



### ABSTRACT

This study examines the role of market segmentation in shaping marketing mix strategies. By customizing the 4Ps—Product, Price, Place, and Promotion—businesses can effectively target consumer preferences, as demonstrated through a case study on Australian vacation activities.

Yelle Sharath

# PROJECT -2

Team Sharath

# Market Segmentation

## **Strategic and Tactical Marketing**

Purpose of Marketing: Match consumers' needs and desires with suitable supplier offerings, benefiting both parties and guiding marketing planning.

### **Marketing Planning:**

**Strategic Plan:** Long-term direction, focusing on where the organization wants to go and why. It identifies consumer needs, organizational strengths and weaknesses, and market opportunities and threats (SWOT analysis).

**Tactical Plan:** Short-term action, translating the strategic plan into specific actions like pricing, promotion, distribution, and product adaptation (4Ps).

### **Expedition Analogy:**

**Strategic Decisions:** Choosing the “mountain” (goal/direction), defining the target.

**Tactical Decisions:** Deciding details like supplies, departure time, and gear to ensure successful execution.

### **Asymmetry of Plans:**

Good strategic marketing lays the foundation; tactical efficiency improves comfort but cannot compensate for poor strategy.

Optimal outcomes arise with both good strategic and tactical planning.

## **Market Segmentation**

**Definition:** Breaking down a heterogeneous market into homogeneous segments based on consumer traits critical for product and marketing alignment.

### **Purpose:**

Segmentation helps tailor products and marketing, making offers more appealing to specific consumer segments, thus increasing sales and brand positioning.

### **Segmentation Strategies:**

**Concentrated:** Focus on one segment, ideal for smaller organizations or those with limited resources.

**Differentiated:** Serve multiple segments with tailored offerings, suitable for mature markets.

**Undifferentiated:** Target entire market with a single offering, often viable for generic products.

### **Benefits:**

Enhances focus on core strengths, improving consumer fit and competitive advantage.

Allows for niche and micro-marketing, particularly effective with modern data-driven insights.

Supports better sales targeting and inter-departmental collaboration within organizations.

### **Costs:**

Requires significant upfront investment in research and strategy development.

Poorly executed segmentation wastes resources and may hurt staff morale.

## Chapter 2 Market Segmentation Analysis

### Layers of Market Segmentation Analysis

#### 1. Core Layer (Technical):

- Central process involves statistically grouping consumers by preferences or characteristics.
- Requires skilled data analysts and knowledgeable users (those using segmentation insights for marketing).

#### 2. Second Layer (Supportive Tasks):

- **Data Collection:** Critical to ensure high-quality data.
- **Data Exploration:** Helps in understanding the segmentation context.
- **Segment Profiling and Description:** Necessary to define each segment for better targeting.
- These tasks aid in creating an effective segmentation model but must be followed by actionable steps.

#### 3. Third Layer (Implementation):

- **Non-Technical Tasks:** Organizational decisions like committing to segmentation strategy and aligning segments with organizational goals.
- Involves choosing target segments and developing a customized marketing mix.

### Approaches to Market Segmentation Analysis

#### 1. Based on Organizational Constraints (Dibb and Simkin, 2008):

- **Segment Revolution:** Radical change, often survey-based, creating new segments from scratch.
- **Segment Evolution:** Incremental changes or refinement of existing segments, often internally guided.
- **Segment Mutation:** New segments discovered incidentally, possibly through data mining.

#### 2. Based on Segmentation Variables:

- **A Priori Segmentation (One Variable):** Pre-defined variables such as age or gender, chosen based on managerial intuition or secondary data.
- **A Posteriori (Data-Driven) Segmentation (Multiple Variables):** Uses data analysis to define segments, often revealing detailed insights into consumer behavior.

#### 3. Combination of Approaches:

- Market segmentation studies often blend both commonsense and data-driven methods, either sequentially or concurrently.
- **Multi-Stage Segmentation:** Combines methods, such as pre-selecting a segment (e.g., seniors) and then refining with data analysis (e.g., travel motives).

## Ten Steps of Market Segmentation Analysis

## Step 1: Deciding (not) to Segment

### 3.1 Implications of Committing to Market Segmentation

Market segmentation is widely used but requires careful consideration due to the significant commitment it demands from organizations. This approach is akin to a long-term commitment rather than a temporary strategy. Implementing market segmentation involves substantial changes and investments in terms of research, surveys, and multiple design variations for packaging, advertisements, and communication, as Cahill (2006) highlights. Thus, segmentation is only worthwhile if the anticipated sales growth justifies the expense of implementing it.

Organizations might need to develop new products, adapt existing ones, and alter pricing, distribution, and communication strategies to meet diverse segment needs. Consequently, structural changes may be necessary, with Croft (1994) suggesting that companies should organize around market segments instead of products to achieve the best results. Such a significant decision must be made at the highest executive level, with clear communication and reinforcement across all organizational levels.

