

Unclassified**English - Or. English****29 April 2021****TRADE AND AGRICULTURE DIRECTORATE
TRADE COMMITTEE****Cancels & replaces the same document of 23 April 2021****Working Party of the Trade Committee****Services Trade Restrictiveness Index (STRI): Measuring services liberalisation
and commitments in the GATS and RTAs****Methodology and results**

This paper was declassified at the 16-17 March 2021 meeting of the WPTC.

Purpose: This paper presents new work using the OECD STRI to quantify the liberalisation and binding of applied regulatory regimes in the GATS and RTAs.

Preparation: This paper was prepared by Sebastian Benz and Inese Rozensteine of the Trade in Services Division. Indicators were calculated by Frédéric Gonzales.

Background: This project was scoped in TAD/TC/WP(2019)15 and contributes to an improved measurement of the regulatory environment for services trade under the Trade Committee's PWB item 3.1.2.1.1 (STRI database, indices, RTA equivalents and impact) of the 2019-2020 PWB.

Communication and dissemination: The paper will be published in the OECD Trade Policy Paper series.

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JT03475653

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Executive Summary

This paper measures, illustrates and analyses the extent to which applied regulatory regimes are bound in multilateral and regional trade agreements by (i) updating and expanding the existing GATS Trade Restrictiveness Index (GTRI), which estimates “water” in GATS commitments (Miroudot and Pertel, 2015^[1]), and (ii) quantifying the degree of new services liberalisation and regulatory bindings in regional trade agreements (RTAs).

The “water” in the GATS refers to the difference between the bound level of trade restrictiveness recorded in GATS schedules of commitments and the applied services trade regime as measured by the OECD Services Trade Restrictiveness Index (STRI). This work updates data initially collected in 2015, adding five new countries and six new sectors and reflecting policy changes recorded since 2014. Findings demonstrate the degree to which applied services trade regimes are significantly more open than those to which countries have committed in the GATS.

The degree of services liberalisation and regulatory bindings in 18 RTAs is also quantified. Similar to the “water” in the GATS indicators, preferential liberalisation is benchmarked against applied services policies recorded in the STRI. The analysis also shows the extent to which existing GATS commitments are strengthened through binding commitments in RTAs, reducing the scope for implementation of restrictive policies in the future and eliminating a large share of “water” in the GATS.

The analysis covers 21 services sectors and 18 RTAs. The STRI methodology is used to calculate sector-specific and country-specific indicators of preferential liberalisation and regulatory bindings for each RTA. The mapping of GATS commitments and RTA provisions against the STRI database is not always straightforward, and this analysis is not meant as definitive legal interpretation of RTA provisions or of “water” in each sector. Low levels of “water” are also not necessarily synonymous with high levels of openness. Ultimately, national and collective services reforms and liberalisation can best drive inclusive and sustainable economic growth.

Key findings

- **Regional Trade Agreements (RTAs) are breaking down barriers to services trade:** RTAs reduce restrictions to services trade by between 10% and 40% compared to the multilateral regime.
- **New access is concentrated in certain sectors and modes of supply:** Most of the new liberalisation in RTAs compared to the currently applied regime comes from reductions in barriers to foreign entry and the lifting of other discriminatory barriers, including restrictions on access to public procurement. Only a few RTAs result in significant liberalisation of the movement of natural persons.
- **Bilateral and plurilateral agreements have substantially increased certainty in the regulatory environment for services trade:** On average, the RTAs considered in this study eliminate between 40% and 70% of the “water” in the GATS.

1. Introduction

The OECD Services Trade Restrictiveness Index (STRI) has been used to compare the legal commitments undertaken by Members of the World Trade Organization (WTO) in the General Agreement on Trade in Services (GATS) with their actual trade regimes (Miroudot and Pertel, 2015^[1]). This report expands that work and adds a new dimension to RTAs.

The basis of each country's services trade regime is reflected in the GATS. A series of market access and national treatment commitments are specified in GATS schedules that describe their terms, limitations and conditions. They form an upper limit for barriers to trade in services. However, countries are free to apply rules more liberal than those they have scheduled in the GATS, with the difference between bindings and the applied regime often called "water".

At the same time, as per Article V of the GATS, countries are able to make services trade concessions in regional trade agreements (RTAs). Services provisions in RTAs may lead to new liberalisation of trade or foreign direct investment (FDI) in services sectors, or can take the form of commitments that bind a country's existing services trade regime at a specific level.

This report updates and expands earlier work on the "water" in the GATS (Miroudot and Pertel, 2015^[1]) to reflect evolutions in the STRI methodology, to add five additional countries (Colombia, Costa Rica, Latvia, Lithuania, and Malaysia), and to expand sectoral coverage to include four logistics and two financial services sectors.¹ In total, the updated GATS Trade Restrictiveness Index (GTRI) database covers 21 sectors² and 45 countries.³ The GTRI database does not aim to track changes over time in GATS commitments; rather, it records the most recent commitments and uses the most recent 2020 STRI to calculate "water" in the GATS.

In addition, this report considers 18 RTAs recently concluded among OECD countries and non-member economies. All provisions of these RTAs are mapped against the STRI framework in order to quantify the degree of preferential services liberalisation and the degree of regulatory bindings achieved through the agreements. This work constitutes a step towards the calculation of bilateral STRIs and the further sharpening of the estimation of Ad Valorem Equivalents (AVEs) for services.

The report is structured as follows. The next section describes the methodology for the quantification of "water" in the GATS. It provides an overview of the findings from this update and the implications for international services trade. Section 3 describes the methodology for the mapping of RTA provisions against the STRI framework. Results are presented, comparing the degree of liberalisation and bindings across RTAs and from the perspective of individual OECD countries. Section 4 concludes.

¹ These sectors are cargo-handling services, storage and warehousing services, freight transport agency services, customs brokerage services, commercial banking, and insurance.

² The GATS Annex on Air Transport excludes from the scope of the agreement measures affecting air traffic rights and services directly related to their exercise. Only some related air transport services are covered, such as aircraft repair and maintenance services, the selling and marketing of air transport services, and computer systems (CRS) services. Most of these services are not covered by the STRI for air transport services.

³ The 2020 STRI database includes 48 countries. The latest additions – Kazakhstan, Peru and Thailand – are not covered in this report.

2. Updating the GTRI

Existing OECD work on “water” in the GATS systematically assessed the extent to which applied services regulations are bound in services commitments under the GATS (Miroudot and Pertel, 2015^[1]). The GATS Trade Restrictiveness Index (GTRI) found that bindings of applied services regimes are relatively uncommon. Instead, there are several sectors for which most countries have not registered any commitments. In other sectors, such as legal services, commitments only exist for part of the sector. Even in sectors with commitments for the whole sector, there is usually a large regulatory gap between the ambition of binding commitments and applied regimes.

While the absence of GATS commitments does not impose actual trade barriers, it may be detrimental to services trade due to the lack of certainty about applied policies. The risk that countries may revert to a more restrictive trade regime at any time may discourage businesses from incurring fixed export costs or from investing in business relationships with clients in other countries. The negative effect of such legal uncertainty on trade has been shown for both goods (Handley, 2014^[2]) and services (Lamprecht and Miroudot, 2018^[3]; Ciuriak, Dadkhah and Lysenko, 2019^[4]).

2.1. Background

This update of the GTRI takes into account changes in the methodology of the STRI database over the past years. These changes were introduced to better harmonise measures across sectors, and, where needed, to reflect developments in technologies or other emerging policy issues affecting trade in services.

This STRI database records services trade barriers in the applied regulatory regimes of 45 countries. It follows the most-favoured nation (MFN) principle, recording barriers based on a country’s national laws and regulation. As such, the STRI quantifies the applied MFN services trade restrictiveness without taking into account preferential regimes. The intra-EEA STRI, on the other hand, is an example of an application of the STRI to quantify preferential regimes. The intra-EEA STRI measures barriers to services trade in the Single Market of the European Economic Area, where the internal regulatory environment for services trade is much more liberal than that which is applied towards third countries (Benz and Gonzales, 2019^[5]).

The STRI database has been updated annually since 2014 (OECD, 2020^[6]). These yearly updates incorporate changes introduced through new laws and regulations. Since 2014, the STRI has also been expanded in terms of sector and country coverage, and has undergone some methodological refinement.

The 2015 GTRI was based on the STRI database completed in 2014, covering 15 services sectors⁴ across 40 countries. At present, the STRI database covers 22 services sectors. Six of these sectors are added to the GTRI database with this update: two financial services sectors (commercial banking and insurance) (Rouzet et al., 2014^[7]) and four logistics services sectors (cargo-handling services, storage and warehousing services – including customs warehouse services, freight transport agency services and customs brokerage services) (Sugie et al., 2015^[8]). Air transport services are not covered here.

⁴ Computer services, construction, accounting, architecture, engineering and legal services, telecommunications, distribution, three audio-visual services (broadcasting, motion pictures and sound recording), courier, and three transport services (maritime, rail and road transport).

In the 2015 work, 40 countries were covered by the GTRI database. Latvia, Lithuania, Colombia, Costa Rica and Malaysia have now been added. New data on services commitments under the GATS are collected for these additional countries, so that their applied services regulations covered by the STRI can be compared to the GATS commitments in the same way as for the existing 40 countries.

2.2. Methodology

The methodology to calculate “water” in the GATS is identical to previous work (Miroudot and Pertel, 2015^[1]). The “water” in the GATS refers to the difference between the bound level of trade restrictiveness permitted by the GATS and the actual trade regime recorded in the STRI. In the GATS, trade is liberalised through commitments describing limitations and conditions for market access and national treatment. Notwithstanding specific commitments pursuant to the GATS, countries can adopt regimes that are more liberal.

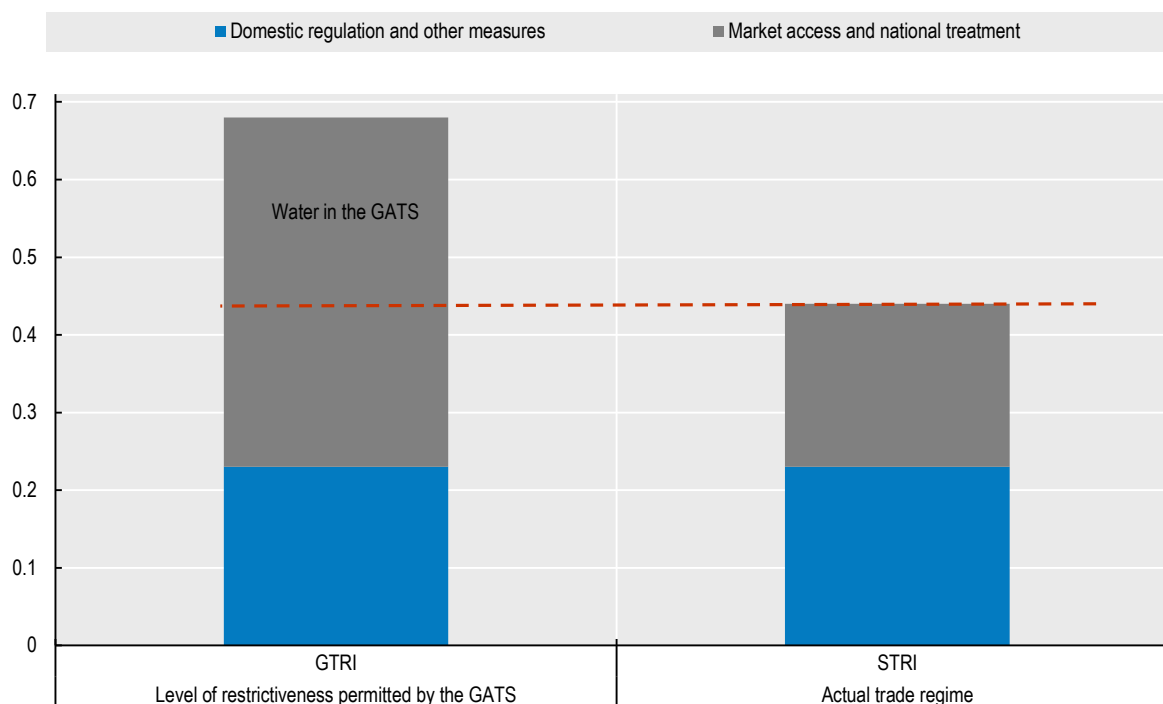
Comparing GTRI and STRI indices reveals an estimation of the “water” in the GATS commitments. The STRI covers measures across five policy areas: restrictions on foreign entry, restrictions to movement of people, other discriminatory measures, barrier to competition and regulatory transparency. However, GATS covers measures on market access (Article XVI of the GATS) and national treatment (Article XVII of the GATS). Therefore, the analysis focuses on the following measures falling under Articles XVI and XVII:

- Non-discriminatory measures of a quantitative nature (Art. XVI) placing a limitation on:
 - the number of services suppliers;
 - the total value of services transactions or assets;
 - the total number of service operations or the total quantity of service output;
 - the total number of natural persons who may be employed in a particular service sector;
 - the types of legal entity or joint venture through which a service may be supplied;
 - the participation of foreign capital.
- Discriminatory measures (Art. XVII) i.e. measures that accord to foreign services and services suppliers a treatment less favourable than that accorded to domestic like services and services suppliers.

For the sake of this report, the “water” in the GATS can only be calculated for the measures that countries are expected to report in their schedules of specific commitments. There is no “water” for measures that are not covered by GATS commitments (Figure 1).⁵

⁵ The STRI database is used as the reference. For measures belonging to domestic regulation, we do not change the information in the database dedicated to the GATS commitments, but for restrictions on market access and national treatment, we change the answers to reflect the maximum restrictiveness permitted by the GATS commitments. The difference between the actual STRI and what we can call the GATS Trade Restrictiveness Index (GTRI) provides a quantitative measure of the “water” in the GATS. The allocation of STRI measures into market access and national treatment and domestic regulation is not always straightforward and the choices made in this project are not meant to represent a definitive legal interpretation.

