

Feynn Labs - Project 2

“Market Segmentation Analysis”

BY: ANJAN S S

Abstract:

This report represents a brief introduction to a marketing strategy popularly known as Market Segmentation (MS) which is the process of grouping an audience into subgroups based on shared characteristics. It also highlights the key points related to MS along with their theory and practical implementation using Python

Objective:

- **Segmentation Identification:** Identify distinct consumer segments based on brand perceptions of McDonald's.
- **Perception Analysis:** Categorize segments into positive and negative perceptions for targeted strategies.
- **Key Driver Identification:** Analyze segments with negative perceptions to identify key drivers of dissatisfaction.
- **Insightful Marketing Strategy:** Provide actionable insights for tailored marketing strategies to strengthen positive perceptions or modify negative ones.
- **Brand Enhancement:** Enhance McDonald's brand management by addressing specific consumer segment perceptions effectively.

1] Market Segmentation

Market Segmentation is the process of identifying segments of the target market and then dividing that target market into subgroups based on different factors such as demographics, needs, priorities, common interests, and other psychographic and/or behavioral criteria used to understand the target audience.



2] Why is it important?

Market Segmentation is necessary as:

- It can help you to target just the people most likely to become customers of your company or consumers of your content/product.
- By understanding your market segments, you can leverage this targeting in product, sales, and marketing strategies.
- It can also power your product development cycles by informing how you create product offerings for different segments like men vs. women or high income vs. low income.
- More importantly, It can enhance profits [1, 2, 3].

Steps of Market Segmentation Analysis:

- Step 1: Deciding (not) to Segment
- Step 2: Specifying the Ideal Target Segment
- Step 3: Collecting Data
- Step 4: Exploring Data
- Step 5: Extracting Segments
- Step 6: Profiling Segments
- Step 7: Describing Segments
- Step 8: Selecting the Target Segment(s)
- Step 9: Customising the Marketing Mix
- Step 10 : Evaluation and Monitoring

Step 1: Deciding (not) to Segment

Implications of Committing to Market Segmentation

- It is critical to understand the consequences of pursuing a market segmentation strategy before committing resources to a market segmentation analysis.
- Market Segmentation is a long-term commitment and is in accordance with the ability and willingness of organizations to be adaptable and welcoming of significant changes.
- There are various costs associated with the implementation process of segmentation (cost of performing research, field surveys, designing packages and advertisements)
- To optimize the advantages of market segmentation, an organization needs to mold themselves around the segments rather than around their products.
- Due to the major implications of such a long-term commitment, the decision to investigate and implement market segmentation is of the highest importance for an enterprise

Implementation Barriers

- There are various obstacles that can prevent a segmentation plan from being implemented successfully.
- Beginning with the barriers related to the senior management which basically are composed of the following factors: Lack of leadership, pro-active championing, commitment and involvement in the market segmentation process by senior leadership.

- Organizational culture is the subject of a second set of obstacles. Few of the key factors leading to creation of a barrier are: Lack of market or consumer orientation, resistance to change and new ideas, lack of creative thinking, bad communication skills and lack of sharing of information and insights across organizational unit.
- Another potential problem is lack of training which primarily arises when the senior management or the team responsible for segmentation process is not aware about the very foundations of the market segmentation or is short sighted in his approach without understanding its consequences
- Most of these barriers can be identified from the outset of a market segmentation study, and then proactively removed.
- Fundamentally as an organization/individual, a strong sense of intention and commitment is needed, balanced by tolerance and an understanding of the unavoidable challenges that will arise in the future.

Step 2: Specifying the Ideal Target Segment

Segment Evaluation Criteria

- For market segmentation analysis to yield valuable results for an organization, it is crucial to recognize that user input should not be confined to just an initial briefing or the final development of a marketing mix.
- The user's involvement is essential throughout various stages, closely intertwining with the technical aspects of the segmentation analysis process.
- In this step, the organization needs to establish two sets of segment evaluation criteria.
- The first set, known as **knock-out criteria**, consists of essential non-negotiable features that define segments the organization would potentially target.
- The second set, known as **attractiveness criteria**, is utilized to assess the relative appeal of the remaining market segments, those that meet the knock-out criteria.

