

MIT Global Airline Industry Program
Industry Advisory Board/Airline Industry Consortium Joint Meeting
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Funding of Aviation Infrastructure

Prof. Joakim Karlsson (Daniel Webster College)


Prof. Amedeo R. Odoni (MIT)





Ms. Megan Gaudet (MIT)

Motivation

- **Concerns about costs of aviation infrastructure**
- **Authority to collect AATF taxes expires 9/30/07**
- **Introduction of new taxes**
 - 13 countries to impose new taxes to fight global disease and promote U.N. Millennium Development Goals
- **Objectives**
 - Quantify U.S. and EU ticket taxes and fees
 - Estimate the distribution of the tax burden
 - Quantify the total share of airline costs which support air transportation and security infrastructure

Battle of the user groups

- **ATA**  **smarts skies**
a blueprint for the future
 - Fair, equitable, and simple user charges
 - Link system use with system costs
 - Base charges on departures and time in system

-    
 - User fees equate to bad government
 - Airlines drive cost
 - ATC system is built for the airlines' use

Ticket Tax Project

U.S. ticket taxes and fees

Tax/Fee	Symbol	Rate	Recipient
Federal ticket tax	FTT	7.5%	Airport and Airway Trust Fund
Federal segment tax	FST	\$3.30 per segment	
Passenger facility charge	PFC	\$3 or \$4.50 per enpl.	Collecting airport
Federal security service fee	FSSF	\$2.50 per enpl.	TSA

Notes:

- Rates effective 2006
- Only includes domestic taxes and fees added directly to the price of tickets
- PFC and FSSF collection limited to first 2 enplanements per one-way trip
- Rural airports exempt from some taxes
- Special FTT & FST rules exist for Alaska and Hawaii
- FSSF temporarily suspended from June 1 to September 30, 2003

Definitions

- Total taxes and fees (U.S. example):

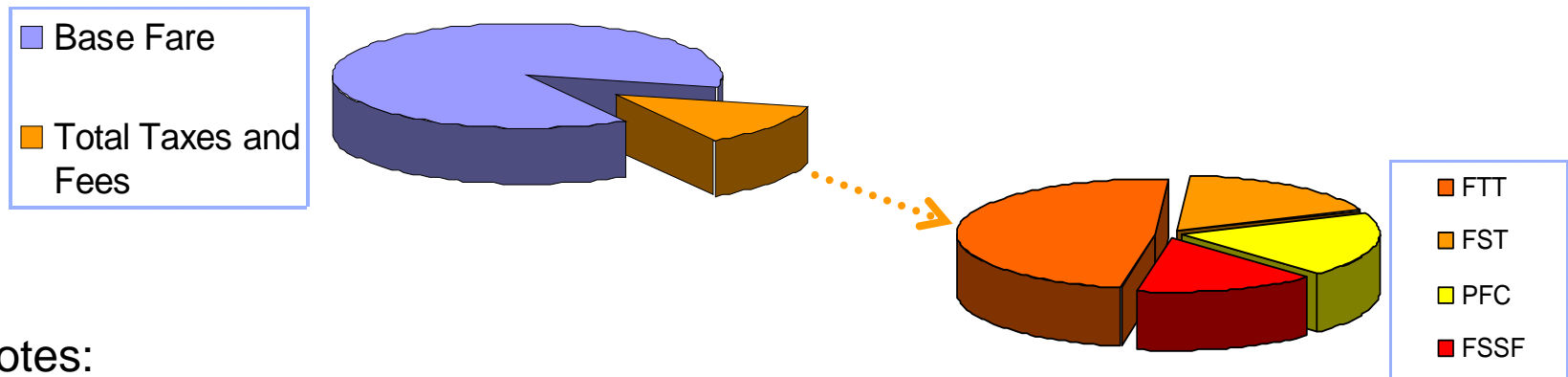
$$TTF = FTT + FST + FSSF + PFC$$

- Effective tax rate:

$$ETR = \frac{E(TTF)}{E(BF)} \times 100\%$$

Summary statistics

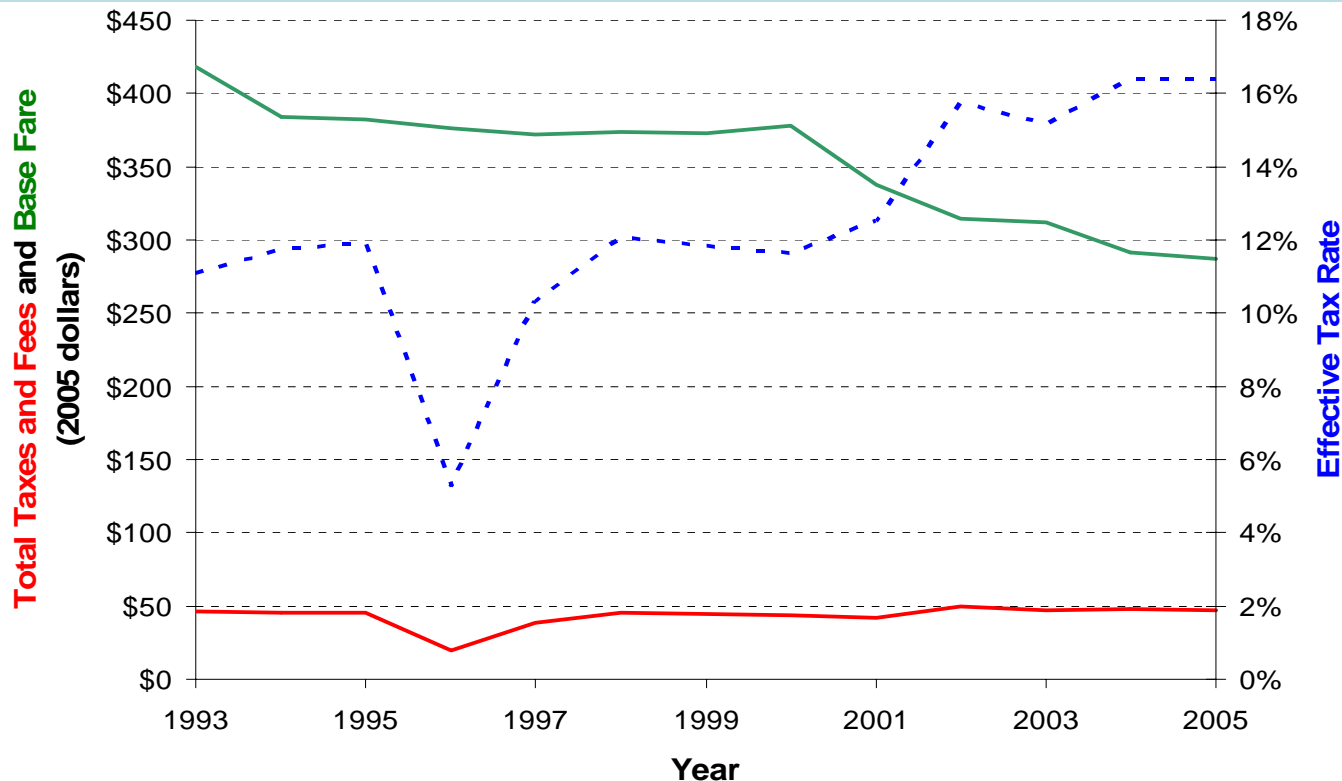
BF	TTF	FTT	FST	PFC	FSSF	ETR
\$287.12	\$47.01	\$21.53	\$8.64	\$10.20	\$6.64	16.4%



Notes:

- Results for 2005
- Expressed as round-trip equivalents
- Average number of segments in each direction: 1.35

U.S. taxes and fees: 1993-2005











- 188 million records, representing 436 million passengers
- Average total taxes and fees: little change
 - Base fare has decreased by \$130 or 31%
 - Tax rate has increased by 5 percentage points

