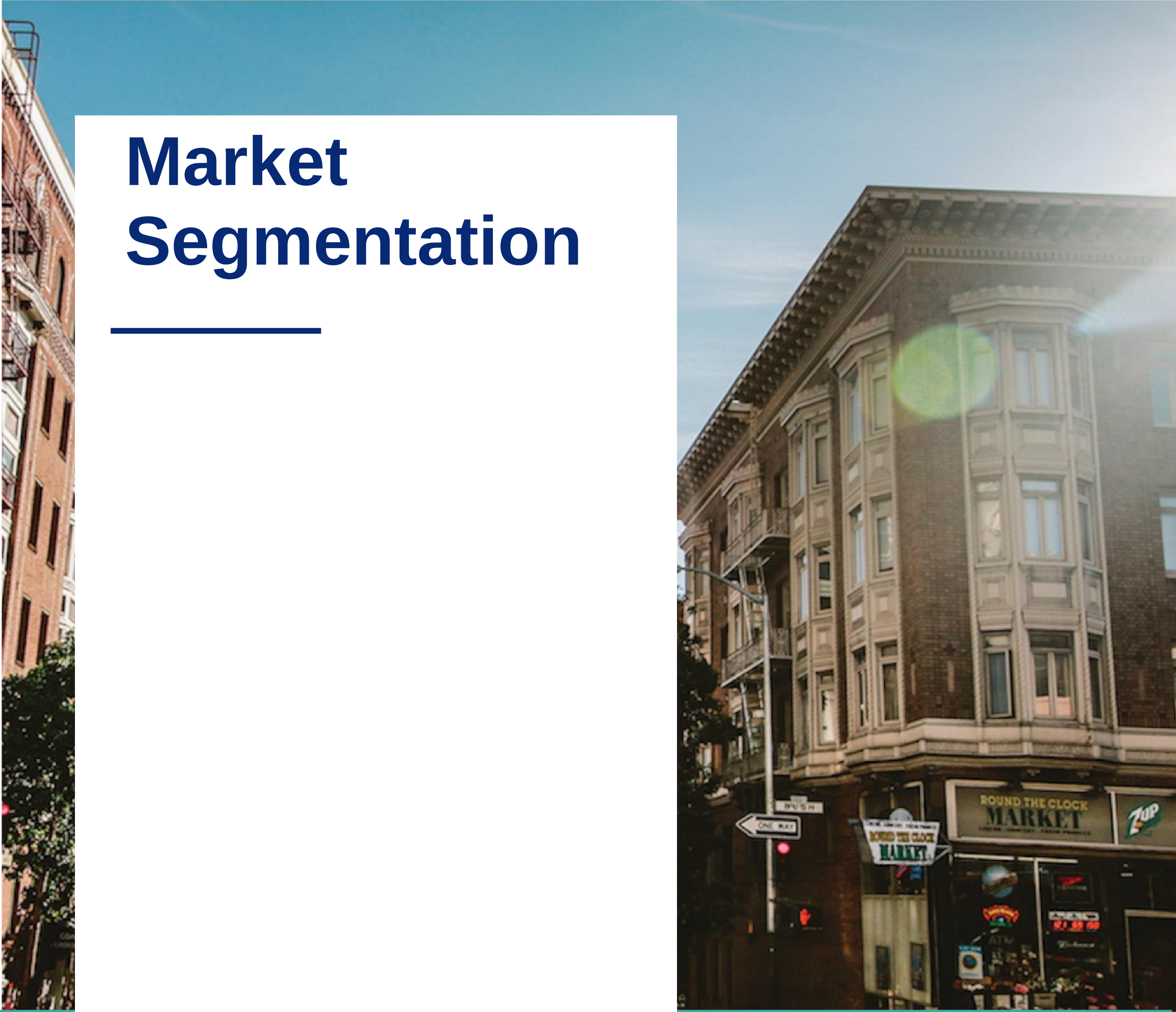

Market Segmentation

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Market Segmentation

Definition

Market segmentation involves dividing a broad market into distinct groups based on specific characteristics, needs, or behaviors. Machine learning, a subfield of artificial intelligence, can significantly impact market segmentation. Machine learning algorithms can analyze large amounts of customer data, uncover patterns, and identify variables that contribute to effective segmentation. They can perform cluster analysis to group customers into segments based on similarities. Predictive modeling techniques can forecast customer behavior and preferences, allowing for personalized marketing approaches. Machine learning models continuously adapt to new data, enabling businesses to adjust segmentation strategies based on evolving market conditions. By leveraging machine learning, businesses can gain deeper insights into target customers, develop targeted marketing strategies, and optimize their segmentation efforts. This enhances accuracy, efficiency, and effectiveness in reaching and satisfying customer needs, ultimately improving business outcomes.

Benefits

1. Market segmentation prompts self-reflection and future planning, helping organizations evaluate their strengths, weaknesses, and goals in relation to competitors and consumer preferences.
2. Effective market segmentation enhances understanding of consumers by identifying distinct segments with unique characteristics, needs, preferences, and behaviors.
3. Market segmentation enables organizations to align their strengths and capabilities with the specific needs of different consumer segments, resulting in improved customer satisfaction and loyalty.
4. Successful market segmentation can lead to a sustained competitive advantage by specializing in catering to the needs of a specific target segment, establishing market dominance, and creating barriers for competitors.

5. Leveraging market segmentation effectively enhances an organization's market position, profitability, and overall success by tailoring products, services, and marketing messages to different segments, improving customer engagement and driving business growth.

Cost of Market Segmentation

Market segmentation incurs costs related to data collection and analysis, data management and technology, expertise and research, implementation of marketing campaigns, and ongoing monitoring and evaluation. These costs vary depending on the complexity of the segmentation approach, data availability, and required resources. However, market segmentation is considered an investment that yields significant returns by improving customer targeting, enhancing marketing effectiveness, and driving business growth. The benefits derived from effective segmentation typically outweigh the associated costs in the long term.

