



Cost-Benefit Analysis of Proposed Consumer Rule 3

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Confidential Draft of 9 May 2013



Proposed Consumer Rule 3

Consumer Rule 3 may mandate, via regulation,

 that airlines display or sell some or all ancillary services through the GDS channel

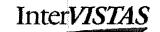
The stated goal of the proposed regulation is to:

- Increase transparency of air fares for consumers
- Which presumably would enhance competition between airlines
 - horizontal competition



Background on Ancillary Fee Issues





Ancillary Charges

CR3 appears to be based on the (incorrect) assumption that charges for ancillary services are uniform

But charges are NOT uniform

- The correct ancillary charge can vary
 - by route, flight, date and individual
 - And by customer relationship with the airline
 - And the package of services being offered to the customer

Even with CR3, GDSs will quote incorrect all-inclusive fares to some travelers

Because a static GDS display won't work when fees vary



Background on the Aviation Value Chain and the Role of GDS





Horizontal and Vertical Competition

The stated goal of CR3 is:

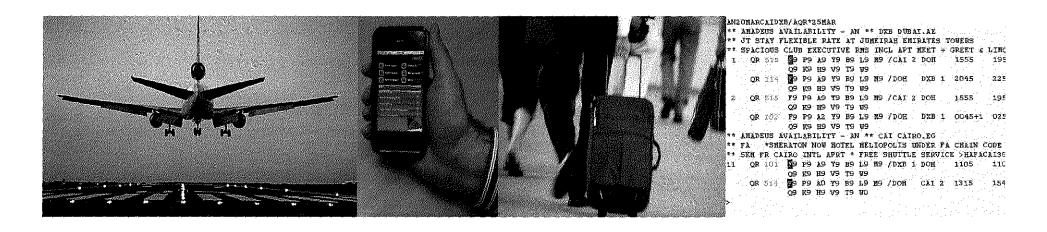
- greater transparency to consumers of all-inclusive fares
- enhancing horizontal competition between airlines

Key questions for cost-benefit analysis are:

- Would CR3 actually increase horizontal competition?
- Would CR3 cause harm to some consumers via overstating all-inclusive fare?
- What are the implications (costs) of CR3 for reducing vertical competition and delaying vertical efficiencies?
 - Airline goal: reduce GDS market power rents
 - Reducing GDS costs
 - Reduce premium above costs embodied in GDS rates to airlines
- Would reduced vertical competition/efficiency outweigh any benefit of horizontal competition?



Cost Benefit Analysis





Cost Benefit Framework

Conceptual Benefits

- Reduction in search time for all-inclusive fare (with ancillary charges)
 - We strongly doubt that there would be a reduction in search costs under CR3
 - Nevertheless, we assume in the CBA that there would be a reduction
- Reduced airfares from increased horizontal competition

Conceptual Costs

- Compliance costs
- Overpayment of fares
 - CR3 could/would result in display of incorrect information on ancillary charges (hence all-in fares) for a portion of travelers
- Higher GDS cost (deferral of investment and innovation in GDS)
- Higher GDS rates (Perpetuation/expansion of GDS market power)
- Deadweight loss



Approaches to CBA

Two approaches were used to create range of CBA results

Method 1

- CR3 reduces search costs for travelers booking via GDS channels who require an ancillary service
- But some travelers (using GDS distribution channels) overpay due to incorrectly quoted all-inclusive fares

Method 2

- CR3 reduces search costs for the portion of travelers booking via GDS channels who require an ancillary service
 - But not for as many as in Method 1, as some must engage in additional search time to obtain a correct all-inclusive fare quote
- Method 2 eliminates the cost of paying incorrectly quoted higher all-inclusive fares
 - But the benefit of reduced search time is lower

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Conclusion

Two methods were used

- Method 1:
 - CR3 does not have a strong and robust positive NPV
 - Has a sizeable negative NPV
- Method 2:
 - CR3 does not have a strong and robust positive NPV
 - Has a small negative NPV

Regardless of which method is used

- CR3 does NOT meet the CBA test
 - of a positive benefit-cost result
 - of a result that is robust to different methodologies or assumptions