Figure 1. Calculation of “water” in the GATS



Source: Miroudot and Pertel (2015^[11])

Another feature of the GATS is that countries are free to make commitments or not in any sector or sub-sector. However, when they do not have market access or national treatment commitments in a specific sector or sub-sector, they still create “water”. In fact, the absence of commitments implies the highest level of “water”, where countries are not constrained by any legal binding and could in theory totally exclude foreign providers from the provision of a service. In these cases, all relevant market access and national treatment measures in the GATS database will be considered restrictive, while measures pertaining to the group of domestic regulations and other barriers retain their original country-specific answers. However, following the methodology by Miroudot and Pertel (2015^[11]), measures in the second group could be scored restrictive in cases where the STRI methodology considers that a combination of restrictive market access and national treatment measures makes domestic regulatory decisions irrelevant for overall services restrictiveness (Geloso Grosso et al., 2015^[9]).⁶

According to this methodology, the basis for the scoring is the use of binary scores where a restrictive measure is scored 1 and a non-restrictive measure (or the absence of a restriction) is scored 0. The scoring of individual measures can be conditioned on other measures to account for the complexity of services regulations. There are hierarchies and bundles of measures and some numerical answers are subject to thresholds. Once each measure has received a score, it is multiplied by a weight depending on the policy area to

⁶ For example, the absence of commitments in a sector implies that the measure on foreign equity limits is scored restrictive, completely ruling out foreign equity in this sector. Several domestic regulatory measures and other measures will be scored restrictive as a consequence, e.g. “Minimum capital requirement”, “Time to complete all official procedures required to register a company”, “Total cost to complete all official procedures required to register a company” and “Number of official procedures required to register a company.”

which the measure belongs. The scoring and weighting for both sections – STRI and GTRI are the same.

In the analysis, we apply the same principles as in the previous work in cases where there are issues with the interpretation of GATS commitments:

- Restrictive answers are recorded only when GATS commitments are clearly more restrictive than the actual trade regime. The same applies for cases where there are exceptions to commitments made under the GATS that cover only a very small part of the sector. This conservative approach implies that, to the extent there is any bias, the “water” in the GATS is always underestimated.
- “Negative water” that may exist is not counted. In theory, the actual trade regime should always be either equivalent to or less restrictive than that described in the GATS. However, “negative water” may occur when the scope of restrictions covered under an STRI measure is larger than the scope of commitments scheduled in the GATS.
- In the case of “other restrictions”, which in the STRI is a measure found in each policy area to cover any type of restriction not listed otherwise, we assess on a case-by-case basis whether the restriction is part of market access and national treatment and we include this measure in the analysis of the “water” when this is the case.

The information on services commitments under GATS is easily accessible and can be downloaded from the World Trade Organization (WTO) website. The information on services regulations is taken from the OECD STRI database.

2.3. Results

This section provides an overview of the results of the analysis of “water” in the GATS for 21 sectors for 45 countries based on the 2019 STRI. Detailed results for new sectors not previously included in the GTRI are presented in Annex C.

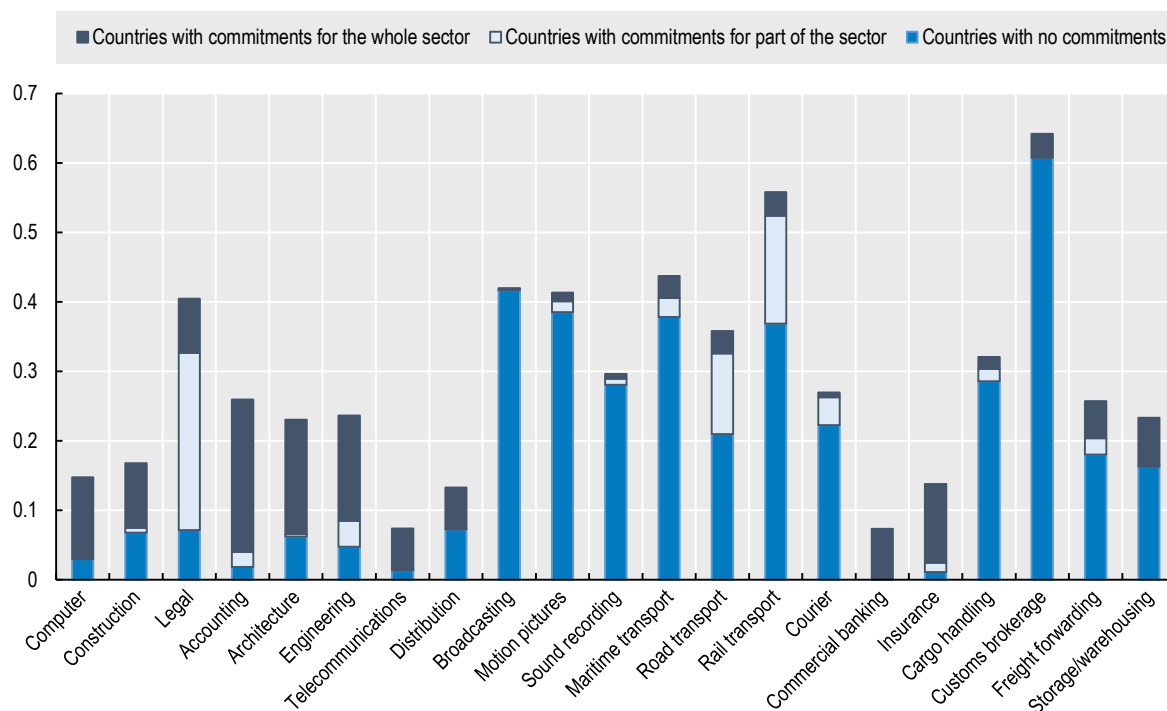
The “water” is measured as the average difference across countries between the maximum restrictiveness allowed by GATS, and the STRI, using simple sector averages. As shown in Figure 2, results differ across sectors but are very similar to the results provided in previous work (Miroudot and Pertel, 2015^[11]), with some differences due to changes in measures and methodology.

The sectors with the highest “water” are audio-visual services, especially broadcasting and motion pictures; some of the transport sectors, such as maritime and road transport services; but also legal services and customs brokerage services. Many countries have no commitments or only partial commitments in these sectors (Figure 1 and Table B.1 in Annex B). In legal services, commitments are focused on the practice of international law.

The lowest levels of “water” can be detected in telecommunications, commercial banking, distribution, and insurance. In these sectors, with the exception of distribution, “water” typically comes from countries with commitments for the whole sector. All these sectors are heavily regulated and often restrictive in the STRI. If the applied regime covered by the STRI is restrictive, less “water” can potentially be created. For distribution services, half of the “water” comes from countries without commitments in the GATS for this sector, which is often subject to sector-specific restrictions and regulations.

Figure 2. “Water” in the GATS by sector and type of commitments, 2020

Simple average over 45 countries



Note: The indices take values between zero and one, one being the highest level of water. Simple average over 45 countries covered in the GTRI database. As landlocked countries are excluded from maritime transport and Iceland has no rail freight, the total number of countries is respectively 39 and 44 for maritime transport and rail transport.

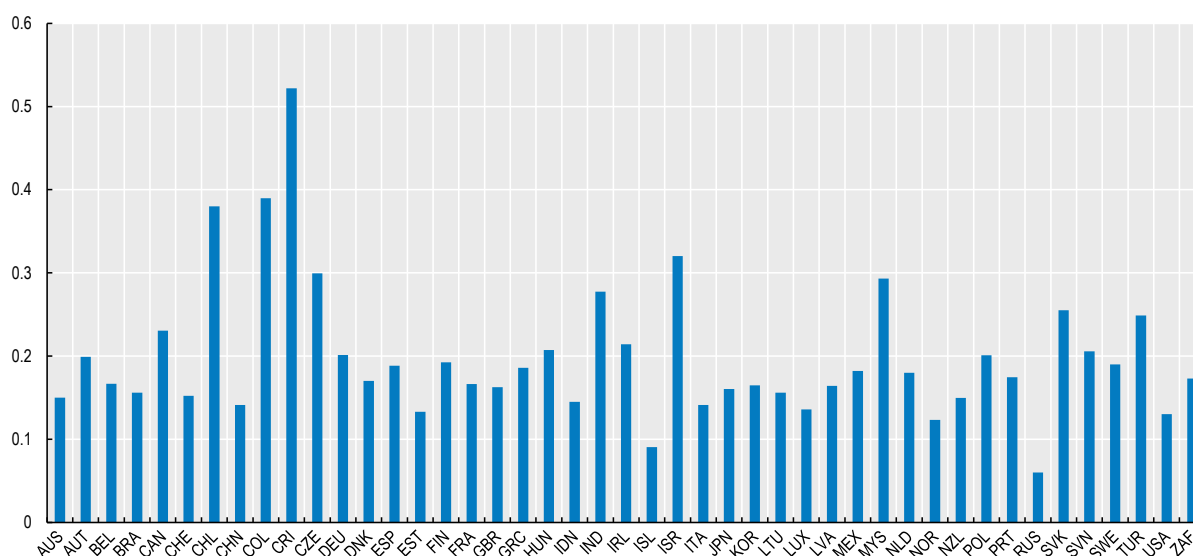
Source: GTRI and STRI databases.

Figure 3 shows the comparison of “water” across countries covered by the analysis. As above, the difference can be largely explained by the number of unbound sectors under the GATS (Table B.2 in Annex B) and the restrictiveness of the applied regime in the STRI. “Water” in the GATS arises primarily in countries with fewer GATS commitments, but also in countries with a relatively low STRI. Costa Rica, Colombia and Chile have the highest level of “water”. These three countries also have the highest number of sectors with no commitments under the GATS and all have relatively low STRIs. Of the 22 sectors, Costa Rica has a lower score on the STRI than the average in 13 sectors, Colombia in 16, and Chile in 19.

For countries with commitments for most sectors, “water” depends on the ambition of these commitments and the restrictiveness of the actual trade regime. Countries with the most sectoral coverage under the GATS are the People’s Republic of China (hereafter “China”) and the Russian Federation (hereafter “Russia”), reflecting their later accession to the WTO, with only two sectors having no commitments. Iceland, Norway, and United States have four sectors with no commitments under the GATS (Table B.2 in Annex B). The lowest “water” among all the countries covered in this report is for Russia. That said, Russia is also one of the most restrictive countries in the STRI, with a below-average in two of the 22 sectors.

Figure 3. “Water” in the GATS by country, 2020

Output-weighted average over 21 sectors



Note: The indices take values between zero and one, one being the highest level of water. Output-weighted average over 21 sectors covered in the GTRI database. For Austria, the Czech Republic, Hungary, Luxembourg, the Slovak Republic and Switzerland, only 20 sectors are included because landlocked countries have no STRI for maritime transport. The same applies to Iceland which has no rail freight transport.

Source: GTRI and STRI databases

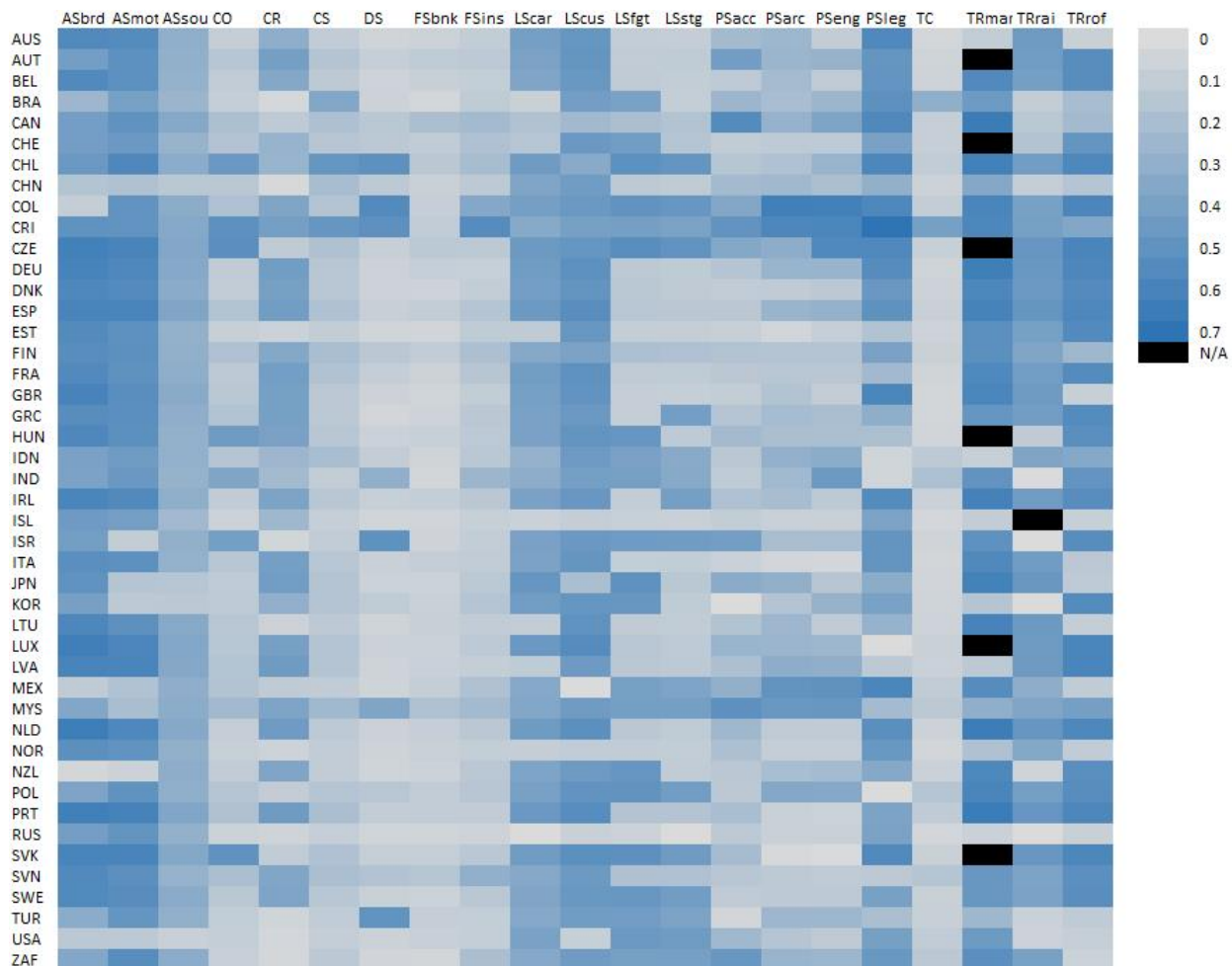
Detailed results across sectors and countries in Figure 4 confirm that only a few countries have GATS commitments in audio-visual services. In broadcasting services, only two countries have commitments for the whole sector, while the lack of “water” in some other countries results from their highly restrictive applied regime. For example, the colour scale indicates that “water” in New Zealand’s GATS commitments in this sector is close to zero, while for Australia and most other countries it is around 0.5 or higher. In motion pictures, eight countries have commitments for at least part of the sector, while five countries have at least partial commitments in sound recording.

