FACTORS THAT INFLUENCE RESIDENTS’ SATISFACTION OF LIVING AND THEIR INFLUENCE ON CITY MARKETING AND BRANDING

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ABSTRACT

In this paper, we examine data from the city of Somerville, MA, a suburb northwest of Boston, MA, and use simple and multiple/stepwise regression analyses to determine the factors that drive residents’ satisfaction with living in Somerville. We find, among other things, that it is the satisfaction with the residents’ individual neighborhood that appears to be the most important factor. There were other, city-wide, important factors, such as the overall cost of housing and the availability of information about the entire city. Satisfaction with living in Somerville varied also by sex and annual household income. The factors considered were based on data from the 2015 “Somerville Happiness Survey,” administered by the city of Somerville.

KEY WORDS: Living-satisfaction, City branding, Somerville MA, Somerville happiness survey, Stepwise regression analysis-
INTRODUCTION

City Marketing is a strategic application which largely depends on the construction, communication and management of the city’s image (Kavaratzis, 2004). Jakovljevic (2000) considers a city as a product; he describes a city-product as “never complete or final, which is continuously being adjusted, and thus, it is very dynamic and in constant transformation.” He also suggests that city marketing should be viewed as just as important as urban planning.

Residents, as described by Van den Berg & Braun (1999), are “consumers for a city,” who are planning to move to a city for a shorter or longer period of time, depending on work, study, or other reasons. The authors also address the fact that the image of a city is simply a set of feelings that certain stakeholders (potential investors, politicians, bankers, tourists, residents) have in their mind regarding the city.

The goal of this paper is to provide an exploratory analysis to understand the relationships between residents’ living-satisfaction and different factors that influence the level of that satisfaction. Also, the study will provide implications why, and suggestions how, a higher resident living-satisfaction will help a city to form its own branding and improve the city’s marketing practice. We use data from Somerville, Massachusetts, a suburb of Boston, to perform our analyses.

LITERATURE REVIEW

City branding

As noted earlier, according to Jakovljevic (2000), “...a city is a product that is never complete or final, which is continuously being adjusted, and thus, it is very dynamic and in constant transformation.” He also suggested that a city should be treated as a corporation or product of a corporation, and a carrier of new trends and the modern “ways of living.”

Van den Berg & Braun (1999) listed several benefits that a successful city-branding- process will provide its stakeholders. They described how a strong branding of a city will help the city find channels to sell their own products or services, reach the best workforce, attract more visitors, tourists, investment and events, and will also be able to potentially have an important role at the national and global level.
Wiezorek (2010) summarized four main target markets: visitors, residents and employees, business and industry, and export markets.

Factors that influence living-satisfaction

Different scholars have various views in term of determining the factors that influence residents’ living-satisfaction. Wiezorek (2010) conducted a survey among 200 city marketing-organizers in the city of Dresden, Germany. For these Dresden city-marketing organizers, the topics they were most concerned about were urban development, tourism, public relations, economy/employment, culture, education and health. Specifically, Wiezorek pointed out that successful marketing should put in place brand values with long-term effects, such as the quality of buildings and public spaces, and compliment these with list of timely events from culture, science and economics. Richard (2014) suggested that, for the majority of people, safety (“how safe people feel from crime when walking in their neighborhoods after dark”) is the single most important aspect when choose living quarters, followed by high-quality parks and recreation facilities, availability of good paying jobs, and the availability of high-quality arts options.

Mayotte (2018), who is currently (March, 2018) running for a City Council seat in Boca Raton, Florida, argues that development projects of a city must address the “quality of life issues,” which she defines as “traffic, parking, overcrowded schools, and open green spaces.” The issue of overcrowded schools is an interesting one, in that an opponent of Mayotte’s argues that, from a marketing perspective, overcrowding of schools is good, in that it indicates to prospective residents that the city is thriving and that people want to move in.

