MARKET SEGMENT ANALYSIS

(Surabhi Priyadarshini)

Market Segmentation:

Market segmentation is a decision-making tool for marketing managers in selecting target markets & designing effective marketing strategies. It's essential for marketing success requiring substantial changes & investments.

STEP 1: Deciding (not) to Segment

Before pursuing Market Segmentation strategy, it's crucial to understand the implications. The key implication is that the organisation needs to commit to the segmentation strategy on the long term. Organisations must be willing to invest in research, develop new products, modify existing ones & adjust pricing, distribution channels & communication. These changes can influence the internal structure, potentially necessitating a reorganisation around market segments rather than products. Given the major implication, the decision to investigate the potential of a market segmentation must be made at the highest executive level & continuously communicated across all organisational units.

Implementation barriers: Key barrier includes lack of leadership, commitment from senior management, insufficient resources & organisational culture. Additionally lack of training & understanding of market segmentation, absence of a formal marketing function & lack of qualified data managers can also represent major stumbling blocks. Objective restrictions like lack of financial resources & bad planning can also prevent success. Overcoming these barriers requires a resolute sense of purpose & dedication. Patience is essential for successful implementation.

STEP 2: Specifying the Ideal Target Segment

Effective market segmentation analysis requires significant user input throughout the process, not just at the beginning or end. Organizations need to establish two sets of segment evaluation criteria: '**Knock-out criteria'**, which are essential and non-negotiable, and '**Attractiveness criteria'**, which assess the relative attractiveness of segments that meet the knock-out criteria. While the literature typically provides a variety of segment evaluation criteria without distinguishing between these two types, involving users in most stages of the analysis ensures that the results are useful to the organization.

They are as follows:

- The criteria mentioned are measurable, substantial, accessible, sufficiently different at suitable life-cycle stage.
- Then, if the segment is large enough or profitable. Whether it's likely to technical changes or not, sensitivity to price or not. Socio-political considerations, cyclicality & seasonality, life-cycle position.
- Whether the segment is distinguishable & compatible with company or not. Whether it's identifiable & accessible enough & if it's responsive & stable, & is it heterogeneous between & homogeneous within.
- Criteria depends on size growth rate per year, sensitivity to price & y, bargaining power of upstream suppliers. Depends on financial & economic factors & socio-political factors.

- It should be large enough having sufficient purchasing power & should be reachable & should be able to serve the segment effectively.
- In modern days, as well maximum criteria are still the same like it should be large enough, growing & competitively advantageous. It should be measurable develops maximum differential in competitive strategy & preserves competitive advantage.
- Evaluated in terms of long-term profit opportunities, financial resources, managerial skills, employee expertise, facilities to compete effectively, conflicts with stakeholders, technological advances.

Knock out criteria are used to determine if market segment resulting from the market segmentation analysis qualify to be assessed using segment attractiveness criteria. There are some criteria suggested by some authors:

- Homogeneity: The members of the segment must be similar to one another.
- Distinctiveness: Members of the segment must be distinctly different from members of other segments.
- Size: The segment must be large enough to justify customizing the marketing mix.
- Match: The segment must be matching the strengths of the organisation. The organisation must have the capability to satisfy segment member needs.
- Identifiability: It must be possible to identify the segment members in the marketplace.
- Reachability: There must be a way to contact segment members to make the customized marketing mix accessible to them.

This segmentation must be understood by senior management, the segmentation team & the advisory committee. Some criteria, such as the exact minimum viable target segment size needs to be satisfied.

Attractiveness criteria are not binary; segments are not assessed as complying or not complying with attractiveness criteria. Rather, each market segment is rated, indicating how attractive it is concerning specific criteria. The attractiveness across all criteria determines whether a market segment is selected as a target segment in market segmentation analysis.

A structured process is beneficial for assessing market segments, with the segment evaluation plot being a popular approach. This plot shows segment attractiveness on one axis and organizational competitiveness on the other, both determined by the segmentation team. These factors need to be negotiated and agreed upon, ideally using no more than six factors. This task should be completed by a team, which then reports to an advisory committee consisting of representatives of all organizational units. There are at least two good reasons to include in this process representatives from a wide range of organisational units. First, each unit has a unique perspective on the business, contributing different positions to the deliberations. Second, the segmentation strategy impacts every unit, making all unit key stakeholders in the analysis. Selecting attractiveness criteria early ensures that relevant information is captured during data collection. The market segmentation team should have a list of approximately six segment attractiveness criteria. Team members distribute 100 points across the criteria, with the final allocations negotiated and approved by the advisory committee. This collaborative approach leverages different perspectives.