Binding commitments are also relatively rare for courier services. Only five countries commit the full sector, while 13 countries have commitments for part of the sector. By contrast, most countries have submitted commitments in construction services, computer services, distribution, commercial banking and insurance. This is shown by the mostly grey and light blue colours in these sectors in Figure 4.

Among logistics services, commitments are less common in cargo handling and customs brokerage compared to freight forwarding and storage/warehousing services. For professional services, commitments are also relatively frequent in accounting services, architecture and engineering, while commitments for all types of legal services only exist in nine countries.

Roughly half of all countries in the sample have submitted commitments for road transport and rail transport, whereas only eleven countries have committed their maritime transport sectors. By contrast, telecommunications is another sector with frequent commitments and little “water”.

Figure 4. “Water” in the GATS by country and sector



Note: No data available in maritime transport for Austria, the Czech Republic, Hungary, Luxembourg, the Slovak Republic and Switzerland. Colour scale ranges from “water” (blue) to tight bindings (grey). Sectors: broadcasting (ASbrd), motion pictures (ASmot), sound recording (ASSou), construction (CO), courier and postal (CR), computer (CS), distribution (DS), commercial banking (FSbnk), insurance (FSins), cargo handling (LScar), customs brokerage (LScus), freight forwarding (LSfgt), storage and warehousing (LSstg), accounting (PSacc), architecture (PSarc), engineering (PSeng), legal (PSleg), telecommunications (TC), maritime transport (TRmar), rail freight transport (TRrai), road freight transport (TRrof).

Source: GTRI and STRI databases.

More detailed results for the new sectors included in the GTRI database (commercial banking, insurance, cargo handling, storage and warehousing, freight forwarding and customs brokerage) are presented in Annex C.

In summary, this update confirms that applied services trade policies are significantly more open than those to which countries have committed in the GATS. An important source of this “water” is the low number of countries with registered GATS commitments in sectors such as logistics and audio-visual services. By contrast, stronger GATS commitments are more prevalent in sectors such as financial services, telecommunications, distribution, construction, and computer services. The level of “water” can be an indicator of the level of legal uncertainty that services operators may have to face in foreign markets and could help inform negotiation of preferential liberalisation through RTAs.

3. Creating RTA equivalents for the STRI

This section describes how the STRI framework can be applied for the analysis of services provisions in RTAs. Similar to the quantification of ‘water’ in the GATS, this analysis relies on a comparison of new data with existing data from the STRI database, with a number of new features.

First, it allows for a benchmarking of RTA provisions against the degree of liberalisation that is already enshrined in the domestic regime or in the GATS. This is an important consideration because domestic policy regimes in services differ substantially across countries. Hence, an isolated focus on RTAs is not able to quantify their effect on trade restrictiveness; doing so requires analysis of RTAs in combination with the established STRI methodology measuring applied services trade regimes.

Second, this project quantifies RTAs along several dimensions. One dimension is the preferential liberalisation of applied services regimes. This measure is based on policy measures where an RTA establishes more liberal rules than a country’s multilaterally applied domestic regime, so that services exporters from other parties to the RTA can access this country’s market under preferential conditions. A second dimension is the applied preferential services trade regime. For each RTA, this measure quantifies the restrictiveness of services barriers in a country faced by exporters from another party to this RTA at a given point in time. The third dimension is the degree to which the applied regime is bound. Many services provisions in RTAs do not lead to actual liberalisation but the binding of existing regimes is the additional benefit of services trade agreements, providing exporters with certainty about stability and predictability liberal trade rules also in the future.

Third, the granularity of the STRI methodology captures differences across RTAs in great detail. The STRI includes between 64 and 144 individual policy measures for each sector. Consequently, different approaches towards services liberalisation can be quantified very precisely in order to provide for a detailed comparison of services trade agreements.

3.1. Background

There have been several notable efforts at a systematic and comprehensive analysis of services provisions in RTAs, at the OECD and elsewhere. A 2009 Trade Committee project on the prospects of multilateralising the deep (WTO-plus) provisions of regional trade agreements (RTAs) aimed to examine how such provisions could become building blocks for multilateral negotiations (Miroudot, Sauvage and Sudreau, 2010^[10]). This work analysed whether RTAs provided for additional commitments, as compared to GATS, indicating a certain degree of commonality in recent services commitments and concluding that multilateralization of such RTAs is achievable.

The database on the Design of International Trade Agreements (DESTA) collects and publishes information on provisions included in RTAs since 1945 (Dür, Baccini and Elsig, 2014^[11]). However, its coverage of services is relatively narrow. It includes horizontal information on the existence of a services chapter or whether a services chapter allows for the movement of natural persons and some details from chapters on investment and public procurement. However, the database does not provide further insights into the scope and ambition of these provisions for services liberalisation.

A World Bank project collects more detailed information on provisions in RTAs concluded between 1958-2015 in the Deep Trade Agreements database (Hofmann, Osnago and Ruta, 2017^[12]). This includes 64 indicators on services provisions under the broad categories agreement structure, scope and coverage, substantive disciplines, exceptions, safeguard

mechanisms, movement of natural persons, rules of origin and dispute settlement. While this level of detail is remarkable, the database does not allow for a comparison with multilateral services liberalisation and variation across sectors is not available.

A recent OECD study analysed the value of services commitments in 95 RTAs with at least one OECD country as party to the agreement (Lamprecht and Miroudot, 2018^[3]). The project created consistent indicators of bindings in bilateral and plurilateral RTAs in selected services sectors. Subsequently, this information was used in quantitative analysis aimed at estimating the value of services commitments in terms of additional trade and lower volatility in bilateral trade relationships.

Most recently, (Ciuriak, Dadkhah and Lysenko, 2019^[4]) use the STRI framework to quantify the degree to which domestic services regimes are bound in 27 RTAs. However, they do not quantify the degree of actual services liberalisation through RTAs.

3.2. Methodology

The analysis of RTAs includes 18 recent trade agreements with coverage of services. The preliminary selection of RTAs seeks to include the most recent agreements among OECD Members. At this stage, the analysis focuses on RTAs that have already entered into force. These RTAs are summarised below. In addition, Table A.1 in Annex A provides an overview of the coverage of RTAs for all OECD countries.

The most recent trade agreement is the USMCA between Canada, Mexico and the United States, which entered into force in July 2020. Other recent trade agreements are the EU-Japan agreement and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP). Almost half of all agreements entered into force after 2015. The oldest agreements covered in this analysis are the agreements between EFTA and Colombia and between the European Union and Korea, which both entered into force in July 2011.

The analysis calculates separate indicators for 21 services sectors based on the definition of sectors used in the STRI. Air transport is not covered, as most trade agreements do not include provisions on air transport.⁷ The mapping of STRI services sectors against sector classifications used in RTAs (GATS Services Sectoral Classification List W/120) relies on the sector definitions outlined in the STRI methodology papers.

The analysis relies on databases similar to those used for the existing STRI. Each database includes a total of 1 942 individual measures for the 21 sectors. This number takes into account that some measures may exist twice in specific sectors in order to capture diverging answers for different subsectors, e.g. domestic law and international law in legal services.

⁷ Some trade agreements include provisions on aircraft repair and maintenance. However, these activities are not covered in the air transport sector of the STRI.

Table 1. Coverage of RTAs

RTA Name	Date of Entry into Force (Services)	Current signatories
USMCA	01-Jul-2020	Canada, Mexico, United States
EU - Japan	01-Feb-2019	Japan; European Union
Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP)	30-Dec-2018	Australia; Brunei Darussalam; Canada; Chile; Japan; Malaysia; Mexico; New Zealand; Peru; Singapore; Viet Nam
Turkey - Singapore	01-Oct-2017	Singapore; Turkey
EU - Canada	21-Sep-2017	Canada; European Union
Costa Rica - Colombia	01-Aug-2016	Colombia; Costa Rica
Korea, Republic of - Colombia	15-Jul-2016	Colombia; Korea, Republic of
Pacific Alliance	01-May-2016	Chile; Colombia; Mexico; Peru
Australia - China	20-Dec-2015	Australia; China
China - Korea, Republic of	20-Dec-2015	China; Korea, Republic of
Korea, Republic of - New Zealand	20-Dec-2015	Korea, Republic of; New Zealand
Japan - Australia	15-Jan-2015	Australia; Japan
Canada - Korea, Republic of	01-Jan-2015	Canada; Korea, Republic of
Switzerland - China	01-Jul-2014	China; Switzerland
Korea, Republic of - United States	15-Mar-2012	Korea, Republic of; United States of America
United States - Colombia	15-May-2012	Colombia; United States of America
EFTA - Colombia	01-Jul-2011	Colombia; European Free Trade Association (EFTA)
EU - Korea, Republic of	01-Jul-2011	Korea, Republic of; European Union

Source: RTA STRI database.

Databases are constructed for all measures for which relevant provisions exist in a specific RTA. Measures that are outside of the scope of an RTA remain empty. This approach enables the comparison of RTA-specific answers with those from the STRI and GTRI to calculate three different indicators that characterise each RTA. All three indicators are calculated separately for the 21 sectors and all participating countries.

While all measures are taken into account for the calculation of the bilateral restrictiveness and preferential services liberalisation, the calculation of “water” in RTAs only considers measures related to market access and national treatment restrictions (Figure 1). Provisions that are in the domain of domestic regulation are not analysed. Therefore it is possible to compare three indicators – STRI (applied regime), “water” in the GATS (multilateral bindings) and “water” in RTAs (regional and bilateral bindings). This distinction is not always straightforward and the preliminary choices made in this pilot project are not meant to represent a definitive legal interpretation. More details on this classification is reported in the STRI sector papers.

3.3. Results

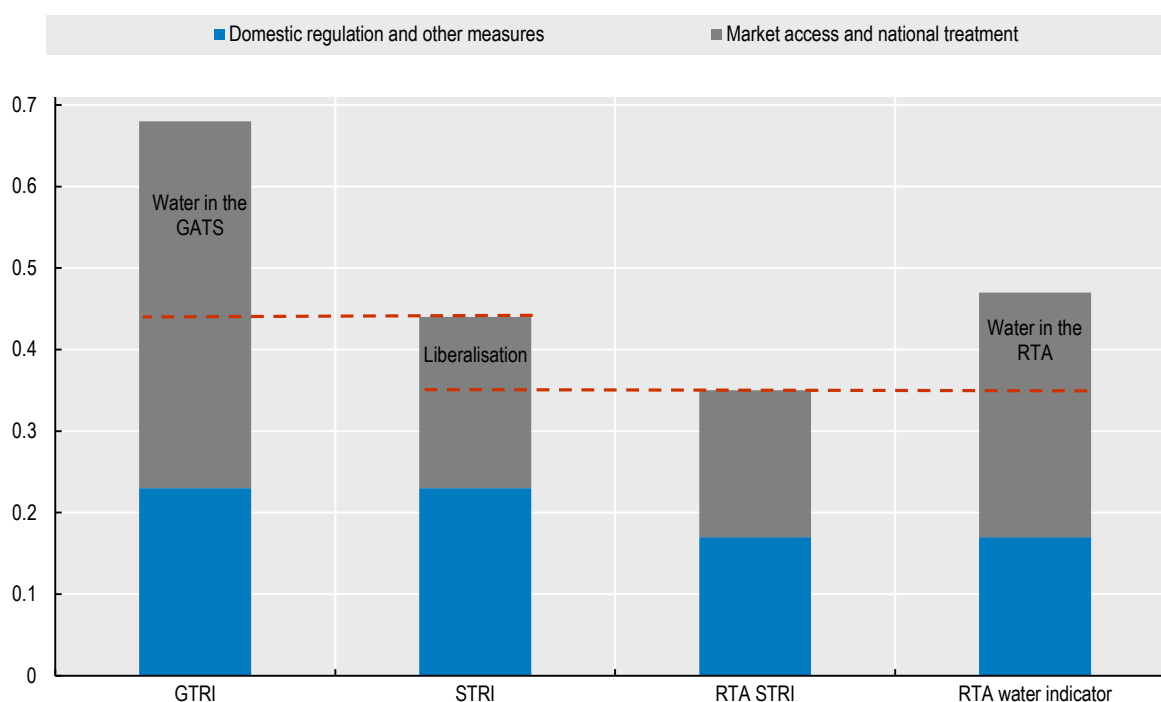
All RTAs can be evaluated on the basis of the following three indicators:

1. *Bilateral restrictiveness under an RTA* measures a country’s restrictiveness under an RTA towards other parties. By analogy to the original STRI, it is called the RTA Services Trade Restrictiveness Index, or RTA STRI.
2. *Preferential services liberalisation* measures the difference between a country’s MFN restrictiveness according to the STRI and its restrictiveness under the RTA (indicator 1). The calculation is based on all measures with restrictive scoring in the STRI database and liberal scoring in the RTA database.

