OVERVIEW

The Evolution of Deep Trade Agreements

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O.1. INTRODUCTION

This Handbook provides new data on and analysis of all preferential trade agreements (PTAs) that have been notified to the World Trade Organization (WTO), and highlights the emergence of deep trade agreement (DTA).[1]

DTAs are reciprocal agreements between countries that cover not just trade but additional policy areas, such as international flows of investment and labor, and the protection of intellectual property rights and the environment, amongst others. While these legal arrangements are still referred to as trade agreements, their goal is integration beyond trade or *deep* integration. DTAs aim at establishing five "economic integration" rights: free (or freer) movement of goods, services, capital, people, and ideas. DTAs also include enforcement provisions that limit the discretion of importing governments in these areas, as well as provisions that regulate the behavior of exporters.

Preferential trade agreements have always been a feature of the world trading system but have become more prominent in recent years. The number of PTAs increased from 50 in the early 1990s to roughly 300 in 2019. All WTO members are currently party to one, and often several, PTAs. While WTO rules still form the basis of most trade agreements, PTAs have in some sense run away with the trade agenda. Traditional trade policy areas, such as tariff reduction or services liberalization, are now more frequently negotiated in regional contexts rather than at the WTO, with PTAs often going beyond what countries have committed to at the WTO. The result is that PTAs have expanded their scope. While the average PTA in the 1950s covered 8 policy areas, in recent years they have averaged 17. In other words, there is some preliminary evidence that PTAs are becoming DTAs, both on the *intensive* margin (specific commitments within a policy area) and the *extensive* margin (number of policy areas covered). In this Handbook, we do not draw a sharp distinction between DTAs and other PTAs. Rather, the aim is to demonstrate the progressive deepening of PTAs.

Deep trade agreements matter for economic development. The rules embedded in DTAs, along with the multilateral trade rules and other elements of international economics law such as international investment agreements, influence how countries (and, hence, the people and firms that live and operate within them) transact, invest, work, and, ultimately, develop.

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[1] In the international economics and law literature, "PTA" is an umbrella term encompassing several types of reciprocal agreements between trading partners: regional trade agreements (RTAs), free trade agreements (FTAs), and customs unions (CUs). This definition differs from that of the World Trade Organization (WTO), which defines PTAs as agreements that grant *unilateral* (i.e., non-reciprocal) trade preferences such as the Generalized System of Preferences schemes, under which developed countries grant preferential tariffs to imports from developing countries.

This study, following the definition from international economics and law, uses the term "PTA" to refer to all types of trade agreements, both within and across regions, and uses "DTA" to refer to PTAs that contain provisions aimed at deepening economic integration between trading partners.

Trade and investment regimes determine the extent of economic integration, competition rules affect economic efficiency, intellectual property rights matter for innovation, and environmental and labor rules contribute to social and environmental outcomes.

It is, therefore, vital that rules and commitments in DTAs be informed by evidence and shaped more by development priorities than by international power dynamics or domestic politics. An impediment to this goal is that data and analysis on trade agreements have not captured the new dimensions of integration, which makes it difficult to identify the content and consequences of DTAs.

This Handbook takes a first step towards filling this important gap in our understanding of international economic law and policy. It presents detailed data on the content of the eighteen policy areas most frequently covered in PTAs, focusing on the stated objectives, substantive commitments, and other aspects such as transparency, procedures, and enforcement. In terms of the coverage of policy areas and the granularity of information within each area, this is the most comprehensive effort to date. Each chapter, authored by a leading expert in his or her field, explains in detail the methodology used to collect the information and provides a first look at the evidence in each policy area.

The new data and analysis will inform experts and policymakers in their efforts to design, negotiate, and take advantage of DTAs that promote development. This information will also enable researchers to develop indicators on the depth of trade agreements in different policy areas, assess the similarities between these arrangements, and benchmark countries' DTAs relative to their partners. It will also help identify the rules that benefit only participants and those that have large spillover effects on non-participants or excluded countries. Finally, the new data and analysis in this study will allow researchers to identify areas where there is de facto convergence across different players, thus facilitating the adoption of commonly agreed multilateral rules.

This Handbook will lay the groundwork for new research in international economics and other fields. A large body of economic literature has looked at the effects of PTAs on international trade flows and on welfare.[2] However, this literature has two important limitations.[3] On the theoretical side, the study of PTAs is mostly based on Vinerian[4] logic, which focuses exclusively on tariffs, thus by construction excluding deep integration issues. On the empirical side, attempts to quantify the effects of PTAs suffer from a measurement error problem, as studies generally rely on dummies to identify trade agreements or distinguish between broad categories of agreements such as FTAs or CUs. The new data will help theorists to model DTAs and help empirical economists to properly identify their effects.

[2] See, e.g., Freund and Ornelas 2010, Limao 2017.
[3] See, e.g., Baldwin 2010, Mattoo et al. 2017.
[4] Viner 1950.

Beyond economics, the data will inform research in other fields, primarily international law and international relations, on important issues such as the commonality or divergence of the rules set in PTAs and how they could evolve in the future.

The research in this Handbook is the result of collaboration among the World Bank, the International Trade Centre (ITC), the Organisation for Economic Co-operation and Development (OECD), the WTO, and experts from academic institutions. It builds on previous research by the World Bank and others. A first database on the content of deep trade agreements was published in 2017 with the goal of documenting how the policy areas covered by PTAs had increased over time (Hofmann, Osnago, and Ruta 2017). This dataset allowed researchers to construct a first series of indicators which capture the scope of trade agreements; i.e., what policy areas they cover. We refer to this as the *extensive margin* of PTA depth. Based on this first dataset, several research papers then looked, respectively, at the impact of deep trade agreements on trade, global value chains, and foreign direct investment (FDI), and the effect of breaking up such agreements.[5] The data have also been extensively employed for policy advice by the World Bank in several developing countries in Africa, Latin America, East Asia, and the Balkans.

The new data that we briefly review in this introduction and that are analyzed in detail in the individual chapters of this Handbook offer insights into a different dimension of PTAs' depth. They capture the detailed commitments to establish and preserve the rights to economic integration, and the procedures, institutions, and enforcement mechanisms that countries set up to make deep integration work. The focus is therefore not on the extensive margin of integration (number of policy areas that are covered by the agreement), but on its intensive margin (the specific commitments within a policy area).

While there are a number of individual studies that have documented the deepening of PTAs in specific areas, two major data collection projects—Dür, Baccini, and Elsig (2014) and Acharya (2016)—also aimed at documenting the specific commitments for a group of policy areas covered in PTAs. Both efforts have important merits. Dür, Baccini, and Elsig (2014) covered a large set of PTAs, including those that have been notified to the WTO but are no longer in force. Acharya (2016) provided a series of databases on the content of PTAs that go beyond specific policy areas and cover emerging issues such as e-commerce or the rules on dispute settlement in PTAs. Relative to these data collection projects, the new dataset is more comprehensive, both in terms of the number of policy areas covered and in terms of the information on detailed disciplines in each area.

This introduction describes the scope and methodology underlying the research agenda on deep trade agreements. It also highlights a novel set of stylized facts that can be inferred from a first look at the new data collected as part of this project, and offers some insights into future applications and areas for analysis.

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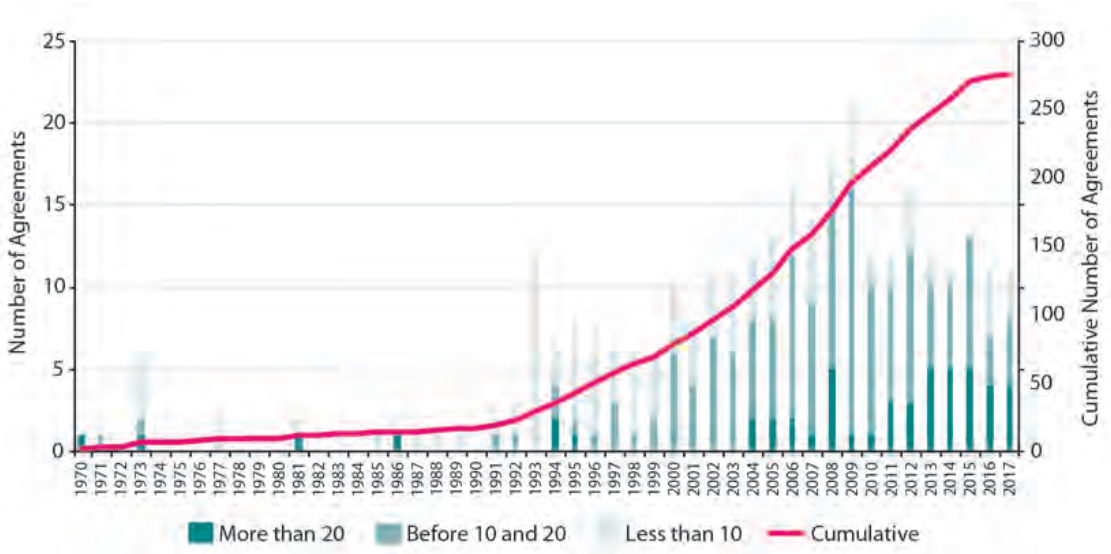
[5] Mattoo et al. 2017, Mulabdic et al. 2017, Laget et al. 2018, Laget et al. 2019.

O.2. SCOPE AND METHODOLOGY

The number of policy areas covered by PTAs has increased in the last two decades. Up until the late 1990s, when the number of PTAs started increasing, the majority of new agreements covered fewer than 10 policy areas. Since the 2000s, most new PTAs have covered between 10 and 20 policy areas, with some having even more than 20 (Figure O.1). In a study of 28 trade agreements signed by the US and the EU, Horn et al. (2010) identify up to 52 policy areas that have been covered by at least one of the agreements. The inclusion of new policy areas in PTAs is not random. As shown in Mattoo et al. (2017), trade agreements covering few policy areas generally focus on traditional trade policy, such as tariff liberalization or customs (Table O.1). Agreements with broader coverage (between 10 and 20 policy areas) tend to include trade-related regulatory issues, such as subsidies or technical barriers to trade. Finally, agreements with more than 20 provisions often include policy areas that are not directly related to trade, such as labor, environment, and movement of people.

Figure O.1: Number of policy areas covered in PTAs, 1970-2017



Source: WTO, Preferential Trade Agreements database, following Hofmann, Osnago, and Ruta 2017.

The policy areas studied in this Handbook are those that appear most frequently in trade agreements. They include (a) a set of 18 policy areas that are covered in 20 percent or more of trade agreements notified to the WTO (Figure O.2): (b) tariffs on industrial and agricultural goods, which are covered by all trade agreements; (c) customs and export taxes, which are regulated in more than 80 percent of PTAs; (d) services and movements of capital, which are regulated in roughly half of the PTAs; and (e) environmental and labor issues, which are covered by around 20 percent of all trade agreements. Other issues that are sometimes (although infrequently) regulated in trade agreements, such as education, nuclear safety, and

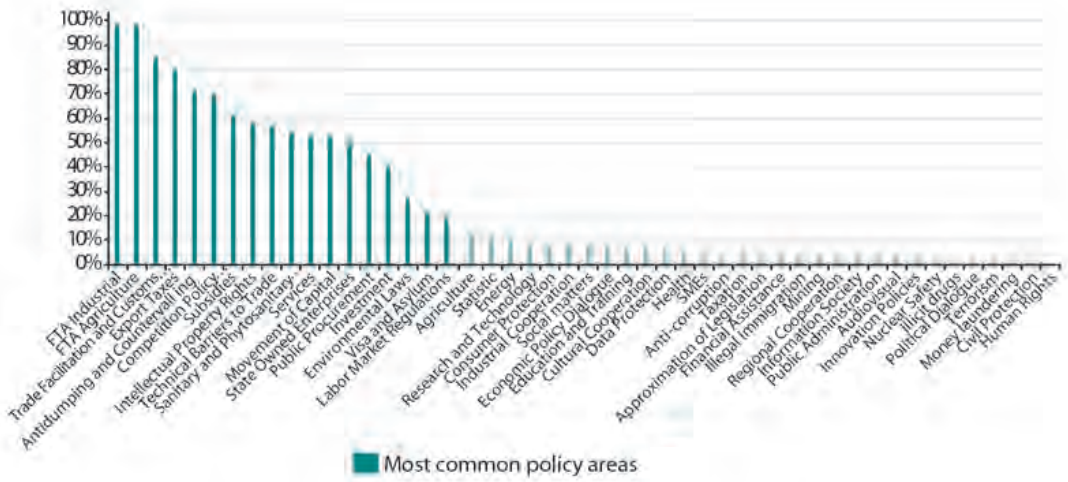
Table O.1: Share of policy areas for different PTAs

[illegible]	Less than 10	Between 10 and 20	More than 20
Tariffs on manufacturing goods	97%	100%	100%
Tariffs on agricultural goods	96%	100%	100%
Export taxes	73%	81%	95%
Customs	67%	95%	100%
Competition policy	58%	73%	88%
State aid	39%	69%	88%
Anti-dumping	35%	88%	98%
Countervailing measures	22%	77%	98%
Statistics	20%	0%	23%
TRIPS	18%	75%	98%
STE	18%	69%	68%
TBT	17%	73%	95%
Movement of capital	15%	68%	93%
GATS	14%	67%	98%
SPS	12%	72%	98%
Public procurement	12%	59%	80%
IPR	6%	56%	75%
Environmental laws	3%	14%	83%
Labor market reculation	3%	13%	75%
Investment	2%	58%	75%
TRIMS	2%	42%	73%
Visa and asylum	2%	37%	57%
Industrial cooperation	2%	5%	33%
Social matters	2%	5%	30%
Agriculture	1%	10%	45%
Energy	1%	8%	40%
Data protection	1%	5%	20%
Anticorruption	1%	5%	18%
SME	1%	4%	25%
Regional cooperation	1%	3%	15%
Taxation	1%	2%	30%
Approximation of legislation	1%	2%	25%
Political dialogue	1%	1%	8%
Research and technology	0%	6%	38%
Public administration	0%	6%	5%
Consumer protection	0%	5%	38%
Mining	0%	5%	13%
Education and training	0%	4%	33%
Information society	0%	4%	15%
Innovation policies	0%	4%	5%
Illegal immigration	0%	3%	23%
Illicit drugs	0%	3%	3%
Economic policy dialogue	0%	2%	43%
Cultural cooperation	0%	2%	38%
Financial assistance	0%	2%	25%
Audiovisual	0%	2%	18%
Terrorism	0%	2%	8%
Money laundering	0%	2%	3%
Health	0%	1%	38%
Human rights	0%	1%	3%
Nuclear safety	0%	0%	15%
Civil protection	0%	0%	5%

Source: Mattoo et al. 2017.

human rights, are not included in this Handbook and could be the subject of future research. The focus on individual areas helps us to identify specific policies that are the object of negotiation but may obscure cross-cutting issues—such as electronic commerce—that may be disciplined under multiple policy areas.