Step 1: Deciding(not) to segment

1.1 Implications of committing to market Segmentation

Market segmentation has become a prominent marketing strategy adopted by many organizations. However, it is essential to recognize that pursuing a market segmentation strategy is not always the best decision. Before investing resources in market segmentation, it is crucial to understand the implications involved.

One key implication is the long-term commitment required from the organization. Market segmentation is not a short-term endeavor but rather a long-term commitment. This commitment necessitates the willingness and ability of the organization to make significant changes and investments. Undertaking market segmentation incurs costs such as research, surveys, designing multiple packages and advertisements, and modifying products. Therefore, the expected increase in sales must sufficiently justify the expenses associated with implementing a segmentation strategy.

Implementing market segmentation may also require organizational changes. This includes developing new products, modifying existing products, adjusting pricing and distribution channels, and adapting communication strategies. The internal structure of the organization may need to be reconfigured to align with market segments rather than products. Organizational units focused on specific segments, such as strategic business units, ensure ongoing attention to the evolving needs of market segments.

Due to the significant implications and long-term commitment involved, the decision to explore a market segmentation strategy should be made at the highest executive level. It should be systematically communicated and reinforced across all organizational levels and units. This ensures a consistent understanding and commitment to the segmentation strategy throughout the organization.

In summary, market segmentation requires a long-term commitment, substantial investments, potential organizational changes, and a decision-making process at the highest executive level. These factors must be carefully considered and communicated to ensure the successful implementation and realization of the benefits of market segmentation.

1.2 Implementation Barriers

Barriers to successful market segmentation can be summarized as follows:

1. Lack of Senior Management Involvement: When senior leadership lacks leadership, proactive championing, commitment, and involvement in the market segmentation process, it undermines the success of segmentation.

2. Lack of Training: If senior management and the segmentation team do not have a solid understanding of market segmentation principles and its implications, the introduction of segmentation is likely to fail.