3. “*Water*” in the RTA measures services market access that is not bound in an RTA. It is based on all market access and national treatment measures with liberal scoring in the STRI database and restrictive scoring or no answer in the RTA database. In cases where no preferential bindings exist, this indicator also takes into account multilateral bindings in the GATS. “*Water*” indicates the absence of bindings in an RTA as well as multilateral bindings in the GATS.

The calculation of the three indicators is presented visually in Figure 5. The RTA STRI can be easily calculated by subtracting the score of all liberalising STRI measures from a country’s MFN STRI. This liberalisation may occur from measures related to market access and national treatment or measures related to domestic regulation. MFN STRI and RTA STRI are identical for all measures that are not liberalised through RTA provisions. Similar to the “*water*” in the GATS, “*water*” in RTA corresponds to the score of measures that are not bound by RTA provisions and also not bound through GATS commitments.

Figure 5. Calculation of RTA indicators



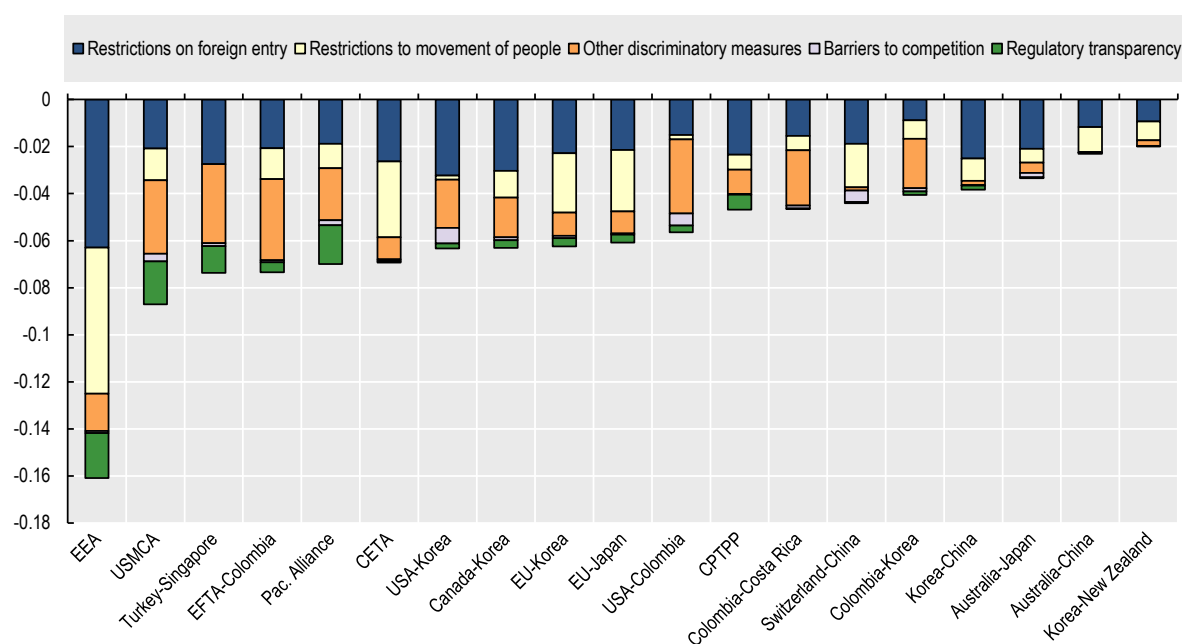
3.3.1. Preferential liberalisation

The indicator of preferential liberalisation measures the difference between a country’s MFN STRI and a country’s RTA STRI. The indicators in Figure 6 below are constructed from output-weighted averages across all sectors within a country. Subsequently, RTA-specific liberalisation is calculated using simple averages over all participating countries for which an MFN STRI is available. The indicator of preferential liberalisation shows actual liberalisation of services trade for the signatories of each RTA. It is an important indicator that quantifies the ambition of participating countries to liberalise their services trade regime towards specific partners. As a benchmark for comparison, the figure also shows the preferential liberalisation in the European Economic Area (EEA) from the OECD intra-EEA STRI database.

The analysis shows that preferential services liberalisation is highest in the USMCA. Parties of the Agreement reduce their services trade barriers by almost 0.1 towards each other relative to the regime they apply towards other countries. Additionally, Turkey-Singapore, EFTA-Colombia, Pacific Alliance and CETA are relatively ambitious RTAs that reduce services restrictiveness by close to 0.07. Comparatively less liberalisation is achieved in the RTAs between Korea and New Zealand, Australia and China, Australia and Japan, as well as Korea and China.

Figure 6. Preferential liberalisation in RTAs and in the EEA, 2020

Average over all sectors and RTA signatories covered in this studies



Note: The STRI uses values between zero and one, one being the most restrictive. This indicator measures the difference between multilateral restrictiveness and bilateral restrictiveness. Output-weighted averages over 21 sectors in each country and simple averages over all participating countries covered in the STRI. Source: RTA STRI and intra-EEA STRI databases.

The elimination of restrictions on foreign entry is the major source of services liberalisation in most RTAs. In particular, those agreements with relatively lower liberalisation tend to focus largely on this policy area. Relevant measures include the elimination of foreign equity limits or residency requirements on board members.

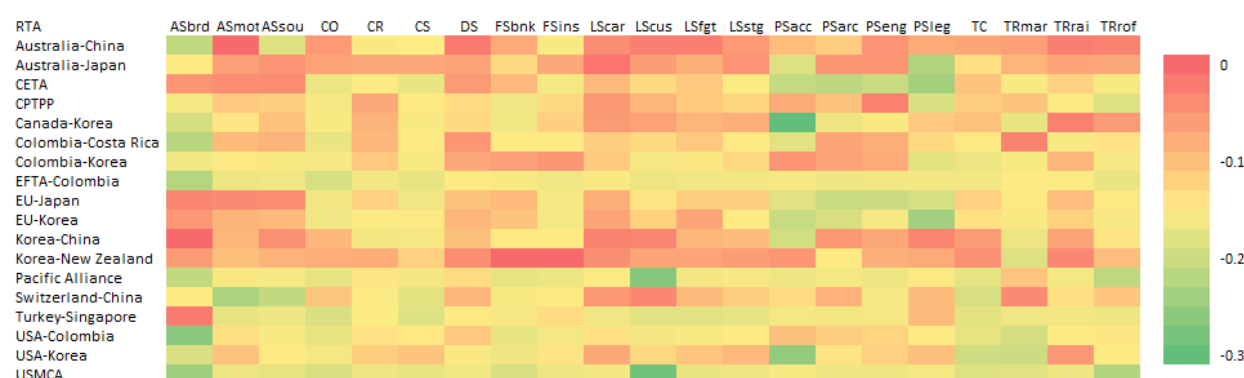
In addition, there is an important focus on other discriminatory measures in several agreements. Amongst others, this policy area includes restrictions on public procurement. Provisions on non-discrimination in public procurement are an important source of liberalisation in these agreements. However, indicators may overstate the magnitude of actual liberalisation in this area.⁸ Only a few RTAs aim for more ambitious elimination of

⁸ Some of these countries had already undertaken efforts towards preferential procurement liberalisation in the WTO Agreement on Government Procurement (GPA). This agreement is not taken into account for the calculation of MFN STRIs. Therefore, preferential liberalisation in this policy area may overstate the magnitude of actual liberalisation through an RTA, if RTA parties are also signatories of the GPA.

restrictions on the movement of people. Examples include CETA, EU-Korea, EU-Japan, and the Switzerland-China agreement.

The analysis by sector in Figure 7 shows liberalisation in the USMCA is relatively evenly distributed across sectors with important contribution in broadcasting, customs brokerage and road transport, where some parties apply foreign equity limitations in their multilateral regime. The same is true for the Pacific Alliance and the EFTA-Colombia agreement. A number of other agreement exclude certain sectors from the scope of liberalisation. For example, the Turkey-Singapore agreement does not seem to liberalise broadcasting and legal services. Similarly, the EU-Japan agreement and CETA exclude audio-visual services, the Korea-New Zealand RTA excludes financial services, and the CPTPP does not liberalise trade in engineering services.

Figure 7. Preferential liberalisation by sector, 2020



Note: Colour scale ranges from sizable liberalisation (green) to no liberalisation (red). Simple averages over all participating countries covered in the STRI. Sectors: broadcasting (ASbrd), motion pictures (ASmot), sound recording (ASsou), construction (CO), courier and postal (CR), computer (CS), distribution (DS), commercial banking (FSbnk), insurance (FSins), cargo handling (LScar), customs brokerage (LScus), freight forwarding (LSfgr), storage and warehousing (LSstg), accounting (PSacc), architecture (PSarc), engineering (PSeng), legal (PSleg), telecommunications (TC), maritime transport (TRmar), rail freight transport (TRrai), road freight transport (TRrof).

Source: RTA STRI database

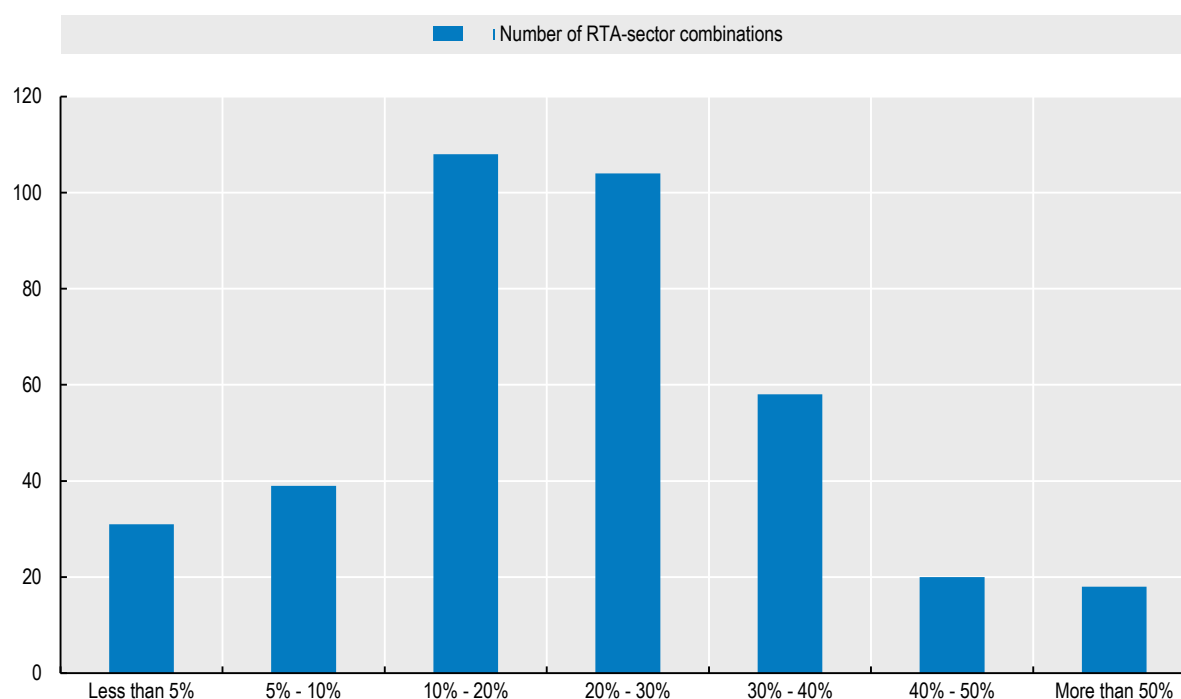
Among all combinations of RTAs and sectors, the accounting sector in the Canada-Korea RTA stands out as the sector with the largest degree of bilateral liberalisation. In this sector, the average RTA STRI of the two countries is 0.315 lower than the average of their respective MFN STRIs. This reduction is mostly driven by a reduction in Korea's services restrictiveness, where the MFN STRI in the accounting sector is equal to one. For Canada, however, the existing MFN STRI in the accounting sector is already a relatively low 0.22. Hence, even if two RTA signatories make identical commitments in an RTA, average liberalisation in cases with unequal MFN STRIs will always be driven by the country with the more restrictive MFN regime.

Similarly, the most significant bilateral liberalisation in the USMCA comes from the logistics customs brokerage sector, where Mexico has a score of one in the MFN STRI. Accounting in the USA-Korea RTA also exhibits a substantial degree of bilateral liberalisation. The broadcasting sector is among the sectors with the largest difference between MFN STRI and RTA STRI in several RTAs, including USA-Colombia, USMCA, EFTA-Colombia and Colombia-Costa Rica. In the EU-Korea RTA and in CETA, legal services reveals significant liberalisation of more than 0.2.

Overall, there are three RTA-sector combination with an average services liberalisation of more than 50% compared to the MFN STRI and 16 further RTA-sector combinations with an average services liberalisation between 40% and 50% (Figure 8). The Korea-New Zealand RTA liberalises most prominently in architecture and maritime transport. The Australia-Japan agreement achieves the most significant liberalisation in legal, accounting and broadcasting services. Colombia and Costa Rica also undertook significant liberalisation in the broadcasting and construction sectors in their FTA.

