Market Segmentation – A Case Study Abstract

- Shruthi Nanditha Ganesh

Market Segmentation

What is Market Segmentation?

Market Segmentation is the process of identifying segments of the target market and then dividing that target market into subgroups based on different factors such as demographics, needs, priorities, common interests, and other psychographic and/or behavioral criteria used to understand the target audience.

Why is it important?

Market Segmentation is necessary as:

- ◊ It can help you to target just the people most likely to become customers of your company or consumers of your content/product.
- ◊ By understanding your market segments, you can leverage this targeting in product, sales, and marketing strategies.
- ◊ It can also power your product development cycles by informing how you create product offerings for different segments like men vs. women or high-income vs. low-income.

Types of Market Segmentation

Below are the four major types of Market Segmentation.

- ◊ **Geographic Segmentation**
  Geographic Segmentation splits up your target segment based on locations such as country, state etc. Customers can also be identified by taking into account the characteristics of the area they live in for example language, urban, suburban, rural etc.

- ◊ **Demographic Segmentation**
  This type of segmentation technique splits the target audience based on people-based differences. These factors include things like age, sex, marital status, family size, occupation, education level, income, race, nationality and religion.

- ◊ **Psychographic Segmentation**
  Psychographic Segmentation splits the target market based on characteristics that are mental and emotional. Some examples of psychographic characteristics include personality traits, interests, beliefs, values, attitudes and lifestyles.

- ◊ Behavioral Segmentation

  Behavioral segmentation is a form of marketing segmentation that divides the target market based on behavioral patterns exhibited. This segmentation type studies the behavioral traits of consumers — their knowledge of, attitude towards, use of, likes/dislikes of, or response to a product, service, promotion, or brand.

Data exploration

It is the first step of data analysis used to explore and visualize data to uncover insights from the start or identify areas or patterns to dig into more. Data exploration helps to identify the measurement levels of the variables; investigate the univariate distributions of each of the variables; and assess dependency structures between variables. In addition, data may need to be pre-processed and prepared so it can be used as input for different segmentation algorithms. Results from the data exploration stage provide insights into the suitability of different segmentation methods for extracting market segments.

Data cleaning

Data cleaning is the process of fixing or removing incorrect, corrupted, incorrectly formatted, duplicate, or incomplete data within a dataset. When combining multiple data sources, there are many opportunities for data to be duplicated or mislabeled. The first step before commencing data analysis is to clean the data. This includes checking if all values have been recorded correctly, and if consistent labels for the levels of categorical variables have been used. For many metric variables, the range of plausible values is known in advance.

Data Pre-processing

Numerical Variables

Numeric variables are often on different scales and cover different ranges, so they can't be easily compared. What's more, variables with large values can dominate those with smaller values when using certain modelling techniques. centring and scaling is a common pre-processing task that puts numeric variables on a common scale so no single variable will dominate the others. The simplest way to centre data is to subtract the mean value from each data point. Subtracting the mean centres, the data around zero and sets the new mean to zero.

Categorical Variables

Two pre-processing procedures are often used for categorical variables. One is merging levels of categorical variables before further analysis, the other one is converting categorical variables to numeric ones, if it makes sense to do so Exploring Data Merging levels of categorical variables is useful if the original categories are too differentiated (too many).

Descriptive Analysis

Descriptive Analysis is the type of analysis of data that helps describe, show, or summarize data points in a constructive way such that patterns might emerge that fulfills every condition of the data. It is one of the most important steps for conducting statistical data analysis. The three main types of descriptive statistics are frequency distribution, central tendency, and variability of a data set. The frequency distribution records how often data occurs, central tendency records the data's centre point of distribution, and variability of a data set records its degree of dispersion. Helpful graphical methods for numeric data are histograms, box-plots, and scatter plots. Bar plots of frequency counts are useful for the visualization of categorical variables.

Principal Components Analysis

Principal component analysis, or simply PCA, is a dimensionality-reduction method that is often used to reduce the dimensionality of large data sets, by transforming a large set of variables into a smaller one that still contains most of the information in the large set. Reducing the number of variables of a data set naturally comes at the expense of accuracy, but the trick in dimensionality reduction is to trade a little accuracy for simplicity. Because smaller data sets are easier to explore and visualize and make analyzing data much easier and faster for machine learning algorithms without extraneous variables to process. The first variable (principal component) contains most of the variability, the second principal component contains the second most variability, and so on.