Figure O.2: Number of policy areas covered in PTAs, by policy



Source: Deep Trade Agreements Database, based on Hofmann, Osnago, and Ruta 2017.

The classification of policy areas used in Figure O.2 deviates slightly from the one of Horn et al. (2010).[6] Specifically, for this Handbook, we decided to include rules of origin, a policy area that was absent from the Horn et al. (2010) classification, and to treat as a single policy area: (a) *trade remedies*, which include anti-dumping and countervailing measures; (b) *investment,* which includes the areas covered under the WTO's Trade-Related Investment Measures, or TRIMs; and (c) *intellectual property rights* (IPR), which include the areas covered under the WTO's Trade-Related Intellectual Property Rights, or TRIPs.

Trade agreements are generally assessed in terms of the market access they create. Given the complexity of policy areas that are covered by DTAs, the metric of market access—while still important—appears inadequate. In this introduction, we propose to define deep trade agreements as international arrangements that aim to regulate three (partially overlapping) sets of policy areas (Figure O.3).

- First, the core policy areas included in DTAs aim to establish five economic integration rights: *free (or freer) movement of goods, services, capital, people, and ideas*.[7]

[6] The Horn et al. 2010 classification was used to collect data on the extensive margin of PTA depth.

[7] We use the words "aim to establish" rather than "establish" for two main reasons. First, DTAs may cover only a subset of integration rights. Second, provisions may not be justiciable. A contribution of the new data is to identify the extent to which integration rights are established in PTAs.

The policy areas that directly impact these flows include: (a) *tariffs and export taxes*, which affect the movement of goods; (b) *services*, which regulate services trade flows; (c) *investment and movement of capital*, which affect the movement of capital; (d) *visa and asylum*, which regulate the movement of people; and (e) *intellectual property rights*, which influence the flows of ideas.

• Second, DTAs also include policy areas that aim to support these economic integration rights by limiting government discretion. Actions by importing governments that limit international flows can be taken at the border and behind the border and are often of a regulatory nature. The policy areas that fall in this category are: (a) *customs*; (b) *rules of origin*; (c) *trade remedies*; (d) *public procurement*; (e) *technical barriers to trade* (TBT); (f) *sanitary and phytosanitary measures* (SPS); (g) *state-owned enterprises* (SOEs); (h) *subsidies;* and (i) *competition policy.*[8]

• Third, DTAs cover policy areas that aim to enhance social or consumer welfare by regulating the behavior of exporters. Policy areas such as environment and labor impose obligations on exporters to further consumer or social interests in importing countries. Rules in areas such as competition, SOEs, and subsidies can have a dual aspect: in addition to regulating action that undermines economic integration rights, they can aim to address distortionary actions that lower economic efficiency, thus hurting consumer or social welfare.

For each policy area, the experts followed a uniform approach to coding.[9] The coding templates encompass several common headings such as objectives and definitions, institutional framework, and an enforcement mechanism, plus a series of discipline-specific questions. Under each heading, questions on specific provisions in the agreement are formulated so that they can be answered with Yes/No. For some policy areas, additional information is provided at the provision level, including (a) the relationship between the coverage of the disciplines on and the corresponding regulation in the WTO; (b) the level of enforceability of each provision;[10] (c) whether the specific

[8] Some of these provisions apply only to cross-border trade in goods (e.g., customs, TBT, and SPS). Others can also apply to cross-border trade in services (e.g., public procurement and competition policy). In some cases, services-related provisions are included separately in a services agreement.

[9] One exception is preferential tariffs. Differently from the other policy areas, tariff commitments apply at the product level. The information for this area is therefore collected at the country-pair-product level. For rules of origin a sub-sample of agreements in Latin America and East Asia, the dataset on regime-wide provisions is accompanied by a mapping of the rules of origin that apply at the product level.

[10] The legal enforceability of the PTA provisions is coded according to the language used in the text of the agreements. It is assumed that commitments expressed with a clear, specific, and imperative legal language can more successfully be invoked by a complainant in a dispute settlement proceeding, and therefore are more likely to be legally enforceable. In contrast, unclearly formulated legal language might be related to policy areas that are covered but that might not be legally enforceable.

Figure O.3: A classification of policy areas in DTAs

commitment can be applied discriminatorily or whether it is de facto non-discriminatory. Finally, when applicable, for example, in services and government procurement, the coders included information at the sectoral level on exclusion of certain sectors from an agreement, or the applicability of an agreement to a specific industry.

The analysis covers the realm of PTAs that are in force and notified to the WTO as of end-2017. The basis of the coding analysis is the legal text of the trade agreements and the relevant annexes that accompany the agreement (and have been notified to the WTO). This approach comes with two main limitations that should be clear to the user of the database. First, the focus on the legal text of the agreement implies that secondary law (the body of law that derives from the principles and objectives of the treaties) has not been coded. This is a concern particularly when assessing the depth of integration of the EU, since in most policy areas covered in this Handbook, EU institutions have used secondary law such as regulations, directives, and other legal instruments to pursue integration.[11] Second, the focus on the legal text also excludes from consideration issues of implementation of the trade agreement into national laws and regulations or subsequent annexes that the parties might agree on which are not reported to the WTO. These are important areas for future research.

Despite the similarity in the coding approach, policy areas differ widely from each other. First, some policy areas are inherently more complex than others and their description requires

[11] Note that the figures and tables in this introduction refer to the EU as a single entity (i.e., the European Union agreement and enlargements are excluded) and report data for EU PTAs with third countries where this concern does not apply.

a larger number of questions to reflect the more detailed provisions. IPR has the highest number of provisions (120), while labor has the lowest (18). Second, some policy areas focus primarily on substantive provisions: specific commitments on integration, such as market access commitments, and specific obligations such as harmonization of standards. Others tend to have a larger number of procedural provisions, such as transparency provisions and procedural requirements. Table O.2 provides an overview, showing the heterogeneity across policy areas in these different dimensions and identifying the set of "substantive" provisions as those that require specific integration/liberalization commitments and obligations.

Table O.2: Number of substantive and other provisions per policy area in all PTAs notified to the WTO

Discipline / Category	Export Taxes	Services	Investment	Movement of Capital	Intellectual Property Rights	Visa and Asylum	Trade Facilitation and Customs	Anti-dumping and Countervailing Duties	Technical Barriers to Trade	Sanitary and Phytosanitary	Measures Public	Procurement Subsidies	State-Owned Enterprises	Competition Policy	Environmental Laws	Rules of Origin	Labor Market Regulations	Total provisions
Objectives				1		1		8	1	2		2	2	2	2		2	**23**
Scope and definitions	1	16	11	7		2		17	2	4	2	1	10	8	10			**91**
Transparency	4	9	3		13	3	8	6	3	10	7	4	5	1				**76**
Substantive commitments	17	19	13		59	3	6	2	19	20	4	3	8	11	27	20	12	**243**
Liberalization/ Integration	14	8	11		19		4	1	3	4	3					13		**80**
Conditions/ Obligations	3	11	2		40	3	2	1	16	16	1	3	8	11	27	7	12	**163**
Procedural requirements	17	8			12	3	28	10		3	28		2	2		17		**130**
Enforcement mechanism		1	3	8	22	1		2	4		5	7	5		4	1		**63**
Sectoral coverage	2	1	2		5						33	9	8					**60**
Specific coverage		2	1	13		9					8	2	8	1				**44**
Exceptions	5	6	2	35	4	4						3	1	3				**63**
Safeguards		1	10	31		1												**43**
Special and differentiated treatment											7	2	2					**11**
Institutional framework		1	1		2	2	2	6	2	11				2	1		2	**32**
Cooperation			2		3	1	8		3	3	1	1	1	5	4		1	**33**
Miscellaneous			9							6	5	2	2				1	**25**
Total provisions	**46**	**64**	**57**	**95**	**120**	**30**	**52**	**51**	**34**	**59**	**100**	**36**	**54**	**35**	**48**	**38**	**18**	**937**

Source: Deep Trade Agreements Database.

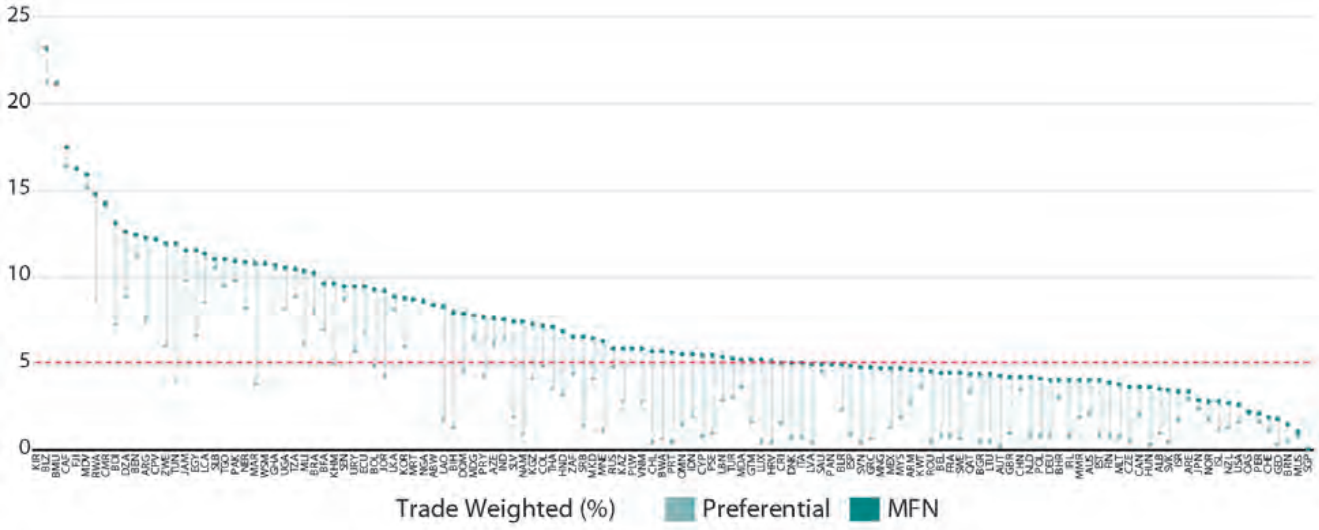
We also make an effort to identify the set of provisions within each policy area that are essential to achieve the objectives of the agreement. The provisions we refer to as "essential" comprise the set of substantive provisions plus the disciplines among procedures, transparency, enforcement, or objectives which are viewed as indispensable and complementary to achieving the substantive commitments. Non-essential provisions are referred to as "corollary." A caveat is that this exercise is based on the experts' knowledge and, hence, is subjective. However, this approach has the advantage of limiting the dimensionality of the data in an informed way.[12]

O.3. STYLIZED FACTS

A number of new stylized facts emerge from a preliminary analysis of the data. Each of the chapters in this Handbook provides a first look at the data by policy area. In this introduction, we present a bird's-eye view of the entire dataset put together by experts. Given the differences among policy areas and among provisions within each policy area, this approach presents many quantification challenges, which are discussed below. In this section, we rely on simple counts of the provisions and on coverage ratios[13] to investigate the evolution of the content of deep trade agreements. The underlying assumption in this approach is that deeper trade agreements imply a larger number of provisions.

As shown in chapter 1,[14] liberalization in PTAs has reduced trade-weighted average tariff rates to less than 5 percent for more than two-thirds of countries (Figure O.4). While there are still

Figure O.4: Tariffs in PTAs and MFN tariffs



Source: Chapter 1 by Espitia et al. 2020.

[12] A statistical approach on how to assess the importance of specific provisions included in the different policy areas in explaining trade outcomes is presented in section O.4.

[13] The coverage ratio is defined as the share of provisions for a policy area contained in a given agreement relative to the maximum number of provisions in that policy area or agreement.

[14] Chapter 1 by Espitia et al. 2020.

pockets of high protection in some countries, most notably lower-income economies, PTAs have been broadly successful in committing national governments to maintaining low tariffs. Trade-weighted applied tariffs are, on average, 2.3 percentage points lower than average most-favored-nation (MFN) rates, with gaps of greater than 6 percentage points for countries like Tunisia, Morocco, Bosnia and Herzegovina, Namibia, and the Lao People's Democratic Republic. So, while from an efficiency perspective, preferential tariff liberalization is inferior to non-preferential liberalization, the commitments countries have made in the network of preferential trade agreements may provide a safety net at a time when trade tensions are escalating and some countries are disregarding their multilateral commitments.

The number of commitments that governments have made in trade agreements, particularly since the early 2000s, has increased over time. Figure O.5 shows how the coverage ratio has changed over time for the 17 policy areas analyzed in this Handbook (all but tariffs) in aggregate. With only a few exceptions, the majority of new PTAs signed after 2000 have a coverage ratio higher than 25 percent. This stands in sharp contrast to the trade agreements signed in the 1980s and 1990s, when coverage ratios were below 15 percent and, in many cases, even below 5 percent. The reduction in tariffs accomplished through preferential trade liberalization, together with the increased depth of agreements over time, suggests that countries that are willing to cut tariffs reciprocally may also be willing to accept deeper mutual commitments in other areas.

