several RTAs contain various provisions addressing these categories. The inclusion of specific IPR categories in RTAs is covered in detail in the next section.

72. Based on Table 2, and as a precursor to the following section, it can be observed that references to specific IPRs are included in half of the RTAs surveyed. When mentioned, specific IPRs are more common in RTAs involving developed economies. Thus, all the RTAs between the Americas and Europe contain such references. Linked to this is the fact that the clear majority of RTAs signed by EFTA members, Japan and the United States contain references to specific IPRs. However, this type of references is also common in the RTAs involving Chile and Mexico.

⁵¹ *Armenia - Moldova*, Article 11 provides that: "This Agreement shall not impede the right of any of the Contracting Parties to take generally accepted in the international practice measures which it considers necessary for protecting its vital interests or which are undoubtedly necessary for compliance with international agreements to which it is or intends to become a party, if these measures relate to (*inter se*)... the protection of industrial and intellectual property. For similar language, see *Kyrgyz Republic - Ukraine* RTA, Article 9.

⁵² *ASEAN - Australia - New Zealand*, Article 9.6 provides that: "Parties shall co-operate on border measures with a view to eliminating trade which infringes intellectual property rights. Parties who are members of the WTO shall also cooperate with each other to support the effective implementation of the requirements relating to border measures set out in Articles 51 to 60 of the TRIPS Agreement."

⁵³ *US - Australia*, Articles 17.11.19 - 17.11.25.

⁵⁴ *US - Australia* Article 17.11.22. See also *US - Bahrain* Article 14.10.23; *US - Jordan* Article 4.26; *US - Singapore* Article 16.9.19.

(b) Provisions related to specific IPR categories

73. In addition to the general IP provisions discussed in the previous section, RTAs may also contain more detailed references to specific categories of IP law. This study took into consideration the following 11 such categories: patents, copyright and related rights, trademarks, undisclosed information, industrial designs, geographical indications, layout designs of integrated circuits, new plant varieties, encrypted program-carrying satellite signals, domain names, and traditional knowledge, folklore or genetic resources. Out of the 165 RTAs containing general IP provisions, 76 were found to also contain provisions related to one or more of those specific IPR categories. These RTAs are represented as Group 2 in Chart 1 and individually listed in Annex III.

74. The incidence of provisions related to specific IPR types is plotted in Chart 4. Of the 11 different types identified in that chart, eight are mentioned in the TRIPS Agreement.⁵⁵ In general, the incidence of specific IPR categories is considerably lower than that of the general IP provisions examined in the previous section.

75. Chart 4 shows strong variations in the incidence of the different types of specific IPRs examined in this section. Geographical indications, patents, trademarks and copyrights are the most commonly cited IPR categories. The next most commonly referenced categories are industrial designs and undisclosed information, with the other five specific IPRs being mentioned in 15% or less of the RTAs containing some type of IP provisions.

76. Table 3 contains summary statistics for the specific IPR types illustrated in Chart 4. The table has the same structure and follows the same methodology as Table 2. The values in the table correspond to the percentage of RTAs falling in a particular category. The actual number of RTAs per category is the same as those shown in the last column of Table 2. The eleven types of specific IPRs included in Chart 4 and Table 3 are discussed in the following sub-sections.

(i) *Patents*

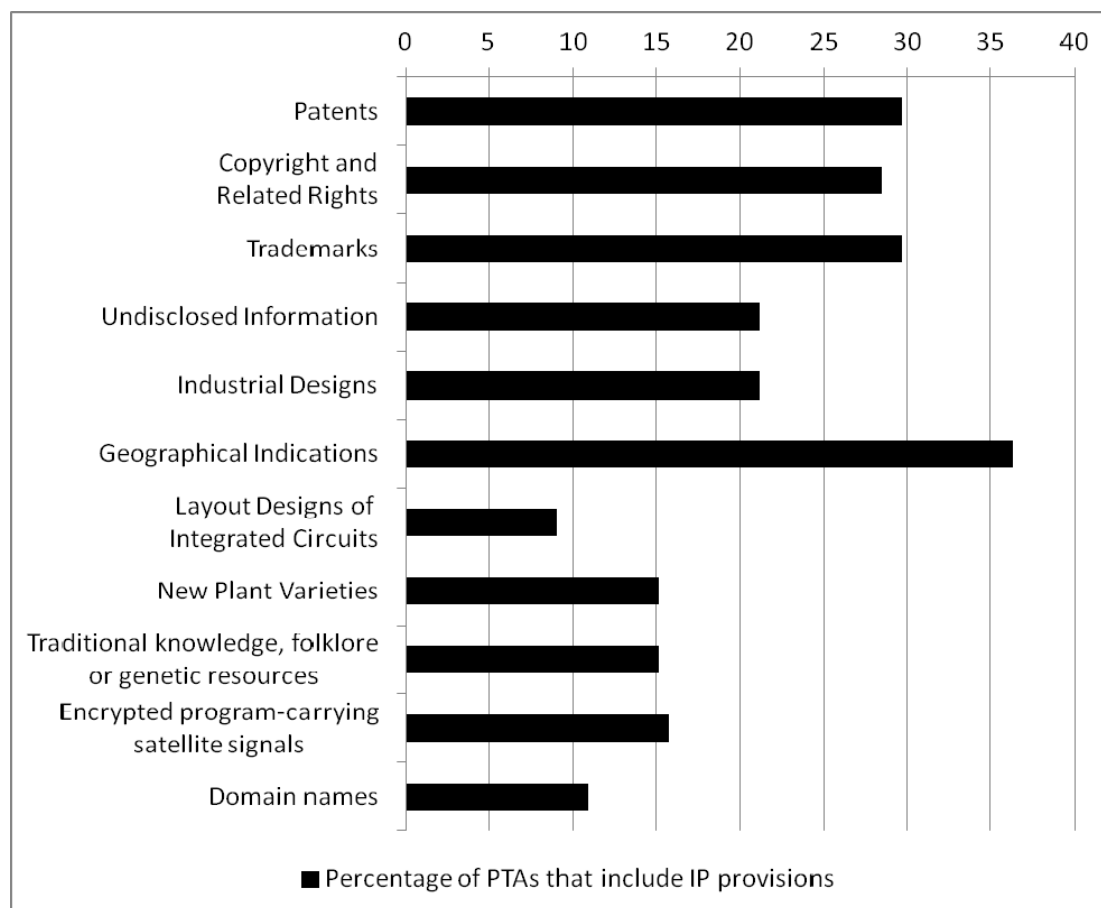
77. A patent is a document that is issued by a government office or a regional office acting for several countries, which describes an invention and confers an exclusive range of legal rights on its owner. These include rights to the manufacture, use, sale, offering for sale and importation of the invention. The patent regime is concerned with protecting inventions in fields of technology, which include both products and innovative processes. The protection conferred by the patent is time-limited (generally up to a maximum of 20 years).⁵⁶

78. Table 3 shows that slightly less than one-third of the 165 RTAs under consideration contain explicit references to patents. There is no clear pattern of increased references to patents over time. On the other hand, clear differences by continent emerge, with 60% of RTAs between the Americas and Europe including references to patents, and almost half of other RTAs involving the Americas and Asia also containing such provisions. The percentage is considerably lower elsewhere.

⁵⁵ The eight categories are patents, copyright and related rights, trademarks, undisclosed information, industrial designs, geographical indications, layout designs of integrated circuits, and new plant varieties.

⁵⁶ For further information on this and other types of IPRs see <http://www.wipo.int/export/sites/www/about-ip/en/iprm/pdf/ch2.pdf>.

Chart 4. Agreements containing references to specific IPRs



Source: Table 3.

79. The above patterns are reflected in the fact that patents are mostly included in RTAs involving developed countries, with over 80% of the RTAs signed by EFTA members or the United States, and 55% of Japan's RTAs, containing patent provisions. However, only just over one-third of RTAs involving the European Union make explicit reference to patents.

80. The low incidence of patent references in RTAs involving the European Union does not necessarily mean that these agreements contain no provisions related to patents. Rather such low incidence may be explained by the text of the relevant RTAs including no explicit mention of patents but instead containing references to international treaties related to patents. In this respect, Table 2 indicates that 68% of the RTAs involving the European Union contain references to WIPO treaties.⁵⁷ For the purposes of coding for the presence of IP categories and issues, these indirect references would not have been recorded as specific provisions on patents *per se*. The same observation applies to the low incidence of references to the other specific IPR categories in RTAs involving the European Union discussed in the following sub-sections.

⁵⁷ For example, the European Union and several of its preferential partners in the Mediterranean "confirm the importance they attach to the obligations arising from..." the Paris Convention for the Protection of Industrial Property.

Table 3. RTAs containing references to specific IPRs, % of agreements in each category

	Patents	Copyright and Related Rights	Trademarks	Undisclosed Information	Industrial Designs	Geographical Indications	Layout Designs of Integrated Circuits	New Plant Varieties	Traditional knowledge, folklore or genetic resources	Encrypted program-carrying satellite signals	Domain names
By period											
Before 1995	31	27	23	19	27	23	19	12	19	12	0
1995-1999	7	21	21	17	7	21	3	10	3	17	3
2000-2004	32	32	34	25	27	45	14	14	7	16	9
2005-2009	41	31	34	22	22	43	5	21	21	17	22
After 2009	13	25	25	13	13	38	0	13	50	13	0
By continent:											
Africa or Africa-Americas	17	17	17	0	0	17	0	0	0	17	17
Africa-Europe	21	7	7	14	14	7	0	0	0	0	0
Americas only	33	54	50	33	21	71	8	25	13	46	21
Americas-Asia	47	47	47	12	0	82	0	18	18	29	35
Americas-Europe	60	40	60	40	60	80	20	20	20	0	20
Asia (incl. Oceania) only	21	24	28	17	21	14	0	17	28	0	14
Asia-Europe	38	19	25	31	38	38	13	6	6	0	6
Europe (incl. CIS) only	26	22	22	20	24	24	19	17	17	17	0
By economy type:											
Developed only	63	50	50	38	50	63	25	38	25	38	25
Developed-Developing	54	46	50	37	40	56	18	21	21	24	22
Developed-Developing-LDC	0	33	33	0	0	33	0	0	33	0	0
Developing only	16	26	23	16	9	37	2	19	12	16	2
Developing-LDC	0	0	0	0	0	0	0	0	17	0	0
Developing or LDC-Transition	0	0	0	0	0	0	0	0	25	0	0
Transition only	0	0	0	0	0	0	0	0	0	0	0
By selected WTO Member or group:											
Chile	31	23	46	8	8	92	0	8	0	23	23
EFTA	81	43	48	57	71	67	29	10	5	5	5
European Union	36	36	39	32	36	39	29	36	36	32	4
Japan	55	55	64	64	55	45	0	64	18	0	36
Mexico	42	75	75	75	42	83	17	42	0	67	0
Turkey	13	13	13	6	13	13	6	6	13	6	0
United States	91	91	82	18	9	91	9	0	9	82	73
Other	4	9	7	1	3	12	1	4	16	0	4
All RTAs with IP provisions	30	28	30	21	21	36	9	15	15	16	11

Source: Calculations based on Annex 3.

(ii) *Copyright and related rights*

81. Literary and artistic works such as books, musical compositions, paintings, sculptures, computer programs and films are protected by copyright. Generally, the minimum period of protection is 50 years after the death of the author. Copyright and related rights, sometimes referred

to as “neighbouring” rights, protect the rights of performers (e.g. actors, singers and musicians), producers of phonograms (sound recordings) and broadcasting organizations. The main social purpose of protection of copyright and related rights is to encourage and reward creative work.

82. Table 3 shows that about 28% of the RTAs under examination contain explicit references to copyrights. There is no distinct pattern over time. By continent, on the other hand, it is clear that RTAs involving the Americas have a greater incidence of references to copyrights than agreements involving other continents. This probably reflects the inclusion of copyright provisions in the RTAs involving Mexico or the United States, the two countries whose preferential agreements tend to include copyright provisions more often.

(iii) *Trademarks including service marks*

83. A trademark is any sign that individualizes the goods of a given enterprise and distinguishes them from the goods of its competitors. Such signs, in particular words including personal names, letters, numerals, figurative elements, combinations of colours as well as any combination of such signs, are generally eligible for registration as trademarks. Other marks that may constitute valid trademarks depending on the national jurisdiction include olfactory marks, sound marks and three dimensional marks.

84. The pattern of trademark provisions in the RTAs under study is remarkably similar to that identified for copyrights. An exception is the European Union, where the incidence of RTAs including trademark provisions (9%) is much smaller than of agreements covering copyrights (36%). Annex 3 also confirms the similar patterns between RTAs with trademarks and copyrights provisions.

(iv) *Undisclosed information, including trade secrets.*

85. Undisclosed information, also known as trade secrets, is confidential information that is not generally known among, or is not readily accessible to other persons apart from its proprietor. Undisclosed information is kept secret because it tends to have commercial value that would be eroded if it were disclosed to others. Such information remains legally protected provided the person lawfully in control of it takes reasonable steps to keep it secret. Unlike other forms of intellectual property protection, trade secrets are not protected by a specially conferred right. They are protected without registration or any procedural formalities.

86. The subject matter of trade secrets is usually broadly defined to include sales methods, consumer profiles, advertising strategies, lists of suppliers and clients, and manufacturing processes. Unfair practices with respect to trade secrets include industrial or commercial espionage, breach of contract and breach of confidence. An example of a trade secret is the recipe for Coca Cola. It should be noted that in the context of this paper, references to ‘undisclosed information’ also includes provisions that provide for test data protection,⁵⁸ a specific form of protection that is distinguished in the TRIPS Agreement (Article 39.3) and is provided in many countries by separate legal mechanisms other than the general protection afforded to undisclosed information or trade secrets.

87. Table 3 indicates that about 21% of the agreements under study include provisions on undisclosed information. There are no obvious patterns by period, although RTAs involving the Americas tend to cover undisclosed information more often than other agreements. References to undisclosed information appear much more frequently in RTAs involving developed countries.

⁵⁸ For example, *Mexico - Northern Triangle*, Chapter XVI, Section G addresses undisclosed information in general, and also includes provisions on the protection of test data for pharmaceuticals and agrochemicals.

However, the highest occurrence of this IPR category is found in Mexico's RTAs, with three-quarters of all its agreements containing references to undisclosed information. This is surprising because references to undisclosed information are rare in other RTAs involving developing countries.

(v) *Industrial designs*

88. Legally, "industrial design" protection is the title granted by a governmental authority, generally the Patent Office, for the aesthetic or ornamental aspects of industrial products. Protection is provided solely for the non-functional features of these products, and does not extend to any functional features of the object to which it is applied.

89. Industrial designs may be two or three-dimensional. Generally, novelty, originality and visual appeal are the essential criteria that must be met if an industrial design is to be protected. However, these criteria can differ from one country to another. Industrial designs increase an object's marketability by rendering it attractive or appealing, which then enhances its commercial value. The relevance of design protection will be of importance notably when copyright protection is excluded or reduced.

90. As with for undisclosed information, Table 3 shows that 21% of the RTAs under consideration include provisions on industrial designs. Further, the incidence of industrial designs in RTAs is similar to those found for undisclosed information. However, the inclusion of references to industrial designs in Mexico's RTAs does not stand out as much as for undisclosed information.

(vi) *Geographical indications*

91. A geographical indication (GI) is a sign used on goods that have a specific geographical origin and possess qualities, reputation or characteristics that are essentially attributable to that place of origin. Most commonly, a GI includes the name of the place of origin of the goods. Agricultural products typically have qualities that derive from their place of production, such as climate and soil. GIs may be used for a wide variety of products, whether natural, agricultural or manufactured. One example of a GI is Darjeeling tea from India.

92. As shown in Table 3, geographical indications are the most commonly included IPR in the RTAs under study. Just over one-third of the RTAs contain provisions on this IPR category (counting also RTAs that use language such as "trademarks, including geographical indications"). The inclusion of geographical indications in RTAs increased after 2000. Geographical indications are considerably more prevalent in RTAs involving countries in the Americas than countries in other continents.

93. Geographical indications are included in many of the RTAs involving developed economies although they are also important for some developing countries. Thus, the highest frequency of inclusion of geographical indications is found in Chile's RTAs (92% of its relevant agreements), with some 83% of Mexico's agreements also including such provisions. The United States is the other intensive user of similar provisions followed distantly by the EFTA members. The European Union's low score is surprising but probably related to the considerations mentioned above in relation to patents.

