Chapter 2: Data-Driven Decision-Making

# Optimal Location Model

## Corresponding reading: Chapter 2, Page 2

### Purpose: Developing a model for a real-world example.

1. Imagine you want to open a restaurant in the Boston area. Your two alternative locations are downtown Boston, and downtown Quincy. You should develop a model to help you make a decision about the location.
2. What are the relevant parameters in this problem (e.g., tax rate, rent, demand)?
3. Estimate the value of each of the relevant parameters by searching over the internet (briefly describe how you estimated the value of each parameter).
4. Develop a model to calculate the expected net profit in each month in each of these two locations.
5. Use your model to recommend one of these locations.
6. Conduct sensitivity analysis on at least three important parameters by increasing and decreasing their value from their base value (remember to change the value of one parameter at a time).
7. What additional insights you can get from the sensitivity analysis?

***Note:*** *Understanding the case and what you need to do is PART OF THE CASE. If you do not understand a specific part, or are not sure what you should do, you need to review the corresponding reading section in the text before asking for help. You might also need to do some search on the internet. That is all part of the case and your learning process.*