

# **Market Segmentation Summary**

**By: Ediga Sai Nikhil**

## **Step 1: Deciding (not) to segment:**

Market segmentation is the process of dividing a market into distinct groups of consumers with similar needs and wants. This allows businesses to target their marketing efforts more effectively and efficiently. There are total of 10 steps in Market Segmentation.

There are a number of factors that businesses should consider when deciding whether or not to segment their market. These factors include:

- **The size and fragmentation of their market:** If a business's market is small or fragmented, it may not be cost-effective to segment.
- **The needs and wants of their customers:** If a business's customers have different needs and wants, then segmentation may be a good option.
- **Their marketing budget:** Market segmentation can be costly, so it is important to make sure that a business has the budget to implement it effectively.
- **Their resources and expertise:** Does a business have the resources and expertise to conduct market research, develop segmentation strategies, and implement separate marketing campaigns for each segment?

If a business is unsure whether or not market segmentation is right for them, it is a good idea to consult with a marketing expert.

## **Implications of Committing to Market Segmentation**

There are a number of implications to committing to market segmentation. Some of the most important implications include:

- **Long-term commitment:** Market segmentation is a long-term strategy. It takes time and resources to develop and implement a successful segmentation strategy, and businesses need to be willing to make changes to their products, pricing, and marketing campaigns in order to target each segment effectively.
- **Cost:** Market research is essential for identifying and understanding different market segments, and this can be expensive. Additionally, businesses need to invest in developing and implementing separate marketing campaigns for each segment.
- **Complexity:** Market segmentation can be complex, especially for businesses with a large number of products or services. It can be difficult to identify and target distinct market segments, and it can be challenging to develop and implement separate marketing campaigns for each segment.

## Implementation Barriers

There are a number of barriers that can prevent businesses from implementing market segmentation effectively. Some of the most common barriers include:

- **Cost:** As mentioned above, market segmentation can be costly, especially for small businesses.
- **Lack of resources:** Many businesses do not have the resources they need to conduct market research, develop segmentation strategies, and implement separate marketing campaigns for each segment.
- **Lack of expertise:** Many businesses do not have the expertise they need to implement market segmentation effectively.
- **Resistance to change:** Some businesses may be resistant to the changes required to implement market segmentation effectively.

## **Step 2: Specifying the Ideal Target Segment:**

Segment evaluation criteria and knock-out criteria are both essential concepts in the process of market segmentation, which is a strategy used by businesses to divide a broader market into smaller, more manageable segments. These criteria help organizations identify and prioritize which market segments are worth targeting with their marketing efforts. Here's an explanation of each:

### **Segment Evaluation Criteria:**

Segment evaluation criteria are the standards or factors used to assess the desirability and suitability of different market segments. They are used to analyse and compare segments to determine which ones align best with the organization's goals and resources. Segment evaluation criteria vary from one organization to another and may include factors such as:

1. **Substantiality:** This criterion assesses the size and potential profitability of a segment. Is the segment large enough to justify marketing efforts, and can it generate sufficient revenue?
2. **Measurability:** Can the characteristics and behaviours of the segment be quantified and tracked? Measurable segments allow for effective marketing strategies and performance evaluation.
3. **Accessibility:** How easy is it to reach and communicate with the members of the segment? Accessibility is crucial for effective marketing.
4. **Homogeneity:** Do the members of the segment share similar characteristics, needs, and preferences? Homogeneous segments are easier to target effectively.
5. **Distinctiveness:** Is the segment distinct from other segments? Distinct segments allow for tailored marketing strategies.
6. **Profitability:** What is the potential profitability of the segment? Factors such as purchasing power and price sensitivity are considered.

7. **Compatibility with Organizational Strengths:** Does the organization have the capability to meet the needs of the segment effectively?
8. **Identifiability:** Can members of the segment be easily identified in the marketplace.
9. **Reachability:** Is there a practical way to reach and engage with the members of the segment?
10. **Competitive Intensity:** What is the level of competition within the segment? Highly competitive segments may require more resources.
11. **Cultural and Ethical Considerations:** Are there cultural or ethical factors to consider when targeting this segment?
12. **Long-Term Growth Potential:** Does the segment offer long-term growth opportunities?