(vii) *Layout-designs (topographies) of integrated circuits*

94. An Integrated Circuit (IC) is an electronic circuit with its elements integrated into some medium, thus creating a single functional unit. The medium typically used for imbedding the circuits is a solid semiconductor, usually a silicon chip.⁵⁹ Integrated circuits are utilized in a large range of products, including articles of everyday use, such as watches, television sets, washing machines, automobiles as well as data processing equipment.

⁵⁹ The terms "integrated circuit", "semiconductor" and "silicon chip" are used synonymously.

95. Table 3 shows that references to integrated circuits topographies in RTAs are the least common of the eleven specific IPRs under consideration. Those references are included in only 9% of the 165 RTAs surveyed. References to integrated circuits topographies are also different from other specific IPRs in that their inclusion, although rare, are more common in RTAs that entered into force before 1995. While still the exception, references to integrated circuits topographies are more frequently found in RTAs involving European parties. Consistent with this observation, references to integrated circuits topographies appear relatively more often in RTAs involving EFTA members or the European Union.

(viii) *Plant breeders' rights and new plant varieties*

96. Plant breeder's rights "acknowledge the achievements of breeders of new varieties of plants, by granting to them an intellectual property right, on the basis of a set of clearly defined principles. To be eligible for protection, varieties have to be distinct from existing, commonly known varieties; sufficiently uniform; stable; and new in the sense that they must not have been commercialized prior to certain dates established by reference to the date of the application for protection."⁶⁰ The main international agreement on plant breeder's rights is the UPOV Convention⁶¹, which is administered by the Geneva-based *Union internationale pour la protection des obtentions végétales* (UPOV). The organization's mandate is to promote international harmonization and cooperation, primarily between its members. It also assists countries and certain organizations in adopting the UPOV system of plant variety protection.⁶²

97. Table 3 shows that the inclusion of references to new plant varieties is infrequent, with only 15% of the RTAs in the sample including any such references. They are somewhat more common in RTAs involving developed economies, and countries in the Americas and Asia. This reflects in good part the relatively high number of references to new plant varieties in RTAs involving Japan and Mexico. In contrast, no RTA involving the United States was recorded as containing references to new plant varieties. The factors underpinning these findings are not apparent but it may be linked to new plant varieties not being referred to directly in RTAs but being covered instead indirectly, e.g., by reference to UPOV membership.

(ix) *Traditional knowledge, folklore and genetic resources*

98. Traditional knowledge, folklore and genetic resources are not covered in the TRIPS Agreement. However, these subjects are all evolving and highly controversial areas of the international IP debate. It is both interesting and important to determine how these issues are being dealt with in the parallel system of proliferating RTAs given the and lack of agreement on these subjects in the WTO context, and the continuing work of WIPO's Intergovernmental Committee to conclude international instruments in this area.

99. Though traditional knowledge, expressions of folklore and genetic resources relate to distinct subject matter, they were included in the same category for the purposes of this paper because legislatures and policy debates tend to cover them together.

100. According to Table 3, only about 15% of the RTAs under consideration incorporate references to traditional knowledge, folklore or genetic resources. The frequency of inclusion of such references has increased since 1995, and became more common in the RTAs entering into force since

⁶⁰ International Union for the Protection of New Varieties of Plants: What it is, What it does UPOV Publication No. 437(E). October 22, 2009 edition.
<http://www.upov.int/export/sites/upov/en/about/pdf/pub437.pdf>.

⁶¹ International Convention for the Protection of New Varieties of Plants of December 2, 1961, as Revised at Geneva on November 10, 1972, on October 23, 1978, and on March 19, 1991 (the "UPOV Convention"). <http://www.upov.int/en/publications/conventions/1991/act1991.htm>

⁶² *Supra*, note 68.

2009. Their incidence is also relatively significant in RTAs involving the Americas, Asia or the European Union.

101. Two RTAs to which Chinese Taipei is a party provide some of the most extensive protections for traditional knowledge, folklore and genetic resources.⁶³ Another treaty that provides elaborate coverage of the three areas under study is the Peru - China RTA. Other developing countries with international renowned indigenous cultures have not included corresponding provisions in their RTAs. No RTA involving a country anywhere in Africa includes such provisions.

(x) *Encrypted programme-carrying satellite signals*

102. "Encrypted program-carrying satellite signal" means "...a program-carrying satellite signal that is transmitted in a form whereby the aural or visual characteristics, or both, are modified or altered for the purpose of preventing the unauthorized reception of a program carried in that signal by persons without the authorized equipment that is designed to eliminate the effects of such modification or alteration."⁶⁴ Parties to WIPO's Brussels Convention are required to take measures to prevent the unauthorized distribution on or from their territories of any programme-carrying signal transmitted by satellite.⁶⁵

103. As shown in Table 3, references to encrypted programme-carrying satellite signals are included in some 15% of the agreements under consideration. There is no clear pattern over time. On the other hand, it is evident that references to encrypted programme-carrying satellite signals are more common in RTAs involving the Americas. Consistent with this, some 82% of RTAs involving the United States include such references, while the equivalent proportions for Mexico, the European Union and Chile are 67%, 32% and 23%, respectively. In contrast, the sample contains no RTA involving Asia with references to encrypted programme-carrying satellite signals.

(xi) *Domain Names*

104. Unlike other IP rights, the registration of domain names is global, rather than territorial in scope. Access to the websites that correspond to their URLs are uninhibited by national borders. Further, the successful registration of a domain name in one part of the world precludes the registration of that domain name in every other part of the world. The registration of domain names is not administered by national IP authorities but by the Internet Corporation for Assigned Names and Numbers (ICANN). As a non-state entity, much of ICANN's responsibilities and activities are neither based in, nor driven by the territorial legislation of any country.

105. Table 3 shows that the proportion of RTAs containing references to domain names is low (11%). However, the frequency has tended to increase over time. References to domain names are more common in RTAs involving developed economies or countries in the Americas and, to a much lesser extent, in Asia. The United States is an outlier in this regard, with almost three-quarters of its RTAs containing references to domain names. Japan and Chile follow far behind.

106. Most of the handful of RTAs that cover domain name issues merely defer to the ICANN system as the governing authority, including in the area of dispute settlement.⁶⁶ Japan's RTAs take a

⁶³ Section H of the *Nicaragua - Chinese Taipei* RTA has separate provisions dealing with each of these three areas. The *Panama - Chinese Taipei* RTA also provides the same extensive protections as the *Nicaragua - Chinese Taipei* RTA.

⁶⁴ See *US - Vietnam* RTA, Article 2.2: Definitions. Encrypted program-carrying satellite signals are also classified as an IPR in Article 2.3. <http://www.usvtc.org/trade/bta/text/chapter2.htm>

⁶⁵ The Brussels Convention Relating to the Distribution of Programme-Carrying Signals Transmitted by Satellite (1974) has 35 contracting parties.

⁶⁶ *Australia - Chile* Article 17.24; *CAFTA - Dominican Republic* Article 15.4; *Nicaragua - Taiwan* Article 17.12; *US - Morocco* Article 15.4; *US - Oman* Article 15.3, *US - Singapore* Article 16.3. All these RTAs

different approach. While they neither challenge the ICANN framework nor provide for an alternative mechanism for dealing with domain name issues, the RTAs do not formally defer to the ICANN system. Instead they provide that parties shall protect against the acquisition or holding of domain names that are identical with, or confusingly similar to protected trade names and trademarks.⁶⁷

(c) Provisions of special interest to public health and the pharmaceuticals sector

(i) *Introduction*

107. As a general observation regarding the analysis of IP normsetting carried out in the course of RTAs, two broad analytical avenues may be pursued: the first approach, essentially that outlined above, would work towards a comprehensive, synoptic overview of broad trends and developments assessed across geographical boundaries and over time; the second avenue is to look at the significance of RTA provisions for specific areas of public policy that are linked with the IP system. The second approach may be of interest since a number of RTAs contain provisions that have direct bearing on particular policy issues, reflecting the interplay between certain fields of IP law and related areas of public policy. This section therefore explores the potential applicability of the general review methodology described above to some more detailed provisions, in order to identify patterns that could help inform policy discussions concerning a particular IP area.

108. The policy area selected as a test case was that of public health and the pharmaceuticals sector. This area is of multilateral interest because of the Doha Declaration on TRIPS and Public Health⁶⁸ the on-going discussion on the Paragraph 6 System⁶⁹; the joint study by the WHO, WIPO and WTO Secretariats on public health, IP and trade⁷⁰; and related policy discussions, notably the work of the World Health Organization through its Global Strategy and Plan of Action. Although some insights may be derived from an initial application of this methodology, the relevance, utility and clarity of its application to this particular policy field could profit from further development, for example to take account of the fact that while the majority of the detailed IP provisions examined in this section are relevant to public health and pharmaceuticals, such provisions are typically not exclusive to this sector, and may have relevance to a wide range of other areas.

109. Hereafter, for convenience, a selection of provisions relevant to public health and the pharmaceutical sector, is referred to as "pharma-related provisions" for short, although the above caveat, that these provisions need not be considered as exclusively concerned with this one sector, should be noted carefully. The analysis of these provisions in RTAs revealed suggestive patterns in this area. The majority of all RTAs do not mention public health. Another group only covers the subject incidentally. The typical manifestation of this coverage can be found in provisions that allow parties to adopt legitimate measures to protect public health.⁷¹

defer to the ICANN system. The organization administers the Uniform Domain-Name Dispute-Resolution Policy (often referred to as the "UDRP").

⁶⁷ Japan's RTAs cover the issue of domain names under sections on Unfair Competition. See *Japan - Switzerland* Article 120.2(g); *Japan - Thailand* Article 143.2(b)(v); *Japan - Vietnam* Article 92.3(d).

⁶⁸ The Doha Declaration on TRIPS and Public Health. 20 November 2001. WT/MIN(01)/DEC/2. http://www.wto.org/english/thewto_e/minist_e/min01_e/mindecl_trips_e.htm.

⁶⁹ Implementation of paragraph 6 of the Doha Declaration on the TRIPS Agreement and Public Health Decision of the General Council of 30 August 2003. WT/L/540 and Corr.1. 1 September 2003 http://www.wto.org/english/tratop_e/trips_e/implem_para6_e.htm

⁷⁰ The study will be released in 2012; its outline and overview are available at: http://www.wto.org/english/tratop_e/trips_e/trilat_outline_nov11_e.pdf

⁷¹ *Australia - Chile*: Annex 10B.3(b) "Except in rare circumstances, non-discriminatory regulatory actions by a Party that are designed and applied to protect legitimate public welfare objectives, such as public health, safety, and the environment, do not constitute indirect expropriations."

110. Some RTAs generally reaffirm the parties' rights and obligations under the WTO Agreement.⁷² Though they do not cover public health or pharmaceuticals, such reaffirmation implies deference to the TRIPS Agreement (Articles 30 and 31), the Doha Declaration and the Paragraph 6 system. In such cases, the RTAs cannot be considered to alter the rights and obligations of the parties under the WTO's IP framework. Some RTAs attempt to draw a balance between IP protection and the rights of other stakeholders.⁷³

111. The RTAs involving the United States tend to have the most significant pharma-related provisions in general, and access to medicines in particular (see below). These RTAs include provisions such as Article 15.9.3 of the *CAFTA - Dominican Republic* RTA, which is a verbatim reproduction of TRIPS Article 30 on limited exceptions to patent rights. The same RTA also recognizes the Bolar exception that allows generic manufacturers to use a patent solely for the purposes of obtaining regulatory approval.⁷⁴ These provisions demonstrate the intention of the parties to recognize and reaffirm their obligations to the public health framework that has emerged in the context of the TRIPS Agreement.

(ii) *Particular pharma-related provisions in RTAs*

112. As with other IPRs analysed in this study, pharma-related provisions were investigated on the basis of whether or not the texts of the RTAs made any reference to specific sub-criteria of this subject area. The sub-criteria were selected because of their connection to the flexibilities available under the TRIPS. They cover policy areas of particular interest access to the public health and pharmaceutical sector, including patent linkage, compulsory licensing, the patenting of life forms, regulatory approval and others. The full list of the eleven sub-criteria is presented in Box 1, which also provides examples taken from specific RTAs.

113. Some 54 RTAs were found to contain at least one of the pharma-related provisions mentioned in Box 1. The frequency with which those provisions are included in RTAs is illustrated in Chart 5. The chart shows that, in general, the inclusion of pharma-related provisions in RTAs is very much the exception, even in those agreements that otherwise contain other types of IP provisions.

⁷² *Canada – Israel*: Preamble: Implied Part 6: Article 9.1: ""The rights and obligations of the Parties relating to intellectual property rights shall be governed by the Agreement on Trade-Related Aspects of Intellectual Property Rights, Annex 1C of the WTO Agreement, and any subsequent amendments to that Agreement." See also *Canada - Peru*: Article 808.3: Reservations and Exceptions.

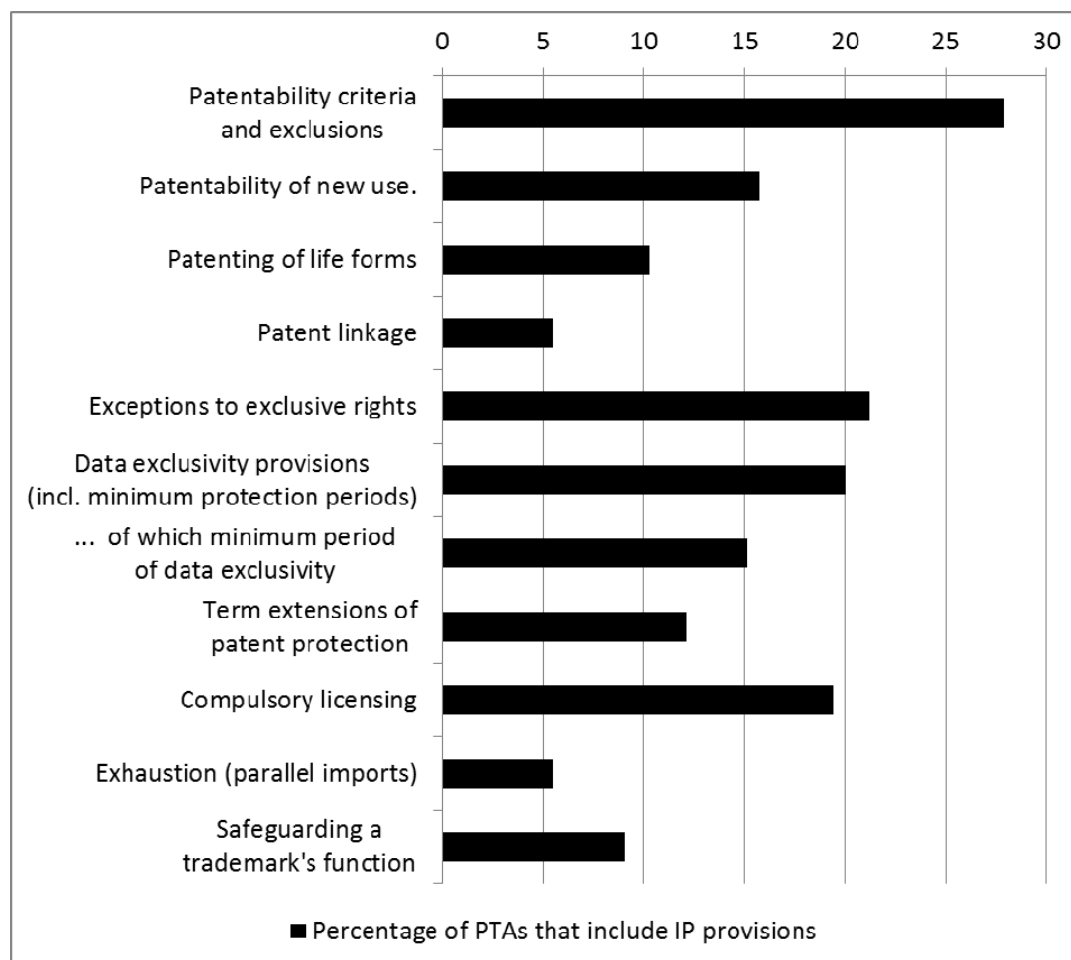
⁷³ For example, Article 2.4 of ASEAN Framework Agreement on Intellectual Property Co-operation provides that: "Member States shall recognise and respect the protection and enforcement of intellectual property rights in each Member State and the adoption of measures necessary for the protection of public health and nutrition and the promotion of the public interests in sectors of vital importance to the Member State's socio economic and technological development, which are consistent with their international obligations."

