

Supplemental Comments Regarding the Impact of Subsidized Gulf Carrier Competition on U.S. Carriers

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1) OVERVIEW & EXECUTIVE SUMMARY

On May 13, 2015, Compass Lexecon released a study assessing the impact of subsidized Gulf carrier presence on international passenger traffic to and from the United States.³ That study supplemented an earlier study by Compass Lexecon examining the impact of subsidized Gulf carrier competition on both U.S.-international passenger traffic and the fares of U.S. carriers on international city-pairs.⁴ Several interested parties—including Emirates Airline (“Emirates”), Qatar Airways (“Qatar”), Etihad Airways (“Etihad”), (collectively the “Gulf carriers”) and the U.S. Travel Association (“USTA”)—as well as economists on their behalf, have filed comments attempting to cast doubt on some of the core conclusions contained in our studies, as well as the key findings contained in the Partnership for Open & Fair Skies’ January 28, 2015, Whitepaper.⁵

Although the submissions filed by the Gulf carriers and their economists are long on assertions purporting to undermine the analyses contained in our earlier studies, a close examination of their submissions yield three key observations:⁶ (1) the Gulf carriers have simply ignored several of the most salient issues that were raised in our initial studies, particularly those related to the harm suffered by U.S. carriers as a result of their subsidized services to the United States; (2) where their submissions do attempt to address the analyses in our studies, the Gulf carriers’ rebuttal is predicated on assumptions that are demonstrably incorrect, rely on suspect data, and/or contain fundamental flaws in economic logic; and (3) lacking any meaningful rebuttal of what our previous studies actually found, the Gulf carriers resort to refuting illogical straw man arguments that they falsely attribute to our studies. Simply put, the Gulf carrier submissions contain little—if any—meaningful analysis that can be used to provide additional insight into the key economic questions examined in our studies, much less any credible analysis to refute our key findings.

³ See “Assessing the Impact of Subsidized Gulf Carrier Expansion on U.S.-International Passenger Traffic”, Darin Lee and Eric Amel, May 13, 2015 (hereafter “Traffic Study”).

⁴ See “Assessing the Impact of Subsidized Gulf Carrier Expansion on U.S.-International Airfares and Passenger Traffic”, Darin Lee and Eric Amel, April 9, 2015 (hereafter “April 9 Impact Study”). Although our April 9 Impact Study was originally provided to the U.S. Government on a confidential basis, it was released publicly on June 2, 2015.

⁵ See “Restoring Open Skies: The Need to Address Subsidized Competition From State-Owned Airlines in Qatar and the UAE,” January 28, 2015 (hereafter “Partnership Whitepaper”).

⁶ A bullet-point summary of the Gulf carriers’ rebuttal points to the key issues raised in our previous studies and our response to those points is contained in Appendix A.

Detailed responses to the Gulf carriers' submissions as they pertain to our studies are contained in Sections 2-4 below.⁷ However, we first briefly summarize the Gulf carriers' attempts to rebut the key findings of our studies below, and why those attempts fail.

- i. *The Gulf carriers' submissions have done nothing to undermine our analysis demonstrating substantial and widespread harm to U.S. carriers from their subsidized U.S. expansion*

Our previous studies demonstrated that Gulf carriers' subsidized capacity expansion to the United States has resulted in substantial and widespread harm to U.S. carriers. One component of our analysis of the harm suffered by U.S. carriers was a series of econometric analyses demonstrating that the presence of Gulf carriers suppresses both the average fares and the number of passengers for U.S. carriers across a broad range of U.S.-international city-pairs. None of the Gulf carriers' submissions even addressed our analysis showing that their presence suppresses the fares of U.S. carriers. But while each of the Gulf carriers' submissions (in addition to the USTA's) attempts to undermine our empirical analysis demonstrating that Gulf carriers' subsidized services have diverted passengers away from U.S. carriers, all of these attempts fall flat.

In our Traffic Study, we demonstrated that in the fourth quarter of 2014 alone, Gulf carriers were present on close to 9,000 U.S.-international city-pairs spanning much of Asia, Africa, the Middle East and Australasia.⁸ Not only have the Gulf carriers ignored this critical fact, each of their submissions (plus the USTA's) goes one step further by making the remarkable claim that Gulf carriers and U.S. carriers barely compete with one another. For example Emirates asserts that "[t]here is little competition between the Gulf Carriers and the Legacy Carriers"⁹ while Qatar argues that "[it] does not compete against US carriers."¹⁰ A closer examination of the Gulf carriers' (and USTA's) submissions, however, reveal that the basis for these claims is a set of flawed assumptions regarding the nature of airline competition generally, or worse yet, a complete disregard for the basic facts. For example, Emirates' submission states that "*the Legacy Carriers*

⁷ Because the purpose of this response report is to address the most salient issues related to our previous studies and the Gulf carriers' attempts to rebut our analyses pertaining to these issues, this response report does not address all of the statements contained in the Gulf carriers' submissions that we disagree with or believe to be factually incorrect.

⁸ See Traffic Study, pages 18-19.

⁹ See "Emirates' response to claims raised about state-owned airlines in Qatar and the United Arab Emirates", (hereafter "Emirates Response"), page 114.

¹⁰ See Comments of Qatar Airways Q.C.S.C., July 30, 2015 (hereafter "Qatar Comments"), page 43.

serve only two U.S.-Indian Subcontinent city pairs with their own aircraft: Newark-Delhi and Newark-Mumbai.”¹¹ Emirates is apparently unaware (or has chosen to ignore) the fact that United operates a hub at Newark with service to scores of destinations in addition to Delhi and Mumbai, thereby serving *hundreds* of U.S.-Indian Subcontinent city-pairs (not two) with their own aircraft. Overall, we demonstrate below that in 2014, U.S. and Gulf carriers overlapped on over 9,000 U.S.-international city-pairs, up from fewer than 3,500 in 2008.

The Gulf carriers’ and USTA’s analysis of harm is also fundamentally flawed because it focuses almost exclusively on non-stop overlapping service between U.S. and Gulf carriers. For example, the Oxford Economics study commissioned by USTA (and endorsed by Qatar) claims that “[o]f critical importance then, is the degree to which the Big Three and Gulf carriers compete head-to-head on the same routes....In practice there are just two routes...”¹² and that “*just 0.7 per cent of inbound passengers on Big Three carriers had the option of a Gulf carrier to fly the same route in 2014.*”¹³ Given that the Gulf carriers’ network model is predicated on flowing passengers over their hubs to other destinations (a fact that all three Gulf carriers reiterate in their submissions), the focus on non-stop competition to evaluate potential harm is simply illogical.

The Gulf carriers’ dismissal of harm based on a fundamental disregard for how airline competition works is pervasive throughout their submissions. For example, Emirates has asserted that Gulf carriers’ services to the United States could not have contributed to the termination of Delta’s or American’s services to India (and by implication, their inability to resume and grow these services) because “the supposed competition for the Legacy Carriers’ discontinued *non-stop* flights consisted of the Gulf Carriers’ *one-stop* flights.”¹⁴ In reaching this conclusion, however, Emirates ignores the fact that more than 60% of bookings between New York City and Delhi/Mumbai (city-pairs that are served non-stop by both United and Air India) use connecting service.

The Gulf carriers’ attempt to evade a meaningful analysis of harm by disguising the facts and/or mischaracterizing the nature of airline competition does not end there. For example, Emirates has argued that “...the Legacy Carriers and their joint venture partners have enjoyed *growth*, not

¹¹ See Emirates Response, page 114.

¹² See “Gulf carrier traffic to the USA: An analysis of the competitive landscape and economic impact”, Oxford economics, May 2015 (hereafter “Oxford USTA Study”), page 7.

¹³ See Oxford USTA Study, page 8.

¹⁴ See Emirates Response, page 118.

decline, in U.S.-Indian Subcontinent bookings...”¹⁵ while Edgeworth has asserted that U.S. carriers and their immunized partners “actually served 18 percent (over 223,000) *more passengers* [between the United States and the Indian Subcontinent] in 2014 because of the growth in the overall volume of travel...”¹⁶ But as discussed in greater detail in Section 2, the Gulf carriers’ attempt to portray U.S. carriers’ traffic in competing markets as growing—rather than shrinking—is dependent on the use of 2009 (the year IATA has described as “the worst year the industry has ever seen”¹⁷) as the base year for their comparisons. Similarly, even though Emirates claims that its’ entry has “grown the pie... allowing Emirates to grow without significantly diverting passengers from the Legacy Carriers,”¹⁸ we demonstrate that in the year following the entry by Emirates into a new U.S. gateway city (e.g., Seattle, Boston, Washington, Dallas), the number of bookings traveling on U.S. carriers and their JV partners between that city and the primary regions served by Emirates (e.g., the Indian Subcontinent, Africa, the Middle East and the ASEAN countries) falls, often dramatically.

In sum, while the Gulf carriers claim that “adverse effects are nowhere to be found,”¹⁹ the primary reason why they have reached this conclusion is that they have systematically *assumed away* virtually all of the competition that exists between U.S. and Gulf carriers. While this approach provides the Gulf carriers with colorful soundbites to distract readers from noticing the lack of substance in their submissions, it does not (and cannot) alter the fact that Gulf carriers and U.S. carriers compete on thousands of city-pairs. Nor can it change the fact the Gulf carriers’ submissions are devoid of any credible analysis refuting our empirical finding that their subsidized expansion has severely harmed U.S. carriers by suppressing their fares and diverting traffic flows that had previously flown on U.S. carriers.

¹⁵ See Emirates Response, page 114.

¹⁶ See “Empirical Investigation and Analysis of Economic Issues Raised In “Restoring Open Skies: The Need To Address Subsidized Competition From State owned Airlines In Qatar And The U.A.E”, Edgeworth Economics, May 21, 2015 (hereafter “Edgeworth Report”), page 2.

¹⁷ See “2009: Worst Demand Decline in History – Encouraging-end Improvements”, IATA Press Release No., January 27, 2010.

¹⁸ Ibid.

¹⁹ See Emirates Response, page 94. See also “Etihad Airways Response to Claims Raised About State-Owned Airlines in Qatar and the United Arab Emirates”, May 31, 2015, (hereafter “Etihad Response”), page 5-6: “While the Big 3 Carriers have rolled out their ‘parade of horrors,’ they have failed to identify any tangible harm to themselves, or to consumer welfare.”

ii. *The Gulf carriers' submissions have failed to demonstrate that their services stimulate new traffic to/from the United States*

Another key question addressed in our Traffic Study was whether Gulf carriers have stimulated additional traffic to/from the United States. This question is relevant not only to the issue of potential harm to U.S. carriers (i.e., if Gulf carriers have failed to meaningfully stimulate additional traffic above and beyond what traffic levels would have been based on underlying demand, it follows that their growth has come at the expense of U.S. and other carriers), but also in evaluating the Gulf carriers' economic impact claims. For example, if Gulf carriers have failed to meaningfully stimulate additional traffic, then the visitors to the United States on their flights are not "new" visitors that traveled to the United States *because of the Gulf carriers' services*, but rather, passengers that would have visited the United States (albeit on other carriers) in the absence of their services. Our Traffic Study addressed this important question by applying standard econometric techniques commonly used in the published economics literature studying airline competition and found that Gulf carrier presence has failed to meaningfully stimulate additional traffic to/from the United States.

As discussed in detail in Section 3 below, the Gulf carriers' rebuttal to our analysis demonstrating that they have failed to meaningfully stimulate additional traffic consists of two main arguments. First, two of the Gulf carriers—Etihad and Qatar—make no attempt to refute our finding that Gulf carriers have failed to meaningfully stimulate additional traffic. Instead, they rely on the Edgeworth Report that—by its own admission—was confused as to what the concept of demand stimulation in the context of our Traffic Study even meant.²⁰ As a result, Edgeworth assumed "it to mean *servicing a customer who would not otherwise be serviced by U.S. carriers*"²¹ even though this (illogical) concept is nowhere to be found in our study. To make matters worse, the submissions of all three Gulf carriers adopt Edgeworth's blatant mischaracterization of our stimulation analysis by falsely asserting that our studies assume that U.S. carriers are "entitled" to carry a certain share of passengers travelling internationally to/from the United States. Putting aside this gross mischaracterization of our study, however, Edgeworth ultimately reaches a similar conclusion to the one found in our Traffic Study: Gulf carriers have been growing not because

²⁰ See Edgeworth Report, Par. 59: "...While the Compass Lexecon Report does not explain this concept [demand stimulation]..."

²¹ Ibid.

they stimulate new traffic above and beyond what would have occurred absent their services, but rather, because they “...have been growing by serving the expanding overall volume of traffic between the U.S. and other countries.”²²

Emirates’ attempt to refute our finding that the Gulf carriers have failed to meaningfully stimulate additional traffic, on the other hand, takes a different (albeit equally ineffective) tack. First, Emirates asserts that “[m]assive, worldwide econometric analysis is a poor tool to resolve questions of stimulation”²³ even though its CEO publicly endorsed a comparable econometric analysis as recently as March of this year to support the carrier’s proposition that it stimulates demand.²⁴ Emirates then purports to demonstrate that its entry has resulted in “stunning” and “massive” demand stimulation by relying on what it refers to as a “simple” methodology that compares changes in traffic at four select U.S. airports prior to and after its entry. But as described in Section 3 below, these examples rely on highly suspect booking data from Emirates that purports to show far more traffic growth between 2009 and 2014 than the equivalent data from Qatar, Etihad, American, Delta or United shows.²⁵ When Emirates’ “simple” stimulation exhibits

²² See Edgeworth Report, page 13.

²³ See Emirates Response, page 103.

²⁴ See footnote 245 below.

²⁵ As discussed in greater detail in Section 3 below, each of the Gulf carriers’ submissions (in addition to the analyses contained in the Partnership’s current and previous submissions, including our reports) makes use of some form of aggregated historical booking data derived from a variety of third-party Global Distribution Systems (“GDSs”) such as Amadeus, Sabre, Worldspan etc., often referred to as Marketing Information Data Tape (“MIDT”) data. Although the MIDT data used by Emirates has not been made available to us, it purports to show 60% more growth in bookings between the United States and Indian Subcontinent from 2009-2014 than the average growth in bookings over the same time period based on data from Qatar, Etihad, Delta, American and United (*see* Exhibit 27 below).

The MIDT data used in our analysis has been provided by Delta Air Lines and reflects the carrier’s ordinary course booking data from ten different GDS subscriptions (Abacus, Amadeus, Apollo, Axess, Galileo, Infiniti, Sabre, Worldspan, Topas and TravelSky). The booking data from each GDS has been aggregated by a third-party vendor according to Delta’s standard business rules (i.e., trip-breaks for international itineraries are based on stops of 24 hours or greater). Delta’s MIDT data includes all bookings made through the 10 GDSs listed above (e.g., all classes of service and segment status codes), net of cancellations and duplicate bookings. The ordinary course MIDT data used by Delta (and relied upon in this study) makes no additional modifications or scaling of the underlying booking data.

Although MIDT data can vary from one carrier to another because of differences in the GDSs contained in a carrier’s MIDT subscription, based on the description provided in footnote 223 of its submission, Emirates subscribes to nine GDSs, *all of which are included in Delta’s MIDT data* (the one GDS included in Delta’s MIDT data that is not included in Emirates’ MIDT data (Axess) is based in Japan). Thus, absent any additional modifications to the MIDT data that have not been disclosed in its comments, Emirates’ MIDT should closely match Delta’s MIDT data. However, as shown in Exhibit 27 below, the purported growth in bookings between 2008 and 2014 based on Emirates’ MIDT data appears to be an outlier.

Finally, since our previous studies were completed, the underlying MIDT used in those studies was re-stated to correct for a processing error impacting the number of bookings on some of the itineraries. We have re-estimated the

are replicated using more representative data (i.e., data consistent with the growth rates found in all of the other carriers' analysis, including Qatar's), we find that the alleged amount of traffic growth in the year following Emirates' entry is a fiction. Moreover, we demonstrate why the traffic growth that has occurred can be explained by a host of other factors, including changes in underlying demand, diversion from other nearby airports, and destination substitution.

Simply put, the Gulf carriers' submissions have failed to provide any credible analysis to undermine a core finding of our Traffic Study, i.e., that Gulf carrier presence has failed to meaningfully stimulate additional traffic to/from the United States. Consequently, it follows that their subsidized expansion has come at the expense of other carriers, including U.S. carriers.²⁶

iii. *The economic impact and employment claims put forth by the Gulf carriers and the USTA are grossly exaggerated*

Although it bears little relevance to the question of how Gulf carriers' subsidized expansion impacts U.S. carriers, the Gulf carriers' submissions include a variety of economic impact claims. Not surprisingly, these claims are grossly exaggerated, and in most instances, are dependent on the incorrect assumption that all of the foreign-originating passengers on Gulf carriers' flights to the United States would not have travelled but for their services. Because this assumption has been shown to be incorrect, the Gulf carriers' claims of billions of dollars of new foreign-visitor spending and related economic activity (creating tens of thousands of new U.S. jobs) amounts to little more than a shell-game. Simply put, because Gulf carriers divert—rather than stimulate—passenger traffic, the “visitors” onboard their flights to the United States do not reflect “new” visitors and therefore, the spending and economic activity that these visitors contribute is not *incremental* to the U.S. economy.

Similarly, the claim by Emirates that their aircraft orders from Boeing support hundreds of thousands of U.S. aerospace jobs suffers from a variety of critical flaws, including the use of “list prices” rather than actual prices and the fact that the alleged jobs are even not jobs *per se*, but “job-years”. As described in Section 4 below, even assuming that all of Emirates' Boeing orders reflect

regressions from our earlier studies using the re-stated data and they are presented in Appendices B-1-B-4. As shown in these appendices, while the estimated coefficients change slightly, the fundamental results are unchanged.

²⁶ It is important to emphasize that while lack of stimulation is a *sufficient* condition to establish that Gulf carriers' subsidized expansion has harmed U.S. and other carriers, it is not a *necessary* condition. Put differently, even if Gulf carriers did in fact stimulate demand, their subsidized expansion would nevertheless still harm U.S. carriers by suppressing their fares and, in all likelihood, reducing (on net) the number of passengers carried by U.S. carriers.

incremental aircraft orders (which is itself a dubious assumption), simple corrections to their analysis shows that they have overstated the estimated jobs figure by a factor of nearly 30.

The remainder of this response report is organized as follows. Section 2 responds to Gulf carriers' attempts to rebut our analysis of the harm suffered by U.S. carriers due to Gulf carriers' subsidized expansion to the United States. Section 3 responds to the Gulf carriers' attempts to rebut our analysis demonstrating that their presence has failed to meaningfully stimulate additional traffic. Section 4 provides an analysis of some of the economic impact claims contained in the Gulf carriers' and USTA's submissions. Section 5 provides concluding remarks.

2) THE GULF CARRIERS' SUBMISSIONS HAVE DONE NOTHING TO UNDERMINE OUR ANALYSIS DEMONSTRATING SUBSTANTIAL AND WIDESPREAD HARM TO U.S. CARRIERS FROM GULF CARRIERS' SUBSIDIZED U.S. EXPANSION

In our previous studies, we demonstrated that Gulf carriers' subsidized capacity expansion to the United States has resulted in substantial and widespread harm to U.S. carriers. The channels through which this harm has occurred are straightforward and easily demonstrated based on a variety of data. For example, we demonstrated that:

- At the end of 2014, Gulf carriers were present on nearly 9,000 U.S.-international city-pairs spanning much of Asia, Africa, the Middle East and Australasia.²⁷ In its responses to the U.S. Government's Technical and & Clarification Question, the Partnership demonstrated that these city-pairs accounted for a significant portion of U.S. carriers' international passengers and revenues;²⁸
- Gulf carriers have been adding capacity to the United States at rates far in excess of what the rate of demand growth for air travel dictates;²⁹
- Capacity expansion far in excess of what underlying demand can support has put substantial downward pressure on the fares of U.S. carriers on city-pairs with subsidized Gulf carrier competition. Our econometric analysis demonstrated that the presence of Gulf carriers lowers U.S. carriers' fares on connecting city-pairs

²⁷ See April 9 Impact Study, pp. 19-21.

²⁸ See Partnership Answers to U.S. Government Technical and Clarification Question #16.

²⁹ See April 9 Impact Study, pp. 4-9.

to/from one of their U.S. gateway cities by as much as 12.9% *on average*.³⁰ Moreover, our regression analysis suggests that subsidized Gulf carrier competition suppresses U.S. carriers' fares by more than ten times as much as the average non-Gulf competitor. On city-pairs now saturated with Gulf carrier capacity (such as those between the United States and the Indian Subcontinent or New York City-Milan), the downward pressure on U.S. carriers' airfares has been far greater.³¹

- The proliferation of subsidized capacity (and the concomitant downward pressure it puts on airfares) has forced U.S. carriers to discontinue (or not enter/expand service on) routes serving city-pairs with significant Gulf carrier presence. We also noted that this outcome had already occurred between the United States and India, where subsidized capacity expansion by Gulf carriers is a key reason why all but one U.S. carrier (i.e., United) no longer offers non-stop service between the United States and India. Moreover, we show that each displaced or forgone U.S. carrier daily frequency to India results in a net loss of over 1,500 U.S. airline and related jobs.
- The traffic gains by Gulf carriers have come largely *at the expense of other carriers*, including U.S. carriers.³² Our Traffic Study provided detailed econometric evidence showing that the presence of each Gulf carrier with as little as a 3% booking share on a city-pair reduces the number U.S. carriers' passengers on that city-pair by approximately 8% on average (i.e., when all three Gulf carriers are present on a U.S. international city-pair, U.S. carrier passengers are—on average—

³⁰ In our April 9 Impact Study, we noted that the presence of each Gulf carrier on a city-pair to/from one of the Gulf carriers' 11 U.S. gateway cities lowered U.S. carriers' fares by 4.3% on average. Thus, on city-pairs where all three Gulf carriers are present, the magnitude of the fare suppression grows to 12.9%, on average. On city-pairs to/from other U.S. cities, our April 9 Impact Study showed that each Gulf carrier present lowered U.S. carrier fares by 1.0%, on average. Using the updated MIDT data and updating to include the fourth quarter of 2014 (*see* Exhibit 8 below), the presence of each Gulf carrier on a city-pair to/from one of the Gulf carriers' 11 U.S. gateway cities lowered U.S. carriers' fares by 4.8% on average (i.e., 14.5% when all three Gulf carriers are present). On city-pairs to/from other U.S. cities, each Gulf carrier present lowered U.S. carrier fares by 1.3% on average. (Using the updated MIDT data but the time period from our previous study, the presence of each Gulf carrier on a city-pair to/from one of the Gulf carriers' 11 U.S. gateway cities lowers U.S. carriers' fares by 4.4%, on average, while on city-pairs to/from other U.S. cities, each Gulf carrier present lowers U.S. carrier fares by 1.1% on average. *See* Appendix B-1).

³¹ *See* April 9 Impact Study, Exhibits 3 and 7.

³² *See* Traffic Study, pages 14-19.

24% lower than they would otherwise be, but for Gulf carrier presence).³³ The regression analysis also demonstrated that on city-pairs where each of the Gulf carriers has at least a 10% share involving a Gulf carrier U.S. gateway city, U.S. carrier passengers have been reduced by approximately 50%, on average.³⁴

As noted above, the Gulf carriers' submissions have not even attempted to refute several of the key elements of harm described above. For example, none of the Gulf carriers has disputed our econometric evidence demonstrating that their subsidized presence has suppressed the fares of U.S. carriers, or the fact that Gulf carriers are present on thousands of U.S.-international city-pairs. Instead, the Gulf carriers (and the USTA) attempt to dismiss the overwhelming body of evidence documenting the substantial harm that U.S. carriers have already suffered by alleging that Gulf carriers and U.S. carriers don't compete. For example, Emirates asserts that "[t]here is little competition between the Gulf Carriers and the Legacy Carriers"³⁵, Qatar argues that "[it] does not compete against US carriers"³⁶ and Oxford Economics (on behalf of the U.S. Travel Association) claims that "there is a limited degree of overlap between the routes of these two groups of airlines..."³⁷ Similarly, Emirates has asserted that Gulf carriers' services to the United States could not have contributed to the termination of Delta's or American's services to India (and by implication, their inability to resume and grow these services) because "the supposed competition for the Legacy Carriers' discontinued *non-stop* flights consisted of the Gulf Carriers' *one-stop* flights."³⁸

Moreover, in attempting to dismiss the substantial harm identified in our earlier studies, the Gulf carriers (and other commenters) make a variety of other claims that are factually incorrect, reflect a

³³ See Traffic Study, page 16. Using the updated MIDT data, the estimated coefficient measuring the impact on U.S. carriers' passengers from each Gulf carrier present with at least a 3% share of bookings (across all connecting city-pairs) increased from -8.1% to -8.7%. Thus, the impact when all three Gulf carriers are present (with at least a 3% share) would be approximately 26%, on average. See Appendix B-2, column (3).

³⁴ See Traffic Study, page 17. Using the updated MIDT data, the estimated coefficient measuring the impact on U.S. carriers' passengers of each Gulf carrier present with at least a 10% share of bookings on city-pairs to/from one of the 11 U.S. gateway cities increased from -16.9% to -17.6%. See Appendix B-3, column (1).

³⁵ See Emirates Response, page 114.

³⁶ See Qatar Comments, page 43.

³⁷ See Oxford USTA Study, page 6.

³⁸ See Emirates Response, page 118.

gross mischaracterization of airline competition, and/or ignore well-known facts about airline economics. These claims include (but are not limited to):³⁹

- The assertion by the Gulf carriers that their torrid rate of capacity growth is justified because they serve regions of the world where traffic growth exceeds global GDP growth;
- The assertions by Emirates that its entry “has not resulted in a significant loss of business”⁴⁰ for U.S. carriers and that its “entry has grown the pie... allowing Emirates to grow without significantly diverting passengers from the Legacy Carriers”⁴¹;
- The assertion by all three Gulf carriers that U.S. carriers and their JV partners have experienced *growth* in traffic between the United States and the Indian Subcontinent,⁴² an assertion entirely dependent on their use of 2009 (the “worst year the industry has ever seen” according to IATA⁴³) as the base year for comparison;
- The assertion by Emirates that U.S. carriers “have never [made] a major investment of their own capacity”⁴⁴ to serve the Indian Subcontinent, instead “rel[ying] on their joint venture partners” who have also “not ma[de] a serious effort to expand with the growth of the market”⁴⁵, or the assertion by Qatar that “[t]he reality is that US carriers have long ignored the India/ISC market”⁴⁶;

³⁹ As noted above, while this report addresses the most egregiously incorrect claims made by the Gulf carriers in their submissions, it does not address all of the statements or claims that we disagree with or that are factually incorrect.

⁴⁰ See Emirates Response, page 103.

⁴¹ Ibid.

⁴² See, for example, Edgeworth Report, page 40: “as traffic between the U.S. and key regions where Etihad operates has grown over time, the numbers of passengers served by U.S. carriers (and their immunized partners) have also grown”; Emirates Response, page 113: “the Legacy Carriers and their joint venture partners have enjoyed growth, not decline, in U.S.-Indian Subcontinent bookings...” and Qatar Comments, page 41 (referencing the Edgeworth Report): “there is clear and compelling evidence that the US-India traffic carried by US carriers and their European counterparts has increased in absolute terms...”

⁴³ See “2009: Worst Demand Decline in History – Encouraging-end Improvements”, IATA Press Release No., January 27, 2010.

⁴⁴ See Emirates Response, page 112.

⁴⁵ Ibid, page 113.

⁴⁶ See Qatar Comments, page 40.

- The assertion by Emirates that “adverse effects [on U.S. carriers’ transatlantic routes] are nowhere to be found”⁴⁷ or by Qatar that U.S. carriers “have failed to show any harm from services operated by Qatar Airways, let alone harm caused by any of the purported subsidies;⁴⁸
- A variety of incorrect assertions regarding our econometric analysis of harm, including the false claim that our analysis is based on U.S. carriers’ “share” of passengers⁴⁹ or that because our data set includes city-pairs to/from Europe where the Gulf carriers do not materially compete, the observed traffic losses “could not have [been] caused” by the Gulf carriers;⁵⁰
- The assertion by Edgeworth Economics that our analysis was predicated on an “uncritical acceptance of the ‘evidence’”⁵¹ related to the Gulf carriers’ subsidies and that we have failed to demonstrate that the documented traffic losses were the result of these subsidies; and
- The assertion by all three Gulf carriers that because some portion of their passengers make connections to flights behind their U.S. gateways, their subsidized service provides “revenue benefits” for Delta, American and United.⁵²

In the remainder of this section, we show why each of these assertions is false and why Emirates’ and Qatar’s assertion that U.S. and Gulf carriers don’t compete is simply untrue.

⁴⁷ See Emirates Response, page 94.

⁴⁸ See Qatar Comments, page 39.

⁴⁹ See Emirates Response, page 138;

⁵⁰ See Edgeworth Report, Page 38.

⁵¹ See Edgeworth Report, page 31.

⁵² See Emirates Response, page 176: “Emirates has carried over 1.35 million feeder passengers to U.S. and European gateways who have then travelled onwards to U.S. destinations using other carriers, resulting in a revenue benefit of \$145.5 million to the Legacy Carriers and their joint venture partners”, Etihad Response, page 14: “...Etihad is actually feeding passengers onto US domestic carriers, including Delta, United and American. In 2014, Etihad delivered 182,000 connecting passengers onto U.S. airlines and this is forecast to grow to approximately 300,000 in 2015” and Qatar Comments, page 53: “Qatar Airways has a broad codeshare arrangement with American Airlines, and transfers its traffic arriving at US gateways to onward services operated by American. Although the amount of interline revenue that changes hands may vary from year to year, the total value of the traffic transferred by Qatar Airways has been in the neighborhood of \$60 million per year.”

a) The Assertion That U.S. and Gulf Carriers do not Compete is Fatally Flawed

- i. Emirates' assertion that "There is little competition between the Gulf Carriers and the Legacy Carriers" illustrates the carrier's blatant disregard for the truth

As noted above, our previous studies demonstrated that in the fourth quarter of 2014 alone, Gulf carriers were present on close to 9,000 U.S.-international city-pairs spanning across much of Asia, Africa, the Middle East and Australasia.⁵³ Not only has Emirates chosen to ignore this fact, its submission perplexingly claims that U.S. carriers "*compete with Emirates only on a few routes*"⁵⁴ and that "*there is relatively little competition in the Indian Subcontinent between the Legacy Carriers and Emirates and the other Gulf Carriers.*"⁵⁵ In support of these claims, Emirates purports to compare the city-pairs between the United States and the Indian Subcontinent served by U.S. carriers and Emirates "with their own aircraft".⁵⁶ Exhibit 1 below replicates Figure III-20 from the Emirates Response which—according to Emirates—shows that "*the Legacy Carriers serve only two U.S.-Indian Subcontinent city pairs with their own aircraft: Newark-Delhi and Newark- Mumbai.*"⁵⁷

⁵³ See April 9 Impact Study, pages 19-21. See also Traffic Study, pages 19-20. Based on the updated MIDT data, the number of U.S.-international city-pairs in the 4th quarter of 2014 with Gulf carrier presence (based on at least a 3% share of bookings) changes from 8,870 to 8,736.

⁵⁴ See Emirates Response, page 87.

⁵⁵ See Emirates Response, page 113.

⁵⁶ See Emirates Response, page 114.

⁵⁷ See Emirates Response, page 114.

EXHIBIT 1: FIGURE III-20 FROM EMIRATES RESPONSE

**'Online' U.S.-Indian Subcontinent City-Pairs
Operated by Legacy Carriers**



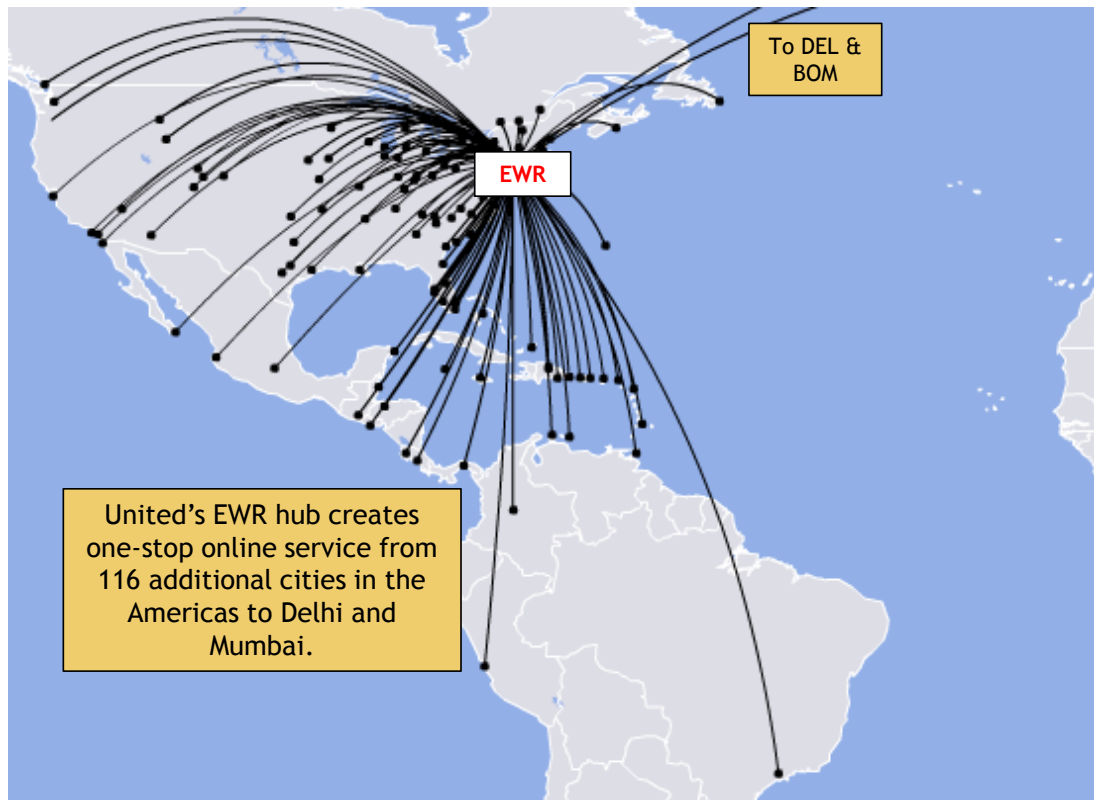
Source: Emirates Response, Figure III-20 (page 114).

Although New York (Newark)-Delhi and New York (Newark)-Mumbai are the only two remaining *non-stop routes* between the United States and the Indian Subcontinent flown by U.S. carriers, Emirates' apparently believes that the only destinations United serves from EWR "with their own aircraft" are Delhi and Mumbai. But as shown in Exhibit 2, United offers non-stop service from Newark to 121 airports (serving 116 unique cities) within the Americas in addition to serving Delhi and Mumbai (plus a host of other international destinations), thereby creating approximately 232 additional one-stop online city-pairs between the Americas and the Indian Subcontinent, of which 158 city-pairs are to/from the United States (i.e., 80 *times the number asserted by Emirates*).⁵⁸ Moreover, U.S. carriers and their JV partners together offer one-stop service on 276 city-pairs between the United States and the Indian Subcontinent and service with two or fewer stops on over 1,800 U.S.-Indian Subcontinent city-pairs.⁵⁹

⁵⁸ The analysis in our original studies, as well as this response, groups airports in the same metropolitan area when constructing city-pairs. From EWR, United serves nine airports within multi-airport U.S. city groupings: i.e., Cincinnati (CVG, DAY); Cleveland (CAK, CLE); Miami (FLL, MIA); Washington (BWI, DCA, IAD).

⁵⁹ Source: OAG. Note that most of the city-pairs that require two-stops on U.S. carriers and their JV partners would also require two-stops via the Gulf carriers as they involve a behind U.S. gateway connection to smaller U.S. cities such as Raleigh-Durham, North Carolina or Columbus, Ohio.

EXHIBIT 2: U.S.-INDIAN SUBCONTINENT CITY-PAIRS SERVED ONE-STOP BY UNITED “WITH THEIR OWN AIRCRAFT”*



Source: OAG.

Notes: Shows all destinations in the Americas served in 2015 by United Airlines from EWR. Map shows 121 airports accounting for 116 cities (5 U.S. airports are within multi-airport cities).

*United includes United Express.

Emirates’ gross mischaracterization of the degree of competitive overlap between U.S. and Gulf carriers does not end there. For example, Emirates also disregards the competitive overlap between U.S. and Gulf carriers on city-pairs that involve two-stop itineraries (some of which may involve connections with non-JV partner carriers such as Air India) because it claims that “*two-stop interline connections to those cities are not an attractive service to passengers*”.⁶⁰ This statement is puzzling in light of Emirates’ assertion that “[p]assengers arriving to the United States on Emirates flights travel on to over 200 airports in small and medium-sized communities in the United States,”⁶¹ many of whom make interline/codeshare connections with JetBlue and Alaska Airlines.⁶² Importantly, *all of the passengers connecting between a JetBlue/Alaska flight and an*

⁶⁰ See Emirates Response, page 115.

⁶¹ See Emirates Response, page 175.

⁶² See Emirates Response, footnote 318: “JetBlue CEO Robin Hayes credited partnerships with airlines like Emirates with increasing JetBlue traffic flow, creating jobs, and enabling launch of new JetBlue routes.” See also “Interview:

*Emirates' flight would be required to make two stops in order to reach destinations beyond Dubai (e.g., the Indian Subcontinent, Africa, etc.), i.e., itineraries that Emirates now claims are "not an attractive service to passengers."*⁶³ Overall, for the year ending Q2-2014, approximately 12% of Emirates' passengers, 26% of Etihad's passengers and 29% of Qatar Airways passengers traveling to/from the United States make connections behind their U.S. gateways, thereby using itineraries that have two or more stops.⁶⁴ Emirates' rationale for disregarding competition between U.S. and Gulf carriers on these two-stop city-pairs in reaching its conclusion that "[t]here is little competition between the Gulf Carriers and the Legacy Carriers"⁶⁵ is yet another example of the carrier's willingness to mischaracterize the nature of airline competition in order to assume away any competitive harm to U.S. carriers.

Simply put, because Emirates has simply ignored virtually all of the competitive overlap between the Gulf and U.S. carriers, it should come as no surprise that Emirates has reached the erroneous conclusion that "adverse effects are nowhere to be found."⁶⁶

Sales VP Matthias Schmid On Creating Space For Emirates In U.S. Corporate Biz", Business TravelNews, June 11, 2015: "We've tried to work closely with JetBlue, Alaska and Virgin. We fly three times a day between Dubai and JFK, and the second daily flight to Boston was to strengthen our relationship with JetBlue. We have a reciprocal codesharing agreement with JetBlue, so the JetBlue flights are also operating with an Emirates code and all the U.S.-to-Dubai flights will carry a JetBlue code. JetBlue started last year Detroit to Boston, which was absolutely aligned with our arrival and departure times coming to Boston, and we're working with them on further optimization. I also mentioned the second daily flight to Seattle, which was to strengthen our relationship with Alaska because we get significant feed via Alaska out of Canada and certain U.S. routes."

⁶³ Thus, even though JetBlue's CEO has asserted that "[e]ach of these new international flights... strengthens JetBlue's ability to launch new competitive domestic routes such as Boston- Detroit based on the large flow of arriving international connecting customers", according to Emirates, passengers connecting from JetBlue's flight between Detroit and Boston to Emirates' Boston-Dubai flight en route to a destination to the Indian Subcontinent would "*not [be] an attractive service to passengers.*" Likewise, according to Emirates, all of the passengers connecting from an Alaska Airlines flight to Emirates Seattle-Dubai or Los Angeles-Dubai flights and traveling beyond Dubai would also be using a two-stop interline itinerary that it believes are "*not an attractive service to passengers*", notwithstanding the fact that Alaska Airlines CEO has stated that these connections allow "Alaska to offer our customers in key markets on the West Coast a virtual global network with greater value to consumers than our relatively small size would otherwise allow." See Letter from Bradley D. Tilden to Secretaries Kerry and Foxx, February 27, 2015 and Letter From Robin Hayes, President and CEO, JetBlue Airways to Secretary Kerry, Secretary Foxx and Secretary Pritzker, April 29, 2015.

⁶⁴ See Partnership answers to U.S. Government Technical & Clarification Question #22, page 63. The exceptions are passengers whose journey begin or end at the Gulf carriers hubs.

