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## Antitrust Immunity for Joint Ventures Among Alliance Airlines

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## ANTITRUST IMMUNITY FOR JOINT VENTURES AMONG ALLIANCE AIRLINES

DR. FRED LAZAR\*

### ABSTRACT

This article addresses four fundamental questions:

1. If joint ventures and, particularly, metal-neutral joint ventures produce significant benefits for consumers, then why not grant them antitrust immunity while subjecting them to periodic reviews that ensure benefits continue to materialize and exceed the potential costs of lessening competition?
2. Alternatively, why not grant antitrust immunity to a joint venture with a time limit and subject it to another review on whether the immunity should be extended for another fixed period of time?
3. Or, why not attach conditions other than carve-outs to any immunized joint ventures?
4. Finally, should immunity have been granted in the first place?

In granting immunity, the U.S. Department of Transportation (DOT) and its counterparts in other countries faced the classic type I and type II errors in decision-making.<sup>1</sup> By not granting immunity, the DOT risked preventing joint ventures that might have net positive effects for consumers—a type II error.<sup>2</sup> On the other hand, when granting immunity, the DOT risked approving joint ventures that might have net negative effects—a type I error.<sup>3</sup> Which error is more critical, and more likely? Antitrust immunity never made sense, even for so-called public policy

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<sup>1</sup> Philip D. Olson, *Notes: Decision Making Type I and Type II Error Analysis*, 20 CAL. MGMT. REV. 81 (1997).

<sup>2</sup> *Id.* at 82.

<sup>3</sup> *Id.*

purposes. Alliances did not spare major U.S. airlines from bankruptcy. There were frequent “open skies” agreements even without antitrust immunity.

It is unlikely that the joint ventures’ efficiency benefits and antitrust immunity goal to encourage metal-neutrality have materialized. The regulators never thought about integration problems, competing goals, and different corporate cultures. Hence, it is unlikely that joint ventures’ efficiency benefits counteracted anticompetitive effects.

In examining the potential anticompetitive impacts, the regulators did not fully appreciate the potential for restrictive trade practices—such as market foreclosure, switching costs, and access to hubs (e.g., slots, gates, check-in counters)—and the possibility of lessening competition in markets beyond countries or continents covered by the immunity. The European Commission (EC) and the DOT did note the potential for market foreclosure. Even though they acknowledged this possibility, market foreclosure did not influence their decisions because there was no evidence at the time of the proposed joint venture causing market foreclosure.<sup>4</sup> Evidence became available years after the opportunity to observe joint ventures’ operations and competitive behavior. Time limits for antitrust immunity and periodic reviews are thus warranted.

Therefore, governments should administer mandatory interlining, open access to frequent flyer programs, and time limits on antitrust immunity. While these recommendations do not guarantee flourishing competition in many international markets, they are critical for creating equal opportunity.

## I. INTRODUCTION

**N**ORTHWEST AIRLINES (NORTHWEST) and KLM Royal Dutch Airlines (KLM) made the first request to the DOT for antitrust immunity (ATI) in 1992.<sup>5</sup> The DOT granted immunity on January 11, 1993.<sup>6</sup> Subsequently, the Northwest-KLM alli-

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<sup>4</sup> Michael Gremminger, *The Commission’s Approach Towards Global Airline Alliances—Some Evolving Assessment Principles*, 1 EC COMPETITION POL’Y NEWSL. 75, 78 (2003).

<sup>5</sup> U.S. Dep’t of Transp., Joint Application of Northwest Airlines, Inc. and KLM Royal Dutch Airlines, Docket OST-95-579-1 (Sept. 9, 1992).

<sup>6</sup> U.S. Dep’t of Transp., Final Order, Joint Application of Northwest Airlines, Inc. and KLM Royal Dutch Airlines, Docket OST-95-579-34 (Jan. 11, 1993).

ance expanded.<sup>7</sup> There are now twelve active immunized alliances administered by the Secretary of Transportation in the United States<sup>8</sup>:

1. America–LAN–Lan Peru: “The Final Order imposed carve outs for U.S. point-of-sale traffic affecting time sensitive travelers” between Miami and Lima, and Miami and Santiago.<sup>9</sup>
2. Oneworld Transatlantic—American Airlines, British Airways, Iberia, Líneas Aéreas de España, S.A., Finnair, and Royal Jordanian Airlines: “The authority was granted subject to a slot remedy.”<sup>10</sup>
3. American Airlines and Japan Airlines.<sup>11</sup>
4. SkyTeam II—Delta Air Lines, Northwest Airlines, KLM/Air France, Alitalia, and Czech Airlines.<sup>12</sup>
5. Delta–Virgin Blue Group.<sup>13</sup>
6. Delta–Aeromexico: The authority was granted subject to the transfer of twenty-four slot-pairs for service between the U.S. and Mexico City; antitrust immunity expires after five years.<sup>14</sup>
7. United–Air New Zealand: “The alliance is subject to carve outs for all U.S. point-of-sale time-sensitive passengers in

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<sup>7</sup> U.S. Dep’t of Transp., Show Cause Order, Joint Application of Alitalia-Compagnia Aerea Italiana S.p.A., Czech Airlines, Delta Air Lines, Inc., KLM Royal Dutch Airlines, Northwest Airlines, Inc, and Société Air France, Docket OST-2007-28644 (May 19, 2009).

<sup>8</sup> There are also four other immunized joint ventures, which do not involve U.S. carriers: Lufthansa and Singapore Airlines; Japan Airlines, British Airways, and Finnair—linking Japan and Europe; Lufthansa and All Nippon Airways (ANA); and Air Asia and ANA—linking Japan and India. See Jenny Southan, *Airline Joint Ventures: Marriage of Convenience*, BUS. TRAVELER (Sept. 28, 2017), <https://www.business traveller.com/features/airline-joint-ventures-marriage-convenience/> [<https://perma.cc/FB9Y-FTLA>].

<sup>9</sup> U.S. DEP’T OF TRANSP., AIRLINE ALLIANCES OPERATING WITH ANTITRUST IMMUNITY 4 (2014), <https://www.transportation.gov/sites/dot.gov/files/docs/140507%20-%20All%20Immunized%20Alliances.pdf> [<https://perma.cc/AK9J-AUTH>]. Docket OST-2016-0087 is currently pending to extend the immunity to cover the entire LATAM Airlines Group. *Id.* at 6.

<sup>10</sup> *Id.* at 5. “For a period of [ten] years from the date of approval, applicants must transfer four slot pairs at London Heathrow to competitors: [two] for Heathrow-Boston services and [two] for services between Heathrow and any U.S. city.” *Id.*

<sup>11</sup> *Id.*

<sup>12</sup> *Id.* at 7.

<sup>13</sup> *Id.* at 7–8.

<sup>14</sup> *Id.* at 8.

the Los Angeles–Auckland and Los Angeles–Sydney markets.”<sup>15</sup>

8. United–Copa.<sup>16</sup>

9. United–Asiana.<sup>17</sup>

10. Star Alliance—United, Brussels, Lufthansa, Air Canada, SAS, Austrian, LOT, Swiss, TAP, and British Midland International.<sup>18</sup>

11. United–ANA.<sup>19</sup>

12. SAS–Iceland Air.<sup>20</sup>

Under 49 U.S.C. § 41308(b), the DOT may exempt airlines from the antitrust laws to allow a proposed transaction to proceed.<sup>21</sup> The DOT’s review of international alliance agreements considers competitive and public interests:

The DOT’s review of international alliance agreements has two steps. The DOT first determines whether an agreement “substantially reduces or eliminates competition.” The DOT applies the principles contained in the antitrust agencies’ Horizontal Merger Guidelines and uses the Clayton Act test, which “requires [considering] whether the Alliance Agreements are likely to substantially reduce competition and facilitate the exercise of market power” in relevant markets. If the DOT determines that an agreement is anticompetitive, then [it must not grant ATI to the joint venture,] unless the DOT finds that the agreement “is necessary to meet a serious transportation need or to achieve important public benefits” and there is no less-anti competitive alternative. If the DOT approves an anticompetitive agreement on those grounds, then it must exempt [the agreement] from the antitrust laws.<sup>22</sup>

But why is antitrust immunity even necessary? Can the DOT allow alliance members to cooperate however they want and mon-

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<sup>15</sup> *Id.* at 10–11.

<sup>16</sup> *Id.* at 11.

<sup>17</sup> *Id.* at 12.

<sup>18</sup> *Id.* at 13. British Midland International ceased operations in 2012. *Id.* at 12. In an earlier United–Lufthansa case, “[t]he alliance [was] subject to carve outs for U.S. point-of-sale nonstop O&D traffic in the Chicago-Frankfurt and Washington-Frankfurt markets.” *Id.* at 10. Similarly, in an earlier United–Air Canada case, this “alliance was subject to carve outs for all U.S. point-of-sale local O&D traffic in the Chicago-Toronto and San Francisco-Toronto markets.” *Id.*

<sup>19</sup> *Id.* at 13.

<sup>20</sup> *Id.*

<sup>21</sup> 49 U.S.C. § 41308(b) (2018).

<sup>22</sup> William Gillespie & Oliver M. Richard, *Antitrust Immunity Grants to Joint Venture Agreements: Evidence from International Airline Alliances*, 78 ANTITRUST L.J. 443, 447–48 (2012); see Clayton Act, 15 U.S.C. § 18 (2017).

itor their behavior *ex post* to ensure that they do not violate the Sherman Act, Clayton Act, or the Federal Trade Commission Act provisions—the triumvirate of U.S. antitrust laws?

The answer partly lies in the *per se* rule for § 1 of the Sherman Act. As noted on the Federal Trade Commission (FTC) website:

The Sherman Act outlaws “every contract, combination, or conspiracy in restraint of trade,” and any “monopolization, attempted monopolization, or conspiracy or combination to monopolize.” Long ago, the Supreme Court decided that the Sherman Act does not prohibit *every* restraint of trade, only those that are *unreasonable*. . . . [C]ertain acts are considered so harmful to competition that they are almost always illegal. These include plain arrangements among competing individuals or businesses to fix prices, divide markets, or rig bids. These acts are “*per se*” violations of the Sherman Act; in other words, no defense or justification is allowed.<sup>23</sup>

Furthermore, the penalties can be quite severe:

Although most enforcement actions are civil, the Sherman Act is also a criminal law, and individuals and businesses that violate it may be prosecuted by the Department of Justice. Criminal prosecutions are typically limited to intentional and clear violations such as when competitors fix prices or rig bids. The Sherman Act imposes criminal penalties of up to \$100 million for a corporation and \$1 million for an individual, along with up to 10 years in prison. Under federal law, the maximum fine may be increased to twice the amount the conspirators gained from the illegal acts or twice the money lost by the victims of the crime, if either of those amounts is over \$100 million.<sup>24</sup>

According to the FTC, price fixing goes beyond agreements to set prices, including “shipping fees, warranties, discount programs, or financing rates.”<sup>25</sup> Antitrust scrutiny and a *per se* violation can cover competitors discussing any of the following: capacity, identity of customers, allocation of customers or sales areas, production quotas, or terms of condition of sales.<sup>26</sup>

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<sup>23</sup> *The Antitrust Laws*, FED. TRADE COMM’N, <https://www.ftc.gov/tips-advice/competition-guidance/guide-antitrust-laws/antitrust-laws> [https://perma.cc/WU9Q-L5EM] (emphasis in original).

<sup>24</sup> *Id.*

<sup>25</sup> *Price Fixing*, FED. TRADE COMM’N, <https://www.ftc.gov/tips-advice/competition-guidance/guide-antitrust-laws/dealings-competitors/price-fixing> [https://perma.cc/E46A-VQZN].

<sup>26</sup> *Id.*

Thus, without ATI, the alliances would not be able to proceed with any explicit or tacit cooperation. Neither the European Union (Articles 101 and 102 of the Treaty on the Functioning of the European Union) nor Canada (Competition Act) have similar per se prohibitions on price fixing.<sup>27</sup> Price fixing is illegal in both the European Union and Canada, but this behavior is subject to investigation, for there might be some positive benefits for consumers.

There were other reasons the DOT was willing to grant ATI. The DOT saw this as an incentive for countries to enter into open skies agreements with the United States.<sup>28</sup> Indeed, the DOT claimed that an open skies agreement was a necessary condition for granting ATI to an alliance.<sup>29</sup> In addition, the DOT believed that immunized alliances—particularly, metal-neutral joint ventures (JV)—would encourage airlines to cooperate fully and thus permit them to maximize the theoretical benefits for consumers.<sup>30</sup> According to an EC-U.S. report:

Integrated JVs give members of alliances the strongest incentives to cooperate on sales and pricing, because the individual carriers no longer seek to maximise their own revenue, but rather the revenue of the network. A key component of an agreement designed to achieve “metal-neutrality” is fare combinability, in which the customers are able to view fares for different segments and combine them easily into a single itinerary.<sup>31</sup>

Alliances developed as a way to circumvent foreign ownership limits<sup>32</sup> and cabotage restrictions<sup>33</sup> while enhancing the alli-

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<sup>27</sup> See Consolidated Version of the Treaty on the Functioning of the European Union arts. 101–02, March 30, 2010, 2010 O.J. (C 83) 47 [hereinafter TFEU]; see also Competition Act, 1985 R.S.C., c C-34, §§ 90(2)(e)–(f), 93(f)–(g) (Can.) [hereinafter Competition Act].

<sup>28</sup> See The Republic of Korea, *Antitrust Immunity for Airline Alliances 2* (Int'l Civil Aviation Org., Working Paper No. 85, 2013), [https://www.icao.int/Meetings/atconf6/Documents/WorkingPapers/ATConf6-wp85\\_en.pdf](https://www.icao.int/Meetings/atconf6/Documents/WorkingPapers/ATConf6-wp85_en.pdf) [<https://perma.cc/MLZ9-5JDM>] [hereinafter *Air Transport Conference*].

<sup>29</sup> See *id.* Obviously, the DOT no longer believes this to be a requirement since it approved the Delta–Aeromexico JV and the United States and Mexico do not have an open skies agreement. AIRLINE ALLIANCES OPERATING WITH ANTITRUST IMMUNITY, *supra* note 9, at 8.

