40 YEARS OF AIRLINE Deregulation: Successes and Surprises

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October 30, 2018
REGULATION 1940-1978: THE GOOD

- US air travel is safe, comfortable, and innovative
- Large set of U.S. carriers
  - 11 of 16 original “Trunk Airlines” (two International ‘Flag’ carriers) & 12 “Local Service”
- Prices set by CAB, target 55% load factor, 12% return
REGULATION: THE BAD & UGLY

- Administrative route and network structure
  - No new airline entry, informal route moratorium post-1969
  - Most routes have only 1 or 2 airlines
- High and rising prices with little/no discounting
  - Vs. comparable unregulated intrastate routes
- Substantial nonprice competition, of unknown net social value
  - Flight frequency, new aircraft, uniforms, & piano bars
- Airlines are still losing money…
  - Douglas & Miller P↑→frequency↑→load factor ↓ “death spiral”
- Regulatory evasion efforts (Freddy Laker)
SUCCESSES

- A demonstration project for deregulation
  - Trucking, Railroads, Natural gas, and more….
- Markets replace administrative decision-making
- Air travel access expands
- Prices fall and productivity rises

*Air cargo deregulation should not be footnote!
AIR TRAVEL EXPANDS

U.S. Domestic Airline Traffic 1937-2017

REFLECTING GREATER ACCESS
NOT ONLY MORE FLIGHTS/FLYER

% of U.S. Adult Population That Flew...

<table>
<thead>
<tr>
<th>Year</th>
<th>Past 12 Months</th>
<th>In Lifetime</th>
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<tbody>
<tr>
<td>1971</td>
<td>21</td>
<td>49</td>
</tr>
<tr>
<td>1977</td>
<td>25</td>
<td>63</td>
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<tr>
<td>1987</td>
<td>30</td>
<td>72</td>
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<td>1997</td>
<td>39</td>
<td>81</td>
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<tr>
<td>2017</td>
<td>48</td>
<td>88</td>
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Source: www.airlines.org
PRODUCTIVITY HAS RISEN
Load factors increase efficiency …though not passenger comfort

Domestic Load Factor 1937-2017

Source: See slide 5
REAL FARES HAVE DECLINED
Even relative to a regulated benchmark?

Fig. 2.4 Real yield (rev/passenger mile) versus DOT standard industry fare level, 1979–2011

Source: See slide 5
EXPANSION BY SOUTHWEST & OTHER LCCS
Critical to competition over past 20 years

Expansion of Low Cost Carriers, 1995-2017

Source: Calculations from DB1B
SOME SURPRISES

- Network evolution to hubs
  - The importance of domestic feed for international airlines (PanAm, TWA)
  - Congestion & delays: Whose fault?
- Pricing strategies
  - Loyalty programs, price dispersion & ancillary fees
- Entry, exits, and consolidations
  - Strategic leverage and bankruptcies?
NETWORK EVOLUTION: HUB AND SPOKE CONNECTS MANY O-D PAIRS

Delta 1974 System Map

Delta 2015 System Map
CONGESTION AND FLIGHT DELAYS

Data source: FAA Operational Network (OPSNET) (data through June ’17)
Courtesy of J. Hansman, “Overview of Airline Industry Forces and Trends, Fall 2018,” MIT ICAT
NEW PRICING STRATEGIES EXPANDED PRICE DISPERSION

Source: See slide 5
FARES TELL ONLY PART OF THE STORY
and this excludes seat assignment, food, other on board revenue

FEE AND ANCILLARY REVENUE GROWTH 2005-2018 (NOMINAL $)

Courtesy of J. Hansman, “Overview of Airline Industry Forces and Trends, Fall 2018,” MIT ICAT
ONGOING CHALLENGES

- Consolidation: Mergers & Alliances
  - What should be the standard?
  - International competition: alliances & antitrust immunity?
  - Conduct?
- Pricing transparency
- Infrastructure investments and access