MARKET SEGMENTATION: Summary(Steps: 1 to 4)

Manjunath V Kannavalli
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The purpose of marketing is to match the genuine needs and desires of consumers with the offers of suppliers particularly suited to satisfy those needs and desires. This matching process benefits consumers and suppliers, and drives an organisation's marketing planning processes.

Strategic marketing planning is important because it determines the long-term direction of an organization. It involves identifying consumer needs and desires, strengths and weaknesses internal to the organization, and external opportunities and threats that the organization may face. Through a SWOT analysis, an organization can identify its strengths, weaknesses, opportunities, and threats, which can help in developing the strategic marketing plan.

Once the strategic marketing plan has been established, decisions can be made about which consumers to focus on (segmentation and targeting), and which image of the organization to create in the market (positioning). These decisions are critical because they determine the long-term direction of the organization, and cannot easily be reversed. Only when these decisions have been made can work on the tactical marketing plan begin.

The tactical marketing plan involves developing and modifying the product to meet the needs and desires of the target segment, determining the price in view of cost, competition, and the willingness to pay of the target segment, selecting the most suitable distribution channels to reach the target segment, and communicating and promoting the offer in a way that is most appealing to the target segment. The tactical marketing plan depends entirely on the strategic marketing plan, but the strategic marketing plan does not depend on the tactical marketing plan.

Benefits of market segmentation:

- Allows organizations to tailor their marketing efforts to specific groups of consumers, which can lead to increased efficiency and effectiveness of marketing campaigns.
- Helps organizations identify and understand the unique needs and desires of different consumer groups, allowing them to develop products and services that better meet those needs.
- Can lead to increased customer loyalty and satisfaction, as consumers feel that their specific needs are being met.
- Enables organizations to more accurately measure the success of their marketing efforts by tracking the response of specific consumer groups.

Costs of market segmentation:

- Can be expensive and time-consuming to conduct the research necessary to identify and understand different consumer segments.
- Can lead to increased complexity in marketing efforts, as organizations need to develop different marketing strategies and campaigns for each segment.
- May lead to increased competition within specific segments as organizations compete for the attention and loyalty of consumers within those segments.

Variables of market segmentation:

- Demographic segmentation: dividing consumers into groups based on characteristics such as age, gender, income, education, and occupation.
- Psychographic segmentation: dividing consumers into groups based on personality traits, values, attitudes, and interests.
- Behavioural segmentation: dividing consumers into groups based on their behaviour and how they interact with products or services.
- Geographic segmentation: dividing consumers into groups based on their geographic location.

Segmentation based on the choice of Segmentation variables:

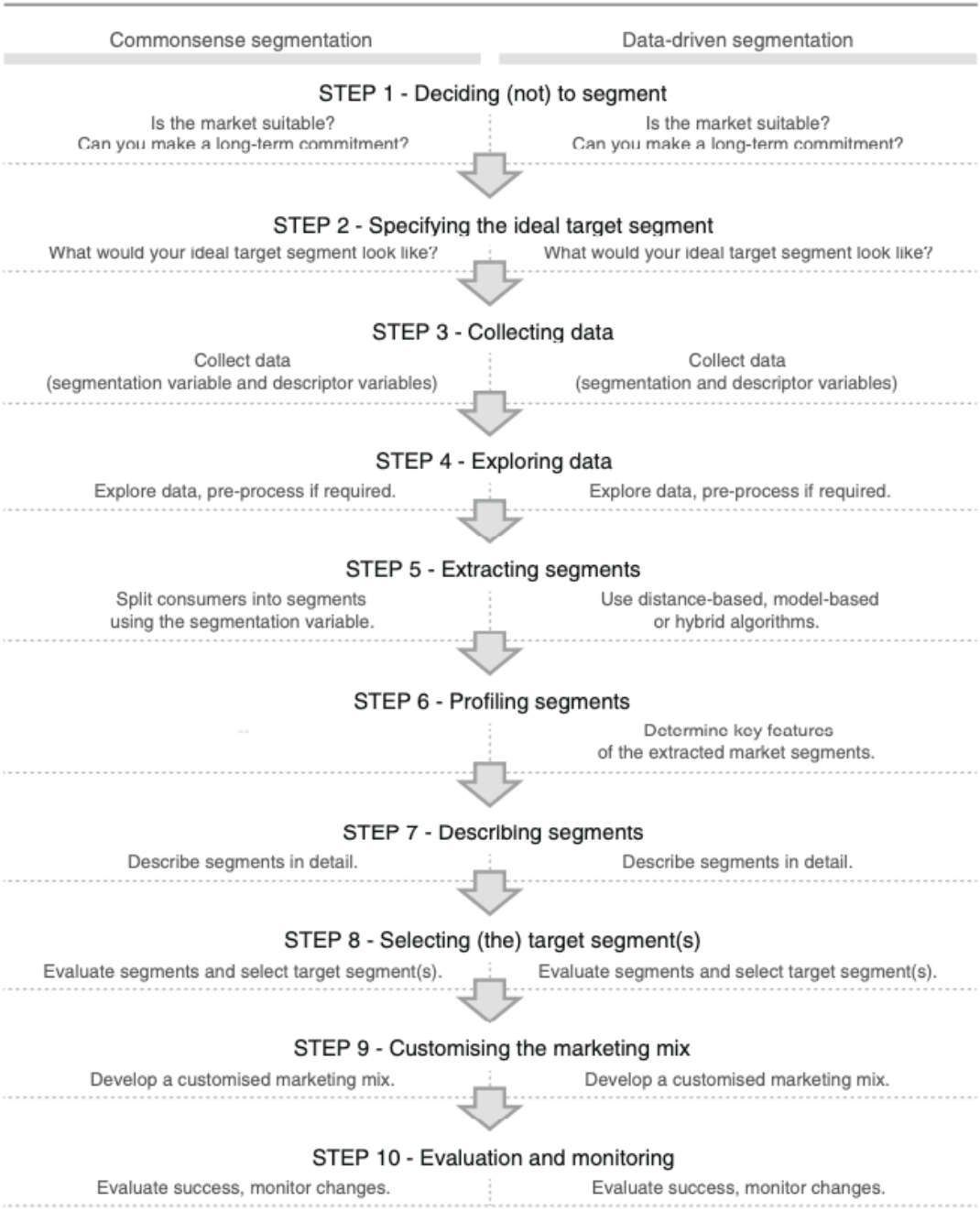
Variable	**Dimensions**	**Sample survey questions**
Age	Unidimensional	How old are you?
Gender	Unidimensional	What is your gender identity?
Country of Origin	Unidimensional	Where do you live?
Prior Purchase	Unidimensional	Have you purchased our service before?
Benefits sought	Multidimensional	When booking flights online, do you care about • Convenience • Value for money • Speed • Ability to compare fares
Motives	Multidimensional	When choosing a vacation, do you • Rest and relax • Explore new things • Meet new people • Learn about other cultures • Getaway from everyday routine

Data driven Market segmentation approach:

	Common sense/ Common sense segmentation	Common sense/ data driven segmentation	Data driven/ Common sense segmentation	Data driven/ data driven segmentation
Primary segmentation variables	Commonsense e.g. age, country of origin	Commonsense e.g. age, country of origin	Data driven e.g.expenditure, vacation activities	Data driven e.g. travel motives, expenditures
Secondary segmentation variables	Commonsense e.g. gender, seeking adventure or not	Data driven e.g. travel motives, vacation activities	Commonsense e.g. Gender. Family status	Data driven e.g. vacation activities, information sources used
Example	Young female tourists	Mature aged who play golf, enjoy wine-tastings and fine-dining	Tourists who engage in many activities that attract entrance fee like theme park, zoo	Tourists who want to learn about the culture and local people, who attend local cultural events and food festivals

