Quiz: O-D Market Demand Function.

$D = M * P^a * T_b$

D

- demand for travel,
- defined by the number of passengers,
- for a time period (e.g. day).

M:

- market sizing parameter
- Constant
- Represents population size and size of economic interaction between O-D markets
- Typical number 200,000

P

- Average price
- Units $
- $80 to $3000 for domestic flights (average $220 adjusted for inflation)

a

- Price elasticity of demand\
- Constant
- Percent change in demand due to 1% change in price
- Range (-0.8 to -2.0)
    - Business travelers = Inelastic, > -1.0 (insensitive to prices. Example: a = -0.8, 10% change in airfare leads to 8% reduction in demand
    - Leisure travelers = Elastic < -1.0 (sensitive to prices). Example: a = -1.6, 10% change in airfare leads to 16% demand decrease

T

- Total trip time
- Hours or minutes

b

- Time elasticity of demand
- Constant
- Percent change in demand due to 1% change in time
- Range (-0.8 to -2.0)
    - Business travelers = Elastic < -1.0 (sensitive to time). Example: b = -1.6, 10% change in travel time leads to 16% demand decrease
    - Leisure travelers > -1.0 (insensitive to times), Example: b==-0.8, 10% change in travel time leads to 16% demand decrease
-