<sup>30</sup> EUR. COMM'N & U.S. DEP'T OF TRANSP., TRANSATLANTIC AIRLINE ALLIANCES: COMPETITIVE ISSUES AND REGULATORY APPROACHES 7–8 (2010), [http://ec.europa.eu/competition/sectors/transport/reports/joint\\_alliance\\_report.pdf](http://ec.europa.eu/competition/sectors/transport/reports/joint_alliance_report.pdf) [<https://perma.cc/LAH4-EVV3>] [hereinafter TRANSATLANTIC AIRLINE ALLIANCES].

<sup>31</sup> *Id.* at 22.

<sup>32</sup> The United States, like most other countries, has foreign ownership restrictions on U.S. airlines. *Airline Ownership and Control Rules: At Once Both Irrelevant*

ances' competitive positions.<sup>34</sup> Without ATI in the United States, the potential benefits for U.S. airlines entering into a joint venture with other members of an alliance might be limited. Nevertheless, there were some benefits for U.S. airlines in joining an alliance.

This article thus addresses four different questions:

1. If alliances and, particularly, metal-neutral joint ventures produce significant benefits for consumers, then why not grant them ATI subject to periodic reviews to ensure that the benefits do materialize and continue to exceed the potential costs of lessening competition, where lessening competition extends beyond § 7 of the Clayton Act and includes § 2 of the Sherman Act?
2. Alternatively, why not grant ATI to a joint venture with a time limit (e.g., a five-year limit as in the Delta–Aeromexico case), subject to another review to determine whether the ATI should be extended for another fixed period of time?
3. Or, why not attach conditions other than carve outs to any ATI?<sup>35</sup>
4. Finally, should ATI have been granted in the first place?

## II. THE HYPOTHETICAL BENEFITS

With regard to questions one and two, the common argument against imposing any time limits on ATI is that this likely would deter the airlines proposing a joint venture from integrating their operations for fear that they might have to incur substantial costs at a later date to dismantle the joint venture. The FTC states, “The premerger notification requirements of the Hart–Scott–Rodino Act allow the antitrust agencies to examine the likely effects of proposed mergers before they take place. This advance notice avoids the difficult and potentially ineffec-

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*and Enduring*, CAPA: CENTRE FOR AVIATION (June 4, 2017), <https://centreforaviation.com/analysis/resports/airline-ownership-and-control-rules-at-once-both-ir-relevant-and-enduring-345816> [<https://perma.cc/C2HL-BY7G>].

<sup>33</sup> In air service agreements, airlines (e.g., non-U.S. airlines) are not allowed to carry domestic O&D passengers between two cities in a foreign market (e.g., any two cities in the United States). *Cabotage and Aviation Rules Relating to Cabotage on International Flights*, AIRCRAFT OWNERS & PILOTS ASS'N, <https://www.aopa.org/travel/international-travel/cabotage> [<http://perma.cc/864C-2C6U>].

<sup>34</sup> TRANSATLANTIC AIRLINE ALLIANCES, *supra* note 30, at 13, 23.

<sup>35</sup> Consent agreements are quite common as part of the approval process for mergers in the United States.

tive ‘unscrambling of the eggs’ once an anticompetitive merger has been completed.”<sup>36</sup> The Organisation for Economic Co-operation and Development (OECD) has pointed out: “far-reaching joint ventures[ ] are deemed more likely to achieve merger-like synergies and efficiencies. At the same time, they may require substantial investments by the allied airlines to implement the foreseen level of integration, and integration can be difficult to adjust or unwind if needed.”<sup>37</sup>

Since integration in a joint venture generates benefits for consumers, the deterrent effect could have greatly limited the potential benefits and diminished the value of ATI. However, the FTC and Department of Justice established precedent in investigating completed mergers that later harmed customers.<sup>38</sup> Furthermore, if the airlines proposing a joint venture truly believed that ATI and the subsequent investments in creating metal-neutral operations would generate net benefits for consumers, then why should they worry about time limits and future reviews? The only uncertainty emanates from the possibility that the joint venture would not produce net benefits. This would be discovered in a future review that measures rather than hypothesizes the efficiencies and anticompetitive effects. Nevertheless, it is necessary to examine the benefits, including broader public interest benefits, which joint ventures among airlines in an alliance should produce to counter criticism to imposing any limits on ATI.

Joint ventures among airlines are analogous to a merger, especially since there are foreign ownership restrictions in the airline industry.<sup>39</sup> Hence, for joint venture agreements to be approved by the authorities responsible for enforcing the antitrust laws, like mergers, they must generate efficiencies and cost savings to offset the anticompetitive effects. Section 7 of the Clayton Act forbids mergers and acquisitions that may be harmful to “competition, or tend to create a monopoly.”<sup>40</sup> But as the FTC has pointed out on its website:

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<sup>36</sup> *Mergers*, FED. TRADE COMM’N, <https://www.ftc.gov/tips-advice/competition-guidance/guide-antitrust-laws/mergers> [<https://perma.cc/ZS22-JZT8>].

<sup>37</sup> Org. Econ. Cooperation & Devel., AIRLINE COMPETITION 11 (June 12, 2014), [http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP\(2014\)14&docLanguage=EN](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP(2014)14&docLanguage=EN) [<https://perma.cc/9R3J-68H7>].

<sup>38</sup> *Mergers*, *supra* note 36.

<sup>39</sup> See TRANSATLANTIC AIRLINE ALLIANCES, *supra* note 30, at 7–8, 13.

<sup>40</sup> *Mergers*, *supra* note 36.

Many mergers produce savings by allowing the merged firms to reduce costs, eliminate duplicate functions, or achieve scale economies. Firms will often pass merger-specific benefits on to consumers in the form of lower prices, better products, or more choices. The agencies [FTC and Department of Justice] are unlikely to challenge mergers when the efficiencies of the merger prevent any potential harm that might otherwise arise from the proposed merger. Theoretical cost savings would not be enough, however; they must be demonstrated. And the efficiencies must involve a genuine increase in productivity. It is not enough for cost savings to result merely from a reduction in output, or from the assertion of newfound market power against suppliers. The price reductions should result from real efficiencies in the merger and not from reducing output or service.<sup>41</sup>

The key statement is, “[t]heoretical cost savings would not be enough, however; they must be demonstrated.”<sup>42</sup> Since it is unlikely that a proposed joint venture could demonstrate any up-

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<sup>41</sup> *Entry and Efficiencies*, FED. TRADE COMM’N, <https://www.ftc.gov/tips-advice/competition-guidance/guide-antitrust-laws/mergers/entry-efficiencies> [<https://perma.cc/KW88-FPVY>]. The balance between anticompetitive effects and efficiencies is common in the competition laws of other countries. For example, under Canada’s Competition Act, among the factors to be considered in both mergers (§ 92) or agreements (§ 90) are the following: “the extent to which effective competition remains or would remain in the market” and removal of an effective competitor, or likelihood that a merger or agreement “would result in the removal of such a competitor.” Competition Act, *supra* note 27, §§ 90(2)(e)–(f), 93(f)–(g). Section 90(4) sets out the efficiency exemption for agreements or arrangements:

The Tribunal shall not make an order under subsection (1) if it finds that the agreement or arrangement has brought about or is likely to bring about gains in efficiency that will be greater than, and will offset, the effects of any prevention or lessening of competition that will result or is likely to result from the agreement or arrangement, and that the gains in efficiency would not have been attained if the order had been made or would not likely be attained if the order were made.

*Id.* at § 90(4). Section 96(1) does the same for mergers:

The Tribunal shall not make an order under section 92 if it finds that the merger or proposed merger in respect of which the application is made has brought about or is likely to bring about gains in efficiency that will be greater than, and will offset, the effects of any prevention or lessening of competition that will result or is likely to result from the merger or proposed merger and that the gains in efficiency would not likely be attained if the order were made.

*Id.* at § 96(1).

<sup>42</sup> *Entry and Efficiencies*, FED. TRADE COMM’N, <https://www.ftc.gov/tips-advice/competition-guidance/guide-antitrust-laws/mergers/entry-efficiencies> [<https://perma.cc/KW88-FPVY>].

front efficiencies, this should support the argument favoring periodic reviews of an ATI grant. Such reviews would examine whether theoretical cost savings materialized and, if so, the magnitude of these savings. Without *ex post* periodic reviews, the entire exercise is theoretical and abstract.

What are the possible efficiency gains from an airline alliance? The EC and the DOT have suggested:

Global alliances allow airlines to link their networks of routes and sell tickets on the flights of their commercial partners, thereby offering travellers access to hundreds of destinations around the world on a single virtual network. Airlines participating in an alliance aim to provide value to consumers by creating a comprehensive route network, more convenient and better coordinated schedules, single on-line prices, single point check-in, coordinated service and product standards, reciprocal frequent flyer programs, and service upgrade potential.<sup>43</sup>

As an example, authors Dean and Shane indicated that, in granting ATI to the expanded Star alliance in 2009, the DOT concluded:

[T]he alliance would produce “numerous public benefits,” including

- an expanded network serving many new cities;
- new online service, including both new routes and expanded capacity on existing routes;
- enhanced service options such as more routings, reduced travel times, expanded nonstop service in selected markets, new fare products, and integrated corporate contracting and travel agency incentives;
- enhanced competition due to the addition of a major new gateway, the elimination of multiple markups on code-share segments, and more vigorous competition between alliances;
- cost efficiencies;
- strengthened financial positions for the participating carriers; and
- substantial economic benefits to communities.<sup>44</sup>

The EC and the DOT added additional benefits:

Lower costs and increased capacity through increased density[:]  
... Perhaps one of the most fundamental potential benefits from consolidation or cooperation arises from economies of scale, or

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<sup>43</sup> TRANSATLANTIC AIRLINE ALLIANCES, *supra* note 30, at 8.

<sup>44</sup> Warren L. Dean, Jr. & Jeffrey N. Shane, *Alliances, Immunity, and the Future of Aviation*, 22 AIR & SPACE LAW. 1, 19 (2010).

lower per-unit costs from an increased level of output. By participating in an alliance, airlines can enjoy lower per-passenger costs when they increase the number of passengers carried on their existing network, a phenomenon known as economies of density. When two airlines cooperate, by joining their respective feeder flows, the alliance may serve a larger pool of customers and can realise cost savings by carrying additional passengers over trunk routes.<sup>45</sup>

The DOT continues to believe that immunized joint ventures, particularly metal-neutral joint ventures, encourage airlines to fully cooperate and thus permit them to maximize the “theoretical” benefits for consumers.<sup>46</sup> But the airlines in a joint venture would have an even greater incentive to generate efficiencies and pass on some of the benefits to consumers if the joint venture is reviewed periodically. They must actually produce the benefits, rather than claim *ex ante* that benefits would materialize to extend ATI.

On the other hand, almost twenty years ago, Joos Stragier, who was then the Deputy Head of Directorate-General (DG) for Competition in the EC, pointed out the potential anticompetitive effects of alliances:

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<sup>45</sup> TRANSATLANTIC AIRLINE ALLIANCES, *supra* note 30, at 21. Star Alliance, as well as the other global alliances, have emphasized the following advantages, most of them repeating the views of the DOT:

Customer Benefits:

Customers enrolled in any of the Star Alliance member airlines’ frequent flyer programmes (FFP) can collect and redeem miles, kilometres or points on any member carrier. Accrued mileage counts towards higher status in the customer’s selected FFP and can also be redeemed for a one cabin upgrade on any of the member airlines.

• • • •

*Convenient schedules*[:]

By providing convenient arrival and departure times, Star Alliance member airlines have optimised connections within the network, thereby connecting times for passengers.

*Seamless Travel*[:]

Through check-in, joint ticketing, check-in and baggage facilities, co-location and connection teams at key airports—these all play a role in creating a smoother travel experience. Star Alliance Gold customers can now also make use of the dedicated Gold Track security checks at many airports across the globe.

*Star Alliance—The Way the Earth Connects*, STAR ALLIANCE, <https://www.staralliance.com/documents/20184/680657/General%2BStar%2BBackgrounder/0e31a9c3-2a75-4091-b1ae-8324db1997d7> [https://perma.cc/2PQV-D8TZ] (last updated June 30, 2017).

<sup>46</sup> See TRANSATLANTIC AIRLINE ALLIANCES, *supra* note 30, at 7–8.

Airline alliances therefore raise fundamental questions about their effect on competition in air services. . . .

In particular, an alliance can significantly reduce competition on overlapping non-stop routes and overlapping connecting routes where the allied airlines were once main competitors. Even where the two networks do not overlap in the markets they serve, the alliance can have serious anti-competitive effects by reducing or eliminating competition on the hub-to-hub route(s) between the networks. Moreover, alliances between airlines operating hub-and-spoke networks will normally enhance demand for the network as a whole and increase the market power of the network, especially at its hub airports. This entails the risk of rendering still more difficult new entry into the network's markets to the detriment of both international and domestic competition.<sup>47</sup>

While not explicitly stated, it appears that Stragier saw the potential for market foreclosure by alliances, especially if non-alliance airlines were precluded from attracting feed traffic at hubs.<sup>48</sup> Fifteen years later, the OECD emphasized these same concerns, and explicitly acknowledged the possibility of market foreclosure:

A secondary concern in international markets is restricted access to domestic feed traffic for non-allied carriers at hub airports dominated by alliance partners (referred to as "vertical" effects). If allied carriers can effectively foreclose access to feeder traffic to other non-allied competitors at their hubs, then the viability of competitors' operations on international routes from those hubs may be reduced.<sup>49</sup>

While the DOT and other countries' competition authorities acknowledge that joint ventures lessen competition in many city-pair markets, they expected the benefits of the postulated efficiencies to exceed the costs (i.e. higher fares) of lessening competition.<sup>50</sup>

Even if the efficiencies and cost savings of a joint venture did not exceed the costs of lessening competition, the DOT would

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<sup>47</sup> Joos Stragier, *Current Issues Arising with Airline Alliances*, EURO. AIR L. ASS'N 42, 42-43 (Nov. 5, 1999), [http://ec.europa.eu/competition/speeches/text/sp1999678\\_en.html](http://ec.europa.eu/competition/speeches/text/sp1999678_en.html) [<https://perma.cc/FW5Q-V84M>].

<sup>48</sup> See *id.* at 41-42, 44-45.

<sup>49</sup> Int'l Transp. Forum, *Air Service Agreement Liberalisation and Airline Alliances*, ORG. ECON. COOPERATION & DEVEL. 1, 47 (2014), <https://www.itf-oecd.org/sites/default/files/docs/14airserviceagreements.pdf> [<https://perma.cc/6CL8-TM7Z>].

