TURKISH AVIATION ACADEMY

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Assignment 2: Route Profitability Evaluation

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Assignment 2: Route Profitability Analysis

- **Turkish Airlines is considering the Istanbul-Vancouver (IST-YVR-IST) route for introduction of a single daily non-stop flight, as part of its Star Alliance relationship with Air Canada.**

- **In this assignment, you will explore the potential profitability of THY providing non-stop service on this route, using a B777-300ER aircraft.**

- **The worksheet (ISTYVR.XLS) presents a complete profit evaluation of the proposed IST-YVR service for THY showing an annual operating margin of 1.7%.**

Fully Allocated Segment Profitability

- **This baseline evaluation makes use of the concepts of fully allocated segment profitability, based on the following information:**
  - Demand forecasts and average PRORATED fare estimates for Business, Premium Economy, and Economy demand, both local and connecting;
  - An assumed 70% market share of the local IST-YVR traffic;
  - Flight operating information;
  - Detailed direct operating cost estimates for the B777-300ER aircraft, in a 28 Business Class, 63 Premium Economy, and 246 Economy Class seat configuration (337 seats total); and
  - Estimates of indirect operating costs for passenger servicing, aircraft and traffic servicing, promotion and sales, and administration overhead.
  - **What makes this a fully allocated profitability assessment?**

Worksheet Structure

- **Annual Demand and Passenger Revenues**

1. ANNUAL DEMAND AND PASSENGER REVENUES	BUSINESS CLASS	PREMIUM ECONOMY	ECONOMY CLASS	TOTAL PASSENGERS
TOTAL Local IST-YVR demand (total OW trips X2)	1,100	2,000	65,400	68,500
Estimated THY Share of Local Demand	70.0%			
Local Passengers on new THY Flight	770	1,400	45,780	47,950
Average Local Fare	$ 1,150	$ 795	$ 605	
THY Local Passenger Revenue	$ 885,500	$ 1,113,000	$ 27,696,900	$ 29,695,400
Additional Connecting Traffic (Estimated for THY at IST)	9,800	25,850	98,400	134,050
Average Prorated Fare to IST-YVR Legs	$ 880	$ 590	$ 475	
Network Contribution on other THY Flights				
THY Connecting Passenger Revenue	$ 8,624,000	$ 15,251,500	$ 46,740,000	$ 70,615,500
TOTAL PASSENGERS	**10,570**	**27,250**	**144,180**	**182,000**

Worksheet Structure (2)

- **Flight Operating Information:**

2. FLIGHT OPERATING INFORMATION			
Block Hours IST to YVR	13.30	Annual Departures	720
Block Hours YVR to IST	12.20	Round Trip Block Hours	25.50
Distance IST-YVR (km)	9646	RPKs	1,390,760,280

- **Estimated Operating Costs:**

3. ESTIMATED OPERATING COSTS		
Aircraft Type	B777-300ER	
Cost per Block-Hour:		
Crew Cost	1450	
Fuel/Oil	3350	
Ownership	1030	
Maintenance	740	
Total per Block-Hour	6570	
Indirect Operating Costs		
Passenger Service	0.020	per RPK
Traffic Servicing	$25	per Enplanement
Aircraft Servicing	$2,200	per Departure
Promotion and Sales	9.00%	of Passenger Revenues
General and Admin	$0.002	per ASK

Worksheet Structure (3)

- **Loads and Revenues:**

4. LOADS AND REVENUES	
Aircraft Configuration	
Business Class Seats	28
Premium Economy Seats	63
Economy Class Seats	246
TOTAL SEATS	**337**
ASK	2,340,505,440
Seat Departures	242,640
Business Load Factor	52.4%
Premium Economy Load Factor	60.1%
Economy Load Factor	81.4%
TOTAL PAX REVENUE	$ 100,310,900
CARGO CONTRIBUTION	$ 8,550,000
DIRECT OP COSTS	60,312,600
PAX SERVICE	27,815,206
TRAFFIC SERVICE	3,604,500
AIRCRAFT SERVICE	1,584,000
PROMOTION/SALES	9,027,981
GEN ADMINISTRN	4,681,011
OPERATING COSTS	107,025,297
UNIT COST	$ 0.046
OPERATING PROFIT	**1,835,603**
OPERATING MARGIN	1.7%

Question 1: Market Share Assumption

- **The spreadsheet provided to you is based on a relatively optimistic assumption about THY's market share of IST-YVR local O-D traffic.**

- **Use this spreadsheet to determine the deviation from the given value (70%) that will cause the service to become unprofitable, holding all else constant.**

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Question 2: Network Contribution

- **Revise the baseline spreadsheet (market share = 70%) to include Network Contribution in the profit calculations, by adding the following estimates of additional network contribution for carrying the connecting passengers on this new flight:**

Business: $420 Premium: $230 Economy: $160

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Question 2: Network Contribution (Continued)

- **Describe what is meant by "network contribution," and how these values can be interpreted.**
- **Discuss the impacts on the estimated route profits.**
- **Then, use the spreadsheet to find the deviation from the 70% assumed market share of local demand that will cause the service to become unprofitable.**
- **Do these network contribution estimates seem reasonable to you?**
- **What factors would determine the *actual* network contributions on this new flight?**

Question 3: Sensitivity Analysis

- **Evaluate the sensitivity of the Network Contribution values you added above in Part (B).**

- **What effect does a 10% increase or decrease in Business, Premium Economy, and Economy network contribution per passenger have on the profitability of this route?**

Business: $420 +/- 10% ***Premium: $230 +/- 10%*** ***Economy: $160 +/- 10%***

- **Note: Perform the sensitivity analyses for all three classes simultaneously (that is, increase or decrease Business, Premium Economy, and Economy network contributions *all* by 10%).**

Question 4: Recommendation

- **Considering the IST-YVR route's profitability estimates and the sensitivity analyses you performed above, provide a detailed recommendation to the Network Planning department as to whether THY should actively pursue this route opportunity.**

- **As a result of your sensitivity analysis, do you think that Turkish Airlines should include network contribution when evaluating route profitability, or rely on a fully allocated segment profitability approach? Why?**