STEP 3: Collecting Data

Empirical data underpins both commonsense and data-driven market segmentation. It is used to identify or create market segments and later describe them in detail. In commonsense segmentation,

a single characteristic (segmentation variable) splits the sample, such as separating men and women. Other personal characteristics (descriptor variables) like age, number of vacations, and sought benefits describe these segments in detail, aiding in developing an effective marketing mix. Typical descriptor variables include socio-demographics and media behaviour. Data-driven segmentation, in contrast, uses multiple segmentation variables to identify or create segments that are useful to the organization.

Before extracting segments, an organization must decide which segmentation criterion to use. The term segmentation variable refers to one measured value. The most common segmentation criteria are geographic, socio demographic, psychographic and behavioural.

Geographic segmentation uses the consumer's location of residence to form segments. Its key advantage is the ease of assigning consumers to geographic units, facilitating targeted communication through local media channels. The key disadvantage is that living in the same area does not necessarily mean that people share other characteristics relevant to marketers.

Typical **Socio-demographic segmentation** criteria include age, gender, income and education, which can be effective in industries such as luxury goods, cosmetics, and baby products. This approach allows easy determination of segment membership and can sometimes explain product preferences, though it often lacks the depth needed for optimal market insights. While demographics explain only about 5% of consumer behaviour variance, values, tastes, and preferences are considered more influential for market segmentation.

Psychographic segmentation groups people based on psychological criteria, such as beliefs, interests, and aspirations. Benefit segmentation & lifestyle segmentation are popular psychographic segmentation approach. It's by nature, more complex than geographic or socio demographic criteria. The advantage that it is generally more reflective of the underlying reasons for differences in consumer behaviour. The disadvantage is the increased complexity of determining segment memberships for consumers, and its power depends heavily on the reliability and validity of the empirical measures used to capture the psychographic dimensions of interest.

Behavioural segmentation focuses on actual or reported behaviours, such as purchase frequency and amount spent. The key advantage is that it groups people based on actual behaviour, providing the most relevant basis for segment extraction. Using behavioural data also avoids the need for the development of valid measures for psychological constructs. It's often not readily available, particularly when aiming to include potential customers who have not yet purchased the product.

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 organisation. There are few key aspects that need to be considered when using survey data are:

➢ Choice of variables: Selecting the right segmentation variables is crucial for effective market segmentation, as including unnecessary variables can cause respondent fatigue and lower the quality of responses, complicate the segmentation process, and hinder the identification of optimal market segments. Noisy variables, which do not contribute useful information, can mislead algorithms and prevent accurate segmentation. To avoid this, questionnaires should focus on necessary and unique questions, potentially involving exploratory research to ensure all critical variables are included while avoiding redundancy.

➤ Response options: Survey response options impact the scale of data for analysis, with binary (0/1) and metric data being ideal for segmentation due to clearly defined distances, while nominal and ordinal data pose challenges. Metric and binary responses avoid complications with distance measures, and although ordinal scales are common, using binary or metric options, or visual analogue scales, is often preferable for more accurate segmentation analysis.

➤ Response styles: Survey data can be biased by respondents' consistent response styles, such as tendencies to use extreme options, midpoints, or agree with all statements, which can distort segmentation results. This bias can create misleading segments, such as high-spending tourists based on acquiescence bias, thus necessitating additional analyses or removing biased respondents to ensure accurate market segmentation.

➤ Sample size: Market segmentation analysis lacks comprehensive sample size recommendations, unlike many statistical analyses. A sample size of at least 2p (preferably five times 2p), where p is the number of segmentation variables, specifically for goodness-of-fit testing in latent class analysis with binary variables. This recommendation may not apply to other methods or scales. A sample size of at least ten times the product of the number of segmentation variables and segments ($10 \cdot p \cdot k$) for studying clustering algorithms, with the smallest segment having a sample of at least $10 \cdot p$ in cases of unequal segment sizes. It had been tested sample size requirements for algorithms to correctly identify true segments, using the adjusted Rand index to measure the accuracy of segment recovery. The adjusted Rand index ranges from 0 (random segmentation) to 1 (perfect alignment), with higher values indicating better accuracy.