Market Segmentation Analysis Step by step:

Market segmentation analysis can be carried out using a ten-step approach as shown in below figure. The approach applies to both common sense and data-driven segmentation strategies. The initial step involves evaluating the benefits and drawbacks of pursuing a segmentation strategy and deciding whether to proceed. The organization then specifies the ideal market segment characteristics before collecting empirical data. The data is explored before market segments are extracted, profiled, and described in detail. The organization then selects one or a few segments to target, develops a customized marketing mix, and evaluates the success of the strategy upon completion. It is crucial to continuously monitor the segments for possible changes in size or characteristics that may require modifications to the segmentation strategy.


Commonsense segmentation
Data-driven segmentation
STEP 1 - Deciding (not) to segment
Is the market suitable?
Can you make a long-term commitment?
Is the market suitable?
Can you make a long-term commitment?
STEP 2 - Specifying the ideal target segment
What would your ideal target segment look like?
What would your ideal target segment look like?
STEP 3 - Collecting data
Collect data
(segmentation variable and descriptor variables)
Collect data
(segmentation and descriptor variables)
STEP 4 - Exploring data
Explore data, pre-process if required.
Explore data, pre-process if required.
STEP 5 - Extracting segments
Split consumers into segments
using the segmentation variable.
Use distance-based, model-based
or hybrid algorithms.
STEP 6 - Profiling segments
Determine key features
of the extracted market segments.
STEP 7 - Describing segments
Describe segments in detail.
Describe segments in detail.
STEP 8 - Selecting (the) target segment(s)
Evaluate segments and select target segment(s).
Evaluate segments and select target segment(s).
STEP 9 - Customising the marketing mix
Develop a customised marketing mix.
Develop a customised marketing mix.
STEP 10 - Evaluation and monitoring
Evaluate success, monitor changes.
Evaluate success, monitor changes.

STEP-1: Deciding (not) to Segment:

The key implication of pursuing a market segmentation strategy is that the organization must commit to the segmentation strategy on the long term. This commitment includes the willingness and ability of the organization to make substantial changes and investments, such as developing new products, modifying existing products, changes in pricing and distribution channels, and communication with the market. These changes may also influence the internal structure of the organization, which may need to be adjusted, for example, to target different market segments. The decision to investigate the potential of a market segmentation strategy must be made at the highest executive level, systematically and continuously communicated, and reinforced across all organizational units.

There are several potential barriers to successful implementation of a market segmentation strategy. The first group of barriers relates to senior management, including lack of leadership, pro-active championing, commitment, and involvement in the market segmentation process. A lack of resources, either for the initial market segmentation analysis or for the long-term implementation of a market segmentation strategy, can also impede the success of market segmentation.

A second group of barriers relates to organizational culture, including a lack of market or consumer orientation, resistance to change, lack of creative thinking, poor communication, lack of sharing of information and insights across organizational units, short-term thinking, unwillingness to make changes, and office politics. Lack of training and a formal marketing function or qualified marketing expert in the organization, and lack of a qualified data manager and analyst, can also represent major stumbling blocks.

Objective restrictions faced by the organization, such as lack of financial resources or the inability to make the required structural changes, can also be obstacles. Process-related barriers include not having clarified the objectives of the market segmentation exercise, lack of planning or bad planning, lack of structured processes to guide the team through all steps of the market segmentation process, a lack of allocation of responsibilities, and time pressure.

STEP-2: Specifying the Ideal Target segment:

This step involves determining two sets of segment evaluation criteria, namely knock-out criteria and attractiveness criteria. Knock-out criteria are non-negotiable features that the organization would consider targeting, while attractiveness criteria are used to evaluate the relative attractiveness of the remaining market segments in compliance with the knock-out criteria. User input is crucial in this step, and the organization must commit to contributing to the market segmentation analysis process by conceptualizing the evaluation criteria. There is a wide array of proposed criteria in the literature, such as measurable, substantial, accessible, sufficiently different, large enough, growing, competitively advantageous, profitable, sensitive to price, socio-political considerations, and others. The literature does not generally distinguish between knock-out and attractiveness criteria.