⁶⁵ See Emirates Response, page 114. Importantly, even though U.S. and Gulf carriers may not provide service on each leg of an itinerary using their own aircraft (e.g., JetBlue may carry an Emirates passenger originating in Delhi from JFK to Buffalo, New York), this does not imply—as Emirates appears to believe—that U.S. and Gulf carriers don't compete on that city-pair. See, for example, Exhibit 24 below.

⁶⁶ See Emirates Response, page 94.

ii. *Qatar's and Oxford Economics' analysis of the competitive overlap between U.S. and Gulf carriers is similarly flawed*

Emirates is not alone in concluding that there is little competitive overlap between U.S. and Gulf carriers by ignoring some or all of the connecting city-pairs where the two sets of carriers compete. For example, Qatar's comments assert that "Given the tenor of the claims of the Big Three, one might imagine that Qatar Airways is their head-to-head competitor in dozens of nonstop markets. The reality is far different... no US airline competes with Qatar Airways in any nonstop market."⁶⁷ Likewise, in a report commissioned by the U.S. Travel Association (and endorsed by Qatar⁶⁸), Oxford Economics concluded that "there is little evidence to suggest that the Big Three US and the Gulf carriers are competitors to any significant degree."⁶⁹ Like Emirates, however, the Oxford Study's conclusion is based almost entirely on a comparison of non-stop overlapping routes between the two sets of carriers. For example, the Oxford study asserts that "[o]f critical importance then, is the degree to which the Big Three and Gulf carriers compete head-to-head on the same routes... In practice there are just two routes – Milan (MXP) to New York (JFK), and Dubai (DXB) to Washington (IAD) – where the Big Three compete directly with the Gulf carriers."⁷⁰ The Oxford study likewise asserts that their "*just 0.7 per cent of inbound passengers on Big Three carriers had the option of a Gulf carrier to fly the same route in 2014.*"⁷¹

The Oxford Study's focus on non-stop routes ignores two critical facts about airline competition in general, and Gulf carrier competition in particular:⁷² (a) the overwhelming majority of Gulf carrier passengers are not traveling to/from their hub cities (e.g., Dubai, Doha and Abu Dhabi), but rather,

⁶⁷ See Qatar Comments, page 43.

⁶⁸ See Qatar Comments, page 44: "Given the US carriers' lack of competitive exposure to Qatar Airways, their claims of threatened harm fall flat. Indeed, Oxford Economics has analyzed the itineraries of inbound passengers on the Big Three in 2014, and has concluded that just 0.7% of these passengers also had an alternative on a Gulf carrier, a fact which demonstrates the almost complete complementarity of US and Gulf carrier networks."

⁶⁹ See Oxford USTA Study, page 13.

⁷⁰ See Oxford USTA Study, page 7.

⁷¹ See Oxford USTA Study, page 8.

⁷² Emirates Response (at page 140) also commits the same fundamental flaw: "The fundamental assumption of the White Paper jobs analysis is that Emirates (and other Gulf Carrier) flights have displaced flights by the Legacy Carriers. The Legacy Carriers offer no evidence to substantiate this, and it is not true. The Legacy Carriers offer very few flights that compete on routes flown by Emirates, and have not provided any credible evidence that any of those flights have been displaced." (emphasis added)

transiting through the Gulf carriers' hubs en route to their final destination;⁷³ and (b) competition in the airline industry is measured at the origin-destination city-pair level (e.g., New York-Delhi), not at the non-stop route level (e.g., New York-Doha, *en route to Delhi*).⁷⁴ By the Oxford Study's flawed logic, the Gulf carriers do not compete with the U.S. carriers for traffic between the United States and the Indian Subcontinent, since the two sets of carriers do not offer "head-to-head" service on any non-stop routes to/from that region. Likewise, by the same flawed logic, Emirates and Qatar do not compete with each other at all, because they overlap on no non-stop routes. Both of these conclusions are plainly wrong.⁷⁵ Consequently, the conclusion in the Oxford study that "the extra Gulf carrier capacity appears to be serving new passengers, with pre-existing passengers using the Big Three in similar numbers to the situation prior to the arrival of the Gulf carriers"⁷⁶ is predicated on an absurd analysis that ignores the fact that almost all of the Gulf carriers' traffic to/from the United States flows connects to points beyond/behind their Gulf hubs.

Although the Oxford study's conclusion "that the two networks [U.S. and Gulf carriers'] do not overlap to a substantial degree" is premised almost entirely on an examination of non-stop overlap routes between the U.S. and Gulf carriers, it includes a cursory analysis of the origin and destination traffic.⁷⁷ Based on their analysis, they conclude that "*the ultimate global origins and destinations served by these two groups are strikingly different. Despite both having huge global reach, there is very little overlap in the regional origin or destination of those who fly into the United States on their respective planes.*"⁷⁸ This statement is also false. In 2014, approximately [] of U.S. carriers' transatlantic/transpacific revenue was generated in city-pairs where U.S.

⁷³ Indeed, this well-known fact was highlighted in Emirates' Response at page 132: "the vast majority of the 11,000 seats are not occupied by travelers whose destinations are the Middle East hubs. They are occupied by travelers who will pass through the hubs en route to Africa, the Indian Subcontinent, Southeast Asia, and other destinations."

⁷⁴ This fundamental fact (which has been ignored by Oxford and Qatar) is even a point made in the Edgeworth Report (at pages 4-5) on behalf of Etihad: "The appropriate level of analysis when examining competitive alternatives for passenger air travel is between origin and destination combinations and not between a particular carrier's hub (i.e., Abu Dhabi) and a destination."

⁷⁵ Indeed, as noted on page 11 of Qatar's Comments "While Qatar Airways, Emirates and Etihad come from the same region, it is essential to bear in mind that the carriers are of different sizes and maturity, and have very different histories and competitive strategies. The carriers compete vigorously with each other for regional and international traffic." (emphasis added)

⁷⁶ See Oxford USTA Study, page 11.

⁷⁷ Ibid, page 2.

⁷⁸ Ibid, page 11.

and Gulf carriers overlapped, up from [] in 2008.⁷⁹ Moreover, in light of Gulf carriers' aggressive expansion plans⁸⁰ (including Emirates' intention to expand its fifth freedom services between Europe/Asia and the United States⁸¹), the degree of overlap will continue to increase significantly if the Gulf carriers' subsidized expansion is left unchecked.

Finally, it is noteworthy that while Emirates and Qatar claim, on the one hand, that they “do not compete against U.S. carriers”⁸² they assert—on the other hand—that they “offer an alternative to [the service of the U.S. carriers and their JV partners]”⁸³ or that “business travelers and visitors who are informed about the choices available” prefer Emirates over the U.S. carriers because it offers “better, modern, wide-body aircraft and world-class service.”⁸⁴ But by correctly noting that passengers can and do *choose* between their services and those of the U.S. carriers, they are confirming the obvious: that Gulf and U.S. carriers do in fact compete. Indeed, it is telling that while Emirates and Qatar have adopted a strategy of attempting to rebut the overwhelming evidence of harm established in our initial submissions by alleging that “[t]here is little competition between the Gulf Carriers and the Legacy Carriers”⁸⁵ or that they “[do] not compete against US carriers”⁸⁶, Etihad openly acknowledges that the Gulf carriers’ have been “taking passengers away from” U.S. and other carriers.⁸⁷

⁷⁹ These figures are based on city-pairs where at least one U.S. carrier and at least one Gulf carrier had at least 3% (or greater) share of bookings. Source: U.S. DOT DB1B and MIDT.

⁸⁰ See, e.g., “Emirates Airline President Plans to Rebut Subsidy Allegations,” Dow Jones Newswire, March 17, 2015, noting that Tim Clark, the CEO of Emirates, stated that Emirates plans to increase the number of airports served in the United States from nine to 20; “Emirates Air Planning Expansion of U.S. Rivals’ Home Turf”, *Bloomberg* (September 22, 2014), noting that “Emirates Airline, the largest international carrier, is planning an expansion that would make the U.S. market one of its three largest sources of revenue” and quoting Emirates CEO Tim Clark (“[the U.S.] is hugely important”); “Airline Eyes More US Destinations,” *Gulf Times* (Apr. 13, 2013), quoting Qatar Airways CEO Akbar Al Baker (“The United States remains a focal point for the airline”) and “Etihad Eyes US Expansion,” *Emirates24/7.com* (Nov. 14, 2012), quoting Etihad CEO James Hogan (“...we are also keen to expand further in the US and are examining a number of other destinations, particularly on the West Coast”).

⁸¹ See, for example, “Ten European cities ask Emirates to fly trans-Atlantic”, *Gulf News*, June 9, 2015. See also *Bloomberg* (June 4, 2013) (quoting Emirates’ CEO Tim Clark as stating that Asia-U.S. routes are “[t]he last piece of the jigsaw in the trans-Pacific” and that “[w]here we will go, when we will do it, and with what, is under plan at the moment”).

⁸² See Qatar Comments, page 43.

⁸³ See Qatar Comments, page 1.

⁸⁴ See Emirates Response, page 188.

⁸⁵ See Emirates Response, page 114.

⁸⁶ See Qatar Comments, page 43.

⁸⁷ See Edgeworth Report, page 26.

iii. *U.S. and Gulf carriers compete on thousands of international city-pairs accounting for a substantial portion of U.S. carriers' international revenue*

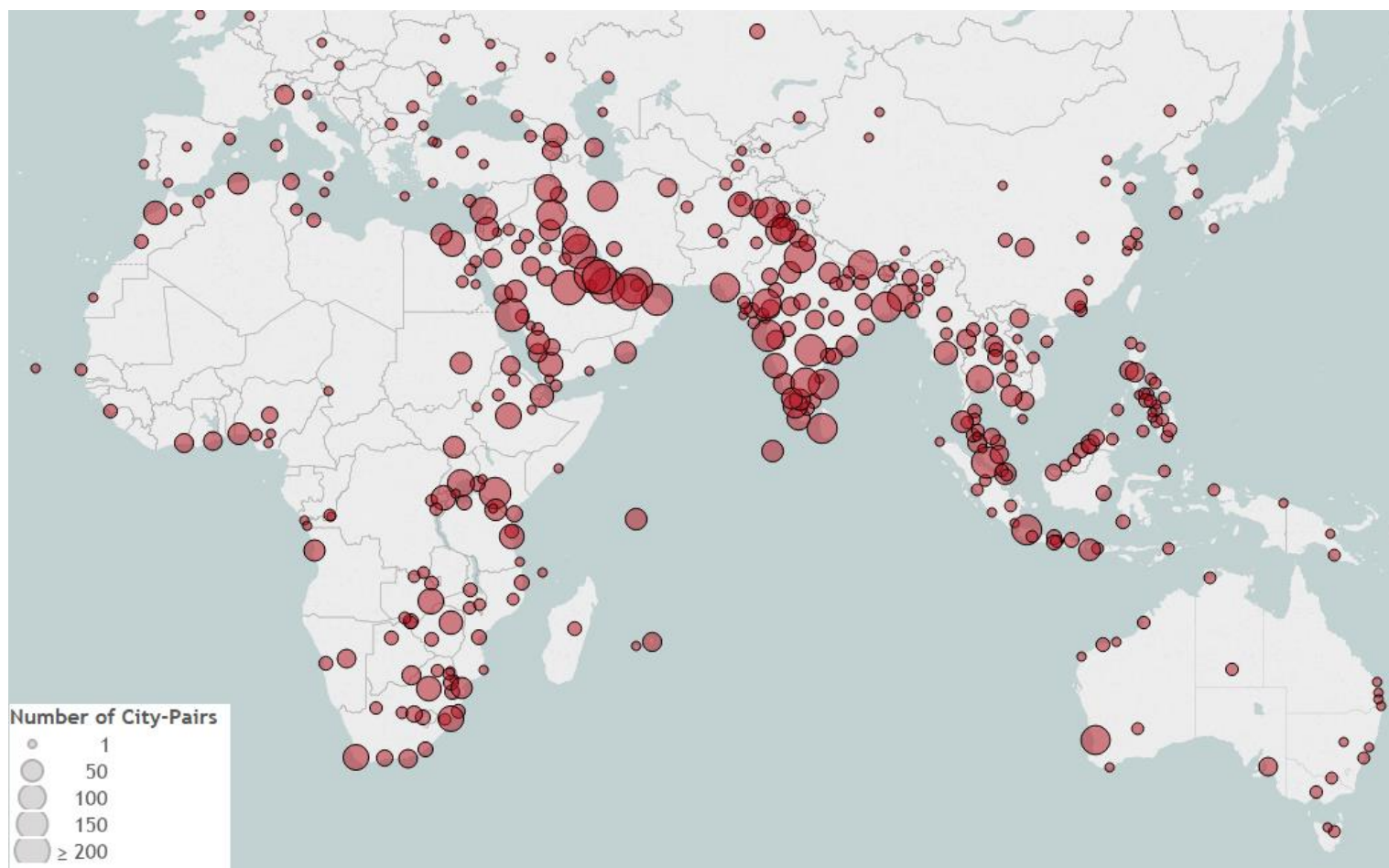
As described above, Emirates, Qatar and Oxford support their claim that Gulf carriers' expansion to the United States has not harmed U.S. carriers by purporting to show that there is little competitive overlap between the route networks of the two sets of carriers. But an examination of their claims reveal that Emirates, Qatar and Oxford have reached this conclusion by choosing to disregard the bulk of city-pairs where U.S. and Gulf carriers actually compete.

An analysis utilizing MIDT data shows that U.S. and Gulf carriers provided overlapping service on more than 9,000 international city-pairs to/from the United States in 2014, up from fewer than 3,500 in 2008.⁸⁸ These city-pairs accounted for nearly [] of U.S. carriers' transatlantic/transpacific revenue in 2014.⁸⁹ Moreover, as shown below, the international city-pairs where U.S. and Gulf carriers currently compete for traffic are not limited to a narrow set of destinations in the Middle East or the Indian Subcontinent, but rather, they span multiple continents.

⁸⁸ As with our earlier studies, when using MIDT data, a connecting itinerary that includes multiple carriers was assigned to the carrier that operated the largest proportion of total distance flown.

⁸⁹ Source: Analysis of U.S. DOT DB1B and MIDT data.

EXHIBIT 3: NUMBER OF U.S.-INTERNATIONAL CITY-PAIRS (BY FOREIGN DESTINATION) WITH OVERLAPPING U.S. AND GULF CARRIER COMPETITION (2014)



Source: MIDT, 2014.

Notes: Map shows all city-pairs aggregated by foreign endpoint for which at least one Gulf carrier and at least one U.S. carrier has at least a 3% share of bookings in 2014. A booking is a U.S. or Gulf carrier booking if a U.S. or Gulf carrier is the dominant operating carrier (i.e., the carrier flying the longest total distance), respectively. U.S. carriers include: American, Delta, US Airways, and United.

In sum, the assertion by Emirates and Qatar that U.S. carriers could not be have been harmed by Gulf carrier's U.S. expansion because "[t]here is little competition between the Gulf Carriers and the Legacy Carriers"⁹⁰ is based on flawed analyses that disregard (unintentionally or otherwise) the fact that U.S. and Gulf carriers compete on thousands of connecting city-pairs. Likewise, the claim by Oxford Economics that "Gulf carrier capacity appears to be serving new passengers, with pre-existing passengers using the Big Three"⁹¹ because "there is a limited degree of overlap between the routes of these two groups of airlines..."⁹² is also demonstrably incorrect.

b) The Attempts by the Gulf Carriers to Deny the Fact That They Have Been Adding Capacity to the United States at Rates Well in Excess of Underlying Demand Growth Are Contradicted by Their Own Data

A key observation of the Partnership' Whitepaper was that because subsidized Gulf carriers have been—and are continuing to—grow their capacity at rates that substantially exceed global GDP growth (a core determinant of demand growth for airline services), an inevitable result is that the Gulf carriers' traffic gains have come (and will continue to come) at the expense of other carriers.⁹³ This observation is particularly relevant for the United States, where the Gulf carriers have been adding capacity at a compound rate of 25.2% over the past five years.⁹⁴

The Gulf carriers have criticized this analysis because they claim that it ignores the fact that Gulf carriers target traffic in parts of the world experiencing higher than average rates of economic growth. For example, the Edgeworth Report asserts that the Whitepaper's analysis is "fatally flawed"⁹⁵ because "a substantial portion of Etihad's U.S. traffic currently goes to (or from) the ISC and Southeast Asia"⁹⁶ and that "it is the expected growth demand of these regions—as opposed to worldwide demand—that is relevant for such an analysis."⁹⁷ Likewise, Emirates' submission

⁹⁰ See Emirates Response, page 114.

⁹¹ See Oxford USTA Study, page 11.

⁹² See Oxford USTA Study, page 6.

⁹³ See Partnership Whitepaper, page 41.

⁹⁴ Source: OAG for the years 2011-2015.

⁹⁵ See Edgeworth Report, page 28.

⁹⁶ Ibid.

⁹⁷ Ibid. The Edgeworth Report also attempts to justify Gulf carriers' aggressive capacity growth by suggesting it was responding to "pent-up demand." See Edgeworth Report, page 30. As discussed below, this claim is also demonstrably incorrect.

asserts that the Whitepaper's comparison "ignores that traffic growth in the markets served by Emirates and the other Gulf Carriers exceeds global GDP growth."⁹⁸ Similarly, Qatar has argued that "the global figure being advanced by the Big Three is entirely misleading, as it ignores the fact that Qatar Airways is based in a part of the world that is home to 60% of the world's population and has a rapidly emerging middle class, and where air service has grown significantly."⁹⁹

The proposition that Gulf carriers' rate of capacity growth can be de-coupled from the rates of global GDP growth because the bulk of Gulf carriers' traffic is traveling to/from regions of the world with above average rates of economic growth does not withstand scrutiny. Indeed, the data contained within the exhibits of the Gulf carriers' own submissions confirm that their capacity growth to the United States has far exceeded the rate of demand growth between the United States and the regions they serve. And as discussed below, this has not only suppressed the fares of U.S. carriers on overlapping city-pairs, but has resulted in the diversion of passengers from U.S. carriers who—in light of these suppressed fare levels—had been forced to discontinue (or not enter/expand service on) a variety of non-stop routes, including those to/from India.

i. *The Gulf carriers ignore the fact that more than half of their U.S. bookings are either to/from relatively slower growing, developed economies*

As noted in our Traffic Study, GDP growth is a substantial driver of airline demand.¹⁰⁰ Likewise, it is well-understood that GDP growth rates vary substantially across countries and that GDP growth in developing or "emerging" economies (e.g., India, ASEAN countries, etc.) is faster than in developed economies such as the United States or Europe. Thus, it is not unreasonable to expect that traffic within or between emerging economies will grow at rates that substantially exceed the overall rate of global GDP growth over an extended period of time.

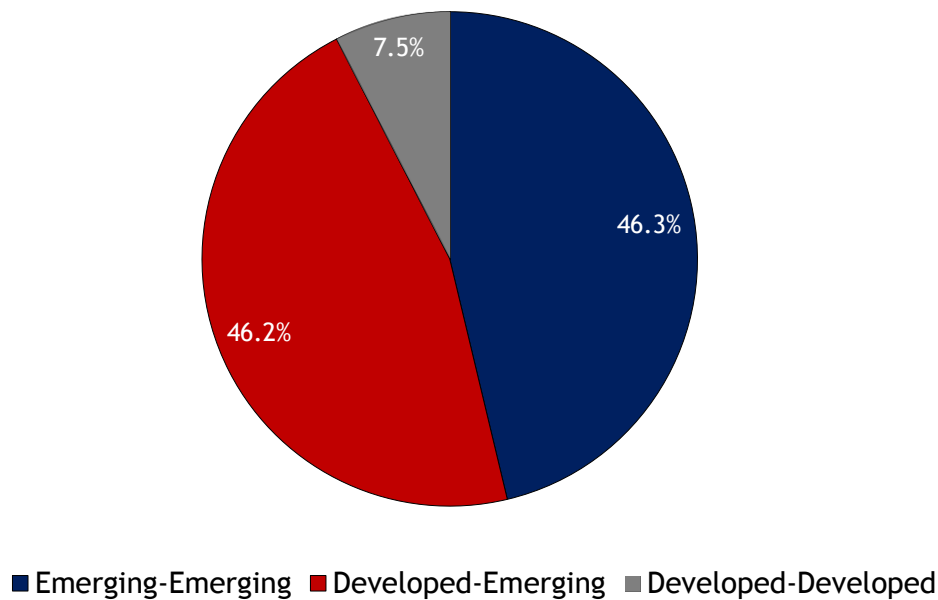
What the Gulf carriers' claims fail to take account of, however, is the fact that almost half of Gulf carriers' worldwide bookings reflect travel between emerging economies *and developed economies*. Moreover, as shown in Exhibit 4, approximately 7.5% of Gulf carriers' bookings in 2014 traveled *between two developed economies* (e.g., between the United States or Europe and Australia).

⁹⁸ See Emirates Response, page 135.

⁹⁹ See Qatar Comments, page 41.

¹⁰⁰ See Traffic Study, footnote 27.

EXHIBIT 4: DISTRIBUTION OF GULF CARRIER BOOKINGS, 2014



Source: MIDT.

Notes: “Developed” countries defined as United States, Canada, Australia, New Zealand, South Korea, Japan and all countries in Europe.

Importantly, in the case of Gulf carriers’ services to the United States, virtually *all of their bookings* reflect passengers for whom at least one endpoint of their journey is in a developed country (i.e., with relatively slower growth).¹⁰¹ Moreover, because much of the traffic growth between the United States and the emerging economies served by the Gulf carriers consists of tourist traffic originating in the United States, this traffic—in particular—would be expected to grow at a rate determined by the GDP growth rate in the United States, not the rate of growth in the emerging countries. Simply put, the Gulf carriers’ claim that their global route networks are “located among the world’s fastest growing economies”¹⁰² does not—by itself—justify capacity growth to the United States at rates that are several times that of global GDP growth.

- ii. Data from the Etihad’s submission show that Gulf carriers’ rate of capacity growth to/from the United States far exceeds the rate of traffic growth to/from their core markets

¹⁰¹ The only exceptions would be for the relatively small number of passengers connecting from behind/beyond a Gulf carriers’ U.S. gateway to points in developing countries, such as in Latin America.

¹⁰² See Emirates Response, page 5.

The Edgeworth Report attempts to justify the projected growth rate of the Gulf carriers' global capacity of 11% over the next several years (as shown in the Partnership's Whitepaper) by claiming that the "implied growth in demand for air travel" for Emerging and Developing Asia should average around 13% over this period (i.e., twice the rate of GDP growth in those regions and approximately *four times* the estimated rate of global GDP growth).¹⁰³

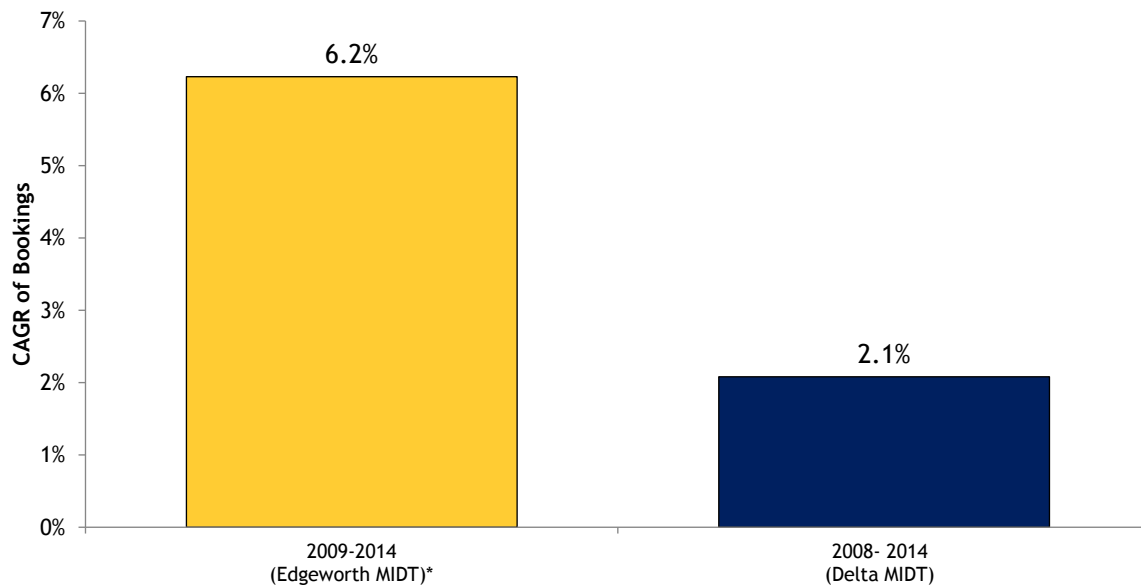
Edgeworth presumes that Gulf carriers can grow at multiples of global GDP growth without diverting passengers from other carriers because their networks are located central to regions with faster growing economies. However, the data contained in Edgeworth's own exhibits demonstrate why this presumption is wrong, particularly as it applies to their rate of growth to the United States. According to the Edgeworth Report, bookings between the United States and the Indian Subcontinent grew at a compound annual growth rate ("CAGR") of 6.2% between the year ending February 2010 and the year ending February 2015.¹⁰⁴ As shown in Exhibit 5, based on Delta's MIDT data, when measured from 2008-2014 (i.e., from pre-recession levels), the CAGR falls to only 2.1%.¹⁰⁵ Simply put, Edgeworth's own data purportedly showing a 6.2% CAGR for bookings between the United States and the Indian Subcontinent from 2009-2014 confirms that its "Implied Growth Rate" of 13% is simply not a relevant comparison to benchmark Gulf carrier's capacity growth rates to the United States.

¹⁰³ See Edgeworth Report, pages 29-30. Although the Edgeworth Report asserts that it is not expressing "a definitive view on the 'correct' level of expansion", it then goes on to enumerate several hypotheses as to why the actual rate of capacity expansion could be justified, including "pent-up demand" and the "geographic centrality" of Etihad's hub.

¹⁰⁴ See Edgeworth Report, Exhibit 3, noting that the "Total Change in Bookings" for Economy Class passengers from the year ending February 2010 to the year ending February 2015 was 33%. Combined with the 65% change in "Premium Class" bookings over the same period (see Edgeworth Report Exhibit 4), this results in change in bookings for all classes of 35.3% (based on the levels of bookings shown in Edgeworth Report Exhibit 2 and Figure A-18), resulting in a CAGR of 6.2%. Edgeworth does not report which GDSs are included in Etihad's MIDT data or if the carrier modifies the underlying booking data in any way.

¹⁰⁵ Using a *post-recession* year (i.e., 2010) rather than a pre-recession year (i.e., 2008) as the base year increases the CAGR to 2014 from 2.1% to 3.5%.

EXHIBIT 5: COMPOUND ANNUAL GROWTH RATE OF BOOKINGS BETWEEN THE UNITED STATES AND THE INDIAN SUBCONTINENT



Sources: Delta MIDT; Edgeworth Economics Report, Exhibits 2, 3, 4, and A18.

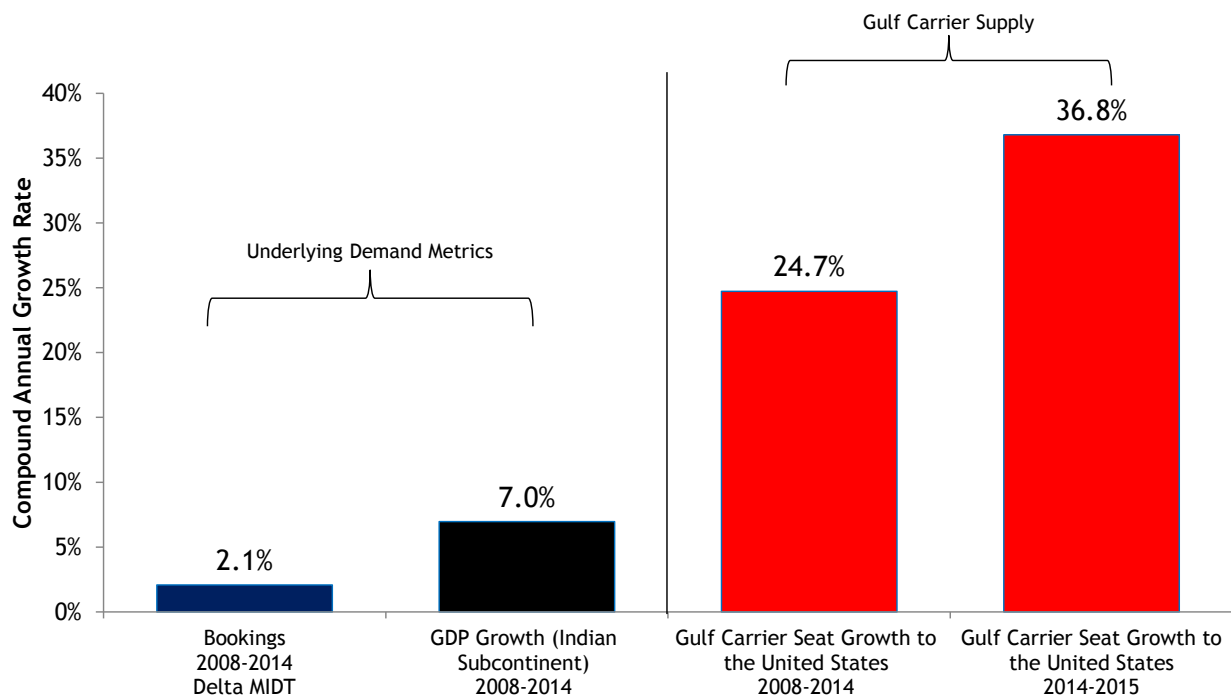
Notes: Edgeworth based on reported 33% growth in economy class bookings and 65% growth in premium bookings between the periods March 2009-February 2010 and March 2014-February 2015. Delta MIDT Indian Subcontinent includes India, Pakistan, Nepal, Bangladesh, Maldives, and Sri Lanka.

*Edgeworth MIDT Indian Subcontinent includes India, Pakistan, Bangladesh, and Sri Lanka.

Indeed, as shown in Exhibit 6, the CAGR of subsidized Gulf carriers' seat growth between the United States and their hubs in Dubai, Abu Dhabi and Doha from 2008 to 2014 of 24.7% was three and a half times the average GDP growth rate of 7.0% in their largest market (the Indian Subcontinent) and *more than ten times the rate of bookings growth* between the United States and the Indian Subcontinent over the same period (2.1%).¹⁰⁶

¹⁰⁶ Nor can traffic growth between the United States and other regions that are served by the Gulf carriers explain the massive increase in their U.S. capacity growth between 2008 and 2014. For example, the CAGR of bookings from 2008 to 2014 between the United States and the Indian Subcontinent, the Middle East, Africa and the ASEAN countries was only 1.9%. Using 2010 as the base year, the rate of traffic growth between the United States and these regions was only 2.8%. Source: MIDT.

**EXHIBIT 6: COMPOUND ANNUAL GROWTH RATE OF GULF CARRIER SEAT GROWTH
BETWEEN THE UNITED STATES AND GULF HUBS AND BOOKING GROWTH BETWEEN THE
UNITED STATES AND THE INDIAN SUBCONTINENT**



Sources: MIDT; OAG; World Bank.

Notes: Seats from the United States to the carriers home countries. Indian Subcontinent includes India, Pakistan, Nepal, Bangladesh, Maldives, and Sri Lanka.

Moreover, there is no indication that the massive imbalance between Gulf carriers’ subsidized capacity growth to the United States relative to underlying demand growth between the United States and the regions they serve is likely to change anytime in the near future. For example, even though Edgeworth’s own Exhibits purport to show that demand between the United States and the Indian Subcontinent has been growing at mid-single digit rates since 2009 (*see* Exhibit 5 above), Exhibit 6 shows that the Gulf carriers are *accelerating their capacity growth* to the United States in 2015 even further (to over 36%).

Gulf carrier growth rates to the United States in excess of 35% in the face of single-digit growth rates of demand demonstrate that the Edgeworth Report’s claim that Gulf carriers are simply responding to “pent-up demand” for travel to “underserved” regions of the world is baseless.¹⁰⁷ Simply put, because the Gulf carriers have failed to meaningfully stimulate new traffic (as discussed in detail in Section 3 below), as a matter of basic arithmetic, the only way the Gulf

¹⁰⁷ See Edgeworth Report, page 7.

carriers can continue to expand to the United States at their current rates of capacity growth is if they continue to divert substantial volumes of traffic from other carriers.

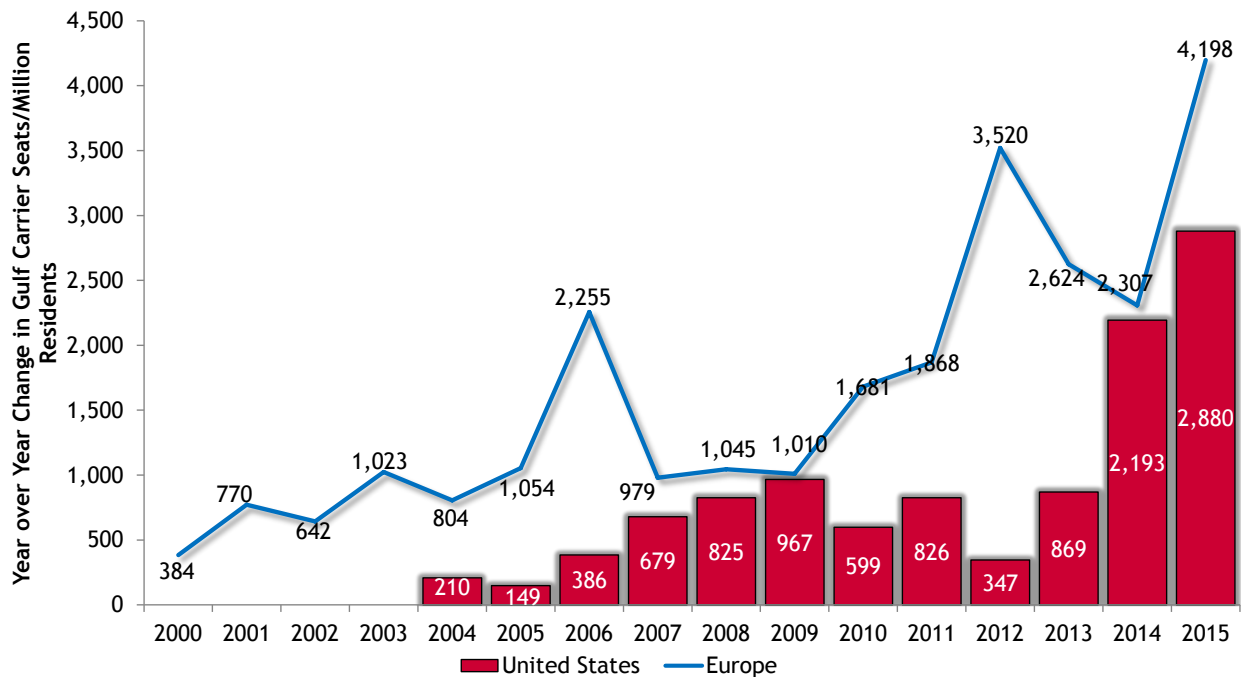
Moreover, it is noteworthy that the recent surge in Gulf carrier capacity growth to the United States parallels a similar surge in capacity growth to Europe that began in the years following the 2008-2009 financial crisis and recession. That surge (which came on the heels of several years of steady—albeit slower—capacity growth to Europe) resulted in the termination of numerous routes by Europe carriers to regions now saturated with Gulf carrier capacity, as well as thousands of job losses at those carriers.¹⁰⁸ Moreover, there is every reason to believe that the recent surge in Gulf carrier capacity to the United States will continue. For example, Qatar Airways has already announced plans to increase its capacity by the end 2016 by approximately 50% over 2015 levels¹⁰⁹ and Emirates has stated that it plans to make the United States one of the carrier's three largest sources of revenue by *doubling* its U.S. destinations from 10 to 20.¹¹⁰

¹⁰⁸ See, for example, Letter to Mr. Ted Dean, Mr. Thomas Engle and Mr. Brandon Belford, from Thomas Kropp, Senior Vice President, Head of Group International Relations and Government Affairs, Lufthansa Group, June 11, 2015 noting that Lufthansa had stopped service from Frankfurt to Calcutta, Hyderabad, Manila, Karachi, Lahore, Sydney, Ho Chi Minh-City, Abu Dhabi, Sanaa, Tashkent, Katmandu, Denpasar/Bali, Pusan, Male/Maldives, Mahe/Seychellen and Colombo. The letter also notes that Austrian has given up serving 17 destinations in Southeast Asia and three in Africa. See also Air France KLM Press Release, January 22, 2015 and “Air France Plans to cut 2,800 More Jobs” (noting that it would cut an additional 800 employees above and beyond the 7,900 positions the carrier has already eliminated as part of its 2012-2014 restructuring plan); *The New York Times*, September 18, 2013, noting that “*Rapidly expanding carriers in Asia and the Gulf region are squeezing full-service carriers like Air France, Lufthansa and British Airways on long-distance routes*”; “Departing Lufthansa chief warns of threat posed by Gulf airlines,” *Financial Times*, March 25, 2014: “Conscious of the challenge from Gulf carriers to Lufthansa’s business and the gradual erosion of the group’s margins, [Lufthansa] launched a €1.5bn cost-savings drive in 2012. It encompassed some 3,500 job cuts, transferring non-hub services to Lufthansa’s low-cost subsidiary Germanwings, restructuring Austrian Airlines and closing some locations”; and “Lufthansa Group Adjusts Earnings Forecast: Lufthansa Group” (June 11th, 2014) quoting Lufthansa’s CEO: “The revenue risks mentioned when we presented the quarterly figures in early May have unfortunately materialized... *Strong capacity growth by state-owned Gulf carriers was a major concern...*” (emphasis added)

¹⁰⁹ See “Qatar Airways Set to Expand its USA Network with the Addition of Three New Routes”, Qatar Airways Press Release, May 4, 2015, announcing that it would add new daily non-stop service between its Doha hub and Los Angeles (effective January 1, 2016), Boston (effective March 16, 2016) and Atlanta (effective July 1, 2016), as well as an additional daily frequency to New York City (effective March 1, 2016).

¹¹⁰ See, e.g. “Emirates Airline President Plans to Rebut Subsidy Allegations,” Dow Jones Newswire, March 17, 2015 and “Emirates Air Planning Expansion of U.S. Rivals’ Home Turf”, *Bloomberg* (September 22, 2014), noting that “Emirates Airline, the largest international carrier, is planning an expansion that would make the U.S. market one of its three largest sources of revenue” and quoting Emirates CEO Tim Clark (“[the U.S.] is hugely important”).

EXHIBIT 7: YEAR-OVER-YEAR CHANGE IN ANNUAL GULF CARRIER SEATS PER MILLION RESIDENTS



Source: OAG; World Bank Economic Indicators.

Notes: 2015 population data is estimated based on 2014 figures adjusted by the year-over-year population growth by country from 2013-2014.

iii. Edgeworth’s claim that Etihad’s “High” load factors are an indication that the carrier’s capacity is serving “pent-up” demand is also incorrect

The Edgeworth Report attempts to justify Etihad’s capacity additions to the United States by suggesting that the carrier’s rapid increase in capacity is merely aimed at serving “pent-up demand” between the United States and the Indian Subcontinent.¹¹¹ As evidence that Etihad’s services are allegedly meeting “pent-up demand”, the Edgeworth Report observes that even though “Etihad increased the annualized number of total seats flown between U.S. and Abu Dhabi from 192,000 in 2009 to 845,000 in 2014, the load factor actually *increased*...”¹¹² But what the Edgeworth Report shows is that over the past three years (i.e., between the year ending October 2012 and the year ending October 2014), as Etihad increased its available seats to the United States

¹¹¹ See Edgeworth Report, page 30: “potential pent-up demand and the “geographic centrality” of Etihad’s hub illustrate the types of factors ignored by the simplistic comparison of capacity growth and global GDP growth presented in the Open Skies Report.”