3. Absence of a Formal Marketing Function: Organizations without a formal marketing function or a qualified marketing expert face challenges in implementing market segmentation effectively. A high degree of formalization is particularly important for organizations with diverse markets and larger operations.

These barriers highlight the importance of strong leadership, training, and expertise in market segmentation. Senior management involvement, understanding of segmentation principles, and a formal marketing function contribute to the successful implementation of segmentation strategies. Overcoming these barriers can significantly enhance the effectiveness and impact of market segmentation initiatives.

Step 1 checklist

Ask if the organisation's culture is market-oriented. If yes, proceed. If no, seriously consider not to proceed.		
Ask if the organisation is genuinely willing to change. If yes, proceed.If no, seriously consider not to proceed.		
Ask if the organisation takes a long-term perspective. If yes, proceed.If no, seriously consider not to proceed.		
Ask if the organisation is open to new ideas. If yes, proceed. If no, seriously consider not to proceed.		
Ask if communication across organisational units is good. If yes, proceed. If no, seriously consider not to proceed.		
Ask if the organisation is in the position to make significant (structural) changes. If yes, proceed. If no, seriously consider not toproceed.		
Ask if the organisation 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 itis not: conduct training until the market segmentation concept is fully understood.		
zEnsure that the implications of pursuing a market segmentation strategy are fully understood. If they are not: conduct training until theimplications of pursuing a market segmentation strategy are fully understood.		
Put together a team of 2-3 people (segmentation team) to conductthe 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 organisational 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

Segment Evaluation Criteria:
1. Size
   - Assess the number of potential customers or market potential in terms of revenue.
2. Growth Potential
   - Evaluate the future growth rate and potential increase in customer demand.
3. Profitability
   - Consider factors such as profit margins, pricing dynamics, and cost structures.
4. Accessibility
   - Evaluate the ease of reaching and accessing the target segment.
5. Compatibility with Organizational Capabilities
   - Assess whether the organization has the necessary resources, expertise, and alignment with segment needs.
6. Competitive Intensity
   - Examine the level of competition within the segment.
7. Segment Stability
   - Assess the stability of the segment over time.
8. Differentiation Potential
   - Evaluate the potential for differentiation and unique positioning within the segment.
9. Sustainability
   - Consider the long-term viability and relevance of the segment.
10. Alignment with Business Strategy
   - Evaluate the extent to which the segment aligns with the organization's overall strategy and objectives.

By considering these criteria, organizations can prioritize and select target segments that offer the greatest potential for success, align with their strategic goals, and ensure efficient resource allocation in market segmentation.

2.2 Knock-out criteria

Knockout criteria are specific factors or conditions that, if not met, would eliminate a segment from being considered as an ideal target for market segmentation. These criteria help narrow down the options and focus on segments that are most likely to yield positive results. Here are some common knockout criteria in specifying the ideal target for market segmentation:

1. Size Insufficiency: If a segment is too small in terms of the number of potential customers or market potential, it may not justify the investment of resources and efforts.

2. Lack of Growth Potential: If a segment lacks growth potential or shows a declining trend, it may not offer long-term opportunities for business expansion and sustainability.

3. Limited Profitability: If a segment does not offer sufficient profitability in terms of profit margins, pricing dynamics, or cost structures, it may not be financially viable to target.

4. Inaccessibility: If a segment is difficult to reach or access due to geographical constraints, lack of appropriate distribution channels, or communication barriers, it may not be feasible to effectively target and serve that segment.

5. Incompatibility with Organizational Capabilities: If an organization lacks the necessary resources, expertise, or alignment with the needs and preferences of a segment, it may not be able to effectively meet the demands of that segment.

6. Intense Competition: If a segment is highly competitive and dominated by strong competitors, it may be challenging for an organization to gain a competitive advantage and achieve success within that segment.

7. Unstable Segment: If a segment exhibits high volatility, frequent changes in customer behavior, or unpredictable market dynamics, it may be risky to target that segment for long-term business stability.

