

Market Segmentation Analysis

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1: Market Segmentation – Strategic and Tactical Marketing

Overview:

The first chapter provides a foundational understanding of market segmentation and how it serves both strategic and tactical purposes in marketing. Strategic marketing focuses on choosing the right target market, while tactical marketing addresses how to approach this market through pricing, product placement, and promotions.

Key Concepts:

1. Strategic Marketing: Long-term focus on defining market segments and determining which to target.
2. Tactical Marketing: Execution of the marketing strategy through pricing, distribution, and communication.

Benefits of Segmentation:

1. Efficiency: Resources are more effectively utilized.
2. Personalization: Allows companies to cater products to specific customer needs.
3. Increased Profitability: Better targeting of high value segments leads to higher returns.

2: The Layers of Market Segmentation Analysis

Overview:

The second chapter introduces the layers of market segmentation. It highlights how segmentation isn't only about dividing customers into groups but also how to analyse these segments to deliver value.

Key Concepts:

1. Data Driven Market Segmentation: Using statistical methods to identify patterns in consumer data.
2. Managerial Relevance: Aligning the segments with business goals.

Approaches to Market Segmentation:

1. A Priori Segmentation: Segments are defined based on known criteria (e.g., age, income).
2. Post Hoc Segmentation: Segments are identified based on data analysis (e.g., clustering methods).

Chapter 3: Deciding to Segment (Step 1)

Overview:

The third chapter discusses the first step in market segmentation: deciding whether segmentation is appropriate. It focuses on the potential benefits and costs of committing to market segmentation.

Implications of Committing to Market Segmentation

Market segmentation is a powerful marketing approach used by many companies, but it's not always the right choice. Before diving in, understand that this strategy requires a long-term commitment and significant investment. Think of it as a serious relationship, not a casual date. There are costs involved in researching and understanding different segments of the market. You might need to create new products, adjust existing ones, change pricing, and even how you communicate with customers. These changes can impact how your company is structured internally.

To make segmentation work, consider organizing your company around market segments rather than just products. This way, you can focus better on the changing needs of different customer groups. Just remember, before you start, be sure the potential increase in sales is worth the effort. As Cahill (2006) puts it: Segmenting a market is not free. There are costs of performing the research, fielding surveys, and focus groups, designing multiple packages, and designing multiple advertisements and communication messages. Cahill recommends not to segment unless the expected increase in sales is sufficient to justify implementing a segmentation strategy.

Implementation Barriers

Barriers:

- Senior management
- Organizational culture
- Lack of training

Senior management

The first set of obstacles is about the top leaders in the company. When senior managers don't take the lead, show strong support, commit, or get involved in market segmentation, it can harm the process. As McDonald and Dunbar explained, if the head of the company doesn't recognize the need for segmenting the market, understand how it's done, or show real interest, then it's really hard for a senior marketing person to put the findings into action in a meaningful way. Senior managers can also be an obstacle for successful market segmentation by not providing enough resources. This could be at the start when you're analyzing the segments or in the long term when you're actually carrying out the segmentation strategy.

Organizational culture

Another set of obstacles comes from how the company works together. When there's not enough focus on understanding the market or the people who buy the products, when people resist trying new things or thinking creatively, when communication isn't good between different parts of the company, and when everyone is only thinking about shortterm gains, it can stop market segmentation from working well. Also, if the company's culture doesn't encourage adapting to changes or if there's too much office politics, it can get in the way of successful market segmentation.

Lack of training

Another potential problem is lack of training. If senior management and the team tasked with segmentation do not understand the very foundations of market segmentation, or if they are unaware of the consequences of pursuing such a strategy, the attempt of introducing market segmentation is likely to fail.

If a company doesn't have someone who knows marketing well, it can make market segmentation harder, especially if the company is big or deals with a lot of different markets. Also, not having someone skilled at managing and analyzing data can be a big problem. Sometimes, a company might have limits that get in the way, like not having enough money or not being able to change the way things are set up. Like Beane and Ennis said, when a company doesn't have many resources, it has to focus on the best opportunities.