### 3.2 Implementation Barriers

Numerous challenges can hinder successful segmentation implementation, including:

1. **Leadership and Resources:** Senior management's lack of engagement or resource allocation can undermine the segmentation effort, as emphasized by McDonald and Dunbar (1995). For a successful rollout, top leadership must support and invest in the strategy.
2. **Organizational Culture:** A culture resistant to market orientation, creativity, information sharing, or structural changes can inhibit segmentation success (Dibb and Simkin, 2008). Croft (1994) developed a tool to assess market orientation within an organization.
3. **Knowledge and Training:** A lack of training or a fundamental understanding of segmentation principles among key personnel can also jeopardize the strategy's success.
4. **Formal Marketing Function and Data Expertise:** As companies grow or face diverse markets, having a qualified marketing and data analysis team becomes critical (McDonald and Dunbar, 1995).
5. **Financial and Structural Constraints:** Organizations with limited resources must be selective about pursuing only the best segmentation opportunities (Beane and Ennis, 1987).
6. **Process and Planning Deficiencies:** Poor planning, undefined segmentation objectives, and time pressures can prevent achieving optimal segmentation results (Dibb and Simkin, 2008).

## Step 2: Specifying the Ideal Target Segment

- **Segment Evaluation Criteria:** Organizations need to provide input throughout the segmentation process, especially in deciding which segments align with their long-term strategy. This includes both "knock-out" and "attractiveness" criteria:
  - **Knock-out Criteria:** Essential criteria segments must meet to be considered viable. Examples include segment size, homogeneity, accessibility, and compatibility with the organization's strengths.
  - **Attractiveness Criteria:** These criteria are applied to assess the relative appeal of viable segments, often ranked in degrees rather than as binary pass/fail.

- **Implementing a Structured Process:** A structured approach, such as a segment evaluation plot, is commonly used to evaluate segments based on attractiveness and organizational competitiveness. This helps organizations systematically decide which segments are most promising based on selected criteria.
- **Team and Stakeholder Involvement:** Effective segmentation analysis requires cross-functional input and consensus from various organizational units. This helps align segment evaluation with company-wide objectives and ensures that every department, as a stakeholder, supports the segmentation strategy.
- **Criteria Weighting and Selection:** Organizations often weight attractiveness criteria based on importance, which can involve team-based scoring and negotiation to determine the final priorities. This pre-defined weighting helps streamline the process when evaluating segments in later stages.

### Step 3: Collecting Data

#### Segmentation Variables and Descriptor Variables:

- *Segmentation Variables:* Used to split data into distinct groups, like gender, age, or benefits sought.
- *Descriptor Variables:* Provide detailed information about each segment to help in targeting and customizing marketing strategies.

#### Commonsense vs. Data-Driven Segmentation:

- *Commonsense Segmentation:* Relies on a single segmentation variable (e.g., gender) to create basic segments.
- *Data-Driven Segmentation:* Uses multiple segmentation variables, which allow for more nuanced groupings that often emerge from analyzing multiple characteristics.

#### Segmentation Criteria:

- Segmentation criteria are broader constructs like socio-demographics, geographic location, and behavior.
- Common criteria include:
  - *Geographic Segmentation:* Dividing the market based on location (useful when targeting consumers in specific areas with specific needs).
  - *Socio-Demographic Segmentation:* Based on factors like age, income, family structure, etc.
  - *Psychographic Segmentation:* Considers lifestyles, interests, or values.
  - *Behavioral Segmentation:* Focuses on consumer behavior, such as buying patterns, product usage, or brand loyalty.

#### Data Sources for Segmentation:

- Empirical data, such as survey data, scanner data, and observations, is essential for segmenting markets effectively. Accurate data quality is crucial for effective segmentation as it impacts assignment accuracy and segment descriptions.

#### Choosing a Segmentation Approach:

- The simplest approach that effectively captures relevant consumer distinctions is recommended. For example, geographic segmentation might be optimal if location heavily influences product demand, while more complex criteria might not necessarily improve segmentation outcomes.

### 5.2.2 Socio-Demographic Segmentation

- **Definition:** Involves categorizing consumers based on characteristics such as age, gender, income, and education.
- **Industries:** Particularly useful in industries like luxury goods, cosmetics, baby products, retirement villages, and tourism, where these demographic factors directly influence consumer choices.
- **Advantages:**
  - Easy to identify segment membership for consumers.
  - Can explain specific product preferences (e.g., families choosing vacation spots).
- **Limitations:**
  - Demographics only explain about 5% of consumer behavior variance.
  - Values, tastes, and preferences may be more influential for segmentation.