### **Knock-Out Criteria:**

Knock-out criteria, on the other hand, are a subset of segment evaluation criteria and are typically considered as the essential, non-negotiable features or characteristics that a market segment must possess for an organization to consider targeting it. If a segment fails to meet any of the knock-out criteria, it is eliminated from further consideration.

For example, a common knock-out criterion might be substantiality, meaning that a segment must be large enough to be economically viable. If a segment is too small and doesn't meet this criterion, it would be "knocked out" and not pursued as a target market.

In summary, segment evaluation criteria encompass a broader set of factors used to assess and prioritize market segments, while knock-out criteria are a specific subset of these criteria, highlighting the essential features that segments must meet to be considered as viable target markets. Both types of criteria play a crucial role in the strategic decision-making process of market segmentation.

## **Attractiveness Criteria:**

The second set of evaluation criteria is called as attractiveness criteria. The Attractiveness criteria are used to evaluate the relative attractiveness of the remaining market segments – those in compliance with the knock-out criteria. In attractiveness criteria there is wide range of attractiveness criteria so that segmentation team have considers which criteria are mostly used in which situations. These criteria are not binary in nature. Each market segment is rated; it can be more or less attractive with respect to a specific criterion.

## **Implementing a Structured Process:**

The most popular structured approach for evaluating market segments are use of segment evolution plot where showing segment attractiveness along one axis, and organizational competitiveness on the other axis. There are no standard criteria for attractiveness and organizational values so the segment attractiveness and organizational competitiveness values are determined by the segmentation team. Factors which constitute both segments need to be negotiated and agreed upon. To achieve this, a large number of possible criteria has to be investigated before agreement is reached on which criteria are most important for the organization.

This task can complete by team. Team proposes an initial solution and reports their choices to the advisory committee for discussion and possible modification. There are two good reasons to include this process representative.

1. Each organizational unit has a different perspective on the business of the organization.
2. If the segmentation strategy is implemented, it will affect every single unit of the organization.

We cannot complete the segment evolution plot because there is no segment available to access. But there is a huge benefit in selecting the attractiveness criteria for market segments at early stage. At the end of this step segmentation team have a list of attractiveness criteria. Criteria have weight assign to each and ask team members to distribute 100 points according to criteria. These allocations then have to be negotiated until agreement is reached.

## **Step 3: Collecting Data:**

### **Segmentation variables**

Segmentation variables are specific characteristics or attributes used to divide a larger market or consumer group into smaller, more homogeneous segments. Commonsense segmentation and data-driven segmentation are two distinct approaches used in market segmentation, each relying on different methods and criteria to group consumers into segments.

Commonsense segmentation variable refers to a single characteristic or attribute used to divide a sample of consumers or market into distinct segments. For example, in commonsense segmentation, gender can be a common variable. Using gender as a segmentation variable, a market can be divided into two segments: one for women and another for men.

Descriptor variables are additional personal characteristics that complement the primary segmentation variable, offering a more comprehensive view of market segments. In this case, descriptor variables include age, vacation habits, and vacation benefit preferences, enhancing our understanding of each segment's behaviour and needs.

Unlike commonsense segmentation, data-driven segmentation considers multiple factors simultaneously. For instance, it can identify tourist segments seeking relaxation, culture, and social interaction while not prioritizing action and exploration during vacations.

In both commonsense and data-driven segmentation, data quality is crucial for accurately assigning individuals to the right segments and describing them effectively. Empirical data for segmentation can come from surveys, observations, or experiments, but surveys may not always provide an accurate reflection of consumer behaviour. Researchers should explore various data sources to find the most representative data for their segmentation efforts.

## **Segmentation criteria**

Before conducting market segmentation, organizations must decide on the segmentation criterion, a fundamental choice that defines the nature of the information used for segmentation. The selection of the criterion requires market knowledge and often depends on factors like profitability, consumer preferences, and product appeal. Whether it's demographic, geographic, or psychographic segmentation, the focus should be on what works for your specific offering. While psychographic segmentation may seem more attractive, simplicity and alignment with your target audience's needs should take precedence over sophistication. In essence, better segmentation is what aligns with your product's requirements while keeping costs in check.

