

MIT Global Airline Industry Program Labor/Human Resource Management Update

Industry Advisory Board Meeting
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Relationships, Layoffs and Organizational Resilience: Airline Responses to the Crisis of September 11th

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Sandy Lim, Singapore Management University

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Journal of Applied Behavioral Science, forthcoming

Impact of 9/11

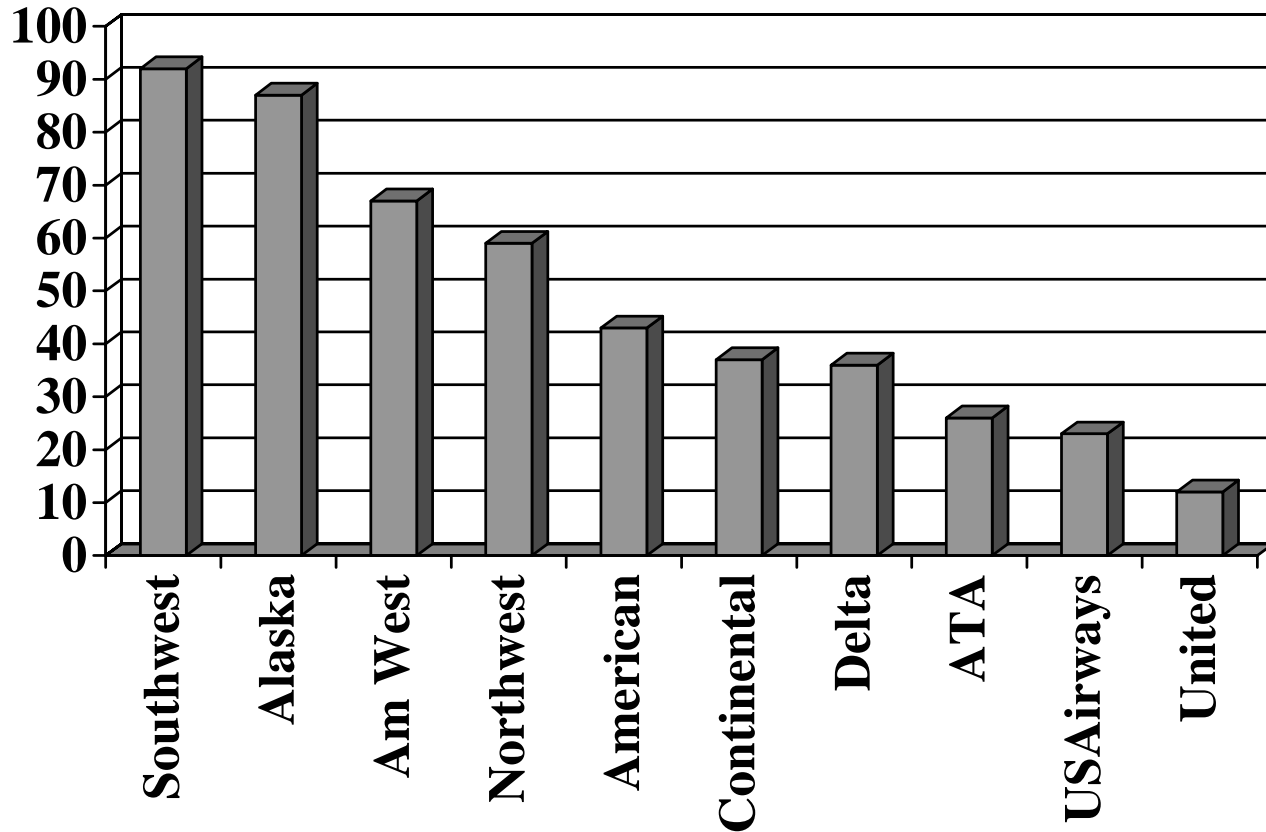
- Drop in traffic throughout the industry
 - More sustained effect on short haul traffic
- Decisions to layoff employees
 - 16% across the industry
 - Differences across airlines, from 0 to 24%

Expected effects of layoffs

- Layoffs clearly intended to help recovery
- But there is a competing theory about their impact on performance
 - Employment security is a key ingredient of high performance work organizations (Kochan & Osterman, 1994)
 - Layoffs undermine organizational relationships (Cameron, 1998)
 - Relationships foster resilience, ability to bounce back from adversity (Spreitzer, et al, 2006)
 - “No layoffs have been good for SWA -- no layoffs breed loyalty” (Kelleher, 2001)

Variation in stock price recovery

Average stock price recovery to pre-9/11 levels,
measured quarterly from 12/10/01 to 9/10/05



Layoffs as a predictor of stock price recovery?