There are also problems related to how things are done. For example, if the company doesn't have clear goals for market segmentation, doesn't plan things well, lacks organized processes to guide the team, doesn't assign responsibilities clearly, or has too little time to make good decisions, it can make market segmentation not work out as well as it could.

Sometimes, managers don't like using methods they don't understand. To fix this, make market segmentation easy to grasp and show results in a simple way, like using pictures. Most of the problems we talked about can be spotted early in a market study and fixed. But if they can't be fixed, it might be better to stop and think if market segmentation is right for the future. If you decide to go ahead, remember: You need a clear goal, dedication, patience, and be ready for problems. That's what McDonald and Dunbar suggest.

Step 1 Checklist

The checklist has tasks and questions. If the answers to these questions are not positive, it's like a red flag. For instance, if a company doesn't focus on what the market needs, even the best market segmentation analysis won't work well.

Tasks

- Ask if the organization's culture is market oriented. If yes, proceed. If no, seriously consider not to proceed.
- Ask if the organization is genuinely willing to change. If yes, proceed. If no, seriously consider not to proceed.
- Ask if the organization takes a long-term perspective. If yes, proceed. If no, seriously consider not to proceed.
- Ask if the organization is open to new ideas. If yes, proceed. If no, seriously consider not to proceed.
- Ask if communication across organizational units is good. If yes, proceed. If no, seriously consider not to proceed.
- Ask if the organization is in the position to make significant (structural) changes. If yes, proceed. If no, seriously consider not to proceed.
- Ask if the organization has sufficient financial resources to support a market segmentation strategy. If yes, proceed. If no, seriously consider not to proceed.
- Secure visible commitment to market segmentation from senior management.
- Secure active involvement of senior management in the market segmentation analysis.
- Secure required financial commitment from senior management.
- Ensure that the market segmentation concept is fully understood. If it is not: conduct training until the market segmentation concept is fully understood.
- Ensure that the implications of pursuing a market segmentation strategy are fully understood. If they are not: conduct training until the implications of pursuing a market segmentation strategy are fully understood.
- Put together a team of 23 people (segmentation team) to conduct the market segmentation analysis.
- Ensure that a marketing expert is on the team.
- Ensure that a data expert is on the team.
- Ensure that a data analysis expert is on the team.
- Set up an advisory committee representing all affected organizational units.
- Ensure that the objectives of the market segmentation analysis are clear.
- Develop a structured process to follow during market segmentation analysis.

- Assign responsibilities to segmentation team members using the structured process.
- Ensure that there is enough time to conduct the market segmentation analysis without time pressure.

Chapter 4: Specifying the Ideal Target Segment (Step 2)

Overview:

This chapter provides methods to identify the ideal target segment. Businesses must evaluate segments based on various criteria like profitability, accessibility, and alignment with the company's goals.

Segment Evaluation Criteria

The third step in market segmentation analysis relies mainly on input from users. It's important to know that for this analysis to help a company, user input can't just happen at the beginning or end. Users need to be involved throughout, alongside the technical work.

Once a company decides to explore segmentation (Step 1), it's important for the company to contribute a lot in Step 2. This contribution shapes many steps, especially Step 3 (collecting data) and Step 8 (choosing target segments). In Step 2, the company has to decide two groups of standards for evaluating segments. One group, called knockout criteria, has the must-have features a segment should have to be considered. The second group, called attractiveness criteria, helps decide how appealing the remaining segments are, based on the knockout criteria. The research doesn't really separate these two kinds of standards. Instead, it gives many options for evaluation standards, describing them in different ways.

We talk about these criteria in two groups because they're different. The shorter knockout criteria are super important. The segmentation team can't decide how much they matter; they're a must. The second group, attractiveness criteria, is longer and more varied. It's like a shopping list for the team. The team chooses which of these criteria they'll use to judge how good potential segments are. They also decide which criteria matter most. Knockout criteria remove some segments automatically, but attractiveness criteria are chosen by the team and used to decide how attractive each segment is in Step 8.