EU challenges

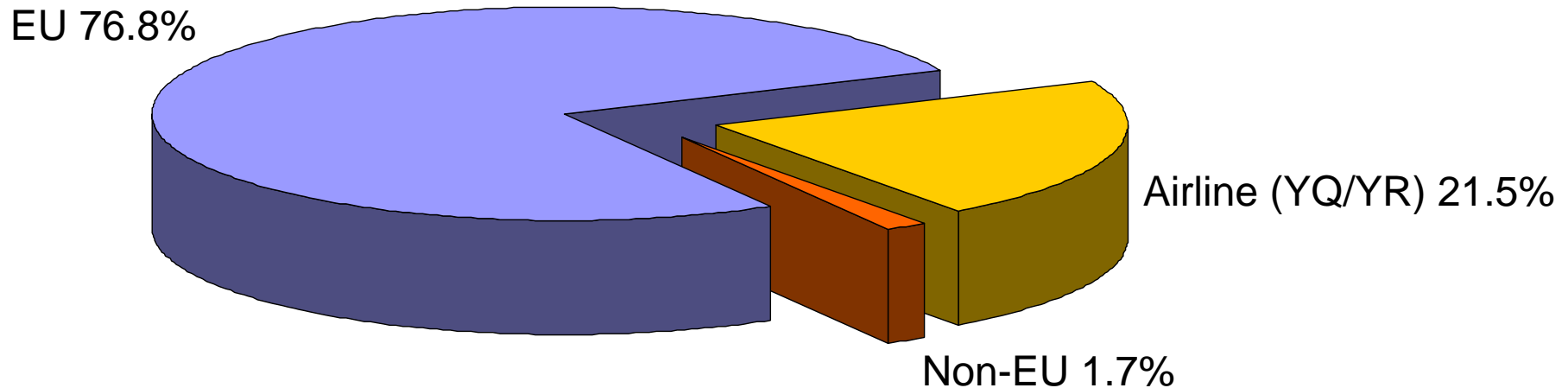
- No database equivalent to U.S. DB1B
- Limited GDS sample for EU-15:
 - ~3.5 million tickets intra-EU tickets collected January 13, 2004-February 15, 2005
 - Does not include LCCs or charter carriers
- Does not cover air navigation service fees
- Results are not directly comparable to U.S.