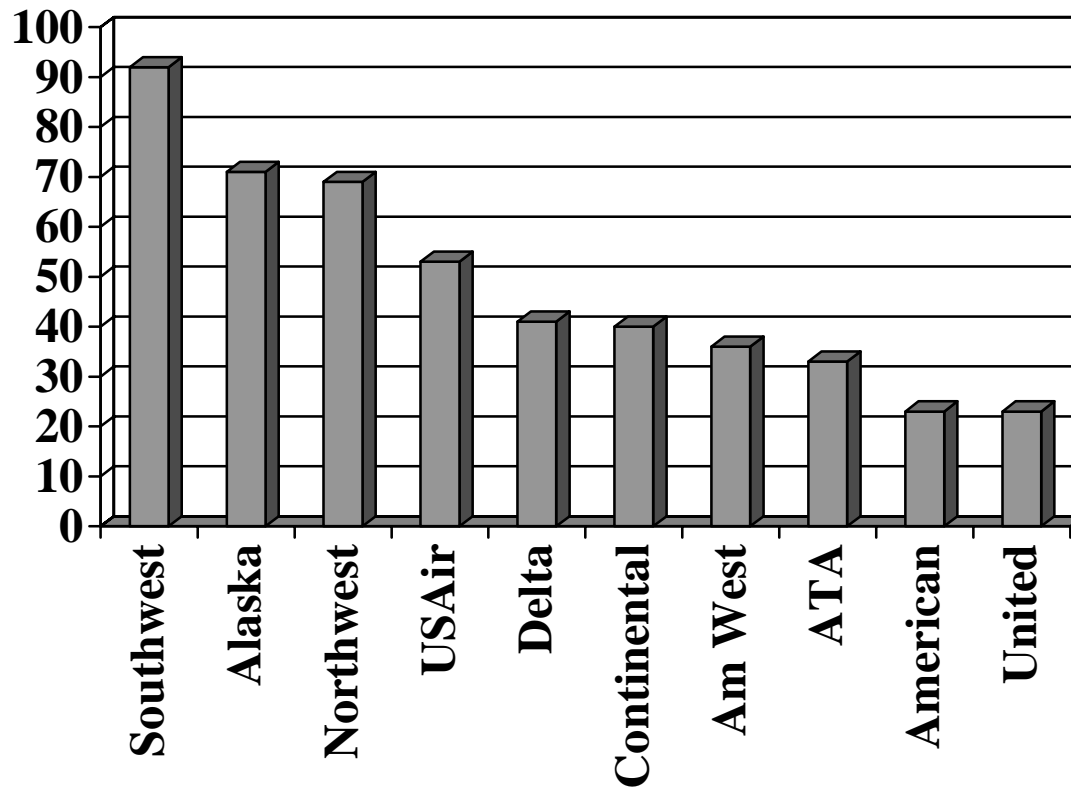
	Year 1				Year 2				Year 3				Year 4			
	Dec 10 2001	Mar 10 2002	June 10 2002	Sept 10 2002	Dec 10 2002	Mar 10 2003	June 10 2003	Sept 10 2003	Dec 10 2003	Mar 10 2004	June 10 2004	Sept 10 2004	Dec 10 2004	Mar 10 2005	June 10 2005	Sept 10 2005
Percent Layoffs	-.665 (.036)	-.751 (.012)	-.763 (.010)	-.874 (.000)	-.849 (.002)	-.788 (.007)	-.825 (.003)	-.394 (.260)	-.364 (.301)	-.492 (.148)	-.566 (.088)	-.652 (.041)	-.591 (.072)	-.751 (.012)	-.763 (.010)	-.825 (.003)

Spearman's rank correlation between layoffs and stock price recovery. Sample = 10 major U.S. airlines. P-value in parentheses. Correlation over entire 4 year period was -0.788 (p=0.007).

