

COMMENTARY

AIRLINE ALLIANCES AND SYSTEMS COMPETITION: ANTITRUST POLICY TOWARD AIRLINES AND THE DEPARTMENT OF JUSTICE GUIDELINES

*Michael E. Levine**

Reitzes and Moss's paper addresses fundamental issues in the evolution of airline competition. Using as its starting point the analysis of airline competition that has evolved at the Department of Justice (DOJ) since airline deregulation, it addresses the "problem" of antitrust treatment of airline alliances. The paper suggests that the benefits of post-deregulation alliances have to be balanced against their negative impact on competition and that recent developments suggest that the fairly benign attitude taken by the Department of Transportation (DOT) toward these alliances needs to be reassessed in light of what seem to them to be diminishing benefits and increasing costs.

Like the DOJ merger guidelines and the current state of antitrust law toward airlines,¹ Reitzes and Moss's paper enshrines

* Distinguished Research Scholar and Senior Lecturer, New York University School of Law. As an executive at Northwest Airlines from 1992–1999, the Author was one of the principal creators of the Northwest-KLM North Atlantic joint venture, which received antitrust immunity in 1993. Since leaving Northwest in 1999, he has served as a consultant at various times to Northwest Airlines and Delta Air Lines. The opinions expressed here are entirely those of the Author and not of any entity for which he has consulted.

1. Comprehensively and elegantly summarized in Rufus Oliver's comments on this panel. See generally U.S. DEP'T OF JUSTICE & THE FED. TRADE COMM'N, HORIZONTAL MERGER GUIDELINES 1 (1997), available at http://www.usdoj.gov/atr/public/guidelines/horiz_book/hmg1.html ("[O]utlin[ing] the present enforcement policy of the Department of Justice and the Federal Trade Commission (the 'Agency') concerning horizontal acquisitions and mergers . . ."); J. Bruce McDonald, Deputy Assistant Attorney Gen., Antitrust Div., U.S. Dep't of Justice, Antitrust for Airlines, Remarks at the President's Council Meeting of the Regional Airline Association 7–11 (Nov. 3, 2005), available at

classical competition for the purchase of individual journeys as its baseline and considers the degree to which firm-induced variations from classical competition produce more benefits than costs. I certainly can't disagree with the idea that, as with any government policy, costs need to be compared with benefits, but I believe that their paper, insofar as it uses thirty years of experience and what we have learned about deregulated competition, regrettably misses the significance of what has occurred.

What we thought, to the extent we thought about it, when we first began considering airline competition was that the mobility of the primary airline resource (the aircraft) meant that we could model airline markets as classically competitive.² That is, we thought that every passenger faced with a fare higher than the marginal cost of serving her would be presented with a lower-cost alternative, producing a competitive equilibrium.³ We treated production as atomistic, as though airline trips were created seat-by-seat. That was a reasonable starting point, considering the way we understood the California and Texas experiences with less-regulated competition, but thirty years of deregulated competition has shown us market developments that no regulator or analyst predicted.

Early on in this thinking process, it became obvious that there were production indivisibilities (that is, that trips were created by the planeload) and that competitive replacement would have to occur on a flight-by-flight basis. In short, route density mattered. What emerged from that recognition was contestability theory, which posited that competition occurred either flight-by-flight or route-by-route (it wasn't clear which) and resulted in a competitive equilibrium in which markets behaved as though they had an infinite number of multiple producers even if there was only one flight or airline actually serving the market.⁴

<http://www.usdoj.gov/atr/public/speeches/217987.htm> (discussing the DOJ's horizontal merger guidelines).

2. See Michael E. Levine, *Airline Competition in Deregulated Markets: Theory, Firm Strategy, and Public Policy*, 4 YALE J. ON REG. 393, 400–01 (1987) (discussing the historical development of competition models in the airline industry); see also McDonald, *supra* note 1, at 3 (describing the “relevant market” for purposes of determining whether a merger will lessen competition as a city-pair, or even more narrowly, as “business’ versus ‘leisure’” passengers for a given city-pair).