⁷⁴ *CAFTA - Dominican Republic*, Article 15.9.5 says "Consistent with paragraph 3, if a Party permits a third party to use the subject matter of a subsisting patent to generate information necessary to support an application for marketing approval of a pharmaceutical or agricultural chemical product, 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 meeting marketing approval requirements of that Party."

Box 1. Examples of pharma-related provisions in RTAs

- i. Patentability criteria and exclusions – Article 130.1 of the *Japan - Thailand* FTA, which requires that patents be made available for any inventions in all fields of technology provided that they are new, involve an inventive step and are capable of industrial application.
- ii. Patentability of new uses – Article 21 of Decision 486 by the Andean Community providing that products or processes that are already patented may not form the subject matter of a new patent owing to the fact of having a use different from that originally provided for in the first patent.
- iii. Patenting of life forms – Article 15.9.2 of the *US – Morocco* FTA requiring that patents be made available for inventions of plants and animals.
- iv. Patent linkage – Article 15.10.4 of the *US – Morocco* FTA requiring that the marketing approval process for pharmaceuticals include measures to prevent third parties from marketing a patented product during the term of that patent without the consent of the patent owner.
- v. Exceptions to exclusive rights – Article 17.20 of the *Australia - Chile* FTA providing that exceptions to the exclusive rights conferred by a patent may be offered when such exceptions do not unreasonably conflict with a normal exploitation of the patent and do not unreasonably prejudice the legitimate interests of the patent owner, taking account of the legitimate interests of third parties.
- vi. Data exclusivity – Annex XIII: Article 3 of the *EFTA - Korea* FTA requiring the Parties to prevent applicants for marketing approval for pharmaceuticals products from relying on undisclosed test data submitted for marketing approval by a first applicant "for an adequate number of years", to be determined by the relevant regulations of the Parties. Any Party may instead allow applicants to rely on such data if the first applicant is adequately compensated.
- vii. Minimum period of data exclusivity – Article 1711.6 of the North American Free Trade Agreement (NAFTA) requiring that, normally, no person other than that submitting test data may, without permission, rely on such data in support of an application for product approval during a period of not less than five years after approval is granted to the person that produced the data.
- viii. Term extensions of patent protection – Article 2(b) in Annex XIII of the *EFTA - Korea* Free Trade Agreement providing for a compensatory term of protection for pharmaceuticals of up to five years for curtailment of the patent term as a result of the marketing approval process.
- ix. Compulsory licensing – Article 1709.10 of the NAFTA setting out conditions for the granting of compulsory licences, including requirements that such licences be non-exclusive and non-assignable, be predominantly to supply the domestic market, efforts be made to obtain authorization from the right holder and this be paid adequate remuneration, and do not authorize the use of the subject matter of a patent to permit the exploitation of another patent except as a remedy for violation of domestic competition laws.
- x. Exhaustion – Article 16-26.1 of the *Mexico - El Salvador* FTA providing patent holders with the exclusive right to prevent third parties from the acts of making, using, offering for sale, selling, or importing a patented product without authorization.
- xi. Safeguarding a trademark's function – Article 15.3 of the *US – Oman* FTA requiring that measures mandating the use of common names, including requirements on size, placement or style of use of the trademark, do not impair the use or effectiveness of trademarks.

Chart 5. Agreements containing pharma-related provisions



Source: Table 4.

114. As displayed in Chart 5, there are wide variations in the inclusion of the different sub-categories of pharma-related provisions. The provision most frequently included in RTAs relates to patentability criteria and exclusions, with over one-quarter of the 165 agreements in the sample. The other three sub-categories that are more often included are those relating to exceptions to exclusive rights, to data exclusivity or to compulsory licensing.

115. Table 4 contains summary statistics for each of the eleven pharma-related provisions. The table has the same structure and follows the same methodology as Tables 2 and 3. Hence, all the values in Table 4 refer to the percentage of RTAs falling in a particular category. The actual number of RTAs per row is the same as that shown in the last column of Table 2.

116. Table 4 shows that the proportion of RTAs containing pharma-related provisions dipped in the five years after the TRIPS Agreement entered into force. However, no other patterns over time are evident. RTAs containing pharma-related provisions are as common for agreements involving only developed economies as for agreements between developed and developing countries. However, RTAs involving other combinations of economies seldom contain such provisions.

Table 4. RTAs containing pharma-related provisions, % of agreements in each category

	Patentability criteria and exclusions	Patentability of new use.	Patenting of life forms	Patent linkage	Exceptions to exclusive rights	Data exclusivity provisions (incl. minimum protection periods)	... of which minimum period of data exclusivity	Term extensions of patent protection	Compulsory licensing	Exhaustion (parallel imports)	Safeguarding of a trademark's function
By period											
Before 1995	31	27	15	0	31	19	15	23	31	15	4
1995-1999	7	7	3	0	7	10	7	0	7	3	10
2000-2004	34	16	7	7	25	23	14	11	27	2	11
2005-2009	34	16	16	10	22	24	21	14	17	5	10
After 2009	13	13	0	0	13	13	13	13	0	0	0
By continent:											
Africa or Africa-Americas	17	17	17	17	17	17	17	17	0	17	17
Africa-Europe	21	14	0	0	14	14	7	0	14	0	0
Americas only	33	4	13	13	33	42	21	21	21	4	42
Americas-Asia	41	24	6	29	29	29	24	29	29	12	24
Americas-Europe	40	20	0	0	20	40	40	20	40	0	0
Asia (incl. Oceania) only	14	0	3	0	0	0	0	0	3	3	0
Asia-Europe	44	19	6	0	25	25	19	19	25	0	0
Europe (incl. CIS) only	26	26	19	0	26	17	17	9	24	7	0
By economy type:											
Developed only	63	50	38	13	50	50	50	63	50	50	13
Developed-Developing	53	31	21	12	40	34	29	21	32	6	12
Developed-Developing-LDC	0	0	0	0	0	0	0	0	0	0	0
Developing only	12	2	0	0	9	14	2	2	14	2	14
Developing-LDC	0	0	0	0	0	0	0	0	0	0	0
Developing or LDC-Transition	0	0	0	0	0	0	0	0	0	0	0
Transition only	0	0	0	0	0	0	0	0	0	0	0
By selected WTO Member or group:											
Chile	23	0	8	8	15	15	15	15	23	0	15
EFTA	81	57	19	0	62	38	29	33	67	10	0
European Union	36	32	29	0	32	36	36	11	29	11	0
Japan	45	0	9	0	0	9	9	9	0	0	0
Mexico	42	8	0	0	42	58	25	8	42	0	58
Turkey	13	13	6	0	13	6	6	0	13	6	0
United States	91	45	45	82	82	91	82	91	36	27	82
Other	3	1	0	0	1	1	0	1	3	3	0
All RTAs with IP provisions	28	16	10	5	21	20	15	12	19	5	9

Source: Calculations based on Annex 4.

117. Table 4 shows a clear tendency for a higher proportion of RTAs involving the Americas to include pharma-related provisions. RTAs involving the United States are primarily responsible for this trend. Indeed, the majority of the United States' RTAs incorporate pharma-related provisions, many of which include several provisions on the eleven sub-categories covered by this study. While far behind the United States, Mexico also contributes significantly to the prevalence of pharma-related provisions in RTAs involving parties from the Americas. EFTA members are the trading bloc that includes pharma-related provisions in their RTAs more frequently, although the number of such provisions in a typical EFTA agreement is not high. The equivalent number for the European Union is lower, although this average masks wide differences across individual RTAs.

118. A more detailed analysis of RTAs signed by the United States is due given their extensive treatment of pharma-related provisions. As shown in Annex IV, 10 RTAs involving the United States contain pharma-related provisions. All of them include provisions on patentability criteria and exclusions, data exclusivity, and patent term extensions. Nine of those RTAs also cover patent linkage, exceptions to exclusive rights, and safeguarding a trademark's function. In all, eight RTAs cover at least eight of the eleven pharma-related provisions under consideration.

119. As a consequence of the above, many of the RTAs involving the United States contain provisions that can result in longer than normal periods of market exclusivity. These provisions may delay the market entry of generic drugs through measures such as data exclusivity, the patenting of new uses and patent term extension. The delay of patent expiration and the market entry of generic drugs have an impact on the ready access to medicines.

120. A specific example of a provision that extends market exclusivity is Article 15.9.6(a) of the *CAFTA - Dominican Republic* RTA. This sub-section provides for patent term extension where the issuance of a patent has been delayed by five years following the application filing, "or three years after a request for examination of the application has been made, whichever is later, provided that periods attributable to actions of the patent applicant need not be included in the determination of such delays." Article 15.9.6(b) of the same RTA also provides for patent term extension to compensate patent owners for the "unreasonable curtailment of the effective patent term resulting from the marketing approval process related to the first commercial marketing of the product in that Party." Article 15.10.1 provides for data exclusivity which increases the effective period of market exclusivity.

121. While the RTAs signed by other WTO Members fall far behind those maintained by the United States in terms of coverage and depth, as previously noted, the RTAs involving EFTA members and, to a lesser extent, the European Union also contain significant pharma-related provisions (see also section on patents above). The same is true of several of the RTAs between Mexico and both developed and developing trading partners. The NAFTA includes a large number of pharma-related provisions, and many of these provisions reappear in the RTAs signed between Mexico and its non-NAFTA partners in Central America.

D. AGGREGATING THE INDIVIDUAL PROVISIONS: THE OVERALL IP CONTENT OF RTAS

122. We conclude with a general set of observations on the findings from this study and on the methodology used: as a working paper, one function of the present study is to promote consideration of suitable methodologies for the categorization, filtering and analysis of IP provisions in RTAs, both for general, systemic analysis, and for specific insights on certain policy issues. The need for a continuing methodological discussion is apparent from the diversity of IP provisions, both in their substantive subject matter, and in the institutional and legal manner in which they are applied.

123. As discussed in the previous sections, of the 194 RTAs initially considered in this study, 165 were found to contain IP provisions of some type or another. However, some of the references to IP were cursory and did not provide for any substantive rights or obligations. Hence, it was considered

important to distinguish between RTAs that merely cite IP from those that contain provisions that could actually qualify or elaborate on the relationship between the parties.

124. The next sections present the methodology implemented to make that distinction. Following the structure of previous sections, separate measures of IP content were estimated for general IP provisions, for specific IP categories, and for pharma-related provisions (see Annex V). These three measures were then consolidated in a global score representing the overall level of IP content of individual RTAs.

1. Methodology

125. The level of IP content of each of the 165 RTAs under consideration was established by counting the number of different IP-related provisions identified in the agreements. Thus, the content of "general" IP provisions was measured by counting the general provisions in each RTA as recorded in Annex II. Likewise, the level of specific and pharma-related provisions in each RTA corresponded to the tally of the related provisions recorded in Annexes III and IV. This methodology reflects the nature of the information resulting from the binary coding methodology followed in previous sections. A more elaborated approach to estimating the IP content of RTAs would require a richer dataset than the one compiled for this paper.

126. As discussed in earlier sections, eight different types of general IP provisions were defined, as were 11 specific IPR provisions and the same number of pharma-related provisions. Hence, the highest possible score for an individual RTA was 8 in regards to general IP provisions, 11 for provisions of specific IPR categories, and 11 for provisions relating to pharmaceuticals. To facilitate the presentation, those tallies were all normalized to 100.⁷⁵ The three resulting scores for each of the RTAs containing IP provisions are shown in Annex V.

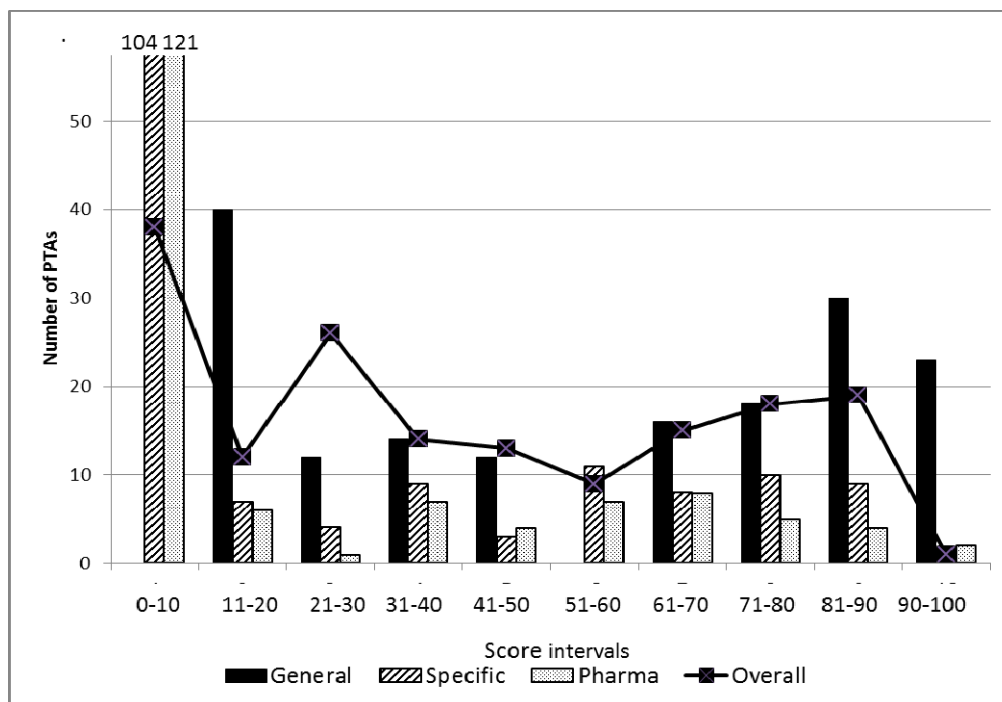
127. Chart 6 shows the distribution of the scores computed for the 165 RTAs containing IP provisions. The three different types of bars in the chart plot the histograms for general, specific, and pharma-related provisions. For each type of provision, the height of the corresponding bars represents the number of RTAs that fall within a particular score intervals. The chart shows ten identical score intervals, each of a width equal to 10 points. For each type of provision, by construction, the sum of all corresponding bars over all the intervals adds up to the total number of RTAs containing IP provisions.

128. Chart 6 shows that a first peak occurs within the 11-20 interval in the case of general provisions. The 40 RTAs in this lowest interval included only one IP provision. The distribution presents a second clear peak within the 81-90 interval, with 30 RTAs falling within this range. Relative to those maxima, the peaks for the specific and pharma-related provisions are shifted to the left.

129. A score for overall IP content was computed by combining the scores for the three groups of IP provisions previously mentioned. The overall score was estimated as the weighted average of the partial scores for those three groups. The following asymmetric weights were given to general, specific and pharma-related provisions, respectively: 60%, 30% and 10%. These values were chosen to give greater importance to general IP provisions and a lower but still significant weight to specific provisions. Pharma-related provisions were given the lowest weight because they mostly represent an elaboration on provisions already included under specific provisions, with 9 of the 11 pharma-related provisions relating to patents alone.

⁷⁵ A linear relationship was used to convert the ranges of 0-8 and 0-11 to a scale of 0-100. This means that in the case of specific and pharma-related provisions, the inclusion of one particular provision in a RTA contributes 9.1 points to the score, while in the case of general provisions each provision adds 12.5 points.

Chart 6. Distribution of RTAs by level of IP content



Source: Annex V.

130. The above weights might overstate the overall IP content of RTAs since they give greater importance to general IP provisions, whose score is the highest of the three types of provisions included in the study. However, the weights used were considered appropriately conservative in the absence of a deeper analysis of the substance of IP provisions in RTAs. The resulting scores for the overall IP content of individual RTAs are indicated in Annex V.