<sup>50</sup> Natalia Nunes et al., *The Economic Impact of Airline Alliances*, PRODUCTIVITY COMM'N 1, 46 (May 29, 1997), <https://www.pc.gov.au/research/supporting/airline-alliances/aircraft.pdf> [<https://perma.cc/MS9J-H3F3>].

argue that there were “public interest” reasons for granting ATI.<sup>51</sup> The DOT saw the possibility of granting ATI as an incentive for countries to enter into open skies agreements with the United States.<sup>52</sup> The DOT believed that these types of air service agreements would be more conducive to promoting competition than the old bilateral agreements.<sup>53</sup>

During the 2009 Star proceedings, as well as in 1992 at the time of the original Northwest–KLM case, “the airline industry [was] mired in [a] global economic recession.”<sup>54</sup> Thus, the DOT added that an antitrust immunity grant served the public interest because it would “help Continental and the other [Star alliance] participants manage cyclical changes in the industry to preserve existing services, with a view towards increasing capacity and enhancing competition between carriers and alliances.”<sup>55</sup> Effectively, alliances were seen as a way to protect and augment the competitive position of the so-called legacy airlines and to restore some degree of stability to the industry.<sup>56</sup>

Airlines, like companies in other industries, face a classic prisoner’s dilemma with regard to expected market growth.<sup>57</sup> For example, if there are four companies competing in a market with each one currently having 25% of the total capacity, and each company expects the market to grow by 20% over the next three years, then each company faces the following dilemma: does it expand its capacity by 20%, or does it try to capture the entire growth in the market and thus expand its capacity by 80%?<sup>58</sup>

If there are economies of scale, technology adoption advantages, bargaining advantages against suppliers or customers, or other advantages in having a larger market share than competitors—e.g., the S-curve phenomenon in the airline industry—then each company might be tempted to capture the entire ex-

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<sup>51</sup> See Gillespie & Richard, *Antitrust Immunity Grants*, *supra* note 22, at 467.

<sup>52</sup> See *Air Transport Conference*, *supra* note 28, at 2.

<sup>53</sup> See TRANSATLANTIC AIRLINE ALLIANCES, *supra* note 30, at 10.

<sup>54</sup> See Gillespie & Richard, *Antitrust Immunity Grants*, *supra* note 22, at 467.

<sup>55</sup> *Id.* at 467 (alterations in original).

<sup>56</sup> See TRANSATLANTIC AIRLINE ALLIANCES, *supra* note 30, at 3.

<sup>57</sup> See *Airlines Face the Prisoner’s Dilemma*, OPENLEARN (Oct. 2006), [www.open.edu/openlearn/money-management/management/business-research-methods/airlines-face-the-prisoners-dilemma](http://www.open.edu/openlearn/money-management/management/business-research-methods/airlines-face-the-prisoners-dilemma) [<https://perma.cc/ER76-GW8N>].

<sup>58</sup> See *id.*

pected growth of the market.<sup>59</sup> Otherwise, if a company falls behind one or more of its competitors, it might be driven out of the market altogether. Of course, there is the downside of growing too rapidly as the capability to manage the growth is exacerbated by the increased complexity.

If the companies cooperate, they would likely agree to increase their respective capacities by 20%. If the market grew by 20%, no excess capacity would materialize, and there would be no need to compete aggressively, especially on price, to fully utilize the existing capacity. However, without cooperation, each company would likely increase its capacity by more than 20% and up to 80%, depending on the managements' confidence. This would cause substantial excess capacity and inevitable price wars.

Before Star Alliance's creation in 1997, overinvestment in capacity, price wars, and poor financial performance tainted the airline industry.<sup>60</sup> Alliances provided a mechanism for avoiding the prisoner's dilemma downside by controlling fleet and route expansion.<sup>61</sup>

### III. ALTERNATIVE MEANS FOR COOPERATION AMONG AIRLINES

Airlines can work together by interlining, code-sharing, creating a joint venture, or through partial and complete acquisitions. The OECD spelled out the advantages of interlining and code-sharing and the distinctions between them:

Interlining makes multi-carrier journeys seamless: at a transit airport, passengers do not have to collect their luggage or to check

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<sup>59</sup> Urs Bingelli & Lucio Pompeo, *Analyst Viewpoint: Does the S-Curve Still Exist?*, INT'L AIR TRANSP. ASS'N (Sept. 2006), [https://www.iata.org/publications/economics/Reports/Mckinsey\\_SCurve.pdf](https://www.iata.org/publications/economics/Reports/Mckinsey_SCurve.pdf) [<https://perma.cc/MUS2-74HU>].

<sup>60</sup> See *30 Seconds About Us: Star Alliance Leads the Way*, STAR ALLIANCE, <https://www.staralliance.com/en/about> [<https://perma.cc/JUP7-USRK>].

<sup>61</sup> In the classic, perfect competition models, which have been at the core of economic theory for decades and serve as the ideal to be replicated by competition policy, the entry and exit process is not stable. Without anyone controlling this process, it is easy to demonstrate that once there is a demand or supply shock in such models, and given their underlying assumptions, especially of perfect information, instability and the inability to restore a new equilibrium are the outcomes. The now discredited theory of contestability, which spurred the move to deregulate the U.S. airline industry in the 1970s, is based on assumptions of perfect information, zero entry and exit costs, and the possibility of a hit-and-run entry. *Contestable Market Theory*, INVESTOPEDIA, <https://www.investopedia.com/terms/c/contestablemarket.asp> [<https://perma.cc/9E9W-4S2Q>].

in again, and their baggage will automatically follow through to their final destination. Deeper and more effective interlining co-operation emerged through code-sharing agreements. Under a code-share agreement, a flight operated by one carrier (“operating carrier”) can be marketed by partner airlines too (“marketing carriers”) under their own code and designator. In other words, code-sharing allows two or more airlines to share the same flight while selling tickets on this flight as their own.<sup>62</sup>

Code-sharing provides two advantages over interlining. This strategy enables an airline to advertise that it has a more extensive network than it operates with its own aircraft.<sup>63</sup> And code-shared flights are listed separately in global distribution systems, thus increasing the likelihood that someone searching for a flight between two destinations will limit the search and select one of the code-share flights. Otherwise, code-sharing adds little incremental value to simple interlining.

Alliances facilitate a more comprehensive system of code-sharing with added features such as access to a larger selection of lounges and the ability to receive frequent flyer credits with more airlines.<sup>64</sup> Interline agreements also could include access to more lounges and expand the scope for receiving frequent-flyer credits. Author Vinay Bhaskara has noted the following:

Joint Ventures are better for airlines than normal code share or blocked space agreements because they allow for the explicit coordinating of schedules, sharing of revenues/costs, and (in a more cynical sense) the blatant control or reduction of capacity and thus increase in fares and profits in previously competitive markets.<sup>65</sup>

Interlining should not raise any concerns for competition authorities. Indeed, interlining should be beneficial for both consumers and competition.

Similarly, there should not be any competition concerns with code-sharing,<sup>66</sup> unless the airlines explicitly forbid interlining with other airlines. In the case of alliances, if the members of the alliances are not allowed to enter into interline agreements

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<sup>62</sup> AIRLINE COMPETITION, *supra* note 37, at 10.

<sup>63</sup> *See id.*

<sup>64</sup> *Id.* at 27.

<sup>65</sup> Vinay Bhaskara, *The Global Airline Alliances are Outdated*, AIRWAYS MAG. (Apr. 8, 2016, 1:02 PM), <https://airwaysmag.com/industry/global-airline-alliances-outdated/> [https://perma.cc/BP6X-7VRC].

<sup>66</sup> AIRLINE COMPETITION, *supra* note 37, at 29 n.149 (agreeing that “Code-sharing or co-operation regarding check in, gate terminal, lounge, luggage, would not usually require immunity”).

with non-alliance airlines, such exclusivity provisions could cause market foreclosure.<sup>67</sup> For example, preventing non-alliance airlines to interline with one or more alliance members could deprive the non-alliance airline of feed at one or more alliance hub airports and, thus, limit the ability of the non-alliance airline to offer a competitive service on certain routes beyond the hub(s).<sup>68</sup>

Even joint ventures do not require antitrust immunity but for the *per se* rule in the United States. Either they create net benefits for consumers, or they act in an anticompetitive manner.<sup>69</sup> The competition authorities could determine which is the case *ex post* and take actions if the joint venture proved to be anticompetitive. Of course, the other “public interest” benefits cited by the DOT would have to be considered as well if the lessening competition costs exceeded the efficiency and other benefits of a joint venture. But as is argued below, the open skies policy and the financial stability public interest benefits are both questionable. William Gillespie and Oliver Richard, both with the U.S. Department of Justice, partially agree and disagree with this view:

If the alliance partners are not competitors (as could be true on many routes like Atlanta-Toulouse), then no antitrust immunity is needed and the partners may jointly decide on fares and other

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<sup>67</sup> Volodymyr Bilotkach & Kai Hüsichelrath, *Antitrust Immunity for Airline Alliances*, 14–16, 33 (Ctr. For Eur. Research, Discussion Paper No. 10-080, 2014), <ftp://ftp.zew.de/pub/zew-docs/dp/dp10080.pdf> (last visited Nov. 5, 2018).

<sup>68</sup> *See id.* The non-alliance airline might not be able to operate at all on select routes, multiple daily flights, or even single daily flights on certain routes. *See id.* This would place the airline at a competitive disadvantage, especially in attracting business travelers and time-sensitive leisure travelers. *See id.*

<sup>69</sup> *See generally* Sherman Act, 15 U.S.C. § 2 (2017); Federal Trade Commission Act, 15 U.S.C. § 45 (2012); TFEU, *supra* note 27, arts. 101–02; Competition Act, *supra* note 27, §§ 75, 77–78. While PanAm, TWA, and Laker Airways all failed prior to the creation of the first major alliance, PanAm and TWA failed primarily because they lacked domestic market feed, and Laker Airways failed because of predatory pricing and capacity expansion on the London to U.S. routes. *See, e.g.*, Robert J. Byrne, *Lots of Reasons Why Pan Am Failed*, WASH. POST, [https://www.washingtonpost.com/archive/opinions/1992/01/25/lots-of-reasons-why-pan-am-failed/ec58b7ee-7287-496c-8a63-343a25d2fce9/?noredirect=on&utm\\_term=.4eeac99f60ca](https://www.washingtonpost.com/archive/opinions/1992/01/25/lots-of-reasons-why-pan-am-failed/ec58b7ee-7287-496c-8a63-343a25d2fce9/?noredirect=on&utm_term=.4eeac99f60ca) [<https://perma.cc/WJF6-AK8L>]. And several Canadian airlines (e.g., Zoom, Harmony, Skyservice, Canada 3000), serving international markets, have failed in part due to a lack of domestic feed both in Canada and in foreign markets. *See, e.g.*, *What Went Wrong at Canada 3000? One Analyst's View*, CBC NEWS (Nov. 9, 2001), <https://www.cbc.ca/news/business/what-went-wrong-at-canada-3000-one-analyst-s-view-1.260214> [<https://perma.cc/P7HX-RSMV>] (noting Canada 3000's failed attempt to enter the domestic market).

competitively sensitive matters. If the alliance partners are competitors, and the alliance agreement is arm's-length, then the carrier operating the flight determines seat availability for the marketing partner but each airline sets prices competitively. All sales revenues go to the operating carrier, and the marketing carrier gets a booking fee to cover handling costs. The partners may in certain instances adjust flight schedules and operations to provide seamless service on code-share flights. They may also agree to link their frequent-flyer programs to allow a customer to use frequent-flyer miles accumulated with one airline to redeem awards with a partner. If the alliance partners are competitors and the alliance agreement is granted antitrust immunity, then the partners may jointly decide on fares, schedules, and other competitively sensitive matters across the routes that they include in the alliance agreement.<sup>70</sup>

#### IV. CRITIQUE OF THE ARGUMENTS IN FAVOR OF GRANTING ATI TO ALLIANCES

##### A. DIVERSIFICATION

One of the perceived benefits of alliances and joint ventures was the ability of airlines to diversify their market presence. They no longer depended on their respective domestic markets and a handful of international flights from their domestic hubs. Geographic diversification should have reduced revenue and profit variability, and lessened bankruptcy risks—one of the public interest benefits the DOT expected.

Finance principles demonstrate how diversification reduces financial risks, as long as the prices of different asset classes or economic conditions in different geographic or product markets are negatively correlated.<sup>71</sup> The problem the alliances encountered in 2001–2002 and 2008–2009 was that economic conditions in various geographic markets tended to be positively correlated.<sup>72</sup> That is, an economic downturn in one market was

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<sup>70</sup> Gillespie & Richard, *Antitrust Immunity Grants*, *supra* note 22, at 445–46.

<sup>71</sup> Ian Huntsley, *Diversification: Its All About (Asset) Class*, INVESTOPEDIA, <https://www.investopedia.com/articles/financial-theory/08/asset-class.asp> [https://perma.cc/H5CX-YTPT]. Finance principles support that individual investors can diversify their portfolios more completely and at a lower cost than companies. William Craig, *Business Diversification: The Risk and the Reward*, FORBES (Apr. 24, 2015, 2:12 PM), <https://www.forbes.com/sites/williamcraig/2015/04/24/business-diversification-the-risk-and-the-reward/#486650da7d09> [https://perma.cc/262G-TB5T] (generally noting the difficulty of business diversification).

<sup>72</sup> See John Edwards, *4 Reasons Why Market Correlation Matters*, INVESTOPEDIA (Feb. 25, 2016), <https://www.investopedia.com/articles/financial-advisors/02>

accompanied by economic downturns in almost every other market as a consequence of global economic integration.<sup>73</sup> Thus, diversification did not enable the airlines to minimize the impacts of negative economic shocks.<sup>74</sup> Indeed, the effects were compounded.

Furthermore, being part of an alliance did not help the major carriers in the United States and Canada from escaping bankruptcy. Notable bankruptcies include: US Airways (August 2002–March 2003); United (December 2002–February 2006); Air Canada (April 2003–September 2004); US Airways (September 2004–September 2005, acquired by America West); Northwest (September 2005–May 2007, acquired by Delta); Delta (September 2005–April 2007); and American (November 2011–December 2013).<sup>75</sup> The data in Table 1 shows how the operating revenues of all U.S. carriers declined sharply in all markets between 2000 and 2002, and 2008 and 2009.<sup>76</sup> The airlines could run in the alliances, but they could not shield themselves from negative economic shocks.