3. See Levine, *supra* note 2, at 400–01.

4. See Elizabeth E. Bailey, *Contestability and the Design of Regulatory and Antitrust Policy*, 71 AM. ECON. REV. 178, 179–80 (1981) (“The new policies [of the Interstate Commerce Commission and the Civil Aeronautics Board] are based on the theory that both trucking and aviation markets are, in the absence of regulatory intervention, naturally contestable. Capital is highly divisible in the trucking industry, and there is every reason to suppose that market mechanisms will work . . . Even in nondense city-pair markets in aviation, . . . potential competition should be able to act as a potent force. This is true because the major portion of airline capital costs, the aircraft, can readily be moved from one market to another.”); see also

By the mid-1980s, after only a few years of deregulated competition, it became clear that this wasn't the case—airline markets were not naturally contestable and what would emerge from airline competition was not necessarily a classically competitive equilibrium. As incumbent (now known as “legacy”) airlines developed strategies to defend themselves, they developed hub and spoke networks that inhibited competitive displacement by creating value to consumers that could not be duplicated by atomistic competitors.⁵ In addition, the incumbents created network-reinforcing marketing practices like price discrimination, customer loyalty programs, travel agency incentive programs, and computer reservations system (CRS) search bias, as well as the use of historic airport facilities commitments, to inhibit competitive entry.⁶

Airline markets have production indivisibilities and transaction costs that affect demand. Networks address both issues, but also impose impediments to classical competition. Some cities can only support one network. Even where, as in most markets, a city or airport can support more than one network, there will be monopoly or duopoly markets (for example, to and from hubs) created by indivisibilities and the demand-side economics of networks.

These networks are very valuable to some time- and transaction-cost-sensitive customers who are willing to pay a lot to use them, and the networks offer benefits through joint production and price discrimination to price-sensitive customers. Inhibiting the development of these networks destroys value to both customer groups. In fact, we now have thirty years of evidence that many, perhaps most, consumers prefer to use networks and have forced virtually all airlines of any size to adopt network structures in one form or another.⁷ This includes even those airlines that started out

WILLIAM J. BAUMOL, JOHN C. PANZAR & ROBERT D. WILLIG, *CONTESTABLE MARKETS AND THE THEORY OF INDUSTRY STRUCTURE* 7 (rev. ed. 1988) (“A clear example is provided by small, and therefore naturally monopolistic, airline markets. . . . [B]ecause airline equipment (virtually ‘capital on wings’) is so very freely mobile, entry into the market can be fully reversible. In principle, faced with a profitable opportunity in such a market, an entrant need merely fly his airplane into the airport, undercut the incumbent’s price, and fly the route profitably. Then, should the incumbent respond with a sufficient price reduction, the entrepreneur need only fly his airplane away. . . . Thus, it is highly plausible that air travel provides real examples of contestable markets.”).

5. See McDonald, *supra* note 1, at 4–5 (outlining several strategic considerations in determining whether a carrier will enter a city-pair to replace lost competition in a hub-and-spoke system).

6. See Levine, *supra* note 2, at 408–18; see also Michael E. Levine, *Price Discrimination Without Market Power*, 19 YALE J. ON REG. 1, 6–7 (2002); Keith Devlin, *The Crazy Math of Airline Ticket Pricing*, MAA ONLINE, Sept. 2002, http://www.maa.org/devlin/devlin_09_02.html (discussing customer loyalty programs and the problems associated with internet-based travel agencies).

7. See Levine, *supra* note 6, at 6–7.

as low-cost point-to-point airlines without historical overhangs or sunk costs.⁸

The principal mechanism underlying efforts to build networks and escape classical competition was the hub, which became known both to its creators and detractors as the “fortress hub.” The hub was designed to offer frequent, cost-effective service to travelers who valued frequent and convenient service in markets too small to support service on a standalone basis.⁹ Since the vast majority of city-pair markets fit into this category,¹⁰ these hubs became the dominant mode of competition for travelers willing to pay for convenience, except in those markets large enough to support standalone frequent service between a hub airline and a point-to-point airline.