Importance of residents’ living-satisfaction on branding/marketing a city

According to Ranaweera & Prabhu (2003), as well as many other authors, customer satisfaction is a factor in determining long-term consumer behavior, and a high level of customer satisfaction leads to long-term loyalty. Applying this concept into city branding, Ergan, Akyol, & Kucukaltan (2014) indicated that people’s living-satisfaction has an “indispensable prescription” on the branding of a city. Van den Berg & Braun (1999) suggested that, if a city is considered as a product, the city has to fulfill some level of expectations and needs for its potential customers (which includes residents). They suggested that the length of time a resident lives in a certain city is dependent on what
the city can offer them in terms of jobs, superior work conditions, a superior living environment, etc.

Among the factors that influence residents’ living-satisfaction, Van den Berg & Braun (1999) pointed out that a city’s infrastructure (transport systems, public services facilities, etc.) is important when a city is seeking to form a comprehensive and superior branding strategy. The reason for this, they explained, is because, without an efficient and modern infrastructure, the functioning and living of citizens and companies is hindered and it may have a negative impact on economic development. Therefore, it potentially reduces the competitiveness and attractiveness of a city.

City branding history - the city of Somerville, MA

We use data from the city of Somerville, MA, a suburb northwest of Boston, MA. In the 1960s and 1970s, Somerville experienced a major decline in various ways (per capita income, amount of industry, and other measures), with the increased use of automobiles and the construction of Route 95 (locally referred to as “route 128” - its name before the emphasis on a national route-name system.) This decline lasted until the 1980s and 1990s. Companies and jobs, and subsequently people, moved to further-away-from-Boston suburbs and rendered Somerville less industrialized.

The City of Somerville began looking for an identity, a way to brand itself and market its values to those who had fueled a comeback in the 1990s, and to continue to attract more of these industries, companies, and people. So, officials turned to Somerville’s (presumed) European mirror image, to find out what Eindhoven, located in the southern portion of the Netherlands, was able teach them about municipal branding. Also, Somerville has been, and still is, home to a thriving arts community, and boasts the second highest number of artists per capita in the United States.

METHODOLOGY

Data Collection

In order to fulfill the purpose of this study, both primary data and secondary data were used. The secondary data were collected from different studies, including literature, published printed sources and electronic sources, industry surveys, and other general websites, much of it presented previously in the literature-review section. These data helped to create a framework and structure the study. For the primary data, we
chose data from Somerville’s 2015 official survey, “The Somerville Happiness Survey,” to analyze the factors relating to Somerville residences’ living-satisfaction level. The survey took place in Oct 2015 and we have data from 185 valid responses.

Our hypotheses are as following:

H1: Urban Development/City Infrastructure has an influence on Somerville residents’ living-satisfaction.

H2: Safety has an influence on Somerville residents’ living-satisfaction.

H3: Education quality has an influence on Somerville residents’ living-satisfaction.

H4: Neighborhood environment has an influence on Somerville residents’ living-satisfaction.

H5: Somerville Residents’ Income level has an influence on their living-satisfaction.

**Data Analysis Plan**

The results of the survey were analyzed with SPSS. This primary data was first analyzed using selected descriptive statistics, in order to get familiar with the data.

To better understand the how the specific factors influence residents’ living-satisfaction, we first study each factor involved in the hypotheses individually, to examine its relationship with the overall resident living-satisfaction. Different hypotheses involved more than one factor. This was done using sets of simple regression analyses.

Lastly, we used stepwise-regression analysis to derive a “final model,” to find out exactly which factors mentioned in this questionnaire have the most significant relationship with residents’ living-satisfaction.