Knockout Criteria

Knockout criteria are used to check if market segments from the analysis can be looked at with attractiveness criteria. The first set of these criteria, suggested by Kotler (1994), includes substantiality, measurability, and accessibility.

More criteria have been suggested later, like: The segment should be alike (homogeneous). The segment should be different from other segments (distinct). It should be big enough. It should match the company's strengths. People in the segment should be easy to spot and reach. Senior managers, the team, and advisors need to understand knockout criteria. Most are clear, but some, like size, need specific details.

Attractiveness Criteria

Apart from the knockout criteria, above step offers a wide range of segment attractiveness criteria. The segmentation team can pick which criteria work best for their situation. These attractiveness criteria aren't just yes or no. Segments aren't judged as meeting or not meeting them. Instead, each segment gets a rating – it can be more or less attractive for a specific criterion. All these ratings together help decide if a segment becomes a target in Step 8 of the analysis.

Implementing a Structured Process

In market segmentation, using a structured process is agreed to be helpful (Lilien and Rangaswamy 2003; McDonald and Dunbar 2012). A common method to pick target segments is with a "segment evaluation plot" (Lilien and Rangaswamy 2003; McDonald and Dunbar 2012). It shows how appealing a segment is and how well the company can compete. The team decides the values for attractiveness and competitiveness because there's no universal list. Important factors for attractiveness and competitiveness are chosen from many options. Around six key factors are suggested by McDonald and Dunbar (2012).

A team with reps from different parts of the company should manage this (McDonald and Dunbar 1995; Karlsson 2015). If a smaller team leads, they propose initial criteria and talk with the advisory committee (representing all parts of the company). This matters because each unit has a viewpoint and will be affected by the strategy. The segment plot isn't done in Step 2 as no segments are there yet. But picking attractiveness criteria early helps. It ensures all important info is collected in Step 3. This makes picking a target segment in Step 8 easier as the groundwork is done beforehand.

By the end of this step, the team should have about six attractiveness criteria, each with a weight to show importance. A common way (Lilien and Rangaswamy 2003; McDonald and Dunbar 2012) is asking team members to divide 100 points among the criteria. This is discussed and agreed upon. It's good to get approval from the advisory committee, which has different parts of the company and various viewpoints.

Step 2 Checklist

- Convene a segmentation team meeting.
- Discuss and agree on the knockout criteria of homogeneity, distinctness, size, match, identifiability and reachability. These knockout criteria will lead to the automatic elimination of market segments which do not comply (in Step 8 at the latest).
- Present the knockout criteria to the advisory committee for discussion and (if required) adjustment.
- Individually study available criteria for the assessment of market segment attractiveness.
- Discuss the criteria with the other segmentation team members and agree on a subset of no more than six criteria.
- Individually distribute 100 points across the segment attractiveness criteria you have agreed upon with the segmentation team. Distribute them in a way that reflects the relative importance of each attractiveness criterion.
- Discuss weightings with other segmentation team members and agree on a weighting.
- Present the selected segment attractiveness criteria and the proposed weights assigned to each of them to the advisory committee for discussion and (if required) adjustment.

Chapter 5: Collecting Data (Step 3)

Overview:

The fifth chapter emphasizes the importance of data collection in market segmentation. It highlights various data collection techniques, including surveys, internal data, and experimental methods.

Segmentation Variables

Empirical data is the foundation of both commonsense and data driven market segmentation. It's used to identify or create market segments and describe them in detail later in the process.

In commonsense segmentation, a single characteristic like gender is used as the "segmentation variable" to split the sample into segments. Other traits like age, vacation habits, and benefits sought are "descriptor variables" used to describe these segments. In data driven segmentation, multiple segmentation variables are used to naturally or artificially create useful market segments. For instance, tourists who share common vacation benefits might form a segment. Quality empirical data is crucial in both cases for accurate segment assignment and description.

Good market segmentation needs reliable data. This data can come from surveys, scanner records, loyalty programs, or experiments. Surveys are common but might not always reflect actual behaviour. So, exploring various data sources is important. The source that closely mirrors real consumer behaviour is preferred.