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2516/4-reasons-why-market-correlation-matters.asp [https://perma.cc/254D-ZA YG].

<sup>73</sup> *See id.*

<sup>74</sup> *See id.*

<sup>75</sup> *U.S. Airline Bankruptcies*, AIRLINES FOR AMERICA, <http://airlines.org/dataset/u-s-bankruptcies-and-services-cessations/> [https://perma.cc/D83N-ZXUS] (last visited Sept. 29, 2018).

<sup>76</sup> *See infra* Table 1.

Table 1. Operating Revenues Totals, All U.S. Carriers, 2000–2016 (U.S. \$000)<sup>77</sup>

	<b>Domestic</b>	<b>Latin America</b>	<b>Atlantic</b>	<b>Pacific</b>
2000	98,990	6,805	13,020	10,020
2001	86,520	6,534	12,084	8,793
2002	79,287	6,085	11,074	9,245
2003	88,870	6,401	11,727	8,976
2004	100,903	7,364	13,635	10,769
2005	111,858	8,619	15,565	12,618
2006	120,907	10,301	17,752	13,685
2007	124,503	11,804	20,712	14,346
2008	129,728	13,468	23,455	15,495
2009	109,681	11,321	18,882	11,914
2010	119,074	13,374	21,972	15,864
2011	132,822	15,270	22,998	17,441
2012	135,830	15,955	22,677	17,666
2013	139,145	17,383	23,453	17,025
2014	145,872	17,559	24,348	17,177
2015	146,932	16,246	23,205	16,375
2016	152,099	15,646	23,415	16,564

Source: US DOT, Bureau of Transportation Statistics, [transtats.bts.gov](http://transtats.bts.gov)

## B. COOPERATION

Another expected benefit of alliances, and of a joint venture granted ATI, was the ability of the airlines to work together to reduce costs, generate benefits for passengers, and improve their profitability. The DOT supported ATI and metal neutrality to incentivize the immunized airlines to cooperate.<sup>78</sup>

Proponents of the argument that only alliances and joint ventures could cooperate sufficiently to generate benefits conveniently overlooked several problems. First, they ignored the different ownership structures among the alliance members.

<sup>77</sup> Bureau of Transp. Statistics, *Operating Revenue*, U.S. DEP'T OF TRANSP., [https://www.transtats.bts.gov/Data\\_Elements\\_Financial.aspx?Data=7](https://www.transtats.bts.gov/Data_Elements_Financial.aspx?Data=7) [<https://perma.cc/DKL6-S3V8>].

<sup>78</sup> See Bilotkach & Hüschelrath, *supra* note 67, at 22.

There are several airlines in each of the alliances that are state-owned or controlled, or where the national government has a significant minority stake.<sup>79</sup> The following are some examples:

- Star: Air China (majority); Air India; Air New Zealand (majority); Croatia Airlines; Egyptair; Ethiopian; LOT; SAS (majority); Singapore (majority); South African; TAP (majority); Thai (majority); Turkish (significant minority)<sup>80</sup>
- Oneworld: Finnair (majority); Malaysia; Qatar; Royal Jordanian (majority); SriLankan (Qatar owns 20% of IAG and 10% of Latam)<sup>81</sup>
- SkyTeam: Aeroflot; Aerolineas Argentinas; Air France (minority); Garuda (majority); Kenya (significant minority); Saudia; Tarom; Vietnam.<sup>82</sup>

It is unlikely that the airlines in which their respective governments own equity stakes (ranging from a significant minority to 100%) have the same objectives as privately-owned airlines. Employment and economic development are key goals for the airlines with significant government ownership.<sup>83</sup> To further complicate matters, there are different legal regimes for labor in each country.

Second, compiling a number of different management teams is not likely to produce high levels of cooperation and coordination. Within each alliance, there are two or three carriers that would likely dominate and dictate the strategy for the entire alliance. And it is most unlikely that the Chinese carriers that have joined the alliances would accept the leadership of any other airlines.<sup>84</sup> More likely, they view an alliance as a partnership in which over time they will have more influence. This inevitably

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<sup>79</sup> *List of Government-Owned and Privatized Airlines*, INT'L CIVIL AVIATION ORG. (2016), [https://www.icao.int/sustainability/SiteAssets/Pages/Eap\\_ER\\_Databases/FINAL\\_Airlines%20Privatization.pdf](https://www.icao.int/sustainability/SiteAssets/Pages/Eap_ER_Databases/FINAL_Airlines%20Privatization.pdf) [<https://perma.cc/V6FL-MX52>].

<sup>80</sup> *Id.* at 3, 5–6, 8, 12–13, 15–17.

<sup>81</sup> *Id.* at 6, 9–10, 13, 16.

<sup>82</sup> *Id.* at 1, 6, 8–9, 13, 15, 19.

<sup>83</sup> Melanie Lieberman, *Why the United States Doesn't Have a National Airline*, TRAVEL & LEISURE (Mar. 18, 2018), <https://www.travelandleisure.com/airlines-airports/national-flag-carrier-explainer> [<https://perma.cc/25YZ-CMBE>].

<sup>84</sup> See Dan Reed, *American Airlines Finally Gets Its Long-Sought Key to China's Front Door—Or Does It?*, FORBES, <https://www.forbes.com/sites/danielreed/2017/03/29/american-airlines-finally-gets-its-long-sought-key-to-chinas-front-door-or-does-it/#227cce8a609c> [<https://perma.cc/7E5Y-9B9E>] (suggesting that it was difficult for airlines to enter the Chinese market and get Chinese airlines to join global alliances).

will lead to more friction with each alliance member. Airline management and employees generally believe that their business practices and pricing strategies (including the frequent-flyer rules, ancillary charges, etc.) are the “best in class.”<sup>85</sup> Thus, they are reluctant to cede authority over those practices to another alliance partner. Author Vinay Bhaskara has pointed out conflicts within Oneworld, for example:

[T]here is a sense that the alliances are getting unwieldy, with members frequently finding themselves at cross-purposes with one another. In particular, oneworld has a tangled set of partnerships that call into question the future for some of its members. For example, American Airlines has close ties (including anti-trust immunity [ATI]) with Qantas, British Airways parent International Airlines Group (IAG), and Japan Airlines, as well as strong ties with Cathay Pacific. Japan Airlines also has anti-trust immunity and close ties with IAG.

However, cooperation between Japan Airlines and Cathay Pacific or Qantas is non-existent. Additionally, Cathay Pacific and Qantas have entered into head-to-head combat over Qantas’ proposed Jetstar Hong Kong operation which in turn would see Qantas partner with Skyteam member China Eastern to offer low-cost competition at Cathay’s primary hub at Hong Kong.

Cathay Pacific also has close ties with Star Alliance member Air China (in which it holds a reciprocal equity share), that likely detracts from its contribution to oneworld. Separately, Qantas and IAG used to have deep ties and ATI on the Kangaroo route, but Qantas ditched IAG in favor of unaligned Emirates while IAG has gotten closer with Emirates’ rival Qatar Airways, who now owns 9.99% of IAG. And to top things off, while Qatar Airways is an actual member of oneworld, American Airlines seems to prefer partnering with its unaligned rival and fellow MEB3 carrier Etihad.<sup>86</sup>

Never underestimate the importance of self-interest.

Third, all the airlines in each respective alliance are unlikely to be using the same information technology (IT) platform. For example, in the Oneworld alliance, American and LATAM are

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<sup>85</sup> See *30 Seconds About Us: Star Alliance Leads the Way*, STAR ALLIANCE, <https://www.staralliance.com/en/about> [https://perma.cc/4Y47-AXGP]; *About Oneworld—Travelling the World*, ONEWORLD, <https://www.oneworld.com/general/about-oneworld> [https://perma.cc/8NG4-DW5P]; *Caring More About You*, SKYTEAM, <https://www.skyteam.com/en/about/> [https://perma.cc/2ZNK-GS9A].

<sup>86</sup> Bhaskara, *supra* note 65.

on Sabre, S7 is on SITA, and all the others are on Amadeus.<sup>87</sup> Transitioning from one platform to another is complicated, costly, and risky.<sup>88</sup> Without a common platform, it is difficult to fully coordinate all the activities of the alliance airlines.<sup>89</sup> Recently, Delta's CEO acknowledged that airlines "do not typically upgrade IT after mergers."<sup>90</sup> Instead, they "pil[e] one legacy system . . . on top of another."<sup>91</sup> "With multiple mergers going back decades," computer networks have retained their 1990s characteristics.<sup>92</sup> As cited in the *American Prospect*, "[t]hese mergers were actually sold on the basis of creating 'efficiencies,' specifically from integrating computer systems. But the efficiencies seldom work out, and the integration costs always end up higher than the initial estimate."<sup>93</sup>

### C. COMPLEXITY AND SCALE

How large is too large? When do diseconomies of scale, which are inevitable as a company scales up, overwhelm any economies of scale, density, and scope? Are the alliances too large and thus too complex to coordinate and manage? As an example, Star Alliance airlines operate 4,764 aircraft and employ 431,040 people.<sup>94</sup> Is this alliance too large? What about Oneworld, which operates 3,447 aircraft and employs 397,682 people?<sup>95</sup> Surpris-

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<sup>87</sup> See *Oneworld at a Glance*, ONEWORLD, <https://www.oneworld.com/news-information/oneworld-fact-sheets/oneworld-at-a-glance> [https://perma.cc/U7HK-N2R7] (last updated Sept. 18, 2018).

<sup>88</sup> See Charisse Jones & Elizabeth Weise, *Travel Trouble? Here's Why Your Airline Flight is Delayed*, USA TODAY (Aug. 11, 2016), <https://www.usatoday.com/story/money/2016/08/11/airlines-complex-aging-systems-lead-to-flight-delaying-computer-glitches/88539190/> [https://perma.cc/7DFG-35PA].

<sup>89</sup> See *id.* The author recently booked flights to Europe on the Air Canada website. He had no problem selecting a seat on his outbound flight because it was an Air Canada flight. However, he was unable to select his seat on the return flight because a Star Alliance partner, Brussels Airlines, operated it. Obviously, Air Canada's IT system does not integrate fully with that of Brussels Airlines. Undoubtedly, one can find many other such examples of incompatibility between the IT systems of alliance airlines.

<sup>90</sup> David Dayen, *Unfriendly Skies*, THE AM. PROSPECT (Nov. 3, 2017), <http://prospect.org/article/unfriendly-skies> [https://perma.cc/ENU4-Z2FR].

<sup>91</sup> *Id.*

<sup>92</sup> *Id.*

<sup>93</sup> *Id.*

<sup>94</sup> See *Reference Guide 2017–2018*, STAR ALLIANCE 6 (Nov. 2017), [https://portal.staralliance.com/cms/publications/reference-guide/staralliancereferenceguide\\_2017-18.pdf/@download/file/StarAllianceReferenceGuide\\_2017-2018.pdf](https://portal.staralliance.com/cms/publications/reference-guide/staralliancereferenceguide_2017-18.pdf/@download/file/StarAllianceReferenceGuide_2017-2018.pdf) [https://perma.cc/6NLP-MAAC].

<sup>95</sup> See *Oneworld at a Glance*, *supra* note 87.

ingly, these questions do not seem to have been asked by either regulators or academics. The oft-cited report by the EC and DOT did allude to this possibility:

On the downside, while growing in size is important for the network, a large alliance unavoidably increases the complexity of governance, and risks rendering it less efficient in decision making and more difficult to integrate. Alliances, therefore, balance the trade-off between, on the one hand, an increment in global network and increased revenue synergies, and, on the other hand, the risk of inefficiencies due to increased size of the alliance.<sup>96</sup>

The expansion of operations at key hub airports, following the creation of an alliance and especially the creation of a joint venture, also has added more complexity for management. The expansion can take two forms: more flights during each bank during the day or an additional bank of flights during the day. The former is likely to exhaust available slots, gates, or check-in counters during the two-to-three-hour period of each bank. As a result, that might be the preferred option for the alliance members. This election might effectively limit or even eliminate competition during such periods. Adding a bank of flights might remove or limit the availability of slots for longer periods of time at the major hubs. With multiple banks during the day, few time-attractive slots might be available for non-alliance airlines.

The expansion of operations undoubtedly leads to greater pressure on ground and airport personnel, and any weather or maintenance-induced delays or cancellations would have greater ripple effects throughout the alliance network.<sup>97</sup> Even with access to additional aircraft and crews, it could take several days to clear up the overhang at hubs from major delays and cancellations.<sup>98</sup> The OECD Directorate for Financial and Enterprise Affairs has noted the following:

Airport congestion today is arguably the most critical barrier deterring entry into certain routes. Airport congestion occurs where demand exceeds airport capacity.

. . . According to IATA, as of April 2014, there were around 167 congested airports in the world: 100 in Europe, 36 in the Asia-

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<sup>96</sup> TRANSATLANTIC AIRLINE ALLIANCES, *supra* note 30, at 9.

<sup>97</sup> See Jeff Edwards, *Study Finds "Rebanking" Trend in U.S. May Lead to Stranded Passengers*, FLYERTALK (June 19, 2015), <https://www.flyertalk.com/articles/study-finds-rebanking-trend-in-u-s-may-lead-to-stranded-passengers.html> [https://perma.cc/X8LL-R8KC].

<sup>98</sup> See *id.*

Pacific region, 13 in North Asia, 11 in Middle East and Africa and only 7 in America. Various studies show that the problem of congestions is most acute at major *hub* airports, such as London Heathrow, Frankfurt and New York JFK.<sup>99</sup>

Thus, just as one can ask if an airline or alliance has become too large, one can ask a similar question about airports. Have any of the airports become too heavily used, increasing the problems and costs of congestions and delays?

#### D. EFFICIENCIES

One of the key arguments in support of ATI for joint ventures was that cooperation would enable the airlines to fully realize the potential from economies of density. A high proportion of costs for each flight tends to be fixed and independent of the number of passengers or distance of the flight (RPKs). Therefore, the more passengers per flight and the higher the load factors, the lower would be the fixed costs per flight, and likely so too would be the average costs per flight (per passenger, and per RPK). ATI should lead to higher load factors and more economies of density.

Authors Hokey Min and Seong-Jong Joo found that joint ventures in the airline industry do not appear to have improved the competitive position of the member airlines. They explained:

. . . we argue that strategic alliances are neutral to competitive advantages in this study. In fact, Porter (1990) pointed out that the effects of alliances could be temporary and seldom provided competitive advantages to their participants. Our finding is congruent with Porter's observation.