**ANALYSIS AND DISCUSSION OF RESULTS**

**Descriptive Statistics**

First, we analyzed demographics variables using descriptive statistics. Figure 1 shows the gender distribution of our sample. As we can see from the Figure 1, 33.33% of the respondents are male and 66.67% of the respondents are female.
Figure 1: Gender breakdown of responses

We next examined the age distribution, as shown in Figure 2. As we can see from Figure 2, 4.92% of the respondents were people from 18 to 24; 37.16% of the respondents were from 25 to 34, and this was, by far, the largest age group in Somerville; 18.58% of the respondents were from 35 to 44; 11.48% of the respondents were from 45 to 54; 11.48% of the respondents were from 55 to 64; 9.29% of the respondents were from 65 to 74, and 7.10% of the respondents were 75 or older.

Figure 2: Age breakdown of responses

We then explored the race distribution, as shown in Figure 3. As we can see from Figure 3, 79.12% of the respondents are White; 8.79% of the respondents are Asian; 8.79% of the respondents are Hispanics/Latinos and 3.30% are Black/African Americans.
Figure 3: Racial breakdown of respondents

We next considered the percentage of people who rent vs. own their home, as depicted in Figure 4. As we can see from Figure 4, 41.44% of the respondents owned their home; 56.35% of the respondents rented where they live, and 2.21% of the respondents chose “other” (perhaps: live with parents, lived with children, etc.)

Figure 4: Own vs. Rent their residence breakdown of responders
We then investigated the distribution of respondents who wanted to move away from Somerville or not in the next two years. This is shown in Figure 5, and we can note that 76.74% of the respondents did not plan to move and 23.26% of the respondents did plan to move away.

Figure 5: A “plan to move or not in the next 2 years” breakdown of the respondents

We next looked into the percentage of respondents who were students. Figure 6 shows that 90.61% of the respondents were not students and 9.39% of the respondents were students.

Figure 6: “Student or not” breakdown of the respondents
Then, we assessed, as shown in Figure 7, the distribution of how long the respondents had lived in Somerville. As shown, 9.34% of the respondents had lived in Somerville for less than a year; 23.08% of the respondents had lived in Somerville for one to three years; 21.98% of the respondents had lived in Somerville for four to seven years; 11.54% of the respondents had lived in Somerville for eight to ten years; 8.79% of the respondents had lived in Somerville for eleven to fifteen years; 6.04% of the respondents had lived in Somerville for sixteen to twenty years; and 19.23% of the respondents had lived in Somerville for 21 years or more.

![Length of Living Percentage Graph](image)

Figure 7: Length of time lived in Somerville breakdown of respondents

Finally, we investigated the annual household income distribution. As we can see from Figure 8, 1.27% of the respondents earned less than $10,000, 5.10% of the respondents earned $10,000 to $24,999; 21.02% of the respondents earned $25,000 to $49,999; 19.11% of the respondents earned $50,000 to $74,999; 14.01% of the respondents earned $75,000 to $99,999; 20.38% of the respondents earned $100,000 to $149,999; 19.11% of the respondents earned $150,000 or more.
Figure 8: Annual household income breakdown of respondents

All of these demographics were reasonably similar to the actual respective distribution for all residents in Somerville, except for the gender breakdown, which was overly heavy toward females.

Test of Individual Hypotheses

H1: Urban Development/City Infrastructure has an influence on Somerville residents’ living-satisfaction.

Hypothesis 1 had three questions in the questionnaire associated with it; they are:
- How would you rate the following: The maintenance of streets and sidewalks
- How satisfied are you with the beauty or physical setting of your neighborhood
- How satisfied are you with the appearance of parks and squares in your neighborhood

We ran a simple regression for each question. The regression analyses are shown in Tables 1A, 1B, and 1C. The results indicate that the quality of urban development/city infrastructure is significantly related to overall residents’ living satisfaction – indeed, each of the three questions exhibit a strong relationship to the dependent variable of “How
satisfied are you with Somerville as a place to live.” Statistically, the respective results show \( F=16.013 \) (sig. [the name for “p-value” in SPSS] = .000), \( F=61.367 \) (sig. = .000), and \( F=40.378 \) (sig. = .000). The \( R^2 \) values are, respectively, .08, .25, and .18.

