MOTION FOR LEAVE TO FILE AND
SUPPLEMENTAL COMMENTS OF HUBERT HORAN
AMERICAN AIRLINES-BRITISH AIRWAYS-IBERIA-FINNAIR-ROYAL JORDANIAN
JOINT APPLICATION FOR ANTITRUST IMMUNITY
DOCKET DOT-OST-2008-0252
31 January 2010

MOTION FOR LEAVE TO FILE

On January 10th, I filed public comments in response to the Department of Justice's December Comments.[1] These comments were filed during the public comment period established by the Department's order of 22 December.[2] My comments were filed via regulations.gov and have been available to the Department and the public since 11 January 2010.[3] My comments were largely focused on the Joint Applicants' claim that a grant of antitrust immunity would generate $92 million in annual public benefits due to lower fares in connecting markets—the largest and most important economic claim in their application. The Department of Justice took no position on the legitimacy of this claim, but argued that if any such consumer benefits existed, they could be largely achieved without a grant of immunity. My comments challenged the DOJ position that the possibility of benefits of this magnitude could be assumed without analysis or other scrutiny.

On 28 January, while discussing an unrelated matter on a separate case, a DOT staffer informed me that my public comments had been rejected by the Department, and the evidence I presented about the public benefit claims would be totally ignored. This was because I had failed to meet the requirements of 14 CFR 302.07 mandating email or physical distribution to all parties to the case, and inclusion of a signed "certificate of service" stating that such distribution has occurred. Although the Department actively encourages public comments via regulations.gov, and there is nothing in 14 CFR 302.07 specifically precluding the use of docket management systems such as regulations.gov as a means of distributing case filings, I was told that the Department interprets 14 CFR 302.07 to mean that evidence introduced by filings distributed solely via regulations.gov are wholly inadmissible. I had no knowledge of this issue prior to 28 January, as the Department had (and has) not provided me with any official communication indicating the deficiency or its intention to reject the comments. I have not received any informal communication about any deficiency other than the "certificate of service" issue.

I am filing this motion for leave to refile my original 10 January comments, including the missing certificate, that will bring my filing into compliance with the Department's interpretation of 14 CFR 302.07. The January 10th comments are completely unchanged from the version that has been available to the Department and the public since 11 January. I believe the Department should grant this motion, as

- The public comments are fully consistent with the reasons the Department established the supplemental comment period on 22 December
- The public comments provide objective evidence and substantive analysis of one of the most important aspects of this case
- I had made a sincere, good-faith effort to comply with the Department's public comment and filing requirements; there is no reasonable way that a member of the general public wishing to file a public comment on an important case such as this would have realized that the email and certificates were mandatory requirements; when I initially inquired about making public comments on cases such as this, staff at the DOT Dockets Office informed me that I simply had to follow the filing procedures at regulations.gov, and complete the filing within the designated public comment period, which I have done

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[1] DOT-OST-2008-0252-3374
[2] DOT Order 2009-12-16
[3] DOT-OST-2008-0252-3379

- There is no information at regulations.gov or any DOT website indicating that evidence introduced via public comments would be automatically rejected unless the distribution and certificate requirements had been met
- The public dockets on this and similar cases include many submissions that do not include certificates, thus a reasonable member of the general public would not assume this is a mandatory requirement

- I have made a sincere, good-faith effort to remedy the distribution and certificate deficiency as soon as I discovered it was an issue, and would have done so sooner, had the Department made me aware of the issue sooner.
- The distribution and certificate requirements of 14 CFR 302.07 serve legitimate, important purposes, but those purposes will have been met if this motion is granted. Granting this leave to refile after the end of the official comment period places no serious disadvantage on any party to this case, as the comments have been fully available for review by all parties since 11 January, and the Department had never issued any public statement disqualifying them; the initial omission of the certificate and this motion for late (re)filing is obviously not attempt to artificially disadvantage other parties to this case, who largely consist of large international airlines, represented by some of the top aviation counsel in Washington.
- Granting this leave to refile after the end of the official comment period would be fully consistent with all past actions taken by the Department in this case, including the granting of all prior motions for leave to file late comments in its December Order. In all of these past decisions, the Department has properly given higher priority to establishing a complete case record, and allowing all parties full opportunity to review and comment on that record, than to producing a less complete decision on a tighter schedule.
- For many years, the Department has actively encouraged public input into regulatory and administrative decisions, and was one of the pioneers of the user-friendly internet-based docket management systems that have evolved into regulations.gov. Granting this motion would indicate that the Department places greater weight on the importance of public access to and participation in its decision making, that it places on any unintended inconvenience caused to the airlines and law firms that have had access to these public comments since 11 January, but had not received a direct email with these comments until this filing.

The balance of this filing consists of a verbatim copy of my 10 January comments and the certificate of service. Following an introduction explaining my background, experience and interest in this case, the comments are divided into five sections

SUPPLEMENTAL COMMENTS OF HUBERT HORAN
AMERICAN AIRLINES-BRITISH AIRWAYS-IBERIA-FINNAIR-ROYAL JORDANIAN
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DOCKET DOT-OST-2008-0252
8 January 2010

My name is Hubert Horan. I am filing these comments in response to the Department of Justice filing at DOT-OST-2008-0252-3374. These are supplemental to comments I originally filed on 15 October 2009 under DOT-OST-2008-0252-3362

During my 25 year aviation career I have done consulting work with over 30 airlines and held airline management positions with Northwest, America West, Swissair and Sabena. I have significant experience in international airline competition and the actual operation and economics of airline alliances. While at Northwest I was personally responsible for the original development of the KLM-Northwest Alliance network and introduced the intense hub-to-hub operations that allowed Northwest to become the most profitable US carrier on the North Atlantic, and established the template followed by all of the subsequent alliance networks. I spent four years at Swissair-Sabena, including the transition of Swissair's alliance from Delta to American, and thus have been involved in alliance management on both sides of the Atlantic. I have not only helped build highly successful alliances, I have helped shut down highly unprofitable ones, including the intra-European Qualiflyer alliance, and the domestic alliance between Continental and America West. Over the years I have written extensively on airline competition, global airline consolidation, and Open Skies treaty negotiations, and I also testified before Congress on the Delta-Northwest merger. I am based in Phoenix, Arizona. A full list of publications and further biographical information is available at my website, horanaviation.com.

I have no active business or financial interests with any of the parties to this case, and am only commenting as a private citizen concerned about the issues raised by this case.

A. RECENT SUBMISSIONS HAVE NOT ADDRESSED THE JOINT APPLICANTS' HIGHLY DEFICIENT CLAIM OF $92 MILLION IN ANNUAL PUBLIC BENEFITS FROM CONNECTING SERVICES

A1. DOT may not grant the requested immunity without evidence, meeting the standards of the *Horizontal Merger Guidelines* demonstrating consumer benefits in nonstop and connecting markets significantly greater than any risks of reduced competition in nonstop or connecting markets

- Applicants for antitrust immunity must prove that immunity "is necessary...to achieve important public benefits" that "cannot be achieved by reasonably available alternatives that are materially less anticompetitive."[1] Both the DOT and DOJ have recognized that airline antitrust immunity applications such as this one would directly eliminate competition in the same manner that a full merger would and applicants must prove that those public benefits outweigh the risk that it could harm competition by increasing the ability or incentive to raise price or reduce output in any relevant market.[2] The burden of proof for public benefits rests with the applicants, and the *Horizontal Merger Guidelines* defines the evidentiary standards that must be met:
    - "[the applicants] must substantiate efficiency claims so that the Agency can verify by reasonable means the likelihood and magnitude of each asserted efficiency, how and when each would be achieved (and any costs of doing so) how each would enhance the merged firm's ability and incentive to compete, and why each would be merger-specific. Efficiency claims will not be considered if they are vague or speculative or otherwise cannot be verified by reasonable means"[3]

[1] 49 USC sections 41308, 41309(b)
[2] Federal Trade Commission, Department of Justice, Antitrust Guidelines for Collaborations Among Competitors (2000) sections 1.2, 3.3.
[3] Federal Trade Commission, Department of Justice, Horizontal Merger Guidelines (1997) p.31

- The Joint Applicants have made four substantive claims in support of their request for antitrust immunity: (1) that immunity would generate $92 million in annual public benefits in the form of capacity driven price reductions to North Atlantic passengers using connecting services[4] (2) that immunity would generate $45 million in annual public benefits from increased nonstop capacity added to hub-to-hub routes[5] (3) competition would not be reduced or eliminated in the overlapping nonstop markets served by the Applicants[6], and carve-outs of nonstop routes from any immunity grant would reduce consumer benefits by $55 million[7] (4) competition would not be reduced or eliminated in transatlantic connecting markets[8],
  - Other claims made by the Joint Applicants (increased convenience, applicants better able to compete) are either derivative claims (the impact of increased convenience and competition are already reflected in the quantified public benefit claims) or are not supported by any of the types of evidence required by the *Horizontal Merger Guidelines.*

A2. Previous testimony has already fully refuted the Joint Applicants' claim that there is no risk to consumers from reduced nonstop competition

- The only verifiable evidence presented by the Joint Applications in defense of claim (3), that competition in nonstop markets would not be reduced enough to increase ability or incentive to raise price or reduce output, and that carve-outs of nonstop routes would harm consumers, is included the Willig/Lexecon Compass affidavit. That affidavit claimed that its regression analysis demonstrated that risks from reduced competition were de minimis because "there is no statistically significant fare effect from reducing the actual number of carriers on a route from two to one" and that "granting antitrust immunity has no significant effect on fares" and "carving-out from antitrust immunity the four oneworld overlap routes would impose harm on consumers equivalent to at least $55 million annually"[9]
- Previous testimony has already thoroughly refuted the Willig/Compass Lexecon claims, the only evidence supporting the Joint Applicants competition claims.
  - My October testimony[10] demonstrated that the key claims (allowing two competitors on a route to collude via immunity, and that reducing the number of competitors on a route from two to one did not affect prices), were entirely based on a regression that did not correctly count the number of competitors historically serving a route. The regression input data explicitly assumed that immunized partners, such as Northwest and KLM on Detroit-Amsterdam, were independent price competitors, and that results linking price levels to the number of competitors on a route were fundamentally invalid since the independent variables were improperly calculated ("routes with 2 competitors" were a mix of routes with 2 actual competitors, and routes such as Detroit-Amsterdam with 1 actual competitor).
  - The Department of Justice's December submission[11] provided a much more exhaustive attack on the methodological problems in the Willig/Compass Lexecon regressions, and the DOJ submitted independent regression analysis demonstrating serious risks that reduced competition on nonstop routes would lead to higher prices. The DOJ regressions, based on data reflecting current market conditions, showed an average 15% fare increase when competition on a route was reduced from 2 to 1, and 6% when competition was reduced from 3 to 2 carriers. When the DOJ corrected the statistical flaws in the Willig/Compass

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[4] Joint Application (DOT-OST-2008-0252-0001) p. 7. 24, exhibit JA-13, JA-19 (the Brattle affidavit) . All references to docket materials in this submissions refer to public versions ; pagination may vary slightly from confidential versions

[5] Joint Application op.cit., Joint Applicants Consolidated Reply (DOT-OST-2008-0252-3314) p.19.