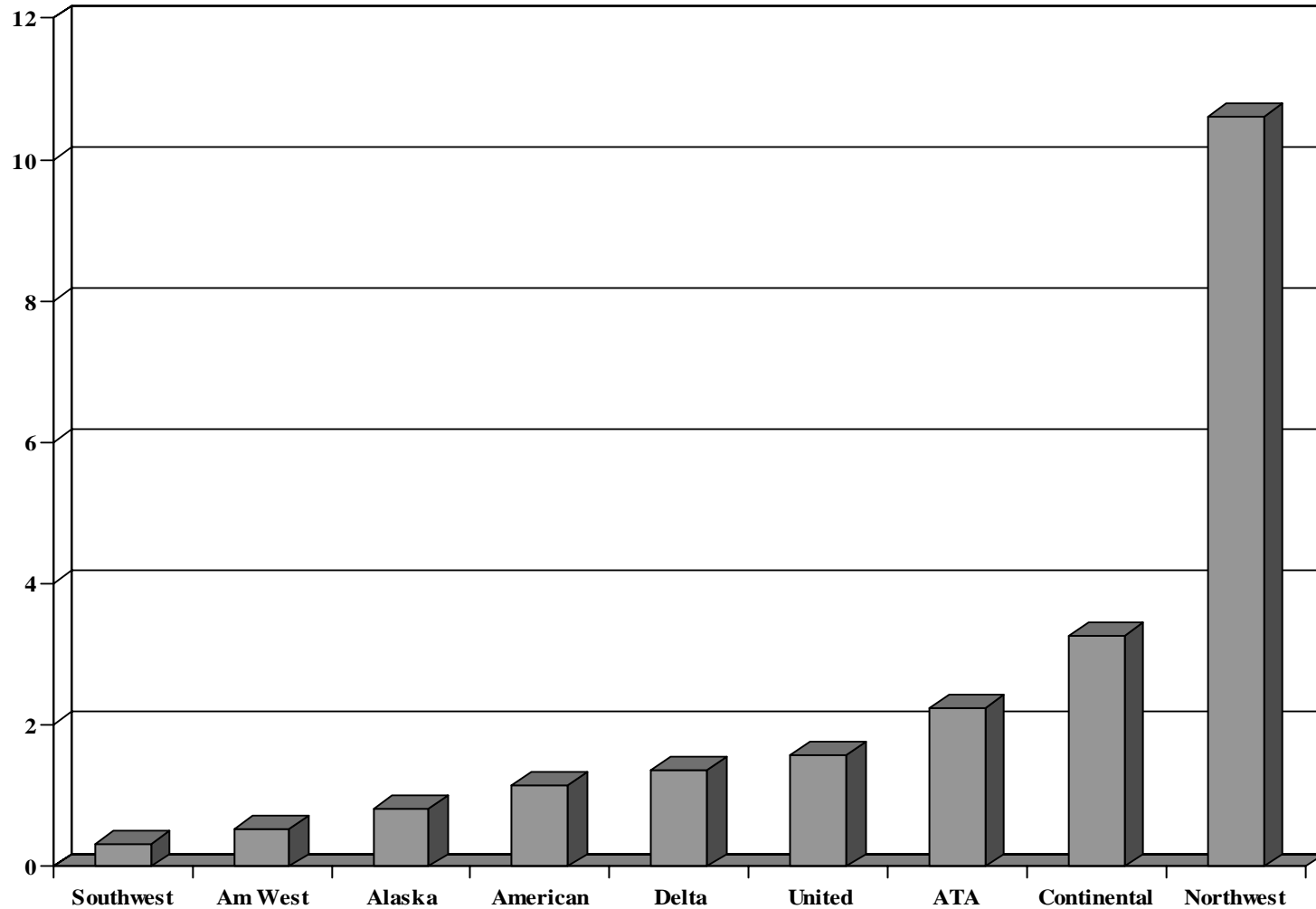
What enabled airlines to *avoid* layoffs in time of crisis?

- Financial reserves?
 - Low levels of debt
 - Cash on hand
- Sustainable business model?
 - Low unit costs