¹¹² See Edgeworth Report, page 26.

by over 73.2% (from approximately 490,000 to approximately 850,000), the carriers' load factor actually *declined by eight percentage points*.¹¹³

c) **The Gulf Carriers' Submissions Have Failed to Rebut Our Analysis Demonstrating That Their Subsidized Capacity Expansion Suppresses the Fares of U.S. Carriers**

Notably absent from any of the Gulf carriers' analyses of harm to the U.S. carriers is any rebuttal to the fare analysis contained in our April 9 Impact Study showing how subsidized Gulf carrier presence had driven down the fares of U.S. carriers across a broad range of city-pairs where Gulf carriers and U.S. carriers compete.¹¹⁴ This analysis showed (among other things) that: (a) the presence of each Gulf carrier on connecting city-pairs to/from one of their U.S. gateway cities lowers the fares of U.S. carriers by 4.3% on average (i.e., on city-pairs where all three Gulf carriers are present, U.S. carriers' fares are nearly 13% lower, on average);¹¹⁵ (b) since 2004 (i.e., the year Emirates began serving the United States), the gap between U.S. carriers' inflation adjusted yields between the United States and India and other transatlantic/transpacific destinations had widened by nearly 25%;¹¹⁶ (c) since Emirates launched its fifth freedom flight between New York City and Milan, U.S. carriers' local fares between those two cities dropped precipitously;¹¹⁷ and (d) following the entry by Emirates, average non-stop yields to Milan fell to the lowest of all cities in continental Europe served from New York City by a U.S. carrier.¹¹⁸

Although an expected result of adding capacity far in excess of underlying demand growth is precisely the type of downward pressure on fares we documented in our earlier studies, the Gulf carrier submissions have chosen to disregard the fundamentals of supply and demand in evaluating the potential harm they have caused to U.S. carriers. Instead, Emirates asserts that “[t]o the extent that adverse competitive effects would be seen on the Legacy Carriers’ operations, those effects should be most visible on transatlantic routes”¹¹⁹ but that “adverse effects are nowhere to be

¹¹³ See Edgeworth Report, Exhibit 14. Moreover, an examination of the most recent load factor data available for the Gulf carriers suggests that their surge in capacity over the past year has been putting downward pressure on their load factors, suggesting that there is little if any “pent-up demand” for their services. For example, as the Gulf carriers increased capacity in the second half of 2014 by 51% over the second half of 2013, load factors on their flights between the United States and their hubs in Dubai, Abu Dhabi and Doha dropped by 6.7 points, on average. Furthermore, load factors on some Gulf routes have been chronically low, suggesting little demand for their service, much less any potential “pent-up” demand. For example, since entering Miami in June 2014, Qatar’s load factor had averaged 41.0% (through January 2015). Source: U.S. DOT T-100 Database.

found.”¹²⁰ Likewise, Qatar asserts that the U.S. carriers “have failed to show any harm from services operated by Qatar Airways.”¹²¹

As discussed below, we have updated each of the analyses related to the harm suffered by U.S. carriers due to Gulf carrier-induced lower fares using the most recent data and these analyses continue to confirm that the presence of Gulf carriers has harmed U.S. carriers by lowering their fares in the city-pairs where U.S. and Gulf carriers compete.

i. *None of the Gulf carriers has contested our regression analysis demonstrating that Gulf carrier presence on a city-pair lowers the fares of U.S. carriers*

Exhibit 8 updates the regression analysis of U.S. carrier average airfares using data through the fourth quarter of 2014 and demonstrates that presence of each Gulf carrier lowers U.S. carrier fares by 4.8% on city-pairs to/from Gulf carrier gateway cities, on average, and by 1.3% on city-pairs involving other U.S. cities, on average.¹²² Thus, on city-pairs from the Gulf carriers’ U.S. gateway cities where all three Gulf carriers are present, U.S. carriers’ fares are lower by 14.5%, on average. Notably, Exhibit 8 also shows that the impact on U.S. carriers’ fares from each Gulf carrier present is far greater than that of the average other *non-Gulf* competitor (i.e., the magnitude of the estimated coefficient on *Number of Gulf Carriers Present* is more than ten times that of the estimate coefficient on *Number of Non-Gulf Carriers Present*). Thus, while the expected result of competition is downward pressure on fares, our regression analysis suggests that subsidized Gulf carrier competition suppresses U.S. carriers’ fares by more than ten times as much as the average non-Gulf competitor.

¹¹⁴ As shown in Exhibit 3 above, U.S. carriers and Gulf carriers overlap on approximately 9,000 city-pairs accounting for approximately 10% of U.S. carriers’ transatlantic/transpacific revenue.

¹¹⁵ See April 9 Impact Study, Exhibit 18. See also footnote 30 above.

¹¹⁶ See April 9 Impact Study, Exhibit 3.

¹¹⁷ See April 9 Impact Study, Exhibit 7.

¹¹⁸ See April 9 Impact Study, Exhibit 8.

¹¹⁹ See Emirates Response, page 94.

¹²⁰ Ibid.

¹²¹ See Qatar Comments, page 39.

¹²² Exhibit 8 also uses the updated Delta MIDT data.

**EXHIBIT 8: UPDATE OF REGRESSIONS FOR U.S. CARRIER INTERNATIONAL AIRFARES FROM
APRIL 9 IMPACT STUDY**

	(1) Gulf Carrier U.S. Gateways	(2) Behind Gulf Carrier U.S. Gateways
Number of Gulf Carriers Present	-0.0482** (0.00227)	-0.0131** (0.00156)
Number of Non-Gulf Carriers Present	-0.00418** (0.000747)	0.00121** (0.000461)
ONLINE	-0.0669** (0.00262)	-0.0356** (0.00168)
ALLIANCE	0.0346** (0.00280)	0.0138** (0.00192)
ATI	-0.0836** (0.00253)	-0.0635** (0.00163)
COUPONS	-0.0594** (0.00133)	-0.0391** (0.000967)
US Point of Sale	0.0959** (0.00117)	0.0299** (0.000723)
INCOME	5.07e-06** (7.53e-07)	5.06e-06** (4.96e-07)
POP	-1.29e-08** (8.37e-10)	-2.97e-08** (1.07e-09)
Constant	6.703** (0.0374)	6.724** (0.0225)
Observations	915,067	2,300,722
R-squared	0.265	0.243

* p<0.05, ** p<0.01

Sources: U.S. DOT DB1B; MIDT; World Bank; BEA.

Notes: Dependent variable is the natural logarithm of the passenger-weighted average fare on the itinerary across all fare classes. Robust standard errors in parenthesis. Regression covers the period 2008-2014 (quarterly) and reflects all round-trip passengers. Includes Carrier, City-Pair, Year, and Quarter Fixed Effects (not shown). Includes passengers on mainland U.S.-international city-pairs, except itineraries to/from North America and South America. Excludes itineraries on city-pairs where any carrier offered non-stop service in that quarter. Population and Income are annual. 2014 population and income based on 2013 grown at the cumulative average growth rate from 2008-2013. Gulf Carrier U.S. Gateways includes: New York City, Chicago, Houston, Los Angeles, Washington D.C., Seattle, Dallas/Fort Worth, San Francisco, Boston, Philadelphia, and Miami. Includes itineraries where the longest segment was operated or marketed by a U.S. carrier (e.g., American, Continental, Delta, Northwest, US Airways, United), or one of their JV Partners.

ii. Non-econometric analysis demonstrates that subsidized Gulf carrier competition lowers the fares of U.S. carriers

The unusually large suppressive impact on U.S. carriers' fares shown in Exhibit 8 from subsidized Gulf carrier competition (relative to non-Gulf competition) can also be seen by directly examining U.S. carriers' fares in international markets where Gulf carriers have grown the most.¹²³ For example, Exhibit 9 shows that while real (i.e., inflation-adjusted) U.S. carrier yields between the United States and transatlantic/transpacific destinations excluding those in the Indian Subcontinent

¹²³ We recognize that changes in economic or demographic factors, as well as the level of non-Gulf competition can also influence U.S. airfares. Such factors are typically best controlled for in an econometric model like the type we estimated in Exhibit 8. However, in light of Emirates' misplaced concerns regarding the use of "[m]assive, worldwide econometric analysis" to resolve the question of stimulation (*see* Emirates Response, page 103), it is also insightful to show the negative relationship between increased Gulf carrier presence and U.S. carrier fares using non-econometric based analysis.

have increased modestly since 2003 (largely tracking the price of jet fuel), real U.S. carrier yields between the United States and the Indian Subcontinent began to fall in 2006 as Gulf carriers began their U.S. expansion. By 2008, the gap between the change in U.S. carriers' average fares to the Indian Subcontinent (relative to 2003) versus other transatlantic/transpacific destinations had widened to approximately 26 percentage points, a gap that has persisted to the present day.¹²⁴

[

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Moreover, disaggregating U.S. carriers' average yields for "other transatlantic/transpacific" destinations in Exhibit 10 reveals a similar trend: in regions where the Gulf carriers have been substantially growing their share of bookings to/from the United States, the fares of U.S. carriers have fallen sharply relative to their 2003 levels, while to other regions without Gulf carrier competition (i.e., "Other Transatlantic/Transpacific") which face robust competition from a host of

¹²⁴ Importantly, over this period of time, there has been intense competition between U.S. and foreign carriers in other transatlantic/transpacific city-pairs, including growth by several entrants new to the U.S. market. However, unlike service between the United States and the Indian Subcontinent, the bulk of the foreign carrier service has *not* been provided by subsidized Gulf carriers.

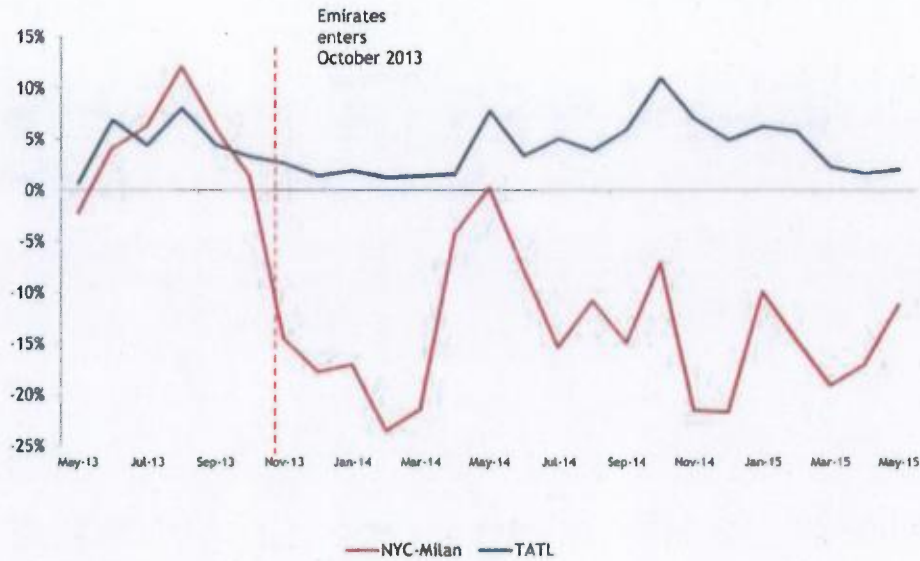
other competitors (e.g., Chinese, other Asian and European carriers) U.S. carriers' real yields have largely followed changes in jet fuel prices.¹²⁵

**EXHIBIT 10: CHANGE IN AVERAGE REAL YIELD (VERSUS 2003) FOR U.S. CARRIERS BY
REGION VS. REAL JET FUEL PRICES**

Likewise, Exhibit 11 updates our analysis comparing the change in U.S. carriers' average local fares for passengers traveling between New York City and Milan and other transatlantic routes, which continues to show that average fares for U.S. carriers between New York City and Milan have underperformed U.S. carriers' transatlantic fares as a whole by a wide margin following the entry by Emirates in October 2013.

¹²⁵ Between 2008 and 2014, Gulf carriers' share of bookings between the United States and each region changed as follows: Indian Subcontinent (12.2% to 40.0%); Africa (2.9% to 8.5%); Middle East (10.4% to 24.2%), ASEAN (0.2% to 4.6%) and Other Transatlantic/Transpacific (0.1% to 0.3%). Notes: Middle East excludes Israel. Source: MIDT.

EXHIBIT 11: CHANGE IN AVERAGE LOCAL FARES, NEW YORK CITY-MILAN VS. OTHER TRANSATLANTIC, VERSUS SAME MONTH IN YEAR PRIOR TO EMIRATES' ENTRY*



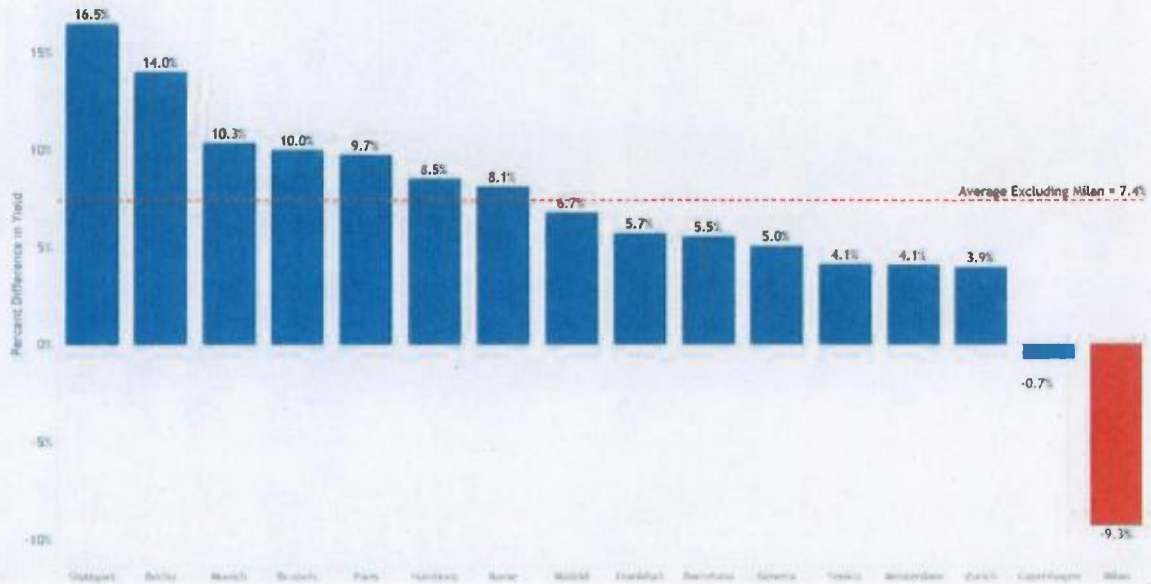
Sources: Delta Air Lines, American Airlines, United Airlines, A4A.

Notes: Data for Transatlantic from A4A.

*Compares fares in post-entry period versus same month in year prior to Emirates' entry (i.e., October 2012-September 2013).

Another way to demonstrate the negative impact that Emirates' entry had on U.S. carriers' fares between New York City and Milan is to compare the change in U.S. carriers' average non-stop yields between New York City to Milan to other cities in continental Europe served non-stop by U.S. carriers from New York City. As shown in Exhibit 12 below, in the year following entry by Emirates, U.S. carriers' average non-stop fares between New York City and Milan fell by [], compared to an average increase in non-stop fares to destinations in continental Europe of [].

EXHIBIT 12: % CHANGE IN NON-STOP U.S. CARRIER YIELDS BETWEEN NEW YORK CITY AND CITIES IN CONTINENTAL EUROPE SERVED BY U.S. CARRIERS, (YE Q3-2014 vs. YE Q3-2013*)



Accordingly, it should come as no surprise that U.S. carriers' average non-stop yields from New York City to Milan are the lowest of any city in Continental Europe by a wide margin.

**EXHIBIT 13: NON-STOP U.S. CARRIER YIELDS BETWEEN NEW YORK CITY AND CITIES IN
CONTINENTAL EUROPE SERVED BY U.S. CARRIERS**

- iii. *The analysis of published fare trends contained in the Edgeworth Report is irrelevant for assessing the question of how subsidized Gulf carrier capacity has harmed U.S. carriers by suppressing their fares*

Although the Edgeworth Report contains a discussion of fare trends on certain routes¹²⁶, it has little relevance to the question of whether Gulf carriers' subsidized expansion has harmed U.S. carriers. This is because the Edgeworth Report's entire fare analysis relies exclusively on *published* rather than actual transacted fares. A carrier's published fares provide little information about how much the carrier's passengers actually paid, because carriers publish scores of individual fares for any given city-pair, which depend on a myriad of factors, including (among other things) minimum stay requirements, advance purchase requirements and ticket flexibility. The fares that passengers actually pay then depend on whether there are seats available in the particular fare "bucket" at the time of purchase, and these buckets open and close almost continuously based on the number of unsold seats available relative to when the flight in question

¹²⁶ See Edgeworth Report, pages 16-21.

is scheduled to depart. Simply put, Edgeworth's published fare analysis provides little—if any—useful information regarding the actual average fares of any of the carriers in question.

Moreover, other aspects of the Edgeworth fare analysis are equally flawed. For example, the inference in the Edgeworth Report that antitrust immunity has enabled U.S. carriers and their immunized partners to charge supra-competitive fares between the United States and Europe¹²⁷ ignores the fact that the economic literature has long found that immunity leads to *lower fares* because they enable carriers to reduce “double marginalization.”¹²⁸ Likewise, the Edgeworth Report's fare “benchmarking” analysis¹²⁹ is severely compromised because it compares Etihad's “revenue per kilometer” on city-pairs to/from the Indian Subcontinent (e.g., New York-Delhi) against the “revenue per kilometer” of U.S. carriers and their immunized partners on city-pairs between the United States and Europe (e.g., New York-London, New York-Paris, etc.). Even if the “revenue per kilometer” measure shown in the Edgeworth Report represented actual revenue (which it does not), a comparison of “revenue per kilometer” across city-pairs that are entirely unrelated in terms of underlying demand conditions (e.g., passenger mix, etc.) or distance¹³⁰ is of little relevance for understanding how Gulf carriers' subsidized expansion has impacted U.S. carriers.

d) The Fact That There is Only One Remaining U.S. Carrier Offering Non-Stop Service to India is a Primary Example of the Harm Caused By Gulf Carriers' Subsidized Expansion

¹²⁷ See Edgeworth Report, page 2: “...fares published by Immunized Carriers on transatlantic routes—where coordination between U.S. and foreign carriers is allowed by way of antitrust immunity conferred by the U.S. government—indicates that Immunized Carriers' RPK is substantially higher.”

¹²⁸ See, for example, Jan Brueckner, “International airfares in the age of alliances: The Effects of Codesharing and Antitrust Immunity”, *Review of Economics & Statistics*, vol. 85, pp. 105-118, 2003, at page 105: “...the presence of antitrust immunity reduces the fare by 13%– 21%” and W. Tom Whalen, “A panel data analysis of code-sharing, antitrust immunity, and open skies treaties in international aviation markets”, *Review of Industrial Organization*, Vol. 30, pp. 39-61 (2007) at page 40: “Alliances that are granted antitrust immunity are associated with fares that are 13 to 20% lower than traditional interline fares...”.

¹²⁹ See Edgeworth Report, pages 22: “Notably, immunized Alliance Members' RPK on transatlantic routes where coordination between U.S. and foreign carriers is allowed by way of antitrust immunity conferred by the U.S. government were 69 to 120 percent higher than Etihad's median RPKs on routes between the U.S. and ISC.”

¹³⁰ It is well understood that the costs (and hence price) per mile for air transportation is negatively correlated with distance. See, Stephen Holloway, *Straight and Level :Practical Airline Economics*, 2008, Ashgate, page 156: “the monetary amount paid per mile for a short journey will tend to be higher than the amount per mile for a significantly longer trip. The reason for this is that operating costs-unit costs or cost per ASM (CASM)-decline as stage-lengths increase.”

In our April 9 Impact Study, we discussed how the glut of subsidized Gulf carrier capacity to the United States had all but foreclosed U.S. carriers from expanding (or in the case of American and Delta, restoring) their non-stop service to India. In their submissions, the Gulf carriers have attempted to rebut this clear example of harm to the U.S. carriers. For the reasons described below, however, their arguments do not withstand scrutiny.

i. *The inference by Emirates that its connecting services could not suppress U.S. carriers' ability to sustain non-stop service to India is not credible*

As discussed in Section 2(a) above, Emirates assumes away the possibility that their services could harm U.S. carriers by ignoring virtually all of the connecting city-pairs where the U.S. and Gulf carriers' services overlap. Thus, it should come as no surprise that Emirates has also claimed that the loss in bookings by U.S. carriers to/from the Indian Subcontinent that occurred as Gulf carriers were rapidly expanding their subsidized capacity to the United States could not have contributed to Delta's and American's discontinuation of non-stop services to/from India.¹³¹

According to Emirates, the proposition that Gulf carriers' services to the United States could have been a contributing factor to these terminated services "is particularly odd in light of the fact that the supposed competition for the Legacy Carriers' discontinued *non-stop* flights consisted of the Gulf Carriers' *one-stop* flights."¹³² Qatar's comments take the same position, arguing that the U.S. carriers "have contended that Sixth Freedom services operated by Gulf carriers between the United States and India might somehow preclude their own introduction of nonstop service in the market. These claims ring hollow. It is well documented that consumers prefer non-stop services over one-stop and multi-stop alternatives, and generally will make their buying decisions based on schedule."¹³³

Emirates' and Qatar's contention that because Gulf carrier passengers traveling between their U.S. gateway cities and the Indian Subcontinent utilize one-stop itineraries, they could not have contributed to the termination of a U.S. carrier's *non-stop* flights to India (and by implication, their inability to resume and grow these services) is simply not credible. To begin with, even for passengers traveling between New York City and Mumbai and Delhi (the two city-pairs between

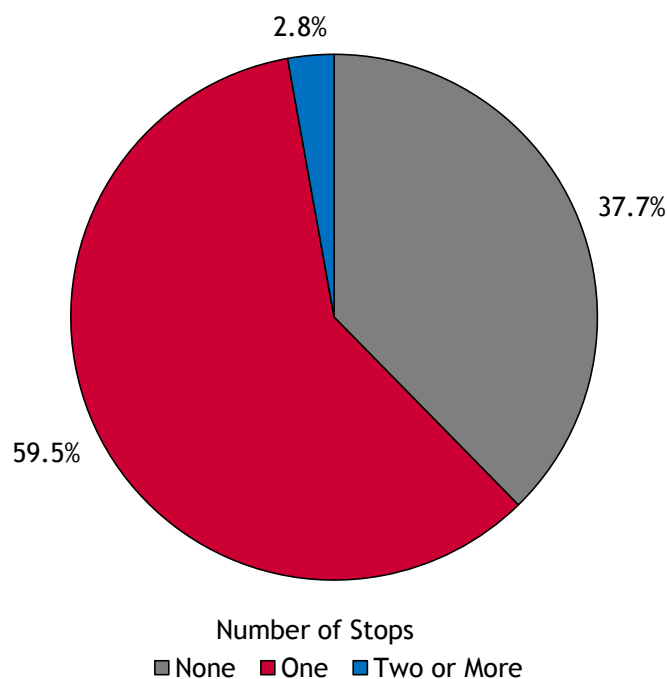
¹³¹ See Emirates Response, pages 117-118.

¹³² See Emirates Response, page 118.

¹³³ See Qatar Comments, footnote 157.

the United States and the Indian Subcontinent that currently have non-stop service on a U.S. carrier (i.e., United) in addition to Air India), more than 60% of bookings utilize connecting itineraries (as shown in Exhibit 14 below).¹³⁴ This clearly demonstrates that Gulf carriers' one-stop service is not only competitive with non-stop service, but has also served to crowd out the non-stop services of other U.S. carriers that have either cancelled or forgone non-stop service between New York City (as well as other U.S. cities) and the Indian Subcontinent.

EXHIBIT 14: DISTRIBUTION OF BOOKINGS BETWEEN NEW YORK CITY AND MUMBAI/DELHI BY NUMBER OF STOPS (2014)



Source: MIDT, 2014.

Notes: Includes all bookings to/from DEL or BOM to/from JFK, EWR or LGA.

More generally, however, as Emirates and Qatar are no doubt aware,¹³⁵ each of the three U.S. carriers operates a hub-and-spoke network that aggregates traffic flows from a myriad of cities behind their hubs,¹³⁶ and connects those passengers to their final destination.¹³⁷ As a result, U.S.

¹³⁴ Source: MIDT 2014.

¹³⁵ As shown in Exhibit 1 above, because Emirates apparently believes that there are only two U.S.-Indian Subcontinent city-pairs served by United, it may be unaware that United operates a hub with non-stop service to approximately 80 U.S. cities from EWR.

¹³⁶ Of all carriers, Emirates should understand the importance of connecting passengers to the viability of a non-stop service in long-haul city-pairs as it purportedly “pioneered an innovative aviation model: long-haul to long-haul

carriers' non-stop flights to India compete directly with Gulf carriers' flights to/from the Gulf, as the bulk of passengers on both carriers' flights are flying on connecting itineraries.¹³⁸ Indeed, in 2014, only about five percent of bookings between the United States and the Indian Subcontinent flew non-stop.¹³⁹ Simply put, because the viability of long-haul international flights depends on both local *and connecting passengers*, the assertion by Emirates and Qatar that the viability of U.S. carriers' non-stop flights to India could not have been adversely impacted by Gulf carriers' subsidized flights because "the supposed competition for the Legacy Carriers' discontinued non-stop flights consisted of the Gulf Carriers' one-stop flights"¹⁴⁰ or that "consumers prefer non-stop services over one-stop and multi-stop alternatives"¹⁴¹ ignores not only the data but also the fundamental fact that hub-and-spoke airlines compete with one another across thousands of unique city-pairs even if there are few if any non-stop overlapping routes.

ii. *The assertion by the Gulf carriers that U.S. carriers did not make a serious effort to serve the Indian Subcontinent is contradicted by the data*

In addition to incorrectly claiming that its connecting services could not have undermined the viability of U.S. carriers' flights to India, Emirates further asserts that "Legacy Carriers and their European joint venture partners have not made the investment needed to participate in that Growth."¹⁴² In a similar vein, Qatar's comments assert that "US carriers have long ignored the India/ISC market"¹⁴³ while the Edgeworth Report infers that a reason why U.S. carriers and their

service that reduces costs and travel times and provides unrivaled global connectivity for international travelers, particularly in the heavily populated but underserved countries in the Indian Subcontinent and Africa." See Emirates Response, page i.

¹³⁷ In some cases, reaching one's final destination may involve a second connection at a partner carrier's hubs in Europe or Asia.

¹³⁸ See Emirates Response, page 132: "...the vast majority of the 11,000 seats are not occupied by travelers whose destinations are the Middle East hubs. They are occupied by travelers who will pass through the hubs en route to Africa, the Indian Subcontinent, Southeast Asia, and other destinations." Likewise, approximately [] of passengers on U.S. carriers' long-haul international flights connect to/from another flight behind the U.S. gateway. Source: Analysis of DB1B data. See also Edgeworth Report, Exhibit 1.

¹³⁹ Source: MIDT.

¹⁴⁰ See Emirates Response, page 118.

¹⁴¹ See Qatar Comments, footnote 157.

¹⁴² See Emirates Response, page 112.

¹⁴³ See Qatar Comments, page 40.

JV partners have not participated in the growth in demand to the Indian Subcontinent is because they have “underserved” this region.¹⁴⁴

The contention that U.S. carriers (or their European JV partners) have ignored or are somehow uninterested in expanding their own services to a destination as large and with as much growth potential as the Indian Subcontinent is simply illogical and is not borne by the evidence. To the contrary, the U.S. carriers had identified India as a growth market,¹⁴⁵ and between 2005 and 2008, Delta, American and Continental (now part of United) each launched non-stop service between the United States and India.¹⁴⁶ Overall, between 2003 and 2008, U.S. carriers increased their number of daily seats to India by 250%, from 1,080 to 2,651, as shown in Exhibit 15.¹⁴⁷ And over that same period, U.S. carriers’ European partners were also expanding their service to the Indian Subcontinent to serve the growing demand to that region. Between 2003 and 2008, for example, Lufthansa increased its daily seat capacity to/from the Indian Subcontinent by more than 50% (from approximately 2,100 to 3,200), while Air France-KLM more than doubled its seat capacity from approximately 650 to 1,500.¹⁴⁸

¹⁴⁴ See Edgeworth Report, page 7. See also Etihad Response, page 9: “...they [the U.S. carriers] have chosen not to serve these important regions themselves and yet seek to block others from doing so.”

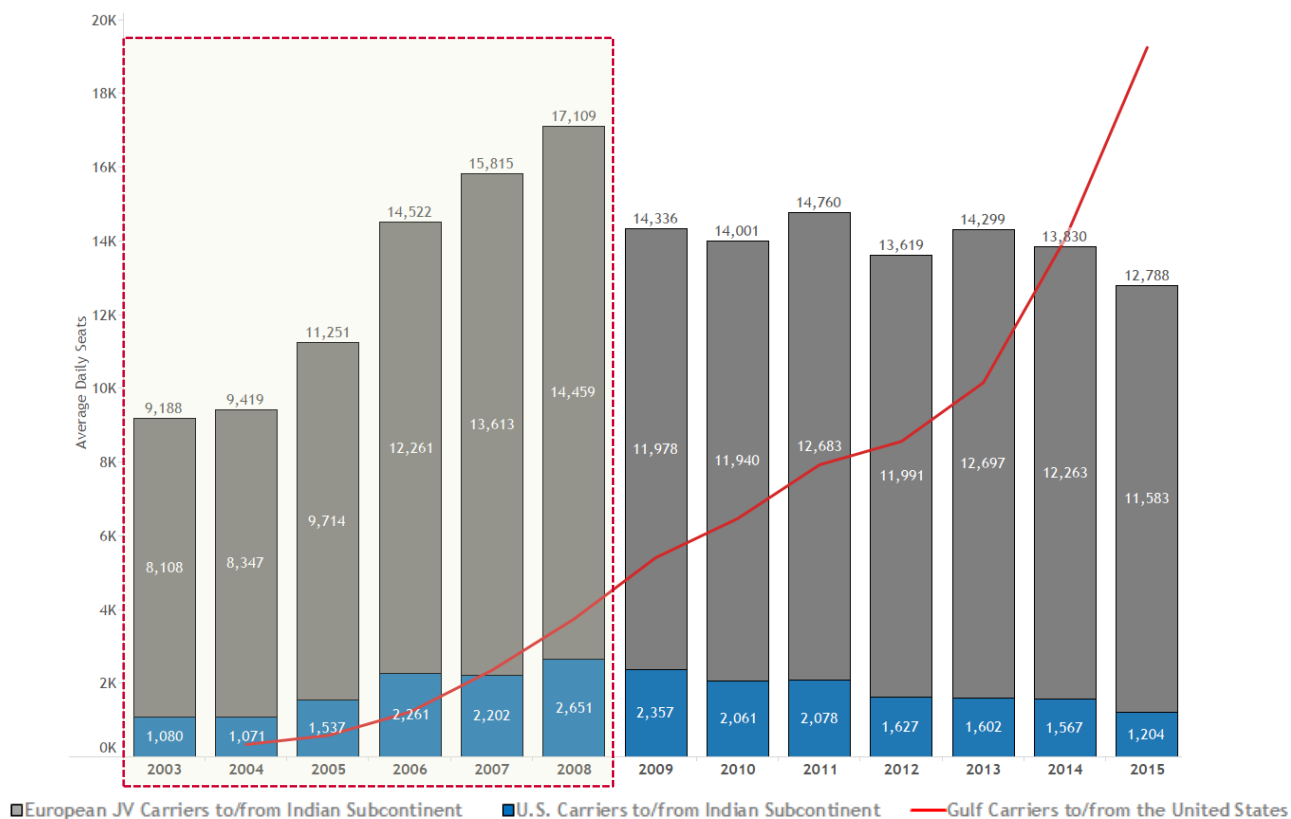
¹⁴⁵ See Business Confidential appendices to Partnership Answers to U.S. Government Technical & Clarification Questions on the Gulf Subsidies Report.

¹⁴⁶ American launched a daily roundtrip between Chicago O’Hare and New Delhi in November 2005, Delta launched a daily roundtrip between both New York Kennedy and Mumbai in November 2006 (which was switched to Atlanta-Mumbai in November 2008) and Continental launched a daily roundtrip between Newark and New Delhi in November 2005, followed by a daily roundtrip between Newark and Mumbai in October 2007. Source: OAG.

¹⁴⁷ As a result, between 2003 and 2008, the number of passengers that traveled between the United States and the Indian Subcontinent exclusively on U.S. carriers increased *nearly* [] fold (from []/day to []/day), and the number of passengers traveling on U.S. carriers on the international gateway segment and then connecting to their final destination in the Indian Subcontinent more than doubled from []/day to []/day. Source: U.S. DOT DB1B.

¹⁴⁸ Source: OAG.

EXHIBIT 15: U.S. AND JV PARTNER CARRIER AVERAGE DAILY SEATS TO/FROM THE INDIAN SUBCONTINENT VS. GULF CARRIER AVERAGE DAILY SEATS TO/FROM THE UNITED STATES



Source: OAG.

Notes: Gulf carrier seats include flights between the United States and DXB, AUH, and DOH. European JV partners include Air France/KLM, Alitalia, Virgin Atlantic, British Airways/Iberia, Lufthansa, Swiss, Brussels and Austrian. The Indian Subcontinent includes India, Pakistan, Nepal, Bangladesh, Maldives, and Sri Lanka.

With the drop in global demand following the onset of the global financial crisis and recession in 2009, however, both U.S. and JV carriers suspended their growth to the Indian Subcontinent. But, notwithstanding the severe recession, the Gulf carriers accelerated their capacity growth to the Indian Subcontinent. Due to the rapid increase of subsidized Gulf carrier capacity since 2008, neither the U.S. carriers nor their European JV partners have been able to restore their capacity to the Indian Subcontinent back to pre-recession levels (much less expand their service to take advantage of the growing demand for travel to/from this region). Exhibit 15 also shows that by 2014, Gulf carriers' capacity to/from the United States (much of which is aimed at serving traffic flows to/from the Indian Subcontinent¹⁴⁹) exceeded the total number of seats to the Indian

¹⁴⁹ See for example Emirates Response, page vii, "Emirates has grown in large part by focusing on markets like the Indian Subcontinent..."

Subcontinent by U.S. and European carriers *combined*. Indeed, in 2015, U.S. carriers' European JV partners offer 20% fewer daily seats to the Indian Subcontinent than they did in 2008. Moreover, as noted above, as a result of the growth in subsidized Gulf carrier capacity, carriers such as Lufthansa and Austrian have terminated service to a wide range of destinations in the Indian Subcontinent, Asia and Africa.¹⁵⁰

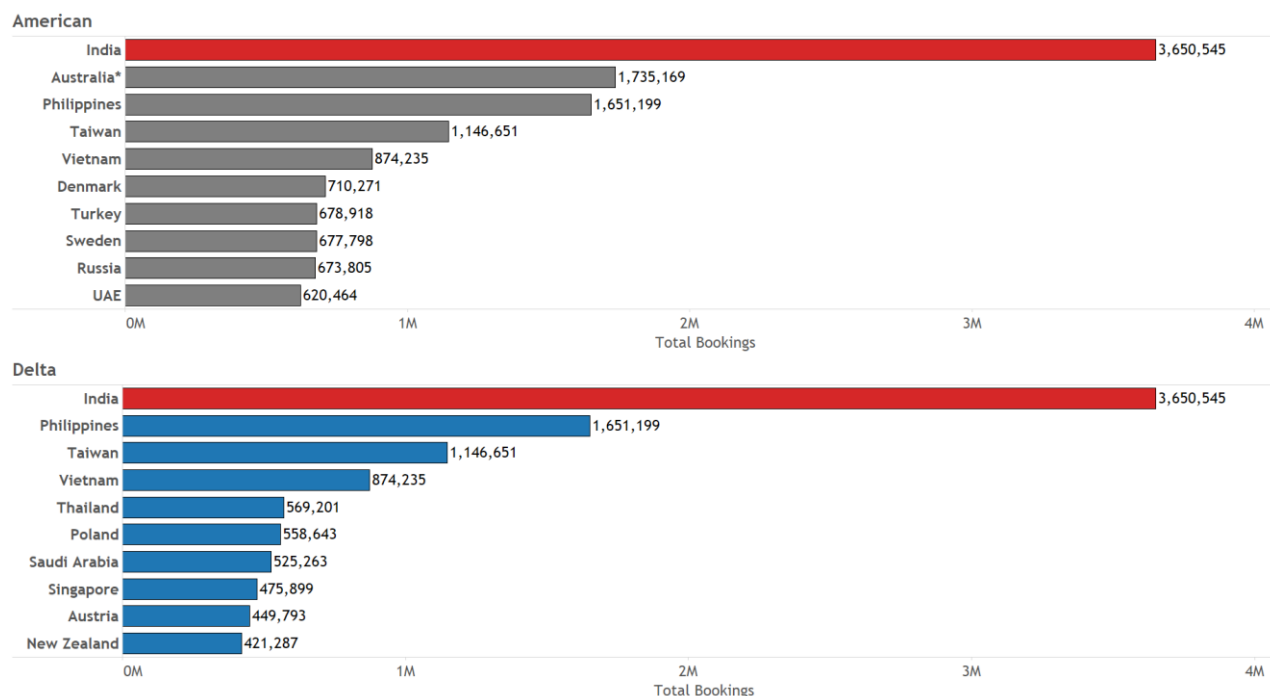
Thus, contrary to Emirates' assertion that the U.S. carriers and their JV partners "have not made the investment needed to participate in that growth [to the Indian Subcontinent]" or Qatar's claim that "US carriers have long ignored the India/ISC market",¹⁵¹ the facts show that both the U.S. carriers and the European JV partners had been growing their capacity to the Indian Subcontinent rapidly until 2008, only to be stymied by the massive growth in subsidized Gulf carrier capacity to the United States that has driven the fares to the region down to levels that have all but precluded U.S./JV partner carriers from being able to restore (much less grow) their capacity to this growing region. Indeed, as shown in Exhibit 16, India is the largest market (by wide margin) that is not served non-stop from the United States by either Delta or American.¹⁵²

¹⁵⁰ See footnote 108 above.

¹⁵¹ See Qatar Comments, page 40.

¹⁵² India is the second most populous country in the world. Source: World Bank (http://data.worldbank.org/indicator/SP.POP.TOTL?order=wbapi_data_value_2014+wbapi_data_value+wbapi_data_value-last&sort=desc).

**EXHIBIT 16: LARGEST COUNTRIES NOT SERVED BY AMERICAN AND DELTA NON-STOP
FROM THE UNITED STATES (BY 2014 BOOKINGS TO/FROM THE UNITED STATES)**



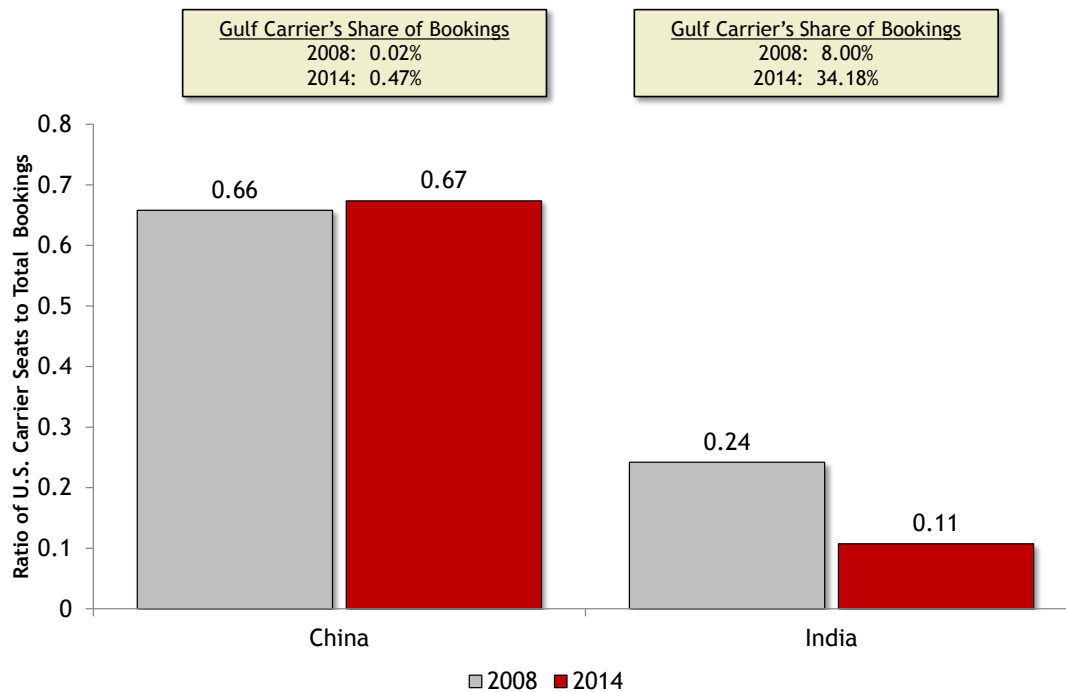
Sources: MIDT; OAG (July 2015-December 2015).