Most RTAs initiate intermediate steps towards services liberalisation. In the vast majority of RTAs and sectors for the RTAs covered in this analysis, MFN STRIs are reduced by between 10% and 30%. More substantial liberalisation only occurs in a limited number of cases, usually when one or several RTA signatories apply a relatively restrictive multilateral regime. That said, liberalisation of less than 5% is rare and usually occurs when entire sectors are carved out from an agreement, so that liberalisation only comes from strictly horizontal measures, such as data transfer or facilitation of business travel.

Figure 8. Most RTAs undertake intermediate steps to services liberalisation



Note: The graph shows the frequency of different liberalisation levels among the 378 RTA-sector combinations covered in this analysis.

Source: RTA STRI database.

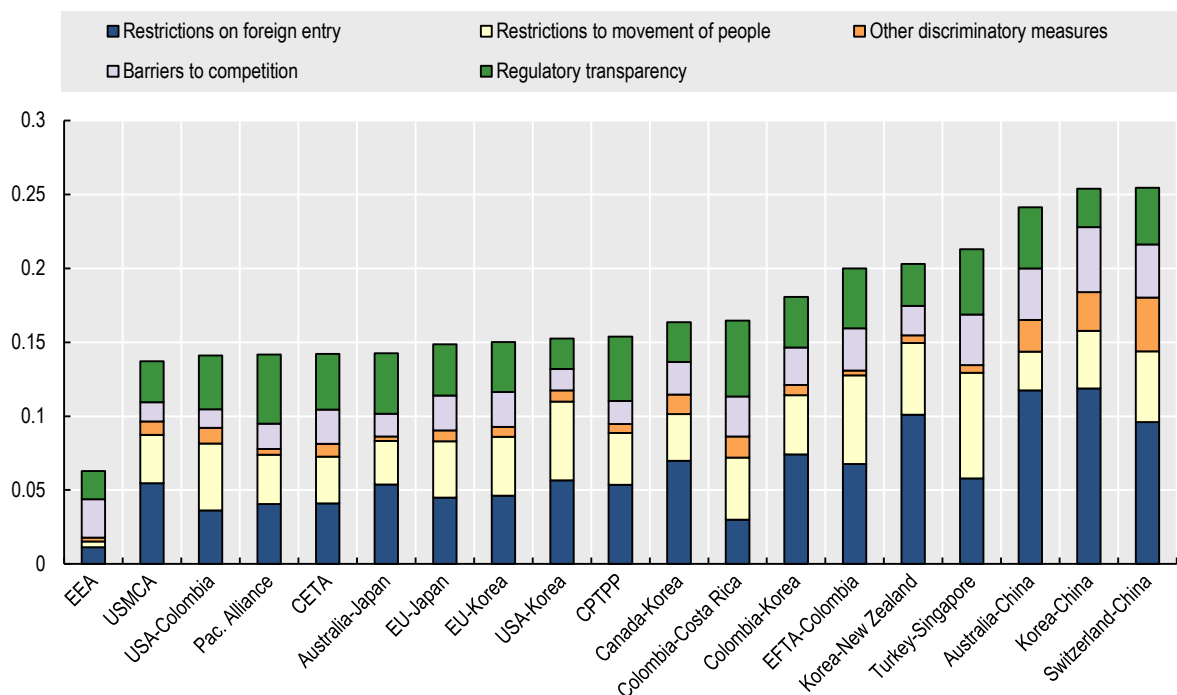
The patterns of liberalisation across sectors are not necessarily the result of a specific focus of certain trade agreements on liberalisation in a given sector. As mentioned above, the magnitude of liberalisation may differ even when two sectors are liberalised by identical horizontal provisions in an RTA. In this case, sectors that are more restrictive according to the multilateral policies will reveal more substantial liberalisation. This is often the case when countries apply foreign equity limitations with respect to foreign investment in specific sectors.

3.3.2. Applied bilateral restrictiveness

While the indicator of bilateral liberalisation quantifies actual services trade liberalisation in an RTA, it has to be acknowledged that such liberalisation is easier for countries that are more restrictive in their multilateral regimes. Countries applying very liberal rules with respect to multilateral services trade have less scope for preferential liberalisation. Therefore, it is important to look at liberalisation jointly with the actual level of services trade restrictiveness between the parties of an RTA (Figure 9).

Figure 9. Applied bilateral restrictiveness in RTAs and in the EEA, 2020

Average over all sectors and RTA signatories covered in this studies



Note: The indices use values between zero and one, one being the most restrictive. Output-weighted averages over 21 sectors in each country and simple averages over all participating countries covered in the STRI. Source: RTA STRI and intra-EEA STRI databases.

This analysis shows that USMCA establishes the lowest level of services trade restrictions among agreements considered. Average restrictiveness across 21 sectors and all participating countries is around 0.14. Other relatively liberal RTAs are USA-Colombia, Pacific Alliance, CETA, and Australia-Japan. Even in these relatively liberal RTAs, services trade is still substantially more restricted than in the European Economic Area (EEA), which is characterised by an average services restrictiveness of around 0.06. The least liberal RTAs are the agreements between Switzerland and China, Korea and China, and Australia and China, each with an average restrictiveness of around 0.25.

The importance of the five policy areas is relatively similar to their importance in the regular STRI of the participating countries. One important aspect is the very low importance of other discriminatory measures in the most liberal agreements. As mentioned above, this is a result of the introduction of non-discrimination provisions in public procurement in combination with the fact that other discriminatory measures are also of relatively low importance in the regular STRI.

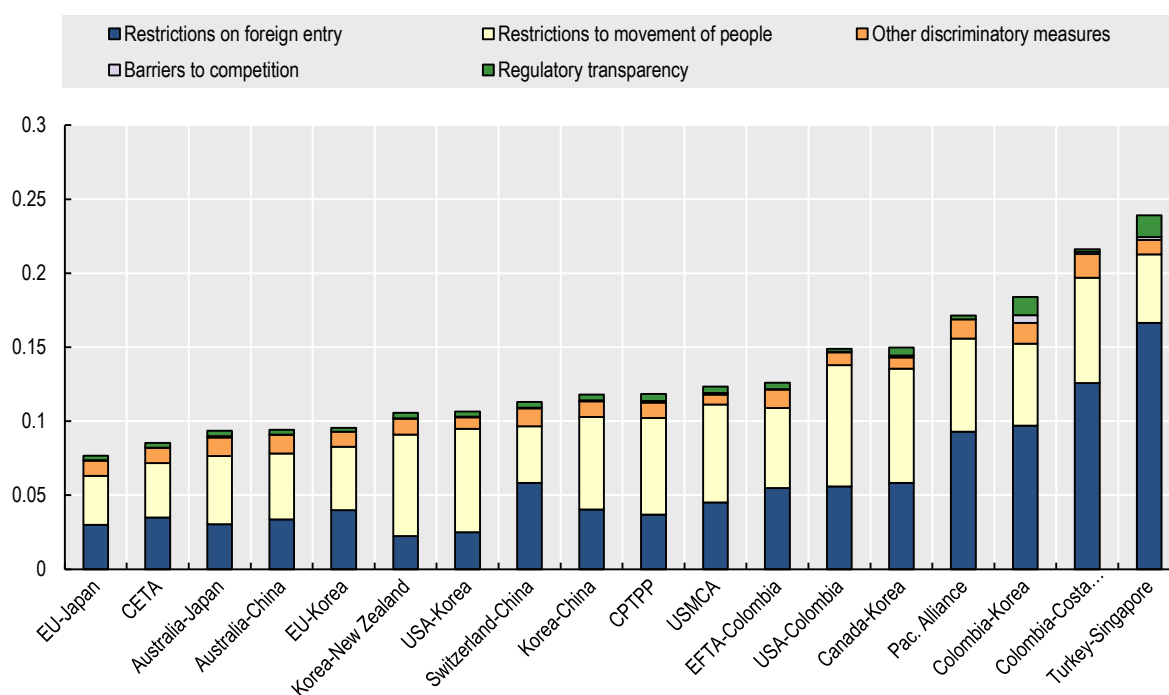
3.3.3. “Water” in RTAs

The third relevant indicator is not based on actual services liberalisation but on services commitments that bind the applied trade regime in RTAs. Similar to the “water” in the GATS, this indicator measures the “water” in each RTA. As already explained above, the “water” measures the difference between the bound level of restrictiveness in an RTA and the actual trade regime. In cases without binding RTA provisions or where RTA provisions are less ambitious than GATS commitments, GATS commitments are taken into account for this analysis as upper limit for the “water”.

The elimination of “water” through regional trade agreements is beneficial due to the enhanced stability and predictability of a trade regime. For example, a guarantee that some restrictions and discriminatory practices cannot be introduced can encourage market entry of services providers in the presence of fixed costs.

Figure 10. “Water” in RTAs, 2020

Average over all sectors and RTA signatories covered in this study



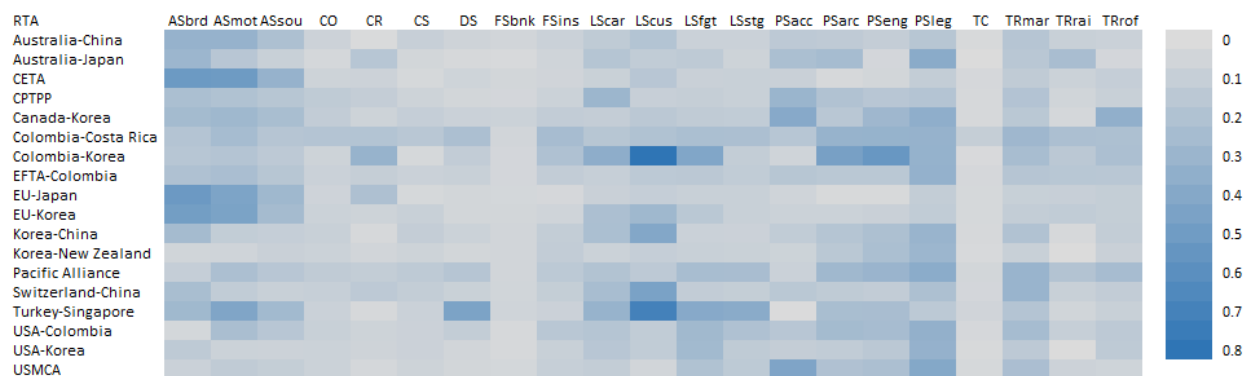
Note: The indices use values between zero and one, one being the highest level of water. Output-weighted averages over 21 sectors in each country and simple averages over all countries covered in the analysis. Source: RTA STRI database.

The analysis shows that the applied trade regime is most rigid against the bound level of restrictiveness (lowest “water”) in the agreement between the European Union and Japan (Figure 10). On average across all sectors, the agreement only allows restrictive policy changes that add 0.08 points on the STRI scale to the current restrictiveness level. Other RTAs with relatively strong bindings are CETA and the agreement between Australia and Japan. “Water” in these agreements mostly comes from a lack of binding commitments related to restrictions to the movement of people and restrictions on foreign entry.

Agreements where bindings allow for more flexibility are the Turkey-Singapore agreement, Colombia-Costa Rica, Pacific Alliance, and Colombia-Korea. The main difference with the first group is an even higher level of water related to restrictions on foreign entry, whereas binding commitments in the other four policy areas seem to be relatively similar.

Moreover, the “water” is unequally distributed across sectors. In general, water in RTAs is lowest in sectors that are characterised by relatively tight bindings in the GATS, such as telecommunications, distribution and financial services. By contrast, there is relatively more “water” in some logistics services, especially customs brokerage, audio-visual services and legal services. This comes from a carve-out of these sectors or only very limited commitments in several RTAs. CETA, Canada-Korea, EU-Japan and EU-Korea stand out with a significant amount of “water” in audio-visual services (Figure 11) since these services not included within the scope of these RTAs. The Turkey-Singapore RTA lacks binding commitments for audio-visual services, but also for the distribution sector and logistics services. There is also significant water in the logistics customs brokerage sectors of the Colombia-Korea, Switzerland-China, and Korea-China agreements.

Figure 11. “Water” in RTAs by sector, 2020



Note: Colour scale ranges from “water” (blue) to tight bindings (grey). Simple averages over all participating countries covered in the STRI. Sectors: broadcasting (ASbrd), motion pictures (ASmot), sound recording (ASSou), construction (CO), courier and postal (CR), computer (CS), distribution (DS), commercial banking (FSbnk), insurance (FSins), cargo handling (LScar), customs brokerage (LScus), freight forwarding (LSfgt), storage and warehousing (LSstg), accounting (PSacc), architecture (PSarc), engineering (PSeng), legal (PSleg), telecommunications (TC), maritime transport (TRmar), rail freight transport (TRrai), road freight transport (TRrof).