Benefits



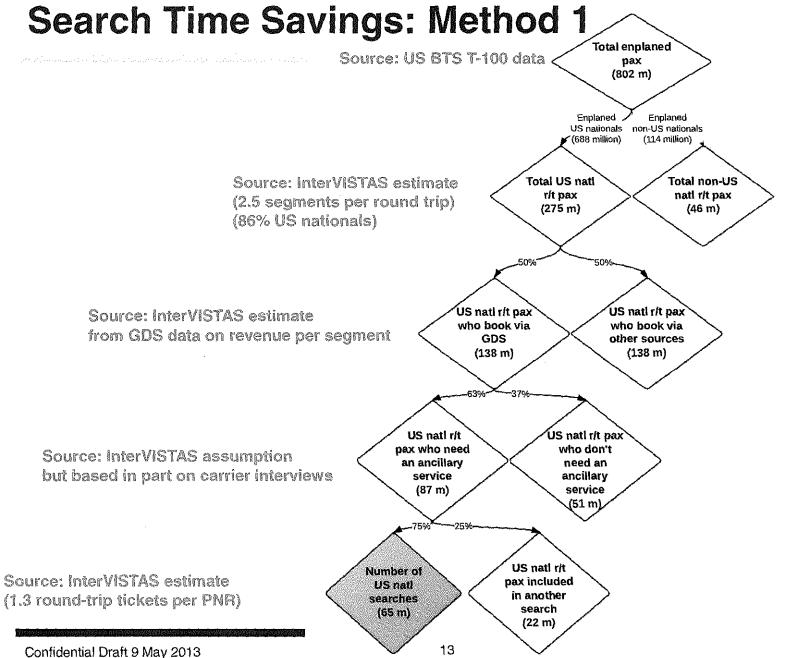
Benefit Category 1: Search Time Savings



Search cost savings are a critical parameter

- Key issues:
 - #1: How many passengers (or their travel agents)
 would realise search cost savings with CR3?
 - 65 million under Method 1
 - 48 million under Method 2
 - #2: How much search time is saved?
 - 10 min per search based on our market research
 - #3: What is the value of these savings?
 - US DOT recommended values were used
 - \$42/hour weighted average based on business and leisure travel, adjusted for inflation
 - Benefits must be incremental to CR2

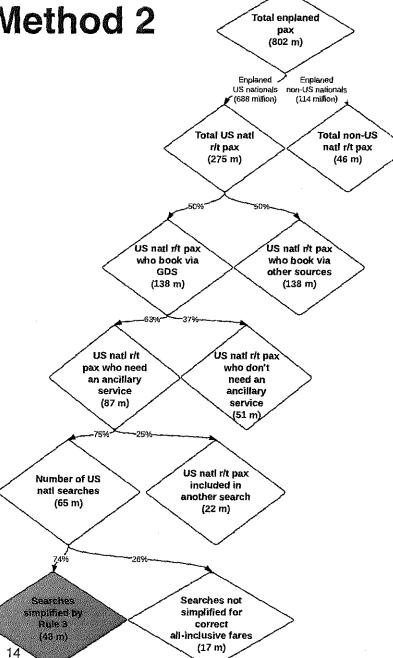






Search Time Savings: Method 2

saga yangangan ang karangangan ng kalalasa karangan ng makanga menelah lebil se mahimulah ng pagkangangan



Source: InterVISTAS estimate
(26% of passengers eligible for
waived or reduced fee ancillary service
and need to research correct all-inclusive fares)

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Search Time Savings

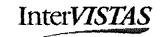
Search cost savings (#1 * #2 * #3)

- What is the value of these hypothetical savings?
 - At \$42/hour and 10 minutes/search, the search cost saving is \$7 per GDS round trip ticket requiring an ancillary service
- \$450 million per year (Method 1)
 - (65 million * \$7/search)
- \$331 million per year (Method 2)
 - (48 million * \$7/search)
- A 7% discount rate was used for NPV
 - 7% real (inflation adjusted) discount rate recommended by OMB