*As of December 2015 American will serve Australia (see

<http://hub.aa.com/en/nr/american-airlines-and-qantas-airways-to-add-new-flights-between-the-united-states-and-australia-6-9-2015>)

The fact that the dramatic expansion of subsidized Gulf carrier capacity to the United States has all but foreclosed U.S. carriers from serving India on a non-stop basis is also readily apparent from a comparison of the ratio of U.S. carrier seats per total number of bookings (i.e., across all carriers) to India and to China (the only other country in the world with more than one billion inhabitants). As shown in Exhibit 17, in 2014 U.S. carriers offered *less than one sixth* the number of seats per total bookings to India as they offered to China. Moreover, Exhibit 17 also shows that as Gulf carriers increased their share of bookings between the United States and India from 8.0% in 2008 to 34.2% in 2014, U.S. carriers' ratio of seats per total bookings to India fell by more than one half. U.S. carriers face vigorous competition from several growing Chinese carriers, yet over the same time period, U.S. carriers' ratio of non-stop seats to China relative to total bookings has remained constant.

EXHIBIT 17: U.S. CARRIER SEATS PER TOTAL MARKET BOOKINGS, INDIA VS. CHINA, 2008 vs. 2014



Sources: MIDT, OAG.

Notes: U.S. Carrier Seats includes all non-stop seats from the lower 48 U.S. states to China and India on United, American and Delta. Total bookings include bookings on carriers between the lower 48 U.S. states and China/India on all carriers.

iii. Each displaced non-stop daily frequency between the United States and India results in a net loss in over 1,500 U.S. airline and related jobs

The Partnership's Whitepaper noted that each daily widebody frequency lost or forgone due to subsidized Gulf carrier competition resulted in a net loss (on average) of over 800 U.S. airline and related jobs.¹⁵³ Because this figure was based on an "average" U.S. carrier long-haul international route, it conservatively assumed that the displaced or forgone U.S. carrier frequency utilized 1.34 widebody aircraft (i.e., the weighted average of number of aircraft used across all of the U.S. carriers' current flights to Europe, Africa, Asia, the Middle East and Australasia).¹⁵⁴ However, since all daily non-stop flights between the United States and India require two widebody aircraft

¹⁵³ See Partnership Whitepaper, page 51. A detailed description of the methodology used to calculate this job loss estimate was included in the Partnership Answers to U.S. Government Technical and Clarification Questions, (Response to Question #21).

¹⁵⁴ See Partnership Answers to U.S. Government Technical and Clarification Questions, Response to Question #21, Exhibit 20. In constructing the weighted average of 1.34 aircraft per roundtrip frequency, routes to Asia, Australasia, the Middle East and Africa use two aircraft, while routes to Europe require one aircraft.

(not the 1.34 conservatively assumed in the Partnership’s previous submissions), the number of forgone jobs for each displaced daily frequency to India specifically is far greater the 848 shown in the Partnership’s earlier submissions.¹⁵⁵ As shown in Exhibit 18, based on two aircraft (and correcting for a calculation error in the original table), the net loss of U.S. airline and related jobs from each displaced or forgone non-stop daily frequency to India is 1,537.¹⁵⁶

¹⁵⁵ The difference in the number of jobs in the Partnership Answers to U.S. Government Technical and Clarification Questions (Response to Question #21) increased to 848 (versus the 821 figure in the Partnership’s Whitepaper) because it the former calculation made use of more recent U.S. DOT Form 41 data that was not available at the time the Whitepaper was released.

¹⁵⁶ In the Partnership Answers to U.S. Government Technical and Clarification Questions (Response to Question #21) and the Whitepaper, the calculation of jobs (for both Delta and the Gulf carriers) inadvertently excluded the “induced jobs” related to the “indirect jobs.” Correcting for that oversight, the net loss of U.S. airline and related jobs from displacing a U.S. carrier with a Gulf carrier on a route—based on the assumption of 1.34 aircraft per daily roundtrip frequency—increases from 848 to 1,039 lost jobs. The 1,537 job difference based on 2.0 aircraft per daily roundtrip frequency includes the induced jobs related to the indirect jobs.

As noted in footnote 187 of the Partnership Answers to U.S. Government Technical and Clarifications (Response to Question #21), “Induced” jobs are those that are supported in the U.S. economy by the spending of direct and indirect workers. “Indirect” jobs are defined as the U.S.-based *non-airline* jobs that are part of an airline’s supply chain and are needed to support their operations (*e.g.*, information technology, human resources, accounting, legal, etc.). “Direct” jobs are the U.S. airline industry jobs that directly support the long-haul international service in question and consist of the jobs at the carrier (or equivalent third party vendors) operating the long haul flight in addition to U.S. airline jobs related to providing the capacity to support the behind/beyond U.S. gateway feed traffic attributable to the long-haul international flight.

EXHIBIT 18: UPDATED SUMMARY OF THE DIFFERENCE IN U.S. AIRLINE INDUSTRY (AND RELATED) EMPLOYMENT FROM EACH U.S. CARRIER WIDEBODY DAILY ROUNDTRIP FREQUENCY BETWEEN THE UNITED STATES AND INDIA (VS. GULF CARRIER DAILY FREQUENCY)

	U.S. Jobs Per Widebody Frequency Between The United States and India vs. Gulf Carrier Frequency to the United States	
	Delta*	Gulf Carriers
<u>Direct Airline Jobs</u>		
Pilots	64	0
Flight Attendants	164	0
Reservations	30	8
Tech Ops	46	1
Airport Customer Service & Cargo Scale	32	18
Management & Other	64	7
Total Direct Jobs/Frequency excluding domestic feed jobs	400	34
Additional U.S Domestic “Feeder” Airline Jobs	62	19
Total Direct Jobs/Frequency	462	53
Indirect Jobs Multiplier:1.64	758	86
Induced Jobs Multiplier:0.42	512.7	58.2
Grand Total (Direct + Indirect + Induced)	1,734	197

*Assumes 2 widebody aircraft per round-trip daily frequency (Boeing 777s staffed at Delta staffing ratios).
Sources: The Impact of Emirates Airline on the German Economy, Final Report, May 2012; The Economic Impact of Emirates Airline Flights on Greater Vienna/Austria; “Economic Benefits from Air Transportation in the US,” Oxford Economics, 2011.

- iv. *The assertions by the Gulf carriers that U.S. carriers’ bookings to the Indian Subcontinent have been expanding depends critically on their dubious use of 2009 as the base year*

The Gulf carriers acknowledge that much of the capacity they offer between the United States and their hubs in Dubai, Abu Dhabi and Doha is devoted to carrying passengers between the United States and the Indian Subcontinent.¹⁵⁷ Nevertheless, the submissions of all three Gulf carriers assert that far from being harmed by their rapid capacity growth targeting these markets, U.S.

¹⁵⁷ See, for example, Edgeworth Report, page 38: “As we have shown in Exhibit 13, approximately 80 percent of Etihad’s traffic either terminates in Abu Dhabi or goes to the ISC” and Emirates’ Response at page vii, noting that “...Emirates has grown in large part by focusing on markets like the Indian Subcontinent...”

carriers have actually been *growing* their bookings to/from this region. For example, Emirates’ asserts that the “Legacy Carriers’ allegation that they have lost Indian Subcontinent bookings to the Gulf Carriers is simply not true”¹⁵⁸ and that “...the Legacy Carriers and their joint venture partners have enjoyed *growth*, not decline, in U.S.-Indian Subcontinent bookings...”¹⁵⁹ Likewise, the Edgeworth Report (commissioned by Etihad and endorsed by Qatar¹⁶⁰) asserts that U.S. carriers and their immunized partners “actually served 18 percent (over 223,000) *more passengers* in 2014 [than 2009] because of the growth in the overall volume of travel...”¹⁶¹ between the United States and the Indian Subcontinent.¹⁶²

These assertions by the Gulf, however, depend critically on their use of 2009 as the base year upon which to measure growth. The use of 2009 as a base year is dubious at best—a fact that even the Edgeworth Report appears to acknowledge when it observed that “overall demand for air travel declined between 2008 and 2009 as a result of the economic downturn generally referred to as the “Great Recession.”¹⁶³ Indeed, IATA referred to the downturn of 2009 as “the deepest [cyclical downturn] experienced by the commercial airline industry since the 1930s”¹⁶⁴ and also noted that “[i]n terms of demand, 2009 goes into the history books as the worst year the industry has ever seen.”¹⁶⁵ Similarly, IATA’s 2010 Annual Report found that:

¹⁵⁸ See Emirates Response, page 117.

¹⁵⁹ See Emirates Response, page 114.

¹⁶⁰ See Qatar Comments, page 41 (referencing the Edgeworth Report): “there is clear and compelling evidence that the US-India traffic carried by US carriers and their European counterparts has increased in absolute terms...”

¹⁶¹ See Edgeworth Report, page 2.

¹⁶² See also Etihad’s submission page 6, asserting that the U.S. carriers’ “only specific claim is that from 2008 to 2014, they have allegedly collectively lost five percentage points of their Indian Subcontinent market share. However, what they neglected to mention is that during the same period their passenger numbers to the Indian Subcontinent actually grew by 18%.” Note that while the inference in Etihad’s submission is that the U.S. carriers have attempted to disguise the facts regarding the harm they have suffered on city-pairs between the United States and Indian Subcontinent by “neglecting to mention” that their bookings had increased, it is Etihad that has made the misleading statement by suggesting that it was making an apples to apples (i.e., 2008 to 2014) comparison of U.S. carriers’ bookings to/from the Indian Subcontinent when in fact, Edgeworth’s analysis of U.S. carriers’ bookings is actually based on a comparison of 2009 to 2014.

¹⁶³ See Edgeworth Report, footnote 14. See also Emirates Response, page 118, noting that “July 2009 was near the lowest point of the global financial crisis.”

¹⁶⁴ See IATA Annual Report, 2010, page 10.

¹⁶⁵ See “2009: Worst Demand Decline in History – Encouraging-end Improvements”, IATA Press Release No., January 27, 2010.

*“Early 2009 marked the low point for international air travel markets. From the early-2008 peak to the early- 2009 trough, premium travel fell 25%. Economy travel fell 9%, the decline softened by a shift to cheaper seats. From mid-2009, air travel markets began to turn upward, boosted by the massive fiscal and monetary stimulus measures taken by governments.”*¹⁶⁶

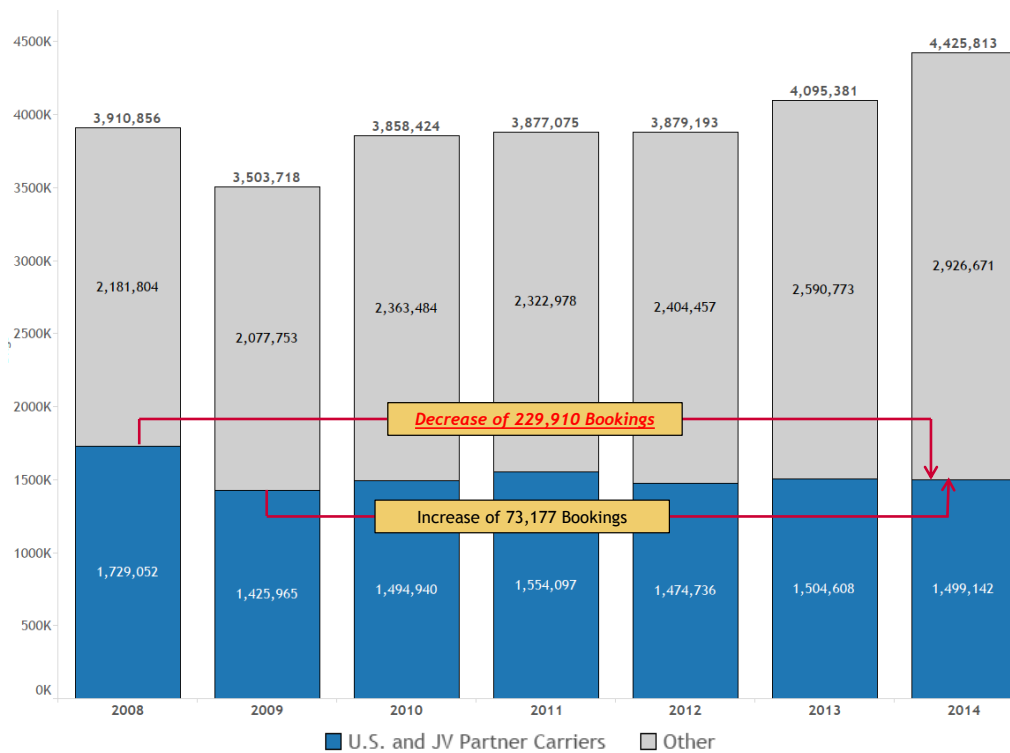
The Edgeworth Report attempts to justify its use of 2009 as their starting year by arguing that it wants to “distinguish the effects of the recession from those of the changing competitive landscape in the airline industry.”¹⁶⁷ However, by using 2009 as the starting point, Edgeworth achieves the opposite effect: by using the bottom of the recession (2009) as the starting point, Edgeworth’s analysis dramatically inflates the growth in bookings for the U.S. carriers and their JV partners. Thus, as shown in Exhibit 19, even though U.S. carriers and their JV partners saw their overall number of bookings between the United States and the Indian Subcontinent *fall* by nearly 230,000 between 2008 and 2014, by choosing to compare 2014 bookings to what IATA characterized as “the worst year the industry has ever seen”, the Edgeworth Report would have one believe that U.S. carriers and their JV partners have experienced an increase in annual bookings, when in fact, they have experienced a substantial loss in bookings since 2008—the last year before the recession. Not only is a comparison of U.S. carrier and JV partner bookings versus 2009 highly misleading, the increase in their bookings purported by Edgeworth since 2009 (i.e., 223,737 in Economy Class bookings) is exaggerated by over 200%, as shown in Exhibit 19.¹⁶⁸

¹⁶⁶ See IATA Annual Report, 2010, page 10.

¹⁶⁷ See Edgeworth Report, footnote 14.

¹⁶⁸ According to Exhibits 6 and 7 of the Edgeworth Report, between 2009 and 2014, U.S. carriers and their “immunized” partners experienced an increase in Economy Class and Premium Class bookings of 223,737 and 33,805, respectively, for a total increase of 257,542 bookings. Based on Delta’s MIDT data, the increase in bookings from 2009 to 2014 was 73,177 (not 257,542).

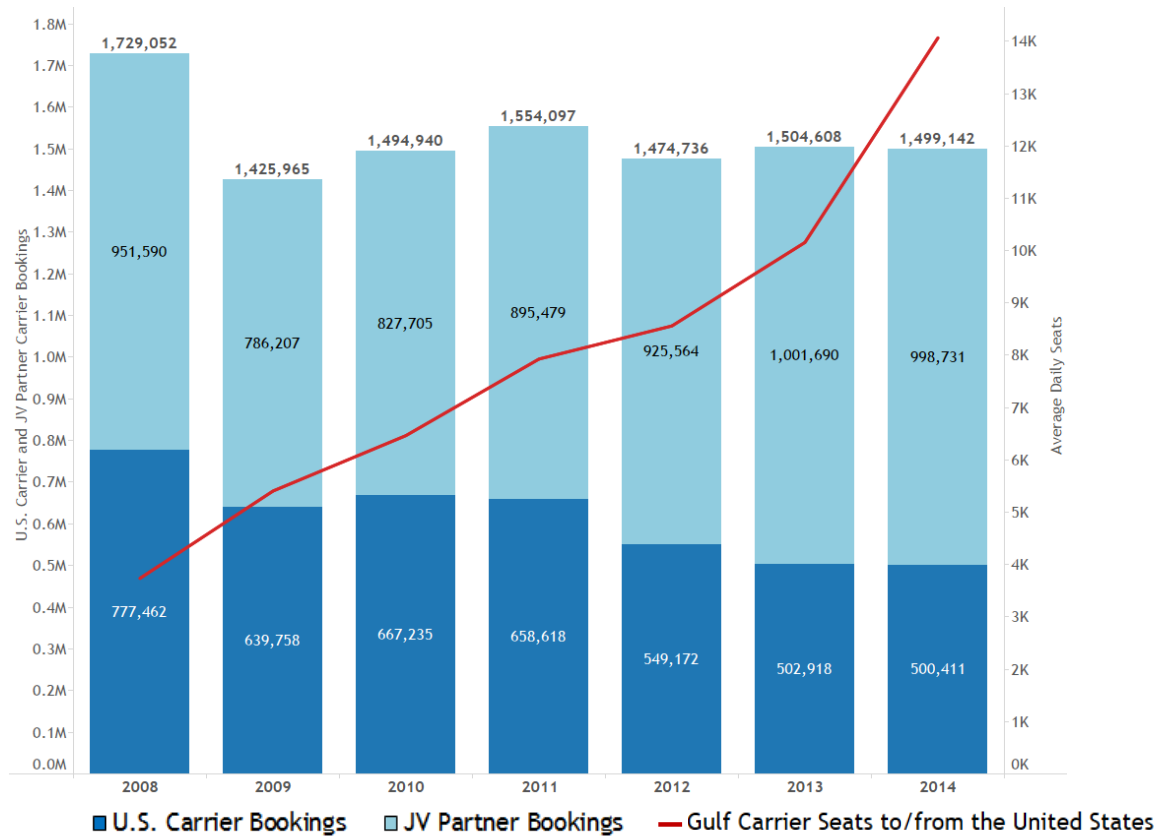
EXHIBIT 19: BOOKINGS BETWEEN THE UNITED STATES AND THE INDIAN SUBCONTINENT



Moreover, as shown in Exhibit 20, even since 2009, the number of U.S. carrier bookings to/from the Indian Subcontinent have fallen sharply. In fact, Exhibit 20 shows that the steady decline in the number (not simply share) of U.S. carrier bookings to/from the Indian Subcontinent since 2008 coincides with the sharp increase in subsidized Gulf carrier seats to the United States targeting these traffic flows. Thus, while U.S. carriers had begun a multi-year effort to expand their non-stop services to India to provide passengers in more U.S. cities with non-stop or one-stop service to an important and growing region (*see* Exhibit 15 above), the glut of subsidized Gulf carrier capacity has forced U.S. carriers to rely more heavily on their JV partners to provide access to/from the Indian Subcontinent. Not only does this entail an additional stop for passengers,¹⁶⁹ it results in fewer jobs for U.S. airline employees.

¹⁶⁹ For example, passengers that used to be able to fly non-stop on Delta from Atlanta to Mumbai are now required to make a connection (in Paris, for example) and passengers that used to be able to fly one-stop from Baton Rouge, Louisiana to Mumbai via Atlanta are now required to make two-stops (e.g., Baton Route-Atlanta-Paris-Mumbai).

EXHIBIT 20: U.S. AND JV PARTNER CARRIER BOOKINGS BETWEEN THE UNITED STATES AND THE INDIAN SUBCONTINENT VS. GULF CARRIER SEATS TO/FROM THE UNITED STATES



Source: Delta MIDT. OAG.

Notes: JV partners include: Delta (Air France/KLM, V-Australia, Alitalia, Virgin Atlantic), American (British Airways/Iberia, Qantas, JAL), United (Lufthansa, Swiss, Brussels, Austrian, Air Canada, ANA). Indian Subcontinent includes India, Pakistan, Nepal, Bangladesh, Maldives, and Sri Lanka. Gulf carrier seats include flights between the United States and DXB, AUH and DOH.

Simply put, the Gulf carriers’ assertion that U.S. carriers have not been harmed because their traffic to/from the Indian Subcontinent has been growing (as opposed to declining) is factually incorrect.

- v. *The assertion by Emirates that U.S. carriers’ transatlantic operations have been growing is false*

Finally, Emirates has also attempted to support its assertion that “adverse effects are nowhere to be found [on Legacy Carriers’ transatlantic routes]”¹⁷⁰ by claiming that “[t]he Legacy Carriers’ transatlantic operations are growing traffic”¹⁷¹ and that “Legacy Carriers that year [2004] began to grow capacity on international routes, a strong trend only briefly interrupted by the 2008–09

¹⁷⁰ See Emirates Response, page 94.

¹⁷¹ See Emirates Response, page 92.

financial crisis.”¹⁷² These assertions are also false. As shown in Exhibit 21, U.S. legacy carrier transatlantic capacity has remained essentially flat since 2007, and is 6.5% (i.e., approximately 6,000 daily seats) *lower* in 2015 than it was in 2010. On the other hand, between 2010 and 2015, the number of Gulf carrier seats to/from the United States increased by approximately 14,000. In light of the fact that Gulf carriers have failed to meaningfully stimulate new traffic,¹⁷³ this provides further evidence that Gulf carriers’ traffic gains have come at the expense of U.S. carriers, which have been forced to *reduce* transatlantic capacity (a portion of which is used by passengers to connect to flights on U.S. carriers’ European partners to destinations in Asia, Africa and the Middle East¹⁷⁴) in response to the glut of subsidized Gulf carrier capacity being added into these markets.¹⁷⁵

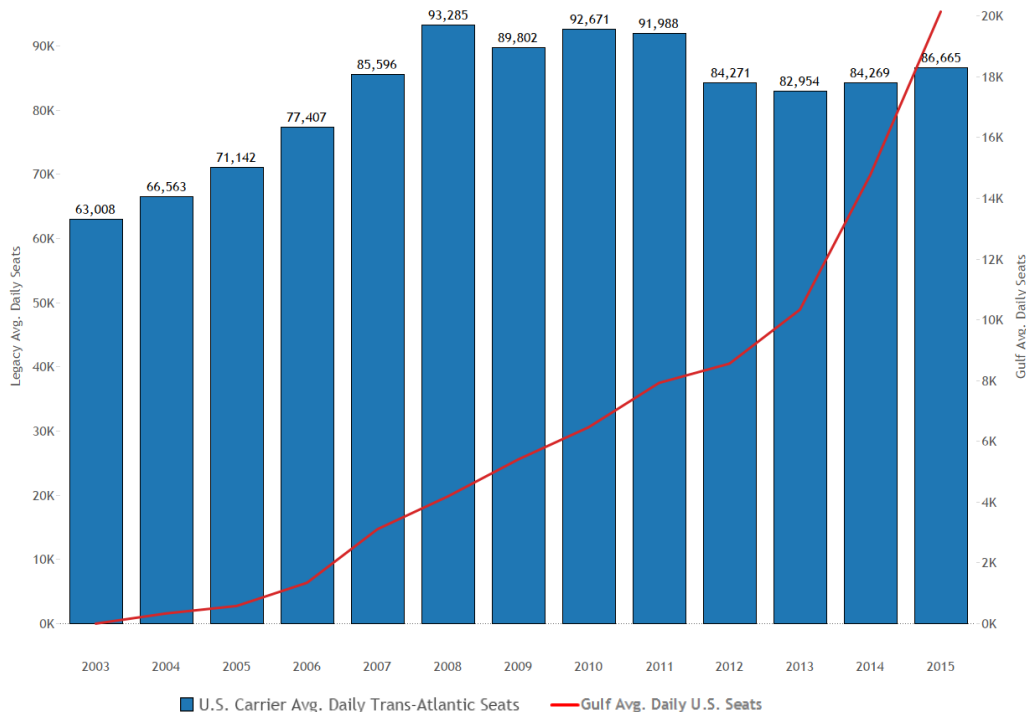
¹⁷² Ibid.

¹⁷³ See Section 3 below.

¹⁷⁴ See footnote 108 above.

¹⁷⁵ Moreover, Emirates’ assertion that the U.S. domestic market is somehow a “protected” market for legacy carriers because cabotage is not permitted is at odds with the fact that the U.S. domestic aviation market is one of the most competitive airline markets in the world. American, Delta and United have seen their number (and share) of passengers drop significantly over the past two decades, which is far from what one would expect to see in a “protected” market. For example, the share of domestic O&D passengers traveling on American, Delta and United has fallen from 77.5% in 1998 to 55.9% in 2014. Source: U.S. DOT DB1B.

EXHIBIT 21: U.S. LEGACY CARRIER TRANSATLANTIC SEATS VS. GULF CARRIER SEATS TO/FROM THE UNITED STATES



Source: OAG.

Notes: Legacy carriers include American (including US Airways), Delta (including Northwest), and United (including Continental). Trans-Atlantic includes Europe, Africa, Middle East, and India. Gulf seats include flights between the U.S. and DXB, DOH, and AUH.

e) The Assertion by the Gulf Carriers That Their U.S. Expansion has not Resulted in a Loss of Passengers for the U.S. Carriers is Demonstrably Incorrect

The Gulf carriers’ submissions contend that U.S. carriers have not been harmed by Gulf carriers’ expansion because the number of passengers carried by U.S. airlines has not declined on the city-pairs where they compete. For example, Emirates asserts that there has been a “lack of harm to the Legacy Carriers... because Emirates’ entry has not resulted in a significant loss of business,”¹⁷⁶ and that it has expanded its services to the United States “without significantly diverting passengers from the Legacy Carriers.”¹⁷⁷ Moreover, Emirates asserts that “in each instance [where Emirates enters a U.S. city]...a clear pattern is seen... U.S. carriers have maintained stable or

¹⁷⁶ See, Emirates Response, page 103.

¹⁷⁷ See, Emirates Response, page 103.

growing bookings”.¹⁷⁸ In this subsection, we address these and the other claims made in the Gulf carriers’ submissions.

i. The claim that U.S. carriers have “maintained stable or growing bookings” after Emirates enters a new U.S. city is untrue

Emirates’ submission asserts that in the markets it has entered, “Legacy Carriers suffer no loss at all— they are actually growing their business”.¹⁷⁹ Emirates even goes as far as to claim that “[f]ar from harming the Legacy Carriers, in a large number of cases Emirates has helped stimulate these emerging markets *to the benefit of the Legacy Carriers...*”¹⁸⁰ Both of these statements are untrue. Not only have Gulf carriers failed to meaningfully stimulate new traffic (as shown in Section 3 below), but the data clearly show that entry by Emirates at a new U.S. gateway is followed by a *decline* in U.S. carrier bookings to the regions served by Emirates and the other Gulf carriers.

Exhibit 22 shows that in the year following Emirates’ entry in Boston, Dallas-Fort Worth, Seattle and Washington, D.C., U.S. carrier bookings declined between each of those cities and destinations in the Middle East, Indian Subcontinent, Africa and the ASEAN countries,¹⁸¹ often by a large margin.¹⁸² Likewise, the number of bookings on U.S. carriers’ JV partners from these four cities also fell in the year following entry by Emirates.

¹⁷⁸ See Emirates Response, page 110. Similar claims have been made by Etihad and Qatar. See, for example, Etihad Response, page 6: “Their only specific claim is that from 2008 to 2014, they have allegedly collectively lost five percentage points of their Indian Subcontinent market share. However, what they neglected to mention is that during the same period their passenger numbers to the Indian Subcontinent actually grew by 18%” and Qatar Comments page 7: “while the Big Three’s market share [between the United States and Indian Subcontinent] may have declined, the number of passengers they carry has increased in absolute terms.” As we already demonstrated in Section 2 (d) above, however, these claims are wrong.

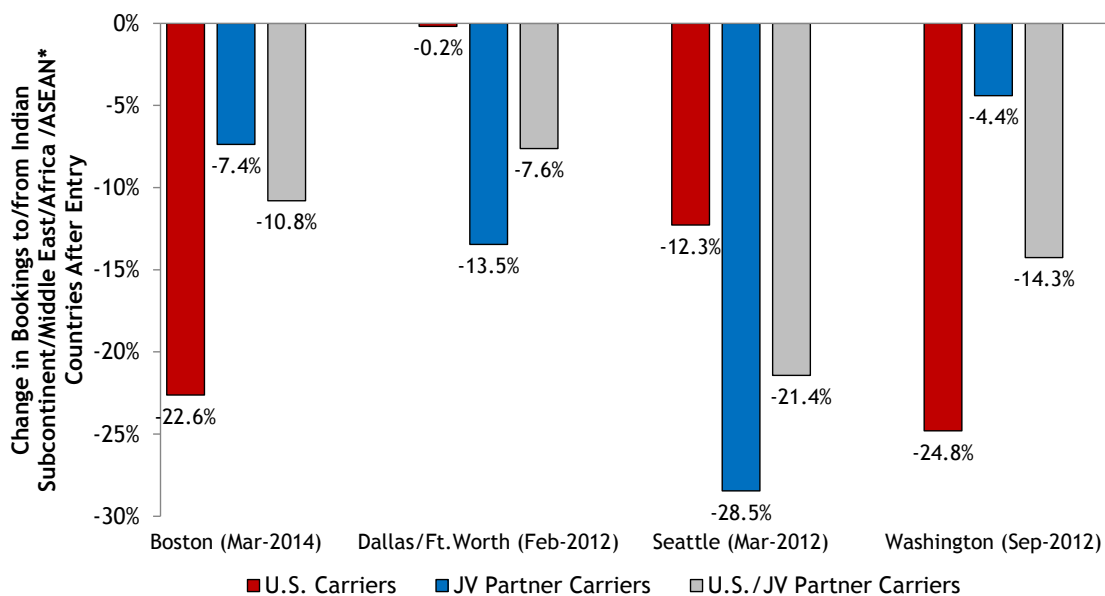
¹⁷⁹ See Emirates Response, page 111.

¹⁸⁰ Ibid (emphasis added).

¹⁸¹ Consistent with the Emirates’ analysis of “stimulation”, we restrict the analysis of booking changes to/from the ASEAN countries to Boston and Washington. See Emirates Response, footnote 222.

¹⁸² The four U.S. cities shown in Exhibit 22 are the cities that Emirates elected to showcase in its submission as examples of where their entry stimulated new traffic in the year following their entry. As discussed in Section 3 below, these claims were incorrect. However, U.S. carriers’ traffic declines in the 12 months after Emirates entry were not limited to these four Emirates gateway cities. For example, in the 12 months after Emirates’ entry, the number of bookings on U.S. carriers to the Middle East, the Indian Subcontinent, Africa and the ASEAN countries has gone down across each of the other cities entered by Emirates since 2008, i.e.,: San Francisco (entry December 2008) down 19.5%, Los Angeles (entry Oct. 2008) down 22.8%, Chicago (entry April 2013) down 5.6%. Sources: OAG, MIDT. Because our MIDT data starts in January 2008, the period for comparison for San Francisco Jan. 2008-Nov. 2008 and Jan. 2009-Nov. 2009, while Los Angeles compares Jan. 2008-Sep. 2008 to Jan. 2009-Sep. 2009. See also footnote 280 below.

EXHIBIT 22: CHANGE IN U.S. AND JV CARRIER BOOKINGS TO/FROM THE MIDDLE EAST, THE INDIAN SUBCONTINENT, AFRICA AND ASEAN* COUNTRIES IN YEAR FOLLOWING EMIRATES ENTRY



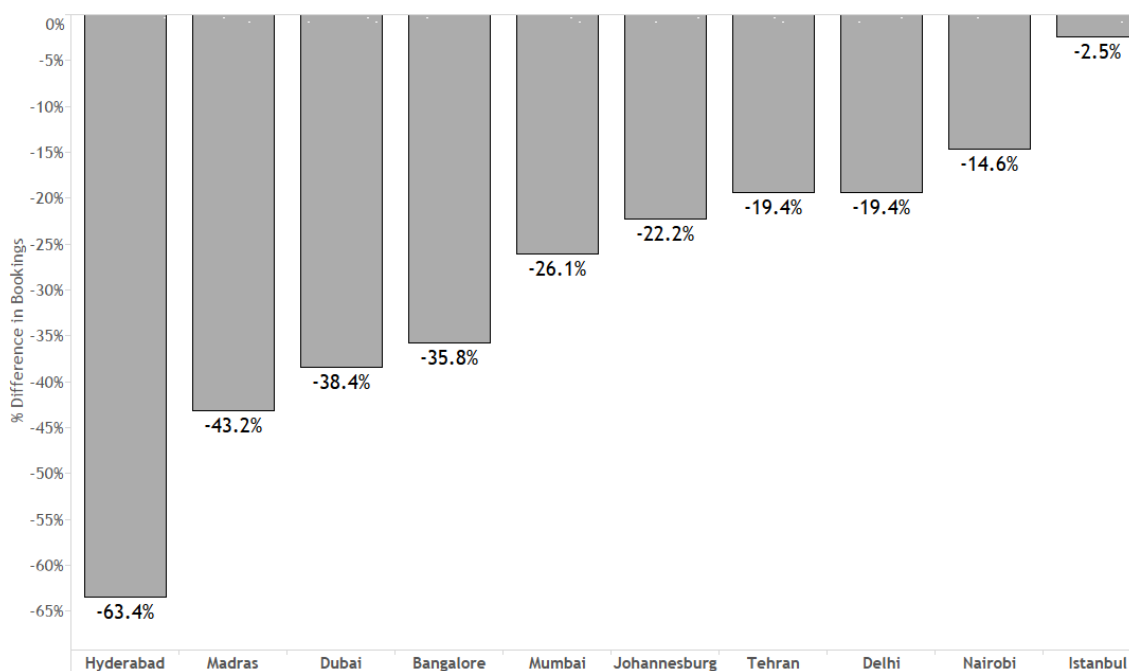
* Dallas/Ft. Worth and Seattle exclude ASEAN countries.

Sources: Delta Air Lines MIDT.

Notes: Dates for each city reflects month of Emirates entry. Change in bookings between Emirates U.S. gateway city and destinations in the Indian Subcontinent, Middle East, Africa and ASEAN countries. Percentage growth for the one year period post entry (including the month of entry) vs. the full year period before entry (up to and including the month prior to entry). Dallas/Ft. Worth includes DFW and DAL. Washington includes IAD, DCA, and BWI. Middle East excludes Israel. Indian Subcontinent includes India, Pakistan, Bangladesh, Nepal, Maldives, and Sri Lanka. ASEAN countries include Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam.

In some of the largest city-pairs served by Emirates from their U.S. gateway cities, the decline in U.S. and JV carrier bookings from those cities following Emirates' entry has been dramatic. For example, as shown in Exhibit 23, in the year following the launch of Emirates' initial daily non-stop frequency between Dubai and Seattle, U.S. and JV carrier bookings between Seattle-Hyderabad and Seattle-Madras fell 63.4% and 43.2%, respectively.

EXHIBIT 23: CHANGE IN U.S. AND JV CARRIER BOOKINGS IN YEAR FOLLOWING EMIRATES ENTRY BETWEEN SEATTLE AND TOP 10 DESTINATIONS (BY BOOKINGS) IN THE MIDDLE EAST, INDIAN SUBCONTINENT AND AFRICA



Sources: Delta Air Lines MIDT.

Notes: Change in U.S. and JV carrier bookings between Seattle and destinations shown for the year ending February 2013 vs. year ending February 2012. Emirates commenced non-stop service to Seattle in March 2012.

Emirates' submission also expends considerable effort attempting to undermine the observation in the Partnership's Whitepaper that U.S. carriers have suffered share loss across a broad set of markets at the expense of Gulf carriers' subsidized capacity growth. While U.S. carriers' share loss to Gulf carriers has been substantial and is a clear indication of harm,¹⁸³ Exhibit 22 and Exhibit 23 show that the actual level of U.S. carriers' bookings between the United States and the regions now saturated with Gulf carrier capacity have also gone down, a finding that was established rigorously by our regression analysis demonstrating the diversion of U.S. carrier passengers due to Gulf carrier presence.

- ii. *Emirates' and Etihad's criticisms of our econometric analysis showing that Gulf carrier presence diverts passengers from U.S. carriers are unconvincing*

¹⁸³ While it is true that share loss can be a natural result of entry and competition, it is important to emphasize that in the context of establishing harm from *subsidized competition*, share losses that would otherwise not have occurred but for the subsidized competition is nonetheless a clear indication of harm, even if the total number of bookings on U.S. carriers' remained flat or increased due to growth in the overall size of the market. This is because in the absence of Gulf carriers' subsidized services (i.e., the "but for" world) other carriers (including U.S. carriers) would have enjoyed a greater proportion of the growing market size. Nevertheless, as shown in Exhibit 22 above, the actual number of bookings on U.S. carriers declined following the entry by Emirates in each city examined.

As noted above, our Traffic Study included a series of regressions demonstrating the harm to U.S. carriers due to the diversion of passengers from U.S. to Gulf carriers on city-pairs where the two sets of carriers compete. In particular, our econometric evidence demonstrated that the presence of each Gulf carrier with as little as a 3% booking share on a city-pair reduces the number U.S. carriers' passengers on that city-pair by approximately 8% on average (i.e., when all three Gulf carriers are present on a U.S. international city-pair, U.S. carrier passengers are—on average—24% lower than they would otherwise have been in their absence).¹⁸⁴ The regression analysis also demonstrated that on city-pairs to/from U.S. cities served by all three Gulf carriers where each of the Gulf carriers has at least a 10% share, U.S. carrier passengers have been reduced by 50%, on average.¹⁸⁵

Emirates and Edgeworth have raised a number of technical criticisms related to our econometric analysis of traffic diversion.¹⁸⁶ These criticisms can be grouped into the following categories:¹⁸⁷ (1) the misconception that our econometric analysis was based on passenger or booking “shares” rather than actual levels of passengers; (2) the claim that our method of identifying Gulf presence does not accurately capture their competitive presence; (3) the assertion that the geographic scope of our econometric analysis is too broad; (4) the fact that we aggregate the passengers or bookings of the harmed carriers into a single group; (5) the fact that we focused on the traffic losses to U.S. carriers resulting from only the Gulf carriers; and (6) the fact that our analysis finds that there has been harm on city-pairs involving a behind-U.S. gateway connection. As described in detail below, these criticisms are either factually incorrect or irrelevant to the questions at hand. Nevertheless, after discussing why our econometric modelling choices were appropriate, we demonstrate that the key findings of our regression analysis are robust to these purported flaws.

1) The suggestion by Emirates that our econometric analysis is based on changes in shares is false

¹⁸⁴ See Traffic Study, page 16. See also footnote 33 above.

¹⁸⁵ See Traffic Study, page 17. See also footnote 34 above.

¹⁸⁶ Qatar's submission did not address any of our econometric analysis.

¹⁸⁷ Several of these criticisms (i.e., the assertion that the geographic scope of our econometric analysis is too broad or the claim that our method of identifying Gulf presence does not accurately capture their competitive presence) apply equally to our econometric analysis of traffic stimulation and traffic diversion. Although we have already described why these criticisms were irrelevant or incorrect, for completeness, we address them below in the context of our traffic diversion regressions.

In concluding that “[t]he Compass Lexecon regression analysis does not demonstrate adverse effects”,¹⁸⁸ Emirates starts by suggesting that “the model builds in the assumption that incumbent carriers will share proportionately in traffic growth.”¹⁸⁹ Nothing could be further from the truth. To the contrary, our Traffic Study clearly states that the dependent variable (i.e., the variable being explained) is the actual number of passengers carried by each carrier, *not their share*.¹⁹⁰ Because our traffic regressions are estimated using the natural log of the level of passengers or bookings (rather than shares, as alleged by Emirates), the interpretation of the estimated coefficient on *Number of Gulf Carriers Present* is the percentage decline in the number of U.S. carrier passengers, not—as Emirates apparently believes—U.S. carriers’ *share* of passengers. There is no basis whatsoever for Emirates’ claim that our econometric analysis “builds in the assumption that incumbent carriers will share proportionately in traffic growth.”¹⁹¹

2) Edgeworth’s claim that our method for identifying Gulf carrier presence suffers from flaws is irrelevant

The Edgeworth Report criticizes our method of identifying Gulf carriers’ “presence” on a city-pair (as proxied by at least a three percent or ten percent booking share), suggesting that it is “arbitrary”¹⁹² and arguing that it “makes it appear that carriers ‘enter’ and ‘exit’ a particular route when they in fact do not.”¹⁹³ In fact, in examining city-pair or airport-pair markets where some or all of the service is provided via connecting service, the use of “share-based” presence variables is commonly applied in both published economic literature¹⁹⁴ and in studies of airline competition

¹⁸⁸ See Emirates Response, page 137.

¹⁸⁹ See Emirates Response, page 138.

¹⁹⁰ See, e.g., Traffic Study, page 13 (“For each of the regressions described below, the dependent variable is the natural logarithm of the number of passengers (or bookings, when MIDT data is used) during the quarter”) and page 14 (“In order to assess the impact that subsidized Gulf carrier presence has had on the traffic levels of U.S. and other non-Gulf carriers, we first estimate the regression model using the traffic levels of various subsets of non-Gulf carriers as the dependent variable”). (emphasis added)

¹⁹¹ See Emirates Response, page 138.

