GIS Tutorial for Marketing

Chapter 8

Retail Site Selection

Marketing scenario

Better Books:
- A San Francisco-based family-owned book retailer
- Owns and operates two successful stores in San Francisco
- Includes several collectors among its customers
- Maintains an address list of its book club members
- Wishes to expand with a third retail location in San Francisco
Learning objectives

To perform retail site selection analysis in San Francisco, you will learn how to use ArcGIS to:

- Create maps that illustrate characteristics of stores, competitors, and population demographics
- Create buffers around store locations to define market areas
- Analyze the demographic characteristics of the market areas and key customers
- Apply several market area models and select the most appropriate one
- Display alternative sites for new stores, evaluate their attractiveness, and select the most favorable site
- Design a map that supports your recommendation

Exercise 8.1: Explore demographics and competition in San Francisco

In this exercise you will:

- Map the location of San Francisco’s Better Books stores
- Map the location and sales levels of competing book stores
- Explore key demographic characteristics of the San Francisco area with thematic maps
Competitors by sales level and average household net worth by block group

Exercise 8.2: Analyze customer and market area characteristics

In this exercise you will:
- Examine the geographic distribution and buying patterns of store customers
- Display a simple one-mile ring market area for each store
- Compare the demographic characteristics of the market areas of the two stores
## Market-area definition

**Better Books San Francisco site selection project**

### Market-area definition: One-mile ring

<table>
<thead>
<tr>
<th>Population measures</th>
<th>Steiner One-mile ring</th>
<th>Bosworth One-mile ring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total population</td>
<td>88,502</td>
<td>41,789</td>
</tr>
<tr>
<td>Annual population growth rate</td>
<td>0.6%</td>
<td>0.1%</td>
</tr>
<tr>
<td>Households</td>
<td>46,839</td>
<td>14,791</td>
</tr>
<tr>
<td>Average household size</td>
<td>1.81</td>
<td>2.78</td>
</tr>
<tr>
<td>Median age</td>
<td>37.5</td>
<td>39.1</td>
</tr>
<tr>
<td>Diversity index</td>
<td>47.7</td>
<td>48.6</td>
</tr>
</tbody>
</table>

### Income and wealth measures

<table>
<thead>
<tr>
<th></th>
<th>Steiner</th>
<th>Bosworth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per capita income</td>
<td>$55,619</td>
<td>$34,219</td>
</tr>
<tr>
<td>Projected PCI growth rate</td>
<td>4.3%</td>
<td>2.8%</td>
</tr>
<tr>
<td>Average household income</td>
<td>$103,188</td>
<td>$98,268</td>
</tr>
<tr>
<td>Average net worth</td>
<td>$739,566</td>
<td>$631,537</td>
</tr>
<tr>
<td>Average home valuation</td>
<td>$637,553</td>
<td>$421,505</td>
</tr>
</tbody>
</table>
Exercise 8.3: Review other market area models and select model store

In this exercise you will:

• Display two additional market area models on your map
• Review market area reports based on these models
• Identify the most appropriate approach, then select one of the Better Books stores to serve as a model for evaluating prospective sites

Alternate market area models

Percentage of sales

Drive time
Exercise 8.4: Evaluate available properties and their market areas

In this exercise you will:

- Identify available properties and display their locations
- Eliminate properties that are improperly zoned or too close to existing stores
- Create one-mile ring market areas for the remaining properties and evaluate their characteristics
- Select the property you will recommend for the third Better Books store

Available property market areas
Demographics of available property market areas

Better Books San Francisco site selection project
Market areas for available sites
Market area definition: One-mile ring

<table>
<thead>
<tr>
<th>Population measures</th>
<th>Southwest One-mile ring</th>
<th>Northwest One-mile ring</th>
<th>East central One-mile ring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total population</td>
<td>52,818</td>
<td>46,567</td>
<td>61,836</td>
</tr>
<tr>
<td>Annual population growth rate</td>
<td>0.16%</td>
<td>0.06%</td>
<td>0.8%</td>
</tr>
<tr>
<td>Households</td>
<td>18,406</td>
<td>18,812</td>
<td>21,650</td>
</tr>
<tr>
<td>Average household size</td>
<td>2.52</td>
<td>2.36</td>
<td>2.55</td>
</tr>
<tr>
<td>Median age</td>
<td>37.0</td>
<td>38.7</td>
<td>39.9</td>
</tr>
<tr>
<td>Diversity index</td>
<td>51.0</td>
<td>56.6</td>
<td>74.9</td>
</tr>
</tbody>
</table>

Income and wealth measures

| Per capita income | $28,199 | $37,311 | $29,272 |
| Projected PCI growth rate | 3.4% | 3.8% | 4.24% |
| Average household income | $80,135 | $91,742 | $82,950 |
| Average net worth | $588,466 | $682,075 | $652,539 |
| Average home valuation | $401,716 | $544,172 | $464,123 |

Exercise 8.5: Recommend a new site

In this exercise you will:

- Review the comparative market area and competitive data you have analyzed
- Identify the property you selected for the third Better Books store in San Francisco
- Design a supporting map
**Recommended site**

**Better Books site selection in San Francisco**

Current Better Books Stores and Available Properties with One-Mile Ring Market Areas

- Available Properties
- Better Books Stores
- Competitors
- Market

San Francisco Book Stores

Sales Level:
- 1: < $400 K
- 2: $400 K - $1 Mil
- 3: > $1 Mil

Total Households
- 1.5 Mil
- 2.5 Mil

Recommended Site: Northwest

Sources: Better Books Internal Data

ESRI Community Data, 2005

**Additional applications**

More sophisticated approaches to site selection include:

- Measures of the ability of stores and competitors to draw customers (used by Gold’s Gym)
- Analysis of daytime population to capture data on customers who shop near their workplace (Chase Manhattan bank)
- Huff’s penetration model (Credit Union of Texas)
- ESRI ArcGIS Business Analyst, which automates and streamlines the market area assessment and site selection process