Figure O.5: Number of agreements over time vs. average coverage ratio

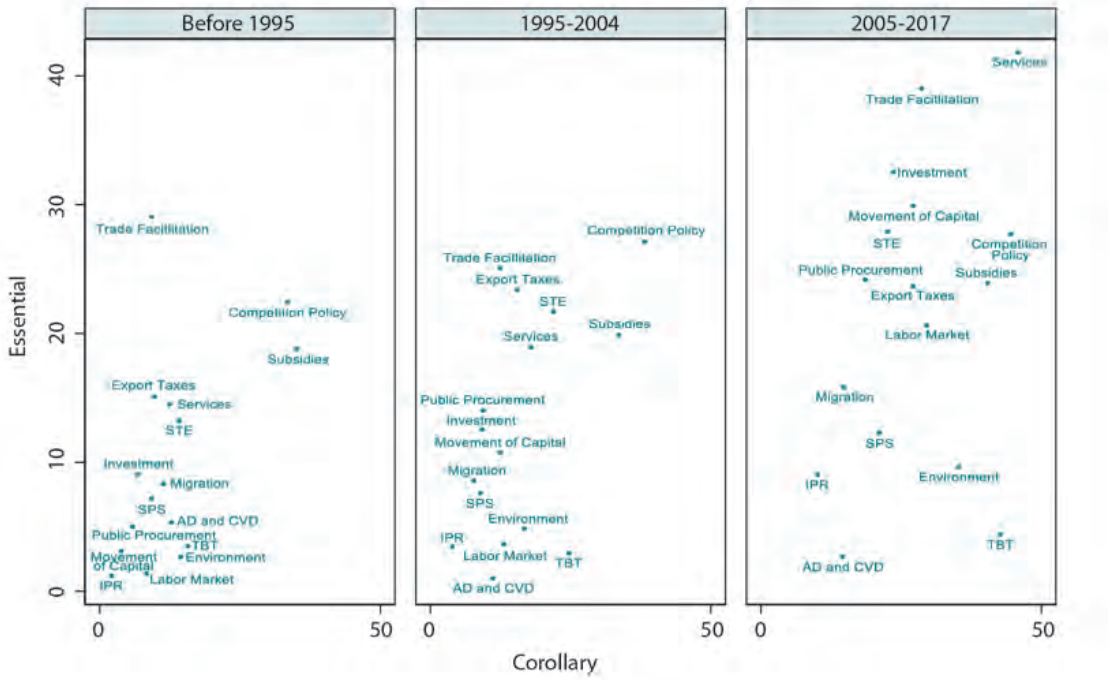
Note: Coverage ratio refers to the share of provisions contained in a given agreement relative to the maximum number of provisions. European Union agreement and enlargements excluded.

While the overall number of provisions is suggestive, it can hide important elements of the evolution of deep trade agreements. First, as discussed above, some provisions imply substantive commitments while others concern broad objectives, definitions, or procedural matters. Second, deep trade agreements, as defined in this Handbook, do not only concern themselves with market access in goods, but also aim to establish freedom of mobility for

services, capital, ideas, and people, as well as regulating policy areas that have an impact on consumer and/or social welfare, such as labor and the environment. To gain a better understanding of how the commitments in PTAs have changed over time, we look at the evolution of coverage ratios by policy area.

Figure O.6 shows that the coverage of *essential* disciplines in PTAs has increased over time across all policy areas. This is most clearly the case for the policy areas aimed at facilitating the flows of goods (customs and trade facilitation), capital (investment and movement of capital), and services. IPR and movement of people (visa and asylum) also saw a steady but less remarkable increase in essential commitments over time. Along with economic integration rights, PTAs increasingly include essential commitments in policy areas that support these rights or impose obligations on exporters. The ones that appear to stand out are subsidies, competition, and SOEs, areas that are either excluded from the WTO or for which reform of multilateral rules is considered difficult. Interestingly, while essential commitments in labor have largely increased in recent years, this happened to a lesser extent for provisions on the environment.

Figure O.6: Coverage ratios by policy area, over time

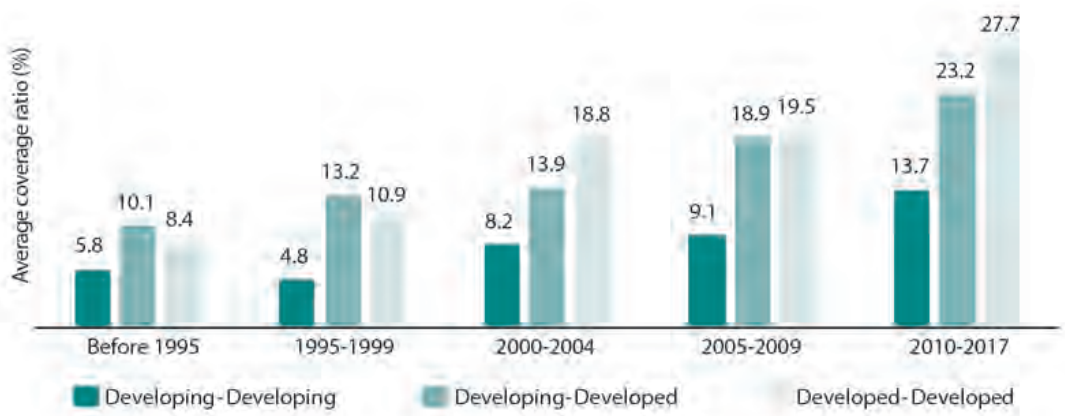


Note: Coverage ratio by policy area refers to the share of provisions for a policy area contained in a given agreement relative to the maximum number of provisions in that policy area. Years refer to entry-into-force date. European Union agreement and enlargements excluded.

The presumption is that the increase in the essential disciplines in deep PTAs has been driven by countries taking on more substantive commitments over time. Indeed, Figure O.7 shows

that this is the case, but it also uncovers interesting insights about the evolution of non-substantive commitments. We focus on the three (numerically) most relevant non-substantive provisions: procedural rules, transparency, and enforcement provisions. The deepening of substantive commitments has been accompanied by an increase in the number of corollary provisions, suggesting that achieving deeper commitments may require more procedural rules for implementation, transparency, and enforcement. A second insight is that, while these disciplines are all necessary to render substantive commitments in trade agreements effective, they have evolved differently in recent years. Starting in the early 2000s, the relevance of enforcement provisions in DTAs has increased disproportionally relative to procedural and transparency provisions. The growing enforcement capacity of DTAs may help explain the success of these institutional arrangements as tools for deep integration.

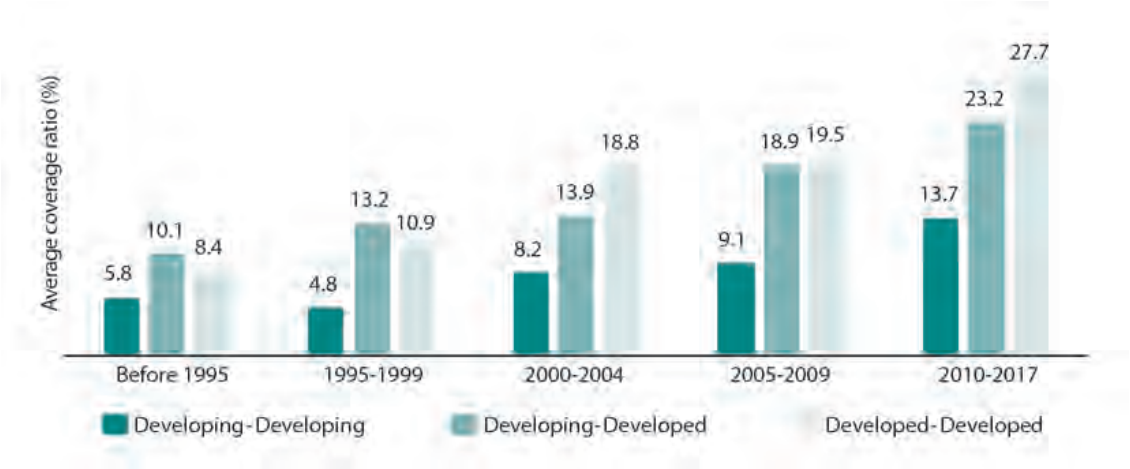
Figure O.7: Substantive provisions and a breakdown of non-substantive provisions in PTAs, over time



Note: Coverage ratio refers to the share of provisions for a policy area contained in a given agreement relative to the maximum number of provisions in that policy area. Years refer to entry-into-force date. European Union agreement and enlargements excluded.

When we break down the trade agreements by level of development of the signatories, we observe two facts. First, the deepest PTAs are those involving developed economies, followed by PTAs between developed and developing economies. PTAs between developing countries are the shallowest. Indeed, there is a sizeable gap between average coverage ratios for the latter group of PTAs relative to the first two (Figure O.8). This could reflect a focus of negotiations on tariffs and traditional trade barriers, which are still high for several low-income economies. Second, in terms of composition, PTAs between developed countries and those between developed and developing economies include similar shares of provisions establishing economic integration rights, supporting these rights, and aiming to regulate exporters (Figure O.9). PTAs between developing countries are shallower across the board, with a stronger gap in areas such as environment and labor that aim at improving social welfare.

Figure O.8: Inclusion of substantive commitments in PTAs, by level of development



Note: Coverage ratio refers to the share of provisions for a policy area contained in a given agreement relative to the maximum number of provisions in that policy area. Years refer to entry-into-force date. European Union agreement and enlargements excluded.

Figure O.9: Coverage ratio by type of policy and level of development

Note: Coverage ratio refers to the share of provisions for a policy area contained in a given agreement relative to the maximum number of provisions in that policy area. Years refer to entry-into-force date. European Union agreement and enlargements excluded.

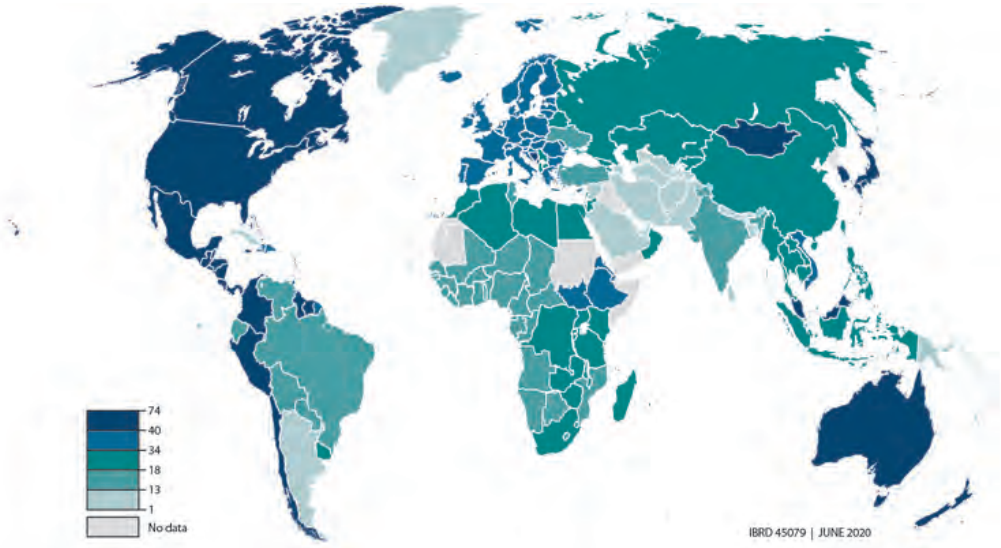
We next analyze the depth of trade agreements by country. Here, we focus on the substantive commitments.[15] As several countries have multiple agreements with different levels of depth, we present the average number of substantive commitments per country in panel a of Figure O.10 and the maximum number in panel b of Figure O.10. The main takeaway is that developing countries in Sub-Saharan Africa, the Middle East and North Africa, South America, South Asia, and, to a lesser extent, East Asia tend to have fewer substantive commitments in trade agreements relative to advanced economies. The few

[15] Annex Tables O.A.1 and O.A.2 provide other indicators by PTA and by country.

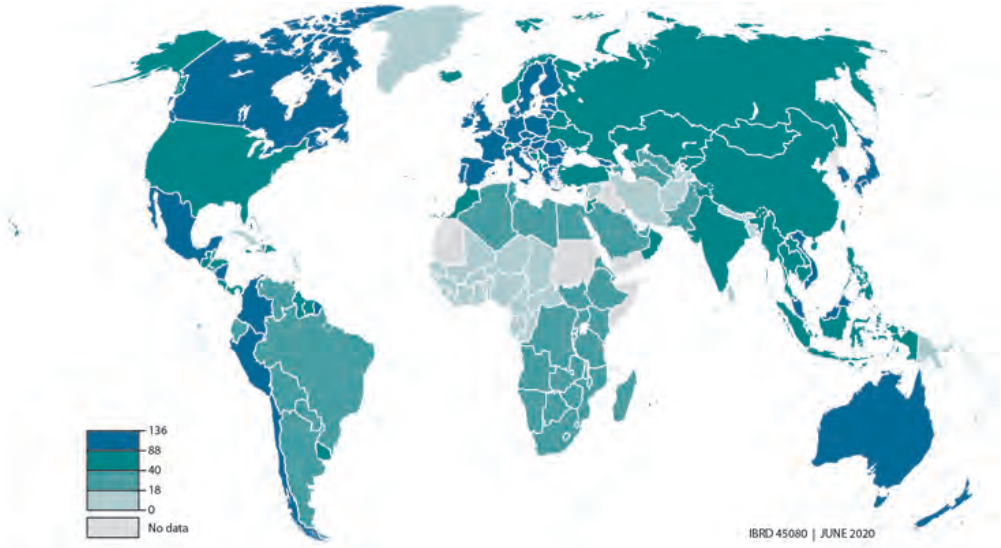
exceptions include countries in South America that are signatories to the Pacific Alliance and other developing economies that have signed deep trade agreements with an advanced trade partner, such as Mongolia with Japan and Caribbean countries with the EU. In terms of depth as measured here, North America and Europe are the most integrated regions, through NAFTA and its successor agreement, and through the agreements the EU has signed with neighboring countries. East Asia is a region with a mixed profile: the network of ASEAN agreements includes most countries but tends to have fewer substantive commitments relative to North America and Europe, except for some countries such as Vietnam, which have signed on to the Comprehensive Agreement for the Trans-Pacific Partnership (with a coverage ratio of 61 percent).