¹⁹² See Edgeworth Report, Par. 69.

¹⁹³ See Edgeworth Report, Par. 69.

¹⁹⁴ See, for example, “Alliances, Codesharing, Antitrust, Immunity, And International Airfares: Do Previous Patterns Persist?”, Jan K. Brueckner, Darin Lee and Ethan Singer, *Journal of Competition Law & Economics*, 7(3), (2011), pp. 573–602, at page 583: “The measure is a count of competing online carriers or carrier pairs, which is subject to a market-share threshold. To be included under the most stringent threshold, an online carrier or a carrier pair must carry at least 10 percent of the traffic in the city-pair market. Another count variable based on a lower 3-percent share threshold is also created.” See also “Airline competition and domestic US airfares: A comprehensive reappraisal”, Jan K. Brueckner, Darin Lee, Ethan Singer, *Economics of Transportation*, Vol. 2 (2013), pp 1-17 at page 3: “To be

conducted by U.S. Government agencies.¹⁹⁵ Furthermore, our Traffic Study presented results using multiple measures of presence (i.e., 3% and 10%) to demonstrate that the results were robust to different specifications. Nevertheless, as shown in Exhibit 25 below, modifying the *Number of Gulf Carriers Present* variable to account for Edgeworth’s concern does not alter the fundamental result that Gulf carrier presence reduces the number of bookings on U.S. carriers.

3) Edgeworth’s assertion that our econometric analysis of harm is somehow flawed because our dataset includes city-pairs not served by Etihad is simply incorrect

The Edgeworth Report states that because our econometric model “includes a substantial number of routes (most notably, between the U.S. and Europe) where Etihad does not materially compete for U.S. traffic”, Etihad’s presence “could not have caused the [traffic diversion] effects”¹⁹⁶ we have identified. This assertion is simply false. In a panel regression utilizing city-pair fixed-effects (like the ones we have estimated) the identification of the key independent variable of interest used to assess whether Gulf carrier presence has diverted passengers from U.S. and other carriers (i.e., *Number of Gulf Carriers Present*) is based primarily on city-pairs where one or more Gulf carriers are present.¹⁹⁷ Nevertheless, as shown in Exhibit 25 below, even if one were to estimate our model excluding city-pairs between the United States and Europe, the result is effectively the same.

4) Grouping harmed carriers and using a single average effect is an appropriate way to assess the aggregate impact of subsidized capacity expansion on U.S. carriers

Another technical criticism raised by the Edgeworth Report is that because we “[t]reat all U.S. carriers (and in some variations, the U.S. carriers and their immunized partners) as though they are

counted, a carrier’s connecting service must represent at least 10% of the origin and destination (“O&D”) traffic in the airport-pair market.”

¹⁹⁵ See, for example, “Issues Raised by the Proposed Merger of United and Continental Airlines”, United States Government Accountability Office, Statement for the Record by Susan Fleming, Director, Physical Infrastructure Issues Testimony Before the Committee on Commerce, Science and Transportation, U.S. Senate, at footnote 23: “We defined an effective competitor as having at least 5 percent of total airport-pair traffic.” Even the highly suspect regression analysis performed by Campbell Hill shown on page 51 of Exhibit 1 to the Emirates submission makes use of a share based (1%) measure to count the number of competitors.

¹⁹⁶ See Edgeworth Report, Page 38.

¹⁹⁷ Emirates Response (at page 139) makes a similar claim, suggesting that our analysis is flawed because “[it] calculates one set of global coefficients that are supposed to be equally applicable to traffic from the United States to the Indian Subcontinent, where the Gulf Carriers are a major presence, and to traffic from the United States to Europe, where they are very small indeed.” For the same reasons, this criticism is also irrelevant.

a single entity”¹⁹⁸, our models cannot discern competition between U.S. carriers. Because the question of interest is how subsidized Gulf carrier presence has impacted the traffic levels of the large U.S. network carriers *as a whole*, this criticism is irrelevant. Similarly, Emirates’ criticism that our analysis “lumps together U.S. and other carriers into one group, thus ignoring competitive relationships among them that may be far more important than the role played by the Gulf Carriers”¹⁹⁹ ignores the fact that our analysis demonstrated that the traffic diversion resulting from Gulf carriers’ subsidized capacity expansion to the United States is widespread, adversely affecting not only U.S. carriers, but also U.S. carriers and their JV partners, as well as other non-Gulf foreign carriers.²⁰⁰

Likewise, the Edgeworth Report suggests that because our models present “a single average effect” of Gulf carrier presence across all city-pairs where such presence exists, the results should somehow be discounted.²⁰¹ This criticism too, is both wrong and irrelevant. The use of explanatory variables that measure the average effect of a particular measure of interest is commonplace in empirical economics, including a broad range of peer-reviewed, published academic papers examining various aspects of airline economics.²⁰² More importantly, however, the fact that the estimated coefficient for *Number of Gulf Carriers Present* represents the average effect across the thousands of city-pairs where at least one Gulf carrier was present does nothing to alter the fact that subsidized Gulf carrier presence lowers the number of passengers on U.S. carriers.

5) The criticism that we ignored the competitive effects of other carriers is also irrelevant

¹⁹⁸ See Edgeworth Report, page 38.

¹⁹⁹ See Emirates Response, page 138.

²⁰⁰ It is important to note that Emirates’ assertion that our analysis “lumps together U.S. and other carriers into one group” is also incorrect. Our traffic paper estimates separate regressions for U.S. carriers, U.S. carriers and their JV partners, and other non-Gulf foreign carriers (excluding U.S. carriers’ JV partners). In each instance, the presence of Gulf carriers reduces the number of passengers (or bookings) for each subset of passengers.

²⁰¹ See Edgeworth Report, page 38.

²⁰² See, for example, “Product Unbundling in the Travel Industry: The Economics of Airline Bag Fees”, Jan K. Brueckner, Darin Lee, Pierre Picard and Ethan Singer, *Journal of Economics Strategy & Managements*, Volume 24, Number 3, (2015), pp. 457-484 (showing the average decline in base fares following the adoption of first bag fees), and “International Airfares In The Age Of Alliances: The Effects Of Codesharing And Antitrust Immunity”, Jan K. Brueckner, *The Review of Economics and Statistics*, 85(1), pp. 105-108 (showing the average impact of immunized alliances on airfares).

Emirates' submission asserts that our econometric analysis of harm was somehow incomplete because it "fails to distinguish effects of Gulf Carrier competition from that of other carriers".²⁰³ Similarly, the Edgeworth Report asserts that "Air India and Turkish Airlines, among others, compete substantially for U.S.-India traffic" and thus "to the extent non-Gulf-based carriers compete on the same routes, the effect of those competitors would be ascribed to Etihad and the other Gulf carriers."²⁰⁴ This criticism is also irrelevant. As shown in Exhibit 25 below, when additional independent variables are added to control for the number of Non-Gulf carriers (or Air India and Turkish Airlines specifically), it does not alter the fundamental conclusion that the presence of each Gulf carrier reduces the number of U.S. carrier passengers by approximately more than 8%, on average.

6) The fact that our analysis shows that Gulf carrier presence lowers U.S. carriers' traffic on city-pairs behind to/from destinations behind the Gulf carriers' U.S. gateways indicates the far-reaching impact of the Gulf Carriers' subsidies

Finally, Emirates asserts that our econometric analysis of traffic diversion is "a crudely wrought analysis"²⁰⁵ because it finds that Gulf carrier presence lowers U.S. carriers' passengers on city-pairs to/from Gulf carriers' U.S. gateways by approximately the same percentage as on city-pairs involving U.S. cities behind a Gulf carrier gateway city. For example, Emirates states that "[i]t is simply not credible that Gulf Carriers have the same alleged competitive impact on traffic from Mumbai to Kansas City, which a passenger can reach only by connecting on a U.S. flag carrier, as on traffic from Mumbai to Boston, where Gulf Carriers fly directly."²⁰⁶

Emirates' assertion that Gulf carriers' competitive presence should only be felt on city-pairs to/from their U.S. gateway cities is puzzling, particularly in light of the fact that all three Gulf carriers have been highly vocal regarding the fact that many of their passengers connect *behind their U.S. gateways* onto the flights of U.S. carriers.²⁰⁷ Emirates, for example, frequently promotes

²⁰³ See Emirates Response, page 138.

²⁰⁴ See Edgeworth Report, page 38.

²⁰⁵ See Emirates Response, page 139.

²⁰⁶ Ibid.

²⁰⁷ See, for example, Emirates Response at page 175: "Increased travel stimulated by the efficiency of the Emirates model is also a boon to the U.S. airline industry. Passengers arriving to the United States on Emirates flights travel on to over 200 airports in small and medium-sized communities in the United States..." See also Etihad Response, page 14: "...Etihad is actually feeding passengers onto US domestic carriers, including Delta, United and American. In 2014, Etihad delivered 182,000 connecting passengers onto U.S. airlines and this is forecast to grow to approximately

the fact that its partnership with JetBlue and Alaska allow the carriers to create convenient connections for Emirates' passengers traveling to dozens of smaller U.S. cities not served by Emirates.²⁰⁸ As shown in Exhibit 24 below, these partnerships (as well as the codeshare agreements between American and both Etihad and Qatar) have enabled Gulf carriers to capture substantial shares of bookings between the Indian Subcontinent and their U.S. gateway cities, but also from other U.S. cities they do not serve themselves.²⁰⁹ Thus, in 2014, the Gulf carriers' 35.6% share of bookings between Raleigh-Durham (a city that no Gulf carrier served in 2014) and the Indian Subcontinent was approximately the same as their 35.1% share of bookings between Chicago (a city served by all three Gulf carriers in 2014) and the Indian Subcontinent.²¹⁰

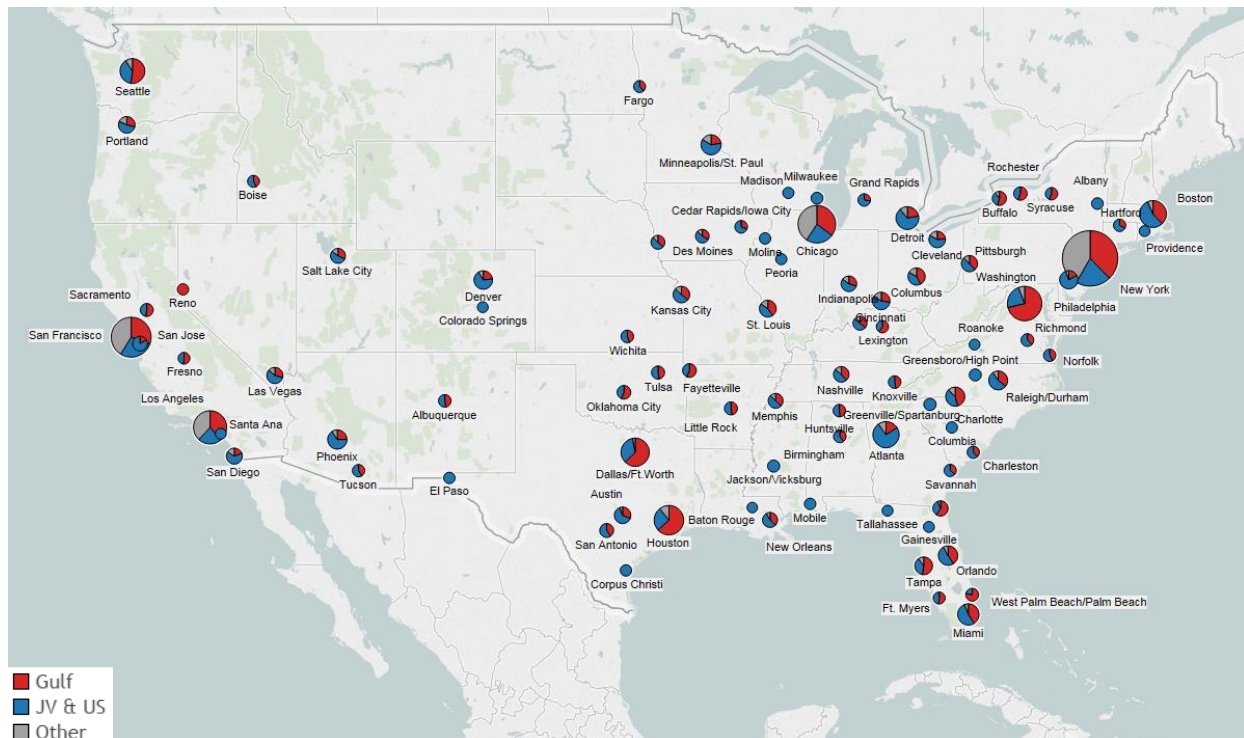
300,000 in 2015" and Qatar Comments, page 58: "far from causing harm, services by carriers such as Qatar Airways provide a valuable source of interline feed traffic and benefit US carriers."

²⁰⁸ See "Interview: Sales VP Matthias Schmid On Creating Space For Emirates In U.S. Corporate Biz", Business Travel News, June 11, 2015: "We've tried to work closely with JetBlue, Alaska and Virgin. We fly three times a day between Dubai and JFK, and the second daily flight to Boston was to strengthen our relationship with JetBlue. We have a reciprocal codesharing agreement with JetBlue, so the JetBlue flights are also operating with an Emirates code and all the U.S.-to-Dubai flights will carry a JetBlue code. JetBlue started last year Detroit to Boston, which was absolutely aligned with our arrival and departure times coming to Boston, and we're working with them on further optimization. I also mentioned the second daily flight to Seattle, which was to strengthen our relationship with Alaska because we get significant feed via Alaska out of Canada and certain U.S. routes."

²⁰⁹ As with all of our analyses, the bookings in Exhibit 24 are assigned to the carrier that operates the greatest proportion of an itinerary's total distance. Indeed, in the particular city-pair identified by Emirates in their submission (Kansas City-Mumbai), Gulf carriers grew their share of bookings from 1.8% in 2008 to 14.5% in 2014 even though total bookings fell slightly.

²¹⁰ Source: MIDT. Gulf carriers' share of bookings between the Indian Subcontinent and other cities they do not serve directly are even higher, including Tampa (52.3%), Jacksonville (59.0%), Buffalo (54.3%) and Columbus (42.1%).

EXHIBIT 24: SHARE OF BOOKINGS BETWEEN U.S. CITIES AND THE INDIAN SUBCONTINENT, 2014



Source: MIDT 2014.

Notes: Map shows cities for which there was at least one average daily booking each way between city and the Indian Subcontinent. Indian Subcontinent includes India, Pakistan, Nepal, Bangladesh, Maldives, and Sri Lanka.

7) Our core finding that the presence of Gulf carriers reduces the number of passengers on U.S. carriers is robust to the criticisms raised by the Gulf carriers

Although none of the criticisms of our econometric analysis demonstrating the traffic losses for U.S. carriers due to subsidized Gulf carrier competition are valid, we have nevertheless demonstrated that even after taking these concerns into account, the estimated coefficient on the *Number of Gulf Carriers Present* remains largely unchanged.

Exhibit 25 below provides additional robustness testing for some of the key regressions from Exhibit 7 in our initial Traffic Study responding to Edgeworth's and Emirates' concerns. Columns 1-6 show the results for U.S. carrier passengers and columns 7-12 show the results for U.S. and JV carrier bookings. For each subset of regressions, we start by showing the result from Exhibit 7 of our initial study (referred to herein as the "base models"). For example, column (1) in Exhibit 25 replicates column (3) from Exhibit 7 of our initial study (i.e., U.S. carrier passengers for all city-

pairs) and column (7) in Exhibit 25 replicates column (6) from Exhibit 7 of our initial study (i.e., U.S. and JV carrier bookings for all city-pairs).²¹¹

To test the validity of the Edgeworth Report’s assertion that our method of constructing the Gulf carrier presence variable is influencing our results by “mak[ing] it appear that carriers ‘enter’ and ‘exit’ a particular route when they in fact do not”²¹², Columns (2) and (8) in Exhibit 25 replicate the base models, but modifies the *Number of Gulf Carriers Present* variable so that once each Gulf carrier’s respective presence variable indicates it is present on a particular city-pair (i.e., once they reach a 3% share), they remain present for the duration of the sample. As shown in Columns (2) and (8) in Exhibit 25, the estimated coefficient on the modified variable of interest (*Number of Gulf Carriers Ever Present*) also remains largely unchanged from our initial analysis, thus showing that Edgeworth’s criticisms are unwarranted. Because *Number of Gulf Carriers Ever Present* would indicate that the Gulf carriers were present on a city-pair even if they discontinued serving the foreign endpoint, Columns (3) and (9) in Exhibit 25 repeat the regressions from Columns (2) and (8) but exclude city-pairs to/from foreign destinations where one or more of the Gulf carriers suspended or terminated service over the sample period.²¹³ As shown in Exhibit 25, the estimated coefficient on *Number of Gulf Carriers Ever Present* in columns (3) and (9) is similar to the estimated coefficient on *Number of Gulf Carriers Present* in the base models, confirming the substantial diversion of U.S. carriers’ passengers on city-pairs with Gulf carrier presence.

To test Emirates’ assertion that we have not accounted for competition by other carriers, columns (4) and (10) modify the regressions in columns (3) and (9) by including *Number of Other (Non-Gulf) Competitors*, a count of the number of other (non-Gulf) competitors with at least a 3% share of bookings in the city-pair in the given quarter.²¹⁴ Likewise, to test whether the Edgeworth

²¹¹ Recall that in our initial Traffic Study, we measure the effect of Gulf carrier presence on city-pairs where the U.S. endpoint was a city served by one of the Gulf carriers (“Gulf carrier U.S. gateways”), city-pairs to/from other U.S. cities (“Behind Gulf Carrier U.S. Gateways”) as well as the combined set of gateway and behind gateway city-pairs (“All Cities”). For the purpose of our additional robustness testing described above, we focus on the “All Cities” sample.

²¹² See Edgeworth Report, page 39.

²¹³ Many of these foreign endpoints were in war zones or other areas with geo-political conflicts, such as destinations in Syria, Libya or Morocco.

²¹⁴ In constructing *Number of Other (Non-Gulf) Competitors*, we exclude any carrier (or their immunized partners) that is included in the dependent variable.

Report's assertion that "Air India and Turkish Airlines, among others, compete substantially for U.S.-India traffic" and thus "to the extent non-Gulf-based carriers compete on the same routes, the effect of those competitors would be ascribed to Etihad and the other Gulf carriers"²¹⁵ has any merit, Columns (5) and (11) in Exhibit 25 replicate the regressions in Columns (3) and (9) but also add dummy variables for the presence of Air India and Turkish Airlines. In both models, the estimated coefficient on the key variable of interest (*Number of Gulf Carriers Present*) remains largely unchanged, showing once again that Edgeworth's criticisms are unwarranted.

Finally, to test whether the inclusion of city-pairs between the United States and Europe is influencing our key findings, Columns (6) and (12) in Exhibit 25 replicate the models in Columns (5) and (11) but exclude city-pairs to/from Europe. In both models, the estimated coefficient on the key variable of interest (*Number of Gulf Carriers Present*) remains largely the same, confirming that the Edgeworth Report's assertion that the inclusion of city-pairs to/from Europe "could not have caused the effects the Compass Lexecon Report purports to find"²¹⁶ is unwarranted.

²¹⁵ See Edgeworth Report, page 38.

²¹⁶ See Edgeworth Report, page 38.

EXHIBIT 25: FURTHER ROBUSTNESS TESTING OF REGRESSION ANALYSIS OF U.S. – INTERNATIONAL TRAFFIC FOR U.S. AND JV PARTNER CARRIERS

	US Carrier Passengers (DB1B) All Cities						US + JV Carrier Bookings (MIDT) All Cities					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Original Regression	Gulf Ever a Competitor	Gulf Ever a Competitor (Excluding Dropped Routes)	Gulf Ever a Competitor (Excluding Dropped Routes)	Gulf Ever a Competitor (Excluding Dropped Routes)	Excluding Europe (Excluding Dropped Routes)	Original Regression	Gulf Ever a Competitor	Gulf Ever a Competitor (Excluding Dropped Routes)	Gulf Ever a Competitor (Excluding Dropped Routes)	Gulf Ever a Competitor (Excluding Dropped Routes)	Excluding Europe (Excluding Dropped Routes)
Number of Gulf Carriers Present	-0.0873** (0.00871)						-0.102** (0.00580)					
Number of Gulf Carriers Ever Present		-0.0938** (0.00676)	-0.0933** (0.00681)	-0.101** (0.00683)	-0.0913** (0.00693)	-0.0992** (0.00661)		-0.0861** (0.00536)	-0.0856** (0.00540)	-0.0947** (0.00548)	-0.0834** (0.00551)	-0.0750** (0.00548)
Number of Other (Non-Gulf) Competitors				-0.0526** (0.00379)						-0.0693** (0.00490)		
Air India Presence					0.0174 (0.0322)	0.0257 (0.0180)					-0.00351 (0.0322)	-0.00755 (0.0114)
Turkish Airlines Presence					-0.0601** (0.0189)	-0.0878** (0.0139)					-0.0675** (0.0127)	-0.0708** (0.0118)
ln(Population)	1.748** (0.134)	1.982** (0.137)	1.937** (0.137)	1.981** (0.136)	1.969** (0.139)	2.510** (0.188)	1.731** (0.118)	1.902** (0.121)	1.891** (0.122)	1.863** (0.121)	1.937** (0.123)	1.510** (0.147)
ln(Income per Capita)	1.378** (0.0762)	1.447** (0.0767)	1.444** (0.0769)	1.600** (0.0775)	1.440** (0.0770)	1.962** (0.110)	0.793** (0.0690)	0.842** (0.0702)	0.828** (0.0708)	0.830** (0.0694)	0.823** (0.0711)	1.489** (0.0940)
D(Quarter 2)	0.387** (0.00497)	0.388** (0.00496)	0.389** (0.00498)	0.394** (0.00503)	0.389** (0.00498)	0.217** (0.00683)	0.287** (0.00459)	0.288** (0.00460)	0.289** (0.00463)	0.294** (0.00479)	0.289** (0.00462)	0.116** (0.00612)
D(Quarter 3)	0.403** (0.00537)	0.404** (0.00536)	0.406** (0.00538)	0.408** (0.00534)	0.406** (0.00538)	0.181** (0.00737)	0.379** (0.00524)	0.380** (0.00525)	0.381** (0.00528)	0.388** (0.00538)	0.381** (0.00528)	0.201** (0.00612)
D(Quarter 4)	0.177** (0.00593)	0.178** (0.00592)	0.179** (0.00595)	0.175** (0.00590)	0.179** (0.00594)	0.127** (0.00700)	0.113** (0.00539)	0.113** (0.00540)	0.114** (0.00544)	0.116** (0.00552)	0.115** (0.00540)	0.0308** (0.00611)
D(2008)	0.184** (0.0122)	0.193** (0.0123)	0.187** (0.0124)	0.233** (0.0124)	0.185** (0.0122)	0.284** (0.0272)	0.149** (0.0111)	0.156** (0.0111)	0.153** (0.0112)	0.143** (0.0113)	0.152** (0.0107)	0.228** (0.0212)
D(2009)	0.161** (0.0127)	0.173** (0.0128)	0.171** (0.0128)	0.220** (0.0131)	0.169** (0.0128)	0.247** (0.0270)	0.0509** (0.0117)	0.0592** (0.0118)	0.0578** (0.0119)	0.0428** (0.0120)	0.0559** (0.0118)	0.127** (0.0207)
D(2010)	0.162** (0.0110)	0.171** (0.0111)	0.170** (0.0111)	0.201** (0.0114)	0.168** (0.0111)	0.260** (0.0216)	0.0862** (0.00989)	0.0932** (0.00997)	0.0920** (0.0100)	0.0793** (0.0101)	0.0900** (0.0100)	0.155** (0.0166)
D(2011)	0.0965** (0.00893)	0.102** (0.00896)	0.102** (0.00900)	0.110** (0.00918)	0.101** (0.00897)	0.144** (0.0167)	0.0428** (0.00810)	0.0475** (0.00813)	0.0475** (0.00818)	0.0361** (0.00825)	0.0460** (0.00816)	0.0686** (0.0130)
D(2012)	0.0490** (0.00764)	0.0524** (0.00765)	0.0521** (0.00768)	0.0575** (0.00786)	0.0514** (0.00767)	0.106** (0.0131)	-0.00628 (0.00706)	-0.00343 (0.00707)	-0.00346 (0.00711)	-0.0109 (0.00721)	-0.00426 (0.00711)	0.0175 (0.0101)
D(2013)	0.0216** (0.00741)	0.0239** (0.00741)	0.0235** (0.00744)	0.0292** (0.00758)	0.0233** (0.00742)	0.0472** (0.0113)	-0.0202** (0.00692)	-0.0178* (0.00692)	-0.0179* (0.00697)	-0.0215** (0.00695)	-0.0181** (0.00696)	-0.0152 (0.00899)
Constant	-41.90** (2.864)	-47.37** (2.943)	-46.40** (2.956)	-48.89** (2.942)	-47.02** (2.994)	-63.41** (4.477)	-35.27** (2.500)	-39.29** (2.609)	-38.90** (2.624)	-38.31** (2.605)	-39.79** (2.641)	-38.09** (3.465)
Observations	554,690	554,690	546,818	546,818	546,818	250,592	1,493,711	1,493,711	1,473,566	1,473,566	1,473,566	769,787
R-squared	0.976	0.976	0.976	0.976	0.976	0.974	0.988	0.988	0.988	0.988	0.988	0.984

* p<0.05, ** p<0.01

Sources: U.S. DOT DB1B; MIDT; World Bank; BEA.

Notes: Robust standard errors in parenthesis. Passenger Weighted. A Gulf carrier is present on a city-pair in a quarter if its share of MIDT bookings on a city-pair is at least 3%. A booking belongs to the carrier operating the longest total distance. A passenger is a U.S. carrier passenger if the operating carrier (on the “overseas” segment for DB1B or on the longest total distance flown for MIDT) of an itinerary was one of the U.S. carriers (e.g., American, Continental, Delta, Northwest, US Airways, United). Regression covers the period 2008/Q1-2014/Q3. Population and Income are annual. 2014 population and income based on 2013 grown at the cumulative average growth rate from 2008-2013. “Gulf Carriers Ever Present” is modified from the “gulf Carriers Present” variable in such a way that once each Gulf carrier’s respective presence variable indicates it is present on a particular city-pair (i.e., once they reach a 3%share), they remain present for the duration of the sample. Includes city-pair fixed effects (not shown). Includes passengers on mainland U.S.-international city-pairs, except itineraries to/from North America and South America, and itineraries starting or ending in Milan. “Dropped Routes” drops all city-pairs to international cities where one of the Gulf carriers had service as of 2008 and has dropped service at some point since. Dropped routes include: Libya (TIP) and Syria (DAM), Nagoya (NGO), Alexandria (HBE), Colombo, Sri Lanka (CMB), Casablanca (CMN), Nagpur, India (NAG), and Cebu, Philippines (CEB).

- iii. *The assertion by the Gulf carriers that because some portion of their passengers make connections to flights behind their U.S. gateways, their subsidized service provides “revenue benefits” for Delta, American and United misses the point*

Because some of their passengers make codeshare or interline connections at their U.S. gateway airports to flights operated by American, United or Delta, the Gulf carriers assert that U.S. carriers are enjoying “revenue benefits” from the Gulf carriers’ services to the United States.²¹⁷ Nothing could be further from the truth. The fact that U.S. carriers maintain a variety of interline/codeshare relationships with the Gulf carriers does *not*—in any way—demonstrate that U.S. carriers have not been harmed as a result of Gulf carriers’ subsidized expansion to the United States. Indeed, the fact that U.S. carriers have been all but foreclosed from serving many of the city-pairs that have been flooded with Gulf carrier capacity over the past several years has left them with little choice but to try to mitigate some small portion of the harm by generating incremental revenue in these city-pairs by providing the behind U.S. gateway domestic segments.

f) Contrary to Assertions in the Edgeworth Report, There is a Clear Causal Link Between the Gulf Carriers’ Subsidies and the Harm to U.S. Carriers

The Edgeworth Report attempts to cast doubt on the findings of our Traffic Study by suggesting that: (a) our analysis was predicated on an “uncritical acceptance of the ‘evidence’”²¹⁸ related to the Gulf carriers’ subsidies; and (b) by asserting that we have failed to demonstrate that the documented traffic losses were the result of these subsidies. Both of these statements are incorrect.

²¹⁷ See Emirates Response, page 176: “Emirates has carried over 1.35 million feeder passengers to U.S. and European gateways who have then travelled onwards to U.S. destinations using other carriers, resulting in a revenue benefit of \$145.5 million to the Legacy Carriers and their joint venture partners”, Qatar Comments, page 53: “Despite the claims of economic harm advanced by the Big Three, the fact is that Qatar Airways contributes revenue to US carriers. For example, Qatar Airways has a broad codeshare arrangement with American Airlines, and transfers its traffic arriving at US gateways to onward services operated by American. Although the amount of interline revenue that changes hands may vary from year to year, the total value of the traffic transferred by Qatar Airways has been in the neighborhood of \$60 million per year. Of course, this feed traffic enhances, not reduces, the viability of American’s domestic services” and Etihad Response, page 14: “...Etihad is actually feeding passengers onto US domestic carriers, including Delta, United and American. In 2014, Etihad delivered 182,000 connecting passengers onto U.S. airlines and this is forecast to grow to approximately 300,000 in 2015.”

²¹⁸ See Edgeworth Report, page 31.

First, the purpose of our Traffic Study was not to evaluate the strength of the evidence related to Gulf carriers' subsidies put forth by the parties in their Whitepapers,²¹⁹ but to assess the impact of the Gulf carriers' growth on the U.S. airlines. Nevertheless, in preparing our initial studies, we reviewed many of the relevant source documents, including the audited financials of Qatar and Etihad that were previously unavailable (at least within the United States), and these documents *confirmed the subsidies*. Specifically, these financials clearly demonstrate that neither Etihad nor Qatar would be classified by their auditors as "going concerns" in the absence of the substantial subsidies that have been provided to these two airlines in particular.²²⁰ Thus, the adverse effects (i.e., losses in traffic) that U.S. carriers are already suffering across thousands of city-pairs due to the presence of Gulf carriers can be directly attributed to the subsidies, as but for the subsidies these airlines would not be commercially viable and likely would not exist.²²¹

Further, the future expansion of these carriers is also *dependent on their continuing subsidies*. As noted in our Traffic Study, on May 4, 2015, Qatar announced that it would add new daily non-stop service between its Doha hub and Los Angeles (effective January 1, 2016), Boston (effective March 16, 2016) and Atlanta (effective July 1, 2016), as well as an additional daily frequency to New York City (effective March 1, 2016).²²² Less than two weeks after that announcement, *The Wall Street Journal* reported that Qatar Airways' CEO admitted that "Because it is such a capital intensive industry... without very strong financial background,

²¹⁹ See Partnership White Paper and Charles Anderson, "Evidence of Actionable Government Subsidies Received by Etihad Airways, Qatar Airways, and Emirates Airline", CapTrade Whitepaper, January 25, 2015.

²²⁰ See, e.g., Etihad 2013 Financial Statements at page 4 (Etihad's Statement of Financial Position shows it has \$13.7 billion in total assets, as compared to over \$17 billion in subsidies since 2004) and Qatar 2014 Financial Statements at 5 (Qatar's Consolidated Statement of Financial Position shows that Qatar has QR 48.5 billion (\$13.3 billion) in total assets, as compared to over \$16 billion in subsidies since 2004). See also Anderson Report, "Qatar's audited financial statements suggest that, but for the explicit sovereign guarantee, Qatar Airways would not continue to exist as a 'going concern'" (p.1) and "Qatar's audited financial statements suggest that, but for the explicit sovereign guarantee, Qatar Airways would not continue to exist as a 'going concern.'" (p. 44)."

²²¹ The subsidies also enable key aspects of Emirates' business strategy, such as its massive capacity expansion, which would not be possible "but for" the subsidized expansion of Dubai's airport infrastructure (much of which is purpose-built for Emirates, including its dedicated A380 concourse) that is enabling the airline's continued rapid growth. See, e.g., Rory Jones, "Emirates Airlines' Boss Bemoans Dubai Bottleneck", *The Wall Street Journal* (Jun. 2, 2014) (reporting that Emirates' President Tim Clark said he was worried about the airline's ability to continue growing at the pace they would like and that "the airport is running out of space"); Rory Jones, *Dubai to Invest \$32 Billion in Airport to Meet Emirates Airline Growth*, *The Wall Street Journal* (Sept. 8, 2014) (noting that Clark had "previously warned that an infrastructure bottleneck at the current airport Dubai International would impede his airline's ambitions").

²²² See "Qatar Airways Set to Expand its USA Network with the Addition of Three New Routes", Qatar Airways Press Release, May 4, 2015. http://www.qatarairways.com/global/en/press-release.page?pr_id=pressrelease_usa.

especially from the government” an airline wouldn’t be able to expand in today’s environment.²²³ Similarly, in an interview published earlier this year, Qatar’s CEO stated that the Qatar Airways Board of Directors has decided to put off privatizing the airline for at least another decade because “private investors really don’t have the stomach to invest to the extent that Qatar Airways will require for its expansion.”²²⁴

3) THE GULF CARRIERS HAVE FAILED TO DEMONSTRATE THAT THEIR SERVICES STIMULATE NEW TRAFFIC TO/FROM THE UNITED STATES

A central and frequently repeated claim by the Gulf carriers is that they provides large benefits to the United States—without harming U.S. carriers—because their services largely stimulate new demand.²²⁵ Indeed, Etihad’s General Counsel recently stated that most of the passengers on its flights would not have travelled to the United States but for its service.²²⁶ Similarly, the “economic impact” section of Emirates’ submission *assumed* that 100% of the foreign originating passengers on its flights to the United States (i.e., visitors) are passengers that would not have travelled in the absence of Emirates’ service.²²⁷ Because a substantial component of the Gulf carriers’ claims in this proceeding (e.g., lack of harm to U.S. carriers, increased visitor

²²³ See “Qatar Airways CEO defends state support”, *The Wall Street Journal*, May 14, 2015.

²²⁴ See David George, *Qatar Airways Ramps Up Global Expansion*, Bloomberg Businessweek Middle East (Mar. 2, 2015), <http://businessweekme.com/Bloomberg/newsid/190/newsid/413#cnttop>.

²²⁵ See, for example, Emirates Response at page 7 (“Emirates’ operating efficiencies and superior service have substantially stimulated traffic in these previously neglected markets”); page 84 (“the facts demonstrate that the entry of Emirates into U.S. markets has stimulated additional traffic”); page 87 (“the data demonstrate that where Emirates has entered U.S. markets, overall demand for air travel in those markets has increased, reducing or eliminating the effects on other carriers’ traffic”); and page 103 (“Emirates’ entry has grown the pie: enhanced levels of service have attracted new travelers to routes, allowing Emirates to grow without significantly diverting passengers from the Legacy Carriers”).

²²⁶ See, for example, CAPA Americas summit debate in US and Gulf carriers, 28-Apr-2015, (video available at <http://centreforaviation.com/analysis/capa-americas-aviation-summit-las-vegas-a-high-level-gulf-us-airline-debate---video-221863>), with Jim Callaghan of Etihad starting at 12:25 (authors’ transcription): “*My flight from Abu Dhabi to Los Angeles on Etihad Airways, 777 Boeing aircraft, made in the USA, capacity of 225 people, load 215 – 95% load factor. We had passengers from 18 destinations who joined the flight in Abu Dhabi and flew 16 hours to get to Los Angeles, actually it was less than 16 hours, we had a good tail wind. But these are folks who otherwise would not have been able to get to the U.S. There were two of those destinations that were actually served by U.S. carriers – two out of 18. Now, either those folks wouldn’t have been able to travel to the U.S. or they would have to take two or three stops before getting here. Pretty sure most of them wouldn’t have come here.*”

²²⁷ See, Emirates Response, page 177, asserting that “... Emirates’ current level of non-stop service to the Middle East creates \$4.7 billion in annual economic benefit (output) in the U.S. economy.” However, as described in greater detail in Section 4 below, an examination of the calculations underlying this claim is the assumption that 100% of the U.S. visitors on Emirates’ flights would not have come to the United States but for Emirates’ service. See Emirates Response, page 178 (Figure V-5, note 1): “Includes the impact of *all onboard passengers* (includes passengers connecting within the U.S. to/from all Emirates Dubai flights.)” (emphasis added).

spending, etc.) hinge on their claim of significant demand stimulation, testing the veracity of this claim is critical to understanding the impact of Gulf carriers' subsidized expansion not only on U.S. carriers, but also on the U.S. economy.

In our previous Traffic Study, we applied standard econometric modelling techniques to rigorously demonstrate that Gulf carrier presence has failed to meaningfully stimulate additional traffic to/from the United States.²²⁸ Although the submissions of the Gulf carriers (and USTA) go to great lengths to try to undermine this key finding, a close examination of their submissions reveals that they are devoid of any credible analysis refuting our empirical finding that Gulf carriers' presence has failed to meaningfully stimulate additional traffic to/from the United States. Moreover, as described below, there does not even appear to be agreement between the submissions of Gulf carriers as to whether their services do in fact stimulate new traffic.

a) In Their Submissions, Neither Etihad Nor Qatar Even Contend That the Carriers' Services Stimulate New Demand

As noted above, Etihad's General Counsel recently asserted that most of the passengers on its flights "would not have come" to the United States but for Etihad's service.²²⁹ It is revealing, therefore, that Etihad's submission in this docket—including the study prepared by Edgeworth Economics on its behalf—does not even attempt to refute our finding that the Gulf carriers have failed to stimulate additional traffic to/from the United States. To the contrary, Edgeworth's primary criticism of our conclusion regarding Gulf carriers' lack of demand stimulation is that our finding is "...predicated on the notion that in order to compete, new entrants must 'stimulate demand' by serving only customers not already served by an incumbent U.S. carrier"²³⁰ or that "Etihad is responsible for 'stimulating demand' between the U.S. and the rest of the world on routes where it does not compete."²³¹ Similarly, Qatar Airways' comments are also devoid of

²²⁸ See Traffic Study, Sections 2 and 3.

²²⁹ See footnote 226 above.

²³⁰ See Edgeworth Report, page 2.

²³¹ See Edgeworth Report, par. 72. The Edgeworth Report also asserts that "the Compass Lexecon Report provides no explanation as to why Etihad is responsible for 'stimulating demand' between the U.S. and the rest of the world on routes where it does not compete." The reason why no explanation was provided is straightforward: our analysis makes no such claim, and Edgeworth's attempt to suggest that we did is entirely unwarranted.

any analysis related to the question of stimulation, choosing instead to simply repeat the conclusion of the Edgeworth study.²³²

The Edgeworth Report's characterization of our stimulation analysis, however, is simply wrong. As a preliminary matter, it is important to point out that Edgeworth Economics was apparently confused as to what the concept of demand stimulation means in the context of our study.²³³ As a result, Edgeworth assumed "it to mean *servicing a customer who would not otherwise be serviced by U.S. carriers*"²³⁴ even though this (illogical) concept is nowhere to be found in our study. Since we provided a clear explanation of the concept of demand stimulation on page 3 of our study,²³⁵ Edgeworth's adoption of an alternative (and nonsensical) definition is wholly unwarranted. Moreover, the submissions of Etihad and Qatar adopt the same mischaracterization of our finding related to demand stimulation.²³⁶ It is telling that neither the Edgeworth Report nor Etihad's and Qatar's comments cite even a single passage from our Traffic Study to support those characterizations. They simply ignored what we said and concocted an economically nonsensical and self-serving definition of demand stimulation as a straw man they could attack.

Simply put, our empirical analysis of the Gulf carriers' traffic stimulation claims addresses a straightforward question: *is Gulf carrier presence on a city-pair to/from the United States associated with higher levels of traffic after controlling for changes in factors that impact underlying demand (e.g., population and per capita income growth)?* If an empirical analysis of this question were to find a positive and statistically significant relationship between Gulf carrier presence and the level of passenger traffic, then it would be reasonable to conclude that some

²³² See Qatar Comments, footnote 138: "This is the entire thrust of the Compass Lexecon Study, which tries to 'prove' that Gulf carriers have not stimulated the markets they serve, and that they have instead "stolen" traffic from US carriers. There is no requirement anywhere that a new entrant in a market accommodate only new (or stimulated) demand."

²³³ See Edgeworth Report, Par. 59: "...While the Compass Lexecon Report does not explain this concept [demand stimulation]..."

²³⁴ Ibid.

