

Homework: Airline Economics

Turn in Hardcopy of HW (includes equations)

1. Create a Spreadsheet (or other computational model) with the following parameters;
 - a. Airfare (0 to \$1000 in \$25 increments)
 - b. Cumulative Demand (see equation in handouts = $f(MS, \text{ and } AS)$)
 - c. Revenue = (Airfare * Cum Demand)

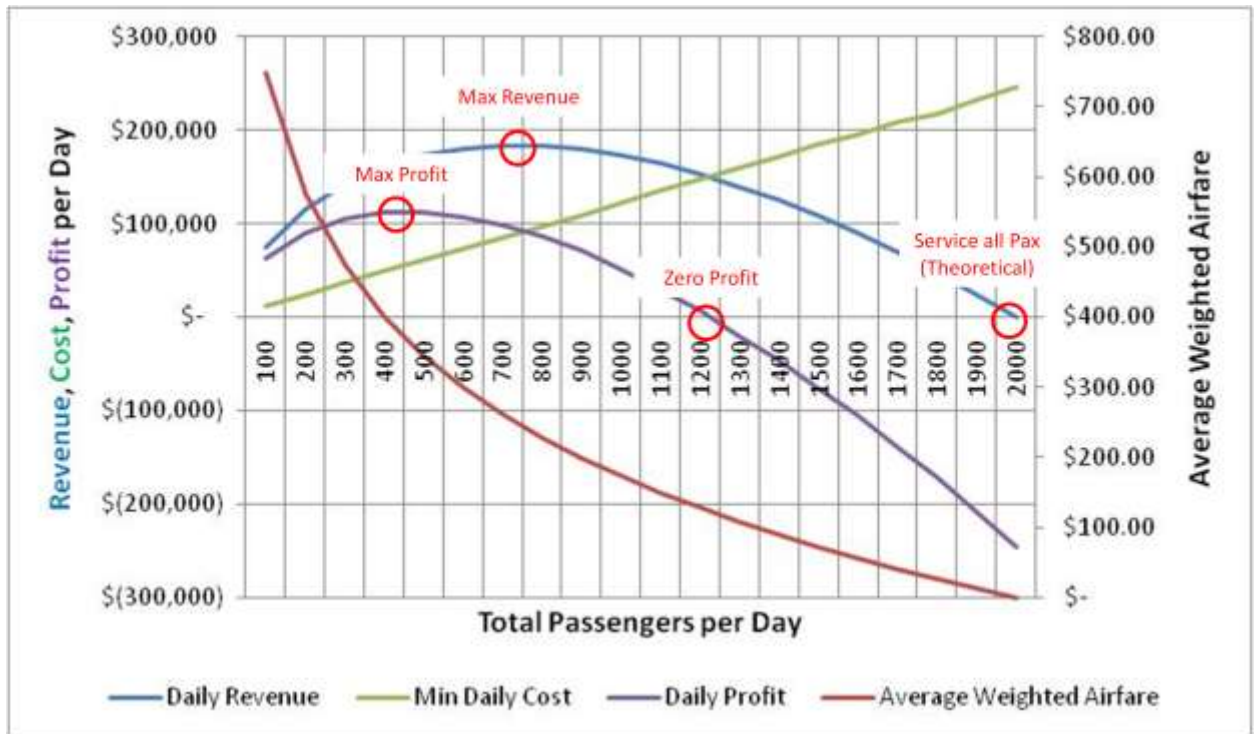
 - d. Non Fuel Costs ($=((\text{nonfuelslope} * \text{Seats}) + \text{nonfuelyintc}) * \text{Seats}$)
 - e. Fuel Costs ($=((\text{fuelslope} * \text{Seats}) + \text{fuelyintc}) * \text{Seats}$)
 - f. Block Hours
 - g. Fuel Price (\$/Gallon)
 - h. Total Costs = $=(\text{Block Hours} * (\text{NonFuelCosts} + (\text{Fuel Costs} * \text{Fuel Price})))$

 - i. Profit = Revenue – Costs

Check model by testing with parameters;

- MS = 2000
- AS = -0.004
- \$1/gallon
- 3 Block Hours
- LF = 0.8
- NonFuel Slope = -0.0209
- NonFuel Y Intc = 15.045
- Fuel Slope = -0.0037
- Fuel Y Intc = 9.063

To get model that looks like this:



2. Explain the effects of multiplying the Market Size by 1.3 (i.e. 30% increase)
3. Explain the effects of multiplying the Airfare Sensitivity by 10 (i.e. more elastic)
4. Explain the effects of increase in fuel price from \$1/Gallon to \$3/Gallon
5. Bring Spreadsheet/Computation Model to class next week for the "Airline Game"