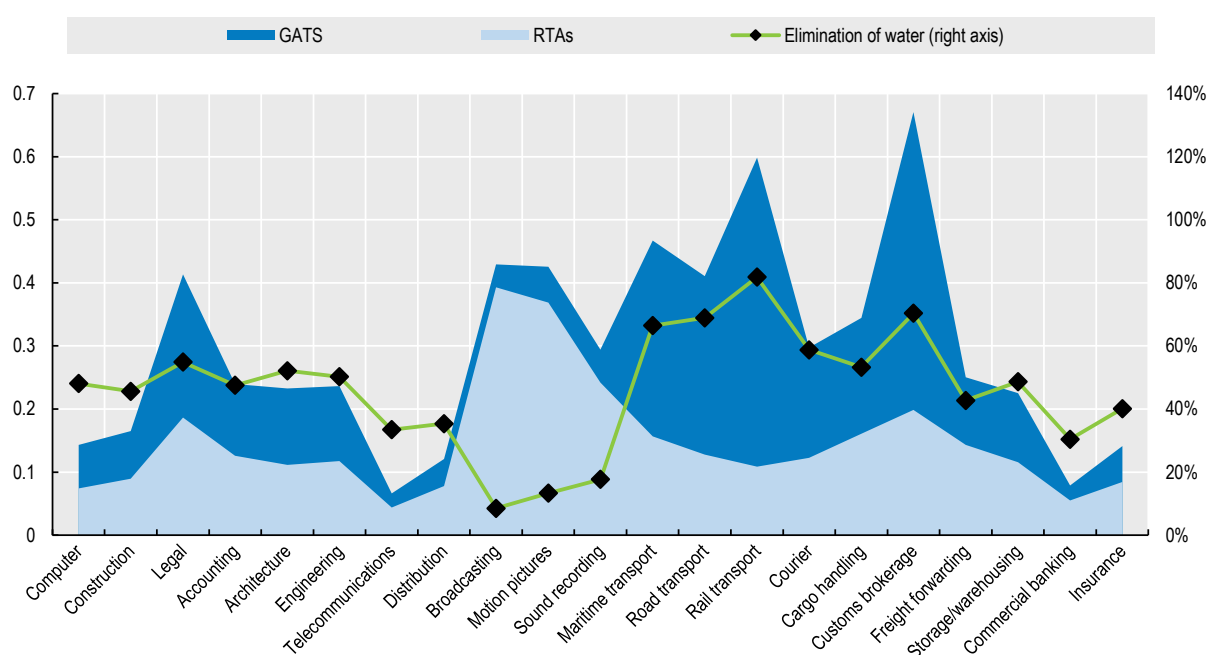
Source: RTA STRI database.

The information in the RTA STRI database allows for a comparison of “water” in the GATS with “water” in RTAs. While “water” in the GATS is measured relative to the applied MFN STRI, “water” in RTAs is measured relative to the applied bilateral RTA STRI. In both cases, most of the “water” is found in those STRI measures that are liberal in both, the MFN STRI and the RTA STRI. Measures that are restrictive in the MFN STRI but that are liberalised through RTAs cannot be a source of “water” in RTAs because such liberalisation is legally binding. At the same time, these measures are usually not a source of “water” in the GATS. Because of the binary STRI methodology, a restrictive multilateral regime cannot be a source of additional legal uncertainty.⁹

⁹ Not all STRI measures use binary scoring. Exceptions include the measure on foreign equity restrictions (1.1.1) and limitations on duration of stay (2.3.1-2.3.3). With an intermediate applied

The comparison shows that the trade agreements covered in this analysis contribute to a considerable reduction of legal uncertainty in most sectors (Figure 12). The average RTA eliminates between 40% and 70% of the “water” in the GATS in all sectors except audio-visual services. The share of “water” eliminated through RTA commitments is largest in the transport sectors but many other services also benefit from increased regulatory certainty through RTAs. The RTAs in this analysis do not remove legal uncertainty for services trade in audio-visual services. This is unsurprising, given that this sector is carved-out from several RTAs.

Figure 12. “Water” in the GATS and “water” in RTAs by sector



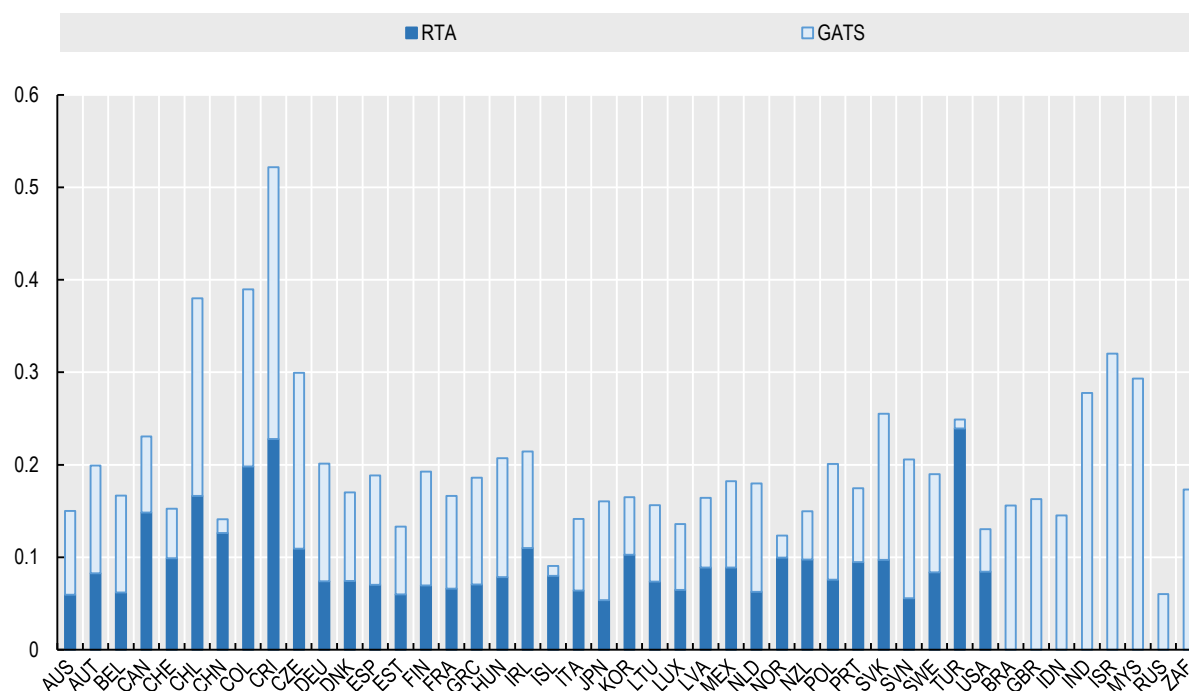
Note: The indices use values between zero and one, one being the highest level of water. “Water” in the GATS and in RTAs is the simple average of water in all RTA-country combinations considered for this analysis. Consequently, countries that are not party to any RTA in this analysis are not considered for this comparison. Elimination of “water” is calculated as the difference between “water” in the GATS and “water” in RTAs divided by “water” in the GATS.

Source: RTA STRI and GTRI databases.

The comparison across countries in Figure 13 compares “water” in the GATS with each country’s most binding RTA. The results reveal a relatively symmetric elimination of “water” across all countries. Countries with less binding GATS commitments also appear to make fewer binding commitments in their RTAs. The most binding RTA eliminates between 40% and 70% of all “water” in the GATS for all countries covered in the analysis.

MFN regime, these measures can be liberalised through binding RTA provisions, while at the same time can be a source of “water” in the GATS, in the absence of GATS commitments for a sector. In these cases, liberalisation and elimination of “water” in the GATS would have occurred simultaneously through an RTA. Of course, legal uncertainty eliminated in these cases is also taken into account for the comparison of “water” in the GATS and in RTAs.

Figure 13. “Water” in the GATS vs. RTAs, by country



Note: The indices use values between zero and one, one being the highest level of water. Simple averages across all sectors. RTA refers to each country's most binding RTA: Australia-China for Australia; CETA for Austria, Canada, Czech Republic, Germany, Hungary, Latvia; EU-Japan for all other EU Member States and Japan; Switzerland-China for Switzerland and China; CPTPP for Chile, Mexico, New Zealand; Pacific Alliance for Colombia; Colombia-Costa Rica for Costa Rica; EFTA-Colombia for Iceland and Norway; Colombia-Korea for Korea; Turkey-Singapore for Turkey; USA-Colombia for the United States. No RTA data available for Brazil, United Kingdom, Indonesia, India, Israel, Malaysia, Russia and South Africa.

Source: RTA STRI and GTRI databases

3.4. Which characteristics of RTAs explain their services impact?

This section uses secondary information on the characteristics of RTAs in order to analyse which factors explain the degree of bilateral services liberalisation or the degree of bilateral “water” in RTAs. For 14 of the 18 RTAs covered in this analysis, it relies on data from the World Bank Content of Deep Trade Agreements (DTA) database (Hofmann, Osnago and Ruta, 2017^[13]). Additional data for the remaining four RTAs not covered in the DRTA database have been collected by the OECD Secretariat.

Separate services chapters are included in all of these 18 RTAs. These services chapters all contain MFN provisions and national treatment obligations. All RTAs contain general exceptions listed in General Agreement on Trade in Services (GATS) Article XIV and all agreements allow for additional security exceptions. In addition, all agreements contain provisions requiring publication of relevant laws and regulations or making laws and regulations available to interested persons and in all agreements there is a general obligation of a mandatory nature to set up an independent authority to which appeals can be made (with regard to implementation of provisions of the agreement).

However, there are some differences among the RTAs. In all RTAs in this analysis, except those between the United States and Korea, the United States and Colombia, and the Pacific Alliance, there are specific provisions clarifying the scope of the presence of natural persons, such as a chapter or annex on temporary presence of business persons. In all RTAs

except Australia-China, Korea-China, Switzerland-China and Turkey-Singapore, there are general or sector-specific obligations not to require nationality or residency requirements for senior managers and/or members of the board of directors.

Moreover, most of the RTAs in this study contain a ratchet provision, implying that any unilateral improvement in the trade regime becomes a commitment under the agreement, reducing legal uncertainty about the persistence of future trade liberalisation. These provisions cannot be captured in our measure of “water” in RTAs, which focuses on the legal uncertainty of the current trade regime. However, such provisions are important components of modern trade agreements and can promote bilateral services trade (Lamprecht and Miroudot, 2018_[3]). Such provisions are included in all RTAs, except the Korea-China RTA, the RTA between EFTA countries and Colombia, the EU-Korea RTA, as well as the Switzerland-China and Australia-China RTA.

Table 2. What explains the services impact of RTAs

	Liberalisation			RTA STRI			Water		
Ratchet	-0.008 (0.010)	-0.006 (0.010)	-0.003 (0.015)	-0.060*** (0.016)	-0.055*** (0.017)	-0.027 (0.022)	0.031 (0.023)	0.030 (0.025)	0.064* (0.034)
Movement of people		0.009 (0.013)	0.009 (0.013)		0.020 (0.020)	0.016 (0.019)		-0.003 (0.030)	-0.008 (0.029)
Nationality/residency			-0.003 (0.015)			-0.040* (0.022)			-0.049 (0.034)
Constant	-0.048*** (0.008)	-0.057*** (0.015)	-0.056*** (0.016)	0.220*** (0.014)	0.200*** (0.025)	0.212*** (0.024)	0.109*** (0.020)	0.112*** (0.037)	0.127*** (0.037)
Observations	18	18	18	18	18	18	18	18	18
R-squared	0.039	0.072	0.075	0.457	0.489	0.586	0.096	0.097	0.213

Note: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1; Ratchet: Does the agreement contain a ratchet provision - implying all unilateral liberalization is legally bound? Yes/No; Movement of people: Are there specific provisions clarifying the scope of the presence of natural persons (e.g. Chapter/annex on temporary presence of business persons)? Yes/No; Nationality/residency: Is there a general or sector specific obligation not to require nationality or residency requirements for senior managers and/or members of Board of Directors? Yes/No;

Source: Authors' calculations.

A simple regression analysis is performed separately for three dependent variables, corresponding to the three indicators developed in this study: (1) the degree of preferential liberalisation in RTAs, (2) the level of bilateral applied restrictiveness in RTAs, and (3) the amount of “water” in RTAs. The analysis seeks to estimate conditional correlations that indicate the degree to which these outcomes coincide with other observable characteristics of RTAs used as explanatory variables. The results show that the characteristics described in the previous two paragraphs are only weak explanatory factors of the impact of these RTAs on bilateral services liberalisation, bilateral remaining services restrictiveness and “water” in the RTA (Table 2).

More specifically, the results indicate that bilateral restrictiveness in RTAs with a ratchet provisions is around 0.05 point lower than in RTAs without a ratchet provision. However, the significance of the ratchet disappears when adding the variable on senior managers and board members. RTAs with an obligation not to require a specific nationality or residency for senior managers and/or board members are around 0.04 point less restrictive than RTAs without such an obligation.

Interestingly, “water” in RTAs with a ratchet is around 0.06 point higher than “water” in RTAs without a ratchet. This could suggest that countries can agree on a ratchet more easily when complete sectors are carved-out from an RTA or when they include strong reservations in the agreement. The estimated relationship between a ratchet and “water” in RTAs could be reversed in the long run. Unilateral improvements in the trade regime happening after the ratification of an RTA would be immediately bound by a ratchet, whereas these improvements create water in RTAs without a ratchet. Assuming that such unilateral improvements will indeed take place in the future, future analysis could find a negative relationship between a ratchet and “water” in RTAs.

The weak explanatory power of these factors suggests that differences across RTAs do not primarily result from the provisions included in the main text of the agreement but rather from the lists of exceptions and reservations in the annexes, at least for this selected group of RTAs signed mostly among OECD members. The 18 RTAs covered in this study are very similar with respect to their characteristics according to the World Bank DTA database. However, they still differ with respect to their impact on bilateral services liberalisation and “water” in the RTA.

At the same time, differences in bilateral services restrictiveness also seem to come from differences in the applied MFN restrictiveness of the parties to these agreements. An RTA signed with a more liberal trade partner will result in lower bilateral liberalisation than the exactly same RTA signed with a more restrictive trade partner. Overall, this shows that services provisions in RTAs are highly complex and that systematic analysis and categorization of services RTAs is challenging.

4. Conclusion

The STRI toolkit can support efforts by policy makers to scope out services trade reform options, benchmark them relative to global best practice, and assess their likely effects. The STRI can also identify restrictions that most impede trade as well as shed light on the requirements that exporters must comply with when entering foreign markets. This work broadens the scope and potential impact of the STRI project by expanding and updating existing analysis of GATS commitments, and applying the STRI toolkit to analyse preferential services liberalisation and regulatory bindings in RTAs.