### **1) Geographic Segmentation**

Geographic segmentation, using consumers' locations of residence as the primary criterion, has traditionally been a fundamental approach for market segmentation. It's often suitable when factors like language or regional preferences are crucial, such as in tourism. For instance, Austria's national tourism organization tailors its offerings to nearby countries with different languages. Global giants like Amazon and IKEA also adjust their services based on geographic locations.

The advantage of geographic segmentation is its ease in assigning consumers to regions for targeted communication. However, it falls short in explaining product preferences, as socio-demographic factors often play a more significant role. Even within the same country, diverse holiday preferences exist due to factors like relationship status and interests, revealing that location alone doesn't fully capture consumer choices.

Geographic information has seen a resurgence in international market segmentation, enabling segmentation across borders. Still, surveys with respondents from diverse cultural backgrounds may introduce biases. For example, Haverila (2013) effectively segmented young mobile phone users across national borders using this approach.

## **Socio-demographic segmentation**

Socio-demographic segmentation relies on criteria like age, gender, income, and education, which can be valuable in specific industries. For instance, it's useful in luxury goods (linked to high income), cosmetics (gender-specific targeting), baby products (gender-related), retirement villages (age-related), and tourism resorts (family-oriented). The advantage lies in the ease of assigning consumers to segments. While socio-demographics may explain some product preferences, they often fall short in providing comprehensive market insights. Research indicates that demographics explain only about 5% of consumer behaviour variance. Some experts argue that values, tastes, and preferences hold more influence over consumers' buying decisions, making them more valuable for segmentation.

## **2)Psychographic segmentation**

Psychographic segmentation involves categorizing people based on psychological criteria like beliefs, interests, preferences, aspirations, or the benefits they seek when buying a product. It encompasses a range of measures related to the mind. One prominent form of psychographic segmentation is benefit segmentation, which focuses on identifying specific benefits consumers seek. Psychographic criteria are inherently more complex than geographic or socio-demographic factors because they require considering multiple variables to capture the psychological dimension effectively. This approach allows for a richer understanding of consumer behaviour and preferences.

This approach to segmentation offers a more insightful understanding of consumer behaviour by delving into the underlying reasons behind it. For instance, tourists primarily motivated by cultural exploration are more likely to choose destinations rich in cultural treasures. This approach has been frequently employed in data-driven market segmentation in tourism, using travel motives as a basis. However, it comes with the challenge of increased complexity in determining consumer segment memberships. Moreover, its effectiveness relies on the reliability and validity of the measures used to capture psychographic dimensions of interest.

### **3)Behavioural segmentation**

Behavioural segmentation involves grouping individuals based on their actual behaviours or reported behaviours, such as prior product experience, purchase frequency, spending patterns, or information-seeking behaviour. When using actual behaviour as the basis for segmentation, it focuses on the most relevant similarity among consumers. This approach can be advantageous because it avoids the need for developing measures for psychological constructs and directly uses the behaviour of interest for segmentation. However, obtaining behavioural data may not always be feasible, especially when including potential customers who haven't previously purchased the product in the segmentation analysis.

## **Step 4: Exploring Data**

### **1)A First Glimpse at the Data:**

The first step in exploring your data is to get a first glimpse at it. This can be done by looking at the raw data, as well as by creating some basic visualizations.

When looking at the raw data, pay attention to the following:

- **Data types:** What types of data do you have (e.g., categorical, numerical, text)?
- **Missing values:** Are there any missing values in your data? If so, how will you handle them?
- **Outliers:** Are there any outliers in your data? If so, how will you handle them?

Once you have a basic understanding of your data, you can start to create some visualizations. Some basic visualizations that can be helpful for exploring data include:

- **Histograms:** Histograms can be used to visualize the distribution of numerical data.
- **Bar charts:** Bar charts can be used to compare the counts of different categories.
- **Line charts:** Line charts can be used to visualize trends over time.



## 2)Data Cleaning

Once you have gotten a first glimpse at your data, you need to clean it. This involves removing any errors or inconsistencies in the data.

