

Chapter 5 Airline Operating Costs and Measures of Productivity

See Spreadsheet for Homework Chapter 5

Home Work:

1. For EWR-ATL

- a. Find Price Elasticity of Leisure and Business Passengers
 - i. Example of EWR-DCA Provided
 - ii. Using $\ln(D)=\ln(M)+a\ln(F)+b\ln(T)$
 - iii. Since same market $\ln(M)+b\ln(T)=\text{constant}$
 - iv. Therefore $\ln(D)=\text{constant}+a\ln(F)$ or $y=\text{constant}+ax$
 - v. Use Regression from data analysis in excel to solve for specified ranges
 - vi. Leisure price range (90 – 185) and Business price range (240 – 360)
 - vii. Coefficient from regression for LN_Fare as shown on worksheet
“Example EWR-DCA Elasticity” cell T18 and T38 are price elasticities respectively.

2. For September 2008 Aviation Daily Data (Example with 2007 data provided)

- a. Plot
 - i. Average Departures per Day (Y axis) versus Seat Size (X-axis) (More is better)
 - ii. Block hrs per aircraft per day (Y axis) versus Seat Size (X-axis) (More is better)
 - iii. Cost per ASM (Y axis) versus Seat Size (X-axis) (Less is Better)
 - iv. Burn Rate per seat (Y axis) versus Seat Size (X-axis) (Less is Better)
- b. For Aircraft with less than to 95 seats pick the best aircraft for each of the four metrics you plotted in 2a
- c. For Aircraft with between 95 and 150 seats pick the best aircraft for each of the four metrics you plotted in 2a
- d. For Aircraft with more than 150 seats pick the best aircraft for each of the four metrics you plotted in 2a

3. For 2005 and 2008 BTS P52 data

- a. Example provided for the Boeing 757-200 (aircraft code 622)
- b. Create a figure like 5.16 from your book for the Airbus 320 (aircraft code 694)
 - i. Prove columns for Crew, Fuel, Maintenance, Total Cost, and Burn Rate (Fuel issued/ total hours flown)
 - ii. Provide rows for Northwest, United, and JetBlue
 - iii. Based upon what you learned about NLCs and LCCs discuss your results