The update of the GTRI confirms previous findings. Generally, applied services trade policies are much more open than those committed under the GATS. Most of the “water” is generated in sectors where countries have no commitments under the GATS, reducing the predictability of trade policy in these sectors. In sectors where specific commitments are more frequent, the “water” is logically significantly lower.

This analysis provides insight into sources of legal uncertainty that can help inform policy reforms and trade negotiations. It is important to continue to update the GTRI to include the STRI sector and country expansion and take into account policy changes identified during the yearly STRI update.

The analysis of 18 RTAs quantifies the degree of preferential services liberalisation and regulatory bindings. Preferential liberalisation and bindings are benchmarked against multilateral services policies recorded in the STRI, as well as against indicators on the “water” in the GATS.

The 18 RTAs reduce restrictions to services trade by between 0.02 and 0.09 on the STRI scale compared to the multilateral regime. On average, this implies a reduction of services trade barriers by slightly more than 20%. Most of the liberalisation comes from barriers to

foreign entry and other discriminatory barriers, including restrictions on access to public procurement. Only a few RTAs achieve major liberalisation for the movement of natural persons. The remaining “water” in the 18 RTAs is between 0.08 and 0.24. On average, the RTAs examined in this preliminary draft eliminate between 40% and 70% of the “water” in the GATS. However, it is acknowledged that the sectoral coverage and depth of RTAs as well as GATS commitments reflect public policy choices, which go beyond the scope of this paper.

Coverage of RTAs could be expanded in the future in order to provide a more comprehensive overview over the global services trade policy landscape. This would open the door towards a full set of bilateral STRIs that quantify services trade barriers for trade between specific country pairs. Such data could be particularly useful for further economic analysis in various areas, including a refined estimation of services trade costs (AVEs).

The adopted approach aims to facilitate a comparison of “water” in the GATS with “water” in RTAs and of liberalisation across RTAs. However, it has to be acknowledged that the mapping of GATS commitments and RTA provisions against the STRI database is not always straightforward. The language can be very different and many RTAs include best-endeavour provisions that are not legally enforceable. Moreover, the definition of sectors in the GATS or used for reservations or non-conforming measures in RTAs does not always allow for a 1:1 mapping to STRI sectors. Hence, this analysis is not meant as definitive legal interpretation of RTA provisions or of “water” in each sector. Furthermore, it should be noted that low levels of “water” are not necessarily synonymous with high levels of openness. Although low levels of “water” may be seen as reflecting legal certainty, it is not clear that such certainty would outweigh the economic and trade benefits of higher levels of liberalisation. Ultimately, national and collective services reforms and liberalisation can best drive inclusive and sustainable economic growth.

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Annex A. Coverage of RTAs by country

Table A A.1. Coverage of RTAs by country

OECD country	Coverage of RTAs					
Australia	CPTPP	China	Japan			
Canada	CPTPP	European Union	Korea	USMCA		
Chile	CPTPP	Pacific Alliance				
Colombia	Costa Rica	Korea	Pacific Alliance	United States	EFTA	
Costa Rica	Colombia					
European Union	Japan	Canada	Korea			
Iceland	Colombia (with EFTA)					
Israel	Not covered					
Japan	European Union	CPTPP	Australia			
Korea	Colombia	Canada	China	New Zealand	European Union	United States
Mexico	CPTPP	Pacific Alliance	USMCA			
New Zealand	CPTPP	Korea				
Norway	Colombia (with EFTA)					
Switzerland	China	Colombia (with EFTA)				
Turkey	Singapore					
United Kingdom	Not covered					
United States	USMCA	Colombia	Korea			

Source: RTA STRI database.

Annex B. GATS commitments in STRI sectors

Table A B.1. Number of countries with specific GATS commitments, by STRI sector

	Sector-specific commitments for the whole sector	Sector-specific commitments for part of the sector	No commitment
Computer	41	1	3
Construction	36	2	7
Legal	9	29	7
Accounting	40	3	2
Architecture	39	1	5
Engineering	39	3	3
Telecom	42	1	2
Distribution	36	0	9
Broadcasting	2	0	43
Motion picture	5	3	37
Sound recording	3	2	40
Banking	45	0	0
Insurance	42	2	1
Maritime transport	9	2	28
Road transport	11	12	22
Rail transport	9	10	26
Courier	5	13	27
Cargo handling	9	2	34
Storage and warehousing	27	1	17
Freight forwarding	23	3	19
Customs brokerage	7	0	38

Note: This table is based on 45 countries covered by the STRI. For Austria, the Czech Republic, Hungary, Luxembourg, the Slovak Republic, and Switzerland, only 20 sectors are included because landlocked countries have no STRI for maritime transport. The same applies to Iceland which has no rail freight transport.

Source: WTO Members' GATS schedules of commitments.

Table A B.2. Number of STRI sectors with specific GATS commitments, by country

	Sector-specific commitments for whole sector	Sector-specific commitments for part of the sector	No commitment	Total
Australia	13	1	7	21
Austria	11	2	7	20
Belgium	11	2	8	21
Brazil	11	1	9	21
Canada	13	4	4	21
Colombia	4	3	14	21
Costa Rica	1	1	19	21
Chile	5	2	14	21
China	14	5	2	21
Czech Republic	9	1	10	20
Denmark	11	2	8	21
Estonia	12	2	7	21
Finland	11	4	6	21
France	12	3	6	21
Germany	12	2	7	21
Greece	11	2	8	21
Hungary	10	1	9	20
Iceland	15	1	4	20
India	3	2	16	21
Indonesia	9	1	11	21
Ireland	10	2	9	21
Israel	9	2	10	21
Italy	10	2	9	21
Japan	13	0	8	21
Korea	12	2	7	21
Latvia	13	3	5	21
Lithuania	12	2	7	21
Luxembourg	11	2	7	20
Malaysia	8	1	12	21
Mexico	7	2	12	21
Netherlands	11	2	8	21
New Zealand	14	2	5	21
Norway	16	1	4	21
Poland	9	1	11	21
Portugal	10	2	9	21
Russia	16	3	2	21
Slovak Republic	9	1	10	20
Slovenia	11	3	7	21
South Africa	10	2	9	21
Spain	11	2	8	21
Sweden	9	2	10	21
Switzerland	11	3	6	20
Turkey	11	2	8	21
United Kingdom	12	2	7	21
United States	15	2	4	21

Note: The table is based on 21 sectors; no maritime transport for land-locked countries Austria, the Czech Republic, Hungary, Luxembourg, the Slovak Republic and Switzerland; no rail freight transport for Iceland.
Source: WTO Members' GATS schedules of commitments.

Annex C. GTRI results for specific sectors

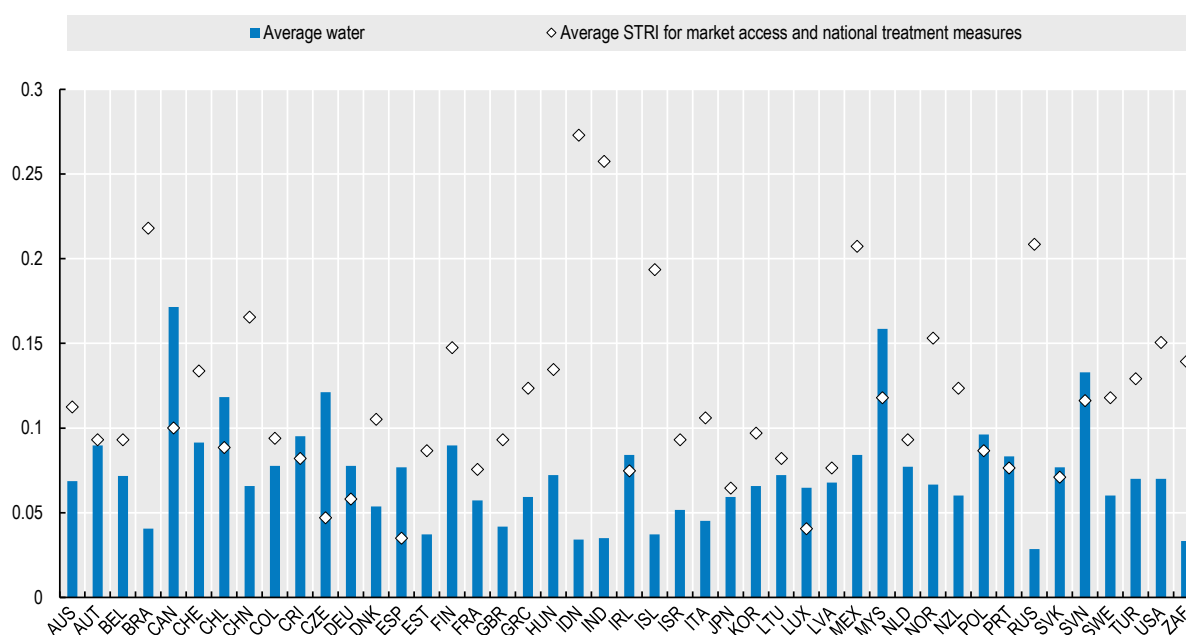
This Annex provides more detailed results for the new sectors in the GTRI database – commercial banking, insurance, cargo handling, storage and warehousing, freight forwarding and customs brokerage. The figures below indicate the average values of STRI indices for the measures just related to market access and national treatment in order to show the most appropriate comparison.

Commercial banking

All countries included in the analysis have submitted sectors specific GATS commitments for the commercial banking. Consequently, the level of “water” is lower than in other sectors. As shown in Figure A C.1, the highest “water” for commercial banking is detected for Malaysia, Canada, Chile, Czech Republic and Slovenia. For three of these countries – Canada, Czech Republic, and Slovenia – the high level of “water” is due to the fact that they are among the least restrictive countries for commercial banking in the STRI. The difference between the bound level of restrictiveness under the GATS and the low STRI score creates larger amount of “water”.

For Malaysia and Chile, the situation is slightly different, as their STRI scores are relatively high. However, the STRI restrictiveness is driven by STRI categories related to barrier to competition and regulatory transparency that are most often domestic regulations. Therefore, measures categorised as domestic regulations have more importance on the STRI scores, creating a bigger difference between the applied regime and the GATS commitments for the sector.

Figure A C.1. “Water” in the GATS commitments for commercial banking



Source: GTRI database.

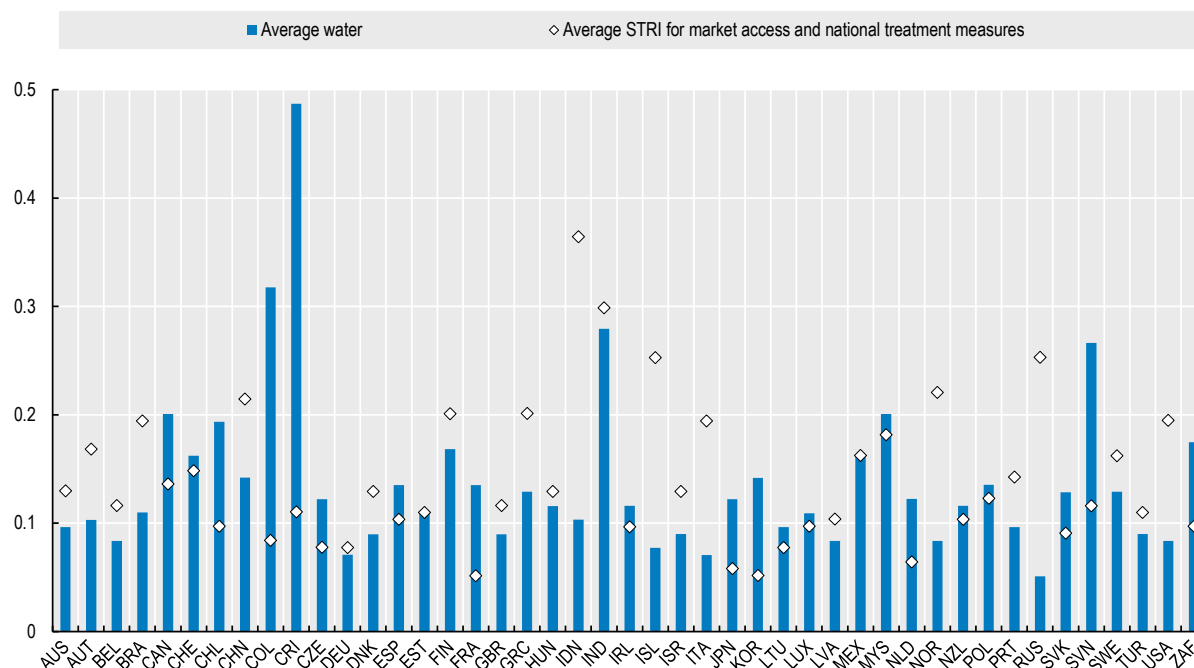
Brazil has the lowest level of “water” in the sector, which is created from the differences in measures concerning the movement of people that are less restrictive in the applied regime than committed under the GATS.

Insurance

The “water” in insurance services is relatively low with a few exceptions (Figure A C.2). Similar to commercial banking, insurance services are often committed under GATS. Forty-two countries have commitments for insurance services for the whole sector. Colombia and India have sector-specific commitments only for a part of the sector, and Costa Rica has no GATS commitments for the sector. This explains the high level of “water” for Costa Rica and Colombia.

Russia has the lowest level of “water” in the sector. The applied regime is very similar to what was committed under the GATS, with the exception to some movement of people measures that are “unbound” under the GATS.

Figure A C.2. “Water” in the GATS commitments for insurance



Source: GTRI database.