[6] Joint Application p. 35-41, Joint Applicants Supplemental Comments (DOT-OST-2008-0252-3357) p.4-9, Exhibit 1 (the Willig/Lexecon Compass affidavit)

[7] Joint Application p. 41-57, Supplemental Comments p.11-19, the Willig/Lexecon Compass affidavit

[8] Joint Application p. 41-57, Supplemental Comments p.4-9

[9] Willig/Lexecon Compass affidavit p.6, 13, 18, 22

[10] Horan comments, DOT-OST-2008-0252-3362

[11] Department of Justice comments, DOT-OST-2008-0252-3374, appendix A and B

Lexecon regressions, results supported the DOJ findings of consumer risks, and no longer supported the Joint Applicants' claims. The DOJ submission also presented Herfindahl-Hirschman Index ("HHI") measures of competition showing that these nonstop markets are already highly concentrated, and that under the *Horizontal Merger Guidelines* further reductions in competition could be presumed to create additional market power.

- The Joint Applicants' claim that immunity would lead to increased capacity in these markets does not meet *Horizontal Merger Guidelines* standards as it is purely speculative (the Joint Applicants say they would look seriously at capacity increases but have made no commitments), but the DOJ submission refuted the counter argument that added hub-to-hub flights would mitigate pricing risks since any added capacity would be dedicated to connecting markets.[12] More importantly, the DOJ submission specifically identifies the huge barriers to potential future entry in these markets, an issue that is critical to any evaluation under the *Horizontal Merger Guidelines.*

A3. The Joint Applicants' $92 million Public Benefit claims are the largest and most important claim in their application, but neither the Department of Justice's comments nor other recent submissions properly addressed the deficiencies in this claims

- The DOT cannot accept the Joint Applicant's claim of $92 million in annual public benefits in connecting markets without
  - proper, verifiable, non-speculative evidence supporting the specific efficiency benefits that the Joint Applicants claim will be created if immunity is granted
  - proper, verifiable, non-speculative evidence supporting that these specific consumer benefits are highly likely to be achieved in the Applicants' markets under current market conditions
  - clear evidence that the claimed public benefits could not be achieved by reasonably available alternatives that are materially less anticompetitive
- The Department of Justice's comments did not directly address the Joint Applicant's claim that immunity would create $92 million in public benefits, but argued more narrowly that these benefits could be achieved without immunity[13]
- The Joint Applicant's claim that immunity will generate $92 million in annual benefits in connecting markets is entirely based on two theoretical assumptions
  - Assumption 1--Interline fares on carriers with antitrust immunity are always lower than interline or codeshare fares on carriers that do not have antitrust immunity because carriers without immunity are always structurally bound to the higher costs of "double marginalization" (i.e. successive markups). This structural efficiency advantage would be observed in any market and occurs independently of any other factors (supply/demand, competition, etc.).
  - Assumption 2--Introducing antitrust immunity to existing itineraries operated on a non-immunized codesharing basis would lead directly to fare reductions of 17.45%; this magnitude of fare reduction would occur in any market, independent of any other factors. These price reductions can be assumed even in markets where there is no evidence than non-immunized passengers currently pay higher fares than passengers traveling on online or immunized alliance services. These fare reductions would stimulate new traffic growth based on a price elasticity measure of -1.7.[14]
  - The $92 million in annual public benefits is calculated by applying the 17.45% price reduction to all AA-BA/AA-IB interline passengers identified in the 2007 DB1A data, and further increasing

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[12] The Joint Application shows (Supplemental Comments p.5) that the Dallas-Ft.Worth-London market already has 8 times as many seats as required to serve the local market

[13] Department of Justice comments, p. 22-29

[14] Brattle affidavit p 1, 5-8; also restated in Joint Applicants Consolidated Reply "Brattle Group reply to Frontier Economics". Brattle would have applied larger (22%) price reduction in non-codesharing interline cases, but these could not be identified in the DB1A data, so the more conservative 17.45% factor was applied to all coupons.

traffic based on the price elasticity factor. These welfare gains are claimed to be "annual"--ongoing and permanent; and would never be eroded or competed away by the marketplace.

- The sole basis for these two assumptions are theoretical arguments made in papers published by J.K. Brueckner in 2003 and W.T, Whalen in 2007, derived from a single jointly-authored 2000 paper[15]. The later papers updated regression analysis from the original paper but made no significant changes to the original theoretical arguments or conclusions.
- This comment will argue that the DOT must completely reject the Joint Applicants' claim of $92 million in public benefits in connecting markets as it not only fails to meet the evidentiary standards of the *Horizontal Merger Guidelines* but is demonstratively false. The Joint Applicants' claims totally rely on the Brueckner and Whalen theoretical arguments; if those arguments meet the *Horizontal Merger Guidelines* standards, then the DOT should affirm the Joint Applicants' public benefits claim. If those arguments do not meet the *Horizontal Merger Guidelines* standards, then the DOT should reject the Joint Applicants' claim. As a result, this comment will:
  - Describe the Brueckner/Whalen analysis and arguments from their published papers, including their regression analysis of (largely) North Atlantic data from the 1990s, following the introduction of the original immunized alliances
  - Describe the actual North Atlantic competitive environment of the 1990s and the actual competitive and efficiency advantages of the original immunized alliances, based on DOT data and market studies, but also based on my experience as one of the key people responsible for the development of the original KLM-Northwest alliance network, my subsequent strategic and network alliance work at Swissair and other carriers, and other work throughout my 25 year career directly relevant to the competitive issues raised by this case, including hub network development, mergers and consolidation, and revenue management.
  - Evaluate Brueckner and Whalen's statistical analysis, which is used to estimate the Joint Applicant's projected public benefits, and their theoretical arguments about "double marginalization", which are central to the Joint Applicants' claim.
- It must be emphasized that, while these comments will focus heavily on the Brueckner/Whalen theories and papers, the issue at hand is claims made by the Joint Applicants, not by Brueckner or Whalen personally, neither of whom has submitted testimony in this case.

A4. The "Economics Literature" supporting the claim that immunized airline alliances generate consumer benefits consists of a single jointly-authored paper, plus two follow-up papers by the same authors that updated regressions without changing the original arguments or conclusions.

- The "economic literature" on the price effects of international alliances consists of one journal article published by Brueckner and Whalen in 2000[16], and several follow-up pieces by the same authors offering minor updates on the original paper. That original paper outlined the material that was repeated, with minor modifications, in all subsequent papers, including
  - A statement of the general hypothesis that the "cooperative pricing" lowers airfares in connecting markets; each paper specifically noted that consumer benefits from lower airfares in these connect markets could be offset by reduced competition in hub-to-hub nonstop markets, and that the analysis in the papers was focused on connect market impacts, and was not intended as an evaluation of the overall welfare impacts of alliances
  - A description of the authors' behavioral theories about how interline prices are set in alliance and non-alliance situations, which underlay the authors' assumptions of structural barriers to efficient non-alliance pricing, causing cooperative alliance interline fares to always be lower than non-cooperative interline fares

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[15] Jan K. Brueckner, currently on the Economics faculty at the University of California-Irvine and W. Tom Whalen, currently with the Antitrust Division of the Department of Justice. Both were at the University of Illinois-Urbana-Champaign at the time of the original paper

[16] Brueckner, J. K. and Whalen, W. T., (2000), "The Price Effects of International Airline Alliances", *The Journal of Law and Economics* v43 n2, p. 503

- A discussion of the authors' mathematical models of how interline carriers, alliance and non-alliance, maximized the difference between marginal revenue and marginal costs, which were then applied to a simplified (4 to 8 leg) airline network where there economies of network density and either positive or constant scale economies. Since it was assumed that the structural barriers inherent in non-alliance pricing imposed an efficiency penalty that immunized airlines did not face, solving these equations (not surprisingly) demonstrated that non-alliance interlining was always less profitable than alliance interlining
- A discussion of the DOT DB1A data and the regression results, which confirmed the general hypothesis that alliance interline fares were materially lower than non-alliance interline fares.

- None of Brueckner or Whalen's follow-up papers made any significant changes to the approach or conclusions of the 2000 paper, and should not be seen as separate from the original analysis
  - Brueckner-Whalen (2000) also attempted to estimate the net welfare impact of a British Airways-American Airlines immunized alliance. This was calculated by applying the regression alliance coefficients to all BA-AA interline traffic, and applying the average price detriment from those regressions due to reduced competition to traffic on BA-AA hub-to-hub flights. The welfare losses from reduced hub-to-hub competition eliminated almost most gains in connection markets, although the exact tradeoff depended on price elasticity assumptions.
  - Brueckner (2001)[17] did not undertake any regression analysis, but fleshed out the behavior pricing theories and mathematical profit maximization model a bit. The paper introduced the terms "double maximization" and "negative externalities" as descriptors for the alleged structural inability of non-alliance carriers to optimize interline revenues.
  - Brueckner (2003a)[18] was the first paper to recognize multiple levels of alliance codesharing, and updated the original Brueckner-Whalen (2000) regressions using 1999 data, which separately identified the "marketing" and operating carriers. The results indicated greater price reductions for alliances with antitrust immunity than for codesharing within alliances that did not have antitrust immunity.
  - Brueckner (2003b)[19] summarized Brueckner (2003a) results for a more general audience, and estimated the benefit of Star Alliance codesharing in connecting markets. Like the earlier BA-AA analysis, this involved a simple application of regression coefficients representing "price benefits of alliances in connecting markets" to all Star Alliance connecting traffic. Brueckner did not attempt to weigh the connecting market benefits (roughly $80 million) against detriments from lost competition in overlap markets, but acknowledged these existed.
  - Whalen (2007)[20] briefly summarized Brueckner's general hypothesis and theories of pricing behavior, and presented new regressions using 11 year panel data instead of cross-section data from a single quarter as the input to his regression. Panel data minimizes errors or false correlations in cross-section analysis that are due to factors such as length of haul or local route characteristics, although panel data can introduce problems due to temporal factors. Whalen also extended the database to include online connecting trips. His results confirmed the general hypothesis but found smaller price differences than Brueckner's cross-section analysis. A separate analysis found that the existence of an "Open Skies" treaty was actually correlated with higher average connecting fares than found in non-"Open Skies" markets.

