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Evaluating the Progress of the Liberalization of International Aviation toward Open Skies

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The United States has engaged in well over 100 Open Skies Agreements with other ICAO member state partners reaching all parts of the globe. These Open Skies Agreements have established a practice of liberalization for airlines to have the most freedom to choose when, where, how often, and for how much they fly to locations. Despite a majority of ICAO member state partners engaging in Open Skies, there has been a reluctance of the member states to engage in the same practices with other aviation partners for similar access. A similar pattern is also evident for liberalization through the Freedoms of the Air, a key philosophical understanding set forth through ICAO practices describing the ways in which airlines can fly between the member states in the interest of international aviation. This paper evaluates the trend among the member states to engage in more liberalized aviation through their granted access to reduced government oversight of foreign airline access to sovereign airspace and the number of rights granted to their respective operational international partners. While the overwhelming number of agreements may not be fully liberalized Open Skies, there does appear to be an increasing desire to promote practices that connect member states at greater efficiencies and give travelers more options and more access to airline choice.

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Introduction

The global aviation system has developed significantly over the past century, and international travel is now commonplace. But despite the ease of international travel, the movement of aircraft and people between countries is the product of a very complex system – one that requires navigating a variety of economic and political issues. Ultimately, the operation of international air services is a function of inter-governmental agreements that provide for various activities as framed by the International Civil Aviation Organization (ICAO). In this way, there is essentially a three-tiered approach for the establishment of international air services: a consensus on all possible privileges, an agreement of specific privileges between States, and the allocation of privileges to air carriers to execute the provisions of the agreement. These agreements vary from heavily restrictive bi- and multi-lateral agreements to the more liberal Open Skies Agreements (OSAs). The purpose of this paper is to explore the extent to which these agreements have been forged worldwide and trends in the liberalization of agreements.

Review of Literature

The Chicago Convention of 1944 established a framework for possible air privileges called “the Freedoms of the Air”, which essentially outlined the categories for possible international air activity (Bartsch, 2018). These include the right to overfly another country’s territory, stop for operational purposes (usually refueling), transport passengers to and from another country, and the right to transport passengers between a second and third country as a continuation of a flight to or from the original country. Collectively, the aforementioned rights are considered the “Five Freedoms of the Air” and foundational. ICAO has since outlined additional “so-called” Freedoms, such as the right to transport passengers and cargo between countries without continuing the flight to or from the home country, as well as operating domestic flights within a foreign country. These additional agreements are defined as Freedoms of the Air Rights 6 through 9. The 6th freedom of the air allows the country of registration for an airline to act as an intermediate stop in the carriage of passengers between two other countries. This enhances competition and could, for example, allow passengers to fly on a single itinerary from London to Tokyo on a US-based airline using US 6th freedom rights instead of being required to fly a British-based airline or Japan-based airline. The 7th freedom right expands this idea by allowing a third country’s airline to operate international flights between two other countries. It removes the need for the stopover in the country of registration; however, it does not allow scheduled stops at more than one location within either country. The 8th freedom does allow multiple stops within a single country but requires that airline to either begin or end the scheduled trip in the country of registration. The 9th and final Freedom of the Air, also known as cabotage, is the right of an airline to fly domestic routes in another country that is not the country of registration and without any intention of returning to its country of registration. These additional freedoms are considered to be “so-called” as they have been defined but are not

widely adopted, whereas the first five are recognized (though not necessarily extended) by all ICAO signatories (Bartsch, 2018).

The Freedoms of the Air are simply available options that be extended from one state to another, thus offering a standardized approach to the establishment of international air services. They “constitute the core of air services agreements’ negotiations, as without their exchange, air transport would only amount to the operation of domestic air services” (Scott & Trimarchi, 2020, p. 93). They form the basis of careful high-level discussion between respective governments to allow any airline to transport passengers and goods in and through their airspace, the second level of the three-tier approach. Because not even all ICAO member-states agree to uphold more than just the first two freedoms, international negotiation and diplomacy are essential to ensuring a successful agreement with the maximum number of freedoms possible. When two States engage in bilateral negotiations, they work to determine the freedoms they will extend and details of how those freedoms must be utilized. This often means outlining approved specific locations of access and associated terms (e.g., frequency of flights, number of gates or slots, terms of reciprocity). Multi-lateral agreements have also been formed among groups of States. For example, the ASEAN Multilateral Agreement on Air Services (MAAS) eliminates restrictions on aircraft operations among capital cities (Ministry of Singapore, 2021).