Figure O.10: Substantive provisions in PTAs by country

a. Average number of provisions



b. Maximum number of provisions

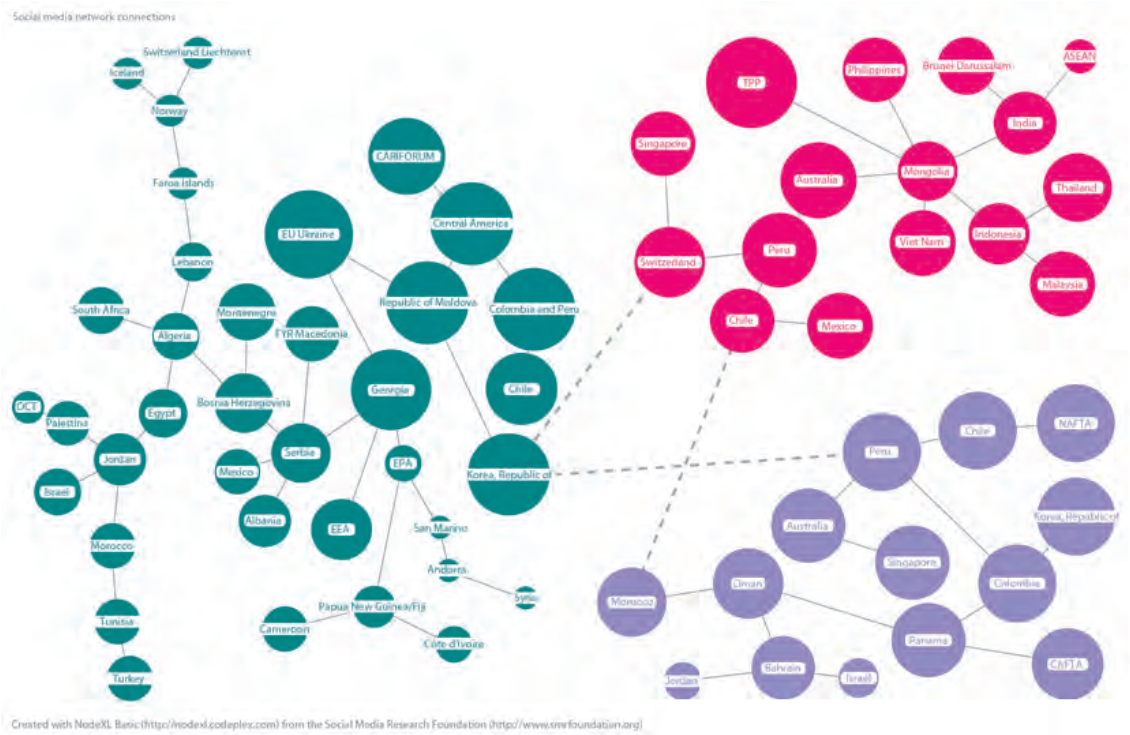


With the increasing depth and complexity of trade agreements, both similarities and dissimilarities between PTAs could potentially increase. Older agreements that covered only preferential tariff liberalization and other aspects of market access tended to be very similar. As PTAs now cover more ground, there can be provisions that are included in two agreements, making them more similar, or there can be provisions that are covered by one PTA but not by another, making them more dissimilar. To capture this information, we construct a similarity index for DTAs, calculated as the ratio between the number of provisions for which two agreements have a "yes" (a measure of similarity) and the total number of provisions covered by the agreements, independently of whether they have the same answer or not. The closer the similarity index is to one (or zero), the more (or less) similar are the two DTAs; i.e., they include the same type(s) of provisions.

Figure O.11 plots the degree of similarity for the PTAs signed by the three major trading blocs: the European Union, the United States, and Japan. Each color represents a DTA signed by a third country with the US (green bubbles), EU (purple bubbles), or Japan (pink bubbles). The size of the bubbles represents the depth of the agreements, measured as the number of provisions covered. Each agreement is connected to the one which is most similar within a trading bloc. The figure also links the three trading blocs, by connecting the pair of agreements that are the most similar between two blocs.

As expected, within each bloc, DTAs are highly similar: up to 0.89 for the US (US-Peru; US-Colombia), up to 0.80 for the EU (EU-Moldova; EU-Ukraine), and up to 0.75 for Japan (Japan-Indonesia; Japan-Mongolia). This fact often reflects a "template effect," where the EU, the US, and Japan tend to negotiate based on a template offered to third countries. Interestingly, the similarity of DTAs is relatively high even across blocs, although lower than within blocs. For example, the EU-Republic of Korea agreement shares more than 50 percent of the provisions with the Japan-Switzerland agreement (similarity index of 0.54) and with the US-Peru agreement (similarity index of 0.51). These results indicate that concerns about the fragmentation of the global trade system have some foundation (i.e., they do not share almost half of provisions), but also point to substantial similarities—based on which multilateral rules can be agreed upon.

Figure O.11: Similarity of agreements



Note: The size of the bubbles represents the depth of a trade agreement, as captured by the number of provisions included in the agreement. Each edge connects an agreement with one that is most similar. Purple bubbles represent EU agreements with non-EU countries, green bubbles represent US agreements, and pink bubbles represent Japan's agreements.

O.4. THE CHALLENGE OF QUANTIFYING THE EFFECTS OF DTAs

Quantification of the effects of DTAs poses a serious challenge. DTAs cover heterogeneous areas: tariffs, contingent protection, export taxes, customs procedures, technical barriers in goods; a wide range of restrictions across modes in services; investment measures, subsidies, procurement, state enterprises, competition policy affecting both trade and investment in goods and services, visas and asylum, and a range of regulatory requirements affecting labor mobility; and a variety of policies affecting the protection of intellectual policy rights and the environment. How can the diversity of policies be quantified and aggregated within separate areas? How can we aggregate across the different areas? We briefly discuss here two approaches to quantification—directly constructed indices and indirectly estimated measures—and some analytical issues going forward.

O.4.1 Directly constructed indices

The count variables and coverage ratios presented in the previous section are the simplest directly constructed indices of depth. They provide an immediate view of how commitments

in PTAs have changed over time, across countries, and for subsets of provisions. Still, aggregate indicators based on some form of counting disregard the fact that DTAs cover multiple policy areas and sectors and that the "value" of each provision is unlikely to be the same even within the same policy area.

In some cases, it may be possible to construct a hierarchy of measures. For example, in the areas of services and government procurement, provisions could be divided into three tiers. Tier 1 would comprise provisions ensuring market access and national treatment at entry. Tier 2 would comprise provisions on post-entry operation; e.g., preferences or offsets. Tier 3 would comprise procedural rules limiting discretion in licenses and awards. The construction of an index could then be lexicographic, in that we would consider first only differences between countries or sectors in Tier 1 and move to subsequent tiers only to break ties. Such an approach is ideally suited to the construction of an ordinal rather than cardinal (i.e., qualitative rather than quantitative) measure.

A pragmatic approach to overcoming some of the constraints to constructing representative indices is to rely on experts' judgment. This is the method adopted in this Handbook. The individual chapters will offer a disaggregated set of stylized facts for each policy area using count variables, coverage ratios, and the individual assessment of the authors of the key provisions in each policy area. We have already discussed the distinction between substantive and essential provisions. Some chapters go even beyond these categories. For instance, the chapter on SOEs (Rubini and Wang 2020) identifies four commitments concerning issues of ownership, discrimination, subsidization, and anti-competitive behavior as key. The chapter on technical barriers to trade (Espitia et al. 2020) identifies a subset of seven commitments which are key to achieving deep integration in the area of technical regulations. This type of information can be used in the estimation exercises we discuss below, as it allows the researcher to address problems associated with large numbers of possible variables at hand, such as multicollinearity (i.e., the high correlation between the different provisions within and across policy areas).

0.4.2 Indirectly estimated measures

These measures are obtained by estimating the impact of the provisions on a variable of interest. For example, we could infer the value of individual provisions by estimating their impact on bilateral trade, controlling for other influences. In principle, each binary element in the relevant DTA areas could be included in a country-product import regression as a right-hand variable while controlling for applied policies, including tariffs and non-tariff measures. Similar methods have been used to estimate the Overall Trade Restrictiveness Index.[16] However, even for trade in goods we have limited degrees of freedom, and in other

[16] Kee, Nicita, and Olarreaga 2009.

areas (such as services), we do not have sufficiently fine outcome data. In these areas, it may be necessary to take a hybrid approach, based on first constructing more aggregated indices.

Another approach is to quantify the effects of DTAs and build indicators of depth using new statistical methods. As a first example, we employ machine learning techniques to detect the influential variables/provisions in DTAs for trade.[17] "Machine learning" is a generic term referring to a wide variety of algorithms which detect a certain pattern from a large dataset, often referred to as "Big Data," and make predictions based on that pattern. In this case, we use a method called Random Forest (RF) to calculate the importance of each variable/provision for international trade flows.[18] Specifically, we run as a first step a structural gravity model with the standard set of fixed effects and then use the residuals as the left-hand variable in the RF.

Figure O.12 shows the boxplot of scores calculated by the RF of variables/provisions in PTAs belonging to the 17 (non-tariff) policy areas analyzed in this Handbook.[19] The areas are colored according to their categorization into the three main groups illustrated in Figure O.3; dark green indicates policies that establish economic integration rights, purple is assigned to those supporting these rights, and light green to those that promote welfare. Each box shows the range of the first (25 percent) and third (75 percent) quartiles, and the black line in the box shows the median of the scores. The vertical lines extending from the box indicate the variability outside the above quartiles, and the dots outside of the line are regarded as outliers. Boxplots are ordered according to the magnitude of the median.

Focusing on the entire set of PTAs, we find that provisions such as investment, subsidies, and services, and to a lesser extent, rules of origin and movement of capital have a median score above the overall score average, suggesting that these policy areas are good predictors of bilateral trade, after controlling for the usual gravity determinants of trade flows. Provisions in policy areas such as SPS, environmental laws, and visa and asylum are located at the other extreme of the distribution of median scores, suggesting a more limited role in predicting bilateral trade flows. The size of the boxes and the vertical lines also indicate that there are policy areas such as movement of capital and IPR for which the contribution to trade is more or less uniform across provisions. For other policy areas such as competition policy and SOEs, there is more heterogeneity within provisions in terms of their contribution to trade.

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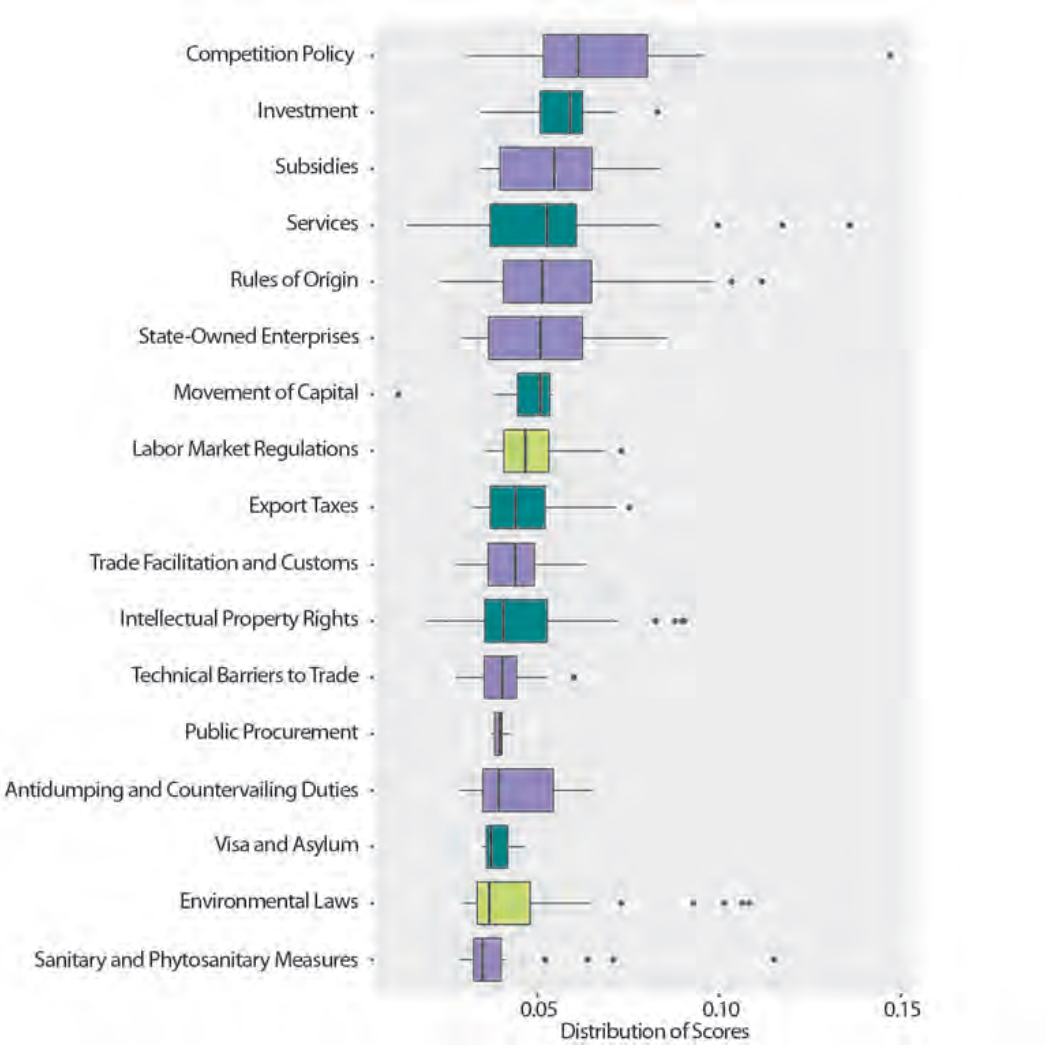
[17] This exercise has been carried out in collaboration with Kazusa Yoshimura and Edith Laget. Parallel work by Breinlich et al. (2020) also uses machine learning techniques to precisely quantify the impact of individual provisions in trade agreements on trade flows.

[18] RF is a frequently used machine learning algorithm that predicts a Y variable by combining the results from hundreds of regression/classification trees. It has the merit of not imposing a linear relationship between the Y and X variables, which is an advantage when analyzing the impact of a highly heterogenous set of variables, such as the provisions in PTAs.