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[17] Brueckner, J. K., (2001), "The Economics of International Codesharing: An Analysis of Airline Alliances", *International Journal of Industrial Organization* v19, p.1474

[18] Brueckner, J. K., (2003a), "International Airfares in the Age of Alliances: The Effects of Codesharing and Antitrust Immunity", *Review of Economics and Statistics* v85 n1, p105. The paper cites Whalen as an uncredited co-author, and was actually completed in 2001.

[19] Brueckner, J. K., (2003b), "The Benefits of Codesharing and Antitrust Immunity for International Passengers, with an Application to the Star Alliance", *Journal of Air Transport Management* v9 n2, p83

[20] Whalen, W. T., (2007) "A Panel Data Analysis of Code Sharing, Antitrust Immunity and Open Skies Treaties in International Aviation Markets", *Review of Industrial Organization* v30 2007; most analysis was conducted years before and earlier working paper versions included Whalen, W. T., (2003) "Constrained Contracting and Quasi-Mergers: Price Effects of Codesharing and Antitrust Immunity in International Airline Alliances" and Whalen, W. T., (2005) "A Panel Data Analysis of Code Sharing, Antitrust Immunity and Open Skies Treaties in International Aviation Markets"

- All quantitative evidence of alliance pricing benefits quoted in these antitrust immunity cases are based on two regressions of data from the 1990s—Brueckner's cross-section analysis of 1999 data, and Whalen's panel 1990-2000 data. These (and the original 2000 regressions that were superseded by the 2003 work) are summarized in the table below.

publication	data used in regression	author's key findings about price differences based on regressions
Brueckner-Whalen 2000	3Q 97 (cross section) international interline connect trips in DB1A 46,620 trips in 16,765 O&Ds	alliance vs. non-alliance interline 24% total database 15% total US behind gateway 15-18% Transatlantic+Central America 52% US-Canada (8%) US-South Pacific 0% US-South America/North Asia
Brueckner-2003	3Q 99 (cross section) international interline connect trips in DB1A 54,687 trips in 17,518 O&Ds	ATI vs non alliance interline 17-31% total database 21-23% Transatlantic 22% total US behind gateway non-ATI codeshare vs interline 7-10% total database 7-9% Transatlantic 5% total US behind gateway
Whalen 2007	11 year panel data 1990-2000 (3Q each) all US-Europe connect trips in DB1A; 120,758 coupons	17-23% online vs non alliance interline 17-20% ATI vs non alliance interline 6-9% non-ATI codeshare vs interline (3%) Open Skies vs. non-Open Skies

- Brueckner, the primary author, has been a paid advocate for United Airlines and the Star Alliance throughout the period when these pieces have been published[21], and in addition to the Brueckner (2003b) paper estimating Star Alliance consumer benefits, has presented testimony on behalf of the Star Alliance in the recent antitrust immunity cases.[22]
- It should be noted while he has consistently claimed that immunity generates sizeable consumer benefits, each of Brueckner's papers also raised some concerns about possible consumer detriments when competition is reduced in overlapping markets, and Brueckner has argued that the merger of the previously independent KLM-Northwest and Delta-Air France groups into a single entity was anti-competitive. Thus while Brueckner's published opinions are extremely consistent with the public positions of United Airlines and the Star Alliance, they are not necessarily consistent with the positions of other parties advocating international airline consolidation.
- Brueckner's papers can and should be evaluated on their own merits. Nonetheless, there is no basis for the claim by the Joint Applicants and other consolidation advocates for the claim that alliance consumer benefits have been well documented by an independent "economic literature"[23]. The entire basis for the claim consists of one article plus statistical updates, and the principal author serves as a paid advocate for United Airlines and the Star Alliance. They should not be evaluated any differently than the Brattle affidavit in the current case (written by paid advocates for American Airlines), or similar paid testimony in other cases.

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[21] Moorman, R. (2000) "United Turns to Academics to Show Alliances Aid Consumers", *Aviation Week and Space Technology* v153 n14 2 October 2000 p. 56 Brueckner's paid advocacy role was not disclosed in any of these papers.

[22] for example "An Evaluation of the Skyteam-Wings Antitrust Immunity Application" submitted in docket DOT-OST-2004-19214 and "An Evaluation of the Latest Star Alliance Application for Antitrust Immunity" submitted in docket DOT-OST 2005-22922. Since the AA-BA analysis in Brueckner-Whalen (2000), Whalen has not published any comments about any specific merger, consolidation or antitrust immunity proposal.

[23] The Brattle affidavit makes the "has been well documented in the economic literature" point at p.1. Another piece written by paid advocates for American Airlines claimed: "virtually every peer-reviewed academic study of immunized international alliances has concluded that, as a result of eliminating carriers' incentives to impose successive markups on fares for connecting tickets (the so called "double marginalization" problem), alliances have led to lower fares and expanded output", Kasper and Lee, "Why Antitrust Immunity Benefits Consumers" GCP Antitrust Journal, Sep. 2009;

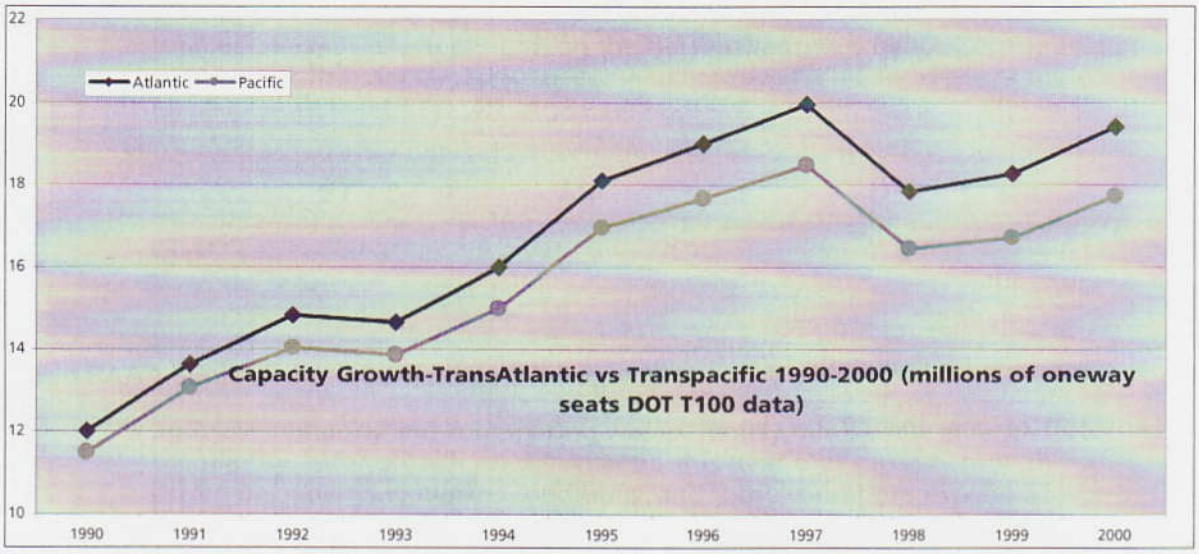
B. THE ORIGINAL NORTH ATLANTIC ALLIANCES DID CREATE SIGNIFICANT CONSUMER WELFARE BENEFITS BUT WELFARE GAINS DUE TO ALLIANCE PRICING WERE VERY NARROW AND THESE WELFARE BENEFITS WERE FULLY EXHAUSTED BY THE LATE 90S

- The consumer benefits of the original North Atlantic immunized alliances (KLM-Northwest in 1992, Delta-Swissair-Sabena in 1995, United-Lufthansa-SAS in 1997) were driven by an efficiency enhancing network innovation—the use of codesharing and joint scheduling and pricing to create "quasi-online" service in a specific category of double connect O&Ds that prior to 1992 had only been served on interline services
  - Prior to alliances 70% of transatlantic demand had nonstop or true online connecting service via one of the many large network hubs, and these online carriers offered good schedules and a full range of discount fares; the other 30% of the market were required to use interline services where connections were often poor, and discount fares were more limited; the original alliances extended the schedule and pricing benefits that had always been enjoyed by passengers in 1-stop connect markets to passengers in the 2-stop double connect markets
  - The table below summarizes the competitive situation of the 1990s; certain carriers focused on the category (1) large nonstop O&Ds serving the largest markets (London, New York, Chicago); these nonstop services also provided capacity serving the category (2) 1-stop markets beyond their hubs; the new alliances had competitive advantage in the category (3) double connect markets where the non-aligned carriers could not compete and the only alternative was interline connections, but they also carried significant traffic in category (2) 1-stop markets

Mid 1990s Carrier Competitive Advantage by North Atlantic Market Category	% of total Trans-Atlantic market in these O&Ds in 1995	Did large non-aligned carriers (BA, CO,AA) have Competitive Advantage?	Did large immunized alliances (KL-NW, SR-DL) have Competitive Advantage?
(1) Nonstop O&Ds <gateway-gateway>	30%	**MAJOR ADVANTAGE**—major share of large nonstop O&Ds	**NO-- UNCOMPETITIVE**
(2) Online 1-stop O&Ds not served by nonstops <beyond US-gateway EU> <gateway US-beyond EU>	40%	Could compete but no carrier had strong advantage	Could compete but no carrier had strong advantage
(3) Double Connect O&Ds with no online service <beyond US- beyond EU>	30%	**NO— UNCOMPETITIVE**	**MAJOR ADVANTAGE**—only alternative was interline service

- The consumer pricing benefits of the new alliances was significant but was strictly limited to the price reductions achieved in category (3) markets—the difference between interline prices and "online" alliance prices in these specific O&Ds that had been exclusively served on an interline basis
  - The new alliances served a significant amount of category (2) traffic, but these passengers in these markets already had online pricing, and thus the new alliances did not create any new pricing benefits for these passengers; the overall growth of these alliances would seriously overstate the size of the true pricing benefits
- Alliance pricing benefits were only a small part of the overall consumer benefits realized as a result of innovation and increased competition on the North Atlantic; evidence of consumer benefits (sustainable lower fares/increased service due to improved industry efficiency) is not always evidence of alliance benefits or pricing benefits
  - Consumers benefited whenever profitable new capacity added, as this growth put downward pressure on fares; most of this capacity growth of the 90s was due to favorable overall industry supply/conditions and was not alliance related. The graph below shows that seat capacity growth during the 90s on the North Atlantic (where alliances and codesharing were strong) tracks very closely to seat capacity growth on the North Pacific (where there was no

antitrust immunity and codesharing was extremely rare); while alliance factors may explain the slightly faster growth on the Atlantic, it is clear that capacity growth was fundamentally driven by underlying market conditions, and those conditions explain a large portion of the pricing changes observed in the regressions.