8. Lack of Differentiation Potential: If a segment does not allow for effective differentiation or unique positioning, it may be difficult for an organization to stand out and create a compelling value proposition within that segment.

By applying knockout criteria, organizations can eliminate segments that do not meet these specific criteria and focus their efforts on segments that offer the best potential for success and alignment with their business objectives in market segmentation.

- Homogeneity: The segment must consist of members who are similar to each other in terms of their needs, preferences, and characteristics.
- Distinctiveness: The segment should be clearly differentiated from other segments, with identifiable boundaries.
- Adequate Size: The segment should have a sufficient number of consumers to justify investing resources in customizing the marketing mix.
- Alignment with Organizational Strengths: The organization should possess the capabilities to effectively satisfy the needs of segment members.
- Identifiability: The members of the segment should be easily recognizable in the marketplace.
- Reachability: There should be accessible means to connect and engage with the segment members.
- Understanding Knockout Criteria: Senior management, the segmentation team, and the advisory committee should comprehend these criteria.
- Minimum Viable Target Segment Size: The exact size of the target segment needs to be specified, as it is a non-negotiable factor.
- Successful Prioritization: Evaluating these criteria helps identify segments with the highest potential for successful market segmentation outcomes.

2.3 Attractiveness Criteria

Attractiveness criteria in market segmentation refer to the factors used to evaluate and determine the desirability of a segment for targeting and allocation of resources. These criteria help organizations identify segments that offer the greatest potential for profitability and success. Here are some common attractiveness criteria in market segmentation:

1. Market Size and Growth: The segment should have a significant market size and exhibit growth potential to ensure sufficient market opportunities and future profitability.

2. Profitability: The segment should be financially lucrative, with the potential to generate favorable profit margins and returns on investment.

3. Competitive Intensity: The level of competition within the segment should be manageable, allowing the organization to effectively differentiate and gain a competitive advantage.

4. Customer Needs and Preferences: The segment should have distinct and well-defined needs and preferences that can be effectively addressed by the organization's products or services.

5. Compatibility with Organizational Capabilities: The organization should have the necessary resources, expertise, and capabilities to meet the specific needs of the segment and deliver superior value.

6. Accessibility and Reachability: The segment should be easily reachable and accessible through appropriate distribution channels, marketing channels, and communication methods.

7. Fit with Brand Image and Positioning: The segment should align with the organization's brand image, values, and positioning strategy to ensure consistency and effectiveness in marketing efforts.

8. Potential for Long-Term Relationship: The segment should demonstrate the potential for building long-term customer relationships, repeat purchases, and loyalty.

By considering these attractiveness criteria, organizations can evaluate different segments and prioritize their efforts on segments that offer the greatest potential for success and profitability in market segmentation.
Attractiveness criteria are not binary in nature. Segments are not assessed as either complying or not complying with attractiveness criteria. Rather, each market segment is rated; it can be more or less attractive with respect to a specific criterion. The attractiveness across all criteria determines whether a market segment is selected as a target segment in Step 8 of market segmentation analysis.

2.4 Implementing a Structured Process

The literature emphasizes the importance of following a structured process for evaluating market segments. The use of a segment evaluation plot is a popular approach, with one axis representing segment attractiveness and the other representing organizational competitiveness. The values for these factors are determined by the segmentation team, and it is necessary to negotiate and agree upon the criteria that constitute both segment attractiveness and organizational competitiveness.

To ensure a comprehensive evaluation, a wide range of criteria should be investigated, and the team should aim to select no more than six factors as the basis for calculating these criteria. The involvement of representatives from different organizational units is crucial, as they bring diverse perspectives and will be affected by the segmentation strategy. This collaborative approach helps capture all relevant information and ensures the buy-in of key stakeholders.

Although the segment evaluation plot cannot be completed in the early stages of the analysis when no segments are available, selecting the attractiveness criteria at this point is beneficial. It guides the data collection process and facilitates the selection of a target segment later on.