Days of cash on hand pre-9/11

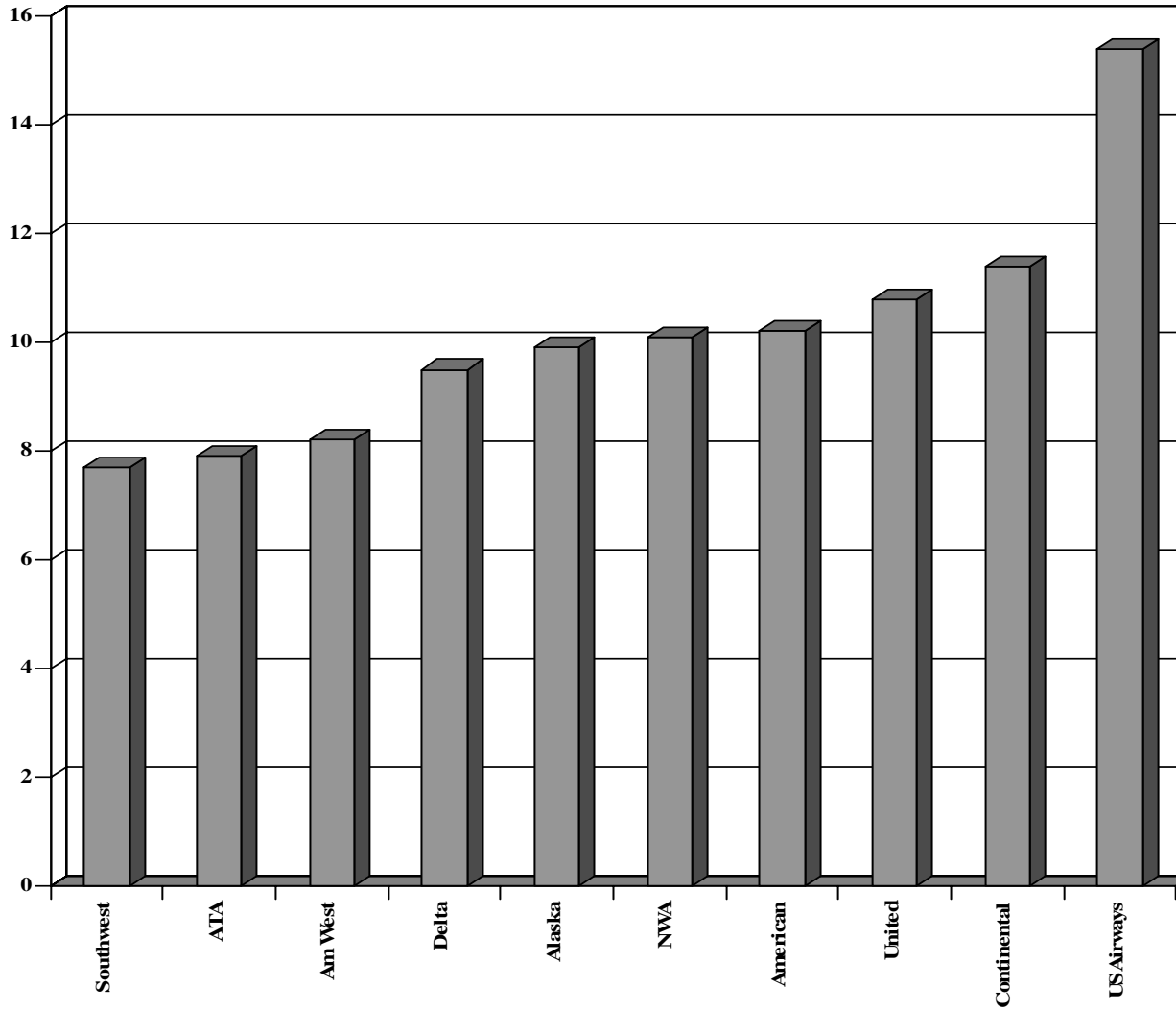


Debt/equity ratios pre-9/11



USAirways was off the chart at 300.

Unit costs pre-9/11



Predictors of layoffs post-9/11

Pre-9/11	% Layoffs post-9/11
Cash on hand	-0.426 (.220)
Debt/equity ratio	0.819 (.004)
Unit costs	0.702 (.024)

Spearman's rank correlation between layoffs and other pre-9/11 factors. Sample = 10 major U.S. airlines. P-value in parentheses.

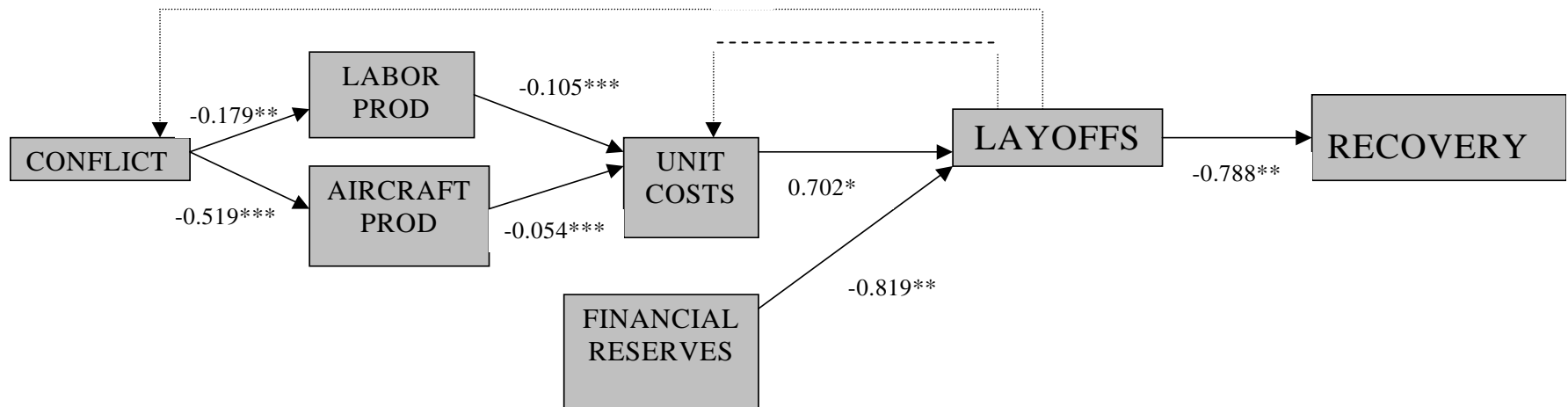
Unit costs a function of productivity and labor relations