Tables 1A, 1B, & 1C: Regression results for the factor: urban development/city infrastructure

<p>| ANOVA² |  |
| --- | --- | --- | --- | --- |</p>
<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Regression</td>
<td>41.769</td>
<td>1</td>
<td>41.769</td>
<td>16.013</td>
<td>.000³</td>
</tr>
<tr>
<td>Residual</td>
<td>474.731</td>
<td>182</td>
<td>2.608</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>516.500</td>
<td>183</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: How satisfied are you with Somerville as a place to live.

b. Predictors: (Constant), How would you rate the following...The maintenance of streets and sidewalks, 2015

<p>| ANOVA³ |  |
| --- | --- | --- | --- | --- |</p>
<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Regression</td>
<td>133.166</td>
<td>1</td>
<td>133.166</td>
<td>61.367</td>
<td>.000⁴</td>
</tr>
<tr>
<td>Residual</td>
<td>390.598</td>
<td>180</td>
<td>2.170</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>523.764</td>
<td>181</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: How satisfied are you with Somerville as a place to live.

b. Predictors: (Constant), How satisfied are you with the beauty or physical setting of your neighborhood.

<p>| ANOVA⁴ |  |
| --- | --- | --- | --- | --- |</p>
<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Regression</td>
<td>95.965</td>
<td>1</td>
<td>95.965</td>
<td>40.378</td>
<td>.000⁵</td>
</tr>
<tr>
<td>Residual</td>
<td>427.799</td>
<td>180</td>
<td>2.377</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>523.764</td>
<td>181</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: How satisfied are you with Somerville as a place to live.

b. Predictors: (Constant), How satisfied are you with the appearance of parks and squares in your neighborhood.

* The sample size for this analysis is \( n = 184 \) (total number of [residual] df = 183). The sample size varies by analysis, depending on how many respondents did not provide an answer to various questions. The sample size ranges from 185 (hypothesis 4) down to 133 (hypothesis 3).
H2: Safety has an influence on Somerville residents’ living-satisfaction.

Hypothesis 2 had two questions in the questionnaire associated with it; they are:

- How would you rate the following: Your trust in the local police
- How safe do you feel walking in your community at night

We ran a simple regression for each question. The regression analyses are shown in Tables 2A & 2B. The results indicate that safety has a strong relationship to overall residents’ living satisfaction – indeed, each of the two questions exhibit a strong relationship to the dependent variable of “How satisfied are you with Somerville as a place to live.” Statistically, the respective results show $F=16.507$ (sig. = .000), and $F=31.640$ (sig. = .000). The R² values are, respectively, .08 and .15.

Tables 2A and 2B: Regression results for safety

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>43.642</td>
<td>1</td>
<td>43.642</td>
<td>16.507</td>
<td>.000⁹</td>
</tr>
<tr>
<td>Residual</td>
<td>470.602</td>
<td>178</td>
<td>2.644</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>514.244</td>
<td>179</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: How satisfied are you with Somerville as a place to live.
b. Predictors: (Constant), How would you rate the following: Your trust in the local police_2015

H3. Education quality has an influence on Somerville residents’ satisfaction.

One question in the questionnaire is associated with Hypothesis 3:

- How would you rate the following: the overall quality of public schools

We see in Table 3 that the regression result indicates that education quality also is strongly related to overall residents living-satisfaction level ($F=6.5$ and sig. = 0.012),

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>77.942</td>
<td>1</td>
<td>77.942</td>
<td>31.640</td>
<td>.000⁹</td>
</tr>
<tr>
<td>Residual</td>
<td>445.872</td>
<td>181</td>
<td>2.463</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>523.814</td>
<td>182</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: How satisfied are you with Somerville as a place to live.
b. Predictors: (Constant), How safe do you feel walking in your community at night_2015
although the p-value (sig.) is not as low as those for hypotheses 1 and 2. This would seem to indicate that education, while significantly important, might be somewhat less important than the earlier-mentioned factors when people evaluate their living quality in Somerville. However, this is likely due to the fact that education may be very important to those with school-age, or pre-school-age, children, while not being that important to those without such children. This possibility is further supported by its having the smallest sample size of any of the 5 hypotheses. The $R^2$ value is only .05 (although – to repeat – with a p-value of .012, well below the traditional benchmark for “significance” of .05).