Increasing sample size generally improves the accuracy of extracted segments, with the most significant improvements seen in very small samples. However, the marginal benefit of further increasing the sample size diminishes as it gets larger. It's recommended a minimum sample size of 70 times the number of segments for challenging artificial data scenarios, with no notable improvements beyond this point. It's expanded on this by considering market and data characteristics that affect segmentation algorithms, such as the number and size equality of market segments and the extent of their overlap, which can make segmentation more difficult. Unequal segment sizes and overlapping segments are particularly challenging for accurate segmentation.

The study emphasizes the importance of having a sufficiently large sample size, recommending at least 100 respondents per segmentation variable, to ensure accurate segment recovery. Additionally, it highlights the necessity of high-quality, unbiased data for effective market segmentation analysis.

Optimal data for market segmentation should:

- Include all necessary items
- Exclude unnecessary items
- Avoid correlated items
- Contain high-quality responses
- Be either binary or metric
- Be free of response styles
- Include responses from a suitable sample size, which should be at least 100 times the number of segmentation variables.

Data from internal sources: Organizations have substantial internal data, such as grocery store scanner data, airline booking data, and online purchase data, for market segmentation analysis. This data's strength lies in reflecting actual consumer behaviour, unlike surveys affected by memory flaws

and response biases. Additionally, internal data is often automatically generated, making it easy to collect if stored accessibly. However, a drawback is the potential bias of over-representing current customers, lacking information on potential future customers with different consumption patterns. **Experimental data,** derived from field or laboratory experiments, is another valuable source for market segmentation analysis. This data can result from tests on how people respond to advertisements, which can then serve as a segmentation criterion. Additionally, experimental data can come from choice experiments or conjoint analyses, where consumers are presented with products featuring specific attribute levels. Their preferences among these products provide insights into the importance of each attribute and attribute level, which can also be used as segmentation criteria.

STEP 6: Profiling Segments

- **Identifying Key Characteristics of Market Segments**:
  The importance of profiling in market segmentation, particularly in data-driven segmentation, is highlighted. Profiling involves defining market segments based on segmentation variables and comparing them. It is crucial for interpreting segmentation results correctly, which is essential for making strategic marketing decisions. Data-driven segmentation solutions can be challenging to interpret, with many managers struggling to understand the results. Graphical statistics approaches are recommended to make profiling less tedious and prone to misinterpretation.

- **Traditional Approaches to Profiling Market Segments:**
  The use of the Australian vacation motives dataset and the neural gas clustering algorithm to extract segments. It also highlights the challenges in presenting data-driven segmentation solutions to users, often either oversimplified or presented in complex tables. The paragraph illustrates this with Table 8.1, showing percentages of segment members for different travel motives. Interpreting such tables requires comparing numerous values, making it challenging for users to understand the defining characteristics of each segment. Comparing multiple segmentation solutions can further increase the complexity. The paragraph also mentions that providing information about the statistical significance of differences between segments is not statistically correct due to the nature of how segments are derived.

- **Segment Profiling with Visualisations:**
  The underutilization of graphics in presenting market segmentation solutions, despite their importance in providing insights into complex relationships between variables. It mentions the benefits of visualizations in exploratory statistical analysis, especially in understanding complex data relationships and monitoring developments over time, particularly in the era of big data. Various authors have recommended the use of visualization techniques to enhance the interpretability of market segmentation analysis results. The paragraph also highlights prior examples of visualizations used in segmentation solutions. Visualizations play a crucial role in inspecting segment profiles, interpreting results, and selecting the most suitable segmentation solution from a large number of alternatives.

- Segment profile plots are a valuable tool for understanding the defining characteristics of each market segment. These plots show how each segment differs from the overall sample across all segmentation variables. The order of variables in visualizations does not need to follow their appearance in the dataset; meaningful orders or clustering can enhance visualizations. Marker variables, which deviate significantly from the overall mean, are highlighted in colour in segment profile plots, making them easier to interpret. Compared to tabular representations, segment profile plots are more intuitive and faster to interpret,

providing valuable insights into segment characteristics. Studies suggest that visualizations, such as segment profile plots, are more efficient for users in understanding complex data analysis results, compared to traditional tabular formats. Investing time in designing well-crafted visualizations can significantly enhance the interpretation of market segmentation analysis results, leading to better strategic decisions and higher return on investment.