131. For comparison purposes, the overall score was also estimated using a proportional weighting scheme that defines the weights as the ratio of the number of general, specific or pharma-related provisions to the maximum possible number of provisions (30). This scheme thus assigned the following weights to general, specific and pharma-related provisions, respectively: 8/30, 11/30 and 11/30. The resulting scores for the overall IP content of individual RTAs calculated using these weights are shown in Annex VI. The proportional weighting scheme gives a much greater weight to the score of pharma-related provisions (36.7%) compared with their weight in Annex V (10%). This and the fact that the pharmaceutical score is in general much lower than the scores for general or specific provisions mean that the overall scores in Annex VI are lower than those in Annex V.

132. As a final step, based on the score of overall IP content, the 165 RTAs containing IP provisions were classified in three categories: RTAs containing a high level of IP provisions, RTAs with a moderate level of IP provisions, and RTAs with negligible IP provisions. Agreements scoring more than 60 points were included in the first group, while those having between 21 and 60 points were classified in the second group. RTAs with 20 points or less were classified as containing negligible IP provisions. These thresholds were selected to favour the classification of RTAs in the moderate and high IP content categories, and may thus overstate the number of agreements in these two categories.

133. Annex V shows the classification of RTAs in each of the three categories defined in the previous paragraph when using asymmetric weights (10%, 30% and 60%) to calculate their overall IP content. This results in the classification of 115 RTAs as containing a high or moderate level of IP provisions. Note that there is an implicit fourth category of agreements: RTAs containing no IP

provisions of any type, i.e., those not included among the 165 RTAs in the other three categories but part of the original group of 194 agreements.

134. The following sections are based on the overall scores obtained using asymmetric weights, as shown in Annex V, which were deemed more representative than those derived using a proportional weighting scheme (Annex VI).⁷⁶

2. RTAs by level of IP content

135. The data in Annex V were used to categorise RTAs according to their content of IP provisions and by period, continent, and their parties' level of development. The resulting landscape is summarized in Table 5. The following paragraphs describe this landscape, with a particular emphasis on RTAs containing moderate or high IP content. Naturally, other RTAs containing negligible IP content, and those without any IP content at all, are of much less interest in the context of this paper.

136. Table 5 shows that 113 (just under 60%) of the 194 RTAs in the original sample contain high or moderate levels of IP content. Of those, 53 RTAs (27% of the total) are classified as having high levels of IP content, 39 of which were notified to WTO as taking the form of both FTAs and EIAs (i.e., covering trade in goods and services), 11 as FTAs alone (i.e., covering goods only), and the other three as CUs and/or EIAs (covering goods and/or services). See also section C.2 above and Annexes I and V.

137. Table 5 also shows that the level of IP content tends to increase with time, from about 15% before 1995 to 34% between 2005 and 2009. The level subsequently decreases but data for the most recent period may not be representative, as noted before.

138. Additionally, Table 5 shows that the IP content of RTAs varies widely across continents. Almost half of the 53 RTAs with high IP content involve countries in the Americas. Also, nearly half of the inter-continental agreements involving countries in the Americas fall in the highest category of IP coverage, a proportion almost twice as high as for all the RTAs in general. In contrast, inter-continental RTAs involving traders in Europe are usually characterized by only moderate IP content; RTAs involving only European countries tend to be below the average with regards to both RTAs containing moderate and high IP content. The same is true for RTAs involving only Asian countries. However, Africa is by some margin the continent with the lowest proportion of RTAs with moderate or high levels of IP content.

139. Just over half of the 72 agreements involving both developed and developing countries contain high IP content, with an additional 36% containing moderate levels. A significant proportion (40%) of the 10 RTAs involving only developed economies has high levels of IP content. Excluding agreements involving developed economies, developing, transition and least-developed countries tend to conclude RTAs with only moderate IP content. Thus about 43% of the 53 RTAs exclusively between developing countries, as well as all of the agreements involving developing, transition and least-developed countries contained only moderate IP content.

⁷⁶ Proportional weighting introduces a bias in favour of patents because of the particular importance these are given as part of pharma-related provisions. This implicitly plays down the role of other forms of intellectual property.

Table 5. Number of RTAs by level of IP content

	High content	Moderate content	Negligible content	No content
By period:				
Before 1995	5	7	14	8
1995-1999	6	6	17	5
2000-2004	17	15	12	7
2005-2009	23	26	9	9
After 2009	2	6	0	0
By continent:				
Africa or Africa-Americas or Asia	1	0	5	3
Africa-Europe	3	11	0	0
Americas only	11	8	5	2
Americas-Asia	10	6	1	4
Americas-Europe	3	2	0	1
Asia (incl. Oceania) only	7	12	10	14
Asia-Europe	6	9	1	0
Europe (incl. CIS) only	12	12	30	5
By economy type:				
Developed only	4	1	3	2
Developed-Developing	38	26	4	4
Developed-Developing-LDC	1	1	1	2
Developing only	10	22	11	10
Developing-LDC	0	5	7	10
Developing or LDC-Transition	0	4	0	0
Transition only	0	1	26	1
By selected WTO Member or group:				
Chile	6	3	4	2
EFTA	15	4	2	4
European Union	10	13	5	2
Japan	7	3	1	0
Mexico	9	2	1	1
Turkey	2	14	0	0
United States	10	1	0	0
Other	4	23	41	22
All RTAs	53	60	52	29

Source: Calculations based on Annex V.

140. The bottom of Table 5 contains statistics for selected WTO Members that are particularly active in concluding RTAs. It shows that most of the RTAs signed by both the developed and developing economies listed in the table contained at least moderate IP content. However, the distribution between RTAs with moderate and high levels of IP content varies considerably across the economies listed. Thus, while over 90% of the 11 RTAs signed by the United States contain high levels of IP content, the equivalent share for Turkey is only 12%.

141. A modest difference in IP content between the several RTAs involving the European Union on the one hand and EFTA members on the other was anticipated in view of the close institutional links between the two trading groups, notably through the EEA. However, according to Table 5 the proportion of RTAs involving the European Union and classified as having high levels of IP content is much lower than for EFTA members, with only one-third of the European Union's 30 RTAs so classified as compared to 60% for EFTA members.

142. Annex V shows that the above is the result of the average IP content for all of the European Union's RTAs concealing a wide gap between two types of agreements: those involving EU's trading partners in Europe and those involving partners further afield. Thus, the EEA Agreement between the European Union and EFTA members requires that the latter provide the same level of protection provided under EU law.⁷⁷ The IP regimes of countries such as Croatia and Turkey are also expected to converge with that of the European Union.⁷⁸ Indeed, Annex V shows that the agreements between the European Union and those two countries, and also the RTAs with other neighbouring countries, are the highest ranked in terms of overall IP content.

143. On the other hand, it is far from clear to what extent the legal language of the so called Euro-Mediterranean Agreements, such as the RTAs between the European Union and Algeria or Tunisia, require the convergence of the relevant IP regimes. Those texts typically use wording such as "the Parties shall ensure adequate and effective protection of intellectual, industrial and commercial property rights in conformity with the highest international standards, including effective means of enforcing such rights".⁷⁹ As observed before, it is an open question whether this type of provisions are enforceable and, thus, of practical significance.⁸⁰ In this respect, the foreword to Horn (2007) observes that the study's main finding:

"... is that the European PTAs are marred by considerable legal inflation. They ambitiously cover a wide range of topics, going much beyond the multilateral commitments entered into by the partners within the framework of the World Trade Organisation, but they are mostly unenforceable – if not entirely devoid of substance. The Union, in other words, seems to be using trade agreements to promote its views on how countries of the world should be run, and it is able to enlist its trade partners to do this, albeit in a noncommittal or semi-committal way. Trade policy therefore provides a vehicle for declaratory diplomacy."

144. Also rather surprisingly, Table 5 shows that the two countries with the highest proportion of RTAs containing high levels of IP content, after the United States, are Mexico and Japan: out of the 13 RTAs recorded for Mexico, 9 were so classified, as were 7 of Japan's 11 RTAs. As indicated in Annex V, in the case of Mexico this largely reflects high scores with respect to general, specific, and pharma-related provisions in the NAFTA and Mexico's RTAs with countries in Central America. On its part, Japan places high in large part due to the comprehensiveness of the general IP provisions in its RTAs. These more than offset moderate levels of pharmaceuticals provisions in its agreements.

E. THE ARCHITECTURE OF RTAS CONTAINING IP PROVISIONS

145. RTAs containing IP provisions are characterized by a distinct hub-and-spoke architecture. The largest systems are grouped around the European Union, EFTA and the United States. However,

⁷⁷ Article 1.2 of Protocol 28 states that "Without prejudice to the provisions of this Protocol and of Annex XVII, the Contracting Parties shall upon the entry into force of the Agreement adjust their legislation on intellectual property so as to make it compatible with the principles of free circulation of goods and services and with the level of protection of intellectual property attained in Community law, including the level of enforcement of those rights."

⁷⁸ Article 31 of the *EC - Turkey* RTA states that "The Parties recognize that the Customs Union can function properly only if equivalent levels of effective protection of intellectual property rights are provided in both constituent parts of the customs Union." Article 36 of the *EC - Croatia* FTA provides that "Croatia shall take the necessary measures in order to guarantee no later than three years after entry into force of this Agreement a level of protection of intellectual, industrial and commercial property rights similar to that existing in the Community, "

⁷⁹ Article 30 of the *EC - Lebanon* RTA.

⁸⁰ As noted, the RTAs in this ambiguous situation include the agreements between, on the one hand, the European Union and, on the other hand, Algeria, Cameroon, Egypt, Israel, Jordan, Lebanon, Morocco or Tunisia.

Chile, Japan and Mexico constitute other centres of gravity. This architecture probably emerged in large part from the frequent use of template approaches to the negotiation of RTAs. This has generated a tendency for IP provisions to be replicated in RTAs linked to a common hub. As a result, several important characteristics of those provisions arise from the identity of the central entity.

146. Charts 7 and 8 present graphic overviews of RTAs containing a high level of IP provisions. Chart 7 depicts the links among such RTAs in force in 2000. Chart 8 shows the links for RTAs containing high IP content in force in 2010. Neither chart provides a comprehensive mapping of all agreements with IP content because such a complete picture would have looked like Bhagwati's proverbial spaghetti bowl, particularly in 2010!

147. As illustrated in Chart 7, in 2000 only a handful of RTAs containing a high level of IP provisions were in force. These included essentially two pivots: Mexico and the EU-EFTA twin hub. The EU-EFTA hub had only three spokes in the form of bilateral RTAs with Israel, Morocco and Turkey. Mexico was linked to Canada and the United States through the NAFTA, and was also linked through bilateral RTAs to Chile, Colombia, Costa Rica and Nicaragua. Chart 8 shows that the number of hubs and the density of links among RTAs containing a high level of IP provisions increased considerably between 2000 and 2010.

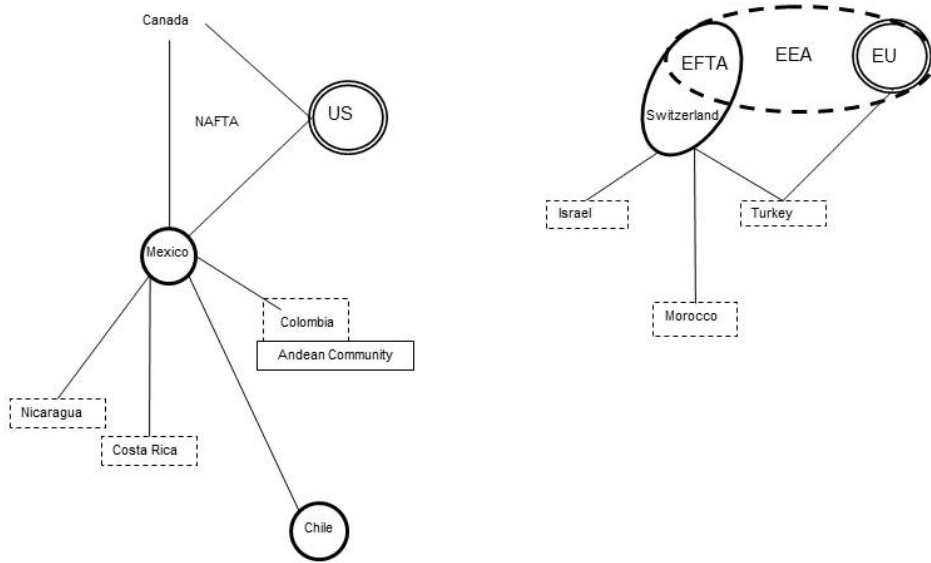
148. Chart 8 highlights some important features of the RTAs containing IP provisions currently in force. Thus, the Chart's far right identifies the links between the members of EFTA and the European Union hubs, which together make up a system of "deep integration", which is both extensive and tightly knitted together. This may have arisen from the successive replication of the European Union's IP regime through the provisions of the relevant RTAs. However, significant differences do arise between the spokes linked to the European Union or to EFTA, with several European countries tied to the European Union through RTAs with high IP content but not to EFTA. On the other hand, EFTA has many more RTAs with high IP content linking its members to non-European countries.⁸¹

149. The left side of Chart 8 suggests the existence of another large hub formed around Mexico and the United States. However, the IP provisions of this system would be less tightly knitted than those in Europe, reflecting the fact that most of the relevant RTAs in the Americas do not usually involve deep integration processes.⁸² As noted, Canada, Mexico and the United States are linked through the NAFTA. In addition, Mexico has bilateral RTAs with high IP content with most Central American countries while one RTA links the United States to the same Central American countries plus the Dominican Republic. Both Mexico and the United States have RTAs with high IP content with individual members of the Andean Community (Colombia and Peru, respectively). In turn, the intellectual property regimes of Andean Community members are connected through relatively comprehensive Andean IP statutes.

⁸¹ Switzerland and Japan maintain a RTA with high IP content which does not involve other EFTA members.

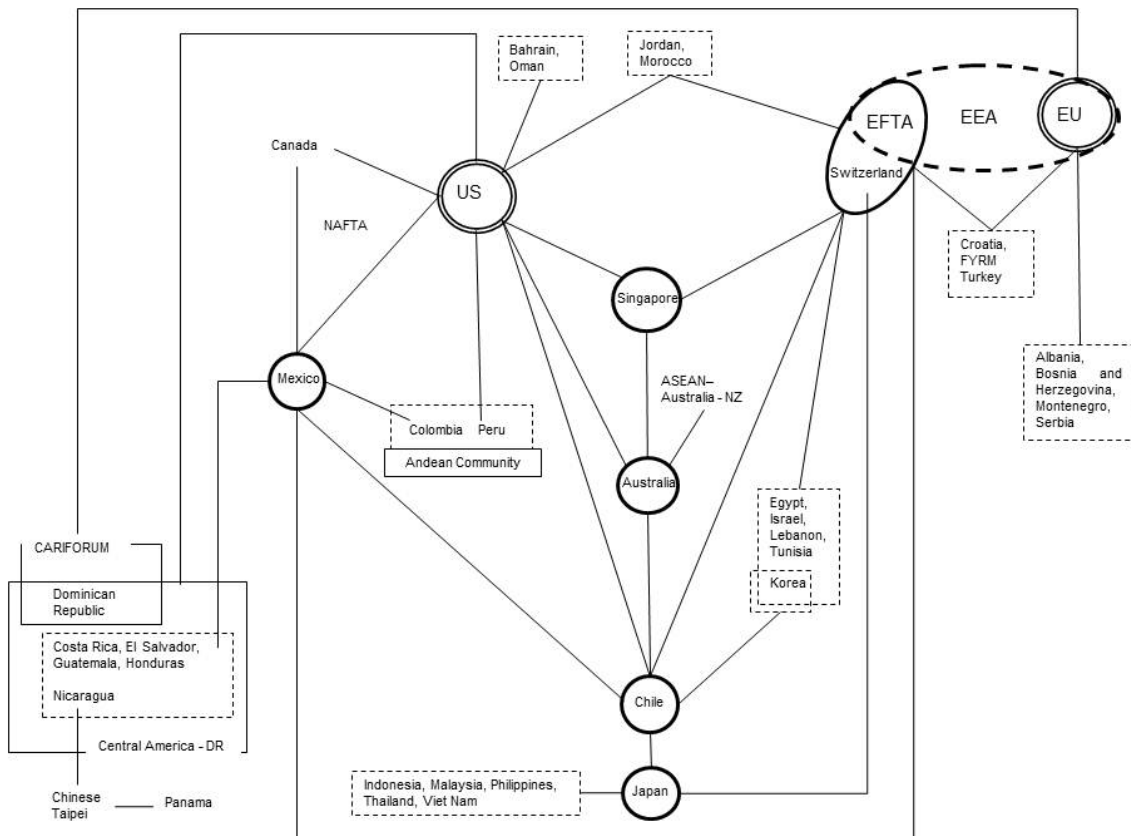
⁸² See Valdés (2010).

