Trading Area Analysis

Why is Location so Important?
- Hard to overcome a bad location
- Determines who you will attract
- Long term commitment and not easily changed
- Financial investment

Selecting a Location
- Regional Analysis
  - Select a geographic market
- Area Analysis
  - Evaluate the trading area
- Site Evaluation
  - Actual physical site

What Factors are Important in Choosing a Location?
Consider:
- Yankee Candle
- Home Depot
- Big Y
- Domino's
- Chili's

Attractiveness of a Region or Market Depends on:
- Population size and characteristics
- Demographics and lifestyles of people in a region
  http://www.caliper.com
  http://www.demographicsnow.com
  http://www.claritas.com
- Economic base of region
- Cost and availability of labor

Attractiveness of a Region (cont.)
- Local gov't support of business
- Warehouse accessibility
- Demand for goods vs. supply
- Competition
  - Number and size of competitors
  - Competitors' strengths and weaknesses
  - Saturation
Index of Retail Saturation

- Considers consumer demand and competitive supply
- Allows you to evaluate markets as understored, saturated, or overstored
- Measure of your potential sales per square foot for a product line in a market area

Index of Retail Saturation Example

<table>
<thead>
<tr>
<th>MARKETS</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>70,000 X $10</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Customers</td>
<td>40,000</td>
<td>50,000</td>
<td>70,000</td>
<td></td>
</tr>
<tr>
<td>Retail Expenditures</td>
<td>$10</td>
<td>$12</td>
<td>$10</td>
<td></td>
</tr>
<tr>
<td>Retail Facilities</td>
<td>10,000</td>
<td>12,000</td>
<td>15,000</td>
<td></td>
</tr>
<tr>
<td>Index of Retail Saturation</td>
<td>$40.00</td>
<td>$50.00</td>
<td>$46.67</td>
<td></td>
</tr>
</tbody>
</table>

Attractiveness also depends on:

- Purchasing power of the region
  - Measure of the market's ability to buy
- BPI measures purchasing strength
  - Disposable Income (EBI) – weighted at 5
  - Retail Sales – weighted at 3
  - Population – weighted at 2

Buying Power Index (Survey of Buying Power)

EBI  Retail Sales  Population
BPI (Area A) = (.5 X .027) + (0.3 X .025) + (0.2 X .02) =

0.025 or 2.5% of U.S. Sales Potential

Trading Area

A trading area is a geographic area containing the customers of a retailer for specific goods or services

- Geographical map from which the retailer draws customers
- GIS (Geographic Information System)
  - population demographics
  - data on customer purchases
  - listings of current, proposed, and competitor locations
GIS Software

Trading Area

- **Size and Shape** are dependent on:
  - Size of Store
  - Neighboring stores
  - Transportation network
  - Population density
  - Physical, social, and political barriers
  - Location of Competition
  - Merchandise uniqueness, low prices, superior service
  (Marketing Strategies)

Trading Areas

- **Primary**
  - 50-80% of customers (less than 10 min.)
- **Secondary**
  - 15-25% of customers (less than 20 min.)
- **Fringe/Tertiary**
  - Remainder of customers (15-50 mi. away)

Primary, Secondary, and Fringe Areas
Techniques for Identifying Trading Areas

- Customer Spotting
  - License plates
  - Customer records (credit cards, delivery records, service)
  - Promotions (sweepstakes, contests, coupons)
  - Customer surveys

Identifying the Trading Areas

- Gravity Models
  - Huff’s Law of Shopper Attraction
    - Attraction of a store in a metropolitan area depends on the size of the store (product assortment), distance, and sensitivity to time
    - Bigger and closer are more attractive
  - Reilly’s Law of Retail Gravitation

Huff’s Law

\[
P_i = \frac{P_i}{\sum P_j}
\]

where:

- \( P_i \) = Probability of a consumer’s traveling from home to shopping location
- \( P_j \) = Square footage of selling space in shopping location
- \( T_i \) = Travel time from consumer’s home to shopping location
- \( x \) = Number of different shopping locations
- \( \lambda \) = Parameter used to estimate the effect of travel time and different kinds of shopping

Huff Ex.

What % of customers will shop in city A for gift items?

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>5,000</td>
<td>10,000</td>
<td>12,500</td>
</tr>
<tr>
<td>Travel time</td>
<td>10 min.</td>
<td>15 min.</td>
</tr>
<tr>
<td>Sensitivity to travel time</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

So:

\[
\frac{5,000}{10'} + \frac{10,000}{15'} + \frac{12,500}{20'} = \frac{500}{1791.67} = 27.9%
\]

28% of customers will shop in City A for gift items

Reilly’s Law of Retail Gravitation

- Defines trade area boundaries between two cities (assumes you will choose to go one way or the other)
- Shows point of indifference between two cities (the breaking point whereby you would be indifferent to shopping in either city)

Reilly’s Law of Retail Gravitation

\[
\frac{d}{1 + \sqrt{(Pb/Pa)}}
\]

\( Dab \) = distance from breaking point to town A
\( d \) = distance in miles between towns A and B
\( Pa \) = population of city A
\( Pb \) = population of city B
Example of Reilly’s Law

Distance in miles between cities A and B = 10 miles
Population of City A = 60,000
Population of City B = 15,000

\[ d_{AB} = \frac{10}{1 + \sqrt{\frac{15,000}{60,000}}} \]

What Makes a Site Attractive?

- Ability to Intercept people
- Cumulative Attraction
- Less Congestion
- Pedestrian Traffic
- Vehicular Traffic
- Parking Availability
- Accessibility

Types of Locations Available

- Isolated Store
- Power Center
- Planned Shopping Center
  - Neighborhood
  - Regional mall
- Unplanned Business District
  - Shopping area with 2 or more stores nearby

Accessibility

- Physical barriers
- Psychological barriers
- No. of traffic arteries and lanes
- Flow of traffic
- No. of intersections
- Traffic control devices