Impediments to contestability, such as frequent flyer programs, CRS principal-agent problems, travel agency incentive commissions, airport slots and gates, and other effects that gave advantages to incumbent airlines, developed to take advantage of these hubs. But these effects, including the hubs, were seen as exogenous to airline competition, rather than intrinsic, and discussion centered on how to eliminate or neutralize them; or, failing that, how much to take them into account in regulating airline competition through antitrust.¹¹ In other words, the industry was modeled as being basically competitive, and scope effects were seen as impediments to this competition to be addressed through merger and agreement policy even if they couldn’t be addressed directly through regulation.¹²

8. This is relevant in the accounting and earnings-reporting sense and, with production indivisibilities, a major source of the pressure for price discrimination even where airline markets are competitive. *See id.*

9. U.S. DEP’T OF TRANSP., ENFORCEMENT POLICY REGARDING UNFAIR EXCLUSIONARY CONDUCT IN THE AIR TRANSPORTATION INDUSTRY 19 (2001), available at <http://purl.access.gpo.gov/GPO/LPS32673>; *see also* Levine, *supra* note 2, at 411–13 [hereinafter ENFORCEMENT POLICY].

10. *See* TRANSP. RESEARCH BD., NAT’L RESEARCH COUNCIL, SPECIAL REPORT 255: ENTRY AND COMPETITION IN THE U.S. AIRLINE INDUSTRY 65–67 (1999) (“In the majority of city-pair markets, travelers must connect to another flight at a transfer point, usually a hub airport. Except for passengers in the densest markets, which have sufficient traffic to support regular point-to-point service, most who fly nonstop are originating from or headed to a hub airport, accompanied on the flight by many other connecting passengers flying to and from dozens of connecting, or spoke, cities.”).

11. *See, e.g.*, ENFORCEMENT POLICY, *supra* note 9, at 8–9 (discussing the need for antitrust regulation when hubbing airlines eliminate competition).

12. Regulations aimed at computer reservation systems and travel agency relationships were adopted, and by the late 1990s, competition rules to deal with so-called “predation” were being proposed by the Department of Transportation (DOT). *See* Ticketless Travel: Passenger Notices, 62 Fed. Reg. 19,473, 19,477 (Apr. 22, 1997) (codified at 14 C.F.R. ch. II) (“[T]icket notices . . . shall be given or made readily available to electronically ticketed passengers in writing . . . no later than the time that they check in for the first flight in their itinerary.”);

Reitzes and Moss's paper looks at airline alliances through this lens, seeing them as extrinsic to basic airline competition and tolerable only to the extent that they do not impede competition "too much." Having once been sympathetic, I now believe that this view is basically wrong for an important segment of the air transport market. That is not to say that classical competition is dead. In dense markets, low-cost airlines can offer relatively frequent service that competes with network service, even for some convenience-sensitive travelers. Even in these markets, though, relatively few firms offer identical airport-pair service.¹³

And for leisure travelers willing to substitute flights, amenities, schedules, flight times, airports, and even destinations for relatively small fare differences, something like contestability still holds. A Ryanair, or closer to home, an Allegiant Air, is built around these principles. The airline assumes that passengers are buying a very basic form of transportation and will adjust their purchases and transfer their business to the airlines offering low fares, whether or not those airlines are part of a larger system. Production indivisibilities are overcome by aggregating passengers, readily willing to adjust their purchase patterns for relatively small amounts of money and travel to Charleroi and Hahn airports instead of Brussels and Frankfurt. Alternatively, the aggregated passengers may adjust their day and time of travel, and perhaps even their choice of leisure destination, to get low fares from Cedar Rapids, IA or Allentown, PA to Orlando or Fort Lauderdale, FL—

Enforcement Policy Regarding Unfair Exclusionary Conduct in the Air Transportation Industry, 63 Fed. Reg. 17,919, 17,921 (Apr. 10, 1998); *see also* ENFORCEMENT POLICY, *supra* note 9, at 62–63 (discussing unfair competitive practices used by incumbent airlines and the need for enforcement actions when such practices are considered "predatory"); U.S. DEPT OF TRANSP., COMPETITION IN THE U.S. DOMESTIC AIRLINE INDUSTRY: THE NEED FOR A POLICY TO PREVENT UNFAIR PRACTICES 8 (1999), *available at* http://ostpxweb.dot.gov/aviation/domav/comp_rev.pdf (describing the sources of unfair exclusionary practices and the DOT's role in preventing such conduct).