- Knockout Criteria:
  Knock-out criteria are used to determine if market segments are suitable for further assessment using segment attractiveness criteria. The article outlines the various criteria recommended by experts in the field, including substantiality, measurability, accessibility, homogeneity, distinctiveness, size, and matching with organizational strengths. It is crucial for senior management, the segmentation team, and the advisory committee to understand these criteria. The article emphasizes the need for specifying the minimum viable target segment size.
  To ensure that market segments resulting from market segmentation analysis are worth pursuing, knock-out criteria are used to determine their suitability for assessment using segment attractiveness criteria. The original criteria suggested by Kotler in 1994 include substantiality, measurability, and accessibility, but additional criteria have been recommended by other authors. These criteria include homogeneity, distinctiveness, size, matching the organization's strengths, identifiability, and reachability. Knock-out criteria must be understood by senior management, the segmentation team, and the advisory committee. While some criteria require no further specification, others, such as the minimum viable target segment size, must be specified. By using these knock-out criteria, organizations can identify and focus on market segments that offer the greatest potential for success.

- Attractiveness Criteria:
  Attractiveness criteria are used to evaluate the relative attractiveness of the remaining market segments after the knock-out criteria have been applied. These criteria are used to select one or more target segments from the remaining options. Attractiveness criteria can be based on a wide range of factors, including market size, growth potential, profitability, competition, and fit with the company's resources and capabilities.
  Attractiveness criteria should be based on the company's strategic priorities and objectives. They should also be flexible enough to allow for changes in the market and the company's resources and capabilities. For example, a company that is experiencing strong growth in a particular market may prioritize growth potential as an attractiveness criterion, while a company that is focused on maximizing profitability may prioritize profitability as an attractiveness criterion.

- Once the knock-out and attractiveness criteria have been established, they can be used to evaluate potential market segments. This involves gathering data on each segment, analysing the data using the established criteria, and selecting one or more target segments that meet the criteria.

STEP-3: Collecting the data:

Segmentation criteria based on variables

- Demographic variables: These variables are based on characteristics such as age, gender, income, education, family size, ethnicity, and occupation. For example, a company may target young adults aged 18-25 for a new energy drink product.

- Geographic variables: These variables are based on geographic location and include region, city size, climate, and population density. For example, a ski equipment manufacturer may target customers in regions with colder climates and mountainous terrain.
- Psychographic variables: These variables are based on consumer lifestyle, values, interests, and personality traits. For example, a company may target environmentally-conscious consumers who are interested in sustainable products.
- Behavioural variables: These variables are based on consumer behaviour, including purchasing patterns, brand loyalty, product usage, and attitudes toward the product or service. For example, a company may target frequent users of a particular product or brand.

Data from Survey studies

Survey data is cheap and easy to collect, making it a feasible approach for any organisation. Few key aspects need to be considered when using survey data

- Choice of variables:
  selecting the variables that are included as segmentation variable in com- monsense segmentation, or as segmentation variables in data-driven segmentation, is critical to the quality of the market segmentation solution
- Response options
  Answer options provided to respondents in surveys determine the scale of the data available for subsequent analyses. Options allowing respondents to indicate a number, such as age or nights stayed at a hotel, generate metric data. Metric data allow any statistical procedure to be performed and are therefore well suited for segmentation analysis
- Response styles
  Survey data is prone to capturing biases. A response bias is a systematic tendency to respond to a range of questionnaire items on some basis other than the specific item content. some respondents displaying an acquiescence bias (a tendency to agree with all questions) could result in one market segment having much higher than average agreement with all answers. Such a segment could be misinterpreted
- Sample size
  increasing the sample size improves the correctness of the extracted segments. Interestingly, however, the biggest improvement is achieved by increasing very small samples. As the sample size increases, the marginal benefit of further increasing the sample size decreases.