[19] A score should not be interpreted as a coefficient in a regression analysis. It measures how much the accuracy of the prediction for Y gets worse if the particular X variable is randomly permuted.

Figure O.12: Boxplot of scores calculated by the RF of variables/provisions in PTAs



O.4.3 Quantification challenges: some analytical issues going forward

Looking ahead, there is a need for stronger analytical underpinnings for any quantification exercise. Ideally, the "value" of a commitment must be evaluated in light of the objective that the provision of the deep trade agreement is trying to achieve. In other words, depth indicators could use different weights, depending on whether the outcome variable is market access, welfare, or another metric. For trade policy, market access may seem to be the most obvious metric, but for intellectual property rights, welfare may be the more relevant. In still other areas, such as competition policy, both might be relevant: the market access measure would include only provisions restricting barriers to foreign entry and operation while the welfare measure would include provisions requiring action against anti-competitive behavior affecting consumers.

One indicator cannot provide a measure of both the trade distortions a country imposes on its trading partners (market access) and the trade distortions a country imposes on itself (welfare). For a market access-based measure in the goods context, the relevant question could be: what is the uniform tariff that if imposed on home imports instead of the existing structure of protection would leave aggregate imports at their current level? And for a welfare-based measure: what is the uniform tariff that if applied to imports instead of the current structure of protection would leave home welfare at its current level? The relationship between the two measures is likely to vary across policy areas: positive correlation for tariffs; perhaps negative for environmental standards; and ambiguous for intellectual property rights.

A further issue relates to whether we should be interested in what legal commitments do to the level of a policy or to its variance. Provisions such as the elimination of tariffs, or of a national treatment rule in services or government procurement, fix the level of protection at zero. Provisions which legally bind policy (e.g., the permissible levels of fees, subsidies, or preferences) truncate the distribution of possible policy outcomes by reducing the variance and hence the expected level of protection. Provisions which reduce discretion, such as rules on customs valuation, licensing, or procurement procedures, narrow the distribution of possible policy outcomes.

Finally, we also need to consider whether we should assess agreements per se or agreements relative to applied policies. If we have the relevant data, the mean and variance shift would ideally be assessed relative to the prevailing policy (and not just the law or policy on paper but how it is implemented). For example, a legally binding tariff at 10 percent might have a different value depending on whether the existing tariff was 5, 10, or 20 percent. The creation of new databases on applied policies in goods and services trade may facilitate such analysis.

0.5. CONCLUSIONS

The *World Development Report* 2009 made the case that "thicker" borders between countries hurt economic growth, especially in developing countries. Policies that directly or indirectly restrain the international mobility of goods, services, capital, people, and ideas limit, among other things, the scale of the market, which is vital for development.[20] Deep trade agreements aim at establishing the rights of economic integration, protecting these rights from importing governments' actions that could undo them, and regulating actions of exporters that can have negative welfare effects. These agreements have developed over time into a key institutional mechanism for countries to overcome the constraints to economic development created by the thick borders that fragment markets.

[20] World Bank 2009.

Of course, deep integration is not an end in itself. First, countries at different levels of development may have different institutional needs, and trade agreements still need to strike the right balance between rules in PTAs and the needed discretion at the national level to pursue desirable social objectives. Second, while many deep provisions may be de facto non-discriminatory and apply to members and non-members alike, there is still a tension between the proliferation of regional approaches and multilateral rules enshrined in the WTO. Therefore, from the perspective of both economic development and global governance, the efficient set of rules in DTAs is an empirical question.

The wealth of information on the content of the policy areas commonly included in PTAs could provide new impetus to the analysis of the determinants and impact of deep trade agreements. Such analysis would also provide the necessary tools to further understand the opportunities and challenges that countries face in terms of negotiation and implementation of deep trade agreements.

We suggest three areas of work going forward. A first step is to improve the measurement of the depth of trade agreements and quantification of its effects. Beyond simple count variables and coverage ratios, more work will be needed to develop new analytic methods to overcome the challenges discussed in the previous section. As shown, machine learning techniques may provide a useful, innovative approach. Second, the detailed information at the level of individual policy areas could inform a series of studies to assess how specific provisions impact trade and other relevant economic variables. As trade policy experts well understand, the devil is often in the details. Finally, the new data and analysis could provide essential information to policymakers on priorities for the negotiation and implementation of trade agreements: finding what potential partners include in their trade deals, identifying best practices in DTAs and areas where practices diverge or overlap across different players, and assessing gaps between international commitments and domestic legislation.

ACKNOWLEDGMENTS

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ANNEX

Annex Table O.A.1: Number of provisions included and coverage ratio – by agreement

Entry into Force (Year)	Agreement	PROVISIONS		COVERAGE RATIO	
		Overall	Substantive	Overall (%)	Substantive (%)
1958	EC Treaty	121	24	13.5	10.8
1960	European Free Trade Association (EFTA)	224	38	24.9	17.0
1961	Central American Common Market (CACM)	155	44	17.2	19.7
1971	EU - Overseas Countries and Territories (OCT)	57	11	6.3	4.9
1973	EC-Iceland	57	11	6.3	4.9
	EC-Norway	57	9	6.3	4.0
	EC-Switzerland-Liechtenstein	58	9	6.5	4.0
	EC (9) Enlargement	127	31	14.1	13.9
	Caribbean Community and Community Market (CARICOM)	152	36	16.9	16.1
1976	APTA	68	10	7.6	4.5
1977	Australia - Papua New Guinea (PATCRA)	19	3	2.1	1.3
	EC-Syrian Arab Republic	30	2	3.3	0.9
1981	South Pacific Regional Trade and Economic Cooperation Agreement (SPARTECA)	21	2	2.3	0.9
	Latin American Integration Association	32	7	3.6	3.1
	EC (10) Enlargement	114	30	12.7	13.5
1983	Australia-New Zealand (ANZCERTA)	108	35	12.0	15.7
1985	US-Israel	90	7	10.0	3.1
1986	EC Enlargement (12)	118	32	13.1	14.3
1987	Panama - Dominican Republic	20	1	2.2	0.4
1988	CAN	116	25	12.9	11.2
1989	Global System of Trade Preferences among Developing Countries (GSTP)	7	0	0.8	0.0
1991	Lao PDR-Thailand	9	1	1.0	0.4
	EU - Andorra	30	6	3.3	2.7
	MERCOSUR	161	32	17.9	14.3
1992	Economic Cooperation Organization (ECO)	46	8	5.1	3.6
	Turkey-EFTA	120	30	13.3	13.5
	ASEAN free trade area	133	18	14.8	8.1
1993	Russian Federation - Uzbekistan	34	13	3.8	5.8
	Russian Federation - Tajikistan	36	8	4.0	3.6
	Russian Federation - Turkmenistan	40	13	4.4	5.8
	Russian Federation - Azerbaijan	41	15	4.6	6.7
	Faroe Islands - Norway	65	17	7.2	7.6
	ECOWAS	99	18	11.0	8.1
	EFTA-Israel	101	22	11.2	9.9
1994	MSG	26	3	2.9	1.3
	Georgia - Russian Federation	42	10	4.7	4.5
	CIS	109	23	12.1	10.3
	COMESA	158	40	17.6	17.9
	EEA	213	42	23.7	18.8
	NAFTA	360	68	40.0	30.5

Entry into Force (Year)	Agreement	PROVISIONS		COVERAGE RATIO	
		Overall	Substantive	Overall (%)	Substantive (%)
1995	South Asian Preferential Trade Agreement (SAPTA)	11	2	1.2	0.9
	Faroe Islands - Switzerland	21	6	2.3	2.7
	Kyrgyz Republic - Armenia	37	11	4.1	4.9
	Ukraine-Turkmenistan	38	8	4.2	3.6
	Kyrgyz Republic - Kazakhstan	39	7	4.3	3.1
	Armenia - Moldova	39	10	4.3	4.5
	EC Enlargement (15)	111	31	12.3	13.9
	Colombia - Mexico	254	61	28.3	27.4
1996	Ukraine - Azerbaijan	34	6	3.8	2.7
	Armenia - Turkmenistan	36	10	4.0	4.5
	Ukraine - Uzbekistan	37	5	4.1	2.2
	Georgia - Azerbaijan	38	11	4.2	4.9
	Georgia - Ukraine	40	12	4.4	5.4
	Armenia - Ukraine	40	7	4.4	3.1
	Kyrgyz Republic - Moldova	42	10	4.7	4.5
	EC-Turkey	110	40	12.2	17.9
1997	Russian Federation - Belarus - Kazakhstan	12	1	1.3	0.4
	EAEC	52	8	5.8	3.6
	EC-Faroe Islands	59	8	6.6	3.6
	Turkey - Israel	74	15	8.2	6.7
	EC-West Bank and Gaza	107	21	11.9	9.4
	Canada - Israel	141	21	15.7	9.4
	Canada - Chile	290	62	32.3	27.8
1998	PAFTA	11	0	1.2	0.0
	Kyrgyz Republic - Uzbekistan	37	7	4.1	3.1
	Georgia - Armenia	37	10	4.1	4.5
	Ukraine-Kazakhstan	37	6	4.1	2.7
	Kyrgyz Republic - Ukraine	39	10	4.3	4.5
	EC-Tunisia	126	35	14.0	15.7
1999	Georgia - Kazakhstan	40	9	4.4	4.0
	Economic and Monetary Community of Central Africa (CEMAC)	57	14	6.3	6.3
	EFTA - West Bank and Gaza	100	24	11.1	10.8
	EFTA - Morocco	130	31	14.5	13.9
	Chile - Mexico	265	69	29.5	30.9
2000	Georgia - Turkmenistan	40	10	4.4	4.5
	West African Economic and Monetary Union (WAEMU)	61	12	6.8	5.4
	Turkey - FYR Macedonia	73	14	8.1	6.3
	Southern African Development Community	84	22	9.3	9.9
	East African Community (EAC)	103	32	11.5	14.3
	EC-Mexico	121	20	13.5	9.0

Entry into Force (Year)	Agreement	PROVISIONS		COVERAGE RATIO	
		Overall	Substantive	Overall (%)	Substantive (%)
2000	EC-Morocco	122	27	13.6	12.1
	EC-Israel	125	31	13.9	13.9
	EC-South Africa	128	33	14.2	14.8
	Israel - Mexico	139	18	15.5	8.1
2001	Armenia - Kazakhstan	38	11	4.2	4.9
	India-Sri Lanka	39	8	4.3	3.6
	Ukraine - FYR Macedonia	65	19	7.2	8.5
	US-Jordan	80	22	8.9	9.9
	EC-FYR Macedonia	171	46	19.0	20.6
	New Zealand - Singapore	179	34	19.9	15.2
	Dominican Republic - Central America	189	44	21.0	19.7
	EFTA - Mexico	233	37	25.9	16.6
2002	Asia Pacific Trade Agreement (APTA) - Accession of China	29	3	3.2	1.3
	EU-San Marino	32	11	3.6	4.9
	Ukraine – Tajikistan	39	8	4.3	3.6
	EFTA - FYR Macedonia	121	26	13.5	11.7
	EFTA - Jordan	122	25	13.6	11.2
	Canada - Costa Rica	155	35	17.2	15.7
	EC-Jordan	162	46	18.0	20.6
	Chile - Costa Rica (Chile - Central America)	230	49	25.6	22.0
	Chile - El Salvador (Chile - Central America)	230	49	25.6	22.0
	Japan-Singapore	237	29	26.4	13.0
2003	GCC	32	3	3.6	1.3
	Pacific Island Countries Trade Agreement (PICTA)	37	1	4.1	0.4
	India - Afghanistan	37	4	4.1	1.8
	China - Macao SAR, China	60	14	6.7	6.3
	Turkey - Bosnia and Herzegovina	77	16	8.6	7.2
	EC-Lebanon	93	32	10.3	14.3
	EFTA - Singapore	264	52	29.4	23.3
	Panama - El Salvador (Panama - Central America)	271	59	30.1	26.5
	EC-Chile	301	54	33.5	24.2
	Australia-Singapore	303	76	33.7	34.1
2004	SACU	25	7	2.8	3.1
	CEZ	45	13	5.0	5.8
	China-Hong Kong SAR, China	64	12	7.1	5.4
	EC Enlargement (25)	103	29	11.5	13.0
	EC-Arab Rep. of Egypt	132	32	14.7	14.3
	EFTA - Chile	232	38	25.8	17.0
	Mexico - Uruguay	233	59	25.9	26.5
	Panama - Taiwan, China	271	73	30.1	32.7
	US-Singapore	318	56	35.4	25.1

Entry into Force (Year)	Agreement	PROVISIONS		COVERAGE RATIO	
		Overall	Substantive	Overall (%)	Substantive (%)
2004	Chile-Rep. of Korea	330	55	36.7	24.7
	US-Chile	348	64	38.7	28.7
2005	Pakistan - Sri Lanka	43	7	4.8	3.1
	Ukraine - Moldova	65	14	7.2	6.3
	Turkey - Tunisia	87	18	9.7	8.1
	Turkey - West Bank and Gaza	104	15	11.6	6.7
	Jordan - Singapore	120	17	13.3	7.6
	EC-Algeria	132	37	14.7	16.6
	EFTA - Tunisia	145	30	16.1	13.5
	Thailand - New Zealand	178	28	19.8	12.6
	China-ASEAN	184	36	20.5	16.1
	Australia-Thailand	197	33	21.9	14.8
	India-Singapore	197	37	21.9	16.6
	Japan-Mexico	252	35	28.0	15.7
	US-Australia	324	61	36.0	27.4
2006	India - Bhutan	8	1	0.9	0.4
	Ukraine-Belarus	36	8	4.0	3.6
	SAFTA	39	2	4.3	0.9
	Russian Federation - Serbia	39	7	4.3	3.1
	Iceland - Faroe Islands	66	18	7.3	8.1
	Turkey - Morocco	85	18	9.5	8.1
	Chile-China	130	22	14.5	9.9
	EC-Albania	158	39	17.6	17.5
	Guatemala – Taiwan, China	227	52	25.3	23.3
	US-Bahrain	237	38	26.4	17.0
	Japan-Malaysia	245	47	27.3	21.1
	Trans-Pacific Strategic Economic Partnership	260	52	28.9	23.3
	US-Morocco	273	52	30.4	23.3
	Panama - Singapore	274	52	30.5	23.3
	EFTA-Rep. of Korea	296	47	32.9	21.1
	CAFTA-Dominican Republic	300	53	33.4	23.8
	Rep. of Korea-Singapore	315	54	35.0	24.2
2007	Agadir Agreement	22	0	2.4	0.0
	East African Community (EAC) - Accession of Burundi	40	14	4.4	6.3
	Mauritius and Pakistan	42	7	4.7	3.1
	Chile-India	70	11	7.8	4.9
	Arab Rep. of Egypt - Turkey	84	18	9.3	8.1
	EC Enlargement (27)	102	29	11.3	13.0
	Turkey - Syrian Arab Republic	109	17	12.1	7.6
	China-Pakistan	120	10	13.3	4.5
	EFTA - Lebanon	142	36	15.8	16.1