Segmentation Criteria

Before extracting segments or collecting data, organizations face a crucial choice: selecting a segmentation criterion. This criterion, broader than a segmentation variable, shapes the nature of information for market segmentation. Common criteria encompass geographic, sociodemographic, psychographic, and behavioural aspects. This decision demands market knowledge and can't be easily outsourced to consultants or analysts.

Key distinctions between consumers, such as profitability, bargaining power, preferences, barriers, and interaction effects, are vital for market segmentation. The array of available criteria poses the question: which is best? While guidance on the optimal choice is limited, experts suggest favouring simplicity. If demographic or geographic segmentation fits your product, go for it – being more sophisticated doesn't always mean better. The bottom line is choosing what effectively serves your product or service at the lowest cost.

Geographic Segmentation

Geographic information stands as one of the earliest and foundational segmentation criteria used in market segmentation (Lewis et al. 1995; Tynan and Drayton 1987). This approach often employs a consumer's location of residence as the sole criterion to create market segments. While straightforward, it is well-suited for specific cases. For instance, when attracting tourists from neighbouring countries, language differences become a practical reason to treat visitors from various countries as distinct segments. Global companies like Amazon and IKEA tailor their offerings based on customers' geographic locations.

The advantage of geographic segmentation lies in easy consumer assignment to geographic units, aiding precise targeting of communication and channel selection. However, a drawback is that shared location doesn't necessarily imply shared product preferences or other relevant characteristics. For instance, people in the same area may have differing ideal vacations, with factors like sociodemographic playing a more significant role. Despite its limitations, geographic information has experienced a resurgence in international market segmentation studies, though challenges arise in making the segmentation variable meaningful across diverse regions and cultures.

An example of this international approach is Haverila's (2013) study, segmenting young mobile phone users across national borders, highlighting the evolving role of geographic factors in modern market segmentation.

Sociodemographic Segmentation

Sociodemographic segmentation criteria encompass characteristics like age, gender, income, and education. These criteria prove valuable in certain industries, such as luxury goods linked to high income, cosmetics associated with gender, and retirement villages aligned with age. For instance, family-oriented products like baby items or tourism resort offerings can leverage gender and age distinctions for effective segmentation. Similar to geographic segmentation, sociodemographic criteria enable easy consumer grouping, and sometimes, they offer insights into specific product preferences stemming from these attributes, like family-oriented vacation choices.

However, while sociodemographic can explain some consumer behaviours, they often fall short in fully explaining product preferences. Haley (1985) suggests that demographics account for just around 5% of the variance in consumer behaviour. Yankelovich and Meer (2006) go further, indicating that sociodemographic may not be the strongest basis for segmentation. Instead, factors like values, tastes, and preferences hold greater influence over consumers' buying decisions, indicating the need to consider deeper psychological and behavioural drivers for effective market segmentation strategies.

Psychographic Segmentation

Psychographic segmentation groups people based on psychological aspects like beliefs, interests, preferences, and the benefits they seek when buying a product. Psychographics encompass a range of mental factors, with benefit segmentation and lifestyle segmentation being popular types. Unlike simpler criteria like geography or demographics, psychographics is more intricate, often requiring multiple variables to capture aspects such as travel motives or perceived risks. This approach delves deeper into why people behave differently, like travellers seeking cultural experiences being drawn to destinations rich in cultural treasures. While psychographics provides richer insights into consumer behaviour, determining segment membership can be more complex, and their effectiveness relies on the accuracy of measures used to capture these psychological dimensions.

Behavioural Segmentation

Another way to create segments is by looking at similarities in behaviour or actions. This can include things like past product experience, how often someone buys, how much they spend, and how they search for information. Using real behaviour as the basis for segmentation can be advantageous because it focuses on what's most important. For instance, studies have found that behaviours reported by tourists work better than where they come from. This method uses what people actually do instead of just what they say they'll do. However, getting behavioural data isn't always easy, especially if you want to include potential customers who haven't bought from you before.