Chart 7. Network of RTAs with high IP content, 2000



Source: Based on Annex V.

Chart 8. Network of RTAs with high IP content, 2010



Source: Based on Annex V.

150. Chart 8 also shows the links drawing together, directly or indirectly, the hubs in the Americas and Europe. The chart shows, for example, that Chile and Mexico are directly connected to EFTA and the United States through RTAs with high IP content. Singapore, Jordan and Morocco also maintain RTAs with high IP content directly linking them to EFTA and the United States. In turn, as a signatory of both the CAFTA-DR and EC-CARIFORUM RTAs, the Dominican Republic is connected to both the European Union and the United States.

F. POSSIBLE IMPLICATIONS

1. Impact for domestic regulation

151. The interconnections among hub-and-spoke systems create networks that transmit IP provisions across RTAs, and eventually from one domestic IP regime to another. For example, the separate RTAs between EFTA and Jordan and EFTA and Morocco require the two Arab countries to provide patent protection similar to that provided by the European Patent Convention. This echoes the provision in the EEA Agreement between EFTA and the European Union, which also mandates EFTA members to comply with the substantive provisions of the European Patent Convention.⁸³

152. The impact of RTAs on domestic regulations can be substantial in part because IP provisions contained in a particular RTA must be applied without discrimination to the nationals of countries that are not parties to the RTA in question. While for trade in goods, WTO rules provide for departures from the MFN principle, for IP, Members are required to apply the MFN principle with only a few exceptions.⁸⁴

153. Even if WTO Members were not required to abide by the MFN principle in regard to IP, they would find it difficult and costly to tailor their domestic regulations to favour RTA partners because IP provisions generally take the form of domestic regulations rather than measures applied at the border. In this regard, Baldwin (2011) concludes that:

"many but not all deeper provisions [in RTAs] tend to act as general liberalisations rather than discriminatory liberalisations because it is difficult or impossible to write rules of origin for them that exclude third nations. The deep reasons are the difficulties in establishing the nationality of modern corporations and of services as well as the public-good nature of the many regulatory reforms in deep [RTAs]."

154. The hub-and-spoke architecture and non-discriminatory nature of IP provisions in RTAs mean that membership in additional RTAs can create a process of ratchet-like steps whose effect is to incrementally tighten a country's domestic IP regulations. This ratchet-up effect is likely to feed back into the international arena, as a country would want to include in future RTAs the domestic regulations resulting from commitments it already made under previous agreements. Both developed and a few developing countries thus appear to have engaged in a process that "exports" their domestic regulatory regimes to trading partners.

155. The ratchet-like process could lead to the creation of new "international standards" of IP which, although established through bilateral rather than multilateral negotiations, would result in the non-discriminatory treatment of RTA members and non-members alike. In the goods area, this type of treatment would tend to enhance competition and trade, and ultimately economic welfare. However, it is not clear that this would be true in the case of intellectual property. Moreover,

⁸³ Article 3.4 of Protocol 28 of the EEA Agreement: "The EFTA States shall comply in their law with the substantive provisions of the European Patent Convention of 5 October 1973".

⁸⁴ As observed before, the MFN principle is contained in Article 4 of the TRIPS Agreement, which provides for only limited exceptions. Additionally, Article 3 of the same agreement requires a WTO Member to extend the treatment accorded to its own nationals to the nationals of other WTO Members. The application of the national treatment principle implies granting MFN treatment to all nationals if a country chooses to apply a RTA without discriminating against its own nationals, which in practice is almost without exception the case.

membership in multiple IP systems implies the risk of regulatory confusion and implementation problems.⁸⁵

2. Economic aspects

156. The 2011 World Trade Report (WTO 2011a)) provided an in-depth analysis of the increase in the number of RTAs. The presentation in this section relies heavily on the perspectives and insights contained in that report. The report discusses the possible motives for RTAs, including neutralizing "beggar-thy-neighbour" trade policies, increasing market size, enhancing policy predictability or signalling openness to investors. The report also observes that the creation of RTAs cannot be fully understood without considering the political context within which they are formed.

157. RTAs containing IP provisions are typically part of deep integration processes. WTO (2011a) argues that trade openness resulting from these processes creates pressures to reconcile divergent national practices, and produces demands for governance and the rule of law that transcend national borders. This is a particularly relevant consideration in the case of IPRs, which have remained essentially territorial despite the growing globalization of virtually all national economies.

158. In addition, WTO (2011a) notes that the international fragmentation of production imposes additional costs, particularly for developing countries that are part of North-South production networks, and that lack sophisticated regulations. Multilateral rules do not go far enough to manage the resultant tightening of economic bonds. As a result, the expansion of international production networks has become a main driver for the creation of deeply integrative RTAs aimed at harmonizing national policies across jurisdictions.

159. The assessment of the economic impact of deep integration RTAs, including those containing IP provisions, has proved difficult. For RTAs covering goods alone, the analysis reflects the established insight that RTAs have both trade creation and trade diversion effects, and may increase or reduce the economic welfare of its members. The fact that deep integration agreements involve not only the reduction of trade barriers at the border but also changes to domestic regulations makes their analysis even more complex and the conclusions more tentative.

160. A particularly difficult question concerning the economic impact of RTAs with IP provisions relates to the estimation of the costs and benefits of adopting common policies and regulations among countries at different stages of economic development. WTO (2011a) concludes that for developing countries, common policies with advanced economies may create benefits by allowing them to import regulatory systems that are "pre-tested" and represent "best practices", without having to pay the costs of developing them from scratch.

161. With regards to disadvantages, the report observes that developing countries may be pressured into adopting common rules which are inappropriate for their level of development, or rules that are used to protect the vested interests of certain groups. In this regard, Horn (2009) found that:

"the new, legally enforceable WTO-X provisions [commitments dealing with issues going beyond WTO's mandate] clearly all deal with regulatory issues. This suggests that the EC and US agreements effectively serve as a means for the two hubs to export their own regulatory approaches to their RTA partners. This study does not permit us to draw conclusions about the costs and benefits of this situation for the hubs and the spokes, but our impression is that it primarily serves the interests of the two 'regulators of the world'. This impression is based on the fact that the legally enforceable WTO-X provisions included in EC and US agreements have all been the subject of earlier, but failed, attempts by the EU and/or the US to incorporate them into WTO rules, against the

⁸⁵ See Kampf (2007).

wishes of developing countries. To the extent that our conclusion is correct, it supports the above-mentioned view that RTAs are breeding concern about unfairness in trade relations."

162. The difficulties of conducting an economic analysis of RTAs containing IP provisions are also compounded by certain economic features of intellectual property, which require particular solutions regarding the protection of IPRs and innovation.⁸⁶ Moreover, a delicate balance between the interest of intellectual property owners and users is also required. Providing for such balance is especially complex when inventors, owners and users are located in different countries. Reflecting these difficulties, the economy-wide effects of including IP provisions in RTAs have seldom been quantified, even in countries with well-established records of sound economic analysis.⁸⁷

163. Valuable sector-specific efforts have been made to quantify the economic impact of including IP provisions in RTAs, particularly those affecting more directly the public health and pharmaceuticals sectors. Such studies have concluded that by increasing the standards of pharmaceutical provisions, RTAs were likely to lead to higher prices and expenditures on pharmaceuticals, and thus, reduced access to medicines.⁸⁸ These results were based on partial equilibrium models which, while making the analysis workable, necessarily simplified the real world conditions. In particular, those studies did not address the key questions of whether a RTA was likely to increase the overall welfare of a country, raise income levels or improve a government's fiscal position, which could in principle more than offset the price-increasing effects of a RTA on medicines. Clearly, further empirical analysis is required in this area.

164. Likewise, the methodology followed in this paper requires additional development, in particular to take better advantage of the information contained in the texts of the numerous agreements put together as part of this study. For example, means could be identified to differentiate provisions in separate RTAs that touch on the same area of IP law but whose nature and depth may vary greatly. Further work could also aim to understand the links between IP and other provisions in RTAs that aim to frame production and trade through the use of internal rather than border measures. Taking better account of measures related to investment, services, competition policy or government procurement could be of particular relevance to develop a more comprehensive overview of the broader system implications of the IP provisions contained in RTAs.

⁸⁶ In particular, the "public good" nature of intellectual property requires adopting second-best solutions.

⁸⁷ For example, policy-makers in Australia typically formulate trade policies through rigorous economic analysis undertaken by government institutions such as the Productivity Commission. Yet Productivity Commission (2010) recommended that in the future "Australia's participation in international negotiations in relation to IP laws ... should be informed by a robust economic analysis of size and distribution of the resultant benefits and costs" ..

⁸⁸ See Hernández-González and Valverde (2009), Rathe et al (2009) and Cortes et al (2004).

G. ANNEXES I - VI

Annex I. Preferential trade agreements surveyed

RTA Name (a)	Coverage (b)	Type (c)	Date of entry into force	Inclusion of IP provisions
Andean Community (CAN)	Goods	CU	25/05/1988	Yes
Armenia - Kazakhstan	Goods	FTA	25/12/2001	Yes
Armenia - Moldova	Goods	FTA	21/12/1995	Yes
Armenia - Russian Federation	Goods	FTA	25/03/1993	Yes
Armenia - Turkmenistan	Goods	FTA	07/07/1996	Yes
Armenia - Ukraine	Goods	FTA	18/12/1996	Yes
ASEAN - Australia - New Zealand	Goods & Services	FTA & EIA	01/01/2010	Yes
ASEAN - China	Goods & Services	PSA & EIA	01/01/2005	Yes
ASEAN - India	Goods	FTA	01/01/2010	Yes
ASEAN - Japan	Goods	FTA	01/12/2008	Yes
ASEAN - Korea, Republic of	Goods & Services	FTA & EIA	01/01/2010	Yes
ASEAN Free Trade Area (AFTA)	Goods	FTA	28/01/1992	Yes
Asia Pacific Trade Agreement (APTA)	Goods	PSA	17/06/1976	No
Australia - Chile	Goods & Services	FTA & EIA	06/03/2009	Yes
Australia - New Zealand (ANZCERTA)	Goods & Services	FTA & EIA	01/01/1983	Yes
Australia - Papua New Guinea (PATCRA)	Goods	FTA	01/02/1977	No
Brunei Darussalam - Japan	Goods & Services	FTA & EIA	31/07/2008	Yes
Canada - Chile	Goods & Services	FTA & EIA	05/07/1997	Yes
Canada - Costa Rica	Goods	FTA	01/11/2002	Yes
Canada - Israel	Goods	FTA	01/01/1997	Yes
Canada - Peru	Goods & Services	FTA & EIA	01/08/2009	Yes
Caribbean Community and Common Market (CARICOM)	Goods & Services	CU & EIA	01/08/1973	Yes
Central American Common Market (CACM)	Goods	CU	04/06/1961	No
Central European Free Trade Agreement (CEFTA) 2006	Goods	FTA	01/05/2007	Yes
Chile - China	Goods & Services	FTA & EIA	01/10/2006	Yes
Chile - Colombia	Goods & Services	FTA & EIA	08/05/2009	Yes
Chile - Costa Rica (Chile - Central America)	Goods & Services	FTA & EIA	15/02/2002	Yes
Chile - El Salvador (Chile - Central America)	Goods & Services	FTA & EIA	01/06/2002	Yes
Chile - India	Goods	PSA	17/08/2007	No
Chile - Japan	Goods & Services	FTA & EIA	03/09/2007	Yes
Chile - Mexico	Goods & Services	FTA & EIA	01/08/1999	Yes
China - Hong Kong, China	Goods & Services	FTA & EIA	01/01/2004	Yes
China - Macao, China	Goods & Services	FTA & EIA	01/01/2004	No
China - New Zealand	Goods & Services	FTA & EIA	01/10/2008	Yes
China - Singapore	Goods & Services	FTA & EIA	01/01/2009	No
Colombia - Mexico	Goods & Services	FTA & EIA	01/01/1995	Yes
Common Economic Zone (CEZ)	Goods	FTA	20/05/2004	Yes
Common Market for Eastern and Southern Africa (COMESA)(k)	Goods	FTA	08/12/1994	Yes
Commonwealth of Independent States (CIS)	Goods	FTA	30/12/1994	Yes
Costa Rica - Mexico	Goods & Services	FTA & EIA	01/01/1995	Yes
Dominican Republic - Central America - United States Free Trade Agreement (CAFTA-DR)	Goods & Services	FTA & EIA	01/03/2006	Yes
East African Community (EAC)	Goods	CU	07/07/2000	Yes

EC - Albania	Goods & Services	FTA & EIA	01/12/2006	Yes
EC - Algeria	Goods	FTA	01/09/2005	Yes
EC - Andorra	Goods	CU	01/07/1991	Yes
EC - Bosnia and Herzegovina	Goods	FTA	01/07/2008	Yes
EC - Cameroon	Goods	FTA	01/10/2009	Yes
EC - CARIFORUM States EPA	Goods & Services	FTA & EIA	01/11/2008	Yes
EC - Chile	Goods & Services	FTA & EIA	01/02/2003	Yes
EC - Côte d'Ivoire	Goods	FTA	01/01/2009	Yes
EC - Croatia	Goods & Services	FTA & EIA	01/03/2002	Yes
EC - Egypt	Goods	FTA	01/06/2004	Yes
EC - Faroe Islands	Goods	FTA	01/01/1997	No
EC - Former Yugoslav Republic of Macedonia	Goods & Services	FTA & EIA	01/06/2001	Yes
EC - Iceland	Goods	FTA	01/04/1973	No
EC - Israel	Goods	FTA	01/06/2000	Yes
EC - Jordan	Goods	FTA	01/05/2002	Yes
EC - Lebanon	Goods	FTA	01/03/2003	Yes
EC - Mexico	Goods & Services	FTA & EIA	01/07/2000	Yes
EC - Montenegro	Goods & Services	FTA & EIA	01/01/2008	Yes
EC - Morocco	Goods	FTA	01/03/2000	Yes
EC - Norway	Goods	FTA	01/07/1973	Yes
EC - Palestinian Authority	Goods	FTA	01/07/1997	Yes
EC - South Africa	Goods	FTA	01/01/2000	Yes
EC - Switzerland - Liechtenstein	Goods	FTA	01/01/1973	Yes
EC - Syria	Goods	FTA	01/07/1977	Yes
EC - Tunisia	Goods	FTA	01/03/1998	Yes
EC - Turkey	Goods	CU	01/01/1996	Yes
EC Treaty	Goods & Services	CU & EIA	01/01/1958	Yes
Economic and Monetary Community of Central Africa (CEMAC)	Goods	CU	24/06/1999	Yes
Economic Community of West African States (ECOWAS)	Goods	CU	24/07/1993	Yes
Economic Cooperation Organization (ECO)	Goods	PSA	17/02/1992	Yes
EFTA - Canada	Goods	FTA	01/07/2009	No
EFTA - Chile	Goods & Services	FTA & EIA	01/12/2004	Yes
EFTA - Croatia	Goods	FTA	01/01/2002	Yes
EFTA - Egypt	Goods	FTA	01/08/2007	Yes
EFTA - Former Yugoslav Republic of Macedonia	Goods	FTA	01/01/2001	Yes
EFTA - Israel	Goods	FTA	01/01/1993	Yes
EFTA - Jordan	Goods	FTA	01/01/2002	Yes
EFTA - Korea, Republic of	Goods & Services	FTA & EIA	01/09/2006	Yes
EFTA - Lebanon	Goods	FTA	01/01/2007	Yes
EFTA - Mexico	Goods & Services	FTA & EIA	01/07/2001	Yes
EFTA - Morocco	Goods	FTA	01/12/1999	Yes
EFTA - Palestinian Authority	Goods	FTA	01/07/1999	Yes
EFTA - SACU	Goods	FTA	01/05/2008	Yes
EFTA - Singapore	Goods & Services	FTA & EIA	01/01/2003	Yes
EFTA - Tunisia	Goods	FTA	01/06/2005	Yes
EFTA - Turkey	Goods	FTA	01/04/1992	Yes
Egypt - Turkey	Goods	FTA	01/03/2007	Yes
EU - San Marino	Goods	CU	01/04/2002	Yes
EU - Serbia	Goods	FTA	01/02/2010	Yes
Eurasian Economic Community (EAEC)	Goods	CU	08/10/1997	No
European Economic Area (EEA)	Services	EIA	01/01/1994	Yes
European Free Trade Association (EFTA)	Goods & Services	FTA & EIA	03/05/1960	Yes
Faroe Islands - Norway	Goods	FTA	01/07/1993	Yes
Faroe Islands - Switzerland	Goods	FTA	01/03/1995	No
Georgia - Armenia	Goods	FTA	11/11/1998	Yes