Office of Management and Budget

Benefit Category 2:



Reduced Fares from Airline Competition

We project this possible benefit from CR3 as zero

- Rule 3 would not reduce airline costs
 - Hence no fare reduction from cost savings
- Is there potential for fare reductions by CR3 reducing alleged airline market power?
 - Airlines have the lowest rate of return in the value chain
 - Return is less than airline cost of capital
 - It is difficult to project any meaningful and sustainable reduction in air fares from CR3
 - Air fares already have unprecedented transparency
 - Travelers have ready access to information on ancillary charges
 - via easy connection to airline.com, airline call centre or by direct connect



Summary of Results: Benefits

Method 1:

Figure ES-1: Summary of Costs and Benefits of Proposed Consumer Rule 3
Method 1: reduced search cost but with incorrectly stated all-in fares for some travellers

(using a 7% discount rate)

| | Annual Benefit or Cost (million\$) | NPV (million\$) | Period (years) |
|--|--|--------------------|-------------------|
| Benefits | | | |
| 1. Reduced search time | \$450 | \$3,161 | 10 |
| Reduced fares from increased airline competition | none | none | none |
| Total benefits | \$450 | \$3,161 |) 10 |

Method 2:

Figure ES-2: Summary of Costs and Benefits of Proposed Consumer Rule 3
Method 2: additional search to offset GDS overstatement of all-in fares for some travelers
(using a 7% discount rate)

| | Annual Benefit or Cost (million \$) | NPV (million \$) | Period (years) |
|--|-------------------------------------|---------------------|-------------------|
| Benefits | | | |
| Reduced search time | \$331 | \$2,327 | 10 |
| Reduced fares from increased airline competition | none | rione | none |
| Total benefits | \$331 | \$2,327 |) 10 |



Costs







Annual airline compliance costs

- Compliance costs per airline assumed to be \$5 million
 - This is based on InterVISTAS experience with airline IT systems and support
 - And interview with a major US carrier using GDS channel
 - Annual costs of compliance for 6 major US carriers were estimated to be \$30 million
 - Likely understates the true cost of compliance
 - based on feedback from the industry

We have not included any implementation costs for GDSs

Doing so would increase cost, and thus reduce net benefit





Method 1

- Computes cost of some travelers overpaying due to incorrect all-in fares for ancillary services
 - Different passengers participate in different reward programs or affiliation programs and qualify for different ancillary service fees
 - GDSs cannot offer 'customized' all-inclusive fares
 - Thus there is a cost in the form of overpayment by some travelers

Annual cost: \$2.4 billion

Method 2

- Assumes travelers will research correct all- in fares
 - There will be no cost of overpayment
 - But the passengers eligible for waived or reduced fees for ancillary services will need to incur higher search costs even under CR3

Annual cost: \$0

Cost Categories 3 & 4: GDS Monopoly Rents

GDSs have market power vis. a vis. airlines

- US DoT/DoJ noted at 2004 deregulation of GDSs that there may be remaining market power for GDSs
- The weak competition in distribution channels allow GDSs
 - to perpetuate high cost systems
 - Cost category 3
 - To perpetuate high mark-ups above cost
 - Cost category 4

Cost Category 3: Deferral of Innovation in GDSs



Perpetuation of higher distribution cost per ticket due to deferral of investment in innovation by GDSs

- In the airlines' view, CR3 would force them to standardize prices for ancillary services to conform to GDS systems
- This would
 - enable the GDSs to stick with their inflexible expensive proprietary solutions that serve to inhibit new entry/competition and delay adoption of new modern technologies that are more cost-effective.

