SUMMARY OF STEPS TO MARKET SEGMENTATION

Step 1 : Deciding not to segment :

Implications of Committing to Market Segmentation :

The organization must be sure to make a market segmentation strategy for a long term. This process is not free. It requires performing the research, fielding surveys, and focus groups, designing multiple packages, and designing multiple advertisements and communication messages and all these require capital. The company should be sure if they need to segment their customers or not.

Implementation Barriers :

1. Lack of management from seniors : A market segmentation strategy is prone to failure if the seniors of the company son not have proper commitment and involvement due to any given reason.
2. Organizational culture : Market segmentation fails if the organization has one or more of the following issues :
    - Resistance to change or new ideas
    - Bad communication
    - Lack of creative thinking
    - Lack of market or consumer orientation
    - Short – term thinking
    - Not sharing information
    - Office politics etc.
3. Improper Training : If the team associated with maket segmentation does not have the proper knowledge or skillset required for the job, then it's not going to be successful.
4. Objective obstacles : if the company is facing issues like lack of capital or inability to make structural changes, then success of the segmentation process is difficult.

STEP – 2 : Specifying the Ideal Target Segment

In step 2, the organization must determine two sets of segment evaluation criteria. These are –

1. Knock-out criteria – These are the essentials and associates attributes like substantiality, measurability and accessibility. These are –

- The segments should be homogeneous.
- The segments must be distinct.
- The segments should be large enough for data to make sense.
- The segments should match the strength of the organization.
- Members of the segment must be identifiable – It must be possible to spot them.
- The segment should be reachable to the targeted consumer.

2. Attractiveness Criteria – These are not compulsory and can vary from company to company. Ex - Segment factors (size, growth rate per year, sensitivity to price, service features and external factors, cyclicality, seasonality, bargaining power of upstream suppliers), Competition (types of competition, degree of concentration, changes in type and mix, entries and exits, changes in share, substitution by new technology, degrees and type of integration), Financial and economic factors (contribution margins, capacity utilisation, leveraging factors, such as experience and economies of scale, barriers to entry, or exit), Technological factors (maturity and volatility, complexity, differentiation, patents and copyrights, manufacturing processes), Socio-political factors (social attitudes and trends, laws and government agency regulations, influence with pressure groups and government representatives, human factors, such as unionisation and community acceptance), etc.

Implementing a Structured Process :

A team of about 6 people determine segment attractiveness and organisational competitiveness values. These criteria are important as it is necessary because there is a huge benefit in selecting the attractiveness criteria for market segments at the early stage in the process of segmentation.

Step 3: Collecting Data

Segmentation Variables :

There are primarily two kinds of variables we use in context of market segmentation. These are :

1. Segmentation Variable : When one single characterstick of the consumer plays the primary role in segmentation process, then it is called segmentation variable. Ex – Gender, age, etc.

2. Descriptor Variables : The variables used to describe a segment in detail is called Descriptor Variable. Typical descriptor variables include socio-demographics, along with information about media behaviour, allowing marketers to reach their target segment with communication messages.

Segmentation Criteria :

Segmentation criteria involves a broad domain. It is mostly related to the nature of data used for data segmentation. The different types of segmentation criteria are –

1. Geographic Segmentation : This involves the consumer's location of residence as the primary factor for segmentation. It is particularly easy to use and helps in target communication messages, and select communication channels (such as local newspapers, local radio and TV stations) to reach the selected geographic segments. Disadvantage is if the consumers have mostly same coutry of residence or if the product doesn't necessarily facilitates location as it's key feature.
2. Socio-Demographic Segmentation : socio-demographic segmentation criteria include age, gender, income and education. For example: luxury goods (associated with high income), cosmetics (associated with gender; even in times where men are targeted, the female and male segments are treated distinctly differently), baby products (associated with gender), retirement villages (associated with age), tourism resort products (associated with having small children or not).
3. Psychographic Segmentation : When people are grouped according to psychological criteria, such as their beliefs, interests, preferences, aspirations, or benefits sought when purchasing a product, the term psychographic segmentation is used. The psychographic approach has the advantage that it is generally more reflective of the underlying reasons for differences in consumer behaviour. The disadvantage is that it is not easy to implement it because of its heavy complexity .
4. Behavioural Segmentation : In behavioural Segmentation we search for similarities in behaviour or reported behaviour. Advantage is that it segments people based on similar behavioural interests, but the data for segmentation based on behaviour is not readily available.