Georgia - Azerbaijan	Goods	FTA	10/07/1996	Yes
Georgia - Kazakhstan	Goods	FTA	16/07/1999	Yes
Georgia - Russian Federation	Goods	FTA	10/05/1994	Yes
Georgia - Turkmenistan	Goods	FTA	01/01/2000	Yes
Georgia - Ukraine	Goods	FTA	04/06/1996	Yes
Gulf Cooperation Council (GCC)	Goods	CU	01/01/2003	No
Honduras - El Salvador and the Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu	Goods & Services	FTA & EIA	01/03/2008	No
Iceland - Faroe Islands	Goods & Services	FTA & EIA	01/11/2006	No
India - Afghanistan	Goods	PSA	13/05/2003	No
India - Bhutan	Goods	FTA	29/07/2006	No
India - Nepal	Goods	PSA	27/10/2009	Yes
India - Singapore	Goods & Services	FTA & EIA	01/08/2005	Yes
India - Sri Lanka	Goods	FTA	15/12/2001	No
Israel - Mexico	Goods	FTA	01/07/2000	Yes
Japan - Indonesia	Goods & Services	FTA & EIA	01/07/2008	Yes
Japan - Malaysia	Goods & Services	FTA & EIA	13/07/2006	Yes
Japan - Mexico	Goods & Services	FTA & EIA	01/04/2005	Yes
Japan - Philippines	Goods & Services	FTA & EIA	11/12/2008	Yes
Japan - Singapore	Goods & Services	FTA & EIA	30/11/2002	Yes
Japan - Switzerland	Goods & Services	FTA & EIA	01/09/2009	Yes
Japan - Thailand	Goods & Services	FTA & EIA	01/11/2007	Yes
Japan - Viet Nam	Goods & Services	FTA & EIA	01/10/2009	Yes
Jordan - Singapore	Goods & Services	FTA & EIA	22/08/2005	Yes
Korea, Republic of - Chile	Goods & Services	FTA & EIA	01/04/2004	Yes
Korea, Republic of - India	Goods & Services	FTA & EIA	01/01/2010	Yes
Korea, Republic of - Singapore	Goods & Services	FTA & EIA	02/03/2006	Yes
Kyrgyz Republic - Armenia	Goods	FTA	27/10/1995	Yes
Kyrgyz Republic - Kazakhstan	Goods	FTA	11/11/1995	Yes
Kyrgyz Republic - Moldova	Goods	FTA	21/11/1996	Yes
Kyrgyz Republic - Russian Federation	Goods	FTA	24/04/1993	Yes
Kyrgyz Republic - Ukraine	Goods	FTA	19/01/1998	Yes
Kyrgyz Republic - Uzbekistan	Goods	FTA	20/03/1998	Yes
Lao People's Democratic Republic - Thailand	Goods	PSA	20/06/1991	No
Latin American Integration Association (LAIA)	Goods	PSA	18/03/1981	No
Melanesian Spearhead Group (MSG)	Goods	PSA	01/01/1994	Yes
MERCOSUR - India	Goods	PSA	01/06/2009	No
Mexico - El Salvador (Mexico - Northern Triangle)	Goods & Services	FTA & EIA	15/03/2001	Yes
Mexico - Guatemala (Mexico - Northern Triangle)	Goods & Services	FTA & EIA	15/03/2001	Yes
Mexico - Honduras (Mexico - Northern Triangle)	Goods & Services	FTA & EIA	01/06/2001	Yes
Mexico - Nicaragua	Goods & Services	FTA & EIA	01/07/1998	Yes
New Zealand - Singapore	Goods & Services	FTA & EIA	01/01/2001	Yes
Nicaragua and the Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu	Goods & Services	FTA & EIA	01/01/2008	Yes
North American Free Trade Agreement (NAFTA)	Goods & Services	FTA & EIA	01/01/1994	Yes
Pacific Island Countries Trade Agreement (PICTA)	Goods	FTA	13/04/2003	No
Pakistan - China	Goods & Services	FTA & EIA	01/07/2007	Yes
Pakistan - Malaysia	Goods & Services	FTA & EIA	01/01/2008	Yes
Pakistan - Sri Lanka	Goods	FTA	12/06/2005	Yes
Panama - Chile	Goods & Services	FTA & EIA	07/03/2008	Yes

Panama - Costa Rica (Panama - Central America)	Goods & Services	FTA & EIA	23/11/2008	Yes
Panama - El Salvador (Panama - Central America)	Goods & Services	FTA & EIA	11/04/2003	Yes
Panama - Honduras (Panama - Central America)	Goods & Services	FTA & EIA	09/01/2009	Yes
Panama - Singapore	Goods & Services	FTA & EIA	24/07/2006	No
Panama and the Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu	Goods & Services	FTA & EIA	01/01/2004	Yes
Pan-Arab Free Trade Area (PAFTA)	Goods	FTA	01/01/1998	No
Peru - China	Goods & Services	FTA & EIA	01/03/2010	Yes
Peru - Singapore	Goods & Services	FTA & EIA	01/08/2009	Yes
Singapore - Australia	Goods & Services	FTA & EIA	28/07/2003	Yes
South Asian Free Trade Agreement (SAFTA)	Goods	FTA	01/01/2006	No
South Asian Preferential Trade Arrangement (SAPTA)	Goods	PSA	07/12/1995	No
South Pacific Regional Trade and Economic Cooperation Agreement (SPARTECA)	Goods	PSA	01/01/1981	No
Southern African Customs Union (SACU)	Goods	CU	15/07/2004	Yes
Southern African Development Community (SADC)	Goods	FTA	01/09/2000	No
Southern Common Market (MERCOSUR)	Goods & Services	CU & EIA	29/11/1991	Yes
Thailand - Australia	Goods & Services	FTA & EIA	01/01/2005	Yes
Thailand - New Zealand	Goods & Services	FTA & EIA	01/07/2005	Yes
Trans-Pacific Strategic Economic Partnership	Goods & Services	FTA & EIA	28/05/2006	Yes
Turkey - Albania	Goods	FTA	01/05/2008	Yes
Turkey - Bosnia and Herzegovina	Goods	FTA	01/07/2003	Yes
Turkey - Croatia	Goods	FTA	01/07/2003	Yes
Turkey - Former Yugoslav Republic of Macedonia	Goods	FTA	01/09/2000	Yes
Turkey - Georgia	Goods	FTA	01/11/2008	Yes
Turkey - Israel	Goods	FTA	01/05/1997	Yes
Turkey - Montenegro	Goods	FTA	01/03/2010	Yes
Turkey - Morocco	Goods	FTA	01/01/2006	Yes
Turkey - Palestinian Authority	Goods	FTA	01/06/2005	Yes
Turkey - Serbia	Goods	FTA	01/09/2010	Yes
Turkey - Syria	Goods	FTA	01/01/2007	Yes
Turkey - Tunisia	Goods	FTA	01/07/2005	Yes
Ukraine - Azerbaijan	Goods	FTA	02/09/1996	Yes
Ukraine - Belarus	Goods	FTA	11/11/2006	Yes
Ukraine - Former Yugoslav Republic of Macedonia	Goods	FTA	05/07/2001	Yes
Ukraine - Kazakhstan	Goods	FTA	19/10/1998	Yes
Ukraine - Moldova	Goods	FTA	19/05/2005	Yes
Ukraine - Russian Federation	Goods	FTA	21/02/1994	Yes
Ukraine - Tajikistan	Goods	FTA	11/07/2002	Yes
Ukraine - Uzbekistan	Goods	FTA	01/01/1996	Yes
Ukraine -Turkmenistan	Goods	FTA	04/11/1995	Yes
US - Australia	Goods & Services	FTA & EIA	01/01/2005	Yes
US - Bahrain	Goods & Services	FTA & EIA	01/08/2006	Yes
US - Chile	Goods & Services	FTA & EIA	01/01/2004	Yes
US - Israel	Goods	FTA	19/08/1985	Yes
US - Jordan	Goods & Services	FTA & EIA	17/12/2001	Yes
US - Morocco	Goods & Services	FTA & EIA	01/01/2006	Yes
US - Oman	Goods & Services	FTA & EIA	01/01/2009	Yes
US - Peru	Goods & Services	FTA & EIA	01/02/2009	Yes
US - Singapore	Goods & Services	FTA & EIA	01/01/2004	Yes
West African Economic and Monetary	Goods	CU	01/01/2000	No

Union (WAEMU)

Notes:

(a) The name corresponds to the short title used in the RTA database and not to the full name used in the text of the respective agreement. The members of the different RTAs listed in this table can be found in the RTA database indicates.

(b) Goods, services or both, as notified by the signatories to the agreement.

(c) FTA - Free Trade Agreement, as defined in Paragraph 8(b) of Article XXIV of GATT 1994; CU - Customs Union, as defined in Paragraph 8(a) of Article XXIV of GATT 1994; EIA - Economic Integration Agreement, as defined in Article V of GATS; and PSA - Partial Scope Agreement, which cover only certain products and are notified under paragraph 4(a) of the Enabling Clause.

Source: Authors' estimates and WTO RTA database, accessible at <http://rtais.wto.org/UI/PublicMaintainRTAHome.aspx>

Annex II. General IP provisions in individual RTAs

Preferential Trade Agreement	Stated commitment to IP protection	TRIPS reaffirmation	Reference to WIPO treaties	MFN or National Treatment provisions	Assistance, co-operation or coordination	Enforcement procedures	Border measures	References to IPRs mentioned in the TRIPS
Andean Community (CAN)					✓		✓	✓
Armenia - Kazakhstan							✓	
Armenia - Moldova							✓	
Armenia - Russian Federation							✓	
Armenia - Turkmenistan							✓	
Armenia - Ukraine							✓	
ASEAN - Australia - New Zealand	✓	✓	✓	✓	✓	✓	✓	✓
ASEAN - China	✓	✓	✓	✓	✓			✓
ASEAN - India	✓	✓	✓		✓			
ASEAN - Japan			✓		✓			
ASEAN - Korea, Republic of	✓	✓	✓	✓	✓		✓	
ASEAN Free Trade Area (AFTA)	✓		✓		✓			
Australia - Chile	✓	✓	✓	✓	✓	✓	✓	✓
Australia - New Zealand (ANZCERTA)							✓	
Brunei Darussalam - Japan	✓		✓	✓	✓		✓	
Canada - Chile	✓							✓
Canada - Costa Rica							✓	✓
Canada - Israel		✓	✓	✓		✓		✓
Canada - Peru	✓	✓	✓		✓		✓	✓
Caribbean Community and Common Market (CARICOM)	✓		✓		✓			✓
Central European Free Trade Agreement (CEFTA) 2006	✓	✓	✓	✓	✓		✓	
Chile - China	✓	✓	✓		✓		✓	✓
Chile - Colombia	✓							
Chile - Costa Rica (Chile - Central America)								✓
Chile - El Salvador (Chile - Central America)								✓
Chile - Japan	✓	✓	✓	✓	✓	✓	✓	✓
Chile - Mexico	✓		✓	✓	✓	✓	✓	✓
China - Hong Kong, China					✓			
China - New Zealand	✓	✓			✓			
Colombia - Mexico	✓		✓	✓		✓	✓	✓
Common Economic Zone (CEZ)	✓							
Common Market for Eastern and Southern Africa (COMESA)					✓			✓
Commonwealth of Independent States (CIS)							✓	
Costa Rica - Mexico	✓		✓	✓	✓	✓	✓	✓
Dominican Republic - Central America - United States Free Trade Agreement (CAFTA-DR)	✓	✓	✓	✓	✓	✓	✓	✓
East African Community (EAC)	✓				✓			
EC - Albania	✓		✓	✓	✓	✓	✓	✓
EC - Algeria	✓	✓	✓		✓	✓	✓	
EC - Andorra	✓						✓	
EC - Bosnia and Herzegovina	✓	✓	✓	✓	✓	✓	✓	✓
EC - Cameroon	✓	✓			✓		✓	

EC - CARIFORUM States EPA	✓	✓	✓		✓	✓	✓	✓
EC - Chile	✓	✓	✓		✓	✓	✓	✓
EC - Côte d'Ivoire					✓	✓	✓	
EC - Croatia	✓		✓	✓	✓		✓	✓
EC - Egypt	✓	✓	✓		✓		✓	
EC - Former Yugoslav Republic of Macedonia	✓		✓	✓	✓	✓	✓	✓
EC - Israel	✓		✓		✓	✓	✓	
EC - Jordan	✓		✓		✓		✓	✓
EC - Lebanon	✓		✓		✓		✓	
EC - Mexico	✓				✓	✓	✓	✓
EC - Montenegro	✓		✓	✓	✓	✓	✓	✓
EC - Morocco	✓		✓		✓	✓	✓	
EC - Norway							✓	
EC - Palestinian Authority	✓				✓	✓	✓	
EC - South Africa	✓	✓	✓		✓		✓	✓
EC - Switzerland - Liechtenstein							✓	
EC - Syria								✓
EC - Tunisia	✓		✓		✓	✓	✓	✓
EC - Turkey	✓	✓	✓		✓	✓	✓	✓
EC Treaty	✓		✓	✓	✓	✓	✓	✓
Economic and Monetary Community of Central Africa (CEMAC)	✓							
Economic Community of West African States (ECOWAS)					✓			
Economic Cooperation Organization (ECO)	✓		✓	✓	✓	✓	✓	✓
EFTA - Chile	✓	✓	✓	✓	✓	✓	✓	✓
EFTA - Croatia	✓	✓	✓	✓	✓	✓	✓	✓
EFTA - Egypt	✓	✓	✓	✓	✓	✓	✓	✓
EFTA - Former Yugoslav Republic of Macedonia	✓	✓	✓	✓	✓	✓	✓	✓
EFTA - Israel	✓		✓	✓	✓	✓	✓	✓
EFTA - Jordan	✓	✓	✓	✓	✓	✓	✓	✓
EFTA - Korea, Republic of	✓	✓	✓	✓	✓	✓		✓
EFTA - Lebanon	✓	✓	✓	✓	✓	✓	✓	✓
EFTA - Mexico	✓	✓	✓	✓	✓	✓	✓	✓
EFTA - Morocco	✓	✓	✓	✓	✓	✓	✓	✓
EFTA - Palestinian Authority	✓				✓	✓	✓	
EFTA - SACU	✓			✓	✓	✓		
EFTA - Singapore	✓	✓	✓	✓	✓	✓		✓
EFTA - Tunisia	✓	✓	✓	✓	✓	✓	✓	✓
EFTA - Turkey	✓	✓	✓	✓	✓	✓		✓
Egypt - Turkey	✓			✓	✓	✓	✓	
EU - San Marino					✓		✓	
EU - Serbia	✓	✓	✓	✓	✓	✓	✓	✓
European Economic Area (EEA)	✓		✓	✓	✓	✓	✓	✓
European Free Trade Association (EFTA)	✓		✓	✓	✓	✓		✓
Faroe Islands - Norway	✓				✓	✓	✓	✓
Georgia - Armenia							✓	
Georgia - Azerbaijan							✓	
Georgia - Kazakhstan							✓	
Georgia - Russian Federation							✓	
Georgia - Turkmenistan							✓	
Georgia - Ukraine							✓	
India - Nepal							✓	✓
India - Singapore					✓		✓	
Israel - Mexico		✓						