. . . .

. . . [R]egardless of the potential benefits of airline alliances through collaboration such as joint marketing, coordinated flight scheduling, combined frequent-flyer programs, airport facility sharing, joint maintenance and ground support, we did not find any competitive advantage attributed to strategic alliances.

. . . .

Defying the conventional wisdom, we found no significant differences in airline performances between airlines with strategic alliances and airlines without alliances. Also, it should be noted that airline performances before and after joining alliances did not show any signs of improvements.

That is to say, airline alliances did not necessarily improve the participating airline's comparative operating efficiency despite its

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<sup>99</sup> AIRLINE COMPETITION, *supra* note 37, at 15 (emphasis in original).

cost saving potentials due to shared resources and customer bases.<sup>100</sup>

The load factor data in the table below for the United States show improvement on domestic and international flights since 2002.<sup>101</sup> But it is debatable how much of the improvement can be attributed to the schedule reconfiguration of the immunized alliances and economies of density, and how much to the economic recovery post-2009, capacity control by the alliances, and yield management systems that have become more adept at filling planes (an advantage of machine learning).

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<sup>100</sup> Hokey Min & Seong-Jong Joo, *A Comparative Performance Analysis of Airline Strategic Alliances Using Data Envelopment Analysis*, 52 J. AIR TRANSP. MGMT. 99, 104–05, 109 (2016) (internal citations omitted).

<sup>101</sup> See *infra* Table 2. The author did not start in 1999 because the load factors dropped sharply in 2001, which would have distorted the data. See *infra* Table 2.

Table 2: Load Factors (passenger-miles as a proportion of available seat-miles in percent (%)), All U.S. and Foreign Airlines, All Major U.S. Airports,<sup>102</sup> 2002–2017<sup>103</sup>

	<b>Domestic</b>	<b>International</b>
2002	71.4	75.3
2003	73.9	74.8
2004	75.5	77.6
2005	78.5	78.5
2006	80.2	78.3
2007	81.2	78.8
2008	81.1	77.4
2009	82.3	78.1
2010	83.3	81.3
2011	83.8	80.0
2012	84.2	81.3
2013	84.4	81.7
2014	85.3	80.6
2015	85.8	80.1
2016	85.4	80.1
2017	85.4	80.1

Source: US DOT, Bureau of Transportation Statistics, [transtats.bts.gov](http://transtats.bts.gov)

There is also evidence that post-ATI the joint ventures have not increased their frequencies in the United States or Europe, contrary to what was expected because of their supposed superior service offerings for passengers. Several authors found the following in Europe:

The number of intra-European flights decreased significantly for the three alliances. . . . On the contrary, the growth of LCCs has been remarkable, with offered flights and seat capacity increased by 58% (1,396 in 2006 vs. 2,211 in 2016) and 74% (207,571 in

<sup>102</sup> Major airports: Atlanta, Baltimore–Washington, Boston, Charlotte, Chicago Midway, Chicago O’Hare, Dallas–Fort Worth, Denver, Detroit, Fort Lauderdale, Honolulu, Houston, Las Vegas, Los Angeles, Miami, Minneapolis, New York, Newark, LaGuardia, Orlando, Philadelphia, Phoenix, Portland, Salt Lake City, San Diego, San Francisco, Seattle, Tampa, D.C. Reagan, Washington Dulles.

<sup>103</sup> Bureau Transp. Statistics, *Load Factor*, U.S. DEP’T TRANSP., [https://www.transtats.bts.gov/Data\\_Elements.aspx?Data=5](https://www.transtats.bts.gov/Data_Elements.aspx?Data=5) [<https://perma.cc/VU35-DSBL>].

2006 vs. 361,547 in 2016), respectively. As a result, the intra-European market share of LCCs in terms of seat capacity increased significantly from 31.7% in 2006 to 45% in 2016. On the other hand, while all three alliances decreased their shares on the intra-European network to focus on less-contended long-haul markets, Skyteam shows the highest losses, especially in terms of seat capacity, with a drop from 16.7% in 2006 to 11.7% in 2016 . . . . Looking at direct connections, when direct flights are available, the contraction of alliances' offers is evident. Specifically, in 2006 they offered 38.7% (2,212) of direct quickest connections. The figure decreased to 32% (1,915) in 2016, while the share offered by Ryanair and easyJet doubled from 14.3% to 28.6%. However, the expansion of LCCs is much less pronounced when looking at indirect connections . . . in terms of available indirect connections, the European scenario deteriorated significantly from 2006 to 2016 . . . the alliances retreat from the European market to concentrate on intercontinental destinations caused a reduction of indirect connectivity, as the flights from secondary airports to their respective hubs reduced. The new point-to-point flights offered by LCCs could not offset the connectivity loss because of their lack of coordination, even when offered from their major bases in Europe. Indeed, new indirect connectivity only occurred "by accident," in some cases even against the strategy of LCCs, which often opposed the 'self-help connections' carried out by their passengers. Only recently, Ryanair and easyJet began evaluating the introduction of some forms of coordination to facilitate their passengers' indirect transfers.<sup>104</sup>

In the United States, the DOT reported that between 2007 and 2012 airlines cut the number of domestic passenger flights by 16–24%—the biggest drops occurred at midsize and smaller regional airports.<sup>105</sup> According to the DOT, the reason was simple: airlines decided that the best way to earn a healthy return on their investment was to maintain tight discipline on capacity.<sup>106</sup> And the way they have accomplished this was by concentrating service on the big domestic and international markets and by cutting flights in smaller, less traveled ones. The data in Table 3 show that since peaking in 2005, aircraft departures in the United States have declined by 19% as of 2017.<sup>107</sup>

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<sup>104</sup> Mattia Cattaneo et al., *Evolution of the European Network and Implications for Self-Connection*, 65 J. OF AIR TRANSPORT MGMT. 18, 21–22 (2017).

<sup>105</sup> OFFICE OF THE INSPECTOR GEN., CC-2012-029, AVIATION INDUSTRY PERFORMANCE: A REVIEW OF THE AVIATION INDUSTRY, 2008–2011 12 (2012).

<sup>106</sup> *Id.* at 25.

<sup>107</sup> *See infra* Table 3.

Table 3: Aircraft Departures and Scheduled Passengers,  
United States, 1997–2017 (000s)<sup>108</sup>

	<b>Aircraft departures</b>	<b>Scheduled PAX</b>
1997	8,534	594,727
1998	8,730	612,882
1999	9,062	635,959
2000	9,450	666,149
2001	9,120	622,129
2002	9,516	614,277
2003	11,192	647,470
2004	11,766	703,692
2005	11,884	738,628
2006	11,553	744,728
2007	11,686	769,622
2008	11,144	743,313
2009	10,383	703,901
2010	10,361	720,496
2011	10,336	730,797
2012	10,127	736,701
2013	9,979	743,171
2014	9,803	762,710
2015	9,738	798,221
2016	9,866	822,972
2017	9,635	849,265

Source: Airlines for America, derived from DOT Bureau of Transportation Statistics.

CAPA pointed out that the “[ATI] approvals for the existing three main JVs on North Atlantic, which were granted immunity in period 2008–2010,” did not lead to capacity growth—based on total ASKs between Europe and North America—between

<sup>108</sup> See generally Bureau Transp. Stats., *Airline Information for Download*, U.S. DEP’T TRANSP., <https://www.bts.gov/topics/airlines-and-airports/airline-information-download> [<https://perma.cc/2TBR-GX4T>].

2007 and 2013.<sup>109</sup> But this was largely the result of the financial crisis in 2007 and the recession that followed.<sup>110</sup> Since 2013, capacity has grown 28% by summer 2016.<sup>111</sup>

Based on a survey conducted in 2002 of the alliance management departments of airlines participating in the four global alliances, Authors Iatrou and Alamdari found that:

The least pronounced impacts have been observed in the areas of costs and fares. As far as costs are concerned, not only have airlines not reaped much benefit from their alliance participation but have entailed certain substantial initial expenses such as IT system harmonization, marketing and advertising expenses which could put a serious strain, at least short term, on the airline costs. [Any] [s]ignificant long-term cost reductions/synergies require the alignment of some product specifications, [a] common approach, [a] common fleet planning and require not only some time and a high degree of integration but also a major commitment on the part of the allies.<sup>112</sup>

More recently, Michael Wisbrun, the CEO of SkyTeam, noted that “there are limits to the ability of alliances to deliver cost synergies”: “We don’t go as far as joint aircraft procurement . . . We are too big to create these kinds of traditional synergies, or, for example engine buying.”<sup>113</sup>

The data in Tables 4 and 5 do not reveal any positive correlation between various measures of productivity (revenue per employee; RPK per employee; employees per aircraft) and size of airlines (as measured by passenger revenues).<sup>114</sup> These findings do not provide any support for the belief that as an airline becomes larger, productivity increases.<sup>115</sup> Furthermore, large discrepancies continue to exist among the airlines in each of the measures of productivity, suggesting that membership in an alliance does not necessarily lead to a convergence in productiv-

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<sup>109</sup> *North Atlantic Airline Market. Closed JVS to have 78% of ASKs in 2016. Weighing the Benefits*, CAPA (Mar. 27, 2016), <https://centreforaviation.com/analysis/reports/north-atlantic-airline-market-closed-jvs-to-have-78-of-asks-in-2016-weighing-the-benefits-272815> [<https://perma.cc/E2EE-UKUY>].

<sup>110</sup> *Id.*

<sup>111</sup> *Id.*

<sup>112</sup> Kostas Iatrou & Fariba Alamdari, *The Empirical Analysis of the Impact of Alliances on Airline Operations*, 11 J. AIR TRANSP. MGMT. 127, 129 (2005).

<sup>113</sup> *Airline Alliances – What Future? Global, Multilateral and Bilateral Partnerships Are All Evolving*, CAPA (Dec. 17, 2013), <https://centreforaviation.com/analysis/reports/airline-alliances—what-future-global-multilateral-and-bilateral-partnerships-are-all-evolving-144593> (last visited Nov. 5, 2018).

<sup>114</sup> See *infra* Tables 4 and 5.

<sup>115</sup> See *infra* Tables 4 and 5.

ity.<sup>116</sup> The gaps most likely represent differences in ownership structures, management capabilities and their objectives, corporate structure (number of business units—degree of vertical integration), and idiosyncratic characteristics of the airlines and geographic markets. The data cannot tell us if membership in an alliance improves productivity over time as compared to non-membership in an alliance.<sup>117</sup>

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<sup>116</sup> See *infra* Tables 4 and 5.

<sup>117</sup> Productivity has likely increased for all airlines, especially the legacy airlines, because airline management has realized that a major cost advantage for the low-cost carriers (LCCs) and ultra-low cost carriers (ULCCs) was their ability to cram more seats into a plane. Conor Shine, *Why Airlines Can't Stop Cramming More and More Seats on Their Planes*, DALLAS NEWS, <https://www.dallasnews.com/business/airlines/2017/11/17/airlines-stop-cramming-seats-planes> [https://perma.cc/S46K-9LB5]. If an airline increases the number of seats in a plane by 25%, the costs per available seat per kilometer will decrease substantially because overall costs will increase by much less than 25%. Most airlines have increased the seating density in their aircraft. *Id.* This had nothing to do with being in an alliance. Rather, this change occurred as legacy airlines have tried to improve their cost competitiveness. *Id.*

Table 4: Star Alliance Airlines, Various Measures of Productivity and Rankings<sup>118</sup>

	Rev. US\$M	Rank	Rev./ Emp. US\$000s	Rank	RPK/ Emp. 000s	Rank	Emp./ Aircraft	Rank
<i>Star</i>	164,040		380.6		3,850		90.5	
<i>Adria</i>	169	27	436.7	10	3,824	14	32.3	1
<i>Aegean</i>	964	24	460.6	8	5,638	4	44.5	4
<i>Air Canada</i>	11,080	4	369.3	14	4,103	8	82.2	12
<i>Air China</i>	10,240	5	440.3	9	8,092	1	61.0	5
<i>Air India</i>	3,100	16	160.7	27	2,002	23	170.7	26
<i>ANZ</i>	3,500	14	304.3	18	2,887	18	111.7	17
<i>ANA</i>	16,300	3	1,253.8	1	6,508	2	50.8	4
<i>Asiana</i>	5,120	9	508.5	6	3,992	11	119.9	19
<i>Austrian</i>	2,300	19	356.6	15	2,884	19	80.6	11
<i>Avianca</i>	4,100	12	195.2	23	1,819	26	116.0	18
<i>Brussels</i>	1,387	23	396.3	13	3,629	15	70.0	7
<i>Copa</i>	1,970	21	244.1	21	3,520	16	84.9	13
<i>Croatia</i>	237	26	262.7	19	1,608	27	75.2	10
<i>Egyptair</i>	1,500	22	166.7	26	1,933	24	145.2	23
<i>Ethiopian</i>	2,530	17	187.6	24	2,017	22	153.2	25
<i>Eva</i>	3,300	15	324.4	17	4,021	10	139.3	21
<i>LOT</i>	930	25	550.3	3	5,462	5	35.2	2
<i>Lufthansa</i>	18,120	2	503.3	7	4,056	9	102.9	16
<i>SAS</i>	5,700	8	532.2	4	3,445	17	68.7	6
<i>Shenzhen</i>	3,790	13	169.0	25	1,918	25	130.4	20
<i>Singapore</i>	8,660	7	585.1	2	6,372	3	139.6	22
<i>SAA</i>	2,100	20	246.3	20	2,475	21	149.6	24
<i>Swiss</i>	4,800	11	527.4	5	4,109	7	100.0	15
<i>TAP</i>	2,450	18	335.6	16	3,863	12	91.3	14
<i>Thai</i>	5,070	10	230.5	22	2,837	20	229.1	27
<i>Turkish</i>	9,790	6	405.8	12	5,256	6	71.6	8
<i>United</i>	36,600	1	418.3	11	3,863	13	71.7	9

Source: Calculated from data on Star Alliance website

<sup>118</sup> See generally STAR ALLIANCE, <https://www.staralliance.com/en/web/staralliance/home> [<https://perma.cc/K33K-P8LD>].