- Consumer welfare was significantly increased by other non-pricing factors including increased market liberalization, the original Open Skies treaties, the growth of network hubs in the US (resulting from deregulation-based changes in the 80s), major improvements in European carrier efficiency (including the privatization of British Airways, and the consolidation of the Air France-UTA-Air Inter hub in Paris), major improvements in distribution and other information technologies, and the widespread introduction of 767 and A330 aircraft that made it possible to operate a much wider range of transatlantic flights profitably, and declining fuel prices. The "quasi-online" alliance network innovation was one of the benefits of increased transatlantic competition, but it was a small part of the overall picture.

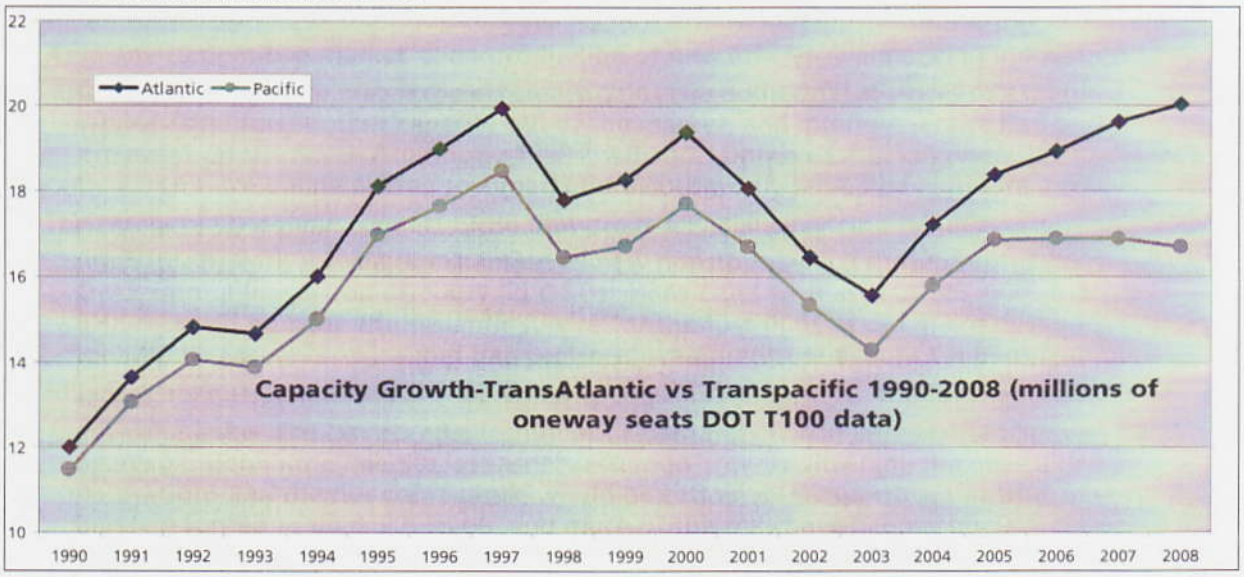
- The ability of the new alliances to generate significant consumer benefits depended on the convergence of three critical factors
  - Aggressive market-oriented, pro-competitive policies in both Washington and Brussels, including the Department of State's efforts use of ultra-liberal Open Skies treaties with countries like the Netherlands and Switzerland to encourage less liberal countries like Germany and France to remove traditional barriers to open entry and market pricing
  - The large, untapped, Category (3) double-connect market opportunity; prior to KLM-Northwest, no one had recognized the size of this segment (individual O&Ds were extremely small and highly fragmented); given the traffic potential, domination of this niche became the central focus of the KLM-Northwest's alliance.[24] The alliance's network coverage created significant marketing and distribution efficiencies, including strong market awareness in every US and European "beyond gateway" market that KLM-Northwest offered a full range of flights at competitive practices to every significant transatlantic destination. The success of KLM-

[24] I was personally responsible for expanding alliance hub-to-hub flights from 3 to 10, all 747s and DC-10s, all of which were highly profitable, as part of a conscious strategy to exploit the alliance's first-mover advantage and establish a dominant position in this niche. The later Delta-Swissair-Sabena and Lufthansa-United alliances followed this exact network template, and rendered North Atlantic interline service almost completely obsolete.

Northwest and the other alliances in developing this category (3) niche was documented by several DOT studies at the end of the decade.[25]

- The coincidental strongly favorable supply/demand conditions that made capacity growth profitable; the alliances' development of secondary connect markets would have been significantly riskier in an environment with low demand growth and overcapacity.

- These incremental consumer benefits were fully exhausted by the end of the 90s; the alliances remained competitive, but were not introducing new efficiencies or reducing prices in any markets
  - As in any competitive market, the introduction of new efficiency enhancing innovation spurs some competitors to match the efficiency gains (via additional alliances or expanded direct services) and forces other capacity out of the market, and interline service had become totally irrelevant on the North Atlantic by 1999[26]. Alliances only create pricing benefits to the extent they introduce online pricing to a market previously only served by high fare interline services
  - The category (3) double connect niche that drove all alliance pricing benefits also shrank dramatically with the major expansion of new nonstops, which shifted most category (3) O&Ds into online 1-stop category (2) O&Ds; many cities such as SLC, CLE, PDX, MEM, BCN, VCE, BHX received nonstop transatlantic service for the first time, as did major destinations in India, the Middle East and Africa that had previously required connections via European hubs
  - Alliances are not generating any incremental consumer benefits in the low/negative growth environment of the last decade; transatlantic demand growth and profitability was halted by overexpansion in the late 90s, as carriers assumed growth driven by the one-time early-90s innovations and the dot-com bubble would be sustainable; capacity and traffic has only barely returned to peak 90s levels, and much of this may have been artificially supported by the recent financial bubble.



[25] US Department of Transportation, Office of the Secretary, (1999) "International Aviation Developments: Global Deregulation Takes Off; US Department of Transportation, Office of the Secretary, (2000), "Transatlantic Deregulation: The Alliance Network Effect"

[26] While markets covering 30% of total demand were only served by interline services prior to 1992, interline trips accounted for 40-45% of total North Atlantic travel, since some passengers in category 2 markets used interline instead of available online markets. The Department of Justice's recent analysis of 2008 connecting travel showed only 7% of the coupons in its sample were interline trips, suggesting that interline travel probably accounts for less than 3% of the total North Atlantic. See Department of Justice, Comments on the Show Cause Order, DOT-OST-2008-0234-0239, p.49-51

C. THE BRUECKNER-WHALEN REGRESSIONS FUNDAMENTALLY MISREPRESENT THE HISTORICAL CONSUMER PRICING BENEFITS FROM ALLIANCE ANTITRUST IMMUNITY

C1. Almost all of the price reductions the authors attribute to "cooperative alliance interline pricing" can be better explained by improved supply/demand conditions and other changes in the marketplace

- Brueckner claims that antitrust immunity reduces fares by 17 to 30% and that his paper "measures the separate impacts of codesharing and antitrust immunity on the fares charged for interline trips".[27] He attributes all of the observed alliance benefits to pricing, specifically "the cooperative pricing of trips by the partners puts downward pressure on fares in the interline city-pair markets."[28] None of these papers are attempting to measure the overall benefits created by alliance expansion, they are specifically attempting to measure alliance pricing benefits. While there is no question that consumers benefited from lower fares in transatlantic markets in the 1990s, and these regressions show a clear correlation between "alliance presence" and "lower fares" in connecting markets, there is nothing in the data or analysis presented in these papers justifying the claim that "cooperative alliance interline pricing" behavior was the sole and exclusive cause of price shifts of this magnitude. This is an unsubstantiated theoretical argument based on claims of structural "double marginalization" barriers to efficient non-alliance pricing that will be discussed in section D, but the regressions provide absolutely no empirical data supporting the theoretical causation claim.
- The actual primary driver of the observed pricing changes was the highly favorable supply/demand and competitive conditions of the mid and late 90s. As shown in the graphs in the previous section, transatlantic capacity grew rapidly during this period (7.4% CAGR 1990-97, 4.9% CAGR 1990-2000[29]) with overall strong growth in international trade and travel. Some of this occurred in the hub-to-hub routes serving alliance connect markets, but the huge increases in nonstop and true online connect services would have had a much bigger impact on market price levels than the increased connecting service in markets that had no online service.
- As noted earlier, there were other important non-alliance factors that also contributed to the observed price changes, including pricing liberalization in Europe, carrier efficiency (the expansion of hubs serving intercontinental flights, marketing and distribution technology gains, 767 and A330 aircraft efficiencies), and declining fuel prices.

C2. The regression analysis seriously overstated the correlation attributed to "cooperative alliance interline pricing" by failing to restrict input data to the markets where these pricing benefits would have actually occurred

- Alliance connecting fares were in fact lower than pre-alliance interline fares, and alliance expansion did create legitimate consumer benefits, but Brueckner and Whalen seriously overstate this benefit by defining their data sets in a manner inconsistent with their own pricing hypotheses and inconsistent with the actual dynamics of these markets. As discussed in section B, alliance pricing benefits only occurred in category (3) double-connect markets that had only been served on an interline basis, and did not occur when alliances served category (2) connect markets that already had online service and prices. All of Brueckner and Whalen's papers explicitly assume that the "online" pricing the existed in category (2) markets prior to alliances was fully efficient. But their regressions overstate the benefit because the data includes a very large number of category (2) connect markets.[30] Category (2) is the most competitive category of markets on the North Atlantic since they can be served by every network carrier and all three alliances.[31] But "alliance price levels"

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[27] Brueckner (2003a) p. 105. Whalen (2007) makes the narrower, more appropriate claims that "alliances are found to have significantly lower prices" or "are associated with" price benefits p.39.