Annual cost: \$323 million

Cost Category 4: Expansion of GDS Market Power



Perpetuation of GDS market power premium

- McKinsey finds
 - GDSs earn 29% rate of return
 - Significantly in excess of either CoC or normal RoIC
- US DoT/DoJ noted at 2004 deregulation of GDSs that there may be remaining market power for GDSs
- While average fee per segment is in \$5-6 range, costs to GDS of providing the service is much less
 - \$4.00 cost (IATA) vs \$5.14 fee per segment (Farelogix)
 - Costs in other regions can be \$1.00 (new Chinese GDS)

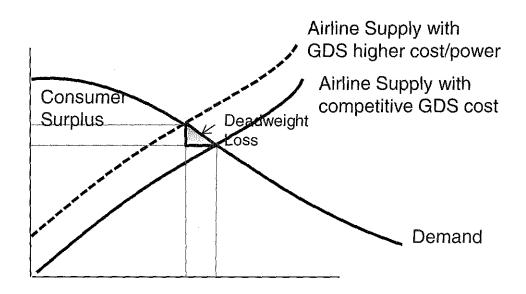
Annual cost: \$241 million

Cost Category 5: Deadweight Loss

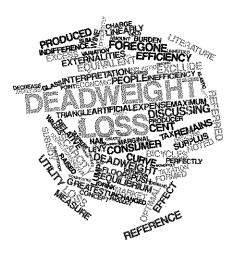


Deadweight loss

 The loss of economic welfare (economic efficiency) due to prices that are too high



Annual cost: \$29 million





Summary of Cost Results (Method 1)

Figure ES-1: Summary of Costs and Benefits of Proposed Consumer Rule 3 Method 1: reduced search cost but with incorrectly stated all-in fares for some travellers

(using a 7% discount rate)

| | Annual Benefit or Cost (million\$) | NPV (million\$) | Period (years) |
|---|--|--------------------|-------------------|
| Costs | | | |
| 1. Compliance costs | \$30 | \$79 | 3 |
| Overpayment of air fares due to incorrectly constructed ancillary services prices | \$2,359 | \$16,569 | 10 |
| 3. Deferral of technical change in GDS services | \$323 | \$1,081 | 5 |
| 4. Cost of perpetuation or expansion of market power by GDS providers | \$241 | \$1,694 | 10 |
| 5. Deadweight loss from reduced travel | \$29 | \$201 | 10 |
| Total costs | \$2,982 | \$19,624 |) |



Summary of Cost Results (Method 2)

Figure ES-2: Summary of Costs and Benefits of Proposed Consumer Rule 3
Method 2 – additional search to offset GDS overstatement of all-in fares for some travellers

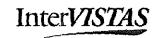
(using a 7% discount rate)

| | Annual Benefit or Cost (million\$) | NPV (million\$) | Period (years) |
|---|--|--------------------|-------------------|
| Costs | | | : |
| 1. Compliance costs | \$30 | \$79 | 3 |
| Overpayment of air fares due to incorrectly constructed ancillary services prices | \$0 | \$0 | 10 |
| 3. Deferral of technical change in GDS services | \$323 | \$1,081 | 5 |
| 4. Cost of perpetuation or expansion of market power by GDS providers | \$241 | \$1,694 | 10 |
| 5. Deadweight loss from reduced travel | \$0.2 | \$2 | 10 |
| Total costs | \$594 | \$2,856 | |



Net Cost-Benefit





Summary of Results

Method 1 Results

- Total Net Present Value of CR3
 - Benefits: \$3 b
 - Costs: \$20 b (bulk of costs from ancillary service overcharge)
 - NPV: -\$17 b

Method 2 Results

- Total Net Present Value of CR3
 - Benefits: \$2.33 b
 - Costs: \$2.86 b
 - NPV: -\$0.53 b

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 - of a positive benefit-cost result
 - of a result that is robust to different methodologies





Thank You!

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InterVISTAS Consulting Group

Offices

- Washington (Bethesda),
 Vancouver, London, the Hague
- Team of 80 professionals

Sectors

- Main focus is aviation
- Airlines, airports, air cargo, business aviation, air navigation

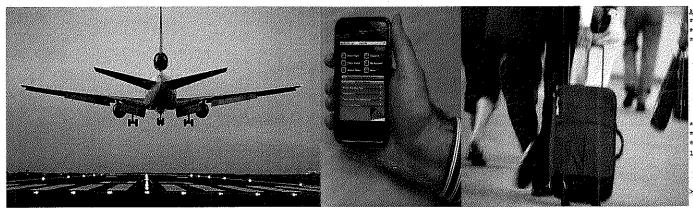
Methodologies

- Network & route planning, privatization & finance, border & security facilitation
- Economic analysis: cost-benefit analysis, pricing/elasticity, traffic forecast, etc.