Table 5: Oneworld Alliance Airlines, Various Measures of Productivity and Rankings<sup>119</sup>

	Rev. US\$M	Rank	Rev./ Emp. US\$000s	Rank	RPK/ Emp. 000s	Rank	Emp./ Aircraft	Rank
<i>Oneworld</i>	123,174		309.7		2,865		115.4	
<i>American</i>	40,180	1	328.5	5	2,941	5	79.6	3
<i>IAG</i>	16,888	2	266.4	6	3,113	4	119.8	4
<i>Cathay</i>	11,960	4	504.2	1	5,207	3	125.5	5
<i>Finnair</i>	2,442	9	484.0	2	5,372	2	69.1	2
<i>Japan</i>	11,960	4	258.4	7	1,348	12	208.5	10
<i>Latam</i>	9,527	7	207.5	11	2,474	8	139.6	6
<i>Malaysia</i>	4,765	8	245.5	9	2,489	7	139.6	6
<i>Qantas</i>	12,016	3	411.5	4	2,712	6	151.3	7
<i>Qatar</i>	9,796	6	249.5	8	2,098	9	202.4	9
<i>Royal Jordanian</i>	1,068	11	245.5	10	1,555	11	167.3	8
<i>S7</i>	1,316	10	438.7	3	9,033	1	50.8	1
<i>SriLankan</i>	906	12	130.2	12	1,825	10	331.4	13

Source: Calculated from data on Oneworld Alliance website

### E. DOUBLE MARGINALIZATION

A common argument in support of ATI is that this would produce lower prices on connecting routes that are separately run monopolies.<sup>120</sup> For example, if one airline has a monopoly on route A–B, and another airline has a monopoly on route B–C, and the two airlines did not cooperate on price, then the “double monopoly” would produce a combined fare for A–C that would be greater than if it were operated by a single monopoly or immunized JV. Prior to the creation of the joint venture, each airline would add its monopoly mark-up, ignoring the negative impact this would have on the combined fare and demand on route A–C.<sup>121</sup> A single monopoly would add a single mark-up, and with a lower price, generate more traffic and larger revenues than the combined revenues of the previously

<sup>119</sup> See generally ONEWORLD ALLIANCE, <https://www.oneworld.com/> [<https://perma.cc/8PPH-JEAY>].

<sup>120</sup> Jan K. Brueckner et al., *Revisiting Alliances, Codesharing, Antitrust Immunity and International Airfares: Findings from a New Economic Study*, INT’L AIR TRANSP. ASS’N 1, 2 (Oct. 2010), [https://www.iata.org/publications/economics/Reports/Brueckner\\_Alliances.pdf](https://www.iata.org/publications/economics/Reports/Brueckner_Alliances.pdf) [<https://perma.cc/VPU4-8895>].

<sup>121</sup> TRANSATLANTIC AIRLINE ALLIANCES, *supra* note 30, at 21–22.

unrelated two monopolists.<sup>122</sup> There are several problems with this argument.

First, the theoretical model assumes that each airline knows its own demand curve and marginal costs and thus would select the correct monopoly price. The reality, unlike the theory, is that no company knows its full demand curve. At best, each company might know two or three points on the demand curve, and it might discover a few more through market research. But significant gaps remain, and no company would likely be able to determine its marginal revenue curve—an essential requirement to come up with the correct monopoly price. Moreover, it is unlikely that any company knows its marginal cost curve, especially when it is engaged in the joint production of services, as is the case in the airline industry. Hence, without knowledge of both the marginal revenue and the marginal cost curves, an airline, like other companies in other industries, engages in a trial and error process to determine its optimal prices.

Companies tend to engage in rule-of-thumb pricing whereby they set prices by marking up their unit costs with the mark-up influenced by the degree of rivalry.<sup>123</sup> But it is unlikely, even in monopoly markets or markets where there is a dominant company, that the mark-up approaches what a monopolist might set. This might happen only by accident. Consequently, even if there were a number of adjacent or consecutive monopoly routes, it is possible that the combined mark-ups of the two monopolists could be less than the mark-up set by a single monopolist.<sup>124</sup>

Yield management systems are intended to maximize revenues per flight, but they all start with historic data, and as a result, the historic prices might not even be close to the monopoly profit maximization levels.<sup>125</sup> If you start with sub-optimal prices and simply adjust them day-by-day and year-by-year, there is no reason to believe that you will stumble across the monopoly price—assuming that an airline has a monopoly on any route.

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<sup>122</sup> Demand is assumed to be price elastic in the airline industry. See *Air Travel Demand*, INT'L AIR TRANSP. ASS'N 1, 5 (Apr. 2008), [https://www.iata.org/whatwedo/documents/economics/air\\_travel\\_demand.pdf](https://www.iata.org/whatwedo/documents/economics/air_travel_demand.pdf) [<https://perma.cc/V4LE-QJJ8>]. Thus, when price declines, demand increases by relatively more and total revenues increase as well. See *id.*

<sup>123</sup> TRANSATLANTIC AIRLINE ALLIANCES, *supra* note 30, at 22.

<sup>124</sup> Indeed, a single monopolist operating routes A–B and B–C could set a mark-up on the route A–C well above what the theoretical profit-maximizing mark-up should be.

<sup>125</sup> See Gillespie & Richard, *Antitrust Immunity Grants*, *supra* note 22, at 452.

Another problem is the assumption that combining two monopolies through a joint venture would retain a monopoly on the route A–C. One of the arguments used by the DOT to support ATI for all three alliances was that this would allow for inter-alliance competition.<sup>126</sup> If this argument is correct, then it is conceivable that, while one airline might have had a monopoly on route A–B and another on route B–C, unrelated airlines might have had separate and adjacent monopolies on routes A–D and D–C. These latter two airlines could join forces in a competing alliance and create the competition on route A–C that the DOT envisioned.

But interlining and through-fare negotiations and competition on both the A–C route via B and the A–C route via D could produce the same competitive prices as two competing, immunized JVs. If one airline had a monopoly on both routes A–B and A–D and this airline formed a joint venture with another airline that had a monopoly on route B–C, the new joint venture might preclude the airline from connecting with a non-alliance airline at D. Then, competition on the A–C route would disappear. Competition would be replaced by a monopoly not only on A–C but also possibly on many other routes connecting via B or other alliance hubs. Market foreclosure caused by an unwillingness to interline or code-share with non-alliance airlines would reduce competition.

Finally, should not the focus of competition policy be to try to augment competition rather than accept monopolies and opt for so-called second-best solutions, assuming that second-best solutions, such as the elimination of double monopoly mark-ups, are in fact the next best alternative? The FTC has emphasized:

Free and open markets are the foundation of a vibrant economy. Aggressive competition among sellers in an open marketplace gives consumers—both individuals and businesses—the benefits of lower prices, higher quality products and services, more choices, and greater innovation. The FTC's competition mission is to enforce the rules of the competitive marketplace—the anti-trust laws. These laws promote vigorous competition and protect consumers from anticompetitive mergers and business practices.<sup>127</sup>

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<sup>126</sup> *See id.*

<sup>127</sup> *Guide to Antitrust Laws*, FED. TRADE COMM'N, <https://www.ftc.gov/tips-advice/competition-guidance/guide-antitrust-laws> [https://perma.cc/53CD-EQ5E].

## F. RESTRICTIVE TRADE PRACTICES

The traditional economic theory in support of joint ventures, particularly ATI, largely ignored the possibility that airlines might engage in restrictive trade practices.<sup>128</sup> The focus of the regulators was on the number of surviving competitors on a route, not on the potential to drive out competitors after the fact.<sup>129</sup> This alone should have caused the DOT and competition authorities to impose time limits on their grants of ATI and approval of joint ventures. It is one thing to count the number of competitors in a market pre- and post-approval of a joint venture. It is totally different and more difficult to predict what a joint venture might do with regards to restricting competition.

Section 2 of the Sherman Act, and to a lesser extent the Clayton Act and FTC Act, have described a number of restrictive trade practices: refusal to supply, exclusive dealing or requirement contracts, exclusionary conduct, predatory or below-cost pricing, and refusal to deal.<sup>130</sup> Restrictive trade practices provisions were developed to deal with relations between upstream and downstream firms that could lessen competition in either or both markets.<sup>131</sup> The upstream firms supply goods and/or services to the downstream firms. The downstream firms either sell the goods or services directly to final customers—consumers or other firms—or use the goods and services to produce other goods or services that are in turn sold to firms further downstream in the value chain—that is, firms that are closer to the final customers.

Airlines deal with many upstream suppliers of goods and services (e.g., airports, maintenance companies, ground handlers, aircraft manufacturers, leasing companies). But feed traffic from one airline to another can and should be considered as a transaction between an upstream supplier (the airline providing the feed traffic) and a downstream customer (the airline taking the feed traffic beyond the connecting airport). Thus, these two

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<sup>128</sup> TRANSATLANTIC AIRLINE ALLIANCES, *supra* note 30, at 21.

<sup>129</sup> *Id.*

<sup>130</sup> See generally Sherman Act, 15 U.S.C. § 2 (2017). Canada's Competition Act defines similar restrictive trade practices in §§ 75, 77 and 78: refusal to deal, exclusive dealing, abuse of dominant position. Competition Act, *supra* note 27, §§ 75, 77–78. There are comparable definitions in Articles 101 and 102 in the EU. TFEU, *supra* note 27, arts. 101–02.

<sup>131</sup> William Gillespie & Oliver Richard, *Antitrust Immunity and International Airline Alliances* 3–4 (U.S. Dep't of Justice Econ. Analysis Grp. Discussion Paper No. EAG 11-1, 2012).

provisions should cover the airline industry as well, even though they were not developed with the airline industry in mind.

1. *Access to Slots*

As suggested above, if the added value alliances and joint ventures supposedly created for customers translates into increased demand, the airlines should increase frequencies of flights to and from their hubs. They might also increase the size of aircraft operating on a number of routes, especially hub-to-hub routes. These actions should increase the number of flights and/or passengers served during each bank at their hubs, as well as lead to an additional bank of flights operating at each hub. Either or both should reduce the availability of slots at the hub airports and increase congestion on taxiways and gates. Thus, despite the occasional requirement for carve-outs and relinquishing slots at key airports, access to slots and other airport infrastructure could have been reduced, particularly at peak periods during the day and week.<sup>132</sup>

Authors Wu and Lee found that congestion did reduce the availability of check-in counters, thus making it more difficult for entry to occur at a major hub:

The busy day in terms of check-in counter demand took place on Tuesday with a peak demand of 185 positions at 0830 h in the morning, as a result of more concentrated morning departures than the rest of the week. The most comprehensive allocations were noted at check-in islands occupied by the home-based carrier, where the majority of the counters have been assigned from 0400 to 2200 h to process the airline's regular departures, leaving minimal residual capacities at these check-in areas. The overlapped check-in windows and combined passenger arrival profiles can result in a more constant demand of counters over a long period of time, which is not sustainable for a single flight demand . . . . At the case airport's international terminal where check-in counters are scarce during the morning peaks, similar common check-in arrangements could be extended to alliance member airlines to co-locate and consolidate existing flight-driven counter allocations and free up check-in capacities.<sup>133</sup>

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<sup>132</sup> See TRANSATLANTIC AIRLINE ALLIANCES, *supra* note 30, at 24.

<sup>133</sup> Cheng-Lung Wu & Andy Lee, *The Impact of Airline Alliance Terminal Co-Location on Airport Operations and Terminal Development*, 36 J. AIR TRANSP. MGMT. 69, 74 (2014).

But it seems that alliance airlines have reduced their frequencies in Europe and the United States.<sup>134</sup> The theoretical possibility of reducing the availability of slots might not have materialized, at least at a number of airports. But if this is the case, then perhaps alliances and joint ventures have not created that much value for customers, and a major argument in favor of ATI might not be valid.

## 2. *Market Foreclosure*

Diana Moss, writing for the American Antitrust Institute, highlighted the importance of feed traffic:

Alliance carriers have maintained high market shares on important transatlantic routes between Europe and the U.S. Long-haul routes are difficult for smaller, non-allied airlines to enter. . . . [T]he DOJ has shifted its focus to slot and gate divestitures in domestic mergers and monopolization issues in order to encourage entry. . . .

. . . .

A second reason why higher concentration at alliance connecting airports is potentially harmful to competition and consumers is because dominance in connecting markets increases the risk that non-alliance carriers will be foreclosed from interlining at alliance hubs.<sup>135</sup>

So too did the EC and DOT:

Alliance partnership with other carriers can also significantly improve access to feeder traffic of alliance partners—particularly important for long-haul operations. While feeder traffic can also be obtained outside of the global alliances through interlining agreements such as an IATA multilateral proration arrangement (“MPA”) or a bilateral proration agreement, airlines in an alliance tend to favour their alliance partners in the financial terms of their interlining and choose them for code-sharing. With the increasing membership of alliances (and, respectively, their network coverage), it may be difficult for unaligned carriers to secure feeder traffic at some airports. This can therefore encourage them to join an alliance to benefit from more attractive conditions for feeder traffic from fellow members.<sup>136</sup>

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<sup>134</sup> See Cattaneo et. al., *supra* note 104, at 26, tbl. 9.

<sup>135</sup> Diana L. Moss, *Revisiting Antitrust Immunity for International Airline Alliances*, AM. ANTITRUST INST. 1, 12, 16 (Mar. 28, 2018).

<sup>136</sup> TRANSATLANTIC AIRLINE ALLIANCES, *supra* note 30, at 8.

Market foreclosure can and does stifle entry and competition. CAPA has provided some anecdotal evidence of the negative impacts on competition when alliance airlines refuse to interline with other airlines, even other members of the same alliance:

Exclusion from a JV carries other impacts: airberlin had to cancel a proposed new route to Dallas, apparently because airberlin could not secure the codeshares it needed from American at its Dallas megahub. Airberlin required beyond-Dallas access to make the route work, but American had no incentive to help a competitor—despite being a oneworld partner—when such traffic could more profitably flow over its network/JV.

In another example, LOT struggled to access beyond-Tokyo codeshares on All Nippon Airways for its new Warsaw-Tokyo flight. LOT's problem was that ANA's JV with Lufthansa forbade ANA from cooperating with another European airline without Lufthansa's approval. Lufthansa approving LOT-ANA cooperation, even if small, could impact the Lufthansa-ANA JV.<sup>137</sup>

### 3. *Switching Costs*

There is extensive literature in economics about switching costs.<sup>138</sup> Switching costs are the result of strategic decisions, which impact rivalry.<sup>139</sup> The more important switching costs are, the more companies will focus on creating these costs to capture their customers and deter entry.<sup>140</sup> Because it would be costly to attract away those customers locked in by switching costs, prospective entrants become restricted to a subset of the entire market.<sup>141</sup> There are many examples of switching costs for customers—free training for the customer's employees, joint product development with the customer, establishing supply chain links with customers through B2B networks, developing products that are incompatible with those of competitors, low interest financing, etc.<sup>142</sup> In the airline industry, the major switching costs are frequent flyer programs and their offshoots,

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<sup>137</sup> *Branded Global Alliances Aren't Dead – Yet*, CAPA (June 4, 2017), <https://centreforaviation.com/analysis/reports/branded-global-alliances-arent-dead—yet-348112> (last visited Nov. 5, 2018).