13. For example, non-hub carrier Southwest Airlines has entered the San Francisco International (SFO) to Los Angeles International (LAX) market to offer competition to United Airlines' service from its San Francisco hub. But compare Dallas to Houston, where Southwest offers service from both Dallas airports, Dallas-Fort Worth (DFW) and Dallas Love (DAL), to its complex at Hobby Airport (HOU) in Houston; Continental Airlines provides service from both Dallas airports to its hub at Bush Intercontinental (IAH); and American Airlines provides skeleton service to both Houston airports from its hub at DFW and from DAL. In Chicago, Southwest provides nonstop service from Midway (MDW) to HOU and (through ATA Airlines) to DFW, while American and United offer nonstop service from their hubs at O'Hare (ORD) to DFW and IAH, but not HOU. In the Chicago-Minneapolis/St. Paul (MSP) market, Northwest Airlines offers nonstop service from its hub at MSP to both Chicago airports and American and United provide service to MSP from their hubs at ORD, and AirTran Airways offers only token service from its mini-hub at MDW to MSP. *See* AirTran Airways, <http://www.airtran.com>; American Airlines, <http://www.aa.com>; Continental Airlines, <http://www.continental.com>; Northwest Airlines, <http://www.nwa.com>; Southwest Airlines, <http://www.southwest.com>; United Airlines, <http://www.united.com>.

markets with density much too low to support frequent and convenient service at low prices. Airlines that specialize in serving these markets offer barebones service in aircraft too large to offer convenient frequency.

But most of the revenue in the airline business is now earned in networks, using airlines that aggregate multiple itineraries through nodal “switches” (airline hubs) to make a wide choice of flights, times, and destinations available to their customers.¹⁴ Indivisibilities are overcome (at considerable production expense) by aggregating aircraft on the ground nearly simultaneously and by using aircraft too small to achieve the lowest possible unit costs. All this is coordinated by immensely complex software and work organizations, and airlines find it less costly to add new flights, destinations, and even passengers to these systems than competitors do to displace them.¹⁵ In short, the systems exhibit network characteristics that on the production side emphasize indivisibility (bundled production of different products) and on the demand side reward scope.

The indivisibilities that create networks, including monopolies or duopolies in nonstop service to hub airports, mean that it is almost never the case that competing networks are perfect mirrors of each other. Networks do compete with each other, but in each network there are users who are likely to be captive, in the sense that the network creates services for which they have no alternative of equal utility. Consumers can use non-network services—drive to or from an airport other than their preferred one or accept a stop as an alternative to monopoly nonstop service—but only at a considerable sacrifice in value. All these services are substitutes for a network airport-pair monopoly, but in thirty years of deregulated U.S. domestic competition, consumers have demonstrated over and over again that they value the networks more highly in aggregate than they value lower-priced alternatives.

These economics are similar to those that have given the antitrust system fits in other industries—software, wireless communications, broadcasting, and similar businesses in which the product or service offered is more valuable to consumers if other consumers use it and exhibits lower unit costs to add customers to the same system than it does to replace them.¹⁶ The nonclassical

14. See Levine, *supra* note 2, at 411–13.

15. *Id.* at 459–60.

16. See, e.g., Howard A. Shelanski & J. Gregory Sidak, *Antitrust Divestiture in Network Industries*, 68 U. CHI. L. REV. 1 (2001) (analyzing the welfare benefits of divestiture remedies in the context of network competition, particularly in the Microsoft matter); Daniel F. Spulber & Christopher S. Yoo, *Mandating Access to Telecom and the Internet: The Hidden Side of Trinko*, 107 COLUM. L. REV. 1822, 1888–98 (2007) (analyzing “interconnection” and network efficiencies in the wireless communication industry).

aspects of these economics have created all the controversy surrounding software bundling and access to “ports” and source code, “network neutrality,” and the “last mile.”¹⁷ They are beginning to give the antitrust system fits here as well, because they replace a classically competitive model with a Schumpeterian model that rewards successive innovation (expressed here as new city-pairs, more convenient schedules, and increased convenience of use relative to standalone alternatives) and scope with temporary market power.¹⁸