By the end of this step, the market segmentation team should have approximately six segment attractiveness criteria, each with a weight indicating its importance relative to the others. The typical approach to weighting involves team members distributing 100 points across the criteria and negotiating until agreement is reached. Seeking approval from the advisory committee, which represents various organizational units and perspectives, further enhances the specification of segment attractiveness criteria.

Step 2 checklist

Task	who is responsible	completed?
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 essential in both commonsense and data-driven market segmentation approaches. It is used to identify or create market segments and provide detailed segment descriptions. In commonsense segmentation, a single characteristic, known as the segmentation variable (e.g., gender), is used to split the sample into segments, while other variables serve as descriptors for segment profiling. Data-driven segmentation, on the other hand, utilizes multiple variables to identify or create relevant market segments. These variables serve as the starting point for segment identification and allow for a more comprehensive understanding of the market. Descriptor variables, including socio-demographics and consumer behavior, help marketers tailor their strategies to specific segment needs. Overall, empirical data plays a crucial role in segment identification, description, and the development of targeted marketing approaches.

Gender as a possible segmentation variable in commonsense market segmentation

Sociodemographic		Travel behavior	Benefits sought				
gender	age	Nº of vacations	relaxation	action	culture	explore	meet people
Female	34	2	1	0	1	0	1
Female	55	3	1	0	1	0	1
Female	68	1	0	1	1	0	0
Female	34	1	0	0	1	0	0
Female	22	0	1	0	1	1	1
Female	31	3	1	0	1	1	1
Male	87	2	1	0	1	0	1
Male	55	4	0	1	0	1	1
Male	43	0	0	1	0	1	0
Male	23	0	0	1	1	0	1
Male	19	3	0	1	1	0	1
Male	64	4	0	0	0	0	0

Segmentation variable

descriptor variables

Segmentation variables in data-driven market segmentation

Sociodemographic Travel behavior Benefits sought

3.2 Segmentation criteria

3.2.1 Geographic Segmentation

gender	age	Nº of vacations	relaxation	action	culture	explore	meet people
Female	34	2	1	0	1	0	1
Female	55	3	1	0	1	0	1
Male	87	2	1	0	1	0	1
Female	68	1	0	1	1	0	0
Female	34	1	0	0	1	0	0
Female	22	0	1	0	1	1	1
Female	31	3	1	0	1	1	1
Male	55	4	0	1	0	1	1
Male	43	0	0	1	0	1	0
Male	23	0	0	1	1	0	1
Male	19	3	0	1	1	0	1
Male	64	4	0	0	0	0	0
descriptor variables				segmentation variables			

Geographic segmentation is a widely used criteria in market segmentation. It involves dividing a market based on geographic variables such as location, region, climate, population density, or urban/rural classification. This segmentation approach recognizes that consumers' needs, preferences, and behaviors can vary depending on their geographic location.

The benefits of geographic segmentation include:

1. Targeting specific regions: Businesses can tailor their marketing efforts to specific geographic areas, focusing on the needs and preferences of consumers in those regions. This allows for more efficient allocation of resources and a better understanding of local market dynamics.

2. Adapting to local preferences: Geographic segmentation enables businesses to customize their products, services, and marketing messages to suit the unique preferences and cultural nuances of different geographic regions. This increases the relevance and effectiveness of their marketing efforts.

3. Addressing local market conditions: By considering geographic factors such as climate, population density, or urban/rural classification, businesses can adapt their strategies to meet the specific challenges and opportunities presented by different regions. This includes adjusting pricing, distribution channels, and product offerings accordingly.

4. Expanding into new markets: Geographic segmentation can help businesses identify untapped market opportunities in different regions. By understanding the distinct characteristics and needs of consumers in those areas, companies can develop targeted strategies to enter and succeed in new geographic markets.