Some common data cleaning tasks include:

- **Removing duplicate rows:** Duplicate rows can occur when data is copied from multiple sources.
- **Correcting typos:** Typos can occur in any type of data, but they are especially common in text data.
- **Converting data types:** Sometimes you will need to convert the data type of a variable in order to be able to analyze it properly. For example, you might need to convert a categorical variable to a numerical variable before using a statistical test.
- **Handling missing values:** There are a number of ways to handle missing values, such as deleting rows with missing values, imputing missing values, or using a statistical method that can handle missing values.

## 3) Descriptive Analysis

Once you have cleaned your data, you can start to perform some descriptive analysis. This involves summarizing the key characteristics of your data.

Some common descriptive statistics include:

- **Mean:** The mean, or average, is a measure of the central tendency of a numerical variable.
- **Median:** The median is the middle value of a numerical variable when the values are sorted in ascending order.
- **Mode:** The mode is the most frequent value of a categorical variable.
- **Standard deviation:** The standard deviation is a measure of the variability of a numerical variable.

You can also use descriptive analysis to identify outliers and patterns in your data.

## 4) Pre-Processing

Before you can apply any statistical methods to your data, you may need to perform some pre-processing. This involves converting your data into a format that is compatible with the statistical method you want to use.

Some common pre-processing tasks include:

Converting categorical variables to numerical variables: This can be done using a technique called dummy coding.

- **Scaling numerical variables:** This can be done using a technique called standardization.
- **Handling outliers:** You may need to remove outliers from your data, or you may need to use a statistical method that is robust to outliers.

## **Categorical Variables**

Categorical variables are variables that can take on a limited number of values. Some examples of categorical variables include gender, country, and product category.

When pre-processing categorical variables, you will often need to convert them to numerical variables. This can be done using a technique called dummy coding.

Dummy coding involves creating a new binary variable for each category of the categorical variable. The value of the new variable will be 1 if the customer belongs to the category, and 0 otherwise.

For example, if you have a categorical variable for gender, you could create two new binary variables: one for male customers and one for female customers. The value of the "male customer" variable would be 1 for male customers and 0 for female customers. The value of the "female customer" variable would be 1 for female customers and 0 for male customers.

## **Numeric Variables**

Numeric variables are variables that can take on any value within a certain range. Some examples of numeric variables include age, income, and purchase amount.

When pre-processing numeric variables, you may need to scale them. This involves converting the variables to a common scale.

Scaling can be useful for a number of reasons. First, it can make the results of your statistical analysis more interpretable

## **Step 5: Extracting Segments**

### **1) Grouping Consumers**

The goal of step 5 is to group consumers into segments based on their shared characteristics. This can be done using a variety of methods, which are typically classified into three categories:

Distance-based methods

Model-based methods

Algorithms with integrated variable selection

## **2) Distance-Based Methods**

Distance-based methods group consumers based on their similarity to one another. The similarity between two consumers is typically measured using a distance metric. Some common distance metrics include:

Euclidean distance

Manhattan distance

Mahalanobis distance

Once a distance metric has been selected, the next step is to choose a clustering algorithm. Clustering algorithms can be divided into two categories:

Hierarchical clustering

Partitioning clustering

### **Hierarchical Clustering**

Hierarchical clustering algorithms create a hierarchy of clusters, with each cluster being more similar to the clusters above it and less similar to the clusters below it.

One of the most common hierarchical clustering algorithms is Ward's method. Ward's method merges the two clusters that result in the smallest increase in the within-cluster variance.

### **Partitioning Clustering**

Partitioning clustering algorithms divide the data into a predefined number of clusters.

One of the most common partitioning clustering algorithms is k-means clustering. K-means clustering works by iteratively assigning each consumer to the cluster with the closest centroid. The centroids are initially chosen randomly, and then they are updated after each iteration to reflect the current cluster assignments.

### **Hybrid Approaches**

Hybrid clustering algorithms combine elements of distance-based and model-based methods.

For example, one hybrid clustering algorithm is called fuzzy c-means clustering. Fuzzy c-means clustering is a variant of k-means clustering that allows consumers to belong to multiple clusters with different degrees of membership.