Background Information

Authors Cost-Benefit Analysis Aviation Value Chain



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Dr. Michael Tretheway

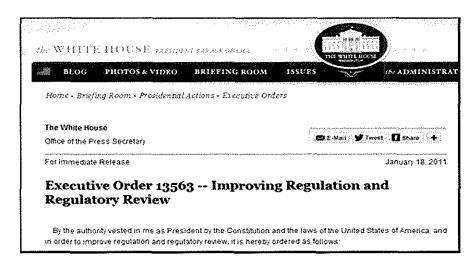
InterVISTAS Chief Economist

- PhD in Economics (Wisconsin)
- Expert witness (testified in roughly 50 proceedings)
 - US, Canada, Australia, New Zealand, UK, EU, Hong Kong
- Professor
 - Transportation Management & Economics, Managerial Economics
 - University of British Columbia
 - Taught social cost-benefit analysis for 14 years
- Fellow, Australia Bureau of Transport Economics
- 5 books, 40 peer reviewed papers

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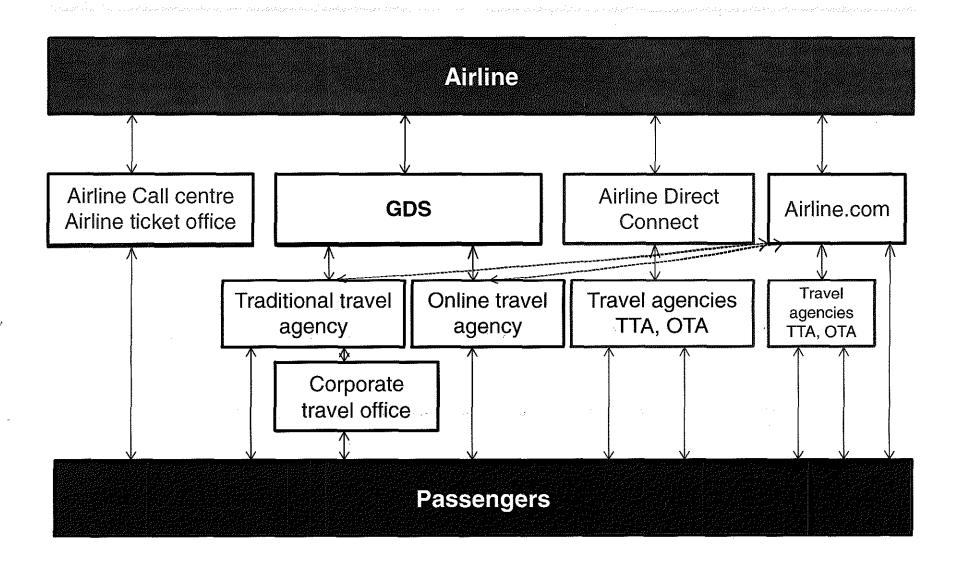


- CBA provides a decision making framework for assessing the merits of a proposed policy
- Any new federal regulation in the US requires a cost-benefit analysis to be completed prior to approval
- President Obama's Executive Order (13563)
- any new federal regulation
 must be supported
 by a cost-benefit analysis
 which shows a clear
 net benefit from the regulation