Entry into Force (Year)	Agreement	PROVISIONS		COVERAGE RATIO	
		Overall	Substantive	Overall (%)	Substantive (%)
2007	EFTA - Arab Rep. of Egypt	150	37	16.7	16.6
	CEFTA	153	55	17.0	24.7
	Chile-Japan	244	39	27.1	17.5
	Japan-Thailand	267	55	29.7	24.7
2008	Japan-ASEAN	67	8	7.5	3.6
	Turkey - Albania	73	14	8.1	6.3
	Turkey - Georgia	78	15	8.7	6.7
	EFTA - SACU	108	21	12.0	9.4
	Panama - Chile	145	27	16.1	12.1
	EC-Montenegro	194	63	21.6	28.3
	Brunei Darussalam - Japan	197	34	21.9	15.2
	EC-Bosnia Herzegovina	204	57	22.7	25.6
	Pakistan - Malaysia	212	37	23.6	16.6
	Japan-Indonesia	222	38	24.7	17.0
	Chile - Honduras (Chile - Central America)	226	49	25.1	22.0
	El Salvador - Honduras - Taiwan, China	233	54	25.9	24.2
	Panama - Costa Rica (Panama - Central America)	241	49	26.8	22.0
	Japan-Philippines	251	60	27.9	26.9
	China-New Zealand	256	50	28.5	22.4
	EC-CARIFORUM	334	74	37.2	33.2
	Nicaragua - Taiwan, China	334	95	37.2	42.6
2009	India - Nepal	19	0	2.1	0.0
	MERCOSUR-India	52	7	5.8	3.1
	EU-Côte d'Ivoire	78	11	8.7	4.9
	EU - Papua New Guinea/Fiji	96	14	10.7	6.3
	EU-Cameroon	108	18	12.0	8.1
	Canada-EFTA	158	23	17.6	10.3
	China-Singapore	214	39	23.8	17.5
	Colombia - Northern Triangle (El Salvador, Guatemala, Honduras)	223	41	24.8	18.4
	Panama - Nicaragua (Panama - Central America)	231	45	25.7	20.2
	Panama - Guatemala (Panama - Central America	237	49	26.4	22.0
	Panama - Honduras (Panama - Central America)	239	49	26.6	22.0
	Japan-Vietnam	250	38	27.8	17.0
	Peru - Chile	258	64	28.7	28.7
	Chile - Colombia	266	60	29.6	26.9
	US-Oman	286	59	31.8	26.5
	Japan-Switzerland	292	47	32.5	21.1
	Peru - Singapore	306	57	34.0	25.6
	Chile-Australia	332	51	36.9	22.9
	US-Peru	355	74	39.5	33.2
	Canada-Peru	375	79	41.7	35.4

Entry into Force (Year)	Agreement	PROVISIONS		COVERAGE RATIO	
		Overall	Substantive	Overall (%)	Substantive (%)
2010	Turkey - Montenegro	71	15	7.9	6.7
	Turkey - Serbia	71	14	7.9	6.3
	EFTA - Serbia	162	30	18.0	13.5
	EFTA - Albania	173	29	19.2	13.0
	ASEAN-India	175	29	19.5	13.0
	ASEAN-Rep. of Korea	194	31	21.6	13.9
	EU-Serbia	209	56	23.2	25.1
	Chile - Guatemala (Chile - Central America)	228	49	25.4	22.0
	New Zealand - Malaysia	245	44	27.3	19.7
	Rep. of Korea - India	252	45	28.0	20.2
	China-Peru	260	44	28.9	19.7
	ASEAN-Australia-New Zealand	260	59	28.9	26.5
2011	South Asian FTA (SAFTA) - Accession of Afghanistan	30	0	3.3	0.0
	Turkey - Jordan	82	16	9.1	7.2
	Turkey - Chile	93	19	10.3	8.5
	China - Costa Rica	176	23	19.6	10.3
	Hong Kong SAR, China - New Zealand	211	42	23.5	18.8
	India-Malaysia	213	32	23.7	14.3
	India-Japan	234	40	26.0	17.9
	EFTA - Peru	291	61	32.4	27.4
	EFTA - Colombia	330	63	36.7	28.3
	EU - Rep. of Korea	392	81	43.6	36.3
	Canada - Colombia	401	79	44.6	35.4
	Peru - Rep. of Korea	403	77	44.8	34.5
2012	Treaty on a Free Trade Area between members of the Commonwealth of Independent States (CIS)	37	5	4.1	2.2
	El Salvador-Cuba	51	10	5.7	4.5
	EU - Eastern and Southern Africa States Interim EPA	78	16	8.7	7.2
	Chile - Malaysia	91	12	10.1	5.4
	Canada - Jordan	120	29	13.3	13.0
	EFTA - Montenegro	206	52	22.9	23.3
	Chile - Nicaragua (Chile - Central America)	227	48	25.3	21.5
	Peru - Mexico	236	45	26.3	20.2
	Mexico - Central America	244	56	27.1	25.1
	EFTA - Hong Kong SAR, China	295	54	32.8	24.2
	EFTA - Ukraine	302	54	33.6	24.2
	Panama - Peru	311	65	34.6	29.1
	Japan - Peru	324	51	36.0	22.9
	US - Panama	328	71	36.5	31.8
	Rep. of Korea - US	344	68	38.3	30.5
	US - Colombia	355	76	39.5	34.1

Entry into Force (Year)	Agreement	PROVISIONS		COVERAGE RATIO	
		Overall	Substantive	Overall (%)	Substantive (%)
2013	Turkey - Mauritius	55	7	6.1	3.1
	EU (28) Enlargement	102	31	11.3	13.9
	Ukraine - Montenegro	133	22	14.8	9.9
	Rep. of Korea - Turkey	140	42	15.6	18.8
	Gulf Cooperation Council (GCC) - Singapore	184	27	20.5	12.1
	Malaysia - Australia	291	65	32.4	29.1
	Costa Rica - Singapore	294	57	32.7	25.6
	Costa Rica - Peru	301	64	33.5	28.7
	New Zealand - Taiwan, China	340	70	37.8	31.4
	Canada - Panama	345	74	38.4	33.2
	EU - Central America	395	88	43.9	39.5
	EU - Colombia and Peru	399	89	44.4	39.9
2014	Chile - Vietnam	75	5	8.3	2.2
	Iceland - China	180	32	20.0	14.3
	Hong Kong SAR, China - Chile	189	27	21.0	12.1
	Switzerland - China	210	40	23.4	17.9
	Singapore - Taiwan, China	274	40	30.5	17.9
	EFTA - Central America (Costa Rica and Panama)	356	74	39.6	33.2
	Canada - Honduras	357	74	39.7	33.2
	EU - Georgia	376	96	41.8	43.0
	EU - Moldova	402	94	44.7	42.2
	Rep. of Korea - Australia	415	91	46.2	40.8
	EU Ukraine	448	111	49.8	49.8
2015	Southern African Development Community (SADC) - Accession of Seychelles	40	10	4.4	4.5
	Eurasian Economic Union (EAEU) - Accession of Armenia	114	38	12.7	17.0
	Eurasian Economic Union (EAEU) - Accession of Kyrgyz Republic	117	40	13.0	17.9
	Mexico - Panama	169	24	18.8	10.8
	Rep. of Korea - Vietnam	186	18	20.7	8.1
	Australia - China	202	39	22.5	17.5
	EFTA - Bosnia and Herzegovina	206	48	22.9	21.5
	Rep. of Korea - New Zealand	240	37	26.7	16.6
	Eurasian Economic Union (EAEU)	243	63	27.0	28.3
	China - Rep. of Korea	262	56	29.1	25.1
	Japan - Australia	342	63	38.0	28.3
	Canada - Rep. of Korea	415	93	46.2	41.7
2016	Pacific Alliance	110	27	12.2	12.1
	Costa Rica - Colombia	172	28	19.1	12.6
	Japan - Mongolia	210	42	23.4	18.8
	Rep. of Korea - Colombia	267	49	29.7	22.0
2017	Trans-Pacific Partnership	486	136	54.1	61.0

Annex Table O.A.2: Average number of provisions included and coverage ratio – by country

Economy	Number of Agreements	PROVISIONS		COVERAGE RATIO	
		Overall	Substantive	Overall (%)	Substantive (%)
Afghanistan	2	33.5	2.0	3.7	0.9
Albania	4	139.3	34.3	15.5	15.4
Algeria	2	71.5	18.5	8.0	8.3
Andorra	1	30.0	6.0	3.3	2.7
Angola	2	62.0	16.0	6.9	7.2
Antigua and Barbuda	1	152.0	36.0	16.9	16.1
Argentina	4	63.0	11.5	7.0	5.2
Armenia	9	77.9	22.2	8.7	10.0
Aruba	1	57.0	11.0	6.3	4.9
Australia	13	253.8	54.9	28.2	24.6
Austria	37	170.1	39.7	18.9	17.8
Azerbaijan	5	51.8	12.0	5.8	5.4
Bahamas, The	2	243.0	55.0	27.0	24.7
Bahrain	4	116.0	17.0	12.9	7.6
Bangladesh	5	35.4	3.4	3.9	1.5
Barbados	1	334.0	74.0	37.2	33.2
Belarus	7	88.4	24.4	9.8	11.0
Belgium	37	170.1	39.7	18.9	17.8
Belize	2	243.0	55.0	27.0	24.7
Benin	2	80.0	15.0	8.9	6.7
Bermuda	1	57.0	11.0	6.3	4.9
Bhutan	4	22.0	1.3	2.4	0.6
Bolivia	2	74.0	16.0	8.2	7.2
Bosnia and Herzegovina	4	160.0	44.0	17.8	19.7
Botswana	4	64.3	15.0	7.1	6.7
Brazil	3	81.7	15.3	9.1	6.9
Brunei Darussalam	9	217.3	44.8	24.2	20.1
Bulgaria	37	165.4	39.7	18.9	17.8
Burkina Faso	2	80.0	15.0	8.9	6.7
Burundi	3	100.3	28.7	11.2	12.9
Cabo Verde	1	99.0	18.0	11.0	8.1
Cambodia	6	168.8	30.2	18.8	13.5
Cameroon	2	82.5	16.0	9.2	7.2
Canada	12	300.3	64.4	33.4	28.9
Cayman Islands	1	57.0	11.0	6.3	4.9
Central African Republic	1	57.0	14.0	6.3	6.3
Chad	1	57.0	14.0	6.3	6.3
Chile	26	218.8	44.0	24.3	19.7
China	14	167.6	30.0	18.6	13.5
Colombia	12	243.8	50.4	27.1	22.6
Comoros	1	158.0	40.0	17.6	17.9

Economy	Number of Agreements	PROVISIONS		COVERAGE RATIO	
		Overall	Substantive	Overall (%)	Substantive (%)
Congo, Dem. Rep.	3	94.0	24.0	10.5	10.8
Congo, Rep.	1	57.0	14.0	6.3	6.3
Costa Rica	13	246.8	51.1	27.4	22.9
Côte d'Ivoire	3	79.3	13.7	8.8	6.1
Croatia	37	170.1	39.7	18.9	17.8
Cuba	2	41.5	8.5	4.6	3.8
Cyprus	37	170.1	39.7	18.9	17.8
Czech Republic	37	165.4	39.7	18.9	17.8
Denmark	37	170.1	39.7	18.9	17.8
Djibouti	1	158.0	40.0	17.6	17.9
Dominica	2	243.0	55.0	27.0	24.7
Dominican Republic	3	181.0	39.7	20.1	17.8
Ecuador	2	74.0	16.0	8.2	7.2
Egypt, Arab Rep.	6	92.8	21.2	10.3	9.5
El Salvador	10	229.1	49.8	25.5	22.3
Equatorial Guinea	1	57.0	14.0	6.3	6.3
Eritrea	1	158.0	40.0	17.6	17.9
Estonia	37	165.4	39.7	18.9	17.8
Ethiopia	1	158.0	40.0	17.6	17.9
Faroe Islands	4	52.8	12.3	5.9	5.5
Fiji	4	45.0	5.0	5.0	2.2
Finland	37	165.4	39.7	18.9	17.8
France	37	170.1	39.7	18.9	17.8
French Polynesia	1	57.0	11.0	6.3	4.9
Gabon	1	57.0	14.0	6.3	6.3
Gambia, The	1	99.0	18.0	11.0	8.1
Georgia	8	86.4	21.6	9.6	9.7
Germany	37	170.1	39.7	18.9	17.8
Ghana	1	99.0	18.0	11.0	8.1
Greece	37	170.1	39.7	18.9	17.8
Greenland	1	57.0	11.0	6.3	4.9
Grenada	2	243.0	55.0	27.0	24.7
Guatemala	9	244.2	52.9	27.2	23.7
Guinea	1	99.0	18.0	11.0	8.1
Guinea-Bissau	2	80.0	15.0	8.9	6.7
Guyana	2	243.0	55.0	27.0	24.7
Haiti	1	152.0	36.0	16.9	16.1
Honduras	10	256.1	55.2	28.5	24.8
Hong Kong SAR, China	4	189.8	33.8	21.1	15.1
Hungary	37	165.4	39.7	18.9	17.8
Iceland	29	189.1	37.4	21.0	16.8
India	16	92.1	14.4	10.2	6.5