5. Efficient resource allocation: By segmenting the market geographically, companies can allocate their resources more effectively by focusing on high-potential regions. This ensures that marketing efforts and investments are optimized for maximum return on investment.

In summary, geographic segmentation allows businesses to target specific regions, adapt to local preferences, address local market conditions, explore new markets, and allocate resources efficiently. By considering the geographic factors that influence consumer behavior, businesses can develop targeted marketing strategies that resonate with their target audience in different locations.

3.2.2 Socio-Geographic Segmentation

Socio-geographic segmentation is a segmentation criterion used in market segmentation. It involves dividing a market based on social and geographic factors that influence consumer behavior. Socio-geographic variables include demographic characteristics such as age, gender, income, education, occupation, and geographic factors like location, urban or rural residence, climate, and population density.

By applying socio-geographic segmentation, marketers can understand the unique needs, preferences, and behaviors of different consumer groups within specific social and geographic contexts. This segmentation approach allows for the customization of marketing strategies to target specific segments effectively.

For example, a company selling luxury beachwear may segment its market based on socio-geographic factors such as income level (high-income individuals), age group (25-40 years), and geographic location (coastal regions with warm climates). This segmentation strategy helps the company tailor its products, pricing, and promotional activities to appeal to the identified target market segment.

Overall, socio-geographic segmentation provides valuable insights into consumer characteristics and helps marketers identify and target specific consumer groups based on their social and geographic profiles.

3.2.3 Behavioral Segmentation

- Behavioral segmentation is a criterion used in market segmentation.
- It categorizes consumers based on their behaviors, attitudes, and patterns of engagement with a product or service.
- Key factors considered in behavioral segmentation include purchase behavior, usage behavior, decision-making process, benefits sought, and brand interactions.
- Purchase behavior looks at buying patterns, such as frequency, volume, and loyalty.
- Usage behavior examines how consumers use a product or service, categorizing them as heavy users, light users, or non-users.
- The decision-making process considers factors like the level of involvement, information-seeking behavior, and decision-making styles.
- Benefits sought focuses on the specific outcomes or benefits consumers desire from a product or service.
- Brand interactions analyze consumers' preferences, loyalty, and engagement with brands.
- Behavioral segmentation helps tailor marketing efforts, develop targeted messaging, and build stronger relationships with specific consumer segments.

3.2.4 Psychographic Segmentation

Psychographic segmentation is a valuable approach used in market segmentation that focuses on understanding consumers based on their psychological and lifestyle characteristics. It involves dividing a market into segments based on factors such as values, beliefs, attitudes, interests, and behaviors. By analyzing these psychographic variables, marketers can gain deeper insights into consumer motivations and preferences.
The key advantage of psychographic segmentation is its ability to create more personalized and targeted marketing strategies. By understanding consumers' lifestyles, personalities, and purchasing behaviors, marketers can tailor their messages and offerings to specific segments, resulting in higher engagement and customer satisfaction
Psychographic segmentation criteria may include personality traits, values, interests, social class, and lifestyle choices. By incorporating these variables into market segmentation, companies can identify distinct segments with similar psychographic profiles. This helps in developing more effective marketing campaigns, building stronger emotional connections with customers, and increasing overall brand loyalty.
Overall, psychographic segmentation enables marketers to go beyond demographic data and delve into the deeper psychological and behavioral aspects of consumers. By understanding consumers at a more nuanced level, companies can better meet their needs, preferences, and desires, ultimately driving business growth and success.

3.3 Data from Survey Studies

Most market segmentation analyses are based on survey data. Survey data is cheap and easy to collect, making it a feasible approach for any organization. But survey data – as opposed to data obtained from observing actual behavior – can be contaminated by a wide range of biases. Such biases can, in turn, negatively affect the quality of solutions derived from market segmentation analysis. A few key aspects that need to be considered when using survey data are discussed below.