	Labor Productivity	Aircraft Productivity	Unit Costs	Unit Costs
Conflictual Relationships	-.179** (.001)	-.519*** (.000)	.027 (.157)	.061*** (.000)
Labor Productivity	----	----	-.105*** (.000)	----
Aircraft Productivity	-----	----	-.054*** (.000)	----
% Union Representation	.262 (.216)	1.18*** (.000)	-.116*** (.000)	.155* (.012)
Wages	2.47*** (.000)	.364 (.466)	.744*** (.000)	.337*** (.000)
Flight Length (000)	-.388 (.145)	1.9*** (.000)	-.199*** (.000)	-.361*** (.000)
Aircraft Size (00)	2.44*** (.000)	2.33*** (.000)	-.301*** (.000)	-.602*** (.000)
Capital Intensity (000,000)	-.754* (.022)	-.543*** (.000)	-.318*** (.000)	.296** (.003)
Chi Square	980.64	405.42	1543.70	580.08
Prob > Chi Square	0.000	0.0000	0.0000	0.0000
Observations	485	489	489	489

* p< 0.05, ** p<0.01, *** p<0.001

Relationships affect unit costs through effect on productivity.

Model of relationships, layoffs and resilience



Solid arrows indicate relationships that are shown statistically. Dotted arrows indicate relationships that are expected, but not tested in this paper.

Bottom line

- Low debt levels and low unit costs are key drivers of *resilience* in this industry
- Implication for labor
 - Low unit costs are a way to achieve job security
- Implication for management
 - Key driver of unit costs is productivity (labor and aircraft), in addition to wages
 - Workplace relationships influence productivity
- Implication for financial analysts
 - Don't push debt as a panacea
 - Consider impact on resilience

Lean Production in the Air: Low Cost Competition Taking Off in the Global Airline Industry and Implications for Employee Relations

Research Project
Work in Progress

Low cost sector world wide, 2004

Canada (8)

CanJet
 HMY Airways
 JetsGo Airlines
 Tango Airlines
 Westjet
 Zip
 Canada West

Europe (63)

Aer Arann	Baboo	Fare4U	Sun Express
Air 2000	Basiq Air	German Wings	Swedline
Air Baltic	Bexx Air	Germania Express	ThomsonFly
Air Berlin	BMLBaby	Globespan	V Bird
Air Finland	British European	Hapag-Lloyd Express	Virgin Express
Air Luxor Lite	BudgetAir	Hellas Jet	VLM Airlines
Air Polonia	Corendon	Helvetic Airways	VolareWeb
Air Scotland	Deutsche BA	Iceland Express	Windjet Vola
Air Southwest	EasyJet	Ryanair	Smart Wings
Air Wales	Evolavia	Snalskjutsen	Wizz Air
Alpi Eagles	Excel Airways	SnowFlake Airlines	Hop
Azzurra Air	Fairline Austria	Sterling	

USA (23)

AirTran	Spirit Airlines
Allegiant Air	Song Air
American West	Sun Country
ATA	USA 3000 Airlines
Frontier Airlines	Vacation Express
Interstate Jet	Ted
JetBlue Airways	Independence Air
Midwest Express	Virgin USA
Pan American	
Southeast Airlines	
Southwest Airlines	

Asia/Pacific (28)