Japan - Indonesia	✓	✓	✓	✓	✓	✓	✓	✓
Japan - Malaysia	✓	✓	✓	✓	✓	✓	✓	✓
Japan - Mexico	✓	✓	✓	✓	✓		✓	✓
Japan - Philippines	✓	✓	✓		✓	✓	✓	✓
Japan - Singapore				✓	✓		✓	✓
Japan - Switzerland	✓	✓	✓	✓	✓	✓	✓	✓
Japan - Thailand	✓	✓	✓	✓	✓	✓	✓	✓
Japan - Viet Nam	✓	✓		✓	✓	✓	✓	✓
Jordan - Singapore	✓	✓						
Korea, Republic of - Chile	✓	✓	✓	✓	✓	✓	✓	✓
Korea, Republic of - India	✓	✓	✓		✓	✓	✓	
Korea, Republic of - Singapore	✓	✓	✓		✓	✓		✓
Kyrgyz Republic - Armenia							✓	
Kyrgyz Republic - Kazakhstan							✓	
Kyrgyz Republic - Moldova							✓	
Kyrgyz Republic - Russian Federation							✓	
Kyrgyz Republic - Ukraine							✓	
Kyrgyz Republic - Uzbekistan							✓	
Melanesian Spearhead Group (MSG)							✓	
Mexico - El Salvador (Mexico - Northern Triangle)	✓		✓	✓	✓	✓	✓	✓
Mexico - Guatemala (Mexico - Northern Triangle)	✓		✓	✓	✓	✓	✓	✓
Mexico - Honduras (Mexico - Northern Triangle)	✓		✓	✓	✓	✓	✓	✓
Mexico - Nicaragua	✓		✓	✓	✓	✓	✓	✓
New Zealand - Singapore	✓	✓						
Nicaragua and the Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu	✓	✓	✓		✓	✓	✓	✓
North American Free Trade Agreement (NAFTA)	✓		✓	✓	✓	✓	✓	✓
Pakistan - China							✓	
Pakistan - Malaysia	✓	✓	✓	✓	✓	✓	✓	
Pakistan - Sri Lanka							✓	
Panama - Chile		✓						✓
Panama - Costa Rica (Panama - Central America)		✓				✓	✓	
Panama - El Salvador (Panama - Central America)		✓				✓	✓	
Panama - Honduras (Panama - Central America)		✓				✓	✓	
Panama and the Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu	✓	✓	✓		✓	✓	✓	✓
Peru - China	✓	✓			✓		✓	✓
Peru - Singapore		✓		✓				✓
Singapore - Australia		✓	✓	✓	✓	✓	✓	✓
Southern African Development Community (SADC)	✓	✓					✓	
Thailand - Australia	✓	✓	✓		✓	✓	✓	✓
Thailand - New Zealand	✓	✓	✓		✓	✓		
Trans-Pacific Strategic Economic Partnership	✓	✓	✓		✓		✓	✓
Turkey - Albania	✓			✓	✓		✓	
Turkey - Bosnia and Herzegovina	✓	✓			✓		✓	
Turkey - Croatia	✓	✓			✓		✓	
Turkey - Former Yugoslav Republic of Macedonia	✓				✓		✓	
Turkey - Georgia	✓			✓	✓		✓	
Turkey - Israel	✓				✓		✓	
Turkey - Montenegro				✓	✓		✓	
Turkey - Morocco	✓			✓	✓			
Turkey - Palestinian Authority	✓	✓	✓		✓		✓	
Turkey - Serbia	✓	✓	✓		✓		✓	
Turkey - Syria	✓	✓					✓	
Turkey - Tunisia	✓	✓	✓		✓		✓	

Ukraine - Azerbaijan							✓	
Ukraine - Belarus							✓	
Ukraine - Former Yugoslav Republic of Macedonia	✓	✓	✓	✓	✓		✓	
Ukraine - Kazakhstan							✓	
Ukraine - Moldova	✓	✓	✓	✓	✓			
Ukraine - Russian Federation							✓	
Ukraine - Tajikistan							✓	
Ukraine - Uzbekistan							✓	
Ukraine -Turkmenistan							✓	
US - Australia	✓	✓	✓	✓	✓	✓	✓	✓
US - Bahrain	✓		✓	✓		✓	✓	✓
US - Chile	✓	✓	✓	✓	✓	✓	✓	✓
US - Israel	✓	✓	✓	✓				✓
US - Jordan	✓	✓	✓	✓		✓	✓	✓
US - Morocco	✓		✓	✓		✓	✓	✓
US - Oman	✓		✓	✓		✓	✓	✓
US - Peru	✓	✓	✓	✓	✓	✓	✓	✓
US - Singapore	✓	✓	✓	✓		✓	✓	✓

Source: Authors' estimates

Annex III. Specific IPRs referred to in individual RTAs

Preferential Trade Agreement	Patents	Copyright and Related Rights	Trademarks	Undisclosed Information	Industrial Designs	Geographical Indications	Layout Designs of Integrated Circuits	New Plant Varieties	Traditional knowledge, folklore or genetic resources	Encrypted program-carrying satellite signals	Domain names
Andean Community (CAN)	✓	✓	✓	✓	✓		✓	✓	✓		
ASEAN - Australia - New Zealand		✓	✓			✓			✓		
ASEAN - China									✓		
Australia - Chile	✓	✓	✓			✓				✓	✓
Canada - Chile						✓					✓
Canada - Costa Rica						✓					✓
Canada - Peru						✓					
Caribbean Community and Common Market (CARICOM)								✓			
Chile - China	✓					✓					
Chile - Costa Rica (Chile - Central America)						✓					
Chile - El Salvador (Chile - Central America)						✓					
Chile - Japan			✓			✓		✓			
Chile - Mexico		✓	✓			✓				✓	
China - New Zealand								✓			
Colombia - Mexico		✓	✓	✓		✓		✓		✓	
Costa Rica - Mexico		✓	✓	✓		✓				✓	
Dominican Republic - Central America - United States Free Trade Agreement (CAFTA-DR)	✓	✓	✓			✓		✓		✓	✓
EC - Albania	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
EC - Bosnia and Herzegovina	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
EC - CARIFORUM States EPA	✓	✓	✓		✓	✓		✓	✓		✓
EC - Chile			✓			✓					
EC - Croatia	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
EC - Former Yugoslav Republic of Macedonia	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
EC - Montenegro	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
EC - Turkey	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
EC Treaty	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Economic Cooperation Organization (ECO)								✓			
EFTA - Chile	✓			✓	✓	✓					
EFTA - Croatia	✓	✓	✓	✓	✓	✓	✓				
EFTA - Egypt	✓										
EFTA - Former Yugoslav Republic of Macedonia	✓	✓	✓	✓	✓	✓	✓				
EFTA - Israel	✓	✓	✓	✓	✓	✓	✓				
EFTA - Jordan	✓	✓	✓	✓	✓	✓	✓				
EFTA - Korea, Republic of	✓			✓	✓	✓					
EFTA - Lebanon	✓			✓	✓	✓					
EFTA - Mexico	✓	✓	✓	✓	✓	✓	✓				
EFTA - Morocco	✓	✓	✓	✓	✓						

EFTA - Singapore	✓		✓		✓	✓				
EFTA - Tunisia	✓				✓	✓	✓			
EFTA - Turkey	✓	✓	✓			✓	✓			
EU - Serbia	✓	✓	✓	✓	✓	✓		✓	✓	✓
European Economic Area (EEA)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
European Free Trade Association (EFTA)	✓					✓	✓			
Faroe Islands - Norway	✓									
Japan - Indonesia	✓	✓	✓	✓	✓			✓	✓	✓
Japan - Malaysia	✓	✓	✓	✓	✓			✓		
Japan - Mexico				✓		✓				
Japan - Philippines	✓	✓	✓	✓	✓			✓		
Japan - Switzerland	✓	✓	✓	✓	✓	✓		✓		✓
Japan - Thailand	✓	✓	✓	✓	✓	✓		✓	✓	✓
Japan - Viet Nam	✓	✓	✓	✓	✓	✓		✓		✓
Korea, Republic of - Chile			✓			✓				
Korea, Republic of - India								✓		
Korea, Republic of - Singapore	✓									
Mexico - El Salvador (Mexico - Northern Triangle)	✓	✓	✓	✓	✓	✓		✓		✓
Mexico - Guatemala (Mexico - Northern Triangle)	✓	✓	✓	✓	✓	✓		✓		✓
Mexico - Honduras (Mexico - Northern Triangle)	✓	✓	✓	✓	✓	✓		✓		✓
Mexico - Nicaragua		✓	✓	✓		✓		✓		✓
Nicaragua and the Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu	✓	✓	✓			✓		✓	✓	✓
North American Free Trade Agreement (NAFTA)	✓	✓	✓	✓	✓	✓	✓			✓
Panama - Chile						✓				
Panama and the Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu		✓				✓		✓	✓	
Peru - China						✓		✓		
Peru - Singapore						✓				
Singapore - Australia		✓	✓		✓					✓
Thailand - Australia		✓								
Thailand - New Zealand								✓		
Trans-Pacific Strategic Economic Partnership			✓			✓		✓		
US - Australia	✓	✓	✓			✓			✓	✓
US - Bahrain	✓	✓	✓			✓			✓	✓
US - Chile	✓	✓	✓			✓			✓	✓
US - Jordan	✓	✓				✓				
US - Morocco	✓	✓	✓			✓			✓	✓
US - Oman	✓	✓	✓			✓			✓	✓
US - Peru	✓	✓	✓			✓			✓	✓
US - Singapore	✓	✓	✓	✓		✓			✓	✓

Source: Authors' estimates

Annex IV. Pharma-related provisions in individual RTAs

Preferential Trade Agreement	Patentability criteria and exclusions	Patentability of new use.	Patenting of life forms	Patent linkage	Exceptions to exclusive rights	Data exclusivity provisions (incl. minimum protection periods)	... of which minimum period of data exclusivity	Term extensions of patent protection	Compulsory licensing	Exhaustion (parallel imports)	Safeguarding a trademark's function
Andean Community (CAN)	✓	✓									
Australia - Chile	✓				✓				✓		
Chile - China									✓		
Chile - Mexico											✓
Colombia - Mexico						✓	✓				
Costa Rica - Mexico											✓
Dominican Republic - Central America - United States Free Trade Agreement (CAFTA-DR)	✓		✓	✓	✓	✓	✓	✓			✓
EC - Albania	✓	✓	✓		✓	✓	✓		✓		
EC - Bosnia and Herzegovina	✓	✓	✓		✓	✓	✓		✓		
EC - Croatia	✓	✓	✓		✓	✓	✓		✓		
EC - Former Yugoslav Republic of Macedonia	✓	✓	✓		✓	✓	✓		✓		
EC - Jordan	✓										
EC - Mexico						✓	✓				
EC - Montenegro	✓	✓	✓		✓	✓	✓		✓		
EC - Turkey	✓	✓	✓		✓	✓	✓		✓		✓
EC Treaty	✓	✓	✓		✓	✓	✓	✓	✓	✓	
EFTA - Chile	✓					✓	✓	✓	✓		
EFTA - Croatia	✓	✓			✓				✓		
EFTA - Egypt	✓					✓					
EFTA - Former Yugoslav Republic of Macedonia	✓	✓			✓				✓		
EFTA - Israel	✓	✓			✓	✓	✓		✓		
EFTA - Jordan	✓	✓			✓				✓		
EFTA - Korea, Republic of	✓		✓		✓	✓		✓	✓		
EFTA - Lebanon	✓	✓			✓	✓	✓		✓		
EFTA - Mexico	✓	✓			✓				✓		
EFTA - Morocco	✓	✓			✓				✓		
EFTA - Singapore	✓							✓			
EFTA - Tunisia	✓	✓			✓	✓	✓		✓		
EFTA - Turkey	✓	✓			✓				✓		
EU - Serbia	✓	✓			✓	✓	✓	✓			
European Economic Area (EEA)	✓	✓	✓		✓	✓	✓	✓	✓	✓	
European Free Trade Association (EFTA)	✓	✓	✓		✓			✓	✓	✓	
Faroe Islands - Norway	✓	✓	✓		✓			✓	✓		
Japan - Indonesia	✓										
Japan - Malaysia	✓										

Japan - Switzerland	✓				✓	✓	✓			
Japan - Thailand	✓		✓							
Japan - Viet Nam	✓									
Korea, Republic of - Singapore									✓	
Mexico - El Salvador (Mexico - Northern Triangle)	✓			✓	✓			✓		✓
Mexico - Guatemala (Mexico - Northern Triangle)	✓			✓	✓			✓		✓
Mexico - Honduras (Mexico - Northern Triangle)	✓			✓	✓			✓		✓
Mexico - Nicaragua					✓					✓
Nicaragua and the Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu	✓									
North American Free Trade Agreement (NAFTA)	✓			✓	✓	✓	✓	✓		✓
Trans-Pacific Strategic Economic Partnership									✓	
US - Australia	✓	✓		✓	✓	✓	✓	✓	✓	✓
US - Bahrain	✓	✓	✓	✓	✓	✓	✓	✓		✓
US - Chile	✓		✓	✓	✓	✓	✓	✓		✓
US - Jordan	✓	✓		✓		✓		✓	✓	
US - Morocco	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
US - Oman	✓	✓		✓	✓	✓	✓	✓		✓
US - Peru	✓		✓	✓	✓	✓	✓	✓		✓
US - Singapore	✓			✓	✓	✓	✓	✓	✓	✓

Source: Authors' estimates

Annex V. IP content and categorization of individual RTAs, asymmetric weights

- ★★★ high content
- ★★ moderate content
- ★ negligible content

RTA Name	IP content score (0 - 100):				
	Pharmaceutical	Specific IPR types	General IP provisions	Overall score (a)	Overall IP content
EC - Bosnia and Herzegovina	64	91	100	94	★★★
EU - Serbia	55	82	100	90	★★★
EC Treaty	82	91	88	88	★★★
European Economic Area (EEA)	82	91	88	88	★★★
EC - Turkey	73	91	88	87	★★★
Dominican Republic - Central America - United States Free Trade Agreement (CAFTA-DR)	73	64	100	86	★★★
Japan - Thailand	18	82	100	86	★★★
EC - Albania	64	91	88	86	★★★
EC - Former Yugoslav Republic of Macedonia	64	91	88	86	★★★
EC - Montenegro	64	91	88	86	★★★
Japan - Switzerland	36	73	100	85	★★★
US - Australia	91	55	100	85	★★★
US - Chile	73	55	100	84	★★★
US - Peru	73	55	100	84	★★★
EFTA - Croatia	36	64	100	83	★★★
EFTA - Former Yugoslav Republic of Macedonia	36	64	100	83	★★★
EFTA - Jordan	36	64	100	83	★★★
EFTA - Mexico	36	64	100	83	★★★
Japan - Indonesia	9	73	100	83	★★★
North American Free Trade Agreement (NAFTA)	64	73	88	81	★★★
US - Singapore	82	64	88	80	★★★
Australia - Chile	27	55	100	79	★★★
Mexico - El Salvador (Mexico - Northern Triangle)	45	73	88	79	★★★
Mexico - Guatemala (Mexico - Northern Triangle)	45	73	88	79	★★★
Mexico - Honduras (Mexico - Northern Triangle)	45	73	88	79	★★★
EC - Croatia	64	91	75	79	★★★
EFTA - Morocco	36	45	100	77	★★★
Japan - Malaysia	9	55	100	77	★★★
EFTA - Israel	55	64	88	77	★★★
EFTA - Lebanon	55	36	100	76	★★★
EFTA - Tunisia	55	36	100	76	★★★
EFTA - Chile	45	36	100	75	★★★
Japan - Viet Nam	9	73	88	75	★★★
EC - CARIFORUM States EPA	0	73	88	74	★★★
Nicaragua and the Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu	9	64	88	73	★★★
ASEAN - Australia - New Zealand	0	36	100	71	★★★
Mexico - Nicaragua	18	55	88	71	★★★
US - Morocco	91	55	75	70	★★★
EFTA - Turkey	36	45	88	70	★★★
US - Bahrain	82	55	75	70	★★★
EFTA - Korea, Republic of	55	36	88	69	★★★
Japan - Philippines	0	55	88	69	★★★
US - Oman	73	55	75	69	★★★
Chile - Japan	0	27	100	68	★★★
Costa Rica - Mexico	9	45	88	67	★★★