<sup>138</sup> See, e.g., Abhi Bhattacharya, *Switching Costs and Sustained Competitive Advantage*, 2 INT'L J. BUS. & MGMT. INVENTION 101, 102.

<sup>139</sup> See *id.* at 103.

<sup>140</sup> See *id.*

<sup>141</sup> See *id.* at 106.

<sup>142</sup> See generally *id.*

elite status programs, and corporate discounts.<sup>143</sup> By restricting access to a frequent flyer program to only alliance airlines, an airline makes it difficult for a non-alliance airline in the country to compete for the frequent traveler.

## V. ACADEMIC STUDIES

There is a vast economics literature testing the effects of alliances, especially ATI for joint ventures, on costs, prices, and networks. But the literature can be summarized as a battle between Bilotkach and Brueckner.<sup>144</sup> Brueckner strongly believes that alliances and ATI have produced large benefits for travelers.<sup>145</sup> Bilotkach, on the other hand, believes that the anti-competitive effects of joint ventures have outweighed any efficiencies created by alliances.<sup>146</sup> For example, Bilotkach and Kai Hüsichelrath reported the following in one of their research papers:

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<sup>143</sup> Fredrik Carlsson & Asa Lofgren, *Airline Choice, Switching Costs and Frequent Flyer Programmes*, 2006 APPLIED ECON. 1469, 1469 (2006).

<sup>144</sup> See, e.g., Volodymyr Bilotkach, *Price Competition Between International Airline Alliances*, 39 J. TRANSPORT ECON. & POL'Y 167 (2005); Volodymyr Bilotkach, *Complementary Versus Semi-Complementary Airline Partnerships*, 41 TRANSP. RES. PART B 381 (2007); Volodymyr Bilotkach, *Multimarket Contact and Intensity of Competition: Evidence from an Airline Merger*, 38 REV. INDUS. ORG. 95 (2011); Volodymyr Bilotkach et al., *Scheduled Service Versus Personal Transportation: The Role of Distance*, 40 REGIONAL SCI. & URBAN ECON. 40 (2010); Volodymyr Bilotkach & Kai Hüsichelrath, *Antitrust Immunity for Airline Alliances*, 7 J. COMPETITION LAW & ECON. 335 (2011); Volodymyr Bilotkach & Kai Hüsichelrath, *Airline Alliances and Antitrust Policy: The Role of Efficiencies*, 21 J. AIR TRANSP. MGMT. 76 (2012); Jan K. Brueckner, *The Economics of International Codesharing: An Analysis of Airline Alliances*, 19 INT'L J. INDUS. ORG. 1475 (2001); Jan K. Brueckner, *International Airfares in the Age of Alliances: The Effects of Codesharing and Antitrust Immunity*, 85 REV. ECON. & STAT. 105 (2003); Jan K. Brueckner & Stef Proost, *Carve-Outs Under Airline Antitrust Immunity*, 28 INT'L J. INDUS. ORG. 657 (2010); Jan K. Brueckner & W. Tom Whalen, *The Price Effects of International Airline Alliances*, 43 J. L. & ECON. 503 (2000); Jan K. Brueckner et al., *Alliances, Codesharing, Antitrust Immunity, and International Airfares: Do Previous Patterns Persist?*, 7 COMPETITION L. & ECON. 573 (2011); W. Tom Whalen, *A Panel Data Analysis of Code-Sharing, Antitrust Immunity, and Open Skies Treaties in International Aviation Markets*, 30 REV. INDUS. ORG. 39 (2007).

<sup>145</sup> See generally Jan K. Brueckner, *The Economics of International Codesharing: An Analysis of Airline Alliances*, 19 INT'L J. INDUS. ORG. 1475 (2001); Jan K. Brueckner, *International Airfares in the Age of Alliances: The Effects of Codesharing and Antitrust Immunity*, 85 REV. ECON. & STAT. 105 (2003); Jan K. Brueckner & Stef Proost, *Carve-Outs Under Airline Antitrust Immunity*, 28 INT'L J. INDUS. ORG. 657 (2010); Jan K. Brueckner & W. Tom Whalen, *The Price Effects of International Airline Alliances*, 43 J. L. & ECON. 503 (2000); Jan K. Brueckner et al., *Alliances, Codesharing, Antitrust Immunity, and International Airfares: Do Previous Patterns Persist?*, 7 COMPETITION L. & ECON. 573 (2011).

<sup>146</sup> See generally Volodymyr Bilotkach, *Price Competition Between International Airline Alliances*, 39 J. TRANSPORT ECON. & POL'Y 167 (2005); Volodymyr Bilotkach,

We examine the issue of market foreclosure by airline partnerships with antitrust immunity. . . . [W]e find evidence consistent with the airlines operating under antitrust immunity refusing to accept connecting passengers from the outside carriers at respective hub airports. Following the antitrust immunity, airlines outside the partnership reduce their traffic to the partner airlines' hub airports by 4.1–11.5 percent. We suggest regulators should take possible market foreclosure effects into account when assessing the competitive effects of antitrust immunity for airline alliances.

. . . .

A crucial feature of the airline industry is that the level of demand on most city-pair markets is not sufficient to sustain regular non-stop services.

. . . .

. . . Antitrust immunity can facilitate market foreclosure, as respective alliance members will be reluctant to accept interline passengers from the outside airlines. In fact, such a concern has been specifically raised by American Airlines: the carrier claimed that it has become more difficult for it to feed its passengers to Air France's flights at Paris Charles de Gaulle airport following the granting of antitrust immunity to the Air France—Delta partnership within the SkyTeam alliance.

. . . .

. . . [D]espite the fact that it is unclear to what extent such efficiencies are immunity-specific (and cannot be realized by lower degrees of airline cooperation such as code-sharing), the existence of efficiencies as such does not rule out the possibility of (larger) anti-competitive effects, especially if the efficiencies come at the cost of increased market power and therefore an enlarged ability and incentive to use that power in an anti-competitive fashion. In other words, although it is typically true that foreclosing on the outside of the partnership carriers enhances efficiency gains of cooperation, it also reduces competition, leaving the sign of the net effect of such a practice ambiguous.<sup>147</sup>

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*Complementary Versus Semi-Complementary Airline Partnerships*, 41 *TRANSP. RES. PART B* 381 (2007); Volodymyr Bilotkach, *Multimarket Contact and Intensity of Competition: Evidence from an Airline Merger*, 38 *REV. INDUS. ORG.* 95 (2011); Volodymyr Bilotkach et al., *Scheduled Service Versus Personal Transportation: The Role of Distance*, 40 *REGIONAL SCI. & URBAN ECON.* 40 (2010); Volodymyr Bilotkach & Kai Hüscherlath, *Antitrust Immunity for Airline Alliances*, 7 *J. COMPETITION LAW & ECON.* 335 (2011); Volodymyr Bilotkach & Kai Hüscherlath, *Airline Alliances and Antitrust Policy: The Role of Efficiencies*, 21 *J. AIR TRANSP. MGMT.* 76 (2012).

<sup>147</sup> Volodymyr Bilotkach & Kai Hüscherlath, *Airline Alliances, Antitrust Immunity, and Market Foreclosure*, Abstract, 1, 10 (Ctr. for Eur. Econ. Res., Discussion Paper No. 10-083, 2012).

They concluded:

Overall, our results suggest that bringing the possibility of market foreclosure as a result of antitrust immunity into consideration allows us to point to potential anti-competitive effects on markets which have generally been considered immune to lower competition as a result of increased airline cooperation. Specifically, review of antitrust immunity cases has been mostly concerned with the potential for declining competition on markets between hub airports of the partner airlines. It has been believed that airline alliances should not affect competition on routes from alliance members' hub airports to non-hub gateways. We show that this might not be true, and suggest that *competition on all markets involving a hub airport of a member of an alliance with antitrust immunity might decrease* through potential market foreclosure.<sup>148</sup>

On the other hand, in the footsteps of Brueckner, W. Tom Whalen has presented the following results:

In empirical tests using a cross section of data from 1997, [Brueckner and Whalen] find that interline fares on carriers with alliances (code sharing or immunity) are on average 25% below fares charged by non-alliance interline pairs.

Brueckner (2003) expands this analysis and finds, using a cross section of data from 1999, that carriers with code sharing agreements charge fares 8 to 17% below traditional interline pairs and that fares on carrier with antitrust immunity are 17 to 30% lower

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This paper expands on the previous empirical results in several ways. First, it makes use of a large data set that covers 11 years of international traffic between the U.S. and Europe. Previous research has relied on cross sectional variation, measuring the price effect relative to non-alliance carriers for a given quarter, while this data set covers the formation and, in some cases, termination of most major U.S.-European carrier alliances to date. In general, the alliance price effects estimated in previous work are robust to the better data, though the effects in this paper are somewhat smaller. Immunity grants are associated with fares 14 to 22% lower than traditional interline and code sharing fares are 5 to 10% lower. In addition, all else equal, immunized alliance fares are often statistically identical to online fares. Because online fares cannot be affected by double marginalization, this result is consistent with the hypothesis that the primary effect of the alliance is an internalization of this demand externality.<sup>149</sup>

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<sup>148</sup> *Id.* at 24 (emphasis in original).

<sup>149</sup> See *Panel Data Analysis*, *supra* note 144, at 4–5.

Because the purpose of this paper is to focus [sic] on alliance effects in markets where domestic and foreign carriers can provide

The EC and DOT have noted:

It is clear that the regulatory changes engendered by the EU-U.S. Air Transport Agreement, as amended, are significant. It will therefore likely take several years for the market to adjust fully, so that significant further evolution cannot be excluded. For instance, with fewer regulatory barriers in place for transatlantic air services, more commercial opportunities are created, including those allowing airlines to restructure and adapt to dynamic industry changes. In addition, LCCs may expand their networks or adjust their business models to take advantage of new possibilities, such as the right to operate transatlantic services from any EU city to any U.S. city. Investment in a long-haul fleet may now be more financially attractive because carriers are no longer limited to non-stop operations from a single Member State. The full effects of the EU-U.S. Agreement, however, cannot yet be assessed.<sup>150</sup>

These comments raise serious questions about the merits of any studies using pre-2007 data to analyze the effects of ATI for transatlantic joint ventures on fares and frequencies. Many of Brueckner's studies used pre-2007 data. However, in a more recent study, Brueckner claims that his earlier findings still hold, albeit the positive effects are somewhat weaker:<sup>151</sup>

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complementary service, gateway-to-gateway markets were eliminated. The second category is gateway-to-beyond routes. These are routes between a U.S. gateway airport and a non-gateway foreign airport. A foreign carrier can offer online service on these routes, but a U.S. carrier can only offer service by interlining with a foreign carrier. These routes were also eliminated. Only U.S. carriers file data with DOT, reporting their online service as well as interline service they provide jointly with a foreign carrier. Because foreign carriers can serve gateway-to-beyond routes on an online basis, this online service will not appear in the data and could bias the results of the estimation.

*Id.* at 12. It is interesting to note the routes that were excluded from the empirical analysis.

<sup>150</sup> TRANSATLANTIC AIRLINE ALLIANCES, *supra* note 30, at 13.

<sup>151</sup> Brueckner was responding to studies such as Gillespie & Richard's *Antitrust Immunity Grants to Joint Venture Agreements: Evidence from International Airline Alliances*. Gillespie and Richard concluded:

The evidence shows that a grant of antitrust immunity to two competing non-stop carriers in a trans-Atlantic route has a fare effect that is equivalent to the loss of an independent competitor, and fares are significantly higher in routes with fewer independent competitors. This finding supports the normal antitrust presumption that eliminating or substantially reducing competition through collaboration or merger enhances the market power of the remaining suppliers and leads to higher prices, harming consumers. An anti-

Recently, the previous empirical results on alliances have been challenged in work carried out as part of regulatory proceedings. The US Department of Justice (DOJ), in two studies produced as part of its review of expanded ATI for the Star Alliance and the subsequent AA/BA/IB antitrust-immunity case, argued that the beneficial effects of alliance cooperation on interline fares is no longer present. Instead of finding that ATI reduces interline fares, putting them close to online fares, the DOJ studies argue that lower alliance fares can be achieved without ATI . . . .

The notion that alliances generate fare benefits for interline passengers, coupled with actual dollar measures of these benefits, has played a prominent role in regulatory actions on alliances, both in the US and in Europe. But the recent controversy over whether such benefits even exist calls these findings into question, while casting a shadow over ATI approvals in previous cases.

. . . .

Table 1 summarizes the estimated fare effects from our regression model relative to the non-alliance interline base case. To understand how to read the table, consider the column 1, which shows the results for the full US-World sample, focusing on all passengers (economy plus business class). The first number in the column shows that the fare for a non-alliance CODESHARE itinerary is 3.6% cheaper than the traditional interline fare. The second number shows that the fare for an ALLIANCE itinerary that does not involve either codesharing or ATI is 2.7% cheaper than the traditional interline fare. The sum of these two numbers then gives the fare reduction for an alliance itinerary that involves codesharing, but where ATI is absent, a reduction equal to  $3.6\% + 2.7\% = 6.3\%$ . If ATI is added to any alliance itinerary, the fare goes down by a further 4.9%. Thus, the fare for an immunized alliance itinerary that involves codesharing is lower than the traditional interline fare by the sum of all three numbers. The fare reduction is thus  $3.6\% + 2.7\% + 4.9\%$ , or 11.2%, a number that is listed in the “full cooperation” row of the table. While

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trust immunized JV also is not a merger, and the data indicate that immunized JV participants do not achieve the pricing efficiencies associated with unified control. The evidence further shows that, within the major alliances, antitrust immunized arrangements do not allow the JV partners to reduce fares for connecting trans-Atlantic passengers below those sold under non-immunized arrangements. This evidence undermines Applicants' claims that antitrust immunity is reasonably necessary for the accomplishment of pricing efficiencies in airline JVs. Accordingly, given the clear benefits of competition in terms of lower prices for consumers, regulators should be wary of calls to further decrease competition in international aviation in pursuit of increasingly uncertain benefits.