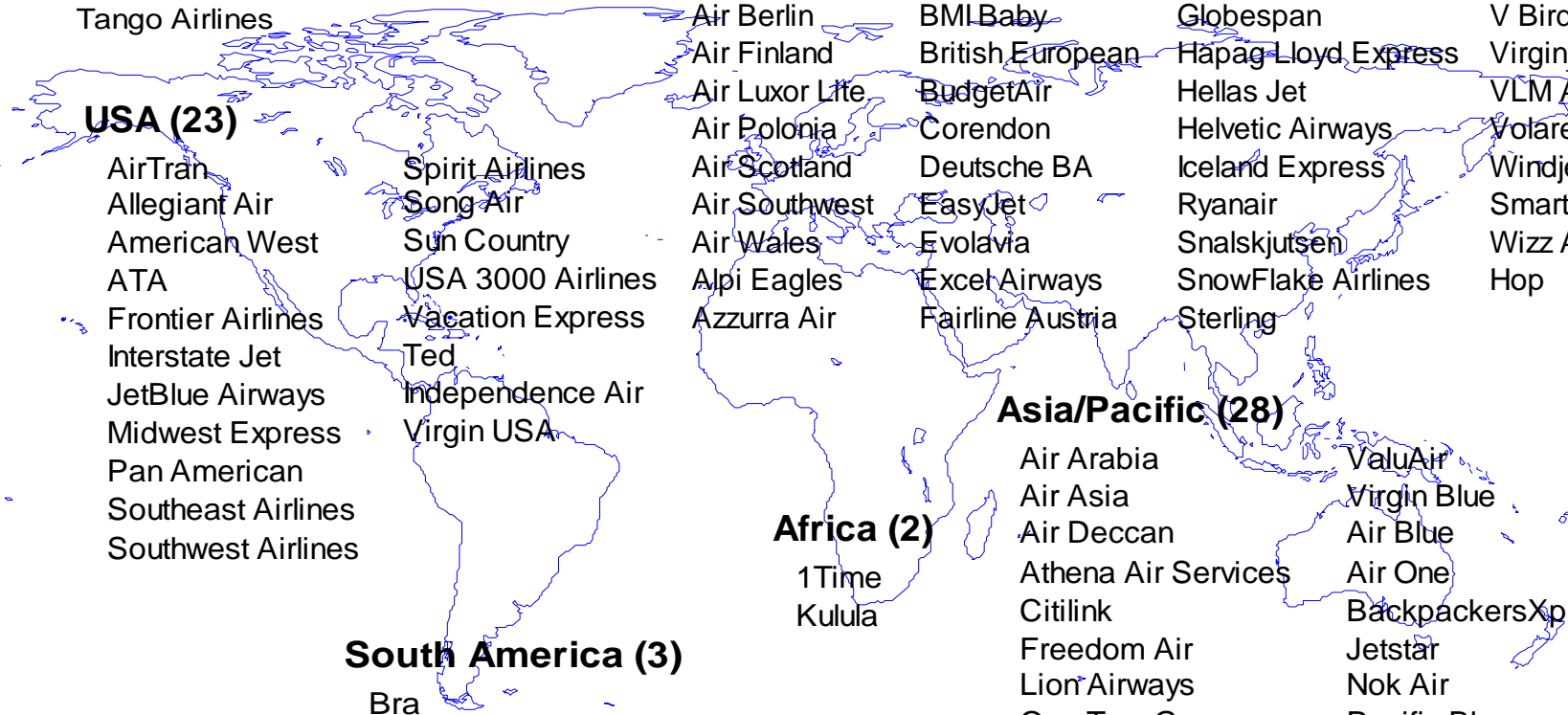
Air Arabia	ValuAir
Air Asia	Virgin Blue
Air Deccan	Air Blue
Athena Air Services	Air One
Citilink	BackpackersXpress
Freedom Air	Jetstar
Lion Airways	Nok Air
One-Two-Go	Pacific Blue
Skymark Airlines	SkyAsia
SkyNet Asia Airways	Tiger Airways

Africa (2)

1Time
 Kulula

South America (3)

Bra
 Gol
 U Air



Growth of flights in low cost sector (8/01 - 8/03)

	Flights per Week (August 2001)	Flights per Week (August 2003)	Percent Change
North America	23,800	30,100	27%
Europe	4,150	10,060	140%
Asia	555	990	78%
Australia/NZ	136	1,340	885%
Total	28,641	42,490	48%

Source: Baseler 2004

Growth of leg length in low cost sector (8/01 - 8/03)

	Miles per Flight (August 2001)	Miles per Flight (August 2003)	Percent Change
North America	540	643	18%
Europe	490	520	7%
Asia	390	470	20%
Australia/NZ	590	700	20%
Average	503	583	16%

Source: Baseler 2004

Research questions

- How is low cost competition affecting employment relations in the airline industry?
 - Consider both new entrants and incumbents
 - Look at U.S., Canada, Europe, Australia and Asia
- Which strategies are being used to achieve low costs?
- Can we identify alternative approaches?
- How well are these alternative approaches working?
 - for employees?
 - for the airlines themselves?

Anticipated case studies

- U.S.
 - Southwest
 - JetBlue
 - Delta/Song
 - USAirways
 - American
- Canada
 - WestJet
 - Air Canada
- Europe
 - RyanAir
 - EasyJet
 - Go!
 - British Midland/BMIbaby
 - Aer Lingus
- Australia/Asia
 - Qantas/JetStar
 - Virgin Blue
 - Oasis Hong Kong Air

Research partners

- U.S.
 - Nancy Johnson, University of Kentucky
 - Thomas Kochan, MIT
 - Robert McKersie, MIT
 - Maital Dar, MIT
 - Jody Hoffer Gittel, Brandeis
- Canada
 - Daphne Taras, University of Calgary
 - Richard Chaykowski, Queens College
 - Andrew von Nordenflycht, Simon Fraser

Research partners

- Europe
 - Phil Beaumont, University of Glasgow
 - Judy Pate, University of Glasgow
 - Laurie Hunter, University of Glasgow
 - Peter Turnbull, Cardiff University
 - Geraint Harvey, Swansea University
 - Joe Wallace, University of Limerick

Research partners

- Australia/Asia
 - Greg Bamber, Griffith University
 - Michael Barry, Griffith University
 - Russell Lansbury, University of Sydney
 - Clare Yazbeck, University of Sydney
 - Peter Waring, University of Newcastle
 - Teresa Poon, Open University of Hong Kong

Anticipated timeline

- Presentation of initial findings in January 2006, Labor and Employment Relations Association meeting
- Submission of case study drafts in June 2006
- Edit research volume, write introduction and conclusion in Summer 2006
- Publish edited research volume in early 2007
- Publish selected case studies in management journal in early 2007