US - Jordan	55	27	88	66	★★★
Korea, Republic of - Chile	0	18	100	65	★★★
EFTA - Singapore	18	36	88	65	★★★
EFTA - Egypt	18	9	100	65	★★★
Chile - Mexico	9	36	88	64	★★★
Panama and the Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu	0	36	88	63	★★★
Singapore - Australia	0	36	88	63	★★★
Colombia - Mexico	18	55	75	63	★★★
European Free Trade Association (EFTA)	64	27	75	60	★★
EC - Chile	0	18	88	58	★★
Japan - Mexico	0	18	88	58	★★
Economic Cooperation Organization (ECO)	0	9	88	55	★★
Thailand - Australia	0	9	88	55	★★
Trans-Pacific Strategic Economic Partnership	9	27	75	54	★★
Pakistan - Malaysia	0	0	88	53	★★
Chile - China	9	18	75	51	★★
Andean Community (CAN)	64	73	38	51	★★
Korea, Republic of - Singapore	9	9	75	49	★★
ASEAN - China	0	9	75	48	★★
Canada - Peru	0	9	75	48	★★
Korea, Republic of - India	0	9	75	48	★★
Faroe Islands - Norway	55	9	63	46	★★
ASEAN - Korea, Republic of	0	0	75	45	★★
Central European Free Trade Agreement (CEFTA) 2006	0	0	75	45	★★
EC - Algeria	0	0	75	45	★★
EC - South Africa	0	0	75	45	★★
EC - Tunisia	0	0	75	45	★★
Ukraine - Former Yugoslav Republic of Macedonia	0	0	75	45	★★
Peru - China	0	18	63	43	★★
Thailand - New Zealand	0	9	63	40	★★
EC - Mexico	18	0	63	39	★★
EC - Jordan	9	0	63	38	★★
Brunei Darussalam - Japan	0	0	63	38	★★
Canada - Israel	0	0	63	38	★★
EC - Egypt	0	0	63	38	★★
EC - Israel	0	0	63	38	★★
EC - Morocco	0	0	63	38	★★
Egypt - Turkey	0	0	63	38	★★
Turkey - Palestinian Authority	0	0	63	38	★★
Turkey - Serbia	0	0	63	38	★★
Turkey - Tunisia	0	0	63	38	★★
Ukraine - Moldova	0	0	63	38	★★
US - Israel	0	0	63	38	★★
Caribbean Community and Common Market (CARICOM)	0	9	50	33	★★
ASEAN - India	0	0	50	30	★★
EC - Cameroon	0	0	50	30	★★
EC - Lebanon	0	0	50	30	★★
EC - Palestinian Authority	0	0	50	30	★★
EFTA - Palestinian Authority	0	0	50	30	★★
EFTA - SACU	0	0	50	30	★★
Japan - Singapore	0	0	50	30	★★
Turkey - Albania	0	0	50	30	★★
Turkey - Bosnia and Herzegovina	0	0	50	30	★★
Turkey - Croatia	0	0	50	30	★★

Turkey - Georgia	0	0	50	30	★★
China - New Zealand	0	9	38	25	★★
Peru - Singapore	0	9	38	25	★★
ASEAN Free Trade Area (AFTA)	0	0	38	23	★★
EC - Côte d'Ivoire	0	0	38	23	★★
Panama - Costa Rica (Panama - Central America)	0	0	38	23	★★
Panama - El Salvador (Panama - Central America)	0	0	38	23	★★
Panama - Honduras (Panama - Central America)	0	0	38	23	★★
Southern African Development Community (SADC)	0	0	38	23	★★
Turkey - Former Yugoslav Republic of Macedonia	0	0	38	23	★★
Turkey - Israel	0	0	38	23	★★
Turkey - Montenegro	0	0	38	23	★★
Turkey - Morocco	0	0	38	23	★★
Turkey - Syria	0	0	38	23	★★
Canada - Chile	0	18	25	20	★★
Canada - Costa Rica	0	18	25	20	★★
Panama - Chile	0	9	25	18	★
ASEAN - Japan	0	0	25	15	★
Common Market for Eastern and Southern Africa (COMESA)	0	0	25	15	★
East African Community (EAC)	0	0	25	15	★
EC - Andorra	0	0	25	15	★
EU - San Marino	0	0	25	15	★
India - Nepal	0	0	25	15	★
India - Singapore	0	0	25	15	★
Jordan - Singapore	0	0	25	15	★
New Zealand - Singapore	0	0	25	15	★
Chile - Costa Rica (Chile - Central America)	0	9	13	10	★
Chile - El Salvador (Chile - Central America)	0	9	13	10	★
Armenia - Kazakhstan	0	0	13	8	★
Armenia - Moldova	0	0	13	8	★
Armenia - Russian Federation	0	0	13	8	★
Armenia - Turkmenistan	0	0	13	8	★
Armenia - Ukraine	0	0	13	8	★
Australia - New Zealand (ANZCERTA)	0	0	13	8	★
Chile - Colombia	0	0	13	8	★
China - Hong Kong, China	0	0	13	8	★
Common Economic Zone (CEZ)	0	0	13	8	★
Commonwealth of Independent States (CIS)	0	0	13	8	★
EC - Norway	0	0	13	8	★
EC - Switzerland - Liechtenstein	0	0	13	8	★
EC - Syria	0	0	13	8	★
Economic and Monetary Community of Central Africa (CEMAC)	0	0	13	8	★
Economic Community of West African States (ECOWAS)	0	0	13	8	★
Georgia - Armenia	0	0	13	8	★
Georgia - Azerbaijan	0	0	13	8	★
Georgia - Kazakhstan	0	0	13	8	★
Georgia - Russian Federation	0	0	13	8	★
Georgia - Turkmenistan	0	0	13	8	★
Georgia - Ukraine	0	0	13	8	★
Israel - Mexico	0	0	13	8	★
Kyrgyz Republic - Armenia	0	0	13	8	★
Kyrgyz Republic - Kazakhstan	0	0	13	8	★
Kyrgyz Republic - Moldova	0	0	13	8	★
Kyrgyz Republic - Russian Federation	0	0	13	8	★

Kyrgyz Republic - Ukraine	0	0	13	8	★
Kyrgyz Republic - Uzbekistan	0	0	13	8	★
Melanesian Spearhead Group (MSG)	0	0	13	8	★
Pakistan - China	0	0	13	8	★
Pakistan - Sri Lanka	0	0	13	8	★
Ukraine - Azerbaijan	0	0	13	8	★
Ukraine - Belarus	0	0	13	8	★
Ukraine - Kazakhstan	0	0	13	8	★
Ukraine - Russian Federation	0	0	13	8	★
Ukraine - Tajikistan	0	0	13	8	★
Ukraine - Uzbekistan	0	0	13	8	★
Ukraine -Turkmenistan	0	0	13	8	★

(a) Weighted average of pharmaceutical, specific and general provisions (10%, 30% and 60% respectively).

Source: Authors' estimates

Annex VI. IP content and categorization of individual RTAs, proportional weights

- ★★★ high content
★★ moderate content
★ negligible content

RTA Name	IP content score (0 - 100):				
	Pharmaceutical	Specific IPR types	General IP provisions	Overall score (a)	Overall IP content
EC Treaty	82	91	88	87	★★★
European Economic Area (EEA)	82	91	88	87	★★★
EC - Bosnia and Herzegovina	64	91	100	83	★★★
EC - Turkey	73	91	88	83	★★★
US - Australia	91	55	100	80	★★★
EC - Albania	64	91	88	80	★★★
EC - Former Yugoslav Republic of Macedonia	64	91	88	80	★★★
EC - Montenegro	64	91	88	80	★★★
Dominican Republic - Central America - United States Free Trade Agreement (CAFTA-DR)	73	64	100	77	★★★
EC - Croatia	64	91	75	77	★★★
EU - Serbia	55	82	100	77	★★★
US - Singapore	82	64	88	77	★★★
US - Chile	73	55	100	73	★★★
US - Peru	73	55	100	73	★★★
North American Free Trade Agreement (NAFTA)	64	73	88	73	★★★
US - Morocco	91	55	75	73	★★★
US - Bahrain	82	55	75	70	★★★
Japan - Switzerland	36	73	100	67	★★★
EFTA - Israel	55	64	88	67	★★★
Mexico - El Salvador (Mexico - Northern Triangle)	45	73	88	67	★★★
Mexico - Guatemala (Mexico - Northern Triangle)	45	73	88	67	★★★
Mexico - Honduras (Mexico - Northern Triangle)	45	73	88	67	★★★
US - Oman	73	55	75	67	★★★
EFTA - Croatia	36	64	100	63	★★★
EFTA - Former Yugoslav Republic of Macedonia	36	64	100	63	★★★
EFTA - Jordan	36	64	100	63	★★★
EFTA - Mexico	36	64	100	63	★★★
Japan - Thailand	18	82	100	63	★★★
Andean Community (CAN)	64	73	38	60	★★
EFTA - Lebanon	55	36	100	60	★★
EFTA - Tunisia	55	36	100	60	★★
Australia - Chile	27	55	100	57	★★
EFTA - Korea, Republic of	55	36	88	57	★★
EFTA - Morocco	36	45	100	57	★★
Japan - Indonesia	9	73	100	57	★★
EFTA - Chile	45	36	100	57	★★
US - Jordan	55	27	88	53	★★
EFTA - Turkey	36	45	88	53	★★
European Free Trade Association (EFTA)	64	27	75	53	★★
Japan - Viet Nam	9	73	88	53	★★
Mexico - Nicaragua	18	55	88	50	★★
EC - CARIFORUM States EPA	0	73	88	50	★★
Japan - Malaysia	9	55	100	50	★★
Nicaragua and the Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu	9	64	88	50	★★
Colombia - Mexico	18	55	75	47	★★

EFTA - Singapore	18	36	88	43	★★
Japan - Philippines	0	55	88	43	★★
Costa Rica - Mexico	9	45	88	43	★★
Chile - Mexico	9	36	88	40	★★
ASEAN - Australia - New Zealand	0	36	100	40	★★
Faroe Islands - Norway	55	9	63	40	★★
Chile - Japan	0	27	100	37	★★
EFTA - Egypt	18	9	100	37	★★
Panama and the Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu	0	36	88	37	★★
Singapore - Australia	0	36	88	37	★★
Korea, Republic of - Chile	0	18	100	33	★★
Trans-Pacific Strategic Economic Partnership	9	27	75	33	★★
Chile - China	9	18	75	30	★★
EC - Chile	0	18	88	30	★★
Japan - Mexico	0	18	88	30	★★
Economic Cooperation Organization (ECO)	0	9	88	27	★★
Korea, Republic of - Singapore	9	9	75	27	★★
Thailand - Australia	0	9	88	27	★★
ASEAN - China	0	9	75	23	★★
Canada - Peru	0	9	75	23	★★
EC - Mexico	18	0	63	23	★★
Korea, Republic of - India	0	9	75	23	★★
Pakistan - Malaysia	0	0	88	23	★★
Peru - China	0	18	63	23	★★
ASEAN - Korea, Republic of	0	0	75	20	★
Central European Free Trade Agreement (CEFTA) 2006	0	0	75	20	★
EC - Algeria	0	0	75	20	★
EC - Jordan	9	0	63	20	★
EC - South Africa	0	0	75	20	★
EC - Tunisia	0	0	75	20	★
Thailand - New Zealand	0	9	63	20	★
Ukraine - Former Yugoslav Republic of Macedonia	0	0	75	20	★
Brunei Darussalam - Japan	0	0	63	17	★
Canada - Israel	0	0	63	17	★
Caribbean Community and Common Market (CARICOM)	0	9	50	17	★
EC - Egypt	0	0	63	17	★
EC - Israel	0	0	63	17	★
EC - Morocco	0	0	63	17	★
Egypt - Turkey	0	0	63	17	★
Turkey - Palestinian Authority	0	0	63	17	★
Turkey - Serbia	0	0	63	17	★
Turkey - Tunisia	0	0	63	17	★
Ukraine - Moldova	0	0	63	17	★
US - Israel	0	0	63	17	★
ASEAN - India	0	0	50	13	★
Canada - Chile	0	18	25	13	★
Canada - Costa Rica	0	18	25	13	★
EC - Cameroon	0	0	50	13	★
EC - Lebanon	0	0	50	13	★
EC - Palestinian Authority	0	0	50	13	★
EFTA - Palestinian Authority	0	0	50	13	★
EFTA - SACU	0	0	50	13	★
Japan - Singapore	0	0	50	13	★
Turkey - Albania	0	0	50	13	★

Turkey - Bosnia and Herzegovina	0	0	50	13	★
Turkey - Croatia	0	0	50	13	★
Turkey - Georgia	0	0	50	13	★
China - New Zealand	0	9	38	13	★
Peru - Singapore	0	9	38	13	★
ASEAN Free Trade Area (AFTA)	0	0	38	10	★
EC - Côte d'Ivoire	0	0	38	10	★
Panama - Chile	0	9	25	10	★
Panama - Costa Rica (Panama - Central America)	0	0	38	10	★
Panama - El Salvador (Panama - Central America)	0	0	38	10	★
Panama - Honduras (Panama - Central America)	0	0	38	10	★
Southern African Development Community (SADC)	0	0	38	10	★
Turkey - Former Yugoslav Republic of Macedonia	0	0	38	10	★
Turkey - Israel	0	0	38	10	★
Turkey - Montenegro	0	0	38	10	★
Turkey - Morocco	0	0	38	10	★
Turkey - Syria	0	0	38	10	★
ASEAN - Japan	0	0	25	7	★
Chile - Costa Rica (Chile - Central America)	0	9	13	7	★
Chile - El Salvador (Chile - Central America)	0	9	13	7	★
Common Market for Eastern and Southern Africa (COMESA)	0	0	25	7	★
East African Community (EAC)	0	0	25	7	★
EC - Andorra	0	0	25	7	★
EU - San Marino	0	0	25	7	★
India - Nepal	0	0	25	7	★
India - Singapore	0	0	25	7	★
Jordan - Singapore	0	0	25	7	★
New Zealand - Singapore	0	0	25	7	★
Armenia - Kazakhstan	0	0	13	3	★
Armenia - Moldova	0	0	13	3	★
Armenia - Russian Federation	0	0	13	3	★
Armenia - Turkmenistan	0	0	13	3	★
Armenia - Ukraine	0	0	13	3	★
Australia - New Zealand (ANZCERTA)	0	0	13	3	★
Chile - Colombia	0	0	13	3	★
China - Hong Kong, China	0	0	13	3	★
Common Economic Zone (CEZ)	0	0	13	3	★
Commonwealth of Independent States (CIS)	0	0	13	3	★
EC - Norway	0	0	13	3	★
EC - Switzerland - Liechtenstein	0	0	13	3	★
EC - Syria	0	0	13	3	★
Economic and Monetary Community of Central Africa (CEMAC)	0	0	13	3	★
Economic Community of West African States (ECOWAS)	0	0	13	3	★
Georgia - Armenia	0	0	13	3	★
Georgia - Azerbaijan	0	0	13	3	★
Georgia - Kazakhstan	0	0	13	3	★
Georgia - Russian Federation	0	0	13	3	★
Georgia - Turkmenistan	0	0	13	3	★
Georgia - Ukraine	0	0	13	3	★
Israel - Mexico	0	0	13	3	★
Kyrgyz Republic - Armenia	0	0	13	3	★
Kyrgyz Republic - Kazakhstan	0	0	13	3	★
Kyrgyz Republic - Moldova	0	0	13	3	★
Kyrgyz Republic - Russian Federation	0	0	13	3	★

Kyrgyz Republic - Ukraine	0	0	13	3	★
Kyrgyz Republic - Uzbekistan	0	0	13	3	★
Melanesian Spearhead Group (MSG)	0	0	13	3	★
Pakistan - China	0	0	13	3	★
Pakistan - Sri Lanka	0	0	13	3	★
Ukraine - Azerbaijan	0	0	13	3	★
Ukraine - Belarus	0	0	13	3	★
Ukraine - Kazakhstan	0	0	13	3	★
Ukraine - Russian Federation	0	0	13	3	★
Ukraine - Tajikistan	0	0	13	3	★
Ukraine - Uzbekistan	0	0	13	3	★
Ukraine -Turkmenistan	0	0	13	3	★

(a) Weighted average of pharmaceutical, specific and general provisions (11/30, 11/30 and 8/30 respectively).

Source: Authors' estimates

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