Data from Survey Studies :

The most common source of data to be used for market segmentation is collection of data via surveys. Survey data depends on the following factors :

1. Choice of Variables : Variables relevant to the construct need to be included for segmentation and the variables that are not useful should be discarded immediately. The variable that are not useful increase dimentionality of data and increases complexity. Such variables are also called noisy variables. So it is necessary to ask relevant and necessary questions only while conducting the survey for data collection.
2. Response Options : The responses to a question to be answered by a consumer can be of following types :
    - binary or dichotomous data : The options of the form yes/no, correct/incorrect with only two posiibilities fall in this category.
    - binary or dichotomous data : Options allowing respondents to select an answer from a range of unordered categories fall in this category.
    - metric data : options allowing the customer to enter a number indicates metric data. Ex – Age.

Response Styles :

A wide range of response styles manifest in survey answers, including respondents' tendencies to use extreme answer options (STRONGLY AGREE, STRONGLY DISAGREE), to use the midpoint (NEITHER AGREE NOR DISAGREE), and to agree with all statements. Response styles affect segmentation results because commonly used segment extraction algorithms cannot differentiate between a data entry reflecting the respondent's belief from a data entry reflecting both a respondent's belief and a response style.

Sample Size :

The size on the sample plays a crucial role in producing nice results on segmentation. If inadequate number of samples are present, it becomes impossible to determine which the correct number of market segments is**.**

Step – 6 : Profiling Segments

Identifying Key Characteristics of Market Segments :

The aim of this step - profiling segments is to get to know the generated segments from the extraction step. Profiling consists of characterising the market segments individually, but also in comparison to the other market segments.

Segment Profiling with Visualisations :

Demonstrating the segmented customers visually is considered as a much better alternative to long explanations. They are much easier to interpret and process and finally make critical decisions.

A segment profile plot is used to understand the defining charactersticks of each segment. It is also called a panel-plot. Each panel represents a segment. For each segment, the segment profile plot shows the cluster centres (centroids, representatives of the segments). An example of a panel plot is shown below :