[28] Brueckner (2001) p.1475

[29] DOT T-100 seat capacity data

[30] The regressions exclude category (2) traffic originating at US gateway cities served by European carrier nonstops (due to inherent limitations in the DB1A data), but include all other category (2) one-stop markets

[31] Category 3 markets can only be served by the three alliances, and category 1 market competition is a function of the number of carriers that choose to operate nonstops.

in the regressions are being measured by the prices in a combination of category (2) and (3) markets, while they should have been measured solely based on the (higher) category (3) observations.

- Interline fares were also not properly restricted to category (3) markets, and "interline fares" were not defined in a way to show the actual pricing impacts. Most (if not nearly all) the interline coupons in Brueckner's 1999 sample were incidental trips representing a tiny fraction of total demand in each O&D and wholly unrepresentative of any "market" price points. In 1999 almost every North Atlantic O&D would have had actual or alliance online service—any interline travel would have represented diversions due to flight cancellations or last minute emergencies or perhaps the occasional expense account traveler going out of his way to collect frequent flyer miles. By definition these tickets would show a high average fare, but they are meaningless in any evaluation of possible alliance price benefits. Brueckner's primary regressions includes interline prices worldwide, including markets where all prices are much higher than the North Atlantic. A legitimate attempt to estimate alliance price benefits would have been strictly limited to alliance versus interline coupons in the North Atlantic O&Ds that had no true online service, but none of these regressions were appropriately focused. These would have been included in Whalen's transatlantic panel data, but his data also included large quantities of unrelated non-category (2) market coupons.
- The analysis not only failed to limit the regression data to the appropriate markets, but the papers made no attempt to place their "17 to 30% lower price" type consumer welfare conclusions in any type of meaningful context. There is nothing in any of the papers that would help readers understand the magnitude of the alleged consumer benefits relative to the size of the overall market, or even to understand the scope of the markets in the regression relative to the size of the market. Despite an analytical scope specifically targeting "interline" traffic and markets, the authors made no attempt to show what portion of these markets actually use non-alliance interline ticket, or what percentage of the O&Ds in the regression were only served on an interline basis, and failed to show that these interline-only markets had almost completely disappeared by the end of the decade. An analysis appropriately targeted at category (3) interline markets might have found similar price reductions following the introduction of alliance online pricing, but from an economics and policy standpoint, it is much more important to understand what the actual historical consumer welfare gain from antitrust immunity had been, and whether there are opportunities for future gains in markets that could, but do not currently enjoy "online pricing".
- Any serious, carefully designed analysis of North Atlantic competition in the 1990s would show a clear correlation between the introduction and expansion of immunized alliance and growing consumer benefits (lower prices and increased capacity). But correlation does not equal causation. Not all of the observed consumer benefits would have been caused by alliances (most were caused by capacity growth, increasing liberalization, industry efficiency and other factors), and not all of the observed price reductions on alliance tickets were caused by efficiencies specifically related to antitrust immunity. A proper analysis of the North Atlantic would also show consumer benefits in general, and specific alliance pricing gains fully exhausted by the end of the decade.[32]

[32] See for example, Robyn, J., Reitzes,J. (2005) untitled paid analysis of the Skyteam antitrust immunity application prepared on behalf of American Airlines DOT-OST-2004-19214, Robyn, J., Reitzes,J. (2006) untitled paid analysis of the Star Alliance antitrust immunity application prepared on behalf of American Airlines DOT-OST-2005-22922

D. DOUBLE MARGINALIZATION DOES NOT EXIST, NEVER EXISTED, HAS ABSOLUTELY NOTHING TO DO WITH THE BENEFITS OF IMMUNIZED ALLIANCES, AND BRUECKNER AND WHALEN'S THEORIES ABOUT DOUBLE MARGINALIZATION ARE NOT SUPPORTED BY ANY DATA OR ANALYSIS

D1. Brueckner and Whalen specifically claim that all of their observed regression price correlations are due to the ability of cooperative pricing to eliminate "Double Marginalization" or "Double Markups" and that this is the primary consumer benefit created when antitrust immunity applications are approved

- Brueckner and Whalen's central "Double Marginalization" claim is repeated in each of their papers[33]. They believe that all of the price/alliance correlation in the regressions is caused by a "negative externality", a structural barrier that prevents non-alliance carriers from setting optimal interline fares, even when it would be in their joint economic interest to do so. The claimed structural barrier arises because non-aligned carriers allegedly establish "subfares" (prorates) for interline travel over their routes without any consideration of the prorate levels of connecting airlines, or any consideration of the joint interline fares that might result from the sum of these two prorates. This "noncooperative pricing of an interline trip leads to an excessively high fare which does not maximize joint profit"[34]. The two interline carriers are making "two separate markups" while immunized alliances and online carriers would only make one[35]. Because alliances can eliminate the "double marginalization", their interline fares are always lower than non-alliance interline fares[36]. Thus when Brueckner and Whalen solve profit maximization equations for alliance and non-alliance interline services, the non-alliance equation includes the efficiency penalty of the "double marginalization" and is always less profitable. The internalization of this "negative externality", is not just a useful feature, but is the primary benefit of immunized airline alliances.[37]
- The alleged efficiency penalty of non-alliance "double marginalization" is claimed to add $200 to the price of a round-trip ticket. Whalen cites an average non alliance fare of $929 in one of his regression sets versus an average immunized alliance fare of $727.[38] The idea that eliminating non-alliance "markups" would create a 25% efficiency gain is preposterous on the face of it; such an efficiency gain would be of the same order of magnitude of eliminating all wage and benefit expenses.[39] The Joint Applicants are claiming benefits of $257 per ticket in this case (applying the smaller regression gap between alliances and existing codeshares to higher 2007 fares). If $200-250 per ticket price reductions actually occurred in the market every time airlines received antitrust immunity, there would be ample evidence from multiple sources, and immunity advocates would not be relying exclusively on this academic paper.

D2. The entire "Double Marginalization" theory is based on unsubstantiated claims that normal competitive, rational, profit-maximizing behavioral assumptions do not apply to interline pricing, and the theory is fundamentally contradicted by actual airline pricing practices and systems

- Brueckner and Whalen's theory of "double marginalization" assumes physical barriers to optimal non-alliance interline pricing that do not exist and ignores the existence of revenue management. The

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[33] Brueckner and Whalen (2000) p. 505-6, Brueckner (2001) p. 1477, Brueckner (2003a) p. 106, Brueckner (2003b) p.84-85, Whalen (2003) p. 2-4, Whalen (2005) p.2-4. Whalen (2007) omits the behavior explanation found in all previous papers, and simply notes that those papers identified a Double Marginalization problem, and that the regression analysis in those papers found a corresponding price difference p. 40

[34] Brueckner (2003a) ibid.

[35] Brueckner, J.K., Proost, S. (2009) "Carve-outs Under Airline Antitrust Immunity" CESIFO working paper

[36] Whalen (2005) p. 4 says that the double marginalization cost problem only exists when the two carriers have market power on their respective portions of the route, and can set price above marginal cost, but Whalen (2007) deletes all references to pricing power, but offers no alternate explanation for the alleged cost problem.

[37] Brueckner (2003b) ibid, Whalen (2007) ibid.

[38] Whalen (2003) p. 24. Other regression sets have slightly lower overall average fares, but average fares for key subgroups were not identified.

[39] According to its 10-K, wages, salaries and benefits accounted for 26% of American Airlines' total 2008 operating expenses.

assumed independent noncooperative processes with fixed (per route) mileage based prorates (derived from IATA practices) were abandoned decades ago[40]. Even carriers with limited automation were always fully capable of designing and adjusting interline fares to more profitable levels.[41]. Although interline fares were not easily handled by first generation yield management tools, interline fares are now easily linked to both carrier's inventory systems; prorates can vary by booking class, so that interline fares can be revenue managed just as effectively as online connecting fares.

- The "double marginalization" theory also assumes that fares are set with reference to the marginal cost of flight legs. This ignores overwhelming historical evidence that fares are set with respect to competitive "market prices" and not with respect to internal cost measures. The entire claim of "double marginalization" is based on "markups" above marginal cost, but the claim falls apart because real world airlines do not construct prices on a "cost plus markup" basis, and do not evaluate prices or prorates against marginal cost. If prices were set on a markup basis with respect to marginal cost-type measures, one would observe wild price fluctuations when fuel prices are volatile. If prices were set on a markup basis with respect to marginal cost-type measures, one would rarely observe price matching on competitive O&Ds, given underlying cost differences between carriers, aircraft and routings.
- Brueckner and Whalen's physical barrier theory explicitly assumes that alliance interline fares will always be lower than non-alliance interline fares, which would be irrational, and also ignores the basic "opportunity cost" logic behind inventory management at hubs, which focuses on revenue contribution/dilution[42]. Using "marginal cost" logic, Brueckner and Whalen falsely assume any "high" interline prorate suboptimizes joint revenue. Most KLM-Northwest alliance fares in the 90s might have been lower than most alternative interline fares, but rational, profit-maximizing airlines (alliance or other) will vary these levels based on specific opportunity costs and market conditions. Carriers with "high" prorates may be maximizing profits based on opportunity cost of connecting traffic from other routes. Connections over hubs with capacity limits and high local fares (London, Tokyo, New York) will have high prorates (to limit yield dilution) regardless of whether these are set on an immunized alliance arms-length codeshare or traditional interline basis. Connections over hubs with ample capacity and low local fares (Bangkok, Amsterdam, Los Angeles) are rationally set at lower levels. "High" prorates in very tiny interline markets may be entirely rational in the sense that the added pricing and revenue management costs needed to maximize joint traffic in each of the thousands of these markets could easily exceed the potential revenue gain. International codesharing and interline prorate arrangements have always been highly dynamic, as carriers adjust and cancel arrangements that are not profitable.
- The Brueckner/Whalen claim that there are behavioral barriers to optimal non-alliance prorate setting was never true, and is in fact a claim that market competition does not work. They claim that non-aligned carriers are incapable of improving or optimizing prorate levels even in the face of evidence that existing prorates do not maximize joint revenue. Thus the theory assumes that the classic

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[40] Brueckner (2001) claims that his noncooperative process is based on historical IATA practices, but then quotes Douganis (1985) *Flying Off Course*, saying that (even by 1985) major airlines almost never used IATA-derived prorate formulas. Brueckner (2003a) p. 108 also notes that most interline fares are in fact based on "special prorate agreements" that do not follow his model of separate leg prorates set in isolation of what interline partners are doing, and totally contradicts the "unavoidable externality" claim when he admits that those agreements "may produce fares not much higher than those observed under antitrust immunity".

