Market Segmentation Analysis

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Steps

Step 1: Deciding (not) to Segment

1.1 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.

1.2 Implementation Barriers

Barriers:

- Senior management
- Organizational culture
- Lack of training

1.2.1. 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.

1.2.2. 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 short-term 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.

1.2.3. 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.

1.3 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 2-3 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.

Step 2: Specifying the Ideal Target Segment

2.1 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 knock-out 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 knock-out 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 knock-out 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. Knock-out 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.

2.2. Knock-Out Criteria

Knock-out 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 knock-out criteria. Most are clear, but some, like size, need specific details.

2.3. Attractiveness Criteria

Apart from the knock-out 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.

2.4. 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.

2.5. Step 2 Checklist

- Convene a segmentation team meeting.
- Discuss and agree on the knock-out criteria of homogeneity, distinctness, size, match, identifiability and reachability. These knock-out criteria will lead to the automatic elimination of market segments which do not comply (in Step 8 at the latest).
- Present the knock-out 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.

Step 3: Collecting Data

3.1. 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 behavior. So, exploring various data sources is important. The source that closely mirrors real consumer behavior is preferred.

3.2. 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, socio-demographic, psychographic, and behavioral 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 favoring 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.

3.2.1. 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 neighboring 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 socio-demographics 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.

3.2.2. Socio-Demographic Segmentation

Socio-demographic 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, socio-demographic 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 socio-demographics can explain some consumer behaviors, they often fall short in fully explaining product preferences. Haley (1985) suggests that demographics account for just around 5% of the variance in consumer behavior. Yankelovich and Meer (2006) go further, indicating that socio-demographics 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 behavioral drivers for effective market segmentation strategies.

3.2.3. 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 travelers seeking cultural experiences being drawn to destinations rich in cultural treasures. While psychographics provides richer insights into consumer behavior, determining segment membership can be more complex, and their effectiveness relies on the accuracy of measures used to capture these psychological dimensions.

3.2.4. Behavioral Segmentation

Another way to create segments is by looking at similarities in behavior 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 behavior as the basis for segmentation can be advantageous because it focuses on what's most important. For instance, studies have found that behaviors 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 behavioral data isn't always easy, especially if you want to include potential customers who haven't bought from you before.

3.3 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, behaviors, and opinions. This information is then used to create segments. Within this category, there are several key considerations:

3.3.1 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 behavioral patterns (purchase frequency, brand loyalty).

3.3.2 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.

3.3.3 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.

3.3.4 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.

3.4 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 behavior, purchase patterns, and interactions with the company. Utilizing internal data can be advantageous as it reflects real customer interactions.

3.5 Data from Experimental Studies:

Experimental studies involve manipulating certain variables to observe their impact on consumer behavior. 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.

3.6 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.

Step 4: Exploring Data

In Step 4 of the market segmentation process, the focus shifts to exploring and understanding the collected data before proceeding to segment formation. This phase involves various techniques and analyses to make the data more manageable, meaningful, and suitable for subsequent segmentation tasks. Let's delve into the details of each sub-section:

4.1 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.

4.2 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.

4.3 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.

4.4 Pre-Processing:

Pre-processing 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 pre-processing are:

4.4.1 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 one-hot encoding, where each category becomes a separate binary column, or ordinal encoding, which assigns numerical values based on the order of categories.

4.4.2 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.

4.5 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.

4.6 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, pre-process 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.

Step 7: Describing Segments

1. Segment Profiling and Description: This step involves understanding market segments by profiling and describing them using chosen segmentation variables. It emphasizes the importance of using descriptive statistics and visualizations to make segment descriptions more user-friendly.

2. Visualizations for Descriptor Variables: The focus here is on employing visualizations like charts to represent differences in descriptor variables within market segments. It discusses approaches for nominal/ordinal variables and metric variables, providing practical methods using R packages like lattice and ggplot2.

3. Metric Descriptor Variables: The summary explores visualizing market segment differences based on metric descriptor variables, particularly emphasizing age distribution and other metrics using R packages.

4. Testing Segment Differences: Statistical tests like chi-squared test, ANOVA, and pairwise t-tests are crucial for formally assessing differences in descriptor variables among market segments. These tests provide quantitative evidence of variation and aid in understanding segment characteristics.

5. Predicting Segments: Regression models, including linear regression and GLMs, are discussed for predicting segment membership from descriptor variables. Understanding these models is essential for targeted marketing strategies and decision-making processes.

6. Binary Logistic Regression: This technique models and predicts binary outcomes based on predictor variables, highlighting model fitting, interpretation, assessment, and visualization using R functionalities.

7. Multinomial Logistic Regression: Extending binary logistic regression, this method handles categorical outcomes with multiple levels. It covers model fitting, interpretation, assessment, and predictive performance evaluation using R functions.

Overall, these methods provide a comprehensive toolkit for understanding, describing, and predicting market segments based on various descriptor variables, aiding businesses in targeted marketing and decision-making.

Step 8: Selecting the Target Segment(s)

- Step 8 in market segmentation involves selecting target segments for focused marketing efforts.

- This decision significantly impacts an organization's future performance.

- It follows global market segmentation, profiling, and description of segments.

- Initial focus is on ensuring remaining segments meet established knock-out criteria.

- Evaluation includes assessing segment attractiveness and organizational competitiveness.

- Decision matrices are often used for visualizing these evaluations.

- Criteria for attractiveness and competitiveness are weighted and rated for each segment.

- Values are plotted on a segment evaluation plot, with bubble size representing additional criteria.

- The plot guides preliminary selection of target segments.

- Compatibility among selected segments is ensured, especially if targeting multiple segments.

- Selected segments are presented to the advisory committee for discussion and potential reconsideration.

- Step 8 lays the foundation for the organization's future market performance.