Competitive pressure from new networks and network expansion continues, even in the hard times prevailing as this Comment is written. U.S. Airways is expanding its network internationally and is a candidate to extend the reach of its domestic network by taking over any abandoned mid-country hub that might be viable at its low costs. Southwest, now one of the largest domestic airlines (its exact rank depends on which measure one uses)¹⁹, continues its slow progression from quasi-hub carrier to full hub carrier in mode of operation and has stated its intention to expand its international service, either directly or via an alliance. JetBlue has accepted an investment from and stated an intention to cooperate with Lufthansa and Aer Lingus and is in the first stages of creating an alliance network with foreign airlines.²⁰

In this model, the issue for competition policy is not really, as the authors say, “How much competitive effect am I willing to give up to allow aggregation that might be of some value to consumers?” but rather, “How much value to consumers as a whole am I willing to bar in order to provide some competitive discipline for the benefit of consumers who would like network value but don’t want to be at the mercy of a single provider in a marketplace that rewards network scope and bundled production?” Forcing network producers to offer access to their networks to non-network producers transfers network benefits to those who will not pay for them while

17. See, e.g., Spulber & Yoo, *supra* note 16, at 1872–74; Robert A. Guth, Ben Worthen & Charles Forelle, *Microsoft to Reveal Software Secrets*, WALL ST. J., Feb. 22, 2008, at A3 (discussing Microsoft’s decision to share technical trade secrets with competitors in part to satisfy European antitrust regulators).

18. See Spulber & Yoo, *supra* note 16, at 1844 (“[The Schumpeterian] market is dominated by a succession of monopolists and firms compet[ing] by vying to discover the next breakthrough innovation that will give them a cost or quality advantage decisive enough to allow them to displace the current monopolist and dominate the market in its place.”).

19. It is the largest domestic airline measured by number of passengers carried, and second measured by revenue passenger miles. U.S. DEP’T OF TRANSP., BUREAU OF TRANSP. STATISTICS, AIRLINE DOMESTIC MKT. SHARE FEB. 2007–JAN. 2008.

20. Andrew Compart, *JetBlue-Lufthansa Links Within Year: Barger*, AVIATION DAILY, Apr. 7, 2008.

discouraging network development. It is a cost to many consumers, not a benefit.

Space does not permit full exploration of this issue, but allow me to make a few assertions based on the implications of what I have said:

1. Deregulation has permitted the offering of network and non-networked services. Both are very valuable to those who choose to use them, but network services have proven to be more valuable to most consumers.
2. Network producers have higher average total costs than specialized non-network producers, but production indivisibilities mean that they will have incremental capacity that they can use by competing for non-network users as well as network users. Doing so raises their total revenue and allows production technology that lowers average cost. When network producers compete for non-network users, their marginal costs vary from near zero to very high and they price discriminate and limit output accordingly. Non-network producers can compete in markets of high density or where large numbers of users can be assembled who don't want the benefits of networks. In other markets, non-network producers experience this price discrimination as predation.
3. Network benefits are real and are highly valued by a significant number of users. They are not an "offset" to the higher prices paid; they are the object of the transaction. The costs of producing these benefits can only be recovered by price discrimination. Forcing network producers to offer the benefits of their network to customers of non-network producers simply and ultimately reduces the scope of the networks that can be offered. Keeping them from disposing of joint production through price discrimination is economically wasteful.
4. When there are economies of scope without economies of scale or political obstacles to achieving economies of scope, alliances are an extremely valuable way to extend networks and should be encouraged, as long as they do not actively prevent by physical exclusion the offering of competing networks or non-network services.
5. I am not suggesting that antitrust is obsolete or irrelevant for the airline industry. Public policy should focus on maintaining access to non-network options where the market will support them on a standalone

basis, but not on inhibiting the development of networks or forcing network accommodation to non-network providers. When feasible, it should also concentrate on preventing removal of the physical possibility of competing network service (for example, by preventing competing networks from accessing facilities that they are willing to pay for or finance, if necessary). Ultimately, even network users can benefit through price competition from the availability of non-network substitutes whenever they can use them, and economic efficiency requires that non-network producers should not be impeded from providing pricing discipline by offering non-network services wherever the market will support them. Competition policy should be directed at preventing such impedance. Similar considerations apply to city-pair competition through alternate or opposing hubs by competing networks, although near-perfect network overlay using the same hub airport is very rare.