[41] I worked extensively with SN Brussels Airlines, which between 2002 and 2009 was not a member of any alliance but had 35 different types of interline agreements with over 80 airlines, all administered manually. All agreements capable of generating significant traffic flows were carefully designed with respect of the competitive pricing situation in the interline O&Ds, and the local demand levels and patterns (time of day, day of week, seasonal) on each affected flight leg. Prorates were not fixed by route, but varied with the booking classes used, so that partners maintained full ability to limit interline sales that would dilute yields. "Default" prorates were used in low-volume cases, but these reflected the opportunity costs of capacity on individual SN flights, not distance based formulas.

[42] "Opportunity cost" is used in its revenue management context here; the opportunity cost of any potential new traffic flow is the revenue from the traffic it might displace; carriers would always set prorates higher than the "opportunity cost" level. With low load factors, this opportunity cost approaches zero. Actual evaluations would be based on a range of factors, including seasonality and how revenue management systems actually allot inventory to different fare categories.

models of dynamic competitive markets that apply well to every other category of airline pricing suddenly break down at the door of the interline pricing department.

- This behavioral theory of competitive market failure rests upon the unsubstantiated assertion that at all non-alliance airlines, the process of establishing leg prorates is completely isolated from any consideration or publication of joint interline fares. "Neither carrier considers what effect setting a high prorate would have on the other"[43] The authors explicitly assume that online fare setting is efficient, which implies they believe that online fare setting follows rational profit maximizing criteria, and is rapidly adjusted in the face of new information about the marketplace. However they offer no explanation of why rational, profit-maximizing logic cannot be applied to interline pricing
- Hub complexity cannot the source of the alleged structural problem; every large international carrier operates hubs, and its pricing staffs understand the process of prorating thru fares across connecting hubs, and how prorate formulas affect the profitability of the various long-haul and short-haul legs at the hub. Thus they would have a very strong understanding of how any given prorates or joint fares would affect the profitability of a potential interline partner, and could negotiate joint fares within ranges that would be profitable for both carriers. Information cannot be a serious issue; thanks to highly sophisticated yield management and route profitability systems, airline staffs have detailed information about leg contributions, can establish the "opportunity cost" of any potential new revenue flows, and can readily understand how other airlines would value these interline opportunities.[44]

- Brueckner and Whalen's theory of structural barriers causing competitive market failure cannot be accepted without substantial real-world examples of carriers refusing to introduce or adjust prorates to levels that would increase total revenue contribution. As noted above, the existence of interline fares that are higher than online or alliance fares does not demonstrate suboptimality, as there could be many rational reasons for maintaining "high" prorates in these cases. The inability of airlines to agree on joint interline fares is also not evidence of irrational suboptimalilty, as there are many cases where there is no jointly beneficial solution.
  - Whalen's analysis illustrates that interline negotiations normally only have a limited set of jointly beneficial solutions. He presents a detailed comparison of hypothetical alliance and non-alliance interline negotiations, showing the full range of possible prorates that would be profitable for both carriers.[45] In Whalen's example there is a narrower range of solutions beneficial to both carriers in the non-alliance case because of the structural "double marginalization" costs he has assumed, but a similar result would hold if the assumed higher costs were due to higher "opportunity costs" of displacing high yield traffic, and there would certainly be cases where "opportunity cost" differentials lead to higher alliance versus non-alliance prorates. Irrational suboptimization would only occur if there was a consistent pattern where non-alliance carriers failed to achieve recognized opportunities beneficial to both carriers existed, consistently reducing their own profits. His example assumes price in the interline O&D is 3-4 times greater than cost, while in the real world airlines evaluate traffic options with only razor-thin margin. In that world the opportunities to improve joint profits via lower prorates would be rare, and it would be entirely rational to turn down most requests to lower prorates.

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[43] Whalen (2003) p.3. In certain situations, carriers might rationally set default prorates "in isolation", based on the opportunity costs on a route. USAirways might have a default prorate available for its midday Los Angeles-Las Vegas flight available to transpacific carriers with morning arrivals at Los Angeles interested in selling the connection, and given modern revenue management systems this default prorate might be very close to an optimal level. But the "double marginalization" theory specifically claims that USAirways would refuse to alter this prorate, even if a transpacific carrier proposed an alternative that would be more profitable for USAirways.

[44] The authors make passing reference to "double marginalization" in the literature on negotiation within vertical industries, but this is largely focused on firms that have very limited information about the costs, internal operations and profitability of competitors, conditions that do not apply to aviation. Ironically, the authors apply the low-competitive information concept of "double marginalization" to an analysis based on DB1A, a comprehensive database that provides competitors with near-perfect information about pricing in every significant market.

[45] Whalen (2003) p. 14-15 and Figures 1,2 p.35

- . There has been no research showing that any carriers currently set interline prorates or joint interline prices following the approaches theorized. None of the hundreds of non-aligned airlines in the world seem to think that "double marginalization" exists, since none of them have undertaken any efforts to minimize or overcome the huge ($200-250 per ticket) competitive pricing disadvantage it is alleged to create.

D3. The market issues that Brueckner and Whalen have improperly attributed to structural barriers and "Double Marginalization" can be readily explained by factors unrelated to antitrust immunity

- Brueckner and Whalen's papers have totally mischaracterized the actual nature of the efficiencies achieved by the original 90s North Atlantic alliances. As discussed in section B, real consumer-welfare enhancing benefits were created, but they were strictly of function of the unusual opportunity presented by the category (3) double-connect markets. There was not only the "online vs. interline" price benefit, but more importantly, there was the marketing/distribution efficiency opportunity created by the large size of the category (3) niche. The size of the market, combined with the size of the KLM-Northwest pricing advantage created the opportunity to quickly and cheaply establish powerful brand awareness among frequent travelers and travel agents in all of these many non-gateway cities. KLM-Northwest had no efficiencies allowing them to determine profit-maximizing levels of connecting fares any better than codesharing or non-aligned carriers. On initially entering the large set of category (3) double-connect markets, they did exploit brand marketing efficiencies, but these were the same efficiencies any hub network operator would enjoy against point-to-point competitors[46], and were not a unique function of antitrust immunity.
- To the extent that there was a historical obstacle limiting the spread of interline fares, it had nothing to do with alliances, but was due to the major economic differences between shorthaul and longhaul flights. Prorate formulas—the 1960's IATA formulas, the formulas currently used in every carrier's pricing and route profitability systems, and everything in between—all attempt to reflect the nonlinear relationship of operating costs and length of haul. Unit costs accelerate rapidly with shorter flights, more rapidly than unit revenues do in the vast majority of markets. Prior to deregulation, the CAB imposed pricing formulas that did not reflect the underlying cost curves, creating structural profitability problems for local service carriers, and artificial advantages for trunk carriers operating longhaul routes. The problem can be seen today within the route profitability reports of hub operators, most clearly at large European hubs like Amsterdam or Frankfurt that have a distinct mix of short 60-90 minute flights, and longhaul intercontinental flights, where shorthaul flights carrying significant connecting traffic will appear very unprofitable, while the longhaul connecting flights appear highly profitable.[47] The obstacle here is that it is extremely difficult to find jointly beneficial joint fares in longhaul-shorthaul situations, where the very low shorthaul prorate will rarely approach the opportunity cost of alternative local or short-haul connecting traffic. KLM-Northwest and the subsequent North Atlantic alliances did not break through this barrier because of an ability to internalize "double markups" as Brueckner and Whalen claim, but because the North Atlantic alliances, by pure happenstance, paired partners with highly parallel networks. In each case partners had equivalent longhaul operations and equivalent shorthaul feeding flights, so there was no "big prorate vs. small prorate" or other type of structural imbalance. Despite the proven success of the North Atlantic alliances, this model has not been

[46] The initial KLM-Northwest versus interline competition was analogous to a new hub entering markets previously served by fragmented point-to-point flights.

[47] In one of the first KLM-Northwest alliance network meetings I attended, we worked with our KLM counterparts to show them that the Amsterdam-Heathrow route was not the biggest money losing route on their system, and why the cutbacks they were planning would be highly damaging to profitability. Their Heathrow route P&L accounting data was accurate, but did not show the value of longhaul connecting revenue that would be lost if flights were cut. Several years later, after reviewing similar route P&L data, Sabena did eliminate its Brussels-Heathrow route, reducing profitability by tens of millions of US dollars.

duplicated in any other market, because the parallel markets needed to ensure mutual benefits and to facilitate cooperation between independent companies does not exist.[48]

- In the environment of the 1990s, KLM-Northwest would have never been able to stumble onto and figure out how to exploit this market opportunity without antitrust immunity,[49] but effective, efficient prorate and revenue sharing approaches for these types of parallel alliances are now well understood, and could now be applied without immunity.[50]
- Codesharing at hubs between mainline and regional carriers further illustrates the longhaul-shorthaul prorate imbalance issues, and disproves the claim that productive international alliances are impossible without full antitrust immunity. No regional operator could exist without extensive revenue and network integration with the mainline partner. This can be solved with common ownership (as with American Airlines and American Eagle), but this approach has many disadvantages and is now exceptional, and airlines have devised a range of contract structures that can allocate market and financial risks in different ways.