Knock-Out Criteria & Attractiveness Criteria

- **Size of the Segment:** Assess the size of the target segment in terms of potential customers or market share.
- **Growth Potential:** Evaluate the growth prospects of the segment over time.
- **Profitability:** Analyze the profitability of serving the segment, considering purchasing power and repeat business.
- **Accessibility:** Determine how easily the business can reach and communicate with the target segment.

- **Compatibility with Resources:** Assess whether the business has the necessary resources and capabilities to serve the segment.
- **Competitive Intensity:** Examine the level of competition within the target segment.
- **Fit with Company Mission and Values:** Ensure alignment with the company's mission, values, and strategic objectives.
- **Stability:** Consider the stability of the target segment over time.
- **Unique Needs and Preferences:** Identify and understand the unique needs and behaviors of the target segment.
- **Cost of Acquisition:** Evaluate the cost-effectiveness of acquiring and retaining customers in the segment.
- **Risk Factors:** Assess potential risks associated with serving the segment.
- **Compatibility with Marketing Strategies:** Ensure that marketing strategies align with the segment's communication preferences.
- **Segment Reach:** Determine the geographical reach of the segment.
- **Brand Fit:** Consider whether the brand aligns with the perceptions and expectations of the segment.
- **Lifecycle Stage:** Analyze the stage of the product or service lifecycle within the target segment.

Implementing a Structured Process in Market Segmentation

In the structured market segmentation process, key elements include:

- **Segment Evaluation Plot:** A tool for comparing segment attractiveness against organizational competitiveness, with criteria determined by the segmentation team.
- **Criteria Selection and Agreement:** The team selects and agrees on a maximum of six factors for segment attractiveness and competitiveness, ensuring clarity and manageability.
- **Team Involvement and Organizational Representation:** Diverse organizational unit representatives are involved for a wide range of perspectives and stakeholder buy-in.
- **Early-stage Criteria Selection:** Attractiveness criteria are chosen early to guide data collection and simplify later target segment selection.

Weighting of Criteria: The team assigns weights to each attractiveness criterion, typically distributing 100 points across them, followed by a consensus process, ideally with the advisory committee's approval.

Step 3: Collecting Data

Segmentation Variables

- Empirical data forms the basis of both commonsense and data-driven market segmentation.
- In commonsense segmentation, typically, one specific characteristic of the sample consumers is used as the segmentation variable.
- The distinction between commonsense and data-driven market segmentation lies in the fact that data-driven segmentation relies on multiple variables rather than just one, as is the case with commonsense segmentation.
- Segmentation studies gather empirical data from various sources, including surveys, observations like scanner data linked to individual customer purchase histories through loyalty programs, and experimental studies.

Segmentation Criteria

In this context, "segmentation criterion" has a broader meaning than "segmentation variable." While a segmentation variable refers to a single measured value, like an item in a survey or an observed expenditure category, the term "segmentation criterion" encompasses the nature of the information utilized for market segmentation.

- **Geographic Segmentation:** Divides the market based on physical locations or regions, enabling businesses to tailor products or services to the unique needs of specific geographic areas.
- **Socio-Demographic Segmentation:** Focuses on dividing the market by demographic factors such as age, gender, income, education, and social class, providing insights into consumer behaviours and preferences within specific demographic groups.
- **Psychographic Segmentation:** Divides the market based on lifestyle, values, interests, and personality traits, helping businesses understand and target consumers with similar psychographic profiles and motivations.
- **Behavioural Segmentation:** Categorizes consumers based on their behaviour, such as purchasing patterns, product usage, brand loyalty, and decision-making processes, allowing businesses to tailor marketing strategies to specific behavioural traits and preferences.

Data from Survey Studies

- **Choice of Variables:** The selection of segmentation variables is crucial. Including only necessary variables avoids respondent fatigue and maintains focus, while excluding unnecessary, 'noisy' variables prevents them from obscuring the segmentation solution.
- **Response Options:** The type of response options in surveys affects the data's scale and suitability for segmentation analysis. Binary and metric data are preferable as they facilitate clear distance measurement essential for segmentation algorithms.
- **Response Styles:** Surveys are susceptible to response biases where answers reflect a respondent's style rather than the content. This can lead to misinterpretation of data, such as falsely identifying a high-value market segment. Minimizing response style biases is critical for accurate market segmentation.