²³⁵ See Traffic Study, page 3: "...that Gulf carrier presence has failed to meaningfully stimulate additional traffic (i.e., on average, the presence of Gulf carriers on a city-pair to/from the United States does not have a statistically significant impact on traffic levels on the city-pair after controlling for other factors that affect passenger demand such as per capita income and population)." (emphasis added)

²³⁶ See, for example, Qatar Comments, footnote 138: "This is the entire thrust of the Compass Lexecon Study, which tries to "prove" that Gulf carriers have not stimulated the markets they serve, and that they have instead "stolen" traffic from US carriers. There is no requirement anywhere that a new entrant in a market accommodate only new (or stimulated) demand."

portion of Gulf carriers' passengers are newly stimulated passengers that would not otherwise have travelled *on any carrier* but for Gulf carriers' services.²³⁷ If, on the other hand, an empirical analysis finds no positive and statistically significant relationship between Gulf carrier presence and the level of passenger traffic, it follows that Gulf carriers' subsidized traffic gains have come largely (or entirely) at the expense of other carriers. The latter result is precisely what the econometric analysis in our Traffic Study established, and none of the Gulf carriers has provided any effective rebuttal of this key result.

It is important to emphasize that contrary to what the Gulf carriers allege in their submissions, we *do not* interpret this empirical result (i.e., the lack of a positive and statistically significant relationship between the passenger traffic and Gulf carrier presence across city-pairs) to mean that U.S. carriers are in any way *entitled* to carry a specific share or level of traffic between the United States and international destinations.²³⁸ Instead, as we made clear in our initial Traffic Study, the empirical result simply implies that the increase in traffic between the United States and the destinations served by the Gulf carriers is attributable to factors related to the underlying demand for air transportation in those city-pairs (e.g., population and economic growth at the endpoints), *and is not a result of the capacity additions to these regions by the Gulf carriers*.²³⁹ Paradoxically, this is precisely the same conclusion reached by the Edgeworth Report, when it found that Gulf carriers "...have been growing by serving the expanding overall volume of traffic between the U.S. and other countries."²⁴⁰ Thus, putting aside Edgeworth's attempt to cast

²³⁷ Note that even if one finds some degree of stimulation on city-pairs with Gulf carrier presence, this does not imply that Gulf carriers have stimulated *overall* traffic growth to/from the United States, as some or all of the "stimulated traffic" on that city-pair could simply reflect substitution of destinations by travelers (e.g., taking a vacation to Dubai *instead of* a vacation to London). See Section 3.d.iv below.

²³⁸ For example, in a blatant attempt to claim (incorrectly) that our study has adopted such a position, the Edgeworth Report asserts that "The Compass Lexecon Report fails to point to any economic or legal doctrine which indicates that an incumbent is *entitled* to the customers it serves and the only way for new entrants to compete 'fairly' is to sell their products to customers *who would not otherwise purchase from the incumbent*" (Edgeworth Report, par. 60, emphasis in original). The Emirates Response makes a similar unjustified claim at page 102 of its comments: "The Legacy Carriers' argument is premised on the disturbing assumption that existing carriers are entitled to their existing traffic as well as a share of market growth: in other words, to be insulated from competition." Likewise, Qatar's Comments (at page 44) make a parallel claim: "Qatar Airways takes exception to any assertion that it 'steals' traffic from US carriers. As a practical matter, carriers do not own or have any entitlement to 'their' passengers, who are free to choose their service on the basis of price and convenience."

²³⁹ In an attempt to muddy the waters even further, the Edgeworth Report attempts to recast the issue of the Gulf carriers' subsidies and the Open Skies agreement as an alleged antitrust violation, even though no such claim has been made. See, for example, Edgeworth Report, Par. 61 ("Importantly, U.S. competition laws are concerned with protection of competition, not individual competitors.")

²⁴⁰ See Edgeworth Report, page 13.

doubt on our finding that Gulf carriers have failed to meaningfully stimulate additional traffic by grossly mischaracterizing our analysis, Etihad's own economists have made no attempt to establish that the carrier's services do in fact stimulate *new* traffic.²⁴¹ Instead, the Edgeworth Report correctly finds that Gulf carriers have grown by simply capturing an increasing proportion of the traffic that would have otherwise flown (albeit on other carriers).

Simply put, it is telling that the only economic submission offered by any of the Gulf carriers addressing the issue of stimulation (the Edgeworth Report) does not endorse the claim by Etihad's General Counsel that most of its passengers would not have flown to the United States but for that carriers' services, nor does it endorse the repeated claims by Emirates that its services have "attracted new travelers to routes, allowing Emirates to grow without significantly diverting passengers from the Legacy Carriers".²⁴² Indeed, the primary conclusion reached in the Edgeworth Report regarding the Gulf carriers' subsidized services is that they "have been growing by serving the expanding overall volume of traffic between the U.S. and other countries"²⁴³, a conclusion that is fully consistent with our empirical finding that Gulf carriers have failed to meaningfully stimulate additional traffic to the United States above and beyond what underlying demand would have otherwise dictated.

b) Emirates' Current View That Econometric Analysis is a "Poor Tool" to Assess Market Stimulation is a Reversal from its Position Just a Few Months Ago

Emirates' critique of our econometric analysis establishing that Gulf carriers have failed to meaningfully stimulate additional traffic consists largely of a single objection, which is that "[m]assive, worldwide econometric analysis is a poor tool to resolve questions of stimulation."²⁴⁴ This criticism is not only unsupported, but also directly contradicted by the fact that Emirates' CEO Tim Clark publicly endorsed and actively promoted a recent econometric study by

²⁴¹ The Edgeworth Report (at page 30) also hypothesizes that Etihad and the other Gulf carriers' rapid capacity expansion to the Indian Subcontinent may have been in response to "pent-up demand" for air services in that region. The Edgeworth Report makes no attempt to test this hypothesis, but even if that hypothesis were true, it would not explain the Gulf carriers' dramatic capacity expansion to the United States.

²⁴² See Emirates Response, page 103.

²⁴³ See Edgeworth Report, page 13.

²⁴⁴ See Emirates Response, page 103.

Professor Martin Dresner and others as recently as March of this year in *support* of its position that the Gulf carriers stimulate demand.²⁴⁵

Indeed, the Dresner et al. study Mr. Clark was content to endorse just four months ago uses nearly the same “massive, worldwide” geographic scope that we used in our study (i.e., an econometric analysis of data covering traffic between the United States and destinations in Asia, Africa, the Middle East, Europe and Australia) and nearly the same time frame of analysis (i.e., 2008-2013).²⁴⁶ Notably, our Traffic Study explained in detail why the Dresner et al. paper showed *the opposite* of what Mr. Clark believed it showed regarding the impact of Gulf carriers on traffic.²⁴⁷ One can only conclude that Emirates’ cursory dismissal of econometric analysis as a tool to resolve the question of stimulation only four months after its CEO actively endorsed the same analytical methodology simply confirms our econometric analysis of the empirical data and that the carrier’s current claims regarding stimulation are without merit.

c) The Gulf Carriers’ Few Technical Criticisms of our Econometric Analysis Regarding Lack of Stimulation are Incorrect and/or Irrelevant

None of the Gulf carriers (nor their economists) has proffered an econometric analysis to support the claim that their services have stimulated new demand. However, the submission of

²⁴⁵ See “American Consumers and Regional State Economies the Ultimate Victims of US Carriers’ Protectionist Campaign, Cautions Emirates Airline’s President”, Emirates Press Release, March 18, 2015, discussing an econometric study by Martin Dresner, Cuneyt Eroglu, Christian Hofer, Frio Mendez and Kerry Tan, “The Impact of Gulf Carrier Competition on U.S. Airlines” forthcoming: *Transportation Research Part A: Policy and Practice*, (hereafter “Dresner et al.”). “...an independent paper published by US economists and academics examined the impact of gulf carrier competition on US carriers’ passenger numbers and fares in international route markets and found that ‘gulf carrier entry stimulated accelerated market growth’ on US-Middle East traffic volumes...”. As noted on page 10 of the Dresner et al. study: “We obtained the international DB1B data for the period from the first quarter of 2008 to the second quarter of 2013 and then aggregated these data to identify average air fares and total passenger volumes transported by a given U.S. carrier offering scheduled international services between a given U.S. airport and a given international airport (or vice versa) in a given quarter. Route markets in which Gulf carriers potentially compete are of particular interest here. Hence, observations pertaining to U.S. carriers’ direct services between the U.S. and destinations in North America, Central America, the Caribbean, and South America were excluded from further consideration since Gulf carriers do not operate or sell tickets from the U.S. to these markets.”

²⁴⁶ Because our study is even more recent than that of Dresner et. al, the period of our analysis includes data from one additional year, i.e., 2014.

²⁴⁷ See Traffic Study, page 26: “Thus, the fact that Dresner et al. document a large increase in passengers traveling between the United States and the Middle East provides no evidence to support the assertion that ‘Emirates, Qatar, and Etihad have succeeded in the U.S. market, not because they are ‘stealing’ traffic from U.S. airlines, but because they opened new markets to places like India, Africa, and the Middle East that U.S. airlines largely ignored.’ In fact, the Dresner et al. study reaches the exact opposite conclusion: ‘...the growth in the U.S.-Middle East market may come at the expense of traffic losses in (broadly) adjacent international route markets.’” Notably, Emirates’ recently submitted comments in this docket did *not* cite the Dresner et. al study.

Edgeworth Economics offers a few technical criticisms of our econometric analysis, all of which are either demonstrably incorrect or irrelevant.²⁴⁸

For example, as noted in Section 2 above, Edgeworth criticizes our method of identifying Gulf carriers' "presence" on a city-pair (as proxied by at least a three percent or a ten percent booking share), suggesting that it is "arbitrary"²⁴⁹ because it "makes it appear that carriers 'enter' and 'exit' a particular route when they in fact do not."²⁵⁰ As we already discussed, the use of share-based presence variables when studying connecting markets is commonly used in both the academic literature and by U.S. government analysis of the airline industry.²⁵¹ The Edgeworth Report also asserts that because our econometric model estimates "an average effect across *all routes*, including many between U.S. and Europe (as well as other continents) where Etihad *does not compete for traffic*...it is unable to determine whether, in fact, Etihad (and other Gulf-based carriers) have 'stimulated' demand on relevant routes."²⁵² This assertion is simply wrong. In a panel regression utilizing city-pair fixed-effects (like the ones we have estimated) the identification of the key independent variable of interest, which is used to assess whether Gulf carriers stimulate additional traffic after controlling for other factors (i.e., *Number of Gulf Carriers Present*), is determined primarily by city-pairs where one or more Gulf carriers are present.²⁵³

Although Edgeworth's concerns are not particularly germane to the questions at hand, we have nonetheless re-estimated the main stimulation regressions from our Traffic Study taking account of their concerns and, as shown below, the estimated coefficient on the variable of interest (*Number of Gulf Carriers Present*) is largely unchanged under the different specifications.

²⁴⁸ Although the Emirates Response includes a handful of technical criticisms of our econometric analysis of traffic diversion (which are discussed in Section 2.e.ii above) their comments do not include any criticisms of our econometric analysis of traffic stimulation, other than asserting that "[m]assive, worldwide econometric analysis is a poor tool to resolve questions of stimulation." As discussed above, however, this assertion directly contradicts Tim Clark's recent statement endorsing an econometric study that he incorrectly believed showed that Gulf carriers stimulated traffic.

²⁴⁹ See Edgeworth Report, Par 69.

²⁵⁰ See Edgeworth Report, Par. 69.

²⁵¹ See footnotes 194 and 195 above.

²⁵² See Edgeworth Report, Par. 72.

²⁵³ Other independent variables in the model, such as those measuring the effect of population growth or per capita income, are identified using all of the city-pairs in the data-set and the inclusion of city-pairs where the Gulf carriers do not currently compete allows for a broader cross section of city-pairs to estimate those variables.

Exhibit 26 below provides additional robustness testing for the key stimulation regressions from Exhibit 9 in our initial Traffic Study. Column 1 of Exhibit 26 replicates the regression in column 3 (all city-pairs) from Exhibit 9 of our Traffic Study, which for our present purposes is considered to be the base case.

Columns (2) - (4) in Exhibit 26 provide robustness testing of the base case by adding or modifying certain variables in the base case to address particular concerns raised by the Edgeworth Report. To test the veracity of Edgeworth's assertion that our method of constructing the Gulf carrier presence variable is influencing our results by "mak[ing] it appear that carriers 'enter' and 'exit' a particular route when they in fact do not,"²⁵⁴ Column (2) in Exhibit 26 replicates the base model by modifying the *Number of Gulf Carriers Present* variable so that once each Gulf carrier's respective presence variable indicates it is present on a particular city-pair (i.e., once the carrier reaches at least a 3% share), the carrier remains present for the duration of the sample. As shown in Column (2), the estimated coefficient on the modified variable of interest (*Number of Gulf Carriers Ever Present*) continues to show no stimulation, demonstrating that Edgeworth's criticism is unwarranted. Likewise, because *Number of Gulf Carriers Ever Present* would indicate that Gulf carriers were present on a city-pair even if they discontinued service to the foreign endpoint, Column (3) of Exhibit 26 re-estimates the regression from Column (2) excluding city-pairs to/from foreign destinations where one or more of the Gulf carriers suspended or terminated service over the sample period.²⁵⁵ As shown in Exhibit 26, the estimated coefficient on *Number of Gulf Carriers Ever Present* in column (3) continues to show no stimulation.

Finally, to test whether the inclusion of city-pairs between the United States and Europe is influencing our key findings, Column (4) of Exhibit 26 modifies column (3) by excluding city-pairs to/from Europe. The estimated coefficient on the key variable of interest (*Number of Gulf Carriers Ever Present*) also continues to show no stimulation, confirming that Gulf carriers have failed to meaningfully stimulate additional traffic on U.S.-international city-pairs and demonstrating that the Edgeworth Report's suggestion that the regression is somehow flawed because it "measures an average effect across all routes, including many between U.S. and

²⁵⁴ See Edgeworth Report, page 39.

²⁵⁵ See footnote 213 above.

Europe (as well as other continents) where Etihad does not compete for traffic”²⁵⁶ is simply wrong.

EXHIBIT 26: FURTHER ROBUSTNESS TESTING OF REGRESSION ANALYSIS OF U.S. – INTERNATIONAL BOOKINGS FOR ALL CARRIERS

All Bookings (MIDT) All Cities				
	(1)	(2)	(3)	(4)
	Original Regression	Gulf Ever a Competitor	Gulf Ever a Competitor (Excluding Dropped Routes)	Excluding Europe (Excluding Dropped Routes)
Number of Gulf Carriers Present	0.00267 (0.00532)			
Number of Gulf Carriers Ever Present		-0.0116* (0.00553)	-0.0118* (0.00558)	-0.000664 (0.00526)
ln(Population)	1.730** (0.108)	1.797** (0.112)	1.791** (0.113)	1.986** (0.130)
ln(Income per Capita)	1.163** (0.0581)	1.189** (0.0586)	1.180** (0.0592)	1.807** (0.0753)
D(Quarter 2)	0.250** (0.00420)	0.250** (0.00420)	0.251** (0.00424)	0.107** (0.00516)
D(Quarter 3)	0.350** (0.00470)	0.350** (0.00470)	0.351** (0.00474)	0.187** (0.00575)
D(Quarter 4)	0.0907** (0.00471)	0.0912** (0.00472)	0.0919** (0.00476)	0.0200** (0.00518)
D(2008)	0.136** (0.0100)	0.139** (0.0100)	0.137** (0.0101)	0.264** (0.0176)
D(2009)	0.0414** (0.0107)	0.0448** (0.0108)	0.0440** (0.0108)	0.165** (0.0176)
D(2010)	0.0759** (0.00885)	0.0786** (0.00889)	0.0777** (0.00896)	0.183** (0.0142)
D(2011)	0.0216** (0.00726)	0.0231** (0.00727)	0.0229** (0.00732)	0.0815** (0.0110)
D(2012)	-0.0177** (0.00631)	-0.0172** (0.00630)	-0.0172** (0.00635)	0.0270** (0.00894)
D(2013)	-0.0274** (0.00600)	-0.0272** (0.00600)	-0.0273** (0.00605)	-0.00970 (0.00785)
Constant	-38.78** (2.332)	-40.42** (2.456)	-40.20** (2.474)	-50.41** (3.050)
Observations	1,714,120	1,714,120	1,690,329	954,115
R-squared	0.989	0.989	0.989	0.990

* p<0.05, ** p<0.01

Sources: U.S. DOT DB1B; MIDT; World Bank; BEA.

Notes: Robust standard errors in parenthesis. Regressions are passenger weighted. A Gulf carrier is present on a city-pair in a quarter if its share of MIDT bookings on a city-pair is at least 3%. A booking belongs to the carrier operating the longest total distance. A carrier is present on a city-pair in a quarter if its share of MIDT bookings on a city-pair is at least 3%. A passenger is a U.S. carrier passenger if the operating carrier of an itinerary was one of the U.S. carriers (e.g., American, Continental, Delta, Northwest, US Airways, United). “Gulf Carriers Ever Present” is modified from the “gulf Carriers Present” variable in such a way that once each Gulf carrier’s respective presence variable indicates it is present on a particular city-pair (i.e., once they reach a 3% share), they remain present for the duration of the sample. Regression covers the period 2008/Q1-2014/Q3 (T100 regressions through 2014Q2). 2014 population and income based on 2013 grown at the cumulative average growth rate from 2008-2013. Includes city-pair fixed effects (not shown). Includes passengers on mainland U.S.-international city-pairs, except itineraries to/from North America and South America, and itineraries starting or ending in Milan. “Dropped Routes” drops all city-pairs to international cities where one of the Gulf carriers had service as of 2008 and has dropped service at some point since. Dropped routes include: Libya (TIP) and Syria (DAM), Nagoya (NGO), Alexandria (HBE), Colombo, Sri Lanka (CMB), Casablanca (CMN), Nagpur, India (NAG), Cebu, Philippines (CEB).

In sum, while the submissions of Emirates and Etihad raised a number of technical criticisms of our econometric analysis demonstrating that Gulf carriers have failed to meaningfully stimulate

²⁵⁶ See Edgeworth Report, page 40.

new traffic to/from the United States, these criticisms are without merit and/or irrelevant.²⁵⁷ Moreover, a simple corollary of the fact that Gulf carriers have dramatically been expanding their share of international traffic to/from the United States without meaningfully stimulating new traffic is that their share gains have come at the expense of other carriers. Because this self-evident finding severely undermines the Gulf carriers' narrative that its services have "grown the pie" without harming U.S. carriers, the Gulf carriers have grossly mischaracterize this empirical finding by alleging that we (and the U.S. carriers) have assumed that U.S. carriers are *entitled* to a specific share of passengers traveling to/from the United States.²⁵⁸ As discussed above, however, these assertions are baseless and appear to be no more than an attempt by the Gulf carriers to misdirect the focus of attention away from the core issue in question, which is whether there is empirical evidence demonstrating that subsidized Gulf carrier expansion has harmed U.S. carriers. As we demonstrated in Section 2 above, the answer to that question is unambiguously yes.

d) Emirates' Exhibits Purporting to Show "Stunning" and "Massive" Demand Stimulation Following Its Entry Show Nothing of the Sort

Unlike the submissions of Etihad or Qatar, Emirates' submission asserts that their services stimulate substantial traffic above and beyond what otherwise would have occurred but for its services.²⁵⁹ In an attempt to cast doubt on our econometric analysis showing that Gulf carriers' presence has failed to meaningfully stimulate additional traffic, Emirates presents a series of charts based on what it calls a "simple" methodology. These exhibits, contained on pages 105-109 of its comments, purport to compare MIDT booking levels in the year before and after Emirates' entry at four of its U.S. gateway airports (Boston, Dallas-Fort Worth, Seattle and Washington-Dulles) to Dubai and the destinations it serves *through Dubai*²⁶⁰ to three regions of

²⁵⁷ Qatar's Comments did not address our regression analysis.

²⁵⁸ See, for example, Emirates Response, page 102: "The Legacy Carriers' argument is premised on the disturbing assumption that existing carriers are entitled to their existing traffic as well as a share of market growth: in other words, to be insulated from competition", Edgeworth Report page 35: "The Compass Lexecon Report fails to point to any economic or legal doctrine which indicates that an incumbent is entitled to the customers it serves and the only way for new entrants to compete 'fairly' is to sell their products to customers who would not otherwise purchase from the incumbent" and Qatar Comments, page 44: "Qatar Airways takes exception to any assertion that it 'steals' traffic from US carriers. As a practical matter, carriers do not own or have any entitlement to 'their' passengers, who are free to choose their service on the basis of price and convenience."

²⁵⁹ See footnote 225 above.

²⁶⁰ The Emirates Response does not state if "through Dubai" only includes destinations in each region served by Emirates, or if it includes city-pairs served "through Dubai" via an interline connection at Dubai on another carrier.

the world: the Indian Subcontinent²⁶¹, Africa and the ASEAN countries.²⁶² Based on this “simple” analysis, Emirates concludes that “for every route, from every city, bookings increased after Emirates’ entry”²⁶³ and that “[i]n virtually all cases the increases are of such magnitude as to demonstrate significant stimulation of demand, and in many cases the increases are stunning.”²⁶⁴ However, the conclusion by Emirates that the level of traffic growth following its entry reflects a “stunning” or “massive” amount of demand stimulation is based on what appears to be highly suspect data. Moreover, for a variety of additional reasons, the inference by Emirates that most or all of the changes in traffic between an airport it enters and other destinations it serves are attributable to its entry does not withstand scrutiny.

i. The MIDT data used by Emirates is highly suspect

As an initial matter, Emirates’ claims of “massive” and “stunning” stimulation rely on what appears to be a highly suspect version of the MIDT booking data.²⁶⁵ To illustrate this point, we replicated Figure III-23 from Emirates’ submission (showing total bookings between the United States and the Indian Subcontinent between 2009 and 2014) using the MIDT databases from Delta, United, and American. As shown in Exhibit 27 below, while Emirates’ MIDT data purports to show a 46% increase in U.S.-Indian Subcontinent bookings between 2009 and 2014,²⁶⁶ booking data from Delta, United and American—in addition to the growth rates reported in the submissions of Qatar and Etihad—reveal that the booking growth has been far less than Emirates’ claims.²⁶⁷ Overall, Exhibit 27 shows that the growth in U.S.-Indian Subcontinent bookings between 2009 and 2014 put forth by Emirates’ is over 60% higher than

²⁶¹ The Indian Subcontinent is defined as India, Pakistan, Bangladesh, Nepal, the Maldives and Sri Lanka.

²⁶² The ASEAN countries are defined as Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam.

²⁶³ See Emirates Response, page 104.

²⁶⁴ See Emirates Response, page 109.

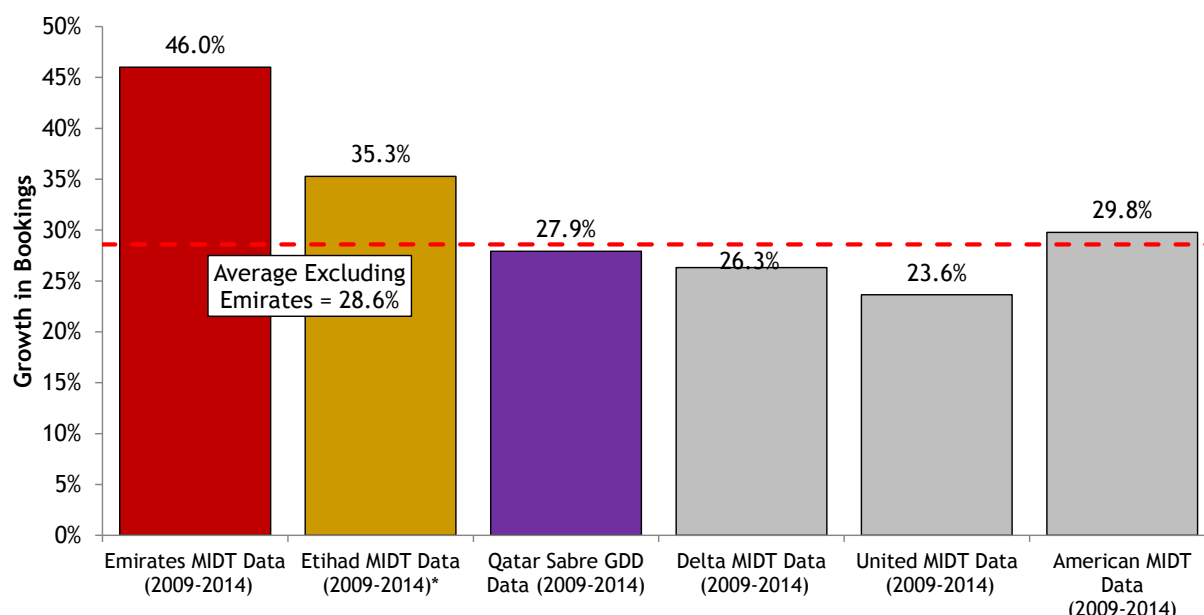
²⁶⁵ See footnote 25 above.

²⁶⁶ See Emirates Response, Figure III-23.

²⁶⁷ The difference in the booking growth figures between the three U.S. carriers reflects slight differences in the GDSs/distributors subscribed to by each individual carrier. Delta’s MIDT subscription includes 10 GDSs (Abacus, Apollo, Axess, Galileo, Infiniti, Sabre, Worldspan, Topas, TravelSky and Amadeus). United’s MIDT subscription includes 12 GDSs/distributors (Sabre, Worldspan, Galileo, Abacus, Navitaire, Farelogix, G2 Switchworks, ITA software, Axess, Infiniti, TravelSky, and Topas). American’s MIDT data includes 10 GDSs/distributors (Sabre, Amadeus, Galileo, Worldspan, Apollo, Travel Sky, Abacus, Infiniti, Farelogix and Axess).

the average of the growth rates based on data from the other two Gulf carriers and all three U.S. carriers.²⁶⁸

EXHIBIT 27: COMPARISON OF GROWTH IN BOOKINGS BETWEEN THE UNITED STATES AND THE INDIAN SUBCONTINENT, 2009-2014



Sources: Delta Air Lines; United Airlines; American Airlines; Emirates Submission, page 117. Edgeworth Economics Report, Exhibits 3 and A18. Qatar Response, page 10 and xii.

Notes: In the case of Emirates, Delta, United, and American the Indian Subcontinent includes India, Pakistan, Nepal, Bangladesh, Maldives, and Sri Lanka. For Etihad and Qatar the Indian Subcontinent includes India, Pakistan, Bangladesh, and Sri Lanka.

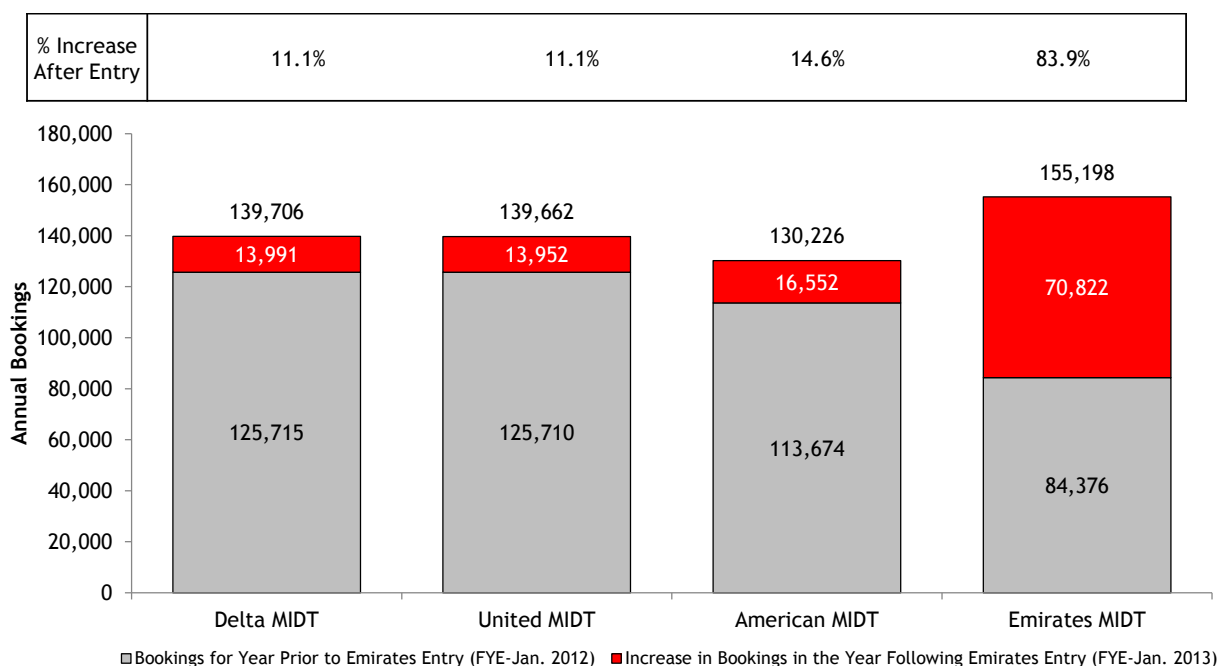
*Edgeworth data is for the year ending February 2015 vs. the year ending February 2010.

The impact of Emirates’ suspect booking data is magnified when applied to shorter time frames and traffic between the Indian Subcontinent and specific U.S. airports. For example, as shown below, based on MIDT data from each of the three U.S. network carriers, bookings between Dallas Fort-Worth airport (“DFW”) and the Indian Subcontinent between the year ending January 2013 (i.e., the year after Emirates entry) and the year ending January 2012 (i.e., the year prior to Emirates entry) increased in the range of 11.1% to 14.6%, with the variation due to slight differences in the sets of GDSs contained in respective MIDT subscriptions across the three

²⁶⁸ Emirates used the same definition of the Indian Subcontinent as our study (i.e., India, Pakistan, Nepal, Bangladesh, Maldives, and Sri Lanka) while Etihad/Edgeworth and Qatar exclude Nepal and Maldives from their definition of the region. See Edgeworth Report page 9, Qatar Comments page 10 and Emirates Response page 117. Qatar’s booking data is based on Sabre Airline Solutions Global Demand Data (“GDD”) which “is developed by blending and cross-referencing all available industry data for historical airline traffic and fares, and uses more than 50 input sources.” See http://www.sabreairlinesolutions.com/home/software_solutions/revenue_analysis/ and Qatar Comments, page xii.

carriers. Emirates' MIDT data, on the other hand, shows an increase of 84%. However, because the Emirates' MIDT data apparently comes from nearly the same set of GDSs²⁶⁹ as those contained in Delta's MIDT data (Delta's MIDT data contains one additional Japanese GDS, Axess), one should expect that Emirates' MIDT data would show approximately the same number of bookings as Delta's MIDT data.²⁷⁰

EXHIBIT 28: COMPARISON OF GROWTH IN MIDT BOOKINGS BETWEEN DFW AND THE INDIAN SUBCONTINENT, FYE-JANUARY 2012 VS. FYE-JANUARY 2013



Sources: Delta Air Lines; United Airlines; American Airlines; Emirates Submission, page 106.

Notes: Growth in bookings between U.S. city and cities in the Indian Sub-Continent served by Emirates. Indian Subcontinent includes India, Pakistan, Nepal, Bangladesh, Maldives, and Sri Lanka. Percentage growth reflects change in bookings from YE Jan. 2012 (pre-entry) vs YE Jan. 2013 (post-entry).

Emirates' use of highly suspect booking data results in greatly exaggerated claims of booking growth. For example, Exhibit 29, Exhibit 30 and Exhibit 31 below show the results of replicating Emirates' "stimulation" figures on pages 104-108 of its submission using Delta's MIDT data (which, as described above, contains all of the same GDSs as Emirates' MIDT data).

²⁶⁹ According to footnote 223 of the Emirates Response, their MIDT data subscriptions include nine GDSs (Abacus, Amadeus, Apollo, Galileo, Infiniti, Sabre, Topas, TravelSky, and Worldspan), all which are included in Delta's MIDT data.

²⁷⁰ Nor can Emirates' method for identifying the origin and destination of a booking explain the enormous difference in growth rates to the Indian Subcontinent vis-à-vis Delta's MIDT data. To show this, we assumed (hypothetically) that 100% of Emirates' bookings in 2014 between the United States and Dubai in Delta's MIDT data represented bookings to the Indian Subcontinent (vs. 0% in 2009). Even under these assumptions, the overall growth rate in U.S.-Indian Subcontinent bookings between the 2009 and 2014 based on this modified version of Delta's MIDT data increases to only 33.9% (from 26.3%).

For each comparison, we examine the same pre- and post-entry periods used by Emirates, and where applicable, include airports in the same U.S. metropolitan area (i.e., IAD/DCA/BWI for Washington, D.C., and DFW/DAL for Dallas Fort-Worth).²⁷¹ Likewise, following Emirates' description of its "simple" methodology, we restrict the set of non-U.S. endpoints to those cities served by Emirates from Dubai.²⁷²

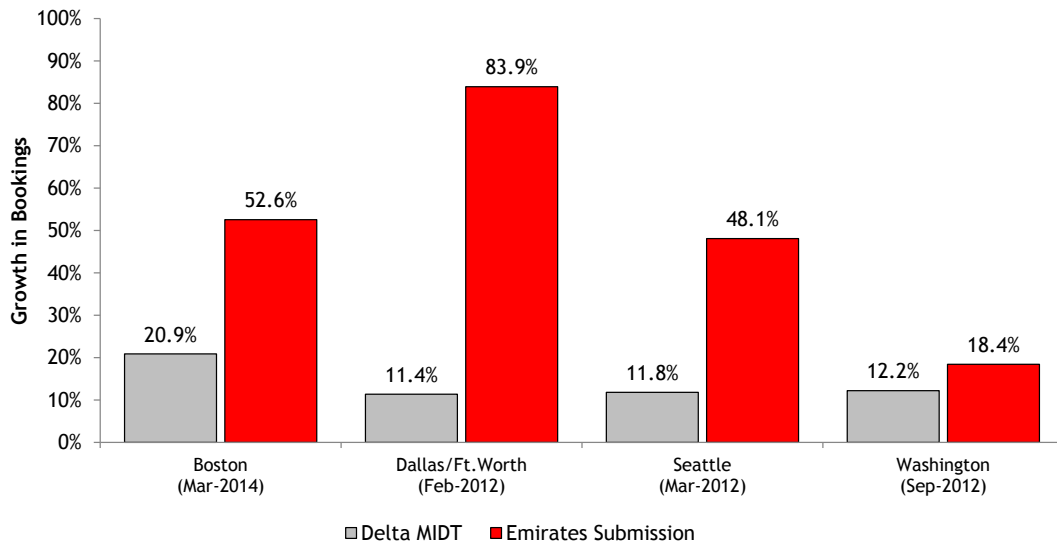
Exhibit 29 replicates the pre- and post- booking change analysis for each of the four cities examined in Emirates' submission to/from the Indian Subcontinent. It shows that Emirates' claims of "stunning" and "massive" traffic growth between some of its recently entered gateway cities and the Indian Subcontinent are grossly exaggerated.²⁷³

²⁷¹ Emirates description of its "simple" methodology is vague in regards to whether or not it is limiting its analysis to airports or cities. For example, in describing its analysis at page 104, Emirates states that "Both sides of the comparison include bookings on all airlines flying between the originating city and the destination city, regardless of routing." However, Emirates later states on the same page that "the calculation considers only the O&D traffic for the U.S. airports served by Emirates (gateway airports)." (emphasis added)

²⁷² See Emirates Response, pages 103-104: "The methodology is simple: passenger bookings are examined twelve months prior to Emirates' launch into a new U.S. city, and are examined for all of the routes: from the U.S. city to Dubai as a final destination; from the U.S. city through Dubai to the Indian Subcontinent; from the U.S. city through Dubai to ASEAN countries; and from the U.S. city through Dubai to Africa." See also footnote 260.

²⁷³ The slight difference in the Delta growth rates for Dallas/Ft. Worth-Indian Subcontinent between Exhibit 28 and Exhibit 29 is due to the fact that Exhibit 29, Exhibit 30 and Exhibit 31 attempt to replicate as closely as possible the Emirates "simple" methodology by limiting the set of foreign endpoints to those served by Emirates. Exhibit 28 does not place this additional restriction on the data.

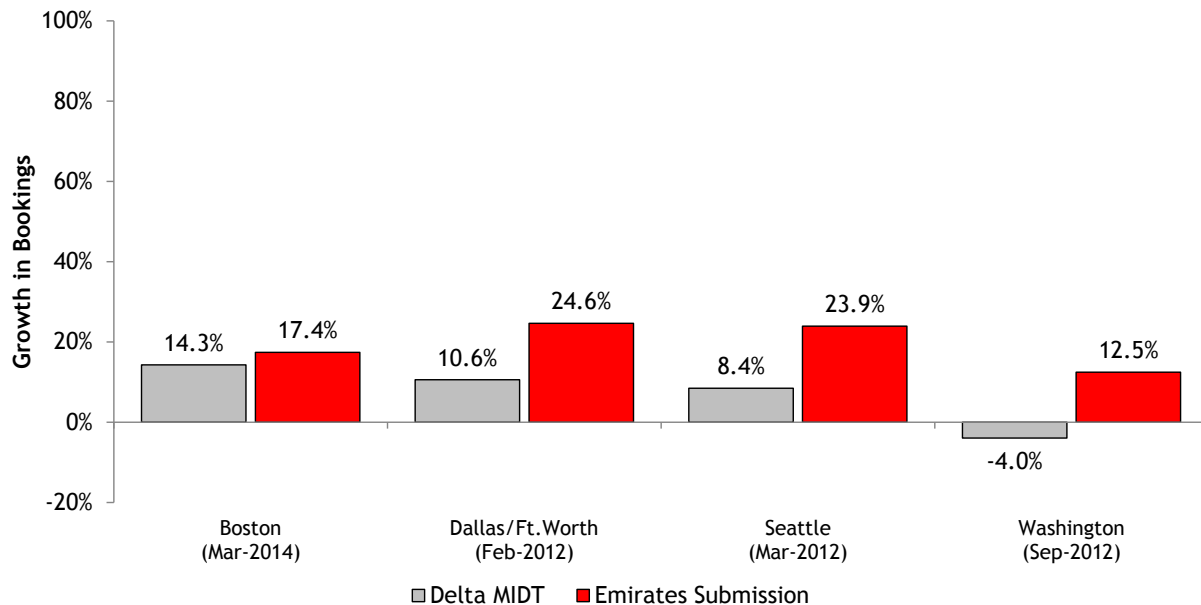
EXHIBIT 29: COMPARISON OF CHANGE IN BOOKINGS BETWEEN SELECT EMIRATES U.S. GATEWAY CITIES AND THE INDIAN SUBCONTINENT (12 MONTHS PRIOR TO ENTRY VS. 12 MONTHS POST-ENTRY)



Sources: Delta Air Lines; Emirates Submission, page 105-108; OAG.
 Notes: Date shows month of entry by Emirates. Growth in bookings between U.S. city and cities in the Indian Subcontinent served by Emirates in the year following entry. Cities in the Indian Subcontinent include those served by Emirates in year following entry. Dallas/Ft. Worth includes DFW and DAL. Washington includes IAD, DCA, and BWI. Indian Subcontinent includes India, Pakistan, Nepal, Bangladesh, Maldives, and Sri Lanka. Percentage growth for the one year period post entry (including the month of entry) over the full year period before entry (up to and including the month prior to entry).

Likewise, the change in bookings between the same four U.S. cities and points in Africa in the year before and after Emirates' entry based on Delta's MIDT data are also well below what Emirates' would have one believe, as shown in Exhibit 30.