D4. Anticipating the Joint Applicant's use of their regression results in the current case, Brueckner and Whalen use their regression coefficients to predict consumer benefits in other, unrelated markets, but do so in ways that violate the basic logic of their "Double Marginalization theory

- Brueckner and Whalen's theory says that consumer benefits from collusive alliance prices will occur totally independent of market and competitive conditions, because every interline fare in every market suffers from the same structural "double marginalization" cost problem, and thus any immunity grant will internalize the problem, and will directly lead to lower fares. In line with the presumed universal truth of this "immunity always lower fares 17-30%" claim, their papers provide two examples using their regression coefficients to predict future price changes in other markets
  - The Brueckner-Whalen (2000) analysis of a potential British Airways-American Airlines alliance took the 25% price/alliance correlation found in the original regression and then simplistically claiming that the fare on every BA-AA interline itinerary would immediately fall 25% as soon as immunity was granted, creating a direct annual consumer welfare gain between $48 and $65 million[51].
  - Brueckner (2003b) applies the same simplistic approach in reverse, taking a 27% "benefit" rate from the later regressions, and then claiming that if the United-Lufthansa-SAS alliance suddenly lost its antitrust immunity, its interline fares would immediately rise 27%, leading (after knock-on effects) to a consumer welfare loss on the order of $80 million annually.
- Applying coefficients from these regressions to future cases in different markets is only plausible if one accepts that none of the regression correlations were explained by 1990s market conditions and one accepts the full logic of the structural barriers/double marginalization theory, but even under these dubious conditions, the forecasting use of the coefficients in these papers violated the logic of that theory.

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[48] For example, a hypothetical immunized alliance between Lufthansa and Thai Airways would offer Thai nearly 100 important connecting destinations beyond Lufthansa's hub, but Thai only operates a handful of routes at its Bangkok hub where Lufthansa-Thai alliance connections would be meaningfully competitive. Under a KLM-Northwest revenue sharing approach, even with metal neutrality, Lufthansa would be saddled with a disproportionate share of low value shorthaul prorates, which might not only displace high-fare intra-European short haul passengers, but longhaul passengers that Lufthansa could have carried on its own longhaul flights. With today's systems, a jointly profit improving system could certainly be designed, but even in the absence of any regulatory or antitrust issues, the net gains might not justify the required investment.

[49] As with most efficiency enhancing innovations, the importance of luck and the lack of prior understanding of the true opportunity cannot be overstated.

[50] For discussions of approaches see Gellman Research Associates (1994) A Study of International Airline Code Sharing. Department of Transportation Office of Aviation and International Economics

[51] The data presented in the paper is from the DOT DB1A ten percent sample, and must be multiplied by ten to produce the full estimated marketplace impact. None of Whalen's writings after the BA-AA analysis in the original joint 2000 paper use regression results as predictive of impacts in other markets

- The BA-AA forecast erroneously assumes that every current BA-AA interline ticket is sold in a market that has no existing online or alliance interline service. In fact Brueckner and Whalen made no effort to determine what markets these passengers flew in, or whether they were even paying higher fares than passengers in other connecting markets were paying. Given the broad market coverage of the existing KLM-Northwest, Delta-Swissair-Sabena and United-Lufthansa-SAS alliances at the time this was written, it is safe to assume that the vast majority of this traffic, perhaps over 90% was in markets that already had the benefit on online or alliance pricing, and the claim that all these BA-AA interline tickets were sold at rates 25% higher than ones in comparable alliance and online markets is wildly implausible.
- The Star Alliance calculations assume that if the alliance lost immunity, none of its current passengers could find equivalent fares on other alliances or online carriers, and that United, Lufthansa and SAS, after six years of immunized cooperation. They would not only be totally incapable of establishing any type of alternate codesharing arrangement, but since they would have reverted to "double maximization" practices, they would be establishing leg prorates with markups over marginal costs, would do in isolation of the pricing situation on any interline market, and would refuse to consider any proposals from their former partners to alter these prorates to levels that would increase joint profits. Brueckner also calculated transatlantic consumer impacts using the 27% factor from his worldwide regression, instead of the 21% factor from his transatlantic regressions, suggesting this analysis may best be viewed as corporate advocacy, and not serious academic research.

D5. Brueckner and Whalen claim that "Double Marginalization" is a structural issue inherent to alliances, and that any and all new immunity grants would create similar consumer gains (due to the internalization of these barriers) is fundamentally false, and is contradicted by all available evidence

- The Joint Applicants' claim of public benefits in connecting markets totally depends on the claim that "double marginalization" not only exists, but would have the powerful effect on consumer prices (17-30% reductions, $200-250 per ticket) any and every time a new grant of immunity was made, regardless of supply or competitive conditions in the specifically affected markets at the time of the immunity grant. Neither the Joint Applications in this case, or any prior applicants for antitrust immunity, have submitted any proper, verifiable, non-speculative evidence of this alleged universal causal link between immunity and lower connecting fares except for citations of the Brueckner/Whalen articles discussed here. All other available evidence directly contradicts the Joint Applicants' claims.
- In order to claim that the Brueckner/Whalen regression coefficients can be used to predict price effects in other, unrelated, markets, one must demonstrate that their regressions were able to surgically isolate the "cooperative alliance pricing" impact on interline prices from all other marketplace factors influencing these fares, including supply levels, efficiency improvements, and the general level of fares in the 70-95% of all markets served by true online services. This would be an astounding statistical claim, but it is not supported by any analysis showing similar price effects in any post-1999 markets, and it is not supported by analysis putting the alliance impacts in the context of the broader North Atlantic consumer pricing gains that occurred during the mid 90s.
  - If one is to argue that these regression perfectly isolated the impact of "cooperative alliance pricing" from all other possible factors, then one must be willing to argue that the consumer benefits actually enjoyed by KLM-Northwest and Delta-Swissair passengers in the 90s, was not the 17-30%, or $200 per ticket identified here, but a substantially greater number. One must conclude either that these immunity grants were the single most economically beneficial decision in the history of aviation, or that the "double marginalization" coefficients cannot be used in forecasts.
  - If immunity grants really did drive these huge (17-30%, $200-250 per ticket) type of price reductions under any market condition, there would be ample evidence, in DB1A and other industry databases, that one could use to support the claim. Neither the Joint Applicants, nor anyone else, has produced any such evidence.

- Neither Brueckner, Whalen, or anyone else has replicated these "17-30%" type results in any regressions of any other markets. The analysis that has been conducted shows absolutely no evidence of "market-independent cooperative alliance pricing" consumer benefits, and tends to support the claim that consumer benefits, if they exist, are not large enough to offset the consumer welfare losses due to reduced competition.
  - James Reitzes and Dorothy Robyn of the Brattle Group, the authors of the Brattle affidavit in this Joint Application, also submitted analysis on behalf of American Airlines in the Star I and Skyteam I cases.[52] These affidavits updated analysis of transatlantic market growth since the initial introduction of antitrust immunity that had been performed by the DOT in 1999 and 2000.[53] The new analysis found that the pro-consumer pricing trends of the 1990s had been reversed, and that the greatest 1999-2005 price increased had come in the connect markets predominately served by carriers with antitrust immunity. Prices had increased 21% across the entire North Atlantic (CAGR 3.5%) and 23% in category 3 double connect markets, despite flat capacity. This suggested that whatever efficiency/consumer benefits had been generated by the original alliances had been short-lived, and had been fully offset by increased pricing power. It also suggested that the later Star Alliance immunity grants did not have the "17 to 30%" level effects that the earlier alliances were alleged to have, and had no impact after 1999.
  - In the Continental/Star Alliance case, The Department of Justice presented original statistical analysis of price differences in connecting North Atlantic markets based on DB1A data from 2005 through 2008.[54] The results directly contradicted claims of "double marginalization" and immunity efficiencies. Interline tickets only comprised 7% of the total sample, suggesting that interline only accounted for 3-4% of total North Atlantic travel. The analysis found that immunized alliance fares were 2.1% higher than online fares and 3.6% higher than non-immunized codeshare fares. This contradicted the claim that immunized fares would be lower than non-immunized codeshare fares because of "double marginalization" problems, and lent further support to concerns that the immunized alliances had developed market power and were not maximizing consumer welfare.
  - In the current case the Department of Justice conducted further new analysis of connecting market fares based on 3Q2008 DB1A data, with results further broken down by alliance group.[55] This confirmed the earlier conclusion that current market data did not support claims about "double marginalization" and immunity efficiencies, and the DOJ specifically noted that they "make no representation that fare differences across tickets, as estimated by this type of work, are informative about causality between immunity grants and double marginalization". The results found that Oneworld codeshare fares were 1.6% less than Oneworld member online fares, undermining the Applicants claim that immunity is needed to reduce artificially high non-immunized fares. The results also found that Skyteam immunized fares were 7.2% higher than Skyteam non-immunized fares and that Star immunized fares were 11.7% higher than Star codeshare fares.
- The argument "consumers benefit from international collusive pricing arrangements" is explicitly saying "consumers benefit whenever international competition is eliminated". If this were true, it would require rethinking a great deal of antitrust and industrial organization theory. But if each new immunized alliance actually generated price cuts on the order of 17-30%, or $200-250 a ticket, then the rethinking would undoubtedly be worthwhile.
- All of the available evidence suggests that the two Brueckner/Whalen regressions failed to surgically isolate "cooperative alliance" pricing effects in connecting markets from the many other factors influencing these prices. The observed correlations between "17-30% price reductions" and "alliances" is not explained by "the internalization of double markups" which does not happen. The correlations are likely to be largely, if not fully explained by the marketplace changes described in section B, including strong, profitable capacity growth, market liberalization, and efficiency

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[52] Robyn, J., Reitzes,J. (2005) and. (2006) op. cit.
[53] DOT, op.cit
[54] Department of Justice, Comments on the Show Cause Order, p.49-51
[55] Comments of the Department of Justice, p.22-4

growth. The original antitrust immunity grants undoubtedly contributed to these overall effects in the mid 90s, but specific alliance pricing benefits would have been limited to one segment of the markets, and would have been fully exhausted by the late 90s, as "online" schedule and pricing options expanded from 60-70% to nearly 100% of the market.

- Since there is no demonstrated "universal market-independent cooperative alliance pricing" impact, it is totally inappropriate to apply the coefficients of these two regressions to any other markets with different supply or competitive characteristics. The Joint Applicants are specifically claiming that regressions reflecting the highly competitive, strongly profitable, high demand growth 1990s North Atlantic can be used to predict price effects in 2010. This is the equivalent of saying that an analysis of the price impact of new low cost carrier entry onto markets solely served by Legacy carriers in the 1990s can be used to predict the price impact of the entry of a low cost carrier onto a market already served by other low cost carriers in 2010, when the pricing and efficiency gap between low cost and Legacy carriers was substantially smaller than it had been. This is the equivalent of saying that an analysis of the price appreciation of Las Vegas housing in the 1990s can be used to predict the exact level of housing appreciation in 2010. The Joint Applicants' use of these regressions to forecast future price reductions is completely indefensible and the consumer benefit claims based on those "predictions" must be rejected.