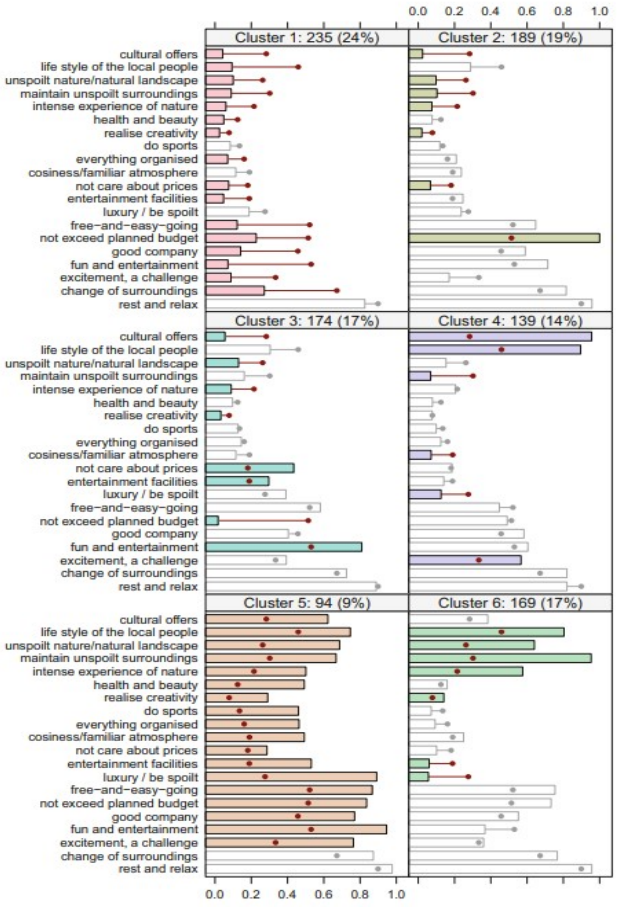

Fig. 8.2 Segment profile plot for the six-segment solution of the Australian travel motives data set

Different panel and different segment have different centroids and distributions representing different kind of customers prioritizing different motives for travelling.

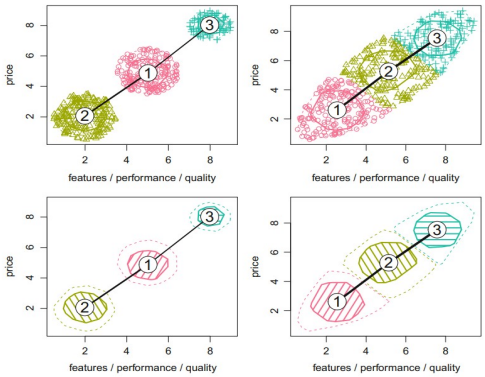

Fig. 8.4 Segment separation plot including observations (first row) and not including observations (second row) for two artificial data sets: three natural, well-separated clusters (left column); one elliptic cluster (right column)

The graphs on the RHS are closely packed because two datasets are used in their segmentation. To avoid this problem we can perform principal component analysis which reduces multiple dimensions to a smaller number of dimensions.

Step 7: Describing Segments

In step 7, we try to describe the segments using additional information like the consumer's age, gender, past travel behaviour, preferred vacation activities, media use, etc. These additional variables are called descriptive variables.

Using Visualisations to Describe Market Segments :

Nominal and Ordinal Descriptor Variables :

The Nominal and Ordinal Descriptor Variables include features like gender, level of education, country of origin etc. To visualize these variables, we first need to encode them as a categorical variable with some numeric form and then do the plotting. These plots can be charts of different kinds to enhance visualization. Examples include bar chart and mosaic chart.

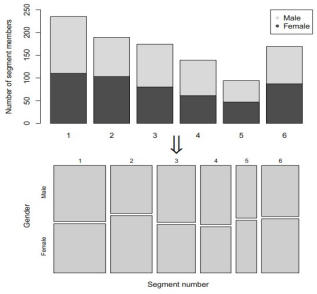

Fig. 9.1 Comparison of a stacked bar chart and a mosaic plot for the cross-tabulation of segment membership and gender for the Australian travel motives data set

Mosaic plots can also be encoded with color combinations for better representation.

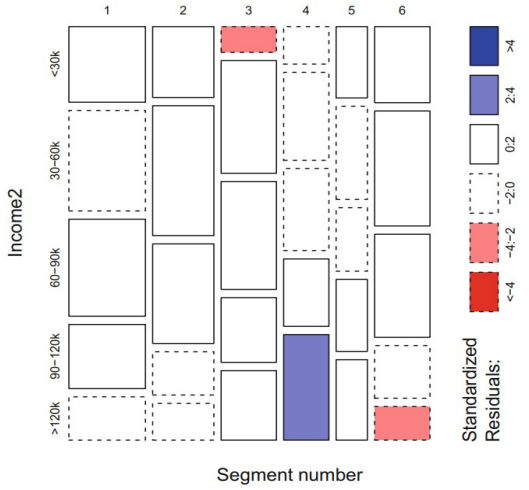

Fig. 9.3 Shaded mosaic plot for cross-tabulation of segment membership and income for the Australian travel motives data set

Metric Descriptor Variables :

The variables are of continuous numeric data type. Examples include age, number of nights at the tourist destinations, money spent on accommodation.