EXHIBIT 30: COMPARISON OF CHANGE IN BOOKINGS BETWEEN SELECT EMIRATES GATEWAY CITIES AND AFRICA (12 MONTHS PRIOR TO ENTRY VS. 12 MONTHS POST-ENTRY)



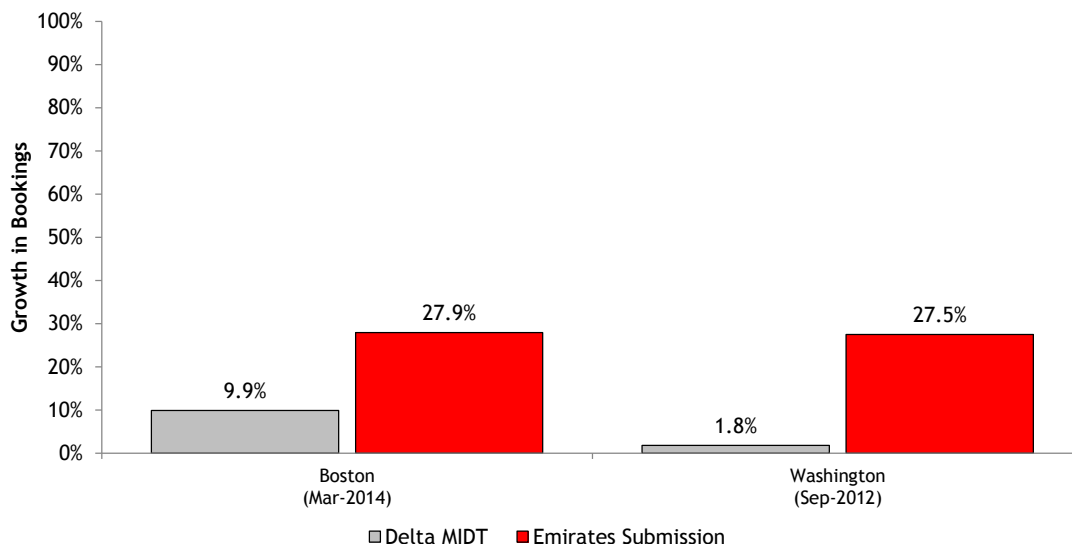
Sources: Delta Air Lines; Emirates Submission 105-108; OAG.

Notes: Date shows month of entry by Emirates. Growth in bookings between U.S. city and cities in Africa served by Emirates in the year following entry. Cities in Africa include those served by Emirates in the year following entry. Dallas/Ft. Worth includes DFW and DAL. Washington includes IAD, DCA, and BWI. Percentage growth for the one year period post entry (including the month of entry) over the full year period before entry (up to and including the month prior to entry).

Finally, as shown in Exhibit 31, the change in bookings between Boston and Washington²⁷⁴ and destinations served by Emirates in the ASEAN countries in the year before and after Emirates entry based on Delta's MIDT data are only a fraction of what Emirates claims.

²⁷⁴ Emirates excludes Dallas and Seattle from its analysis of ASEAN booking growth because "Dubai is not well located to handle traffic from the western United States to ASEAN countries". See Emirates Response, footnote 222.

EXHIBIT 31: COMPARISON OF CHANGE IN BOOKINGS BETWEEN BOSTON AND WASHINGTON, D.C. AND DESTINATIONS SERVED BY EMIRATES IN ASEAN COUNTRIES (12 MONTHS PRIOR TO ENTRY VS. 12 MONTHS POST-ENTRY)



Sources: Delta Air Lines; Emirates Submission, pages 105-108; OAG.

Notes: Date shows month of entry. Growth in bookings between U.S. city and cities in ASEAN countries. Cities in ASEAN countries include those served by Emirates in year following entry. Washington includes IAD, DCA, and BWI. Percentage growth for the one year period post entry (including the month of entry) over the full year period before entry (up to and including the month prior to entry). ASEAN countries include Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam.

Simply put, the “massive” and “stunning” traffic stimulation between its U.S. gateway cities and the main sources of Emirates traffic to/from the United States is driven almost exclusively by highly suspect MIDT booking data. Moreover, to the extent that more reliable MIDT data shows some increase in traffic between the U.S. cities entered by Emirates and the regions they serve, for the reasons discussed below, virtually all of the observed increase in traffic can be explained by a host of other factors, including changes in underlying demand, diversion from other airports, and destination substitution.

- ii. *The inference by Emirates that most or all of the incremental traffic from the year prior to entry to the year after entry is attributable to its service is also a gross exaggeration*

In addition to relying on highly suspect MIDT data that dramatically inflates the magnitude of bookings growth in the year following its entry into select U.S. airports, the inference by Emirates that the increase in bookings following its entry on a route is attributable to the carrier’s new service is, at best, highly misleading.²⁷⁵ To begin with, Emirates’ “simple” methodology

²⁷⁵ See, for example, Emirates Response, page 109: “The evidence is clear: Emirates’ entry into U.S. markets has been followed by a growth in bookings in every instance. In virtually all cases the increases are of such magnitude

disregards the economic factors that influence underlying demand for airline services. As a result, Emirates simply *assumes* that most or all of the observed bookings growth from each of the four cities shown in its submission would not have occurred but for its entry. This assumption is entirely unjustified. The demand for airline services across any set of city-pairs—including those that Emirates has chosen to analyze on pages 104-109 of its submission—depends on local economic conditions at both endpoints (i.e., the U.S. cities Emirates entered and the non-U.S. regions of the world served by Emirates) as well as the health of the global economy in general. It is well understood that as economic activity improves (or worsens), the demand for travel responds accordingly. The economies in the regions that account for much of Emirates' U.S. passenger traffic (i.e., the Indian Subcontinent) have been growing at approximately 6% annually since 2012.²⁷⁶ Likewise, as noted above, three of the four cities that Emirates' submission focuses on (Washington D.C., Dallas-Fort Worth and Seattle) were entered by the carrier in early 2012, a banner year for the economy in all three cities. Indeed, each of the three cities was ranked within the top 15 of the 200 large cities ranked by the Milken Institute's list of 2012 Best-Performing Cities. Likewise, each of these cities also showed a substantial improvement in ranking versus 2011.²⁷⁷ Similarly, Emirates' entry in Boston in March 2014 coincided with a sharp improvement in Massachusetts's economy, which “grew at a 4.7 percent annual rate in the last three months of the year [2014], after expanding at a 6 percent rate in the previous three months, and 5.2 percent in the second quarter of 2014.”²⁷⁸ This followed relatively weak economic performance in the Boston metropolitan area (the state's economic engine) in 2013.²⁷⁹

as to demonstrate significant stimulation of demand, and in many cases the increases are stunning. When it enters a market, Emirates offers passengers single-stop, single airline service with well timed connections that rarely existed before. The convenience of this service attracts new passengers.”

²⁷⁶ World Development Indicators, The World Bank. *See also* Edgeworth Report exhibit 1, which also shows around a 6% growth rate for the Indian Subcontinent.

²⁷⁷ According to the 2012 study, Washington-Arlington-Alexandria ranked 5th (up from 17th in 2011), Fort-Worth-Arlington Texas ranked 10th (up from 24th in 2011), Dallas ranked 14th (up from 20th in 2011) and Seattle ranked 13th (up from 27th in 2011). *See* Best-Performing Cities 2012: Where America's Jobs Are Created and Sustained, The Milken Institute, Ross C. DeVol, Armen Bedroussian, and Yu Liu, January 2013, page 25.

²⁷⁸ *See* “Mass. Economy outpaced nation in 2014”, *The Boston Globe*, January 30, 2015.

²⁷⁹ *See* “Boston Area's Economic Growth Slowed Last Year”, WBUR News, September 16, 2014, noting that: “Economic growth in the Boston metro area, a broadly defined region that stretches south of the city and north into New Hampshire, slowed last year when compared with 2012 figures.”

In short, because Emirates’ “simple” methodology for assessing stimulation disregards all of the underlying economic and demographic factors that contribute to the demand for air travel, it incorrectly assumes that the booking increases in the year following its entry reflect “stimulation” or “new passengers”, when in fact, the bulk of those passengers would have travelled irrespective of Emirates’ new service. Indeed, just as it would be misleading to claim that the *decline* in bookings between San Francisco/Los Angeles and the Indian Subcontinent in year following Emirates’ entry (i.e., 2009) in those two cities was *attributable to its new services*,²⁸⁰ it is also misleading to claim—as Emirates does—that the increase in bookings in the year following the launch of its services to Dallas, Seattle, Washington D.C. and Boston is attributable to the carrier’s new service to those cities.

iii. *Emirates’ stimulation analysis also ignores the fact that its services divert traffic from other airports within the catchment area of the U.S. airports it serves*

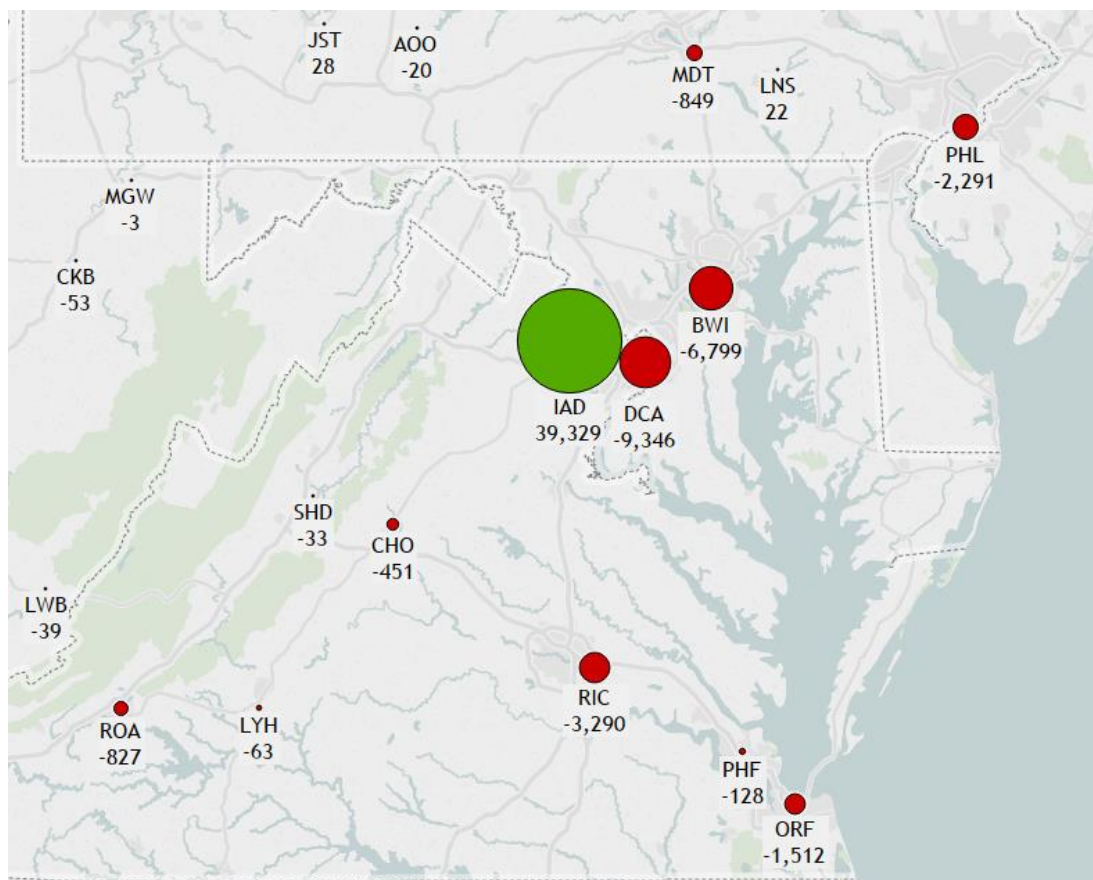
In addition to ignoring the changes in underlying demand that would have driven traffic growth between Dallas/Boston/Seattle/Washington D.C. and the regions served by Emirates even if Emirates had not instituted service, Emirates’ analysis ignores the widely-recognized fact that airports draw traffic from a broad geographic “catchment area” that extends well beyond the metropolitan area they serve, particularly for passengers taking long-haul international journeys.²⁸¹ By comparing the pre- and post-entry traffic changes *only at the U.S. airports or cities it has entered*, Emirates’ “simple” stimulation analysis fails to take account of the fact that its services divert traffic from other nearby airports within the catchment area of the airports it enters. As a result, Emirates’ simple methodology considerably overstates the impact of its entry on overall traffic. One clear example of this is Emirates’ recent entry at Washington-Dulles airport. As shown in Exhibit 32 below, in the year following Emirates’ entry at that airport,

²⁸⁰ Emirates entered Los Angeles and San Francisco in November 2008 and December 2008, respectively. Between the first 11 months of 2008 and 2009, bookings between San Francisco and the Indian Subcontinent declined by 15.3% and bookings between Los Angeles and the Indian Subcontinent fell by 15.4%. Source: MIDT.

²⁸¹ See Peter Belobaba, Amedeo Odoni and Cynthia Barnhart, *The Global Airline Industry*, 2009, Wiley, page 53: “An airport’s catchment area can extend for hundreds of kilometers and can vary with the destination and trip purpose of the traveler... a vacation traveler flying a much longer distance and staying at the destination for several weeks is more likely to be willing to travel much further to an originating airport, perhaps to take advantage of lower fares.” See also “Catchment Area Analysis,” 2011, U.K Civil Aviation Authority Working Paper, page 22: “passengers taking long haul flights have the longest surface travel time, which is likely to create more catchment area overlaps, particularly for leisure passengers” and page 50: “Since longer surface travel times would constitute a smaller proportion of overall travel time for long haul journeys, passengers on these flights could then be willing to travel further to their departure airport than those on international short haul and domestic flights.”

much of the booking increase between Washington-Dulles (“IAD”) and Dubai plus other destinations served by Emirates in the Indian Subcontinent, Africa and the ASEAN countries was largely offset by traffic declines from surrounding airports to/from and the same destinations.²⁸²

EXHIBIT 32: CHANGE IN BOOKINGS BETWEEN AIRPORTS WITHIN IAD’S CATCHMENT AREA AND DUBAI, THE INDIAN SUBCONTINENT, AFRICA AND THE ASEAN COUNTRIES, YE FEBRUARY 2012 VS. YE FEBRUARY 2013



Source: Delta MIDT.

Notes: Emirates began serving IAD September 2012. Map shows the difference in bookings from YE August 2013 vs. YE August, 2012. Shows bookings to/from cities served by Emirates to destinations in the Indian Subcontinent, ASEAN countries, Africa and Dubai. Indian Subcontinent includes India, Pakistan, Nepal, Bangladesh, Maldives, and Sri Lanka. ASEAN countries include Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam.

²⁸² As shown in Exhibit 32, much of the traffic diversion from airports within the catchment area of the U.S. gateway airports entered by the Gulf carriers is from airports that serve small and medium-sized communities. As Gulf carriers’ subsidized services at larger hub airports siphon away traffic from surrounding airports (by virtue of passengers choosing to drive to the hub airport, for example), the economic viability of U.S. network carriers’ service to/from small communities is threatened.

Simply put, while the traffic growth at the airports entered by Emirates may reflect “new” local traffic *for that airport*, much of the incremental traffic (which Emirates claims to be “new travelers into the marketplace”²⁸³) merely reflects a re-allocation of existing traffic between U.S. airports and the destinations served by Emirates.²⁸⁴ In short, Emirates’ failure to take into account the catchment area of large hub airports is yet another reason why its “simple” stimulation analysis is unreliable.

iv. Emirates’ stimulation analysis also ignores the well-known fact that travelers substitute between destinations

Emirates “simple” stimulation analysis is also gravely flawed because it ignores the fact that a significant portion of travel for both leisure and business travelers reflects varying degrees of substitution among competing destinations. For example, even if Emirates’ new service to Boston resulted in some passengers traveling between Boston and Dubai that would not have otherwise traveled on that city-pair, the aggregate number of passengers traveling internationally to/from Boston has not necessarily increased because consumers may have simply substituted Dubai for another destination. It is well understood that many consumers choose between alternative tourist destinations based on a host of factors including (among other things) the price of airfare, their interest in local attractions, weather, perceived safety, and the relative strength of the U.S. dollar vis-à-vis the local currency.²⁸⁵ Thus, it should come as no surprise that in response to new non-stop service between Boston (or another U.S. city entered by Emirates) and Dubai, some travelers who had previously not considered Dubai as a potential tourist destination chose to visit Dubai for the first time. Because of the long-haul nature of the journey from the

²⁸³ See Emirates Response, page 103.

²⁸⁴ The diversion of traffic from other airports within the catchment area of the airport entered by Emirates is not unique to Washington-Dulles (IAD). For example, in the year following Emirates’ entry at Seattle-Tacoma International (SEA), bookings between Portland, Oregon and Dubai plus destinations served by Emirates in the Indian Subcontinent and Africa fell by over 1,100 (approximately 3%). Likewise, bookings from Vancouver, British Columbia to the same destinations also fell.

²⁸⁵ See, for example, Haiyan Song and Stephen F. Witt, Tourism Demand Modelling and Forecasting: Modern Econometric Approaches, 2000, Routledge, pp. 2: “The conditions that relate to the quantity of tourism demanded include tourism prices for the destinations (tourists’ living costs in the destination and travel costs to the destination), the availability of and tourism prices for competing (substitute) destinations, potential consumers’ incomes, advertising expenditure, tastes of consumers in the origin (generating) countries, and other social, cultural, geographic and political factors.”

United States to Dubai, however, for most tourists, their trip was almost certainly in lieu of a trip to an alternative destination.²⁸⁶

Similarly, it is well understood that Dubai, Abu Dhabi and Doha have been successful in marketing themselves as destinations for hosting global conferences and meetings (due in large part to the fact that their subsidized national carriers offer non-stop air service to so many large metropolitan destinations worldwide). For example, according to the International Congress and Convention Association, the number of global meetings/conventions that were hosted in Dubai rose from only 8 in 2003 to 56 in 2014.²⁸⁷ Because these global meetings/conventions would have occurred elsewhere had they not been held in Dubai, even if Dubai has been the beneficiary of increased global visitors from these conferences and global meetings (traffic that Emirates considers to be new demand “stimulation”), this traffic comes at the expense of other global destinations that lost out on hosting the conference or global meetings now being held in Dubai.²⁸⁸ In assuming that all changes in traffic represent “new travelers into the marketplace”,²⁸⁹ Emirates ignores the fact that much of the traffic it now carries to Dubai (and other destinations) comes at the expense of forgone trips to other destinations.²⁹⁰

- v. *In the long run, Emirates and the other gulf carriers have failed to meaningfully stimulate new demand*

²⁸⁶ Indeed, to the extent that U.S. residents view international tourism to be a substitute for domestic tourism, any potential “stimulation” of international travel on Gulf carriers by U.S. residents because of their subsidized expansion to the United States is likely to *reduce* domestic leisure travel and hence, U.S. economic activity (all other things equal).

²⁸⁷ “ICCA Statistics Report,” *International Congress and Convention Association*, 2001-2010 & 2014, www.iccaworld.com. Likewise, the number of global meetings/conventions held in Abu Dhabi increased from only one in 2003 to 22 in 2014. Doha experienced the same increase in global meetings/conventions (i.e., one to 22) between 2003 and 2014.

²⁸⁸ See, for example, “Nu Skin's huge corporate party rolls up in Dubai”, CNN.com, September 14, 2014: “Nu Skin China, the Chinese arm of a U.S.-based marketing skin care marketing company is flying in 16,000 of its employees from China, Hong Kong, Taiwan and Macau to the UAE for a corporate trip... Dubai bid for the jaunt in October 2012, competing against other cities including Seoul, Macau and Singapore, to play host.”

²⁸⁹ It is important to emphasize that we are not in any way suggesting that other countries should not be allowed to compete for such global conventions/meetings. We are merely pointing out the simple fact that the passengers to/from these conventions/meetings does not constitute “new” overall traffic, but rather, a re-allocation of traffic from one city to another based on where those conventions/meetings are held.

²⁹⁰ By way of example, the Gulf carriers will undoubtedly experience a surge in traffic to the Gulf region from the United States (as well as other countries around the world) when Qatar hosts the FIFA World Cup in 2022. However, it would be illogical to assume that this traffic represents “new” passengers stimulated by Gulf carriers’ services, since the trips these passengers will take will be in lieu of the trips they would have taken to the countries that had been vying for (but were not awarded) the 2022 World Cup.

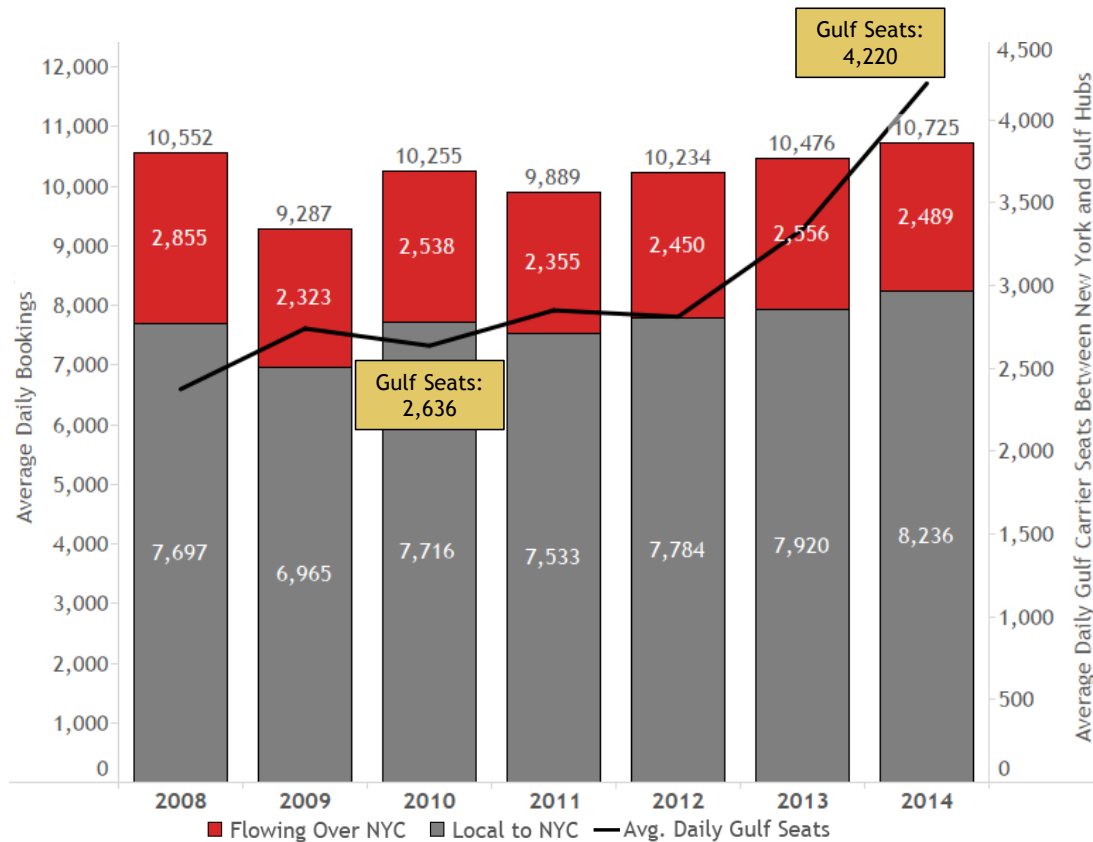
For the reasons described above, Emirates' claims of traffic stimulation following the launch of its service to certain U.S. airports cannot be taken at face value. Not only is the MIDT data relied upon by Emirates highly suspect, its "simple" methodology of comparing pre- and post-entry booking changes ignores a host of factors unrelated to its entry that explain much of the traffic growth in the studied markets, including—but not limited to—the economic factors that drive underlying demand. Moreover, to the extent that there has been some incremental traffic growth following Emirates' entry above and beyond what one would expect to occur due to economic factors, much of this traffic is likely to represent the diversion of passengers from other airports within the catchment areas of Emirates' U.S. gateway airports or destination substitution by travelers.

Finally, contrary to the assertions by Emirates, *short run* changes in traffic following Gulf carrier entry are not nearly as meaningful to assess the question of demand stimulation as longer run analyses (such as the econometric analysis contained in our Traffic Study covering 2008-2014) that better reflect steady state changes, such as competitive responses by other carriers (e.g., changes in capacity by non-Gulf carriers in response to subsidized capacity additions by Gulf carriers) or transitory fluctuations in traffic due to post-entry promotional pricing and/or transitory destination substitution by travelers.

Indeed, an examination of the experience from New York City provides a straightforward way to assess whether subsidized Gulf carrier capacity expansion to a U.S. city stimulates new passengers *over the long run*. All three Gulf carriers entered New York City prior to 2008²⁹¹ and, as shown in Exhibit 33, have collectively increased capacity (through a combination of additional frequencies and up-gauging of aircraft) to/from New York City from approximately 2,600 daily seats in 2010 to 4,200 daily seats in 2014, an increase of 60%. Over the same period, however, the number of local bookings between New York City and Africa, the Middle East, the Indian Subcontinent and the ASEAN countries has increased by only about 500/day (i.e., 6.7% in total, or about 1.6% per year). In light of the fact that GDP growth to the regions served by Gulf carriers has been expanding at rates far in excess of 1.6% per year, this provides further evidence that Gulf carriers' subsidized capacity growth at New York City has done little—if anything—to stimulate additional traffic since 2008.

²⁹¹ Emirates, Etihad and Qatar launched service to New York City in 2004, 2006 and 2007, respectively.

EXHIBIT 33: AVERAGE DAILY BOOKINGS (ALL CARRIERS) BETWEEN NYC AND INDIAN SUBCONTINENT, AFRICA, ASEAN COUNTRIES, AND MIDDLE EAST VS. AVG. DAILY GULF CARRIER SEATS FROM NYC TO GULF HUBS



Sources: Delta MIDT. OAG.

Notes: Average daily Gulf carrier seats includes flights between NYC and DXB, AUH and, DOH. Includes bookings between the United States and the Middle East (excluding Israel), the Indian subcontinent, the ASEAN countries, and Africa. New York City includes JFK, EWR and LGA. The Indian subcontinent includes India, Pakistan, Nepal, Bangladesh, Maldives, and Sri Lanka. The ASEAN countries include Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam.

Simply stated, the fact that Gulf carriers added nearly 1,600 daily seats between New York City and their hubs in Dubai, Abu Dhabi and Doha between 2010 and 2014²⁹² without any meaningful stimulation in bookings can mean only one thing: *that their traffic gains to/from the New York City area have come at the expense of U.S. and other carriers.* And as Gulf carriers further

²⁹² In 2015, Gulf carriers increased their number of seats between New York City and their hubs in Dubai, Doha, and Abu Dhabi an additional 24.3% over 2014 levels (to 5,245/day), including the addition of a third daily non-stop A-380 flight by Emirates starting March 8, 2015.

expand their capacity to both new and existing U.S. gateways without meaningfully stimulating new demand,²⁹³ they will divert even more passengers from U.S. and other carriers.

4) THE ECONOMIC IMPACT AND EMPLOYMENT CLAIMS PUT FORTH BY THE GULF CARRIERS AND THE USTA ARE GROSSLY EXAGGERATED

Referencing findings from a variety of commissioned studies, the submissions of the Gulf carriers (in addition to the USTA) make several claims regarding the purported economic impact of their subsidized services to the United States. As discussed below, because the studies relied upon by the Gulf carriers and the USTA are predicated on assumptions that are demonstrably wrong—most notably, the assumption that they stimulate new passengers *that otherwise would not have travelled*—the economic impact claims made by the Gulf carriers are illusory.

a) The Tourism-Related Claims Made by the Gulf Carriers and the USTA Incorrectly Assume That Every Foreign Originating Passenger on Gulf Carriers’ Flights to the United States Represents a “New” Visitor

A common claim made by the Gulf carriers is that their services to the United States create billions of dollars of tourism-related spending which, in turn, supports tens of thousands of U.S. jobs. For example, an Oxford Economics study commissioned by Etihad claims that “[i]n 2015 the economic footprint of Etihad’s visitor arrivals will be an estimated US \$1.6 billion contribution to the GDP of the USA, and some 19,400 jobs across the country.”²⁹⁴ Likewise, Qatar asserts that in 2014, the carriers brought over 243,000 visitors to the United States, whose spending “sustain[ed] 27,000 jobs” and contributed \$900 million to the U.S. Economy.²⁹⁵ Not to be outdone, Emirates’ submission asserts that “a traditional air service economic impact analysis... shows that Emirates’ current level of non-stop service to the Middle East creates \$4.7 billion in annual economic benefit (output) in the U.S. economy”²⁹⁶ supporting “40,000 jobs”.²⁹⁷

²⁹³ As noted in our earlier Traffic Study, Emirates will add its 10th U.S. destination (Orlando) effective September 1, 2015, recently doubled its daily frequencies between Dubai and Seattle, and will add an additional daily frequency to Boston effective October 1, 2015. Likewise, Qatar has announced that it would add new daily non-stop service between its Doha hub and Los Angeles (effective January 1, 2016), Boston (effective March 16, 2016) and Atlanta (effective July 1, 2016), as well as an additional daily frequency to New York City (effective March 1, 2016).

²⁹⁴ See Oxford Economics, *The Impact of Etihad Airways on the US Economy*, May 2015, page 23 (“Oxford Etihad Study”).

²⁹⁵ See Qatar Comments, page 56.

²⁹⁶ See Emirates Response, page 177.

²⁹⁷ Ibid, page 178.

Moreover, in a separate study commissioned by the USTA, Oxford Economics claims that “in 2014, the tourist spending of visitors arriving at the top 11 cities having traveled on a Gulf carriers [sic] for all or part of their journey, supported almost 50,000 jobs.”²⁹⁸

i. A closer examination of the tourism-related benefits asserted in the Emirates submission demonstrates why they cannot be taken at face value.

As noted above, Emirates’ submission asserts that its “current level of non-stop service to the Middle East creates \$4.7 billion in annual economic benefit (output) in the U.S. economy.”²⁹⁹ According to Emirates, this claim is based on “a traditional air service economic impact analysis”³⁰⁰, the results of which are summarized in Figure V-5 of its submission. As described in Exhibit 6 of Emirates’ submission,³⁰¹ the methodology used to calculate Emirates’ purported economic benefits to the United States is based on the amount of visitor spending that Emirates assumes is attributable to its services, which filters through the economy. Based on the “traditional” analysis used by Emirates, this spending by visitors circulates throughout the economy, and in turn, this visitor-induced economic activity is the basis for the nearly 40,000 U.S. jobs that Emirates claims are attributable to its services.³⁰²

Thus, the economic impact that is purportedly “created” (according to Emirates) by its U.S. flights (i.e., \$4.7 billion output and 39,751 U.S. jobs) is a function of two key inputs: (1) the average direct spending per overseas visitor to the United States; and (2) an estimate of the number of visitors to the United States that can be attributed to Emirates U.S. flights. The Campbell Hill analysis that each international visitor spends an average of \$3,670 during their stay in the United States (an estimate derived using data from the U.S. Department of Commerce’s ITA Office of Travel and Tourism that takes into account the origin of visitors on Emirates’ flights).³⁰³ But in estimating the number of “visitors” to the United States attributable

²⁹⁸ See Oxford USTA Study, page 18.

²⁹⁹ See Emirates Response, page 177.

³⁰⁰ Ibid.

³⁰¹ See “Analysis of the Legacy Carriers’ Job Loss Estimate Due to Emirates’ Service”, Campbell-Hill Aviation Group, LLC, Exhibit 6 to Emirates’ submission. (“Campbell Hill Economic Jobs Study”).

³⁰² The total economic activity and jobs are calculated using an input-output model (IMPLAN in this instance) that makes use of a variety of so-called economic “multipliers”. See Campbell Hill Jobs Study, page 11.

³⁰³ See Campbell Hill Economic Impact Study, page 10: “These visitors spend an average of \$3,670 per trip while in the U.S., for which jobs in industries such as hotel/lodging, restaurants, entertainment, retail, and ground transportation are dependent.”

to Emirates' service, the Campbell Hill analysis uses *all foreign originating passengers onboard Emirates' flights*.³⁰⁴ Simply put, the assertion by Emirates that its "current level of non-stop service to the Middle East *creates* \$4.7 billion in annual economic benefit (output) in the U.S. economy"³⁰⁵ is predicated on the assumption that 100% of the foreign-originating passengers onboard its U.S. flights would not have visited the United States but for Emirates' service. As demonstrated in Section 3 above, however, this assumption is demonstrably wrong, because the Gulf carriers have neither provided credible evidence to support this assumption, nor have they done anything to undermine our econometric analysis demonstrating that their services have failed to meaningfully stimulate additional traffic to the United States. Moreover, as noted above, even Etihad's own economists have also failed to endorse the position that Gulf carriers have stimulated traffic above and beyond the levels that would have flown absent the Gulf carriers' service based on underlying demand.³⁰⁶

ii. *The tourism-related claims made by Qatar and the Oxford Economic studies commissioned by Etihad and USTA commit the same critical flaw*

Campbell-Hill is not alone in devising a grossly exaggerated claim of tourism-related expenditures (and hence tourism-related jobs) by assuming that 100% of Gulf carriers' foreign-originating passengers on their U.S. flights represent "new" visitors stimulated to travel to the United States because of their services. For example, in asserting that its services to the United States generated \$900 million in visitor spending in 2014 (supporting 27,000 U.S. jobs),³⁰⁷ Qatar points out that "almost half of passengers on Qatar Airways flights to [the] USA are overseas

³⁰⁴ See Emirates Response, Figure V-5, note 1: "[i]ncludes the impact of all onboard passengers (includes passengers connecting within the U.S. to/from all Emirates Dubai flights." See also Campbell Hill Jobs Study, page 10.

³⁰⁵ See Emirates Response, page 177. (emphasis added)

³⁰⁶ Moreover, it is commonly understood that Emirates entices passengers that previously flew on U.S. and other carriers to switch to their services by offering them complimentary perks that privately-owned U.S. carriers could not offer while still covering their costs. See, for example, http://www.emirates.com/us/english/plan_book/essential_information/dubai-connect/dubai-connect.aspx, ("As a special courtesy to our passengers, in certain cases where an itinerary calls for a longer stopover in Dubai, Emirates will provide accommodation, meals, ground transportation, and visa costs.") See also "Persian Gulf Airlines Are Winning Fans in the U.S.," *The Wall Street Journal*, March 17, 2015: "Sheila Hodge, an American who lives outside Bangkok with her husband, who works in the oil industry, flies home with her family to Texas twice a year. They normally fly business class and recently abandoned United Continental Holdings Inc. for Emirates...On her first Emirates flight, Ms. Hodge says, she had a 10-hour layover in Dubai. To her surprise, the airline, without charge, sent a car for her when she landed, drove her to a nice hotel, gave her two meal vouchers, then picked her up again before her connecting flight. A representative walked her from the curb to her gate."

³⁰⁷ See Qatar Comments, page 56.

visitors”³⁰⁸, implying that it too has assumed that all (or virtually all) of its foreign originating passengers represent “new” visitors to the United States.

Likewise, both of the studies conducted by Oxford Economics rely on the same critically flawed assumption. For example, while the Oxford Study commissioned by Etihad claiming \$1.3 billion in “Etihad-facilitated visitor spending in the USA”³⁰⁹ is based on “Oxford Economics’ sophisticated tourism spending forecast”³¹⁰, the estimates are effectively the product of two numbers: (1) the average spending per visitor (i.e., \$4,900)³¹¹ and (2) the number of “US foreign arrivals carried on Etihad”³¹², which Oxford estimates will be 260,000 in 2015.³¹³ Like the Campbell-Hill study relied upon by Emirates, the Oxford study assumes 100% of the onboard, foreign-originating passengers that do not connect to flights outside of the United States on Etihad’s U.S. bound flights would not have visited the United States but for Etihad’s flights.³¹⁴ This is not an assumption based in reality or an analysis of the data. Moreover, it is not even an assumption that Edgeworth Economics (Etihad’s other economists) have endorsed.³¹⁵ Notably,

³⁰⁸ Ibid.

³⁰⁹ See Oxford Etihad Study, page 23.

³¹⁰ Ibid, page 22.

³¹¹ Ibid.

³¹² Ibid, page 47. See also Oxford Etihad Study page 48: “The essence of the approach was to use the OAG data to establish the true origins and destinations of passengers flying on each Etihad route. This allowed the identification of those Etihad passengers who are travelling to the USA and their true origins. US resident travellers on these routes, who by definition do not contribute to tourism impacts, were then identified using information on the point of sale for the booking.”

³¹³ Ibid, page 5: “In 2015 Etihad flights will carry 260,000 international visitors bound for the USA.” Oxford excludes foreign arrivals on Etihad’s flight to the United States that make a connection at the U.S. gateway airport to a destination outside of the United States.

³¹⁴ A similar assumption is made in the Oxford USTA Study, although the economic impact calculated in that study is limited to those “visitors” destined to one of the Gulf carriers’ 11 U.S. gateway cities. See Oxford Etihad Study, page 17: “Our analysis shows that of 2.2 million inbound passengers to the USA on Gulf carriers in 2014, some 1.2 million were foreign travelers, around 50,000 of whom connected onto an immediate subsequent international flight out of the USA.” See also Oxford USTA Study, page 33: “In order to undertake the tourism impact analysis, we began by interrogating the OAG database to understand the true origin of inbound passengers on Gulf flights in 2014. This was determined by the passengers’ origin of ticket purchase. Passengers’ final destinations in the USA were identified by examining whether they took any onward flights from the initial US arrival airport. Where a subsequent domestic flight was taken, those passengers were allocated as visitors to the ultimate destination rather than the entry airport. All inbound OAG---based estimates were then scaled to be consistent with Department of Transportation data for 2014.”

³¹⁵ Even though the tourism-related benefits in the Oxford Etihad study are calculated assuming that 100% of the foreign originating visitors would not have come to the United States but for Etihad’s service, there is reason to believe that even Oxford Economics recognizes that this is not a reasonable assumption. See, for example, page 26:

even the USTA (which commissioned one of the two Oxford studies) has apparently concluded that this assumption is not credible, having concluded that Gulf carriers bring an average of only 384 visitors/day to the United States (i.e., only about 4.2% of Gulf carriers' total average daily seats to the United States in 2014).³¹⁶ Even more recently, the Presidents and CEOs of Atlas Air, FedEx, JetBlue and Hawaiian Airlines also pointed out that in 2014, the Gulf carriers only brought 140,000 international visitors to the United States (i.e., the same number determined by USTA, or an average of only 384/day).³¹⁷ The logical inference of the analysis by these carriers (and the USTA) is that the overwhelming majority of foreign originating passengers on Gulf carriers' flights to the United States are *not* "new" visitors, but rather, visitors that would have come to the United States using other carriers (including U.S. carriers) but for Gulf carriers' services.

In summary, an analysis of the tourism-related economic impact claims conducted on behalf of the Gulf carriers reveals that they share the same fundamental flaw; i.e., the fact that the purported economic benefits are predicated on the assumption that *all of the foreign-originating passengers on the Gulf carriers' flights to the United States would not have flown but for the Gulf carriers' services*. Because the tourism-related economic benefits contained in the Gulf carriers' submissions rely on an assumption that has been demonstrated to be wrong, the Gulf carriers' economic benefit analyses related to increased tourism should be disregarded.³¹⁸

"With Etihad serving ultimate destinations and origins primarily in the Middle East and the Indian Subcontinent, these represent new customers for the US aviation industry, who may not have arrived in the country but for the global network Etihad provides." (emphasis added).

³¹⁶ See Letter to Secretaries Foxx, Kerry and Pritzker, U.S. Travel Association, June 11, 2015: "In 2014, the Gulf carriers brought 140,000 international visitors to the United States." 140,000 annual visitors divided by 365 days equals an average of 384/day.

³¹⁷ See Letter to Secretaries Kerry, Foxx and Pritzker from William Flynn, David Bronczek, Robin Hayes and Mark Dunkerley, August 3, 2015.

³¹⁸ For largely the same reason—i.e., the fact that they rely on the incorrect and unproven assumption that Gulf carriers' services meaningfully stimulate new demand—the other claims of economic impact contained in the Oxford Etihad and Campbell Hill studies are similarly flawed. For example, Etihad's claim that its global operations support 7,900 U.S. jobs ignores the fact that because its services displace the flights of other carriers, these jobs are not incremental to the U.S. economy, but merely reflect jobs that would have been supported by other carriers. Moreover, to the extent that Etihad has displaced international services that would have been operated by U.S. carriers (i.e., non-stop service to India and/or additional frequencies to Europe), each displaced frequency has resulted in a net loss of over 800 U.S. jobs. Likewise, the entire jobs analysis contained in the Campbell Hill study is predicated on the assumption that Emirates' services to the United States have not come at the expense of U.S. (or other) carriers, when in fact, the U.S. carriers have documented several international routes they had planned to serve, but were forced to postpone (indefinitely) because of the glut of subsidized capacity to/from the same regions.

b) Emirates Has Also Vastly Overstated the Number of Jobs Supported by its Recent Order for Boeing 777-X Aircraft

In addition to falsely asserting that its services to the United States “create” tens of thousands of U.S. tourism-related jobs, Emirates has also claimed that its recent order “of the new B777X would alone account for *over* 400,000 new American jobs.”³¹⁹ Like its tourism-related economic impact claims, an examination of this claim reveals that it too has been grossly exaggerated.