EU-15 ticket taxes and fees

			DQ FI QU WL	FR QW	DE	GR	
AT ZY		DK ZO	YF ZX	QX UI	RA RD	WP WQ	BC UP
							

EX FN IT VT		CJ NL RN VV		ES QV RS		GB UB YO
LU YJ		PT YP		XS YA		
						

Distribution of EU taxes and fees



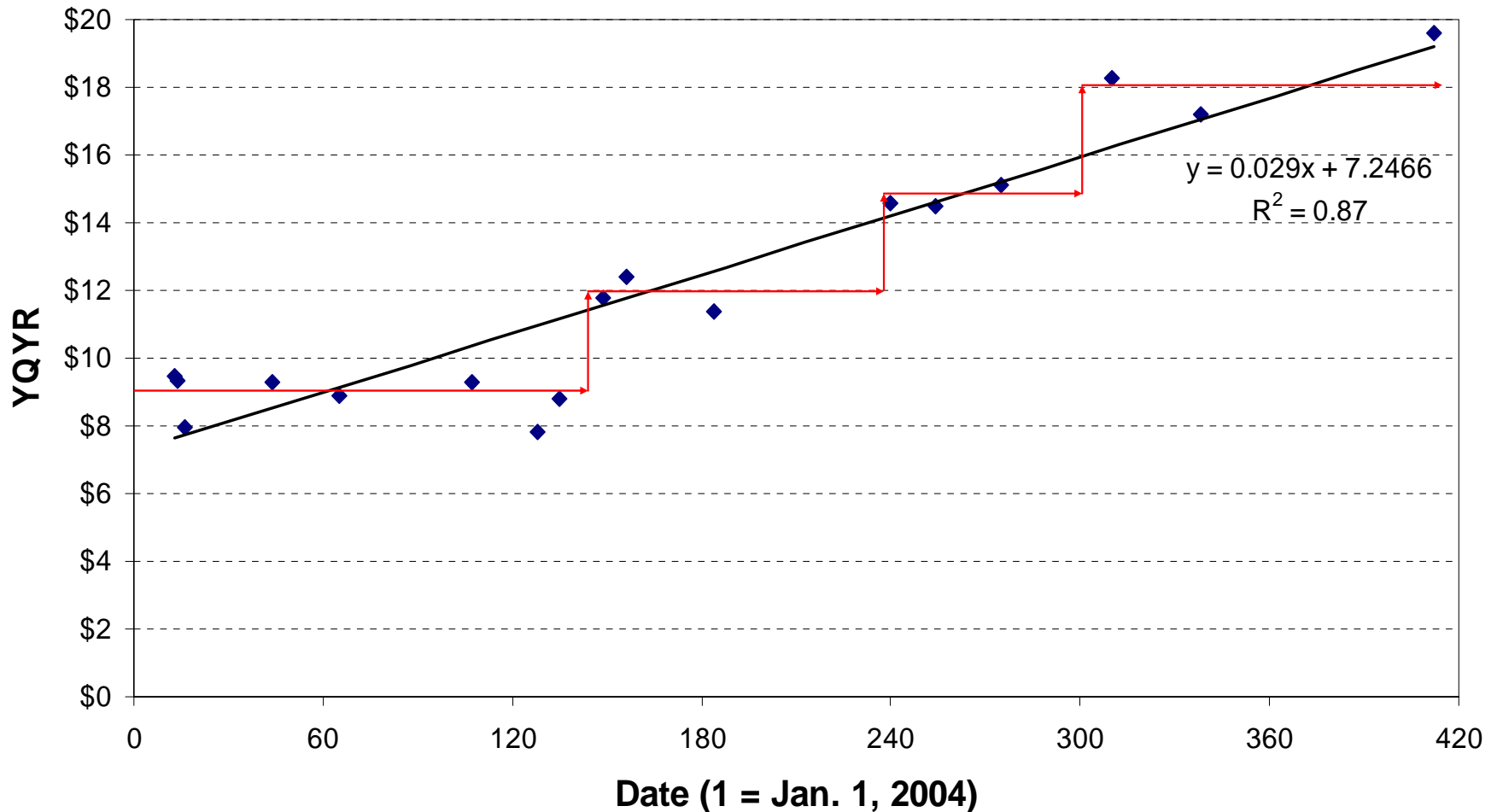
- YQ/YR (= “airline own use only”) make up more than 20% of apparent taxes and fees
- A non-trivial amount of non-EU taxes are assessed on intra-EU tickets