Sample Size:

Sample Size in Market Segmentation Analysis:

- Insufficient sample sizes make it difficult to determine the correct number of market segments.
- Sufficient sample sizes enable easy identification of the number and nature of market segments.

Data from Internal Sources

- Organizations increasingly leverage internal data, such as scanner data from grocery stores or online purchase information, for market segmentation analysis.
- The strength of this data lies in its representation of actual consumer behaviour, avoiding issues associated with self-reported data.
- However, a potential drawback is systematic bias, as it may primarily capture information from existing customers, lacking insights into potential future customers with different consumption patterns.

Data from Experimental Studies

Data, derived from field or laboratory experiments, offer another valuable source for market segmentation. This data can arise from various experiments, such as testing consumer responses to advertisements or conducting conjoint analyses, providing insights into consumer preferences and influencing factors that can serve as segmentation criteria.

Step 4: Exploring Data

- **Data Cleaning:** Remove or correct any inaccuracies in the data. This might include handling missing values, correcting data entry errors, and standardizing formats.
- **Initial Analysis:** Perform basic statistical analysis to get an overview of the data. This includes calculating means, medians, modes, and standard deviations.
- **Identifying Patterns:** Look for patterns and correlations in the data. Use tools such as scatter plots, histograms, and correlation matrices to visualize relationships between variables.
- **Principal Component Analysis (PCA):** Use PCA to reduce the dimensionality of the data and identify the most significant variables. This helps in simplifying the data without losing important information.
- **Normalization:** Scale data to ensure all variables contribute equally to the analysis.
- **Categorization:** Convert continuous variables into categorical ones if necessary.
- **Handling Missing Data:** Impute or remove missing data to maintain data integrity.
- Cleanse the collected data by removing duplicates, correcting errors, and handling missing values.
- Standardize data formats and variables to ensure consistency and compatibility for analysis.
- Transform raw data into a structured format suitable for segmentation analysis.
- Create new variables or derived metrics to enhance the richness of the data set.
- Conduct data normalization or standardization to eliminate biases and outliers.
- Merge and integrate data from multiple sources to create a comprehensive data set.
- Ensure data integrity and accuracy through rigorous data cleaning and validation processes.
- Address data quality issues such as inconsistencies, inaccuracies, and incompleteness.
- Verify the reliability and validity of data sources to ensure the credibility of analysis results.
- Prepare data for statistical analysis by organizing variables and observations systematically.
- Document data preparation steps and transformations for transparency and reproducibility.
- Consider the scalability and flexibility of data preparation processes for future segmentation projects.
- Collaborate with data experts or analysts to optimize data preparation workflows.
- Implement data governance practices to maintain data quality and consistency over time.
- Conduct exploratory data analysis to identify patterns, trends, and relationships in the data set.
- Segment data based on relevant criteria such as geographic location, customer segments, or product categories.
- Ensure data security measures are in place to protect sensitive customer information.
- Optimize data storage and retrieval processes for efficient data management.
- Validate data preparation procedures through peer review or validation checks.
- Continuously monitor and update data preparation processes to adapt to changing business needs and data requirements.