Open Skies Agreements (OSAs) are a form of air service agreement with minimal restrictions and government interference in the free-market determination of international air operations. The impetus for OSAs is their proposed economic benefits (Button, 2009, and Laplace et al., 2019). However, the term Open Skies itself is not standardized, which presents a logistical challenge for the categorization of air service agreements (Forsyth et al., 2004). Though its name may suggest unrestricted operations, (Scott & Trimarchi, 2020) indicate an OSA is typically characterized by:

- no limitations with regard to capacity;
- opening of all routes;
- unlimited exchange of third and fourth freedom rights, with, occasionally, also the inclusion of fifth freedom rights, subject to approval from the third country involved;
- multiple – that is, unlimited – designation;
- pricing subject to rules of competition; and
- fair and equal opportunity for airlines to compete (p. 104).

The United States offers its own framing of OSA, as facilitating international air travel “by eliminating government interference in commercial airline decisions about routes, capacity, and pricing...” (U.S. Department of State, 2016).

Further complicating the issue of distinguishing an OSA is the challenge of different rights being granted to cargo versus passenger operations, as well as the extent to which the “so-called” sixth, seventh, eighth, and ninth freedoms are included. The liberalization of air service agreements is ultimately a spectrum, and this study relies on the ICAO World Air Services Agreement (WASA) database, which categorizes air service agreements into traditional, transitional, and fully liberalized. A traditional agreement is defined as an agreement between two member states that includes elements of single airline designation, predetermination of capacity, and dual approval of tariffs (i.e., price structure). A fully liberalized (i.e., Open Skies)

agreement on the opposite side of the scale included elements of multiple airline designation with no route limitations, at least 5th freedom right designations, the free determination of capacity, a dual disapproval for restrictions, and free pricing tariffs (International Civil Aviation Organization, n.d.). A transitional agreement contains at least one of the elements required in a fully liberalized agreement. At its core, it is still identified as a non-Open Skies agreement because it still requires close government approval of a specific part of the operation, whether that is the pricing structure, frequency of flights, route structure, or other limits that would otherwise be left to an airline to decide based on market conditions. Any such limitation means it is not a fully liberalized agreement and therefore cannot be Open Skies, but it can suggest a slow loosening of restrictions in the direction of liberalization.

Research Question

The goal of this study was to document through an exploratory study the current status of ICAO member states' engagement in the liberalization of competition among partner states as indicated through the implementation of Open Skies Agreements. The following research questions were analyzed to provide comparative insights between and among the member states regarding the existence of facilitation of liberalization for airline competition and globalization two decades into the 21st century.

1. Compared to traditional, heavily negotiated, and restrictive operational agreements, as of 2020, how many Open Skies bilateral agreements have been fully executed and documented with the International Civil Aviation Organization by each member state?
2. To what extent does the international community appear to be embracing or rejecting the idea of reduced government interference in international airline competition?
3. In the process of liberalizing airline access to global markets, to what extent are ICAO member states embracing 5th Freedom rights and beyond?

Method

This study was exploratory in nature and a canvas of the ICAO member states' engagement in the liberalization of international airline market competition. Despite the first Open Skies Agreement being signed in 1992 between the United States and the Netherlands, the sovereignty of the airspace within the territory of each member state is a fundamental principle of ICAO standard operation and a necessary philosophical norm for successful participation on the international stage. Therefore, a baseline analysis of participation in the loosening of fundamental principles needed to be conducted.

Data Collection

The primary source of data for this study was the World Air Services Agreement (WASA) database supported by ICAO. This database is the repository for the official bilateral and multi-lateral agreements signed by member states to facilitate international aviation between and among the member states. As a specific part of ICAO Standards and Recommended Practices (SARPs), member states are required to submit their executed agreements to ICAO. Therefore,

this database is the most complete and accessible collection of the signed agreements among all the 193 member states.