Choosing the Target Segment or Segments

The first step in Step 8 is to confirm that all market segments still being considered for target market selection have successfully passed the knock-out criterion test.

It is necessary to assess how competitive the company is in various markets. In other words, the segmentation team must pose a number of queries that can be divided into two main groups:

1. Which market category would the company choose to focus on? Which market would the firm like to invest in?

2. Which of the businesses selling the same item would each of the segments prefer to purchase from? How probable is it

Market Segment Evaluation

Label the two axes How attractive is the segment to us? and How attractive are we to the segment?

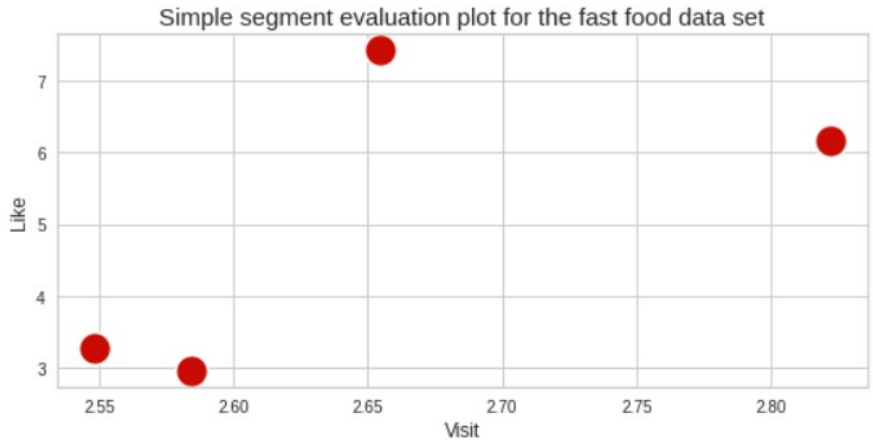
We plot segment attractiveness along the x-axis, and relative organisational competitiveness along the y-axis. Segments appear as circles.

The size of the circles reflects another criterion of choice that is relevant to segment selection, such as contribution to turnover or loyalty.
Of course, there is no single best measure of segment attractiveness or relative organisational competitiveness. It is therefore necessary for users to return to their specifications of what an ideal target segment looks like for them.

In Step 8, the target segment selection step of market segmentation analysis, this information is critical. However, the piece of information missing to be able to select a target segment, is the actual value each market segment has for each of the criteria specified to constitute segment attractiveness. These values emerge from the grouping, profiling, and description of each market segment. To determine the attractiveness value to be used in the segment evaluation plot for each segment, the segmentation team needs to assign a value for each attractiveness criterion to each segment.

The location of each market segment in the segment evaluation plot is then computed by multiplying the weight of the segment attractiveness criterion (agreed upon in Step 2) with the value of the segment attractiveness criterion for each market segment. The value of the segment attractiveness criterion for each market segment is determined by the market segmentation team based on the profiles and descriptions resulting from Steps 6 and 7. The result is a weighted value for each segment attractiveness criterion for each segment. Those values are added up, and represent a segment’s overall attractiveness (plotted along the x-axis).

We can obtain the values required to construct the segment evaluation plot using the following commands. First, we compute the mean value of the visiting frequency of McDonald's for each segment.



Market segments 3 and 4 are located in the attractive quadrant of the segment evaluation plot. Members of these two segments like McDonald's and visit it frequently. These segments need to be retained, and their needs must be satisfied in the future.

Market segment 2 is located in the least attractive position. Members of this segment hate McDonald's, and rarely eat there, making them unattractive as a potential market segment. Market segment 1 does not currently perceive McDonald's in a positive way, and feels that it is expensive. But in terms of loving McDonald's and visitation frequency, members of market segment 1 present as a viable target segment. Marketing action could attempt to address the negative perceptions of this segment, and re-inforce positive perceptions. As a result, McDonald's may be able to broaden its customer base.

The segment evaluation plot serves as a useful decision support tool for McDonald's management to discuss which of the four market segments should be targeted