Step 5: Extracting Segments

- **Clustering Algorithms:** Choose appropriate clustering algorithms based on your data and objectives. Common methods include K-means clustering, hierarchical clustering, and Gaussian mixture models.
- **k-Means Clustering:** Use the k-means algorithm to partition the data into distinct segments.
- **Mixtures of Distributions:** Apply mixture models to identify segments based on the distribution of data.
- **Mixtures of Regression Models:** Use regression models to extract segments based on relationships between variables.
- **Algorithm Application:** Apply the chosen algorithm to your data. Ensure to preprocess data as needed (e.g., normalization) before applying the algorithm.
- **Segment Validation:** Validate the segments identified by checking their stability and consistency. Use techniques such as silhouette analysis to assess the quality of the clusters.
- **Iterative Refinement:** Refine the segments by iterating the clustering process. Adjust parameters and reassess until meaningful and actionable segments are identified
- Apply segmentation techniques such as cluster analysis, factor analysis, or decision trees to identify distinct customer segments.
- Evaluate segmentation results based on criteria such as homogeneity, heterogeneity, and actionable differences.
- Consider the number of segments generated and their interpretability for practical application.
- Validate segmentation solutions through statistical tests and validation procedures.
- Assess the stability and robustness of segmentation results across different data sets.
- Interpret segment characteristics and profiles to understand customer behaviors and preferences.
- Identify key segmentation variables that differentiate between customer segments.
- Consider the scalability and generalizability of segmentation solutions for broader applications.
- Evaluate the overlap or redundancy between segments to ensure distinctiveness.
- Conduct sensitivity analysis to test the impact of different segmentation criteria on results.
- Visualize segmentation results using charts, graphs, or maps to communicate findings effectively.
- Compare segmentation solutions with industry benchmarks or best practices for validation.
- Seek feedback from stakeholders or experts to validate the relevance and accuracy of segmentation results.
- Document segmentation methodologies and results for transparency and reproducibility.
- Consider the implications of segmentation results on marketing strategies and business decisions.
- Identify opportunities for further segmentation refinement or customization based on feedback.

- Collaborate with cross-functional teams to integrate segmentation insights into strategic planning.
- Monitor the performance of segmentation solutions over time and adjust strategies as needed.
- Conduct post-segmentation analysis to evaluate the impact of segmentation on business outcomes.
- Continuously refine segmentation models based on market feedback, customer insights, and competitive dynamics.

Step 6: Profiling Segments

- **Detailed Analysis:** Analyze each segment in detail. Identify key characteristics, such as age, income, buying behavior, and preferences.
- **Comparison:** Compare segments to highlight what makes each one unique. This can involve cross-tabulations and other comparative analysis techniques.
- **Visualization:** Use visual tools like bar charts, pie charts, and radar charts to represent segment characteristics clearly.
- **Behavioral Insights:** Understand the underlying motivations and behaviors of each segment. This might involve looking at purchase frequency, brand loyalty, and product preferences.
- Understand the key characteristics of each segment.
- Analyze demographics, behaviors, preferences, and needs.
- Create detailed profiles for each segment.
- Identify common traits within each segment.
- Use data-driven insights to inform profiling.
- Develop detailed profiles for each segment based on demographic, psychographic, and behavioral characteristics.
- Analyze key traits and preferences of each segment to understand their unique needs and motivations.
- Identify segment-specific attributes such as age, income, education, lifestyle, and purchase behaviors.
- Segment profiles should include information on values, attitudes, beliefs, and preferences.
- Consider segment size, growth potential, profitability, and competitive intensity in profiling.
- Evaluate segment homogeneity and heterogeneity to determine the level of differentiation.
- Assess segment attractiveness based on alignment with organizational objectives and resources.
- Identify segment-specific challenges, opportunities, and threats for strategic planning.
- Customize segment profiles to reflect the diversity and complexity of customer segments.
- Use segmentation variables to create meaningful and actionable segment profiles.
- Visualize segment profiles using charts, graphs, or infographics for easy interpretation.

- Compare segment profiles to industry benchmarks or market trends for validation.
- Seek feedback from stakeholders or experts to validate the accuracy and relevance of segment profiles.
- Document segment profiles in a structured format for reference and analysis.
- Consider the implications of segment profiles on marketing strategies and communication tactics.
- Tailor product offerings, pricing strategies, and promotional campaigns based on segment profiles.
- Develop targeted messaging and positioning strategies for each segment.
- Monitor segment performance and adjust strategies based on feedback and insights.
- Conduct segmentation audits to evaluate the effectiveness of segment profiles.