Economy	Number of Agreements	PROVISIONS		COVERAGE RATIO	
		Overall	Substantive	Overall (%)	Substantive (%)
Indonesia	7	176.4	31.3	19.6	14.0
Iran, Islamic Rep.	1	46.0	8.0	5.1	3.6
Iraq	1	11.0	0.0	1.2	0.0
Ireland	37	165.4	39.7	18.9	17.8
Israel	6	111.7	19.0	12.4	8.5
Italy	37	170.1	39.7	18.9	17.8
Jamaica	2	243.0	55.0	27.0	24.7
Japan	16	257.5	47.6	28.6	21.4
Jordan	8	89.9	19.4	10.0	8.7
Kazakhstan	10	73.7	19.6	8.2	8.8
Kenya	3	100.3	28.7	11.2	12.9
Kiribati	2	29.0	1.5	3.2	0.7
Korea, Rep.	17	267.5	50.4	29.8	22.6
Kuwait	3	75.7	10.0	8.4	4.5
Kyrgyz Republic	9	80.0	21.6	8.9	9.7
Lao PDR	9	124.3	21.7	13.8	9.7
Latvia	37	170.1	39.7	18.9	17.8
Lebanon	3	82.0	22.7	9.1	10.2
Lesotho	4	64.3	15.0	7.1	6.7
Liberia	1	99.0	18.0	11.0	8.1
Libya	2	84.5	20.0	9.4	9.0
Liechtenstein	27	194.0	38.3	21.6	17.2
Lithuania	37	165.4	39.7	18.9	17.8
Luxembourg	37	170.1	39.7	18.9	17.8
Macao SAR, China	1	60.0	14.0	6.7	6.3
Macedonia, FYR	5	116.6	32.0	13.0	14.3
Madagascar	4	90.0	22.0	10.0	9.9
Malawi	3	94.0	24.0	10.5	10.8
Malaysia	13	215.1	42.6	23.9	19.1
Maldives	3	26.7	1.3	3.0	0.6
Mali	2	80.0	15.0	8.9	6.7
Malta	37	165.4	39.7	18.9	17.8
Marshall Islands	1	21.0	2.0	2.3	0.9
Mauritius	6	76.2	17.0	8.5	7.6
Mexico	14	223.9	47.3	24.9	21.2
Micronesia, Fed. Sts.	2	29.0	1.5	3.2	0.7
Moldova	5	140.2	36.6	15.6	16.4
Mongolia	1	210.0	42.0	23.4	18.8
Montenegro	5	151.4	41.4	16.8	18.6
Morocco	6	107.2	21.3	11.9	9.6
Mozambique	2	62.0	16.0	6.9	7.2
Myanmar	6	168.8	30.2	18.8	13.5

Economy	Number of Agreements	PROVISIONS		COVERAGE RATIO	
		Overall	Substantive	Overall (%)	Substantive (%)
Namibia	4	64.3	15.0	7.1	6.7
Nauru	2	29.0	1.5	3.2	0.7
Nepal	4	24.8	1.0	2.8	0.4
Netherlands	37	170.1	39.7	18.9	17.8
New Caledonia	1	57.0	11.0	6.3	4.9
New Zealand	12	232.0	49.1	25.8	22.0
Nicaragua	8	259.4	59.1	28.9	26.5
Niger	2	80.0	15.0	8.9	6.7
Nigeria	1	99.0	18.0	11.0	8.1
Norway	28	189.4	37.5	21.1	16.8
Oman	4	128.3	22.3	14.3	10.0
Pakistan	9	61.1	8.1	6.8	3.6
Panama	14	245.6	50.9	27.3	22.8
Papua New Guinea	5	39.8	4.6	4.4	2.1
Paraguay	3	81.7	15.3	9.1	6.9
Peru	16	285.2	60.3	31.7	27.0
Philippines	7	180.6	34.4	20.1	15.4
Poland	37	165.4	39.7	18.9	17.8
Portugal	37	170.1	39.7	18.9	17.8
Qatar	3	75.7	10.0	8.4	4.5
Romania	37	170.1	39.7	18.9	17.8
Russian Federation	12	67.9	19.1	7.6	8.6
Rwanda	3	100.3	28.7	11.2	12.9
Samoa	2	29.0	1.5	3.2	0.7
San Marino	2	240.0	61.0	26.7	27.4
Saudi Arabia	3	75.7	10.0	8.4	4.5
Senegal	2	80.0	15.0	8.9	6.7
Serbia	5	126.8	32.4	14.1	14.5
Seychelles	4	90.0	22.0	10.0	9.9
Sierra Leone	1	99.0	18.0	11.0	8.1
Singapore	22	238.1	45.3	26.5	20.3
Slovak Republic	37	170.1	39.7	18.9	17.8
Slovenia	37	165.4	39.7	18.9	17.8
Solomon Islands	3	28.0	2.0	3.1	0.9
South Africa	5	77.0	18.6	8.6	8.3
South Sudan	1	158.0	40.0	17.6	17.9
Spain	37	165.4	39.7	18.9	17.8
Sri Lanka	7	37.0	4.6	4.1	2.0
St. Kitts and Nevis	2	243.0	55.0	27.0	24.7
St. Lucia	2	243.0	55.0	27.0	24.7
St. Vincent and the Grenadines	2	243.0	55.0	27.0	24.7
Sudan	1	11.0	0.0	1.2	0.0

Economy	Number of Agreements	PROVISIONS		COVERAGE RATIO	
		Overall	Substantive	Overall (%)	Substantive (%)
Suriname	2	243.0	55.0	27.0	24.7
Swaziland	5	83.0	20.0	9.2	9.0
Sweden	37	165.4	39.7	18.9	17.8
Switzerland	30	192.0	37.5	21.4	16.8
Syrian Arab Republic	3	50.0	6.3	5.6	2.8
Taiwan, China	6	279.8	64.0	31.1	28.7
Tajikistan	3	42.3	8.0	4.7	3.6
Tanzania	4	66.8	19.5	7.4	8.7
Thailand	10	166.4	29.8	18.5	13.4
Togo	2	80.0	15.0	8.9	6.7
Tonga	2	29.0	1.5	3.2	0.7
Trinidad and Tobago	2	243.0	55.0	27.0	24.7
Tunisia	5	78.2	16.6	8.7	7.4
Turkey	19	85.9	18.5	9.6	8.3
Turkmenistan	6	50.0	11.5	5.6	5.2
Turks and Caicos Islands	1	57.0	11.0	6.3	4.9
Tuvalu	2	29.0	1.5	3.2	0.7
Uganda	3	100.3	28.7	11.2	12.9
Ukraine	14	67.9	13.7	7.5	6.1
United Arab Emirates	3	75.7	10.0	8.4	4.5
United Kingdom	37	165.4	39.7	18.9	17.8
United States	14	285.6	54.9	31.8	24.6
Uruguay	4	119.5	26.3	13.3	11.8
Uzbekistan	5	50.8	10.6	5.7	4.8
Vanuatu	3	28.0	2.0	3.1	0.9
Venezuela, RB	3	81.7	15.3	9.1	6.9
Vietnam	10	201.0	37.8	22.4	17.0
West Bank and Gaza	3	103.7	20.0	11.5	9.0
Yemen, Rep.	1	11.0	0.0	1.2	0.0
Zambia	3	94.0	24.0	10.5	10.8
Zimbabwe	4	90.0	22.0	10.0	9.9

Annex Table O.A.3: Maximum number of provisions included and coverage ratio – by country

Country	PROVISIONS Agreement	PROVISIONS Provisions	PROVISIONS Coverage Ratio (%)	SUBSTANTIVE Agreement	SUBSTANTIVE Provisions	SUBSTANTIVE Coverage Ratio (%)
Afghanistan	India - Afghanistan	37	4.1	India - Afghanistan	4	1.8
Albania	EFTA - Albania	173	19.2	CEFTA	55	24.7
Algeria	EC-Algeria	132	14.7	EC-Algeria	37	16.6
Andorra	EU - Andorra	30	3.3	EU - Andorra	6	2.7
Angola	Southern African Development Community	84	9.3	Southern African Development Community	22	9.9
Antigua and Barbuda	CARICOM	152	16.9	CARICOM	36	16.1
Argentina	MERCOSUR	161	17.9	MERCOSUR	32	14.3
Armenia	EAEU	243	27.0	EAEU	63	28.3
Aruba	EU - Overseas Countries and Territories (OCT)	57	6.3	EU - Overseas Countries and Territories (OCT)	11	4.9
Australia	Trans-Pacific Partnership	486	54.1	Trans-Pacific Partnership	136	61.0
Austria	EU Ukraine	448	49.8	EU Ukraine	111	49.8
Azerbaijan	CIS	109	12.1	CIS	23	10.3
Bahamas, The	EC-CARIFORUM	334	37.2	EC-CARIFORUM	74	33.2
Bahrain	US-Bahrain	237	26.4	US-Bahrain	38	17.0
Bangladesh	APTA	68	7.6	APTA	10	4.5
Barbados	EC-CARIFORUM	334	37.2	EC-CARIFORUM	74	33.2
Belarus	Eurasian Economic Union (EAEU)	243	27.0	Eurasian Economic Union (EAEU)	63	28.3
Belgium	EU Ukraine	448	49.8	EU Ukraine	111	49.8
Belize	EC-CARIFORUM	334	37.2	EC-CARIFORUM	74	33.2
Benin	ECOWAS	99	11.0	ECOWAS	18	8.1
Bermuda	EU - Overseas Countries and Territories (OCT)	57	6.3	EU - Overseas Countries and Territories (OCT)	11	4.9
Bhutan	SAFTA	39	4.3	SAFTA	2	0.9
Bolivia	CAN	116	12.9	CAN	25	11.2
Bosnia and Herzegovina	EFTA - Bosnia and Herzegovina	206	22.9	EC-Bosnia Herzegovina Herzegovina	57	25.6
Botswana	EFTA - SACU	108	12.0	Southern African Development Community	22	9.9
Brazil	MERCOSUR	161	17.9	MERCOSUR	32	14.3
Brunei Darussalam	Trans-Pacific Partnership	486	54.1	Trans-Pacific Partnership	136	61.0
Bulgaria	EU Ukraine	448	49.8	EU Ukraine	111	49.8
Burkina Faso	ECOWAS	99	11.0	ECOWAS	18	8.1
Burundi	COMESA	158	17.6	COMESA	40	17.9
Cabo Verde	ECOWAS	99	11.0	ECOWAS	18	8.1
Cambodia	ASEAN-Australia-New Zealand	260	28.9	ASEAN-Australia-New Zealand	59	26.5
Cameroon	EC-Cameroon	108	12.0	EC-Cameroon	18	8.1
Canada	Trans-Pacific Partnership	486	54.1	Trans-Pacific Partnership	136	61.0
Cayman Islands	EU - Overseas Countries and Territories (OCT)	57	6.3	EU - Overseas Countries and Territories (OCT)	11	4.9

Country	PROVISIONS Agreement	Provisions	Coverage Ratio (%)	SUBSTANTIVE Agreement	Provisions	Coverage Ratio (%)
Central African Republic	Economic and Monetary Community of Central Africa (CEMAC)	57	6.3	Economic and Monetary Community of Central Africa (CEMAC)	14	6.3
Chad	Economic and Monetary Community of Central Africa (CEMAC)	57	6.3	Economic and Monetary Community of Central Africa (CEMAC)	14	6.3
Chile	Trans-Pacific Partnership	486	54.1	Trans-Pacific Partnership	136	61.0
China	China-Rep. of Korea	262	29.1	China-Rep. of Korea	56	25.1
Colombia	Canada-Colombia	401	44.6	EU - Colombia and Peru	89	39.9
Comoros	COMESA	158	17.6	COMESA	40	17.9
Congo, Dem. Rep.	COMESA	158	17.6	COMESA	40	17.9
Congo, Rep.	Economic and Monetary Community of Central Africa (CEMAC)	57	6.3	Economic and Monetary Community of Central Africa (CEMAC)	14	6.3
Costa Rica	EU - Central America	395	43.9	EU - Central America	88	39.5
Côte d'Ivoire	ECOWAS	99	11.0	ECOWAS	18	8.1
Croatia	EU Ukraine	448	49.8	EU Ukraine	111	49.8
Cuba	El Salvador-Cuba	51	5.7	El Salvador-Cuba	10	4.5
Cyprus	EU Ukraine	448	49.8	EU Ukraine	111	49.8
Czech Republic	EU Ukraine	448	49.8	EU Ukraine	111	49.8
Denmark	EU Ukraine	448	49.8	EU Ukraine	111	49.8
Djibouti	COMESA	158	17.6	COMESA	40	17.9
Dominica	EC-CARIFORUM	334	37.2	EC-CARIFORUM	74	33.2
Dominican Republic	EC-CARIFORUM	334	37.2	EC-CARIFORUM	74	33.2
Ecuador	CAN	116	12.9	CAN	25	11.2
Egypt, Arab Rep.	COMESA	158	17.6	COMESA	40	17.9
El Salvador	EU - Central America	395	43.9	EU - Central America	88	39.5
Equatorial Guinea	Economic and Monetary Community of Central Africa (CEMAC)	57	6.3	Economic and Monetary Community of Central Africa (CEMAC)	14	6.3
Eritrea	COMESA	158	17.6	COMESA	40	17.9
Estonia	EU Ukraine	448	49.8	EU Ukraine	111	49.8
Ethiopia	COMESA	158	17.6	COMESA	40	17.9
Faroe Islands	Iceland - Faroe Islands	66	7.3	Iceland - Faroe Islands	18	8.1
Fiji	EU - Papua New Guinea/Fiji	96	10.7	EU - Papua New Guinea/Fiji	14	6.3
Finland	EU Ukraine	448	49.8	EU Ukraine	111	49.8
France	EU Ukraine	448	49.8	EU Ukraine	111	49.8
French Polynesia	EU - Overseas Countries and Territories (OCT)	57	6.3	EU - Overseas Countries and Territories (OCT)	11	4.9
Gabon	Economic and Monetary Community of Central Africa (CEMAC)	57	6.3	Economic and Monetary Community of Central Africa (CEMAC)	14	6.3
Gambia, The	ECOWAS	99	11.0	ECOWAS	18	8.1