EU-15 results

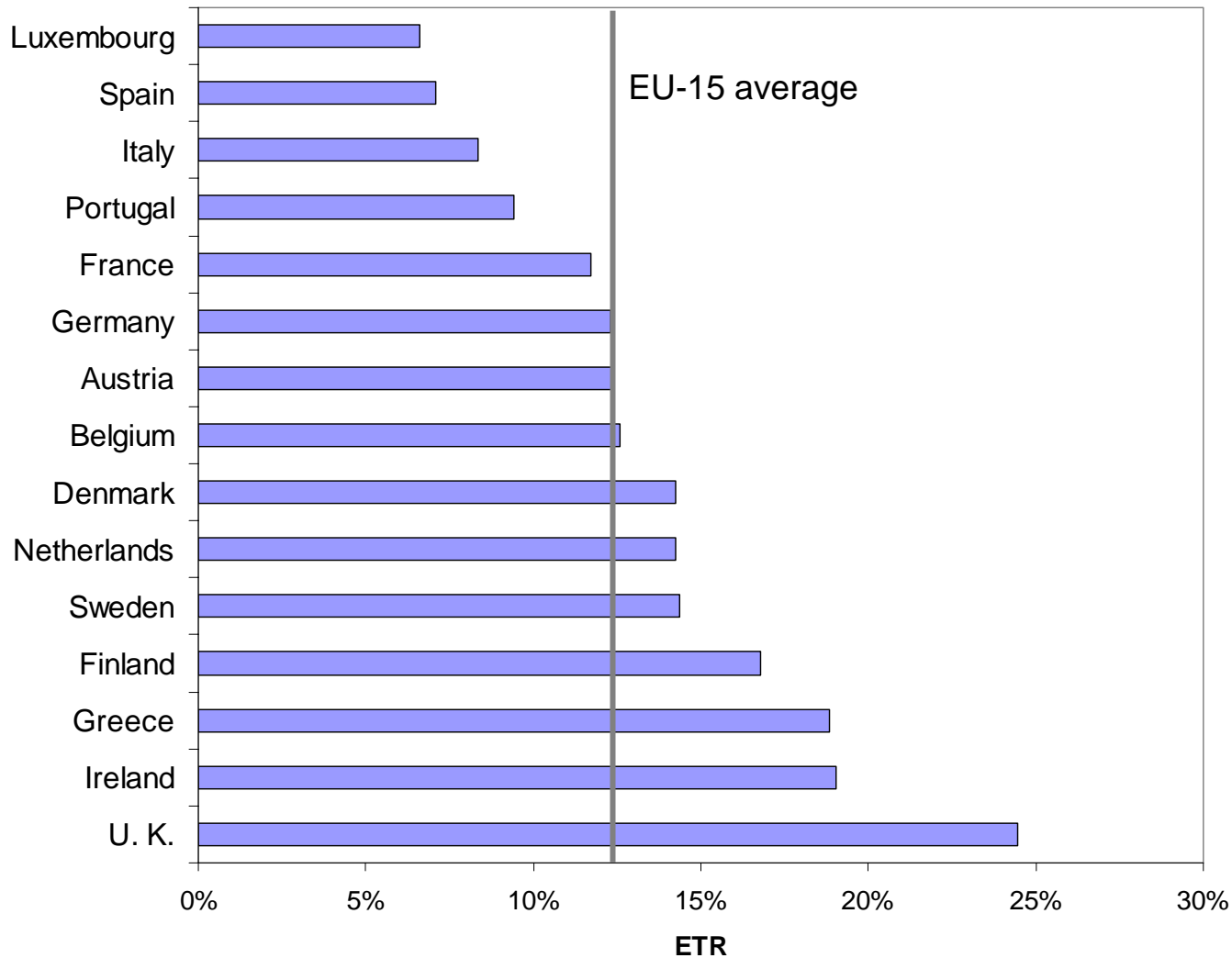
Case	BF	TTF	BF+TTF	ETR
EU-15 Total	\$283.40	\$32.11	\$315.51	11.3%
U.S. Total	\$287.12	\$47.01	\$334.13	16.4%

- EU-15 results based on 17-day sample of ~3.5 million tickets
- YQYR included in base fare (and not in total taxes and fees)
- When including YQ/YR in fees, apparent EU-15 ETR is >16%
- YQYR increased from \$8.50 in Jan. 2004 to \$19.50 in Feb. 2005
- Including ANS charges may increase EU ETR to ~19% (based on Lufthansa/SAS data)