In addition to the library of air service agreements, the database also provides unique insights and basic analyses of the specific agreements. This includes data on the summary of provisions, route planning criteria as described in the agreements and global maps of international travel information since 2003. While the data is not coded in a downloadable format or synthesized beyond the details of each individual agreement, this information provides accessible details about each agreement as applicable to ICAO operations. For example, the summary of provisions includes an overview of the specific details contained in each agreement describing the specific administrative clauses, the applicable traffic rights (i.e., the number of “Freedoms of the Air” allowed), operational clauses, capacity clauses, and tariff clauses. This summary is how ICAO determines their assessment of whether or not an agreement meets the requirements to be considered a liberalized Open Skies Agreement, a traditional agreement, or somewhere in between (transitional). The summary of provisions also includes a snapshot overview of the types of agreements that have been negotiated between a member state and its respective partners. This summary of provisions section of the database was the primary section of the WASA database used for analysis. This overview is as current as the most recent agreements submitted to ICAO by an individual member state.

The key data collected for this analysis was the type of agreement assessment from the WASA database as traditional, transitional, and full liberalization. In addition to the type of agreements collected for each member state, additional information included the highest Freedom of the Air embraced with each agreement between two member states. While there are a theoretical 9 freedoms, the 8th and 9th freedoms are both a variation of cabotage, or international operation within a domestic market, and were indicated in the database together under the name “cabotage.”

Data Analysis

The primary method for analyzing the data collected was through graphs, tables, and descriptive statistics. Presentation of the total numbers of agreements tabulated by the type of agreement or the extent to which beyond 5th Freedoms were allowed by member states were the key indicators to assess the current status of liberalization embraced by the member states and to answer the research questions. Two types of data were collected for the assessment of the status of liberalization. The first assessment was the overall number of agreements that have been submitted to ICAO as executed agreements. The second assessment was the number of member states to which a partner member state flew and of these, which were accessed via traditional, transitional, or liberalized Open Skies Agreements.

Results

Based on an assessment of the bilateral agreements contained in the ICAO WASA database, there has been a trend in the liberalization of agreements. The United States has continually led the world in the facilitation of Open Skies Agreements, with the first being administered with the Netherlands in 1992. By 2003, the first year recorded in the WASA

database, the number of Open Skies Agreements entered into force rose to 50 while there were 34 non-Open Skies Agreements on file. In addition, where international procedure limited the completeness of the data, operations to 20 member states occurred in 2003 where no agreement had been submitted to ICAO. Table 1 shows the growth of Open Skies Agreements submitted to ICAO between 2003 and 2020.

Table 1
Growth of US Open Skies Agreements with Partner Member States, 2003-2020

Year	Open Skies	Non-Open Skies	Unrecorded	Year	Open Skies	Non-Open Skies	Unrecorded
2003	50	34	20	2012	82	32	13
2004	56	34	19	2013	86	32	11
2005	61	34	18	2014	86	32	12
2006	62	35	18	2015	89	30	12
2007	67	34	17	2016	90	29	15
2008	70	35	16	2017	94	29	13
2009	71	35	15	2018	94	29	14
2010	74	35	15	2019	93	30	13
2011	78	33	12	2020	94	29	13

Notes. A Non-Open Skies Agreements includes traditional agreements and transitional agreements defined in the WASA database.

Of the 20 non-submitted agreements in 2003, none had achieved an Open Skies status based on Open Skies Partner data reported by the U.S. Department of State (U.S. Department of State, 2021). Only until 2007 did a divergence begin to appear where an implemented Open Skies Agreement was not recorded in the WASA database. However, in no case was there any apparent error in terms of where, if the Open Skies Agreement was ultimately submitted to ICAO, an error was present between recording the Open Skies Agreement at a later date and when it was originally signed. In the case of the United States, only two Open Skies Agreements were signed prior to 2016, where operations were consistently present with the partner member state and the United States. These two countries were the Cook Islands (Open Sky Agreement operations from 2007 through 2020) and Latvia (Open Sky Agreement operations from 2008 through 2018). Between 2016 and 2020, where Open Skies Agreements were signed, operations were routine between the partner states, but ICAO did not update or receive notification of an update were between the US and Azerbaijan (2016), The Bahamas (2020), Belize (2018), Grenada (2018), and Togo (2016).

In contrast to the relatively few instances of a missing update to ICAO where an Open Skies Agreement was facilitated, there were more occurrences where a non-Open Skies Agreement was negotiated or updated but not submitted to ICAO. As indicated earlier, all 20 instances of a non-recorded agreement were Non-Open Skies Agreements, and by 2020, of the 13 non recorded agreements where operations were conducted, eight were non-Open Skies Agreements; however, there was a continual decrease in the overall number of agreements not recorded in the ICAO database between the US and its partner member states. Of the 26 countries unrecorded non-Open Skies Agreements in the WASA database, 13 became Open Skies

Agreements and were subsequently recorded in the database.