Table 3: Regression results for education

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>19.384</td>
<td>1</td>
<td>19.384</td>
<td>6.519</td>
<td>.012</td>
</tr>
<tr>
<td>Residual</td>
<td>389.533</td>
<td>131</td>
<td>2.974</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>408.917</td>
<td>132</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: How satisfied are you with Somerville as a place to live.

b. Predictors: (Constant), How would you rate the following, The overall quality of public schools.

H4. Neighborhood environment has an influence on Somerville residents’ satisfaction.

One question in the questionnaire is associated with Hypothesis 4:

- How satisfied are you with your neighborhood?

We see in Table 4 that the regression result indicate that neighborhood environment also is strongly related to overall residents living-satisfaction level ($F=232.016$ and sig.= .000). In fact, the F-value is much greater here than for any of the other results (with roughly the same number of degrees-of-freedom as for most of the other analyses, excluding education.) The $R^2$ value is quite high, in context, .56, much larger than any of the other corresponding values.
Table 4: regression results for neighborhood environment

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>294.624</td>
<td>1</td>
<td>294.624</td>
<td>232.016</td>
<td>.000b</td>
</tr>
<tr>
<td>Residual</td>
<td>232.381</td>
<td>183</td>
<td>1.270</td>
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<td></td>
</tr>
<tr>
<td>Total</td>
<td>527.005</td>
<td>184</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

b. Predictors: (Constant), How.satisfied.are.you.with.your.neighborhood.

H5. Somerville Residents’ Income level has an influence on their living satisfaction.

One question in the questionnaire is associated with Hypothesis 5:

- What is your annual household income

We see in Table 5 that the regression result indicate that income level also is related to overall residents’ living-satisfaction level (F= 4.282 and sig.= 0.040). However, the p-value of .04 is near the .05 borderline, so that the relationship between income level and living-satisfaction is not as strong as the previous factors. In fact, The R^2 value is only .03, well lower than previous values noted.

Table 5: Regression results for annual household income

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>11.245</td>
<td>1</td>
<td>11.245</td>
<td>4.282</td>
<td>.040b</td>
</tr>
<tr>
<td>Residual</td>
<td>407.023</td>
<td>155</td>
<td>2.626</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>418.268</td>
<td>156</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

b. Predictors: (Constant), Annual household income

Based on the results of these regression analyses, it appears that all of our five hypotheses were confirmed, at least individually. In truth, none of the results were very surprising.
Stepwise Regression

We then conducted a stepwise regression, with the same, “How satisfied are you with Somerville as a place to live” dependent variable. This is scaled on a 1-10 scale, where 1 = very unsatisfied and 10 = very satisfied. The eligible variables are:

Set 1, on the aforementioned 10-point scale:
- How satisfied are you with your neighborhood?
- How proud are you to be a Somerville resident?
- How safe do you feel walking in your neighborhood at night?
- How satisfied are you with the beauty or physical setting of your neighborhood?
- How satisfied are you with the appearance of parks and squares in your neighborhood?