Data from Internal sources

Businesses can collect data from their own customer database, sales data, and customer service interactions to gain insights into customer needs, behaviours, and preferences. Typical examples are scanner data available to grocery stores, booking data available through airline loyalty programs, and online purchase data. The strength of such data lies in the fact that they represent actual behaviour of consumers

Data from experimental studies

Experimental data can result from field or laboratory experiments. For example, they can be the result of tests how people respond to certain advertisements. The response to the advertisement could then be used as a segmentation criterion. Experimental data can also result from choice experiments or conjoint analyses. One such method is A/B testing where certain features are tested on control groups.

STEP-4: Exploring data:

This step can be further broken down to smaller steps. Data cleaning is a crucial step in the data analysis process that involves identifying and correcting or removing errors, inconsistencies, and inaccuracies in the data.

- Data Cleaning
  - Handling missing values:
    decide on a strategy for handling missing values, such as imputation (replacing missing values with estimates) or deletion (removing rows or columns with missing values).
  - Handling duplicate values:
    identify and remove duplicates from the dataset to avoid biasing the analysis.
  - Data transformation:
    This step involves converting the data into a suitable format for analysis. It may include converting categorical data into numeric data, scaling or standardizing the data, and creating new variables or features.
  - Handling outliers:
    Outliers are extreme values that can skew the analysis. You need to identify and handle outliers using methods such as winsorizing, trimming, or removing outliers.
  - Data integration:
    This step involves combining multiple datasets into a single dataset for analysis. It may include merging data from different sources or databases.
  - Data formatting and labeling:
    format the data in a consistent manner, such as using consistent date formats or units of measurement. Also need to label the data appropriately, such as labelling variables or features to make them more understandable.
  - Quality control:
    Finally, you need to perform quality control checks on the cleaned dataset to ensure that the data is accurate, consistent, and ready for analysis. This may involve running statistical tests or visualizing the data to identify any remaining issues.

- Descriptive Analysis
  - Data summarization:

This involves summarizing the key features of the dataset, such as the mean, median, mode, range, standard deviation, and variance.

- Data visualization:
  This step involves creating graphical representations of the data to identify patterns, trends, and anomalies. Examples of visualization techniques include scatter plots, histograms, box plots, and heat maps.

- Pre-processing
  - Categorical variables:
    For some analyses, it is necessary to convert continuous numerical data into categorical data by creating equally sized intervals as category. For example, age. There are other methods such as label encoding, one hot encoding, and dummy encoding which can be used to transform the select features into categorical variables.
  - Numerical variables:
    The range of values of a segmentation variable affects its relative influence in distance-based methods of segment extraction. To balance the influence of segmentation variables on segmentation results, variables can be standardised. Standardising variables means transforming them in a way that puts them on a common scale.

- Principal Components Analysis
  PCA (Principal Component Analysis) is a popular technique used for dimensionality reduction and feature extraction from high-dimensional datasets. It is a mathematical algorithm that transforms a set of correlated variables into a new set of uncorrelated variables, called principal components. The steps involved in PCA are:
  - Standardization:
    The data is standardized by subtracting the mean and dividing by the standard deviation to ensure that all variables are on the same scale.
  - Calculation of Covariance Matrix:
    The covariance matrix is computed for the standardized dataset. The covariance matrix is a square matrix that contains the covariances between all pairs of variables in the dataset.
  - Eigenvector Decomposition:
    The eigenvectors and eigenvalues of the covariance matrix are computed. The eigenvectors are the directions in which the data varies the most, while the eigenvalues represent the amount of variation explained by each eigenvector.
  - Selection of Principal Components:
    The principal components are selected based on the eigenvalues. The first principal component is the eigenvector that explains the most variation in the dataset, the second principal component is the eigenvector that explains the most variation remaining after the first principal component has been removed, and so on.
  - Projection of Data:
    The data is projected onto the new set of variables, or principal components, to obtain a reduced dimensional representation of the original dataset.