E. THE JOINT APPLICANTS' CLAIMS OF $92 MILLION IN ANNUAL PUBLIC BENEFITS IN CONNECT MARKETS MUST BE REJECTED. IT NOT ONLY FAILS TO MEET THE MINIMIMUM REQUIREMENTS OF THE HORIZONTAL MERGER GUIDELINES, BUT THE CLAIM IS DEMONSTRABLY FALSE.

E1. The Joint Applicant's Claim of $92 million in annual public benefits in connect markets is entirely based on two demonstrably false assumptions, and thus must be rejected in its entirety.

- The Joint Applicant's public benefit claim depends on the false assumption that there are structural "Double Marginalization" barriers to efficient non-alliance pricing that would be found in any and all non-alliance cases as these barriers are independent of market or competitive conditions.
  - There have never been serious structural or behavior barriers preventing non-immunized carriers from setting rational, profit maximizing interline fare levels; carriers do not set prorates in total isolation of interline markets and partners as the "double marginalization" theory assumes, and do not refuse to consider more jointly beneficial alternative prorates
  - "Double markups" never existed because airlines never price on a "cost plus markup" basis;
  - The general claim that "high" interline prorates are evidence of structural barriers because they are inherently suboptimal is false; there are many examples of rationally higher prorates, and the theory is not based on any actual examples of irrationally suboptimal pricing;
  - Efficient interline pricing can be managed at small airlines with limited automation, and is easily managed via fare mapping at any carrier using modern revenue management tools;
  - The marketing efficiency of the original 1990s North Atlantic alliances had nothing to do with pricing; the actual brand awareness and distribution efficiencies achieved are found in any "hub network versus point-to-point" situation and were not uniquely caused by antitrust immunity
  - Historical limitations to more widespread interline pricing had nothing to do with the lack of alliances or antitrust immunity but was due to the inherent difficulty of establishing jointly profitable interline fares between longhaul and shorthaul operators.
  - None of the statistical analysis in the Brueckner and Whalen papers demonstrates the existence of "double marginalization" or any related structural barriers or supports the claim that it is the cause of higher non-alliance prices; there is absolutely no empirical evidence that the theorized structural barriers to efficient interline pricing actually exist.
- The Joint Applicant's public benefit claim depends on the false assumption that non-immunized interline fares are always higher than immunized alliance and online connecting fares in all

situations, regardless of market or competitive conditions, and that these higher non-immunized fares would immediately fall to the lower immunized/online level upon grant of immunity

- The only legitimate historical case of consumer pricing benefits from immunity occurred in the 1990s in a specific range of double-connect North Atlantic markets that had no online service, where new alliances prices were substantially lower than the previously available interline prices; this benefit is only possible in cases where new alliance service enters an O&D solely served on an online basis; "interline-only" O&Ds had been almost completely eliminated on the North Atlantic by 1999, and thus it would not be possible for any new alliance to achieve material pricing benefits from this source.
- Brueckner and Whalen's regression correlations between "alliances" and "lower prices" vastly overstate the claimed alliance pricing benefit, as their regressions were not properly restricted to the double-connect, interline-only markets and included many markets that already had online pricing. There were major consumer benefits realized on the North Atlantic following the introduction of alliances in the mid 90s, but most were due to non-alliance factors including profitable capacity growth and hub expansion, market liberalization, increased carrier efficiencies due to fleet and technology improvements, and lower fuel prices. The consumer benefits due to alliance pricing in previously interline-only markets had been fully exhausted by the end of the decade, and all of the available empirical evidence shows that the consumer welfare impact of antitrust immunity grants since 1999 has been negative.
- The Joint Applicant's' provided no evidence that their current non-immunized codeshare and interline fares in any given market are higher than competitive online and alliance fares, much less evidence showing that they are 17.45% higher as their testimony claims; Neither the Joint Application or the Brueckner and Whalen pricing theories are supported by any empirical evidence that non-immunized carriers publish higher fares than online and alliance carriers in any given market, and the claims of structurally higher non-immunized fares would contradict all historical evidence that airlines with comparable products cannot sustain higher than "market" fares in competitive O&Ds.
- The Joint Applicants' claim that non-alliance fares are structurally higher than alliance fares is based on the false assumption that all of these competitors set fares on a markup basis relative to a marginal cost-type measure; if this were true, airline fares would fluctuate wildly with volatile input costs such as fuel. If a given interline fare was rationally profit maximizing prior to an immunity grant, it would irrational to reduce it after an immunity grant. Since there is no evidence that current fares are irrationally set above profit-maximizing levels, there is no reason to believe that an immunity grant would systematically reduce fares.
- There is no empirical evidence of any fare reductions directly attributable to any antitrust immunity grant in the last decade, and certainly no evidence of fare reductions of the 17-30%, $200-250 per ticket magnitude suggested by the "double marginalization" theory and claimed by the Joint Applicants.
- Since the Brueckner and Whalen theories and regressions do not justify the "universal market-independent cooperative alliance pricing" impacts claimed by the Joint Applicants, there is no basis for using coefficients from those regressions as the basis of predicting such alliance pricing impacts in today's market.

<u>E2. The Joint Applicant's Claim of $92 million in annual public benefits completely fails to meet the evidentiary standards of the Horizontal Merger Guidelines, and must be rejected in its entirety.</u>

- The Joint Applicants have failed to provide proper, verifiable, non-speculative evidence that the claimed structural "double marginalization" barriers to efficiency actually exist
  - The cited Brueckner and Whalen "double marginalization" theories do not constitute legitimate evidence of actual barriers to airline efficiency
  - The cited Brueckner and Whalen "double marginalization" theories are not supported by their own empirical evidence or any other independent analysis showing systematic barriers to

non-immunity pricing efficiency, all of the assumptions underlying the theory can be plausibly challenged, and there are highly plausible alternate explanations for all of the evidence they cite in support of their theory

- The credibility of the theory must be questioned further given Brueckner's longstanding role as a paid advocate for another airline with similar interests in reduced competition among international airlines
- The Joint Applicants' failed to provide any other evidence supporting their "double marginalization" claim.

- The Joint Applicants have failed to provide proper, verifiable, non-speculative evidence that the proposed immunity grant would lower prices in the specific markets served by the applicants, under current market conditions.
  - The Joint Applicants provided no evidence that the current interline pricing functions of British Airways, American Airlines, Finnair, Iberia or Royal Jordanian actually suffer from any of the structural inefficiencies implied by the "double marginalization" claim
  - The Joint Applicants provided no evidence that their current interline pricing is currently above online or alliance levels in the markets where it currently provides service
  - The Joint Applicants provided no evidence of any specific consumer-welfare enhancing price reductions it would make in any market it currently serves following a grant of immunity, and no evidence that these merger-specific changes would create $92 million in annual public benefits.
- As has already been shown in the comments of the Department of Justice[56], the Joint Applicants provide no proper, verifiable, non-speculative evidence that it would be unable to provide the alleged consumer pricing benefits in the absence of a grant of immunity, although this point is mooted by the lack of evidence for the alleged consumer pricing benefits.
- As the DOT has acknowledged on many occasions, the law places the burden of proof on the carriers requesting exemption from the antitrust laws; this burden has clearly not been met.

Respectfully submitted,

Hubert Horan
8 January 2010

[56] DOJ comments, DOT-OST-2008-0252-3374 p. 22-28

CERTIFICATE OF SERVICE

I hereby certify that I have this date served the foregoing document on the persons identified below by causing a copy to be sent by electronic mail.

anbird@fedex.com	konstantinos.adamantopoulos@hammonds.com
andrew.forman@cwt.com	kquinn@pillsburylaw.com
anita.mosner@hklaw.com	lachter@starpower.net
aserranzana@geclaw.com	leslie.abbott@wnco.com
benjamin.slocum@usairways.com	lhalloway@crowell.com
bill@mietuslaw.com	libowd@sullcrom.com
bkeiner@crowell.com	mamaila@airfrance.fr
blabow@omm.com	mchopra@jamhoff.com
bob.kneisley@wnco.com	mcmillin@woa.com
bruce.rabinovitz@wilmerhale.com	mgerchick@gerchickmurphy.com
byerlyjr@state.gov	mgoldman@sgbdc.com
carl.nelson@aa.com	mholland@condonlaw.com
cdonley@ssd.com	mroller@rollerbauer.com
cgosain@steptoe.com	mrosia@crowell.com
cjsimpson@zsrlaw.com	msinick@ssd.com
cwilson@omm.com	npeterson@wileyrein.com
david.heffernan@wilmerhale.com	paul.jasinski@ba.com
dfisher@kelleydrye.com	paul.yde@freshfields.com
dhainbach@ggh-airlaw.com	peter.irvine@dot.gov
diarmuid.ryan@hammonds.com	pmurphy@gerchickmurphy.com
dkirstein@yklaw.com	pmurphy@lopmurphy.com
donna.kooperstein@usdoj.gov	prrizzi@hhlaw.com
dvaughan@kelleydrye.com	pruden@asta.org
dwight.moore@ustranscom.mil	rbkeiner@crowell.com
ebailey@wileyrein.com	rclayman@geclaw.com
efaberman@wileyrein.com	recohn@hhlaw.com
gmurphy@crowell.com	rick.rule@cwt.com
howard_kass@usairways.com	robert.land@jetblue.com
james.garzia@apgnet.com	rsilverberg@sgbdc.com
jashetaylor@gibsondunn.com	russell.bailey@alpa.org
jeff.ogar@aa.com	sametta.c.barnett@delta.com
jeffrey.manley@united.com	sami.sarelius@finnair.fi
jennifer.trock@pillsburylaw.com	sascha.vanderbellen@delta.com
jhill@dlalaw.com	scott.mcclain@delta.com
jill.ptacek@usdoj.gov	sllunsford@fedex.com
jim.ballough@faa.gov	sophy.chen@hklaw.com
jrichardson@johnlrichardson.com	thomas.bolling@coair.com
julie.oettinger@united.com	tmuris@omm.com
jyoung@yklaw.com	todd.homan@dot.gov
karine.faden@freshfields.com	wkaras@steptoe.com
kevin.montgomery@polaraircargo.com	

Hubert Horan
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