6. While network producers can go out of their way to raise rivals' costs (for example, by preventing the construction of gates that non-network airlines or network competitors are willing to pay for and by conspiring to hoard operational "slots"), and should be prevented from doing so by the application of the Sherman Act, declining to offer their facilities or networks to competitors (by denying competitively-priced prorates for "outsider" connection to the networks or access to gates that are used intensively) should not be an antitrust violation. Competition policy should not be aimed at preventing network producers from expanding networks or forcing them to offer network services to those producers who do not incur the costs of providing them.
7. Policy should encourage competing networks but recognize that pockets of monopoly will persist. Most competitive benefits can probably be realized in the context of networks by multiple (three or more?) networks and as much non-network price discipline as can develop without interfering with network evolution. Much competition between networks and even between

network and non-network services will be Schumpeterian rather than classical.²¹

This is the reverse of the analytical approach suggested in Reitzes and Moss's paper and currently embedded in the DOJ policy guidelines. These guidelines, and competition policy toward airlines, must change to allow society to extract full value from the airline system. The Supreme Court is rethinking and recodifying antitrust, and we can only hope that, over time, the DOJ will do the same.²² It is conceivable that legislation would be required, but most competition law is court- and agency-made.²³ In fact, most competition law can be remade through administrative proceedings and the exercise of prosecutorial discretion.²⁴ I am not optimistic that this project will make progress if the incoming administration of 2009 is Democratic (whatever other benefits such an administration might bring), but thirty years of experience with airlines free to evolve without regulatory handcuffs has taught us what is inevitable and what consumers regard as desirable. No competition policy can possibly achieve an economic optimum in the real world. The question is where to start and on which side to err. In airline networks and alliances, errors should be on the side of allowing network benefits at the cost of classical price competition, retaining as much of the latter as can be kept without diminishing the former significantly.

21. Consider, for example, British Airways's recent announcement of service between London City Airport (LCY) and New York (airport to be announced) and its creation of a non-network subsidiary to fly from Brussels and Paris to New York. See Joe Sharkey, *British Airways Is Stoking the Business-Class Rivalry*, N.Y. TIMES, Feb. 5, 2008, at C6 (detailing the City of London to New York route); Joe Sharkey, *For the Laptop Toters, a Roomier Flight to Europe*, N.Y. TIMES, Jan. 15, 2008, at C6 (detailing the Brussels/Paris to New York route). The first represents an extension of its network by offering another alternative to users who are already likely to be members of its frequent flyer program and to use its services at the other London airports. The second represents point-to-point competition by a low-cost subsidiary to existing service in hub markets.

22. See, e.g., *Leegin Creative Leather Prods., Inc. v. PSKS, Inc.*, 127 S. Ct. 2705, 2720, 2725 (2007) (overturning 100-year-old precedent interpreting the Sherman Act to hold vertical minimum pricing agreements per se illegal and finding that the rule of reason applies in these cases).

23. ERNEST GELLHORN, WILLIAM E. KOVACIC & STEPHEN CALKINS, *ANTITRUST LAW AND ECONOMICS* 526–36 (2004) (noting that both the Federal Trade Commission and the Justice Department's Antitrust Division create agency rules and regulations affecting competition law and create judicial precedents through the prosecution of cases). An encouraging example is the recent tentative approval of the Department of Transportation of Antitrust Immunity for the four-way North Atlantic joint venture of Air France, Delta, KLM and Northwest. Show Cause Order 2008-4-17, No. OST-2007-28644-0174 (Dep't of Transp. Apr. 9, 2008), available at <http://www.regulations.gov/fdmspublic/component/main?main=DocumentDetail&o=090000648048195b>

24. *Id.*