### 5.2.3 Psychographic Segmentation

- **Definition:** Groups consumers based on psychological criteria such as beliefs, interests, preferences, and benefits sought.
- **Types:**
  - **Benefit Segmentation:** Focuses on the benefits consumers seek.
  - **Lifestyle Segmentation:** Based on activities, opinions, and interests.
- **Advantages:**
  - Reflects underlying reasons for consumer behavior differences (e.g., tourists motivated by cultural exploration).
- **Limitations:**
  - More complex to determine segment membership.
  - Relies heavily on the reliability and validity of empirical measures.

### 5.2.4 Behavioral Segmentation

- **Definition:** Segments consumers based on actual behaviors (e.g., purchase frequency, amount spent, prior experience).
- **Advantages:**
  - Directly utilizes behavior relevant to the product or service.
  - More effective than geographic segmentation in some cases.
- **Limitations:**
  - Behavioral data may not be available for potential customers who haven't purchased previously.

## 5.3 Data from Survey Studies

- **Survey Data Collection:** Most market segmentation analyses use survey data due to its cost-effectiveness, but it can be prone to biases.

### 5.3.1 Choice of Variables

- Importance of selecting relevant segmentation variables while avoiding unnecessary ones to reduce respondent fatigue and improve data quality.
- Noisy or masking variables can obscure meaningful segmentation insights.

### 5.3.2 Response Options

- The type of response options affects the data scale for analysis:
  - **Binary/Dichotomous:** Simple yes/no options, easy to analyze.
  - **Nominal:** Categories without order, can be converted to binary.
  - **Metric:** Continuous data suitable for a wide range of statistical analyses.
  - **Ordinal:** Ordered categories, but with undefined distances between options.

### 5.3.3 Response Styles

- Systematic tendencies in survey responses can bias results (e.g., extreme responding, midpoint selection).
- Such biases can lead to misinterpretation of market segments, necessitating careful analysis to identify and exclude biased responses.

### 5.3.4 Sample Size

- Sufficient sample size is crucial for accurate market segmentation.
- **Recommendations:**
  - General guidelines suggest having at least  $2p^2$  (or better,  $5 \times 2p^5$ ) where  $p$  is the number of segmentation variables.
  - For unequal segment sizes, the smallest segment should have a sample of at least  $10 \times p$ .

## Step 4: Exploring Data

### 6.1 A First Glimpse at the Data

#### 1. Purpose of EDA:

- EDA aims to clean, preprocess, and explore data to identify suitable algorithms for market segmentation.
- It includes identifying measurement levels, investigating univariate distributions, and assessing dependency structures.

#### 2. Dataset Overview:

- The dataset contains responses from 1,000 Australian residents regarding their travel motives for their last vacation, with 20 motives included.
- Examples of travel motives include interest in local lifestyles.

#### 3. Loading Data in R:

- Instructions are provided to load a CSV file containing the data using R's `read.csv()` function.
- The `check.names = FALSE` option preserves the column names without converting spaces to dots.

#### 4. Inspecting Data:

- Column names and dimensions of the dataset can be explored using `colnames()` and `dim()`.
- A summary of the data can be generated using the `summary()` function.

## 6.2 Data Cleaning

### 1. Importance of Data Cleaning:

- The initial step in analysis involves checking for data accuracy and consistency, including ensuring categorical variables have permissible values.
- For example, ages should fall within a reasonable range, and categorical variables should contain expected levels.

### 2. Cleaning Example:

- The `Income2` variable's categories were found to be unordered. The levels were reordered using the `factor()` function to create an ordinal variable.
- A cross-tabulation was used to confirm the successful transformation of the variable.

### 3. Reproducibility:

- The process of cleaning and exploring data is documented with code, allowing for reproducibility in future analyses.

## 6.3 Descriptive Analysis

### 1. Descriptive Statistics:

- Descriptive statistics help avoid misinterpretation of results. Numeric and graphic summaries provide insights into the data.
- The `summary()` function in R gives a range of statistics for numeric variables and frequency counts for categorical variables.

### 2. Graphical Representations:

- Histograms and boxplots are emphasized as useful tools for visualizing numeric data distributions.
- Histograms are created using the `histogram()` function from the `lattice` package, illustrating how age distributions can be analyzed.

### 3. Box-and-Whisker Plots:

- Boxplots summarize data based on minimum, maximum, quartiles, and median, providing insights into distribution and potential outliers.

### 4. Visualizing Travel Motives:

- The last part of the analysis involves visualizing the importance of different travel motives using a dot chart.
- The chart illustrates the percentage of respondents agreeing with various travel motives, showing a broad range of interests among tourists.