To begin with, according to Boeing, the finalized agreement for the 150 firm orders of 777-X aircraft by Emirates is valued at \$56 billion at list prices.³²⁰ Moreover, it is well understood that large airline customers typically receive substantial discounts off “list price” when purchasing new aircraft. Although the specific discount a customer receives on a particular order is not publicly disclosed, they are generally understood to be in the range of 50% off of list prices, particularly for large customers.³²¹ Notwithstanding this fact, in calculating the purported number of jobs associated with its Boeing 777-X order, Emirates’ assumes that it paid list price for these aircraft, effectively inflating Emirates’ jobs claim by approximately 100%.³²²

Moreover, by claiming that its 777-X order will “account for *over* 400,000 new American jobs,”³²³ Emirates is also assuming that all 150 aircraft in question will be produced and delivered *in a single year*, even though, these aircraft are currently scheduled to be delivered over the span of 11 years.³²⁴ Simply put, the purported “new American jobs” that Emirates

³¹⁹ See Emirates Response, page 177.

³²⁰ See “Boeing, Emirates Finalize Order for 150 777X”, Boeing Press Release, June 9, 2014: “Boeing (NYSE: BA) and Emirates Airline have finalized an order for 150 777Xs, valued at \$56 billion at list prices.” The average list price of \$373 million per aircraft is consistent with the 2014 list prices on Boeing’s website (<http://www.boeing.com/company/about-bca/#/prices>), which, according to Boeing “reflect an average price reflecting a range of available options and configurations for each model” and includes the engines. See, for example, Boeing 777 Factsheet June 2014 which reflects the nearly the same list prices mentioned and includes the engine specification in the factsheet.

³²¹ See “The Secret Price of a Jet Airliner,” *The Wall Street Journal*, July 9, 2012 (estimating a 50% discount on Boeing 777-300ERs) and “American EETC Filing Reveals, 777, A319, A321 Market Values,” *Aviation Daily*, September 5, 2014 (reporting that the appraised value of a new 777-300ER is approximately \$168 million compared to the list price of \$330 million).

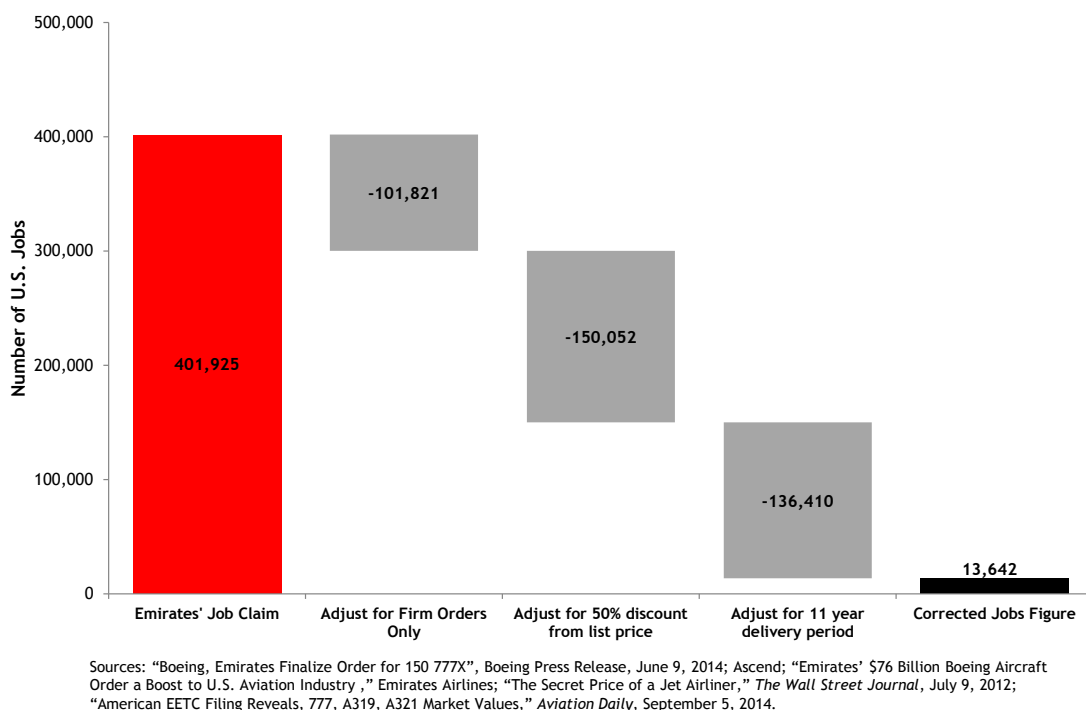
³²² See “Boeing, Emirates Finalize Order for 150 777X”, Boeing Press Release, June 9, 2014: “Boeing (NYSE: BA) and Emirates Airline have finalized an order for 150 777Xs, valued at \$56 billion at list prices.” (emphasis added). See also “GE’s Record Jet Engine Agreements at Dubai Air Show”, GE Aviation Press release, November 17, 2013: “Emirates has committed to acquiring 300 GE9X engines for its new 777X fleet. The agreement for the GE9X engines is worth more than \$11 billion (USD) list price.” (emphasis added)

³²³ See Emirates Response, page 177.

³²⁴ Emirates’ 777-X orders are currently scheduled to be delivered between 2020 and 2030. Source: Ascend.

claims will be created because of its 777-X order are not even jobs *per se*, but job-years.³²⁵ Exhibit 34 corrects the inflated jobs claim by Emirates by: (1) limiting the analysis to firm orders only (i.e., reducing the value of the order at list prices from \$75 billion to \$56 billion); (2) assuming that Emirates received a 50% discount off list prices and, (3) correcting for the fact that the aircraft in question will be delivered over an 11 year period. As shown below, with these three corrections, the number of U.S. jobs that are *potentially* supported by Emirates' order falls by over 96%, from over 400,000 to only 13,642.³²⁶

EXHIBIT 34: EMIRATES' JOB CLAIMS ASSOCIATED WITH ITS 777-X ORDER IS OVERSTATED NEARLY 30-FOLD



³²⁵ The fact that the production of large aircraft orders are spread over many years (and thus, do not support the number of U.S. jobs in the manner calculated by Emirates) was recognized by the U.S.-U.A.E Business Council. See "U.S.-U.A.E. Commercial Aviation: Taking Flight, the World's Fastest Growing Bilateral Aviation Relationship", 2013, U.S.-U.A.E Business Council, page 6: "The U.S. Department of Commerce estimates that each one billion dollars in aerospace exports sustains 6,700 jobs, which means that the current U.A.E. order book (\$37 billion) will over time support more than 200,000 U.S. jobs..." (emphasis added)

³²⁶ Moreover, even the "corrected" job figure from Exhibit 34 overstates the actual number of "net" jobs that are supported by Emirates' order because Emirates' (and the other Gulf carriers') aircraft orders have "crowded out" widebody orders by other carriers that have placed fewer orders than they would have placed but for Gulf carriers' subsidized services.

5) CONCLUSIONS

In our previous studies, we presented rigorous empirical evidence of the substantial and widespread harm suffered by U.S. carriers as a result of the Gulf carriers' subsidized expansion to the United States. Confronted with this evidence, one would have expected the Gulf carriers' rebuttal submissions to contain a meaningful critique of our analyses demonstrating the extent of competitive overlap (e.g., approximately 9,000 city-pairs), the magnitude of the fare suppression (e.g., approximately 13%, on average, on connecting routes served by all three Gulf carriers), or the loss of passengers suffered by U.S. carriers at the expense of Gulf carriers' subsidy-fueled capacity expansion to the United States (e.g., approximately 24%, on average, when all three Gulf carriers were present on a city-pair).³²⁷ Instead, however, the Gulf carriers have chosen to ignore most of the key evidence of harm established in our previous studies.

Moreover, where the Gulf carriers' submissions do attempt to address the analyses in our studies, their rebuttal is predicated on assumptions that are simply wrong (e.g., "*the Legacy Carriers serve only two U.S.-Indian Subcontinent city pairs with their own aircraft*"³²⁸), mischaracterize the nature of airline competition (e.g., "*Qatar Airways does not compete against US carriers*"³²⁹) or rely on suspect data. Furthermore, lacking any meaningful rebuttal of what our previous studies actually found, the Gulf carriers' submissions also resort to refuting illogical straw man arguments related to demand stimulation that they falsely attribute to our studies.

In sum, given that the Gulf carriers' submissions have systematically ignored virtually all of the competition that exists between U.S. and Gulf carriers, it should come as no surprise that they have reached the conclusion that "adverse effects are nowhere to be found."³³⁰ While this approach provides the Gulf carriers with colorful soundbites to distract readers from noticing the lack of substance in their submissions, it does not (and cannot) alter the fact that Gulf carriers and U.S. carriers compete on thousands of city-pairs. Nor can it refute our empirical finding that

³²⁷ Price suppression and passenger diversion findings based on Gulf carrier presence measured using the 3% threshold.

³²⁸ See Emirates Response, page 114.

³²⁹ See Qatar Comments, page 43.

³³⁰ See Emirates Response, page 94.

their subsidized expansion has severely harmed U.S. carriers by suppressing their fares and diverting traffic flows that had previously flown on U.S. carriers.

APPENDIX A: SUMMARY OF MAIN POINTS

Initial Harm Analysis	Gulf Carrier Rebuttal			Response
	Emirates	Etihad	Qatar	
<i>Gulf carriers have caused substantial and widespread harm to U.S. carriers</i>	“...adverse effects are nowhere to be found” (See Emirates Response, page 94).	“While the Big 3 carriers have rolled out their ‘parade of horrors,’ they have failed to identify <i>any</i> tangible harm to themselves, or to consumer welfare” (See Etihad Response, pages 5-6).	“The Big Three have failed to show any harm from services operated by Qatar Airways...” (See Qatar Comments, page 39).	Gulf carrier submissions systematically assume away virtually all of the competition that exists between U.S. and Gulf carriers (See Response, Section 2).
<i>Gulf carriers overlap with U.S. carriers on approximately 9,000 city-pairs spanning destinations throughout Asia, the Middle East, Africa, and Australasia</i>	U.S. carriers “compete with Emirates only on a few routes” (See Emirates Response, page 87). “...the Legacy Carriers serve only two U.S.-Indian Subcontinent city pairs with their own aircraft” (See Emirates Response, page 114).	Unrebutted in submission	“Qatar Airways does not compete against US carriers” (See Qatar Comments, page 43). “Qatar Airways does not compete against any US carrier on any nonstop route” (See Qatar Comments, page 2).	As even Edgeworth Economics correctly observes, competition occurs at the city-pair level, not on the non-stop overlapping routes. (See Edgeworth Report, pages 4-5: “The appropriate level of analysis when examining competitive alternatives for passenger air travel is between origin and destination combinations and not between a particular carrier’s hub (i.e., Abu Dhabi) and a destination”). United serves 232 city pairs in addition to the two claimed by Emirates (See Response Exhibit 2); combined with their JV partners, U.S. carriers offer service on over 1,800 city-pairs between the United States and the Indian Subcontinent (See Response footnote 59).
<i>Gulf carriers have expanded their capacity far in excess of underlying demand growth</i>	Gulf carriers serve regions of the world with relatively faster GDP growth (See e.g., Emirates Response, page 135; Qatar Comments, page 41; Edgeworth Report, page 28).			More than half of Gulf carrier bookings are for travel to/from a developed economy with relatively slower GDP growth (See Response Exhibit 4).

Initial Harm Analysis (continued)	Gulf Carrier Rebuttal			Response
	Emirates	Etihad	Qatar	
<i>Gulf carriers have expanded their capacity far in excess of underlying demand growth</i>		<p>Implied rate of demand growth for emerging and developing Asia should average around 13% (See Edgeworth Report, page 29-30).</p> <p>Edgeworth speculates that Etihad is meeting “pent-up demand” to the Indian Subcontinent by observing that as the carrier “... increased the annualized number of total seats flown between U.S. and Abu Dhabi from 192,000 in 2009 to 845,000 in 2014, the load factor actually increased...” (See Edgeworth Report, page 26).</p>		<p>Edgeworth's own exhibits indicate that demand growth between the United States and Indian Subcontinent has averaged 6.2% since 2009 (See Response Exhibit 5).</p> <p>Between 2008 and 2014, Gulf carrier capacity to the U.S. grew at more than ten times the rate of overall booking growth (See Response Exhibit 6).</p> <p>Between year ending October 2012 and year ending October 2014, as Etihad increased its available seats to the U.S. by over 73%, the carrier's load factor actually declined by eight percentage points (See Edgeworth Report, Exhibit 14).</p>
<i>Regression and non-regression analyses demonstrate that Gulf carrier presence suppresses U.S. carriers' fares</i>	Unrebutted in submission.	Unrebutted in submission.	Unrebutted in submission.	Gulf carriers have ignored these key aspect of harm (See Response, Section 2c).
<i>Estimated fare suppression from Gulf carriers is more than 10 times as large as non-Gulf competitors</i>	Unrebutted in submission.	Unrebutted in submission.	Unrebutted in submission.	
<i>Glut of subsidized capacity has prevented U.S. carriers from restoring/expanding service to India</i>	“...the Legacy carriers have declined to commit capacity to this expanding market...” (See Emirates Response, page 116).	“Instead, they have chosen not to serve these important regions themselves and yet seek to block others from doing so” (See Etihad Response, page 9).	“US carriers for years have largely ignored the US-ISC market...” (See Qatar Comments, page 40).	<p>Between 2003 and 2008, U.S. carriers and their JV partners had been rapidly expanding their service to India to capitalize on the growing market (See Response Exhibit 15).</p> <p>India is—by a wide margin—the largest market not served non-stop by American and Delta (See Response Exhibit 16).</p>

Initial Harm Analysis (continued)	Gulf Carrier Rebuttal			Response
	Emirates	Etihaad	Qatar	
<i>Glut of subsidized capacity has prevented U.S. carriers from restoring/expanding service to India</i>	<p>“...the supposed competition for the Legacy Carriers’ discontinued <i>non-stop</i> flights [to India] consisted of the Gulf Carriers’ <i>one-stop</i> flights” (See Emirates Response, page 118).</p>			<p>Approximately 95% percent of bookings between the United States and Indian Subcontinent were connecting itineraries (See Response Section 2 (d) i.).</p> <p>More than 60% of the bookings between New York City and Mumbai/Delhi—the only two U.S.-India city-pairs that still have non-stop service on a U.S. carrier—use connecting services (particularly those on the Gulf carriers) (See Response Exhibit 14).</p>
<i>Gulf carrier share gains have come at the expense of U.S. and other carriers (e.g. to/from the Indian Subcontinent)</i>	<p>“...the Legacy Carriers and their joint venture partners have enjoyed <i>growth</i>, not decline, in U.S.-Indian Subcontinent bookings” (See Emirates Response, page 114).</p>	<p>“U.S. carriers still served <i>more passengers</i> because the overall volume of travel expanded” (See Edgeworth Report, page 33).</p>	<p>“...while the Big Three’s market share may have declined, the number of passengers they carry has increased in absolute terms” (See Qatar Comments, page 7).</p>	<p>Gulf carrier claims are dependent on the use of 2009 (the year IATA described as “the worst year the industry has ever seen”) as the starting year; since 2008, the U.S./JV bookings to the Indian Subcontinent have declined (See Response Exhibit 17).</p> <p>Even since 2009, U.S. carrier bookings between the United States and Indian Subcontinent have substantially declined (See Response Exhibit 18).</p>
<i>The Gulf carriers divert passenger flows that previously flew on U.S. carriers and their JV partners.</i>	<p>“... Emirates’ entry has grown the pie...allowing Emirates to grow without significantly diverting passengers from the Legacy Carriers” (See Emirates Response, page 103).</p>	<p>Acknowledges that: “taking passengers away from other countries’ carriers’ is consistent with precisely the kind of competitive process that benefits consumers” (See Edgeworth Report, page 26).</p>	<p>“Qatar Airways does not compete against US carriers” (See Qatar Comments, page 43).</p> <p>“Aside from the fact that it has no nonstop route overlaps with any US carrier, Qatar Airways also notes that it has almost no one-stop overlap with US carriers either” (See Qatar Comments, page 43).</p>	<p>In the year following Emirates’ entry in cities such as Boston, Dallas, Seattle and Washington, D.C., U.S. carriers and their JV partner carriers experienced sharp declines in bookings to the destinations served by Gulf carriers (See Response Exhibits 20 and 21).</p>
<i>Regression analyses show that Gulf carrier presence lowers the number of passengers on U.S. carriers</i>	<p>“There is reason to believe, for example, that the model builds in the assumption that incumbent carriers will share proportionately in traffic growth” (See Emirates Response, page 138).</p>	<p>Models are “fundamentally flawed” (See Edgeworth Report, page 2).</p>	<p>Unrebutted in submission.</p>	<p>Contrary to Emirates’ conjecture, our regression models use the <i>number</i> of passengers, not shares.</p> <p>Technical criticisms of our diversion regression models are without merit (See Response Section 2 (e) ii.). Core findings are robust to all of Edgeworth’s alleged technical criticisms (See Response Exhibit 23).</p>

Initial Claims (Stimulation)	Gulf Carrier Rebuttal			Response
	Emirates	Etihad	Qatar	
<p><i>Gulf carriers have failed to meaningfully stimulate traffic to/from the United States</i></p>		Findings are “predicated on the notion that new entrants must ‘stimulate demand’ by serving only customers not already served by an incumbent U.S. carrier” (See Edgeworth Report, page 2).	“There is no requirement anywhere that a new entrant in a market accommodate only new (or stimulated) demand” (See Qatar Comments, footnote 138).	<p>Neither Etihad nor Qatar dispute our finding that Gulf carriers have failed to meaningfully stimulate new demand.</p> <p>Edgeworth falsely asserts that our study “does not explain this concept [of demand stimulation]” and therefore assumed “it to mean servicing a customer who would not otherwise be serviced by U.S. carriers” even though this (illogical) concept is nowhere to be found in our study (See Response Section 3(a)).</p>
	“The Legacy Carriers’ argument is premised on the disturbing assumption that existing carriers are entitled to their existing traffic as well as a share of market growth: in other words, to be insulated from competition” (See Emirates Response, page 102).	“The Compass Lexecon Report fails to point to any economic or legal doctrine which indicates that an incumbent is <i>entitled</i> to the customers it serves and the only way for new entrants to compete ‘fairly’ is to sell their products to customers <i>who would not otherwise purchase from the incumbent</i> ” (See Edgeworth Report, par. 60).	“Qatar Airways takes exception to any assertion that it ‘steals’ traffic from US carriers. As a practical matter, carriers do not own or have any entitlement to ‘their’ passengers, who are free to choose their service on the basis of price and convenience” (See Qatar Comments, page 43).	No such claim to “entitlement” can be found in our studies. The Gulf carriers’ claims amount to nothing other than a straw man.
	“Massive, worldwide econometric analysis is a poor tool to resolve questions of stimulation” (See Emirates Response, page 103).			Emirates’ CEO publicly endorsed other econometric analyses using the same “massive, worldwide” scope to support its claim that it stimulates demand as recently as March, 2015 (See Response Section 3(b)).
		“...the Compass Lexecon Report provides no explanation as to why Etihad is responsible for ‘stimulating demand’ between the U.S. and the rest of the world on routes where it does not compete” (See Edgeworth Report, page 72).		No explanation was provided because our studies have made no such claim.
		Models are “fundamentally flawed” (See Edgeworth Report, page 2).		Technical criticisms of our stimulation regression models are without merit (See Response Section 3 (c)). Core findings are robust to all of Edgeworth’s alleged technical criticisms (See Response Exhibit 24).

Initial Claims (Stimulation)	Gulf Carrier Rebuttal			Response
	Emirates	Etihad	Qatar	
<i>Gulf carriers have failed to meaningfully stimulate traffic to/from the United States</i>	<p>"Massive, worldwide econometric analysis is a poor tool to resolve questions of stimulation. Because Emirates serves only a small number of U.S. markets, the data can be examined directly" (See Emirates Response, pages 103-109).</p>			<p>Emirates' MIDT data is highly suspect and shows 60% more growth than the average of comparable MIDT data from Etihad, Qatar, American, Delta, and United (See Response Exhibit 25).</p> <p>Recreating Emirates' "stimulation" exhibits with Delta's MIDT data shows substantially less traffic growth (See Response Exhibits 26 - 29).</p> <p>By ignoring other factors such as underlying economic growth, diversion from nearby airports and destination substitution, Emirates' "simple" methodology falsely attributes all traffic growth to its entry (See Response Sections 3(d)(ii) – 3(d)(v)).</p>
Economic Impact	Gulf Carrier Rebuttal			Response
	Emirates	Etihad	Qatar	
<i>Gulf carriers' subsidized expansion threatens U.S. jobs</i>	<p>"...current level of non-stop service to the Middle East creates \$4.7 billion in annual economic benefit (output) in the U.S. economy" and supports "40,000 jobs" (See Emirates Response, pages 177-178).</p>	<p>"In 2015 the economic footprint of Etihad's visitor arrivals will be an estimated US \$1.6 billion contribution to the GDP of the USA, and some 19,400 jobs across the country" (See Oxford Etihad study, page 23).</p>	<p>"Qatar Airways estimates that its services help to sustain more than 27,000 jobs, and that the visitors it carries contribute \$900 million to the US economy" (See Qatar Comments, page 56).</p>	<p>The entirety of these employment claims are predicated on the incorrect assumption that 100% of foreign-originating passengers onboard their flights to the United States <u>would not have visited</u> but for their services. (See e.g., Emirates Response, page 178 figure V-5, note 1).</p>
	<p>"Emirates' order from Boeing of the new B777X would alone account for over 400,000 new American jobs" (See Emirates Response, page 177).</p>			<p>By relying on list (rather than actual) prices, assuming all aircraft would be delivered in one year, and including options rather than firm orders, Emirates overstates its job claim by a factor of 30 (See Response Exhibit 32).</p> <p>Emirates has failed to demonstrate that their aircraft orders represent additional "net" aircraft orders for Boeing; because Emirates' and the other Gulf carriers divert (rather than stimulate) traffic, their aircraft orders come at the expense of other carriers' orders (See Response Section 4(b)).</p>

APPENDIX B- 1: UPDATE TO EXHIBIT 18 OF APRIL 9 IMPACT STUDY USING UPDATED MIDT DATA

	(1) Gulf Carrier U.S. Gateways	(2) Gateways
Number of Gulf Carriers Present	-0.0441** (0.00242)	-0.0112** (0.00164)
Number of Non-Gulf Carriers Present	-0.00397** (0.000760)	0.00126** (0.000469)
ONLINE	-0.0697** (0.00267)	-0.0359** (0.00171)
ALLIANCE	0.0346** (0.00284)	0.0141** (0.00195)
ATI	-0.0860** (0.00255)	-0.0646** (0.00165)
COUPONS	-0.0603** (0.00136)	-0.0394** (0.000986)
US Point of Sale	0.0940** (0.00119)	0.0270** (0.000738)
INCOME	5.88e-06** (7.72e-07)	5.57e-06** (5.09e-07)
POP	-1.19e-08** (8.58e-10)	-2.74e-08** (1.11e-09)
Constant	6.650** (0.0384)	6.677** (0.0233)
Observations	883,978	2,220,180
R-squared	0.267	0.246

* p<0.05, ** p<0.01

Sources: U.S. DOT DB1B; MIDT; World Bank; BEA.

Notes: Robust standard errors in parenthesis. Regression covers the period 2008-2014 Q3 (quarterly) and reflects all round-trip passengers. Includes Carrier, City-Pair, Year, and Quarter Fixed Effects (not shown). Includes passengers on mainland U.S.-international city-pairs, except itineraries to/from North America and South America. Excludes itineraries on city-pairs where any carrier offered non-stop service in that quarter. A carrier is present on a city-pair in a quarter if its share of MIDT bookings on a city-pair is at least 3%. A booking belongs to the carrier operating the longest total distance. Population and Income are annual. 2014 population and income based on 2013 grown at the cumulative average growth rate from 2008-2013. Gulf Carrier U.S. Gateways includes itineraries to/from: New York City (EWR, JFK, LGA), Chicago (ORD, MDW), Houston (IAH, HOU), Los Angeles (LAX, LGB, BUR), Washington D.C. (IAD, DCA, BWI), Seattle (SEA), Dallas/Fort Worth (DFW, DAL), San Francisco (SFO, OAK), Boston (BOS), Philadelphia (PHL), and Miami (MIA, FLL). Includes flights where the longest segment was operated or marketed by a U.S. carrier (e.g., American, Continental, Delta, Northwest, US Airways, United), or one of their JV Partners.

APPENDIX B- 2 : UPDATE TO EXHIBIT 19 OF APRIL 9 IMPACT STUDY (EXHIBIT 7 OF MAY 13 TRAFFIC STUDY) USING UPDATED MIDT DATA

	US Carrier Passengers (DB1B)			US + JV Carrier Bookings (MIDT)			Other Non-Gulf Foreign Carriers (MIDT)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Gulf Carrier U.S. Gateways	Behind Gulf Carrier U.S. Gateways	All Cities	Gulf Carrier U.S. Gateways	Behind Gulf Carrier U.S. Gateways	All Cities	Gulf Carrier U.S. Gateways	Behind Gulf Carrier U.S. Gateways	All Cities
Number of Gulf Carriers Present	-0.0861** (0.0146)	-0.0866** (0.00588)	-0.0873** (0.00871)	-0.108** (0.00874)	-0.0867** (0.00435)	-0.102** (0.00580)	-0.122** (0.0149)	-0.0395** (0.00859)	-0.108** (0.0124)
ln(Population)	1.694** (0.262)	1.622** (0.107)	1.748** (0.134)	1.387** (0.183)	1.884** (0.103)	1.731** (0.118)	-1.883** (0.446)	2.359** (0.284)	-1.403** (0.370)
ln(Income per Capita)	1.819** (0.123)	0.814** (0.0569)	1.378** (0.0762)	1.102** (0.101)	0.315** (0.0606)	0.793** (0.0690)	1.195** (0.127)	0.823** (0.132)	1.184** (0.115)
D(Quarter 2)	0.364** (0.00803)	0.413** (0.00450)	0.387** (0.00497)	0.281** (0.00655)	0.299** (0.00464)	0.287** (0.00459)	0.154** (0.00975)	0.126** (0.00922)	0.150** (0.00848)
D(Quarter 3)	0.430** (0.00884)	0.368** (0.00445)	0.403** (0.00537)	0.405** (0.00755)	0.330** (0.00534)	0.379** (0.00524)	0.300** (0.0111)	0.166** (0.00967)	0.281** (0.00971)
D(Quarter 4)	0.196** (0.00943)	0.152** (0.00498)	0.177** (0.00593)	0.129** (0.00755)	0.0814** (0.00523)	0.113** (0.00539)	0.0434** (0.0102)	-0.0485** (0.00978)	0.0296** (0.00893)
D(2008)	0.206** (0.0209)	0.149** (0.0101)	0.184** (0.0122)	0.165** (0.0159)	0.106** (0.0104)	0.149** (0.0111)	-0.0724** (0.0342)	0.292** (0.0329)	-0.0287 (0.0304)
D(2009)	0.203** (0.0212)	0.105** (0.0102)	0.161** (0.0127)	0.0899** (0.0167)	-0.0264** (0.0108)	0.0509** (0.0117)	-0.174** (0.0331)	0.0746** (0.0320)	-0.145** (0.0294)
D(2010)	0.213** (0.0183)	0.0956** (0.00860)	0.162** (0.0110)	0.123** (0.0140)	0.0138 (0.00939)	0.0862** (0.00989)	-0.115** (0.0273)	0.142** (0.0263)	-0.0840** (0.0243)
D(2011)	0.138** (0.0149)	0.0427** (0.00714)	0.0965** (0.00893)	0.0712** (0.0114)	-0.0144 (0.00816)	0.0428** (0.00810)	-0.158** (0.0212)	0.0811** (0.0205)	-0.129** (0.0188)
D(2012)	0.0767** (0.0126)	0.0130* (0.00635)	0.0490** (0.00764)	0.0162 (0.00996)	-0.0527** (0.00743)	-0.00628 (0.00706)	-0.122** (0.0173)	0.0363* (0.0161)	-0.104** (0.0153)
D(2013)	0.0324** (0.0121)	0.00824 (0.00645)	0.0216** (0.00741)	-0.00985 (0.00950)	-0.0402** (0.00866)	-0.0202** (0.00692)	-0.0889** (0.0150)	0.0309* (0.0137)	-0.0746** (0.0132)
Constant	-45.43** (5.550)	-33.54** (2.183)	-41.90** (2.864)	-31.26** (3.890)	-33.49** (2.026)	-35.27** (2.500)	37.21** (9.615)	-48.96** (5.987)	26.31** (7.950)
Observations	87,021	467,669	554,690	195,711	1,298,000	1,493,711	152,440	573,513	725,953
R-squared	0.968	0.964	0.976	0.985	0.982	0.988	0.971	0.954	0.978

* p<0.05, ** p<0.01

Sources: U.S. DOT DB1B; MIDT; World Bank; BEA.

Notes: Robust standard errors in parenthesis. Passenger Weighted. A Gulf carrier is present on a city-pair in a quarter if its share of MIDT bookings on a city-pair is at least 3. A booking belongs to the carrier operating the longest total distance. A passenger is a U.S. carrier passenger if the operating carrier (on the "overseas" segment for DB1B or on the longest total distance flown for MIDT) of an itinerary was one of the U.S. carriers (e.g., American, Continental, Delta, Northwest, US Airways, United). Regression covers the period 2008/Q1-2014/Q3. Population and Income are annual. 2014 population and income based on 2013 grown at the cumulative average growth rate from 2008-2013. Includes market fixed effects (not shown). Includes passengers on mainland U.S.-international city-pairs, except itineraries to/from North America and South America, and itineraries starting or ending in Milan. Gulf Carrier U.S. Gateways includes itineraries to/from: New York City (EWR, JFK, LGA), Chicago (ORD, MDW), Houston (IAH, HOU), Los Angeles (LAX, LGB, BUR), Washington D.C. (IAD, DCA, BWI), Seattle (SEA), Dallas/Fort Worth (DFW, DAL), San Francisco (SFO, OAK), Boston (BOS), Philadelphia (PHL), and Miami (MIA, FLL).

APPENDIX B- 3: UPDATE TO PAGE 17 OF MAY 13, 2015 TRAFFIC STUDY USING UPDATED MIDT DATA

	US Carrier Passengers (DB1B)			US + JV Carrier Bookings (MIDT)			Other Non-Gulf Foreign Carriers (MIDT)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Gulf Carrier U.S. Gateways	Behind Gulf Carrier U.S. Gateways	All Cities	Gulf Carrier U.S. Gateways	Behind Gulf Carrier U.S. Gateways	All Cities	Gulf Carrier U.S. Gateways	Behind Gulf Carrier U.S. Gateways	All Cities
Number of Gulf Carriers Present (10%)	-0.176** (0.0143)	-0.123** (0.00752)	-0.153** (0.00921)	-0.195** (0.0112)	-0.172** (0.00531)	-0.187** (0.00784)	-0.232** (0.0149)	-0.136** (0.00781)	-0.216** (0.0125)
ln(Population)	1.655** (0.257)	1.560** (0.106)	1.693** (0.133)	1.339** (0.181)	1.855** (0.102)	1.693** (0.117)	-1.985** (0.435)	2.383** (0.283)	-1.471** (0.363)
ln(Income per Capita)	1.835** (0.123)	0.777** (0.0569)	1.369** (0.0760)	1.136** (0.101)	0.297** (0.0605)	0.804** (0.0686)	1.253** (0.127)	0.893** (0.130)	1.238** (0.115)
D(Quarter 2)	0.364** (0.00802)	0.413** (0.00450)	0.387** (0.00497)	0.281** (0.00654)	0.299** (0.00464)	0.287** (0.00458)	0.154** (0.00973)	0.125** (0.00922)	0.150** (0.00847)
D(Quarter 3)	0.430** (0.00883)	0.368** (0.00445)	0.403** (0.00537)	0.404** (0.00754)	0.330** (0.00534)	0.379** (0.00523)	0.299** (0.0111)	0.165** (0.00966)	0.280** (0.00969)
D(Quarter 4)	0.195** (0.00942)	0.152** (0.00498)	0.176** (0.00592)	0.128** (0.00754)	0.0812** (0.00523)	0.112** (0.00539)	0.0406** (0.0102)	-0.0479** (0.00977)	0.0276** (0.00891)
D(2008)	0.206** (0.0209)	0.147** (0.0101)	0.183** (0.0122)	0.166** (0.0159)	0.105** (0.0104)	0.149** (0.0111)	-0.0693** (0.0341)	0.296** (0.0330)	-0.0255 (0.0303)
D(2009)	0.204** (0.0212)	0.101** (0.0102)	0.160** (0.0127)	0.0923** (0.0167)	-0.0286** (0.0108)	0.0514** (0.0117)	-0.169** (0.0330)	0.0798** (0.0320)	-0.140** (0.0293)
D(2010)	0.214** (0.0183)	0.0926** (0.00860)	0.161** (0.0110)	0.125** (0.0140)	0.0123 (0.00939)	0.0872** (0.00986)	-0.108** (0.0272)	0.147** (0.0263)	-0.0781** (0.0242)
D(2011)	0.138** (0.0149)	0.0412** (0.00714)	0.0960** (0.00892)	0.0729** (0.0114)	-0.0152 (0.00816)	0.0434** (0.00809)	-0.152** (0.0211)	0.0852** (0.0205)	-0.123** (0.0188)
D(2012)	0.0774** (0.0126)	0.0123 (0.00635)	0.0491** (0.00763)	0.0178 (0.00996)	-0.0529** (0.00744)	-0.00536 (0.00706)	-0.120** (0.0172)	0.0399** (0.0161)	-0.101** (0.0153)
D(2013)	0.0328** (0.0121)	0.00852 (0.00646)	0.0220** (0.00741)	-0.00853 (0.00950)	-0.0399** (0.00867)	-0.0192** (0.00692)	-0.0876** (0.0149)	0.0309** (0.0137)	-0.0735** (0.0131)
Constant	-44.79** (5.441)	-31.94** (2.166)	-40.69** (2.830)	-30.62** (3.826)	-32.72** (2.001)	-34.62** (2.474)	38.78** (9.379)	-50.10** (5.969)	27.19** (7.793)
Observations	87,021	467,669	554,690	195,711	1,298,000	1,493,711	152,440	573,513	725,953
R-squared	0.968	0.964	0.976	0.985	0.982	0.988	0.971	0.954	0.978

* p<0.05, ** p<0.01

Sources: U.S. DOT DB1B; MIDT; World Bank; BEA.

Notes: Robust standard errors in parenthesis. Passenger Weighted. A Gulf carrier is present on a city-pair in a quarter if its share of MIDT bookings on a city-pair is at least 10%. A booking belongs to the carrier operating the longest total distance. A passenger is a U.S. carrier passenger if the operating carrier (on the "overseas" segment for DB1B or on the longest total distance flown for MIDT) of an itinerary was one of the U.S. carriers (e.g., American, Continental, Delta, Northwest, US Airways, United). Regression covers the period 2008/Q1-2014/Q3 and reflects all round-trip passengers. Population and Income are annual. 2014 population and income based on 2013 grown at the cumulative average growth rate from 2008-2013. Includes market fixed effects (not shown). Includes passengers on mainland U.S.-international city-pairs, except itineraries to/from North America and South America, and itineraries starting or ending in Milan. Gulf Carrier U.S. Gateways includes itineraries to/from: New York City (EWR, JFK, LGA), Chicago (ORD, MDW), Houston (IAH, HOU), Los Angeles (LAX, LGB, BUR), Washington D.C. (IAD, DCA, BWI), Seattle (SEA), Dallas/Fort Worth (DFW, DAL), San Francisco (SFO, OAK), Boston (BOS), Philadelphia (PHL), and Miami (MIA, FLL).

APPENDIX B- 4: UPDATE TO EXHIBIT 20 OF APRIL 9, 2015 IMPACT STUDY (REPEATED AS EXHIBIT 9 OF MAY 13, 2015 TRAFFIC STUDY) USING UPDATED MIDT DATA

	All Bookings (MIDT)			All Passengers (T100)		
	(1)	(2)	(3)	(4)	(5)	(6)
	Gulf Carrier U.S. Gateways	Behind Gulf Carrier U.S. Gateways	All Cities	Gulf Carrier U.S. Gateways	Behind Gulf Carrier U.S. Gateways	All Cities
Number of Gulf Carriers Present	-0.00699 (0.00734)	0.0316** (0.00343)	0.00267 (0.00532)	0.00389 (0.00660)	0.0275** (0.00339)	0.00997* (0.00472)
ln(Income per Capita)	1.405** (0.0740)	0.474** (0.0543)	1.163** (0.0581)	1.923** (0.0754)	0.955** (0.0601)	1.642** (0.0575)
ln(Population)	1.564** (0.156)	1.930** (0.0872)	1.730** (0.108)	2.172** (0.153)	2.044** (0.0864)	2.199** (0.105)
D(Quarter 2)	0.239** (0.00560)	0.273** (0.00420)	0.250** (0.00420)	0.242** (0.00599)	0.275** (0.00435)	0.252** (0.00448)
D(Quarter 3)	0.367** (0.00627)	0.306** (0.00482)	0.350** (0.00470)	0.376** (0.00697)	0.314** (0.00477)	0.358** (0.00514)
D(Quarter 4)	0.102** (0.00622)	0.0632** (0.00468)	0.0907** (0.00471)	0.135** (0.00687)	0.0915** (0.00500)	0.122** (0.00519)
D(2008)	0.139** (0.0136)	0.124** (0.00984)	0.136** (0.0100)	0.124** (0.0155)	0.0692** (0.0114)	0.109** (0.0115)
D(2009)	0.0619** (0.0144)	-0.0162 (0.0104)	0.0414** (0.0107)	0.129** (0.0155)	0.0106 (0.0119)	0.0943** (0.0117)
D(2010)	0.0917** (0.0118)	0.0310** (0.00901)	0.0759** (0.00885)	0.0962** (0.0132)	-0.000648 (0.0104)	0.0679** (0.01000)
D(2011)	0.0299** (0.00966)	-0.00222 (0.00774)	0.0216** (0.00726)	0.0515** (0.0109)	-0.0111 (0.00903)	0.0332** (0.00835)
D(2012)	-0.0103 (0.00832)	-0.0390** (0.00690)	-0.0177** (0.00631)	0.0140 (0.00986)	-0.0236** (0.00831)	0.00322 (0.00758)
D(2013)	-0.0263** (0.00775)	-0.0303** (0.00771)	-0.0274** (0.00600)	0.00509 (0.00906)	-0.00919 (0.00833)	0.000673 (0.00707)
Constant	-37.66** (3.405)	-35.99** (1.745)	-38.78** (2.332)	-55.37** (3.307)	-42.68** (1.761)	-52.96** (2.276)
Observations	229,130	1,484,990	1,714,120	218,651	1,417,502	1,636,153
R-squared	0.987	0.982	0.989	0.987	0.982	0.989

* p<0.05, ** p<0.01

Sources: U.S. DOT DB1B; MIDT; World Bank; BEA.

Notes: Robust standard errors in parenthesis. Regressions are passenger weighted. A Gulf carrier is present on a city-pair in a quarter if its share of MIDT bookings on a city-pair is at least 3%. A booking belongs to the carrier operating the longest total distance. All Passenger (T100) is the total US DOT T100 long haul international passengers for each carriers, allocated to city-pairs based on MIDT proportions to each citypair. A passenger is a U.S. carrier passenger if the operating carrier (on the "overseas" segment for DB1B or on the longest total distance flown for MIDT) of an itinerary was one of the U.S. carriers (e.g., American, Continental, Delta, Northwest, US Airways, United). Regression covers the period 2008/Q1-2014/Q3 (T100 regressions through 2014Q2). Population and Income are annual. 2014 population and income based on 2013 grown at the cumulative average growth rate from 2008-2013. Includes market fixed effects (not shown). Includes passengers on mainland U.S.-international city-pairs, except itineraries to/from North America and South America, and itineraries starting or ending in Milan. Gulf Carrier U.S. Gateways includes itineraries to/from: New York City (EWR, JFK, LGA), Chicago (ORD, MDW), Houston (IAH, HOU), Los Angeles (LAX, LGB, BUR), Washington D.C. (IAD, DCA, BWI), Seattle (SEA), Dallas/Fort Worth (DFW, DAL), San Francisco (SFO, OAK), Boston (BOS), Philadelphia (PHL), and Miami (MIA, FLL).