Data from Survey Studies:

Surveys are a common and cost-effective way to collect data for market segmentation. They involve asking a set of questions to a sample of individuals to gather insights into their characteristics, preferences, behaviours, and opinions. This information is then used to create segments. Within this category, there are several key considerations.

Choice of Variables:

When designing a survey, it's important to choose the right variables or characteristics to study. These variables should be relevant to the segmentation goals, such as demographic details (age, gender, income), psychographic traits (attitudes, lifestyle), and behavioural patterns (purchase frequency, brand loyalty).

Response Options:

Surveys present respondents with response options, such as multiple choice answers or rating scales. The design of these options can impact the accuracy and usefulness of the collected data. Careful consideration should be given to ensure that response options accurately capture respondents' perspectives.

Response Styles:

People may have different ways of responding to survey questions, influenced by factors like cultural norms or the desire to present oneself in a certain way. These response styles can introduce biases in the data, so it's important to be aware of potential response biases and account for them during analysis.

Sample Size:

The number of respondents in a survey, known as the sample size, should be large enough to provide statistically significant results. The sample should also be representative of the target population to ensure the findings can be generalized.

Data from Internal Sources:

Internal data sources refer to data that an organization already possesses, such as customer databases, sales records, and transaction histories. This data can provide insights into past consumer behaviour, purchase patterns, and interactions with the company. Utilizing internal data can be advantageous as it reflects real customer interactions.

Data from Experimental Studies:

Experimental studies involve manipulating certain variables to observe their impact on consumer behaviour. These studies provide insights into cause-and-effect relationships. For example, a company might test different marketing strategies to see how they influence customer preferences and buying decisions.

Step 3 Checklist:

- Convene a market segmentation team meeting.
- Discuss which consumer characteristics could serve as promising segmentation variables. These variables will be used to extract groups of consumers from the data.
- Discuss which other consumer characteristics are required to develop a good understanding of market segments. These variables will later be used to describe the segments in detail.
- Determine how you can collect data to most validly capture both the segmentation variables and the descriptor variables.
- Design data collection carefully to keep data contamination through biases and other sources of systematic error to a minimum.
- Collect data.

Chapter 6: Exploring Data (Step 4)

Overview:

This chapter introduces Exploratory Data Analysis (EDA) to clean and analyse the data before performing segmentation. Techniques such as descriptive statistics and preprocessing are discussed.

A First Glimpse at the Data:

At the outset, it's crucial to get an initial overview of the collected data. This involves examining the data's structure, format, and content. Preliminary observations help identify potential issues, such as missing values, outliers, or inconsistencies, which may require further investigation and cleaning.

Data Cleaning:

Data cleaning is a critical step to ensure the accuracy and reliability of the data. This process involves identifying and addressing errors, inconsistencies, and missing values. Data cleaning may include imputing missing values, correcting inaccuracies, and standardizing formats. Clean data is essential for accurate analysis and reliable segmentation outcomes.

Descriptive Analysis:

Descriptive analysis involves summarizing and visualizing the data to gain insights into its distribution and characteristics. This step helps identify patterns, trends, and relationships among variables. Techniques such as histograms, bar charts, and scatter plots can provide a clearer understanding of the data's nature.

Pre-processing:

Preprocessing prepares the data for more advanced analysis techniques. This step includes transforming and scaling the data to make it suitable for segmentation methods. Two main aspects of preprocessing are:

Categorical Variables:

Categorical variables represent discrete categories or groups. To use them effectively, they may need to be converted into a suitable format. This could involve techniques like onehot encoding, where each category becomes a separate binary column, or ordinal encoding, which assigns numerical values based on the order of categories.

Numeric Variables:

Numeric variables may require normalization or standardization to bring them to a common scale. Normalization adjusts the values to a specified range, while standardization scales the values to have a mean of zero and a standard deviation of one. This ensures that variables with different scales do not disproportionately influence segmentation outcomes.