A Recovery Path for the Nation's Airline Industry

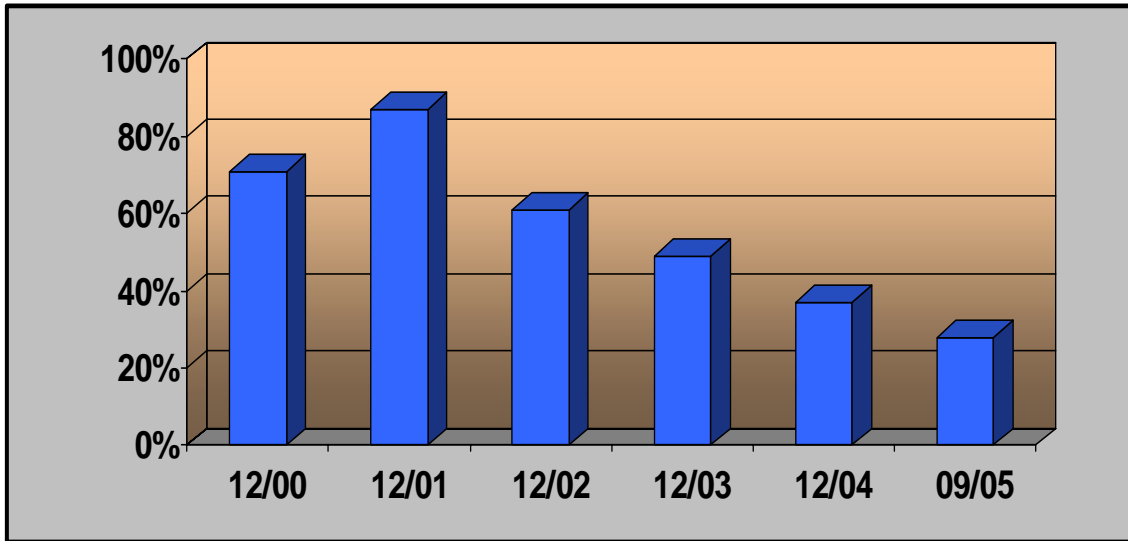
A statement of members of the
Airline Industry Council

DRAFT

Airline industry today

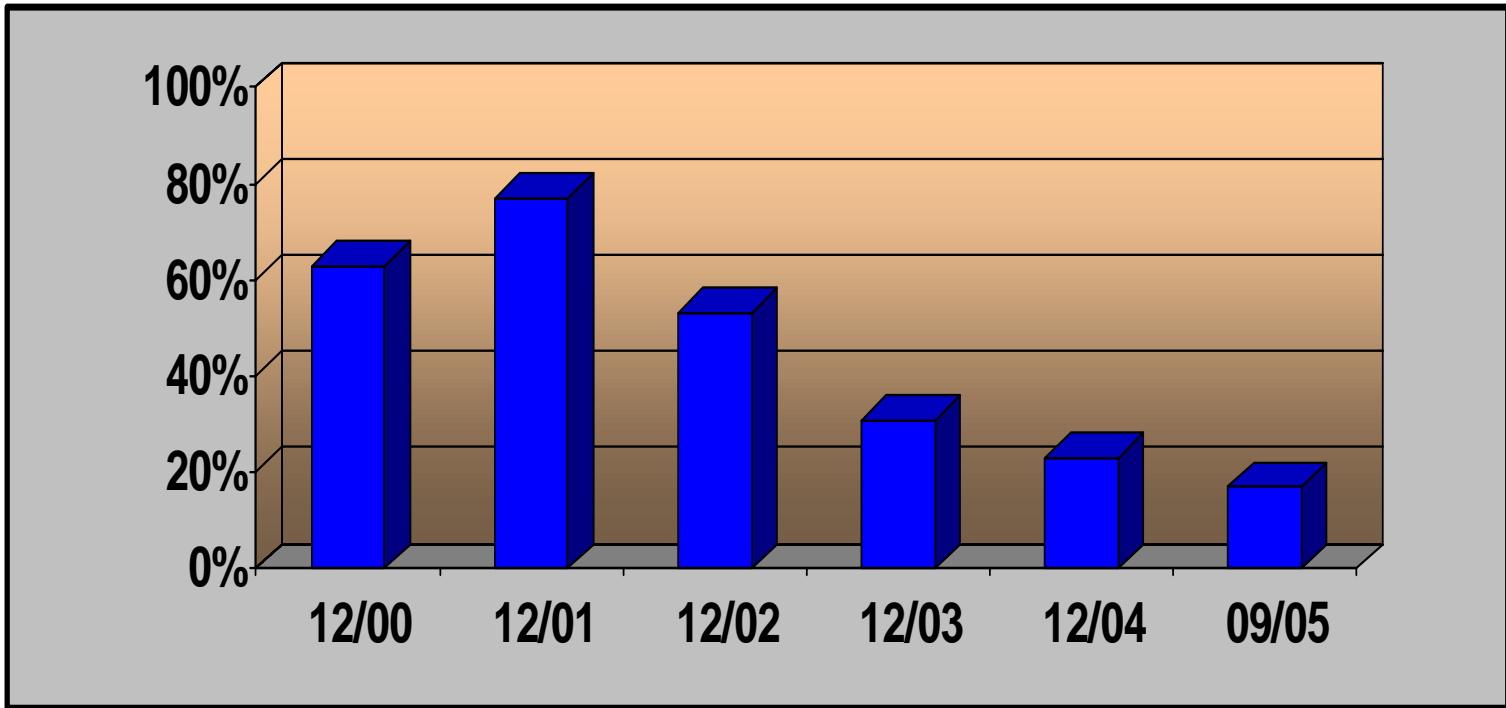
- Two distinct segments in the industry
 - low cost versus network airlines
 - market share of low cost has grown from 6 to 25% in past 15 years
- 70 percent of employees are unionized
 - network airlines more highly unionized
 - collective bargaining governed by RLA
- \$30 billion losses in past 4 years
- Wage and benefit cuts =
- Four carriers have declared bankruptcy