A third consideration of the status of Open Skies Agreements were those that were signed, but no operations ever occurred between the United States and the partner member state. Figure 1 shows the status of the overall number of bilateral air service agreements with the United States between 2003 and 2020.

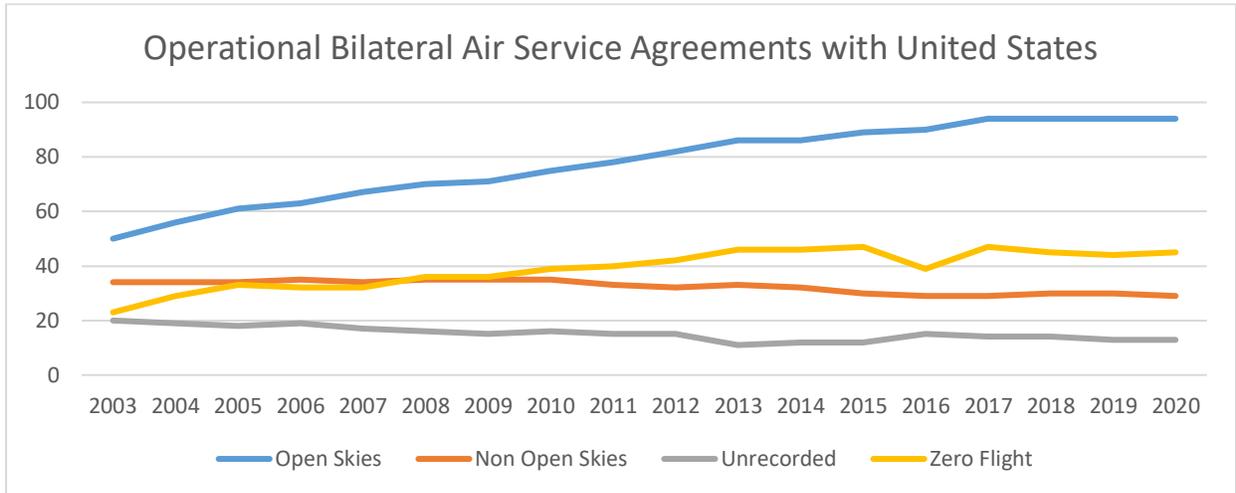


Figure 1. Air Service Agreement Status by Type of Agreement Compared to Agreements that have not facilitated operational commercial service flights.

As can be seen in Figure 1, there is a coinciding increase in the number of total agreements signed between the United States and partner member states. The number of non-Open Skies Agreements have remained relatively unchanged since 2003 and, as of 2020, showed a slight decrease from 34 in 2003 to 29 in 2020. Open Skies Agreements signed have steadily increased each year over the 18 years of this data on an average increase of just over eight Open Skies Agreements per year. In addition, the number of Zero Flight agreements, or signed agreements where no commercial air service flights have been reported to have taken place, have also increased over the same 18-year period. In 2003, 23 agreements with member states were signed and recorded with ICAO, but no commercial service had been conducted by parties of either member states. By 2020 that number had increased to 45 for a yearly increase of 4 agreements on average. Figure 2 shows the comparison zero flight operations of member states with an air service agreement with the United States. There is a noticeable difference in the number of partner states that have engaged in Open Skies Agreements did not yet establish commercial service as of the year shown and the number of partner states who had negotiated limited agreements in the form of non-Open Skies Agreements.