Principal Components Analysis (PCA):

PCA is a dimensionality reduction technique used to simplify complex data sets by transforming them into a smaller set of uncorrelated variables called principal components. This reduces the number of variables while retaining as much meaningful information as possible. PCA can help reveal underlying patterns and relationships within the data.

Step 4 Checklist:

- Explore the data to determine if there are any inconsistencies and if there are any systematic contaminations.
- If necessary, clean the data.
- If necessary, preprocess the data.
- Check if the number of segmentation variables is too high given the available sample size. You should have information from a minimum of 100 consumers for each segmentation variable.
- If you have too many segmentation variables, use one of the available approaches to select a subset.
- Check if the segmentation variables are correlated. If they are, choose a subset of uncorrelated segmentation variables.
- Pass on the cleaned and pre-processed data to Step 5 where segments will be extracted from it.

Chapter 7: Extracting Segments (Step 5)

Overview:

The seventh chapter covers segment extraction, which involves applying statistical methods like clustering or finite mixture models to divide consumers into homogeneous groups. Segment extraction is a crucial step in marketing and data analytics, where we aim to divide consumers into homogeneous groups based on similarities in their behaviour, preferences, or characteristics. This step typically uses statistical techniques to identify meaningful segments in the data, which can then be targeted with tailored marketing strategies or products. Let's delve into the key concepts mentioned:

1. Distance-based Methods

Distance-based methods are unsupervised learning techniques that group data points (e.g., consumers) based on their proximity to each other in feature space. These methods are particularly useful when the goal is to group consumers with similar characteristics. The most common distance-based methods include:

a. KMeans Clustering

Kmeans clustering is one of the simplest and most widely used clustering algorithms. It divides the data into K clusters based on minimizing the within cluster sum of squares. The process involves:

- Initializing K centroids (randomly or by other means).
- Assigning each data point to the nearest centroid, creating K clusters.
- Recalculating the centroid for each cluster by taking the mean of all points in that cluster.
- Repeating the assignment and recalculation steps until the centroids converge (i.e., no more significant movement).

b. Hierarchical Clustering

Hierarchical clustering builds a hierarchy of clusters using either a bottom up (agglomerative) or top down (divisive) approach.

In agglomerative clustering, each data point starts as its own cluster, and pairs of clusters are merged iteratively based on their similarity until one large cluster is formed.

Divisive clustering, on the other hand, starts with one large cluster and splits it iteratively into smaller clusters.

Both methods rely on a distance metric (such as Euclidean distance, Manhattan distance, etc.) to measure similarity between data points, which can influence the quality of the clusters.

2. Model Based Methods

Model based methods use probabilistic models to find segments in the data. Unlike distance-based methods, which rely on direct calculations of distance between data points, model-based methods assume that the data is generated by an underlying statistical model, and each segment (or cluster) represents a distinct statistical distribution.

a. Finite Mixture Models

Finite mixture models (FMMs) are a common approach to model-based segmentation. These models assume that the population is made up of a finite number of subpopulations (segments), each of which can be represented by a different probability distribution. The objective is to identify the most likely distribution for each data point, effectively assigning them to a segment.

A popular form of FMM is the Gaussian Mixture Model (GMM), where each segment is assumed to follow a Gaussian (normal) distribution. The parameters of the model (means, variances, and mixing proportions) are estimated using methods like the Expectation Maximization (EM) algorithm.

b. Latent Class Analysis (LCA)

Latent Class Analysis is another model-based approach, where the goal is to identify latent (unobserved) classes or segments that explain the observed data. LCA is particularly useful for categorical data, where the objective is to group individuals who exhibit similar patterns of responses to survey questions or other categorical variables.

Step 5 Checklist

- Pre-select the extraction methods that can be used given the properties of your data.
- Use those suitable extraction methods to group consumers.
- Conduct global stability analyses and segment level stability analyses in search of promising segmentation solutions and promising segments.
- Select from all available solutions a set of market segments which seem to be promising in terms of segment-level stability.
- Assess those remaining segments using the knock-out criteria you have defined in Step 2.
- Pass on the remaining set of market segments to Step 6 for detailed profiling.