Positive views of how management is running the airline



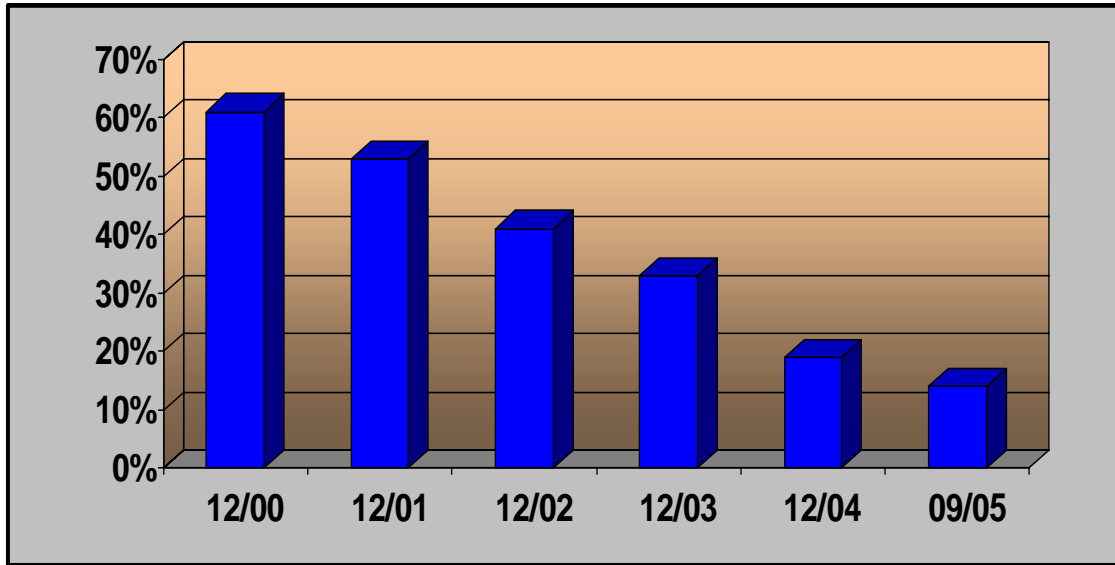
Source: The Wilson Center for Public Research, Inc. – based on 150,674 interviews conducted with pilots or flight attendants from 1/1/2001 to 9/20/2005

Positive views of management's treatment of employees



Source: The Wilson Center for Public Research, Inc. – based on 150,674 interviews conducted with pilots or flight attendants from 1/1/2001 to 9/20/2005

Positive views of employee morale



Source: The Wilson Center for Public Research, Inc. – based on 150,674 interviews conducted with pilots or flight attendants from 1/1/2001 to 9/20/2005

Summary of recommendations

- Engage employees in coordinating work, improving productivity and service levels
- Develop processes for negotiation, conflict resolution
- Share sacrifices and gains equitably
- Develop sustainable business models
- Address structural issues at industry level

Employee engagement

- Workplace cultures that promote trust and high levels of coordination and productivity among employees

Negotiations and conflict resolution

- Negotiations and conflict resolution processes that achieve labor agreements in a timely manner without disruptions

Equitable sharing of sacrifice/gain

- Compensation plans that share the sacrifices and gains achieved in a fair fashion among employee and management groups throughout the organization

Sustainable business models

- Sustainable business models that can generate and sustain profits and jobs with wages, benefits and career opportunities needed to attract and retain quality workers

Structural issues

- Increased need for employment mobility, whether in case of merger, downsizing or failure

Dialogue we are engaged in

- Airline Industry Council
 - Academics
 - Management
 - Labor
 - Government/Neutrals
- Goal is to reach agreement among council members, make public statement
- Obstacles to achieving agreement
- Open for discussion