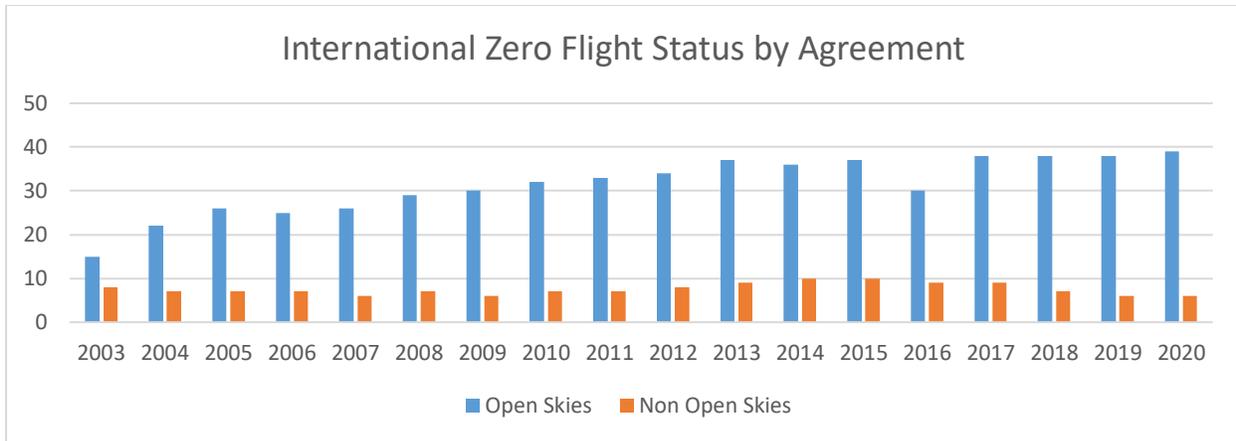


Figure 2. Air Service Agreement Type between the United States and its Partners without Commercial Air Service.

The specific focus of the chart in Figure 2 is to show that there is not always a specific or instantaneous relationship between the implementation of an air service agreement allowing commercial service of any sort and functional implementation of that agreement. If and when a partner country began any commercial service with the United States, it was removed from this interpretation. For instance, Qatar signed its first air service agreement with the United States in 2001. This first agreement was written as a liberalized Open Skies Agreement. However, no flights from the US to Qatar or vice versa were initiated in 2007. Pertaining to Figure 2, Qatar is only represented as a Zero Flight partner in 2003 through 2006. Of the 56 total member states that had zero flights with the United States at the time of initiating an air service agreement, 12 of those partners still have not entered into any commercial service during the 18 years between 2003 and 2020. In 2020, 44 partners with air service agreements did not initialize any commercial service and of those 39 were partners with Open Skies Agreements. Of the 12 US air service partners that had established agreements for the 18 years of observational data, nine had established Open Skies Agreements at some point during that time period, with seven member states establishing their Open Skies Agreements prior to the 2003 period of observation.

While the United States has established itself as the first and continual leader in international aviation regarding the development of Open Skies, member states have not only shown an interest in fostering these agreements with the United States but there is now an ever-rising presence of liberalized Open Skies Agreements among other member states beyond the United States. There are two specific areas of growth that pertain to the opening of partnerships and access to the airspace of partner states. The facilitation of Open Skies Agreements is a key indicator because of the necessity to negotiate an air service agreement outlining the rights of another country to operate within foreign airspace. The Open Skies agreements allow the competition to exist. The second key component of facilitating Open Skies is the access to where airlines can take passengers after they have arrived in the foreign country. These specifically relate to the Freedoms of the Air. Many Open Skies Agreements are facilitated on the basis of 5th Freedom Rights, or the rights to fly into a member state, disembark and board any passengers at that gate, and then fly to another location outside the borders of that partner state. However, there has been increasing facilitation of access to additional Freedoms of the Air embodying the 6th, 7th, and 8th Freedoms in conjunction with the implementation of the Open Skies Agreement. The

United States has been a leader in both of these key points, but other member states are realizing benefits and slowly following the same trajectory.

Depicted in Table 2, as of 2020, the United States has recorded a total of 107 Open Skies Agreements with ICAO, and as discussed earlier, a number of these agreements have not yet established commercial service. The willingness of other member states to engage in the liberalization of skies with other partner countries has not risen to the same level. The United Arab Emirates (UAE) has the second most Open Skies Agreements with 41. From that point, there is a steady drop off to where the 20th most member states (out of 193 member states) have signed 4 Open Skies Agreements, one of those being with the United States. In contrast, traditional agreements are still a very common way to negotiate international commercial air service. The Netherlands had the most traditional or most restrictive agreement type, with 112 partner agreements. Many countries have 80 or 90 such agreements, with the 20th ranked state having 53 traditional agreements recorded with ICAO. In the traditional agreement rankings, the United States ranks 69th, with 22 traditional agreements still recorded. The WASA categorization of the agreements has established a middle tier, identified in the name “transitional.” These transitional agreements remain competitively restrictive compared to Open Skies Agreements but have allowed for a loosening of specific points compared to the traditional agreements. For example, a member state may allow an airline to choose the number of flights it can have on a route but still specify the exact routing allowed. In contrast, the Open Skies Agreement allows the airlines complete freedom to choose how, when, where, and price of their flights. The United Kingdom has embraced more and a loosening of these agreements, although still being a top 10 state in the number of traditional agreements, led the way in 2020 in developing transitional agreements. However, the United States ranked 7th in 2020 in transitional agreements as well with 23. Between the Open Skies Agreements and the transitional agreements, the United States has entered 130 more open agreements where the UAE in second has 63 combined transitional or Open Skies Agreements.