3.3.1 Choice of Variables

Careful selection of variables is crucial for high-quality market segmentation. Unnecessary variables cause respondent fatigue and complicate data analysis, known as noisy variables. Redundant questions hinder accurate segment identification. To avoid this, develop survey questions carefully and select variables thoughtfully. Incorporate qualitative and quantitative research for a comprehensive approach.

3.3.2 Response Options

The response options provided to survey respondents play a crucial role in the scale of data available for segmentation analysis. Binary options generate binary data, while unordered categories correspond to nominal variables. Metric data, generated by numerical responses, are suitable for various statistical procedures. The most common option is a limited number of ordered responses, resulting in ordinal data. Applying standard distance measures to ordinal data requires strong assumptions. It is preferable to provide binary or metric response options to avoid complications with distance measures in data-driven segmentation analysis.
Visual analogue scales, such as slider scales, can capture fine nuances and generate metric data. In many cases, binary options outperform ordinal options, especially when formulated in a level-free manner.

3.3.3 Response Styles

Survey data is susceptible to biases that can affect the accuracy of market segmentation. Response biases, such as consistently favoring extreme or neutral answer options, can distort segmentation results. Common segmentation algorithms struggle to differentiate between genuine beliefs and response styles. For example, an acquiescence bias where respondents agree with all questions can create a segment that appears highly attractive but is actually influenced by the response style. To minimize the impact of response styles on segmentation, it is crucial to identify and mitigate these biases during data collection. If response patterns indicate the presence of a response style, additional analyses should be conducted to address this issue.

Alternatively, respondents influenced by the response style may need to be excluded from the targeted market segment to ensure accurate segmentation outcomes.

3.3.4 Sample Size

The sample size in marketing segmentation surveys refers to the number of participants included. It is important to determine an appropriate sample size to obtain reliable and representative results. A larger sample size provides more precise estimates but requires more resources. Balancing statistical significance and practical feasibility is essential. Statistical calculations help determine the minimum sample size needed. Sufficient sample size minimizes biases and increases generalizability. Consulting with experts in research methodology is recommended to determine the appropriate sample size based on study objectives, available resources, and statistical requirements.

3.4 Data from Internal Sources

Organizations now have access to large amounts of internal data that can be utilized for market segmentation analysis. This includes data such as scanner data from grocery stores, booking data from airline loyalty programs, and online purchase data. The advantage of using such data is that it represents actual consumer behavior, rather than relying on self-reported information that may be influenced by memory limitations and response biases.

Furthermore, internal data is often readily available as it is automatically generated and stored by organizations. However, a potential drawback is that the data may be biased towards existing customers, lacking information about potential future customers who may have different consumption patterns. It is important for organizations to recognize this limitation and consider supplementing internal data with external data sources to ensure a comprehensive and unbiased understanding of the market and its segments.

3.5 Data from Experimental Studies

Experimental data can be another valuable source for market segmentation analysis. These data can be generated through field or laboratory experiments, such as testing people's responses to advertisements. The response to the advertisement can serve as a segmentation criterion. Experimental data can also come from choice experiments or conjoint analyses, where consumers are presented with carefully designed stimuli that include specific levels of product attributes. Consumers then indicate their preferences among different product options with varying attribute combinations. Through conjoint studies and choice experiments, valuable information is obtained about the influence of each attribute and attribute level on consumer choices. This information can also be used as a basis for segmentation in marketing analysis. Experimental data offer a unique perspective by providing insights into consumer behavior and preferences in controlled settings.

Step 3 Checklist

Convene a market segmentation team meeting.			
Discuss which consumer characteristics could serve as promisingsegmentation variables. These variables will be used to extract groups of consumers from the data.			
Discuss which other consumer characteristics are required to developa 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 thesegmentation variables and the descriptor variables.			
Design data collection carefully to keep data contamination throughbiases and other sources of systematic error to a minimum.			
Collect data.			

Market Segmentation analysis on a dataset of store (reps/products/revenue/region/quantity)

GitHub link to code and dataset :

https://github.com/iArushi/FeyNN-Intern/tree/main