## 6.4 Pre-Processing

### 6.4.1 Categorical Variables



- **Merging Levels:** It's important to merge categories of categorical variables if they are too numerous or skewed in response counts. For example, in an income survey, many categories had very few respondents, leading to an imbalance. Merging these categories results in a more balanced representation, making the analysis more robust.
- **Converting to Numeric:** Categorical variables can be converted to numeric if it makes sense, especially if the categories are ordinal. For instance, income categories can be treated as ordinal data because they represent ranges that have meaningful order and approximate equal intervals.
- **Likert Scale:** The section discusses the use of multi-category scales like the Likert scale in surveys, emphasizing that while they are commonly treated as numerical, this may not be justified due to potential biases in response styles. It suggests that using binary options can mitigate these issues.
- **Binary Variables:** Binary variables (e.g., Yes/No) are easier to convert to numeric (0/1) and require less preprocessing. The example provided shows how to convert travel motives into a binary matrix.

#### 6.4.2 Numeric Variables

- **Standardization:** The influence of segmentation variables can be skewed due to differing value ranges. Standardizing these variables (subtracting the mean and dividing by the standard deviation) ensures they are on a common scale, preventing variables with larger ranges from dominating the analysis.
- **Outliers:** If the data contains significant outliers, robust methods for standardization (e.g., using the median and interquartile range) may be necessary.

#### 6.5 Principal Components Analysis

- **Purpose:** PCA is introduced as a method to transform multivariate datasets into uncorrelated variables called principal components. This helps in reducing dimensionality while retaining variance.
- **Interpretation of PCA:** The PCA results indicate the standard deviations of principal components and the proportion of variance they explain. It reveals that not all components capture significant variance, emphasizing the need for the original variables.
- **Visualization:** The section describes how to visualize PCA results using scatter plots, showcasing relationships between principal components and original variables.
- **Cautions:** The text warns against reducing the number of segmentation variables solely based on PCA results, as this could lead to loss of valuable information. Instead, PCA can be used to identify redundancy in variables without replacing them in the segmentation process.

#### 6.6 Step 4 Checklist

- The checklist provides a practical guide for ensuring data consistency, cleaning, preprocessing, and evaluating segmentation variables before proceeding to the next analysis step.

#### Summary

This section highlights the importance of careful preprocessing of both categorical and numeric data to ensure robust analysis, especially when segmenting consumer preferences. The methods discussed aim to reduce redundancy, standardize data, and transform variables in a way that facilitates clearer insights and more effective segmentation in subsequent analyses.

## 1. Evolution of Marketing Mix:

- Marketing has evolved from a basic toolbox for sales to a sophisticated strategy involving the 4Ps (Product, Price, Promotion, Place) developed by McCarthy in 1960, with a broader range of components initially identified by Borden in 1964.

## 2. Segmentation-Targeting-Positioning (STP) Approach:

- Market segmentation is integral to strategic marketing and is a crucial first step in the STP framework.
- The STP process involves identifying and profiling market segments, selecting target segments, and positioning products to meet the distinct needs of these segments.

## 3. Integration of Marketing Mix with Target Segments:

- The marketing mix must be customized based on the target segment's characteristics and preferences.
- Each aspect of the marketing mix should be reconsidered once target segments are identified. For example, decisions regarding product modifications, pricing strategies, distribution channels, and promotional messages should all align with the preferences and behaviors of the selected segments.

## 4. Customizing the Marketing Mix:

- **Product:** Decisions may involve creating new products or modifying existing ones to cater to the target segment's needs (e.g., specialized tours for culturally inclined tourists).
- **Price:** Price strategies should reflect the target segment's willingness to pay, as evidenced by the example of segment 3 having a higher willingness to spend on vacations, allowing for premium pricing.
- **Place:** Distribution strategies must align with how the target segment prefers to purchase products (e.g., emphasizing online booking for tech-savvy tourists).
- **Promotion:** The promotional strategy must utilize the most effective channels to reach the target audience, based on their preferences for information sources and media consumption.

## 5. Practical Applications:

- The text illustrates practical applications using data analysis, highlighting the importance of understanding target segments through data to inform marketing mix decisions.
- Examples include using consumer expenditure data to inform pricing strategies and identifying booking preferences to guide distribution methods.

## Implications for Marketers

- **Strategic Alignment:** Marketers must ensure that the development of the marketing mix aligns closely with the characteristics and preferences of the identified target segments. This requires continuous review and adaptation as new data and consumer insights become available.
- **Data-Driven Decisions:** Utilizing data analytics in the segmentation process allows for more informed decisions regarding product features, pricing structures, distribution channels, and promotional strategies.
- **Flexibility in Approach:** While the STP approach provides a useful framework, marketers should remain flexible, recognizing that the process is iterative. They may need to revisit segmentation as they gather more insights into consumer behavior and market dynamics.
- **Holistic Review:** It's essential for marketers to review the marketing mix holistically, ensuring that all elements work together to create a cohesive strategy that meets the needs of the target segment.

GITHUB LINK FOR THE MCDONALDS CASE STUDY CODE:

[my github Repo Link](#)