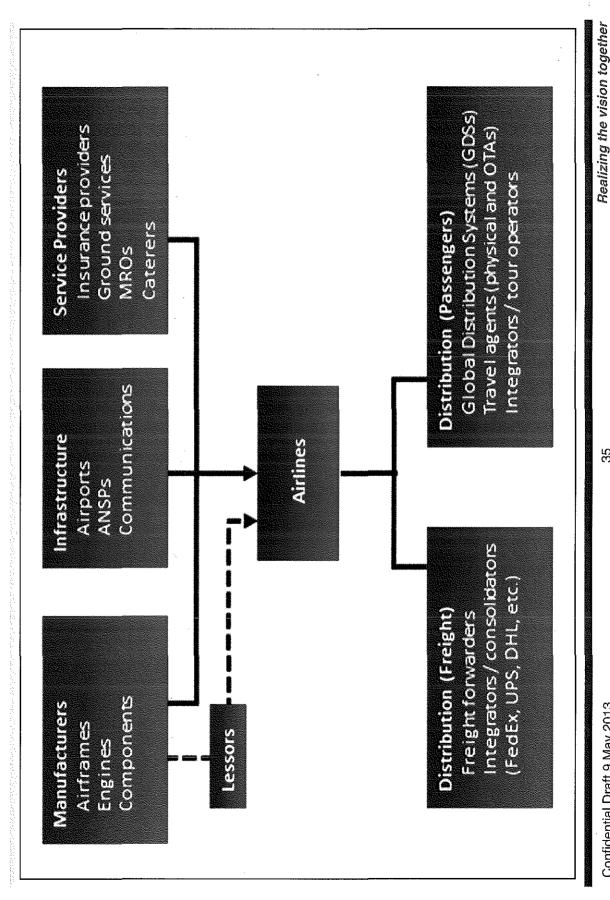




Airline Distribution Channels

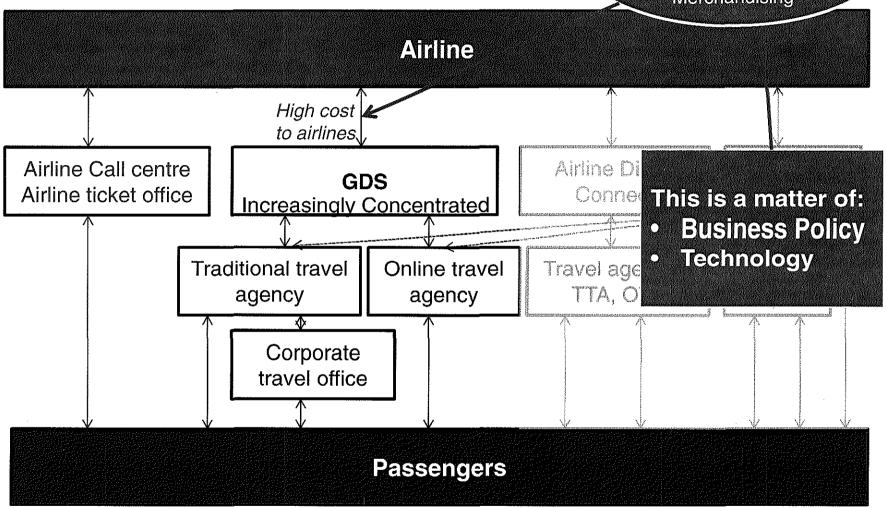


Aviation Value Chain



Airline Distribution Channels

Does not reveal pax name prior to sale, thus cannot support Customisation/ Merchandising

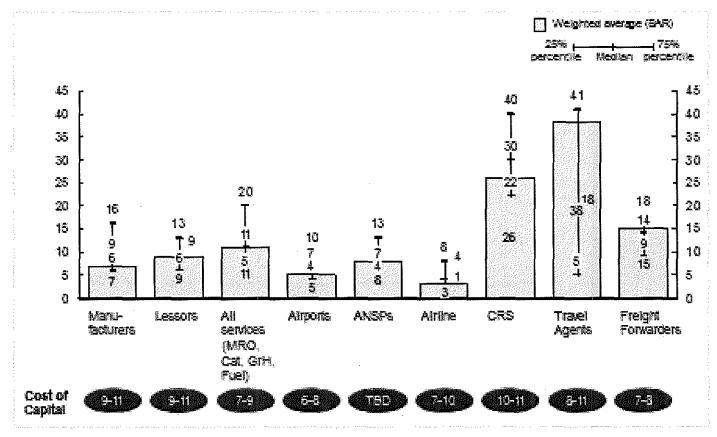




Aviation Value Chain (McKinsey study)

Operating performance varies throughout the value chain

ROIC excluding goodwill, period 2002-2009, %



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