### **Distance-Based Methods Brief Summary**

Distance-based methods are a simple and effective way to group consumers based on their similarity to one another. However, distance-based methods have a few limitations. First, they require the user to specify the number of clusters in advance. Second, they can be sensitive to outliers.

### **3) Model-Based Methods**

Model-based methods group consumers based on a statistical model of the data. One of the most common model-based clustering algorithms is finite mixture of Gaussian distributions (FMG).

FMG assumes that the data is generated by a mixture of Gaussian distributions, with each distribution representing a different cluster. The FMG algorithm estimates the parameters of the Gaussian distributions and then assigns each consumer to the most likely distribution.

Another common model-based clustering algorithm is finite mixture of regressions (FMR). FMR is similar to FMG, but it allows the clusters to have different regression relationships between the variables.

### **Model-Based Methods Brief Summary**

Model-based methods are more flexible than distance-based methods, but they can be more computationally expensive. Additionally, model-based methods require the user to choose a statistical model of the data, which can be difficult.

### **4) Algorithms with Integrated Variable Selection**

Algorithms with integrated variable selection group consumers and select variables simultaneously. This can be useful for reducing the dimensionality of the data and for identifying the variables that are most important for segmentation.

One of the most common algorithms with integrated variable selection is biclustering. Biclustering algorithms group consumers and variables simultaneously.

#### **Biclustering Algorithms:**

Biclustering algorithms are a powerful tool for segmentation, but they can be computationally expensive. Additionally, biclustering algorithms can be difficult to interpret.

## **Step 6: Profiling Segments**

### **1) Identifying Key Characteristics of Market Segments**

Once you have extracted segments from your customer data, you need to profile each segment to better understand its needs and wants. This includes identifying the key characteristics of each segment, such as its demographics, psychographics, and behavioral characteristics.

### **2) Traditional Approaches to Profiling Market Segments**

Traditional approaches to profiling market segments involve using descriptive statistics and statistical tests to compare the different segments. For example, you might use a t-test to compare the mean age of two segments, or you might use a chi-squared test to compare the distribution of income across three segments.

### **3) Segment Profiling with Visualizations**

Segment profiling with visualizations is a more recent and innovative approach to profiling market segments. This approach involves using data visualization tools to identify patterns and trends in the data.

For example, you might use a bar chart to compare the purchase history of two segments, or you might use a scatter plot to identify the relationship between two variables within a segment.

### **Identifying Defining Characteristics of Market Segments**

One of the goals of segment profiling is to identify the defining characteristics of each segment. These are the characteristics that are most different across the segments.

To identify the defining characteristics of each segment, you can use a variety of data visualization tools. For example, you might use a heatmap to identify the variables that are most correlated with each segment.

### **Assessing Segment Separation**

Another goal of segment profiling is to assess the separation of the segments. Ideally, the segments should be well-separated, meaning that the customers in each segment should be very different from the customers in the other segments.

To assess the separation of the segments, you can use a variety of data visualization tools. For example, you might use a cluster dendrogram to visualize the similarity between the segments.

## **Step 7: Describing Segments**

Once you have segmented your customers, you need to describe each segment in detail. This will help you to better understand the needs and wants of each segment, and to develop more targeted marketing campaigns.

There are a number of ways to describe market segments. One common approach is to use descriptive statistics, such as means, medians, and modes. For example, you could calculate the average age, income, and purchase history of each segment.

Another way to describe market segments is to use data visualizations. Data visualizations can be used to identify patterns and trends in the data. For example, you could create a bar chart to compare the purchase history of two segments, or you could create a scatter plot to identify the relationship between two variables within a segment.

Here are some examples of data visualizations that can be used to describe market segments:

### Testing for Segment Differences in Descriptor Variables

Once you have described your market segments, you may want to test for differences in the descriptor variables across segments. This can be done using a variety of statistical tests, such as t-tests and chi-squared tests.

For example, you could use a t-test to compare the average age of two segments, or you could use a chi-squared test to compare the distribution of income across three segments.