- Segment separation plots are used to visualize the overlap of segments across all relevant dimensions of the data space. These plots provide a quick overview of the data situation and the segmentation solution. They can be simple for a low number of segmentation variables but become complex as the number of variables increases. Neighbourhood graphs in segment separation plots indicate similarity between segments. In cases where the original data has high dimensionality, projection techniques like principal components analysis can be used to create segment separation plots. These plots help in understanding the separation between segments, especially when segments overlap. Modifying colour, omitting observations, and highlighting only the inner area of each segment can improve the readability of segment separation plots. Each segment separation plot visualizes one possible projection, and overlapping segments in one projection do not necessarily overlap in all projections.

STEP 8: Selecting the Target Segment(s)

- **The Targeting Decision:**
  In Step 8 of market segmentation, the focus shifts to selecting one or more target segments from those identified in earlier steps. This decision is crucial as it significantly impacts the future performance of the organization. The process involves evaluating the attractiveness of each segment based on predefined criteria and assessing the organization's competitiveness in serving those segments. This step builds on the outcomes of Steps 2, 6, and 7, where knock-out criteria and segment attractiveness were established. The first task is to ensure that all remaining segments meet the knock-out criteria. Then, the team evaluates which segments the organization would most like to target and which segments are most likely to choose the organization's offerings. Answering these questions helps in making the final decision on which segment(s) to target.

- **Market Segment Evaluation**:
  Most books on target market selection recommend using a decision matrix to visualize relative segment attractiveness and organizational competitiveness for each market segment. Various names are used for these matrices, including Boston matrix, General Electric/McKinsey matrix, directional policy matrix, and market attractiveness business strength matrix. The purpose of these matrices is to simplify the evaluation of alternative market segments and aid in selecting one or a few for targeting.

- The decision matrix assesses two dimensions for each segment: segment attractiveness and relative organizational competitiveness. Segment attractiveness reflects how desirable the segment is for the organization, while organizational competitiveness indicates how likely the organization is to succeed in targeting that segment. These factors are evaluated based on predefined criteria and weights determined in earlier steps of the market segmentation analysis.

- To create a segment evaluation plot, the team assigns a value to each segment for each attractiveness criterion. This value is calculated by multiplying the weight of the criterion by the segment's rating for that criterion. The sum of these weighted values represents the

segment's overall attractiveness. A similar process is followed for organizational competitiveness.

- The plot includes circles representing each segment, with the x-axis indicating segment attractiveness and the y-axis indicating organizational competitiveness. The size of the circles can represent another criterion, such as profit potential. The plot helps visualize which segments are most attractive and competitive for the organization, aiding in the decision-making process for target segment selection.

STEP 9: Customising the Marketing Mix

- **Implications for Marketing Mix Decisions**:
- Marketing was originally viewed as a toolbox for selling products, with various components like product planning, packaging, distribution channels, pricing, and promotions. Over time, the marketing mix has been commonly understood as the 4Ps: Product, Price, Promotion, and Place.
- Market segmentation is integral to strategic marketing and is closely tied to positioning and competition. The segmentation-targeting-positioning (STP) approach starts with segmenting the market, then targeting specific segments, and finally positioning the product to meet segment needs. This sequential process ensures segmentation is aligned with broader strategic decisions.
- The target segment decision impacts the development of the marketing mix. Once target segments are chosen, organizations may need to design new products, adjust pricing, select appropriate distribution channels, and develop effective promotion strategies. Customizing the marketing mix to the target segment maximizes the benefits of a market segmentation strategy. Market segmentation analysis can be tailored to specific marketing mix elements like pricing, advertising, or distribution, depending on the organization's needs. Insights from the target segment's detailed description guide the adjustment of the marketing mix to best serve the chosen segment.
- **Product**:
- When developing the product dimension of the marketing mix, organizations need to tailor their products to customer needs. This often involves modifying existing products rather than creating new ones. Key decisions include naming the product, packaging, offering warranties, and providing after-sales support.
- **Promotion**:
- When designing the promotion component of the marketing mix, typical decisions include developing an advertising message that resonates with the target market and identifying effective communication channels. Other promotional tools include public relations, personal selling, and sponsorship.

.