

## HOMEWORK CHAP 3 – AIRLINE ECONOMICS SOLUTIONS

### 1) Airline Strategies

<b>Airline Market Strategy</b>	<b>Intended Benefit</b>	<b>Strategy Pitfalls</b>
Cut Airfares/Yields	Stimulate Demand	Price decrease will only work if demand is price <u>elastic</u>
Increase Airfares/Yields	Increase Revenue	Price increase will only work if demand is price <u>inelastic</u>
Decrease Flights	Stimulate Demand	Decreasing frequency will only work if demand <u>frequency inelastic</u> (i.e. not sensitive to time of departures/arrivals).
Increase Flights	Reduce Operational Costs	Increase flights will only work if demand is <u>frequency elastic</u> (i.e. sensitive to time departure/arrivals)
Increase Passenger Service Quality	Stimulate Demand	Service quality improvements will only work if demand is <u>quality elastic</u> (i.e. sensitive to quality) such as business passengers seeking most comfort largely independent of cost
Decrease Passenger Service Quality	Reduce Operational Costs	Service quality reduction will only work if demand is <u>quality inelastic</u> (i.e. not sensitive to quality) such as leisure passengers seeking lowest fares.

The basic idea is that the airline market strategy must account for the sensitivity of passenger demand to airfare, frequency (i.e. displacement time), and service quality.

If passengers are sensitive to these properties (i.e. elastic), then decreasing airfares, increasing frequency, and improving service quality, can result in increased revenue.

Conversely, if passengers are not sensitive to these properties (i.e. inelastic), then increasing airfares, decreasing frequency and reducing service quality can result in reduced operational costs with impacting revenue.

2) Network Analysis

Itin	Origin	Dest	Hub	Segment 1					Segment 2					Leg Load Factor
				Airline/Flight #	Sched Dep	Sched Arr	Seats	Pax	Airline/Flight #	Sched Dep	Sched Arr	Seats	Pax	
1	IAD	BOS	NULL	A123	8:00	9:30	100	75						0.75
2	IAD	BOS	JFK	B9871	8:00	8:55	70	50	B9651	9:45	10:50	70	50	0.714286
3	IAD	JFK	NULL	B9871	8:00	8:55	70	20						
4	JFK	BOS	NULL	B9651	9:45	10:50	70	15						
4	IAD	BOS	NULL	A456	12:00	13:40	100	75						0.75
5	IAD	BOS	JFK	B9872	12:00	2:55	70	50	B9652	13:45	14:50	70	50	0.714286
6	IAD	JFK	NULL	B9872	12:00	2:55	70	18						
7	JFK	BOS	NULL	B9652	13:45	14:50	70	50						

IAD- Bos 400

IAD-JFK 300

JFK-BOS 200

Assume IAD- BOS= 450 nm, IAD-JFK= 300nm, JFK-BOS = 200	0.732143
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a.Total Itineraries IAD to BOS (4)	4	
b.Total Direct Flights IAD-BOS (2)	2	
c.Total Network Flights IAD-BOS (6)	6	
d. Total Pax IAD-BOS (75+50+75+50)	250	
e.Total Seats IAD-BOS (100+70+100+70)	340	
f. RPM Direct Flights	6000	
g.ASM Direct Flights	8000	
h.RPM IAD-BOS Network (Direct + Connecting)	1100	
i. ASM IAD-BOS Network (Direct + Connecting)	1500	
j.Average Leg Load Factor IAD-BOS Network (Avg (0.75, 0.75, 50/70, 50/70, 50/70, 50/70))	0.73	2
k.Network Load Factor IAD-BOS Network (RPM/ASM)	0.73	3
l.Airline A Frequency Share IAD-BOS, Airline B Frequency Share IAD-BOS	A= 50%	B= 50%

Airline A Market Share IAD-BOS, Airline B Frequency Share IAD-BOS

Total Seats	340	A Market Share=0.6
Total Pax	250	B Market Share = 0.4
Pax A	150	
Pax B	100	

3)

**Crandalls Tradeoff**

Low prices vs ubiquity of service (i.e. service to smaller markets, generally rural areas)

De-regulation resulted in lower airfares, but also reduction in service to small markets (that may have grown if better service)