Set 2, on a 5-point scale, where 1 = very bad, and 5 = very good
- The availability of information about city services
- The cost of housing
- The overall quality of public schools
- Your trust in the local police
- The maintenance of streets and sidewalks
- The availability of social community events

Set 3, Demographics
- What is your sex? (male = 0, female = 1)
- Age? (coded 1-7, with 1 = 18-24, 2 = 25-34, 3 = 35-44, 4 = 45-54, 5 = 55-64, 6 = 65-74, 7 = >75)
- Describe your housing status in Somerville (0 = own, 1 = rent or other)
- Do you plan to move away from Somerville in the next two years? (0 = yes, 1 = no)
- How long have you lived in Somerville? (7-point scale, in years, 1 = < 1, 2 = 1-3, 3 = 4-7, 4 = 8-10,
  5 = 11-15, 6 = 16-20, 7 = 21 or more)
- What is your annual household income? (7-point scale in $, 1 = < 10,000, 2 = 10,000–24,999, 3 = 25,000-49,999, 4 = 50,000-74,999, 5 = 75,000-99,999, 6 = 100,000-149,999, 7 = >150000)
- Are you a student? (0 = yes, 1 = no)
Race (A set of 4 dummy variables representing the 5 categories (White, Hispanic/Latino, Black/African American, Asian, Other)

Six of the 17 variables successively entered the stepwise regression model (i.e., without any deletions). The result of the last (6th) step is displayed in Table 6. The most important columns are the first column of numbers, representing each variable’s coefficient, and the last column representing the “sig” (i.e., the p-value.) The middle three columns represent, respectively, the standard deviation of the coefficient, the standardized coefficient, and the t-statistic.

Table 6: Stepwise-regression results

<table>
<thead>
<tr>
<th>(Constant)</th>
<th>.921</th>
<th>.803</th>
<th>1.147</th>
<th>.254</th>
</tr>
</thead>
<tbody>
<tr>
<td>How satisfied are you. with your neighborhood.</td>
<td>.558</td>
<td>.064</td>
<td>.655</td>
<td>8.760</td>
</tr>
<tr>
<td>How would you rate the following...The availability of information about city services...2015</td>
<td>.554</td>
<td>.145</td>
<td>.281</td>
<td>3.809</td>
</tr>
<tr>
<td>Annual household income</td>
<td>.211</td>
<td>.062</td>
<td>.229</td>
<td>3.394</td>
</tr>
<tr>
<td>sex</td>
<td>.574</td>
<td>.220</td>
<td>.179</td>
<td>2.606</td>
</tr>
<tr>
<td>How would you rate the following...The cost of housing.</td>
<td>.212</td>
<td>.093</td>
<td>.158</td>
<td>2.273</td>
</tr>
<tr>
<td>How would you rate the following...The availability of social community events</td>
<td>-.297</td>
<td>.141</td>
<td>-.166</td>
<td>-2.110</td>
</tr>
</tbody>
</table>

a. Dependent Variable: How satisfied are you with Somerville as a place to live.

Here is our final model -

Predicted Living-Satisfaction Index = .921 + .558 * (Neighborhood Satisfaction Index) + .554 * (City Service Information Availability) + .221 * (Annual Household Income) + .574 * (Sex) + .212 * (Cost of Housing Satisfaction Index) - .297 * (Social Event Availability)
In examining our final model, we have the following conclusions:

The Neighborhood Satisfaction Index corresponds to question, “How satisfied are you with your neighborhood,” and has a coefficient of 0.558. A positive coefficient makes obvious sense to us, in that, the more people are satisfied with their neighborhood, the more satisfied they would be in general living in Somerville.

The City Service Information Availability Index corresponds to the question, “How would you rate the availability of information about the city services,” and has a coefficient of 0.554. A positive coefficient makes sense to us here also, in that, the easier it is for people to receive information about city services, the more easily the people can avail themselves of the services, and, therefore, the more satisfied people would be with living in Somerville.

The positive coefficient of .211 in the equation indicates that, holding everything else [in the equation] constant, a higher Annual Household Income leads to a higher living-satisfaction (perhaps, wherever one is living!!) This result makes obvious sense; to say the least, more money, everything else equal, is generally a desirable, more-satisfying thing!!

Holding everything else in the equation constant, the positive coefficient of .574 indicates that females tend to have higher living-satisfaction index than males. We are not surprised by this, but would not have been surprised had this factor not been significant.