“Airline use only” fees in EU



ETR by country of origin



Cost of Infrastructure Project

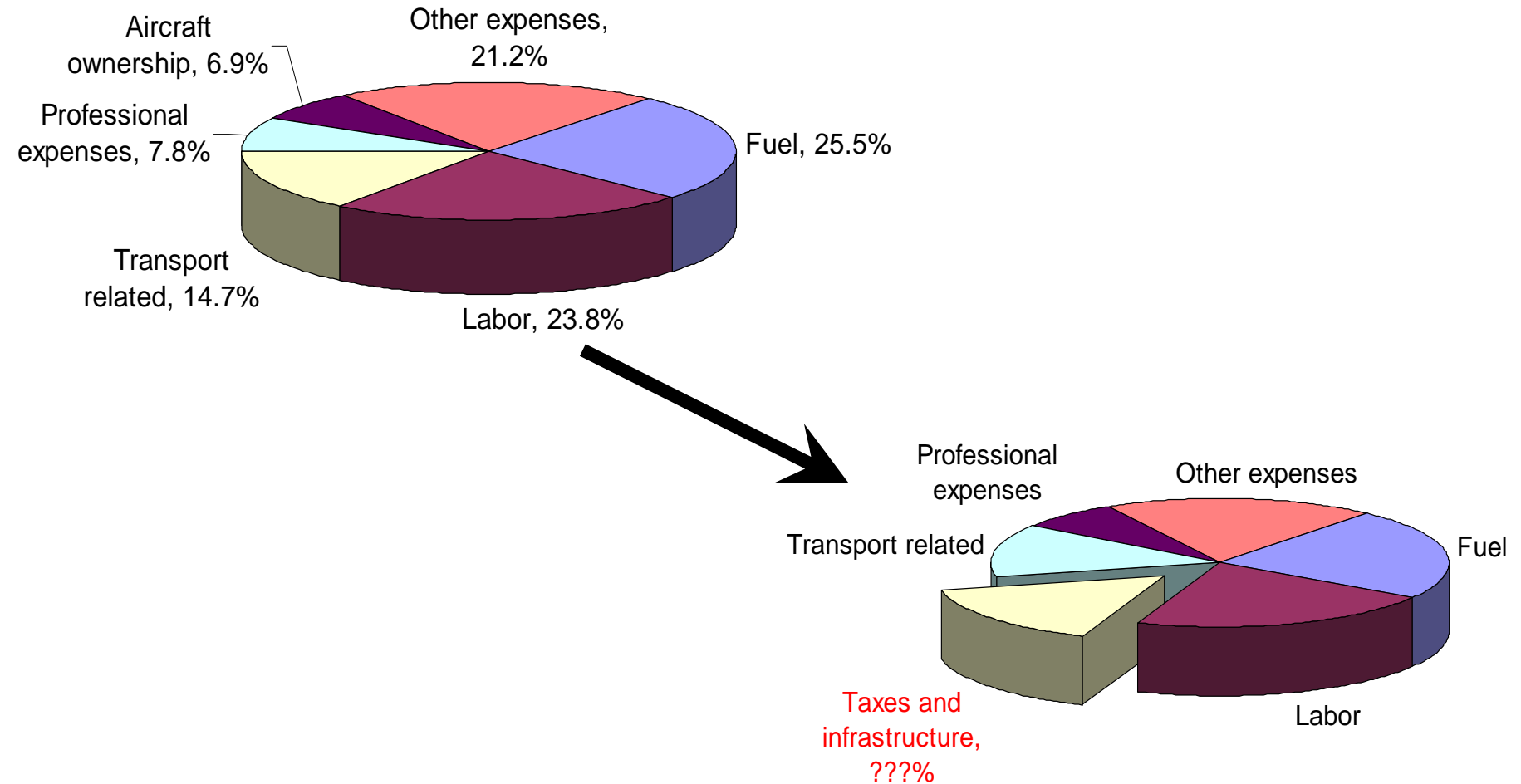
Goals and methodology

- Quantify all infrastructure and security related air transportation costs
- Developed survey instrument for ATA to distribute to members
- Received survey results for 10 carriers
- Goal is to have estimates for all carriers, by scaling up survey results
- Includes all taxes (most are off-budget)

Additional U.S. airline taxes

Tax	Rate	Basis
International arrival tax	\$14.50	Per arriving international passenger
International departure tax	\$14.50	Per departing international passenger
Immigration user fee	\$7.00	Per arriving international passenger
Customs user fee	\$5.00	Per arriving international passenger
Animal and plant health inspection service passenger fee	\$5.00	Per arriving international passenger
Animal and plant health inspection service aircraft fee	\$70.50	Per arriving international aircraft
Jet fuel tax (commercial use)	4.3¢	Per gallon
Leaking underground storage tank fuel tax	0.1¢	Per gallon
Air carrier security fee	Confidential	Per carrier (based on CY 2000 screening costs)
Cargo waybill tax	6.25%	Domestic freight waybill
Frequent flyer tax	7.5%	Sale of the right to award frequent flyer miles to third parties

Changing conventional wisdom



Survey results and follow-up

- Infrastructure costs are ~16% (10 carriers)
- Methods for estimating costs for **all** carriers
 - Option 1: Scale survey results

	Ops	Pax	Cargo
Domestic	33.8%	55.7%	37.9%
International	34.6%	63.0%	36.6%

- Option 2: Use independent data sources (found for 85% of infrastructure costs)

Questions?