The best representation of these variables is done by histograms.

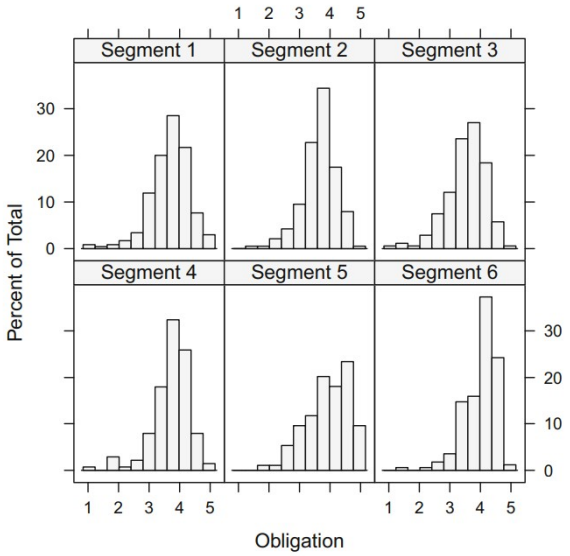

Fig. 9.6 Histograms of moral obligation to protect the environment by segment for the Australian travel motives data set

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Other forms of graphs can also be used to visualize data, like box-and-whisker plot.

Predicting Segments from Descriptor Variables :

We can use regression models to predict segments from the data. Regression analysis is the basis of prediction models. Regression analysis assumes that a dependent variable y can be predicted using independent variables or regressors.

Linear Regression :

The most basic form of regression model is the linear regression model. It assumes that function is linear and that y follows a normal distribution with a mean and a variance. In linear regression models, regression coefficients express how much the dependent variable changes if one independent variable changes while all other independent variables remain constant.

$$y = \beta_0 + \beta_1 x_1 + ... + \beta_p x_p + c$$

Binary Logistic Regression :

We can formulate a regression model for binary data using generalised linear models by assuming that f (y|μ) is the Bernoulli distribution with success probability μ, and by choosing the logit link that maps the success probability $\mu \in (0, 1)$ onto $(-\infty,\infty)$ by

$$g(\mu) = \eta = \log(\mu / 1 - \mu)$$

In binomial logistic regression, the intercept gives the value of the linear predictor η if the independent variables $x_1,...,x_p$ all have a value of 0.

Multinomial Logistic Regression :

Multinomial logistic regression can fit a model that predicts each segment simultaneously. Because segment extraction typically results in more than two market segments, the dependent variable y is not binary. Rather, it is categorical and assumed to follow a multinomial distribution with the logistic function as link function.

Tree-Based Methods :

Classification and regression trees are a supervised learning technique from machine learning. The advantages of classification and regression trees are their ability to perform variable selection, ease of interpretation supported by visualisations, and the straight-forward incorporation of interaction effects.

An example of tree formation is :

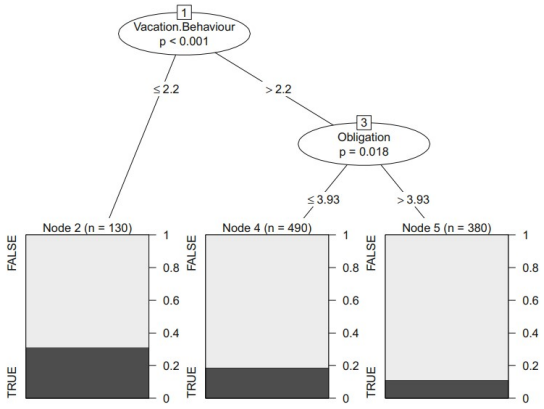

Fig. 9.15 Conditional inference tree using membership in segment 3 as dependent variable for the Australian travel motives data set

The node containing all consumers is the root node. Nodes that are not split further are terminal nodes. When the terminal nodes are reached, regression can be performed to create segments.