The Cost of Housing Satisfaction Index corresponds to question, “How would you rate the cost of housing,” and has a positive coefficient of .212. A positive coefficient makes sense here also, in that, if a person is more satisfied about his/her cost of housing, the person would be more satisfied with living in Somerville (or, everything else equal, wherever he/she is living.)

The Social Community Event Availability corresponds to question, “How would you rate the availability of social community events.” This variable has highest sig. / p-value of the six variables in the final model (in some sense, the “least significant”), and it has a negative coefficient, -.297. The lack of a positive coefficient is not surprising, since the majority of the respondents are “younger” people and younger people tend not to have great need or passion for social community events. Still, it is not clear why, holding other
variables in the model constant, a higher satisfaction with availability of social events should significantly reduce the overall living-satisfaction index. We might have predicted a non-significant result.

It might be noticed that certain variables that were highly significant in the individual (i.e., simple) regressions did not enter the final stepwise regression model – for example, the safety questions. This indicates that those variables are sufficiently (multi-)collinear with the 6 variables that did enter the final stepwise model, so that they cannot be said, statistically, to add significant predictive value of living-satisfaction above and beyond the 6 variables in the model.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

From the results of the questionnaire, we can see that in planning Somerville’s city branding strategies, several factors such as neighborhood quality, availability of city information and city infrastructure level can be addressed when conducting city promotion-activities. Still, as in most studies, our study has some limitations.

Our sample size is only 185. While not a “small” sample size, a larger sample size would be able to come closer to exactly mirroring the actual demographics of Somerville. Also, there are some areas that are not as comprehensive as they might be on the questionnaire. For example, additional customized questions, especially relating to Somerville’s city persona (related, perhaps, specifically, to young people and, specifically to art) might be useful. In addition, there are other variables not addressed at all in the questionnaire that future research may wish to include – variables that people may value when they decide on their satisfaction with location of their residence. These might include the ease of driving to a supermarket, satisfaction with public transportation, and the degree of traffic jams that occur. It is possible that if the city sponsored some focus groups, other issues that would be appropriate to address in the questionnaire would be revealed.

Also, there are missing values in the dataset. Certain categories of questions have higher amounts of missing values, rendering analysis of those questions less precise; for example, there were about 50 missing values (out of the 185 responses) to the question about education quality in Somerville.
Finally, a couple of the questions in the survey adopt an ordinal scale (since the ranges of choice of each question are of different sizes, and it is not clear that an interval scale assumption is justified); however, we assumed an interval scale for these questions, in essence, assuming a linearity, in using them the way we did when performing the linear regression analyses. For example, the range of income starts at $10,000 (0 – less than 10,000), then goes to $15,000 for three categories, then to $25,000 for two categories, and then to $50,000 for two categories, before having an indefinite upper category, while the 7 categories were coded as 1-7. There are also slight differences in the size of the ranges in the age question, and the length-of-time-living-in-Somerville, questions. However, we strongly believe that these assumptions did not materially affect our results.

City branding aims at attracting more visitors and tourists. So, their opinions, not solely those of the residents of Somerville, may be useful. Indeed, you can make a theoretical argument that residents of Somerville are people who (obviously!!) have chosen to live in Somerville. Therefore, it is almost axiomatic that they would have a higher living-satisfaction index toward Somerville than non-residents. Opinions gathered from visitors and tourists would be offer a potentially useful different perspective. Indeed, opinions of residents of neighboring cities and towns (or “perceptions,” since these non-Somerville residents may not be very knowledgeable about Somerville) would provide a yet different, potentially useful, perspective.

Finally, this survey, like virtually all surveys, has questions that some respondents may not choose to answer truthfully; e.g., annual household income. The survey may also suffer from the ubiquitous external validity problem of non-response bias; this latter issue can be addressed, but usually the methods for doing so are follow-up activities that are relatively expensive.

REFERENCES