Gillespie & Richard, *Antitrust Immunity Grants*, *supra* note 22, at 1–2.

full cooperation therefore yields a large reduction in the interline fare, the reduction is not quite as large as the one associated with online (single-carrier) service. The ONLINE number in the first column shows that the online fare is 14.4% lower than the traditional interline fare . . . .

These findings mirror the results from earlier research by showing that successive increments to airline cooperation each reduce the fare relative to the traditional interline level.

. . . .

Two broad policy conclusions can be drawn from our study. First, unlike the recent puzzling findings from the DOJ studies, which cast doubt on the view that airline cooperation leads to lower interline fares, our study confirms what previous studies had found using the most up-to-date data. Importantly, our findings show that ATI, which gives alliance partners license to fully cooperate, leads to an incremental fare reduction for all types of passengers (economy and business and across all regions).<sup>152</sup>

There are several problems with Brueckner's findings. Assuming that ATI did lead to lower fares on certain routes, this does not automatically imply that ATI was necessary. Further, were immunized joint ventures able to offer lower fares because of operational efficiencies that reduced their costs? In light of the discussions above, it is unlikely that ATI did enable the joint ventures to reduce their operating costs. This raises the possibility that the lower fares reflected the strategy to drive non-alliance competitors out of certain markets. In other words, Brueckner cannot tell us whether ATI permitted joint ventures to engage in predation.<sup>153</sup> Finally, if ATI allowed joint ventures to offer passengers a more attractive service—one of the key arguments in support of granting ATI and encouraging metal neutrality—why did they not increase fares instead? Surely, passengers would have been willing to pay a premium for better service.

Authors Gillespie and Richard have summarized the academic and legal debate quite well:

To support their claim that antitrust immunized alliances benefit consumers, Applicants cite evidence in the economics literature that shows that consumers pay significantly lower fares for connecting flights offered through antitrust immunized alliance arrangements rather than non-immunized alliance and interline arrangements. In particular, they cite a fare study using 1999

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<sup>152</sup> Brueckner et al., *Revisiting Alliances, Codesharing, Antitrust Immunity and International Airfares*, *supra* note 120, at 2–4.

<sup>153</sup> See generally *id.*

data by Brueckner (2003), which shows that, controlling for route and travel itinerary characteristics, fares paid by connecting passengers for flights offered by carriers in immunized alliances were 8% to 10% lower than for flights offered by non-immunized alliances, and 17% to 20% lower than for flights offered through interline arrangements . . . . The authors (see also Brueckner and Whalen 2000) argue that their results are consistent with the hypothesis that carriers in an immunized alliance charge lower fares to connecting passengers because they internalize a double marginalization problem that arises from the uncoordinated choice of fares in the absence of immunity . . . . Since the 1990s, however, as DOT has highlighted, the competitive structure of the global airline industry has changed “in unprecedented ways through mergers, financial restructurings, and additional forms of cooperative agreements.” Findings for the 1990s, which were the formation years of alliances, may not apply nowadays. Recent published work also cast doubt on the claim that antitrust immunity is needed to reduce a double marginalization problem in connecting fares. Bilotkach (2005) provides a theory framework that shows that immunity is not needed to deliver this benefit, and Bilotkach (2007) finds using 1999 data that alliances with and without antitrust immunity have equivalent prices for economy-class connecting tickets. Likewise, though Brueckner, Lee, and Singer (2010) state that their results using 1998-2009 data mostly confirm findings in the literature that antitrust immunity by itself reduces connecting fares for trans-Atlantic passengers, they actually find little, if any, fare effect from immunity for economy-class tickets, which represent 95% of all tickets sold to passengers in their data.<sup>154</sup>

Thus, it is reasonable to conclude that the empirical work is inconclusive and incomplete. But the theoretical work that underlies the empirical work is based on flawed assumptions and weak theories. The theoretical work largely ignores the role and importance of market foreclosure and other restrictive trade practices.

## VI. CONCLUSIONS

### A. NEED FOR RECONSIDERATION OF ATI

ATI never made sense, even for public policy purposes. Alliances and ATI did not spare the major U.S. airlines from bankruptcy. Open Skies agreements likely would have become common even without ATI.

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<sup>154</sup> Gillespie & Richard, *Antitrust Immunity*, *supra* note 131, at 13.

Alliances and joint ventures are considered to be the airline industry's primary method for circumventing foreign ownership restrictions. Without such restrictions, supporters of joint ventures and ATI believe that cross-border mergers would have been commonplace. Mergers often turn out to be failures. Consequently, it is unlikely that mergers would have improved the competitive position of the acquiring airline. Moreover, distinct differences in culture, government policies, and massive egos likely would have prevented mergers between the leading companies in each alliance.

The efficiency benefits of joint ventures and the goal of ATI to encourage metal neutrality were unlikely to materialize. The regulators never really thought through the integration problems and how to overcome competing goals and different corporate cultures. Hence, whatever efficiency gains were produced, they were unlikely to come close to offsetting the anti-competitive effects.

In examining the potential anti-competitive impacts, regulators did not fully appreciate the potential for restrictive trade practices—market foreclosure, switching costs, access at hubs (slots, gates, check-in counters)—and the possibility of lessening competition in markets beyond the countries or continents covered by the ATI. For example, ATI for the transatlantic market ignored the possibility that as an alliance accepted new members, competition could be lessened on other routes, such as North America to Africa, or any other country with a single airline that joined one of the alliances.

As discussed above, the EC and DOT did note the potential for market foreclosure.<sup>155</sup> But even though they acknowledged this possibility, it did not appear to influence their decisions, largely because no evidence would have been available at the time of the proposed joint venture. Evidence would only become available after a number of years during which the joint venture would be operational, and their competitive behavior could have been observed. Time limits for ATI and periodic reviews appear to be warranted.

More recently, Diana Moss has pointed out the increasing likelihood for market foreclosure:

This white paper examines the implications of this issue for U.S. consumers. It focuses particularly on the implications of antitrust immunity for U.S. consumers that travel on nonstop and con-

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<sup>155</sup> TRANSATLANTIC AIRLINE ALLIANCES, *supra* note 30, at 13.

necting international itineraries that utilize U.S. alliance gateways (i.e., hubs). Many of these gateways have become significantly more concentrated as the result of sweeping U.S. airline consolidation over the past decade, raising concerns about foreclosure of smaller, non-allied carriers and higher fares, less choice in carriers, and lower quality for consumers. Such changes undercut claims that immunity can bring substantial benefits to consumers in nonstop and in the behind-the-gateway and beyond-the-gateway markets served by the alliances.<sup>156</sup>

Her recommendations for future policy were:

- DOT's policy on ATI should be more proactive in responding to fundamental competitive changes in U.S. markets by including and enforcing sunset provisions.
- In light of increased concentration at U.S. alliance hubs, DOT should look skeptically at arguments that immunity creates benefits for consumers in behind-the-gateway and beyond-the-gateway markets.
- DOT should conduct periodic reviews of grants of immunity, per the standard 5-year requirement that is written into almost every final ATI order.
- Ease of market entry (or lack thereof) by non-alliance carriers should be one of the DOT's top considerations in reviewing existing and prospective grants of immunity.
- The DOT should routinely reject arguments that alliances require immunity because they need to compete in the "alliance market."<sup>157</sup>

## B. RECOMMENDATIONS

The general arguments supporting the creation of alliances and joint ventures are that airlines were able to get around the regulations that prevented mergers and the creation of subsidiaries in other countries, and that "seamless" travel could generate significant benefits for consumers. However, the two primary reasons were more likely capacity control (the industry was susceptible to capacity wars that destroyed profitability) and market dominance, especially on many international routes where there was only one national carrier in a market.

The supposed benefits of alliances for consumers likely have been overstated. But what should governments do now? The EC

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<sup>156</sup> Moss, *supra* note 135, at 2.

<sup>157</sup> *Id.*

and DOT have warned that governments might have few degrees of freedom to undo the ATI:

The Commission and DOT agree that one of the main challenges in the airline industry is to design a remedy that can effectively address the identified negative effects of the parties' cooperation while giving consideration to the principle of proportionality. Given the specificities of the airline industry, it is, however, difficult to apply the traditional forms of divestiture remedy, commonly used in other sectors. A key issue is the assessment of the barriers to entry on the route(s) of concern: is it possible to design remedies which would lower these barriers such that entry on the route would become likely? Are there carriers whose existing networks would be compatible with potential entry on a city-pair of concern, with appropriate remedies?<sup>158</sup>

Despite this warning, the author puts forward some suggestions.

### 1. *Mandatory Interlining*

Feed traffic, especially at major hub airports, is critical to support many routes to and from these hubs. If there is no technology or any other real operational issue that prevents interlining, or code-sharing between an alliance airline and a non-alliance airline, then alliance airlines should be required to offer non-alliance airlines the option to interline or code-share on terms similar to those offered to alliance members. Otherwise, refusal to offer interline or code-share could be a restrictive trade practice, and it would be subject to review by the FTC and DOJ in the United States.

### 2. *Open Access to Frequent Flyer Programs (FFP)*

Frequent flyer programs were created by American Airlines to promote loyalty, especially among the frequent travelers, and create a switching cost for such travelers.<sup>159</sup> At the present time it is not the accumulation of points for redemption for free travel that matters for frequent travelers.<sup>160</sup> Rather, it is the accumulation of miles to achieve higher levels of status that offer important perks.<sup>161</sup> When someone joins a program, he or she is reluctant to shop around to find lower prices on other, non-affiliated airlines.

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<sup>158</sup> TRANSATLANTIC AIRLINE ALLIANCES, *supra* note 30, at 24.

<sup>159</sup> AIRLINE COMPETITION, *supra* note 37, at 18.

<sup>160</sup> *See id.*

<sup>161</sup> *See id.*

The combination of FFP and dominance at a hub tend to reinforce each other in reducing the likelihood that frequent travelers will switch to competing airlines. The switching costs deter entry, and if the airline refuses to interline with a competitor, competition is greatly lessened, especially in markets where feed traffic is critical.

Thus, to level the playing field further, alliance airlines should be required to open up their FFP to all passengers, even passengers not flying on their respective airlines. Obviously, this might lead to privacy and other competitive concerns. An alliance airline might use the information to contact passengers directly and offer special deals to attract them away from other competitors. But, undoubtedly, there are rules that could be imposed to restrict this type of predatory behavior. There is a precedent for this recommendation. The OECD pointed out the case in Sweden:

A rare example of antitrust enforcement against an airline's FFP is provided by the Swedish Competition Authority (SCA). The SCA found SAS liable for abusing its dominant position by extending its EuroBonus programme to domestic flights. SAS had a market share of approximately 70% in the Swedish market for scheduled domestic passenger flights. The SCA concluded that EuroBonus programme had strong loyalty-inducing benefits hampering competition from alternative carriers. On appeal, the Swedish Market Court considered that the programme was capable of distorting market incentives, especially when the person accruing the benefits (i.e. the employees) was not the one paying for the programme (i.e. the employer). The Court also found that EuroBonus programme could be used to influence prices by reducing customers' responsiveness to price, and that the programme had a price-raising effect. The Market Court therefore confirmed the SCA's finding that SAS's programme had exclusionary effects. It prohibited the EuroBonus programme on domestic routes where SAS or any airline cooperating with SAS faced competition, as well as on routes considered by new entrants.<sup>162</sup>

### 3. *Competitive Pricing by Suppliers*

Scale does give a company a bargaining advantage with suppliers. If there are economies of scale and/or significant contracting costs (including monitoring and enforcement), lower prices might be warranted for large customers. However, the

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<sup>162</sup> *Id.* at 45–46.

bargaining leverage can place smaller competitors at an increasing disadvantage.

For this reason, it is important to continually monitor the relationships between suppliers of various services to airlines, particularly services at airports, to ensure that a dominant airline is not pressuring a supplier to provide inferior service to competitors. This might include longer wait times for ground handling or fueling services, limited access to check-in counters, access only to more remote gates, or access to less desirable slots. The relationships must be monitored to ensure that suppliers are not engaging in price discrimination that favors the larger airline.

#### 4. *Time limits for ATI*

The author concurs with Diana Moss's recommendation that the DOT include and enforce sunset provisions in all ATI cases.<sup>163</sup> And the DOT, in conjunction with the Department of Justice and possibly the FTC, should conduct periodic reviews of grants of immunity. The recent Delta-Aeromexico joint venture has been granted ATI for five years.<sup>164</sup> All the other existing immunized joint ventures should be subject to a similar five-year time limit going forward. During the five-year period and at the end of this period, the DOT should review each case to determine whether efficiencies did materialize and, if so, the magnitude of the efficiencies. They should also analyze the anti-competitive effects, including the possibility of market foreclosure through restrictive trade practices.

### C. WRAP-UP

There never was a reason to grant ATI to any of the alliances, except for the per se rule in the United States. Collaboration through a joint venture either was going to produce operational efficiencies with subsequently lower fares and a higher quality of service, in which case ATI was not required, or was going to significantly lessen competition, in which case ATI could not be supported by the competition laws.

When the requests for ATI were made, it should have been clear that improvements in operational efficiency would be limited at best. Different ownership structures, objectives, corporate cultures, incompatible IT systems, and egos would stand in

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<sup>163</sup> Moss, *supra* note 135, at 2.

<sup>164</sup> *Id.* at 11.

the way, as they did. In assessing the potential for lessening competition, the regulators, particularly the DOT, did not fully consider the potential for the implementation of various restrictive trade practices by the alliances or the possibility of monopolization of routes beyond the countries involved in the ATI applications. Carve outs were a weak compromise for minimizing the anti-competitive impacts of immunized joint ventures. They did not address other foreclosure strategies, predation, or the monopolization of third country markets.

While the recommendations the author has suggested do not guarantee that competition will flourish in many international markets, they are critical to creating a more level playing field. For a similar reason, the inclusion of subsidy and dumping codes in Open Skies Agreement are warranted to maintain as a level a playing field as possible in international markets.<sup>165</sup> With a level playing field, the companies with the superior strategies and the best execution of their strategies will succeed over time.

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<sup>165</sup> Fred Lazar, *Multilateral Trade Agreements for Civil Aviation*, 36 AIR & SPACE L. 379, 384 (2011).