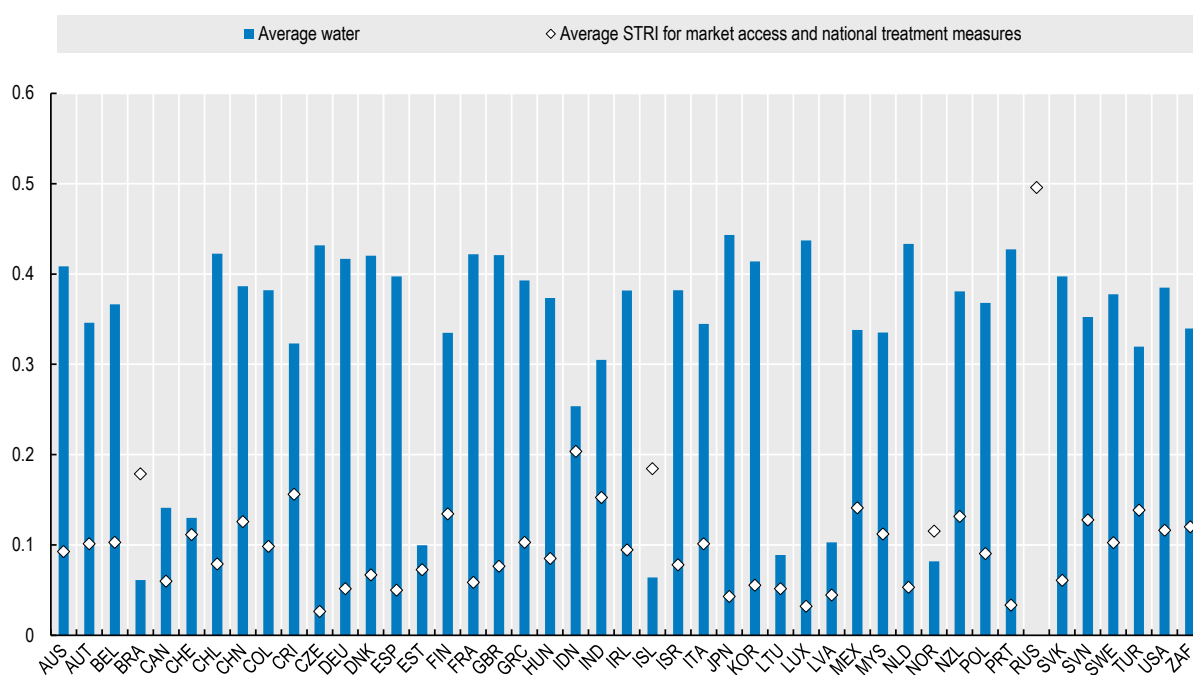
Logistics services – cargo handling

Results for most logistics services are very different from those for financial services just described. For cargo handling services, most of the countries in the sample have made no commitments under the GATS – 34 countries have no commitments, nine have

commitments for the whole sector,¹⁰ and two for a part of the sector. This explains the results shown in Figure A C.3.

Russia has score of 1 for both indices – STRI and GTRI, meaning that the sector is completely closed for foreign services suppliers. Russia reserves these services to a statutory monopoly at all transport facilities – airports, ports, road and rail terminals. Consequently, there is no “water” in Russia’s trade regime for the sector. In general, STRI results show that the sector is not heavily regulated. However, the lack of GATS commitments allows reversion to a more restrictive regime in most countries.

Figure A C.3. “Water” in the GATS commitments for logistics: Cargo handling services



Source: GTRI database

Logistics: Storage and warehousing

In this sector, 27 countries have made GATS commitments for the whole sector. Luxembourg has commitments for only a part of the sector and 17 countries have no commitments. These differences are visible in Figure A C.4.

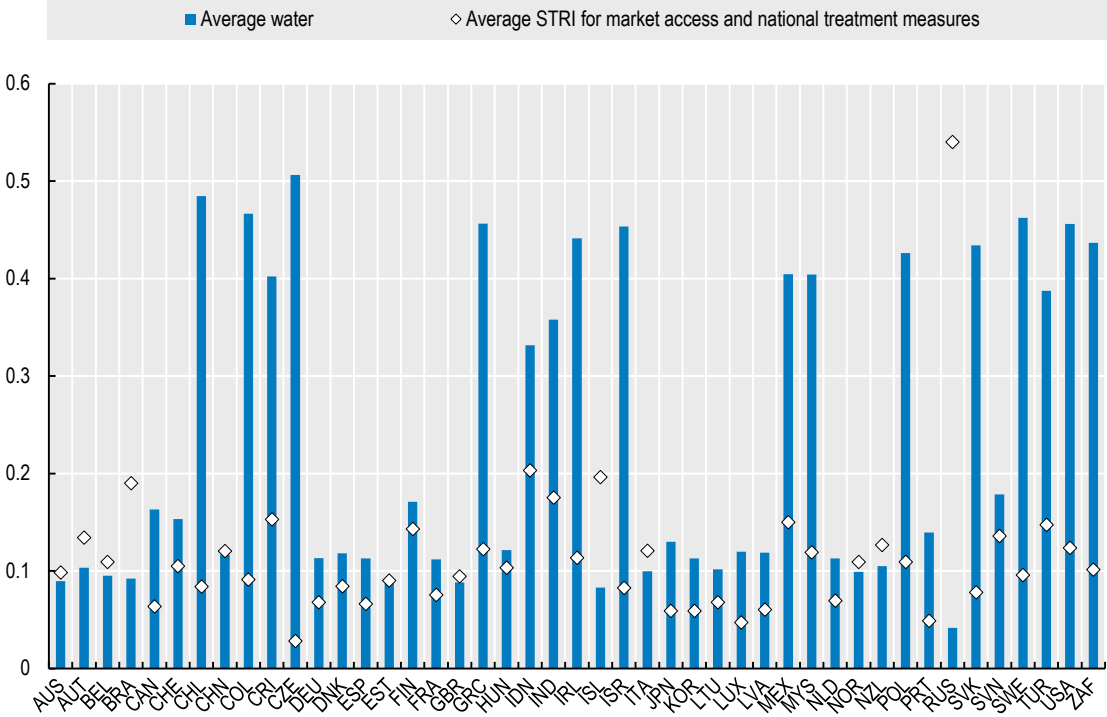
Identical to cargo handling services, Russia has a score of 1 for STRI and GTRI, as well as for storage and warehousing services, due to the fact that Russia reserves these services to a statutory monopoly at all transport facilities – airports, ports, road and rail terminals.

The results for storage and warehouse services are driven by measures that are within the scope of GATS, e.g. on foreign entry and some measures related to regulatory transparency, especially those on border procedures. These policy areas contain most of the

¹⁰ Brazil, Canada, Estonia, Iceland, Latvia, Lithuania, Norway, Russia, and Switzerland have commitments schedules for the whole sector of cargo handling services under the GATS. China and Korea have committed sectors – specific commitments only for a part of the sector.

market access and national treatment measures; therefore, countries which have not made commitments for the sector under the GATS, have more significant amount of “water”.

Figure A C.4. “Water” in the GATS commitments for logistics: Storage and warehousing



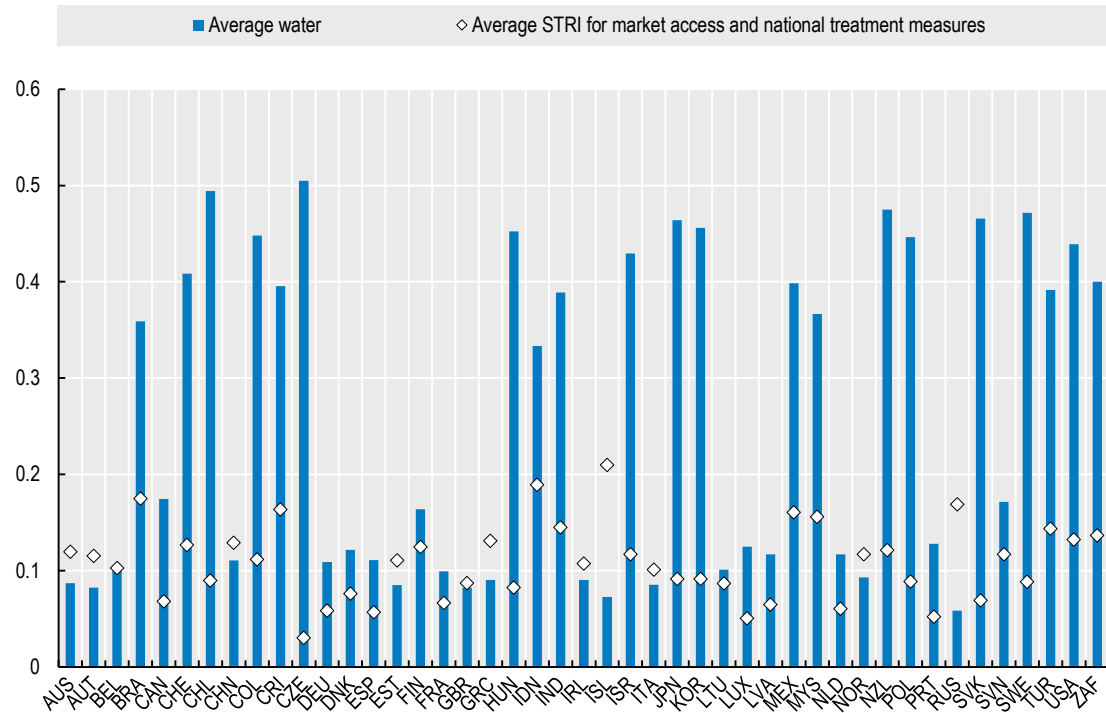
Source: GTRI database.

Logistics: Freight forwarding

The results for the freight forwarding sector are similar to the previous sectors. Nineteen countries have not made any commitments for the sector under the GATS. These countries are easily be identified in Figure A C.5, characterised by their very high levels of “water”.

The sector has relatively more homogenous STRI results. Contrary to other logistics sectors, no country has the score of 1. The STRI and GTRI results for Russia and Iceland are very close, showing that the applied regime is approaching the level of allowed restrictiveness by GATS commitments.

Figure A C.5. “Water” in the GATS commitments for logistics: Freight forwarding



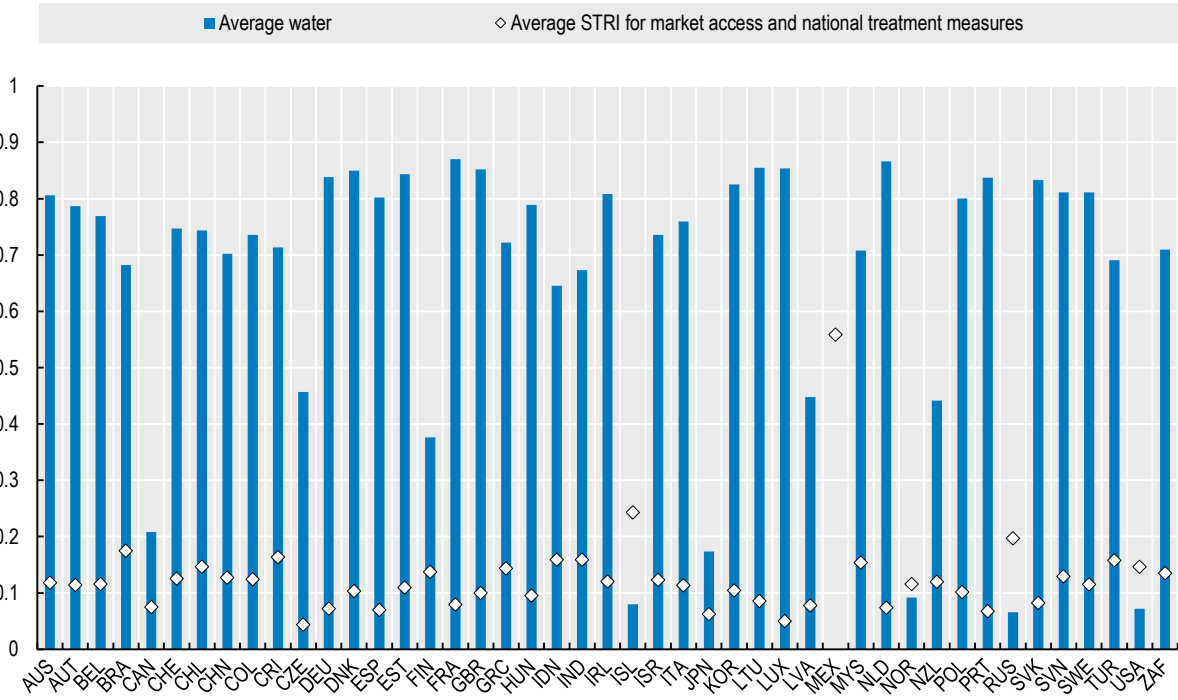
Source: GTRI database.

Logistics: Customs brokerage services

Only seven countries have made commitments for customs brokerage services.¹¹ According to Sugie et al. (2015^[8]), if two specific measures are restrictive in the dataset (foreign equity participation in customs brokerage is prohibited and there is a nationality requirement to get a licence to operate as customs broker) the market is closed to foreign services providers. The same mechanism generates a maximum score in the GTRI for countries without commitments in the sector. For this reason, most countries have similarly high levels of “water”, while small differences can be explained by the differences in the applied regimes of these countries. For Mexico, the sector is completely closed in the applied regime so that no “water” can occur by construction (Figure A C.6).

¹¹ United States, Russia, Norway, Netherlands, Japan, Iceland, and Canada.

Figure A C.6. “Water” in the GATS commitments for logistics: Customs brokerage services



Source: GTRI database.