### Predicting Segments from Descriptor Variables

Once you have understood the differences between the segments, you may want to develop a model to predict which segment a customer belongs to. This can be done using a variety of machine learning algorithms, such as logistic regression and tree-based methods.

For example, you could use logistic regression to develop a model that predicts whether a customer is likely to be a high-value customer. Or, you could use a tree-based method to develop a model that predicts which segment a customer belongs to based on their demographic and behavioral characteristics.

Here are some examples of machine learning algorithms that can be used to predict segments from descriptor variables:

- **Logistic regression:** Logistic regression is a machine learning algorithm that can be used to predict the probability of a binary outcome, such as whether a customer is likely to be a high-value customer.
- **Multinomial logistic regression:** Multinomial logistic regression is a machine learning algorithm that can be used to predict the probability of a categorical outcome with more than two categories, such as which segment a customer belongs to.
- **Tree-based methods:** Tree-based methods are a type of machine learning algorithm that can be used to predict both binary and categorical outcomes. Tree-based methods are known for their ability to handle complex data sets and to identify non-linear relationships between variables.

## **Step 8: Selecting (the) Target Segment(s)**

### **1) The Targeting Decision**

Once you have profiled your market segments, you need to decide which segment(s) you want to target. This decision should be based on a number of factors, including:

The size and profitability of each segment

Your marketing resources

Your marketing goals

### **2) Market Segment Evaluation**

To evaluate your market segments, you can use a variety of criteria, including:

**Size:** How large is the segment?

- **Profitability:** How profitable is the segment?
- **Accessibility:** How easy is it to reach the segment?
- **Responsiveness:** How likely is the segment to respond to your marketing efforts?
- **Synergy:** How well does the segment align with your existing products and services?

You can also use a more quantitative approach to evaluating your market segments. One common approach is to use a weighted sum model. In this approach, you assign different weights to each of the evaluation criteria. The weights should reflect the relative importance of each criterion to your business.

Once you have weighted the evaluation criteria, you can calculate a total score for each segment. The segment with the highest total score is the most attractive segment.

## **Step 9: Customizing the Marketing Mix**

### **1) Implications for Marketing Mix Decisions**

Once you have segmented your customers and described each segment in detail, you can start to customize your marketing mix for each segment. The marketing mix is the set of marketing tools that a company uses to achieve its marketing goals. The four elements of the marketing mix are product, price, place, and promotion.

### **2) Product**

When customizing your product for each segment, you need to consider the needs and wants of each segment. For example, if you are targeting a segment of high-income customers, you may want to offer premium products with more features and benefits.

### **3) Price**

When customizing your price for each segment, you need to consider the price sensitivity of each segment. For example, if you are targeting a segment of price-sensitive customers, you may want to offer lower prices or discounts.

### **4) Place**

When customizing your place for each segment, you need to consider where each segment shops. For example, if you are targeting a segment of online shoppers, you may want to sell your products through your website and other online retailers.

### **5) Promotion**

When customizing your promotion for each segment, you need to consider the communication channels that each segment prefers. For example, if you are targeting a segment of social media users, you may want to promote your products through social media platforms like Facebook and Twitter.

Here are some examples of how companies have customized their marketing mix for different segments:



- **Product:** Apple offers a variety of iPhone models to cater to different segments of customers. For example, the iPhone SE is a more affordable option for budget-conscious customers, while the iPhone Pro Max is a high-end option for customers who want the latest and greatest features.
- **Price:** Amazon offers a variety of pricing options for its Prime membership program. For example, students can get a discounted Prime membership, while families can get a Prime membership that allows up to six members to share the benefits.
- **Place:** Nike sells its products through a variety of channels, including its own retail stores, department stores, and online retailers. This allows Nike to reach a wide range of customers, regardless of where they prefer to shop.
- **Promotion:** Coca-Cola uses a variety of promotional channels to reach different segments of customers. For example, Coca-Cola uses television commercials and social media marketing to reach a general audience, while it uses targeted advertising to reach specific segments, such as millennials or parents.
- By customizing your marketing mix for each segment, you can increase the effectiveness of your marketing campaigns and reach more customers.

**Github Link: <https://github.com/NikhilEdiga/Internship.git>**