Table 2
Number of Air Service Agreements by Access

Rank	Country	Open Skies	Country	Transitional	Country	Traditional
1	United States	107	United Kingdom	41	Netherlands	112
2	United Arab Emirates	41	Dominican Republic	41	Germany	104
3	Burma	36	India	31	Switzerland	97
4	Singapore	26	Qatar	26	China	94
5	Dominican Republic	17	Germany	25	Belgium	94
6	New Zealand	15	Russia	23	United Kingdom	84
7	Chile	10	United States	23	Austria	83
8	Kuwait	10	South Africa	22	Poland	80
9	Costa Rica	7	United Arab Emirates	22	Spain	73

10	Switzerland	6	Czech	22	France	73
11	Brazil	6	Singapore	21	Sweden	67
12	Australia	6	China	18	Denmark	60
13	Panama	5	Spain	18	Morocco	58
14	Finland	5	Canada	18	Iraq	56
15	Iceland	5	Argentina	18	India	55
16	Qatar	4	New Zealand	16	Israel	54
17	Czech Republic	4	Chile	14	Norway	54
18	Netherlands	4	Israel	13	Japan	53
19	Malta	4	Seychelles	13	Pakistan	53
20	Norway	4	Sweden	12	Italy	52

Lastly, the United States has led the access to international transportation by engaging in the most open agreements and combining that with the most open access through the 5th Freedoms Rights and Beyond. 5th Freedom rights appear not to be uncommon, but a number of countries that have not automatically advanced 5th Freedom Rights as can be seen by the reduction in agreements with 5th, 6th, or 7th Freedom Rights shown in Table 3. The United States is nearly alone at the top in allowing routine 6th and 7th Freedom Rights as the United States routinely advances 7th Freedom Rights through cargo airline approvals. As can be seen, the 8th most number of agreements with 7th Freedom Rights was a tie among Switzerland, Iceland, and Trinidad and Tobago with 3 approvals. As of 2020, this extension of liberalization was not readily embraced compared to the number of traditional agreements held by other member states.

Table 3
Freedoms of the Air Allowed by the Member States

Country	5ths	Country	6ths	Country	7ths
United States	145	United States	85	United States	86
Netherlands	99	Dominican Republic	26	Dominican Republic	8
Switzerland	98	United Arab Emirates	13	United Arab Emirates	7
Singapore	85	New Zealand	10	Chile	7
Belgium	78	Chile	9	Singapore	6
Germany	75	Singapore	8	Argentina	6
United Arab Emirates	68	Russia	6	New Zealand	5
France	67	Argentina	6	Switzerland	3
India	56	Colombia	6	Iceland	3
Sweden	55	Brazil	6	Trinidad and Tobago	3

Conclusions

In the 21st century, there has been an opening of competition among international airlines. This opening has been facilitated through a relaxation of the acceptance of traditional, heavily restricted air service agreements in favor of a push towards Open Skies Agreement. Competition has increasingly been advanced over the last decade, and the United States has continued to embrace liberalization with any partner who wishes to negotiate. However, there still appears to

be a reluctance and hesitance to embrace the maximum freedom of international airlines. 8th freedom cabotage or the direct competition of a foreign airline with a domestic airline is still a very isolated exception for very specific circumstances that no member state readily embraces. However, even the 7th Freedom Rights are rare. As international aviation continues to grow and recover from the Covid-19 pandemic, there is a unique opportunity for the ICAO member states to assess their international practices and determine how connectivity and liberalization can move the industry forward in an increasingly globalized society in need of increasingly sustainable practices that will maximize growth at the least destructive impact to society. Open Skies Agreement and liberalized access to aviation is potentially a powerful and unique tool to pursue.

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