Country	PROVISIONS Agreement	Provisions	Coverage Ratio (%)	SUBSTANTIVE Agreement	Provisions	Coverage Ratio (%)
Georgia	EU - Georgia	376	41.8	EU - Georgia	96	43.0
Germany	EU Ukraine	448	49.8	EU Ukraine	111	49.8
Ghana	ECOWAS	99	11.0	ECOWAS	18	8.1
Greece	EU Ukraine	448	49.8	EU Ukraine	111	49.8
Greenland	EU - Overseas Countries and Territories (OCT)	57	6.3	EU - Overseas Countries and Territories (OCT)	11	4.9
Grenada	EC-CARIFORUM	334	37.2	EC-CARIFORUM	74	33.2
Guatemala	EU - Central America	395	43.9	EU - Central America	88	39.5
Guinea	ECOWAS	99	11.0	ECOWAS	18	8.1
Guinea-Bissau	ECOWAS	99	11.0	ECOWAS	18	8.1
Guyana	EC-CARIFORUM	334	37.2	EC-CARIFORUM	74	33.2
Haiti	Caribbean Community and Community Market (CARICOM)	152	16.9	Caribbean Community and Community Market (CARICOM)	36	16.1
Honduras	EU - Central America	395	43.9	EU - Central America	88	39.5
Hong Kong SAR, China	EFTA - Hong Kong SAR, China	295	32.8	EFTA - Hong Kong SAR, China	54	24.2
Hungary	EU Ukraine	448	49.8	EU Ukraine	111	49.8
Iceland	EFTA - Central America (Costa Rica and Panama)	356	39.6	EFTA - Central America (Costa Rica and Panama)	74	33.2
India	Rep. of Korea-India	252	28.0	Rep. of Korea-India	45	20.2
Indonesia	ASEAN-Australia-New Zealand	260	28.9	ASEAN-Australia-New Zealand	59	26.5
Iran, Islamic Rep.	Economic Cooperation Organization (ECO)	46	5.1	Economic Cooperation Organization (ECO)	8	3.6
Iraq	PAFTA	11	1.2	PAFTA	0	0.0
Ireland	EU Ukraine	448	49.8	EU Ukraine	111	49.8
Israel	Canada - Israel	141	15.7	EC-Israel	31	13.9
Italy	EU Ukraine	448	49.8	EU Ukraine	111	49.8
Jamaica	EC-CARIFORUM	334	37.2	EC-CARIFORUM	74	33.2
Japan	Trans-Pacific Partnership	486	54.1	Trans-Pacific Partnership	136	61.0
Jordan	EC-Jordan	162	18.0	EC-Jordan	46	20.6
Kazakhstan	Eurasian Economic Union (EAEU)	243	27.0	Eurasian Economic Union (EAEU)	63	28.3
Kenya	COMESA	158	17.6	COMESA	40	17.9
Kiribati	Pacific Island Countries Trade Agreement (PICTA)	37	4.1	South Pacific Regional Trade and Economic Cooperation Agreement (SPARTECA)	2	0.9
Korea, Rep.	Canada - Rep. of Korea	415	46.2	Canada - Rep. of Korea	93	41.7
Kuwait	Gulf Cooperation Council (GCC) - Singapore	184	20.5	Gulf Cooperation Council (GCC) - Singapore	27	12.1
Kyrgyz Republic	Eurasian Economic Union (EAEU)	243	27.0	Eurasian Economic Union (EAEU)	63	28.3
Lao PDR	ASEAN-Australia-New Zealand	260	28.9	ASEAN-Australia-New Zealand	59	26.5
Latvia	EU Ukraine	448	49.8	EU Ukraine	111	49.8
Lebanon	EFTA - Lebanon	142	15.8	EFTA - Lebanon	36	16.1

Country	PROVISIONS Agreement	Provisions	Coverage Ratio (%)	SUBSTANTIVE Agreement	Provisions	Coverage Ratio (%)
Lesotho	EFTA - SACU	108	12.0	Southern African Development Community	22	9.9
Liberia	ECOWAS	99	11.0	ECOWAS	18	8.1
Libya	COMESA	158	17.6	COMESA	40	17.9
Liechtenstein	EFTA - Central America (Costa Rica and Panama)	356	39.6	EFTA - Central America (Costa Rica and Panama)	74	33.2
Lithuania	EU Ukraine	448	49.8	EU Ukraine	111	49.8
Luxembourg	EU Ukraine	448	49.8	EU Ukraine	111	49.8
Macao SAR, China	China - Macao SAR, China	60	6.7	China - Macao SAR, China	14	6.3
Macedonia, FYR	EC-FYR Macedonia	171	19.0	CEFTA	55	24.7
Madagascar	COMESA	158	17.6	COMESA	40	17.9
Malawi	COMESA	158	17.6	COMESA	40	17.9
Malaysia	Trans-Pacific Partnership	486	54.1	Trans-Pacific Partnership	136	61.0
Maldives	SAFTA	39	4.3	SAFTA	2	0.9
Mali	ECOWAS	99	11.0	ECOWAS	18	8.1
Malta	EU Ukraine	448	49.8	EU Ukraine	111	49.8
Marshall Islands	South Pacific Regional Trade and Economic Cooperation Agreement (SPARTECA)	21	2.3	South Pacific Regional Trade and Economic Cooperation Agreement (SPARTECA)	2	0.9
Mauritius	COMESA	158	17.6	COMESA	40	17.9
Mexico	Trans-Pacific Partnership	486	54.1	Trans-Pacific Partnership	136	61.0
Micronesia, Fed. Sts.	Pacific Island Countries Trade Agreement (PICTA)	37	4.1	South Pacific Regional Trade and Economic Cooperation Agreement (SPARTECA)	2	0.9
Moldova	EU - Republic of Moldova	402	44.7	EU - Republic of Moldova	94	42.2
Mongolia	Japan - Mongolia	210	23.4	Japan - Mongolia	42	18.8
Montenegro	EFTA - Montenegro	206	22.9	EC-Montenegro	63	28.3
Morocco	US-Morocco	273	30.4	US-Morocco	52	23.3
Mozambique	Southern African Development Community	84	9.3	Southern African Development Community	22	9.9
Myanmar	ASEAN-Australia-New Zealand	260	28.9	ASEAN-Australia-New Zealand	59	26.5
Namibia	EFTA - SACU	108	12.0	Southern African Development Community	22	9.9
Nauru	Pacific Island Countries Trade Agreement (PICTA)	37	4.1	South Pacific Regional Trade and Economic Cooperation Agreement (SPARTECA)	2	0.9
Nepal	SAFTA	39	4.3	SAFTA	2	0.9
Netherlands	EU Ukraine	448	49.8	EU Ukraine	111	49.8
New Caledonia	EU - Overseas Countries and Territories (OCT)	57	6.3	EU - Overseas Countries and Territories (OCT)	11	4.9
New Zealand	Trans-Pacific Partnership	486	54.1	Trans-Pacific Partnership	136	61.0
Nicaragua	EU - Central America	395	43.9	Nicaragua - Taiwan, China	95	42.6
Niger	ECOWAS	99	11.0	ECOWAS	18	8.1

Country	PROVISIONS Agreement	Provisions	Coverage Ratio (%)	SUBSTANTIVE Agreement	Provisions	Coverage Ratio (%)
Nigeria	ECOWAS	99	11.0	ECOWAS	18	8.1
Norway	EFTA - Central America (Costa Rica and Panama)	356	39.6	EFTA - Central America (Costa Rica and Panama)	74	33.2
Oman	US-Oman	286	31.8	US-Oman	59	26.5
Pakistan	Pakistan - Malaysia	212	23.6	Pakistan - Malaysia	37	16.6
Panama	EFTA - Central America (Costa Rica and Panama)	356	39.6	Canada - Panama	74	33.2
Papua New	EU - Papua	96	10.7	EU - Papua	14	6.3
Guinea	New Guinea/Fiji			New Guinea/Fiji		
Paraguay	MERCOSUR	161	17.9	MERCOSUR	32	14.3
Peru	Trans-Pacific Partnership	486	54.1	Trans-Pacific Partnership	136	61.0
Philippines	ASEAN-Australia-New Zealand	260	28.9	Japan-Philippines	60	26.9
Poland	EU Ukraine	448	49.8	EU Ukraine	111	49.8
Portugal	EU Ukraine	448	49.8	EU Ukraine	111	49.8
Qatar	Gulf Cooperation Council (GCC) - Singapore	184	20.5	Gulf Cooperation Council (GCC) - Singapore	27	12.1
Romania	EU Ukraine	448	49.8	EU Ukraine	111	49.8
Russian	Eurasian Economic	243	27.0	Eurasian Economic	63	28.3
Federation	Union (EAEU)			Union (EAEU)		
Rwanda	COMESA	158	17.6	COMESA	40	17.9
Samoa	Pacific Island Countries Trade Agreement (PICTA)	37	4.1	South Pacific Regional Trade and Economic Cooperation Agreement (SPARTECA)	2	0.9
San Marino	EU Ukraine	448	49.8	EU Ukraine	111	49.8
Saudi Arabia	Gulf Cooperation Council (GCC) - Singapore	184	20.5	Gulf Cooperation Council (GCC) - Singapore	27	12.1
Senegal	ECOWAS	99	11.0	ECOWAS	18	8.1
Serbia	EU-Serbia	209	23.2	EU-Serbia	56	25.1
Seychelles	COMESA	158	17.6	COMESA	40	17.9
Sierra Leone	ECOWAS	99	11.0	ECOWAS	18	8.1
Singapore	Trans-Pacific Partnership	486	54.1	Trans-Pacific Partnership	136	61.0
Slovak Republic	EU Ukraine	448	49.8	EU Ukraine	111	49.8
Slovenia	EU Ukraine	448	49.8	EU Ukraine	111	49.8
Solomon Islands	Pacific Island Countries Trade Agreement (PICTA)	37	4.1	MSG	3	1.3
South Africa	EC-South Africa	128	14.2	EC-South Africa	33	14.8
South Sudan	COMESA	158	17.6	COMESA	40	17.9
Spain	EU Ukraine	448	49.8	EU Ukraine	111	49.8
Sri Lanka	APTA	68	7.6	APTA	10	4.5
St. Kitts and Nevis	EC-CARIFORUM	334	37.2	EC-CARIFORUM	74	33.2
St. Lucia	EC-CARIFORUM	334	37.2	EC-CARIFORUM	74	33.2
St. Vincent and the Grenadines	EC-CARIFORUM	334	37.2	EC-CARIFORUM	74	33.2
Sudan	PAFTA	11	1.2	PAFTA	0	0.0

Country	PROVISIONS Agreement	Provisions	Coverage Ratio (%)	SUBSTANTIVE Agreement	Provisions	Coverage Ratio (%)
Suriname	EC-CARIFORUM	334	37.2	EC-CARIFORUM	74	33.2
Swaziland	COMESA	158	17.6	COMESA	40	17.9
Sweden	EU Ukraine	448	49.8	EU Ukraine	111	49.8
Switzerland	EFTA - Central America (Costa Rica and Panama)	356	39.6	EFTA - Central America (Costa Rica and Panama)	74	33.2
Syrian Arab Republic	Turkey-Syrian Arab Republic	109	12.1	Turkey-Syrian Arab Republic	17	7.6
Taiwan, China	New Zealand - Taiwan, China	340	37.8	Nicaragua - Taiwan, China	95	42.6
Tajikistan	EAEC	52	5.8	EAEC	8	3.6
Tanzania	East African Community (EAC)	103	11.5	East African Community (EAC)	32	14.3
Thailand	Japan-Thailand	267	29.7	ASEAN-Australia-New Zealand	59	26.5
Togo	ECOWAS	99	11.0	ECOWAS	18	8.1
Tonga	Pacific Island Countries Trade Agreement (PICTA)	37	4.1	South Pacific Regional Trade and Economic Cooperation Agreement (SPARTECA)	2	0.9
Trinidad and Tobago	EC-CARIFORUM	334	37.2	EC-CARIFORUM	74	33.2
Tunisia	EFTA - Tunisia	145	16.1	EC-Tunisia	35	15.7
Turkey	Rep. of Korea - Turkey	140	15.6	Rep. of Korea - Turkey	42	18.8
Turkmenistan	CIS	109	12.1	CIS	23	10.3
Turks and Caicos Islands	EU - Overseas Countries and Territories (OCT)	57	6.3	EU - Overseas Countries and Territories (OCT	11	4.9
Tuvalu	Pacific Island Countries Trade Agreement (PICTA)	37	4.1	South Pacific Regional Trade and Economic Cooperation Agreement (SPARTECA)	2	0.9
Uganda	COMESA	158	17.6	COMESA	40	17.9
Ukraine	EFTA - Ukraine	302	33.6	EFTA - Ukraine	54	24.2
United Arab Emirates	Gulf Cooperation Council (GCC) - Singapore	184	20.5	Gulf Cooperation Council (GCC) – Singapore	27	12.1
United Kingdom	EU Ukraine	448	49.8	EU Ukraine	111	49.8
United States	NAFTA	360	40.0	US - Colombia	76	34.1
Uruguay	Mexico - Uruguay	233	25.9	Mexico - Uruguay	59	26.5
Uzbekistan	CIS	109	12.1	CIS	23	10.3
Vanuatu	Pacific Island Countries Trade Agreement (PICTA)	37	4.1	MSG	3	1.3
Venezuela, RB	MERCOSUR	161	17.9	MERCOSUR	32	14.3
Vietnam	Trans-Pacific Partnership	486	54.1	Trans-Pacific Partnership	136	61.0
West Bank and Gaza	EC-West Bank and Gaza	107	11.9	EFTA-West Bank and Gaza	24	10.8
Yemen, Rep.	PAFTA	11	1.2	PAFTA	0	0.0
Zambia	COMESA	158	17.6	COMESA	40	17.9
Zimbabwe	COMESA	158	17.6	COMESA	40	17.9