Step 7: Describing Segments

- **Comprehensive Descriptions:** Develop in-depth descriptions of each segment, including demographics, psychographics, and behaviors.
- **Behavioral Patterns:** Document the typical behaviors and purchasing patterns of each segment. Include factors like preferred communication channels and responsiveness to marketing efforts.
- **Personas:** Create customer personas for each segment. These personas should be detailed and reflect the typical member of each segment, including their needs, preferences, and pain points.
- **Use Cases:** Provide real-world scenarios or use cases that illustrate how each segment interacts with your product or service.
- Go beyond profiling to gain deeper insights into segments.
- Understand motivations, preferences, and behaviors.
- Develop detailed descriptions for each segment.
- Use additional information to enhance segment understanding.
- Cross-reference with psychographic, demographic, and behavioral variables.
- **Detailed Description:** Provide a detailed description of each segment, including demographics, behaviors, and attitudes.
- **Comparison:** Compare segments to highlight differences and similarities.
- **Behavioral Insights:** Gain insights into the behaviors and preferences of each segment.
- **Objective:** Provide detailed descriptions of each segment for strategic planning.
- **Actions:** Document segment characteristics, preferences, and behaviors in detail.
- **Considerations:** Use clear, actionable language to communicate findings to stakeholders and support decision-making .

Step 8: Selecting the Target Segment(s)

- **Segment Attractiveness:** Evaluate the attractiveness of each segment based on criteria such as size, growth potential, profitability, and competitive intensity.
- **Strategic Fit:** Assess how well each segment aligns with your company's strengths and strategic goals. Consider if your organization can meet the needs of the segment effectively.
- **Resource Allocation:** Determine the resources required to target each segment and whether the potential return justifies the investment.
- **Risk Assessment:** Consider the risks associated with targeting each segment, including market volatility and potential competitive responses.
- Evaluate segments based on criteria like homogeneity and distinctness.
- Consider segment size, match, identifiability, and reachability.
- Choose the most attractive segments for targeting.
- Ensure alignment with organizational capabilities.
- Prioritize segments with the highest potential for success.
- **Objective:** Choose the most viable market segments to target.
- **Actions:** Evaluate segments based on criteria like size, growth potential, and alignment with business goals.
- **Considerations:** Balance segment attractiveness with company resources and strategic priorities
- **Segment Attractiveness:** Evaluate segments based on size, growth potential, and profitability.
- **Strategic Fit:** Assess how well each segment aligns with the company's strategic goals.
- **Resource Allocation:** Consider the resources required to target each segment effectively.

Step 9: Customising the Marketing Mix

Implications for Marketing Mix Decisions

- The widely accepted modern interpretation is the 4Ps model, focusing on Product, Price, Promotion, and Place as the key components of an effective marketing strategy.
- Market segmentation is integral to strategic marketing and is closely linked with positioning and competition.

Product

- In developing the product dimension of the marketing mix, organizations must align product specifications with customer needs.
- This refers to the tangible or intangible goods or services that a company offers to meet the needs and wants of its target market. It involves decisions related to product design, features, quality, branding, packaging, and any additional services that accompany the product.

Price

- Price is the amount of money customers are willing to pay for a product or service.
- Pricing decisions involve determining the right balance between setting a price that covers production and distribution costs while remaining attractive and competitive in the market.
- Pricing strategies can include penetration pricing, skimming pricing, discount pricing, etc.

Place

- Place refers to the distribution channels through which a product or service is made available to customers.
- It involves decisions related to the selection of distribution channels, logistics, inventory management, and ensuring that the product is available at the right place and time for customers to purchase.
- Place also considers factors like retail outlets, online presence, and geographic reach.

Promotion

- Promotion encompasses all the activities that a company undertakes to communicate and promote its products or services to the target audience.
- This includes advertising, sales promotions, public relations, personal selling, and other promotional activities. The goal is to create awareness, generate interest, and persuade customers to make a purchase.

Step 10: Evaluation and Monitoring

- **Performance Metrics:** Define key performance indicators (KPIs) to measure the success of your segmentation strategy. These might include sales growth, market share, customer satisfaction, and ROI.
- **Continuous Monitoring:** Regularly monitor the performance of each segment and the effectiveness of your marketing efforts. Use tools like dashboards and reports to track progress.
- **Feedback Mechanisms:** Implement mechanisms to collect feedback from customers and other stakeholders. This feedback can provide insights into how well your segmentation strategy is working.
- **Strategy Adjustment:** Based on performance data and feedback, make necessary adjustments to your segmentation strategy. This ensures that your approach remains relevant and effective in a changing market.

Conclusion:

It was noted in this study that market segmentation is regarded essential by marketing practitioners for various reasons, including targeting, proposition development, price formulation and developing of mass communication. Though being conceptualised as simple in its rationale, the process of segmentation is not necessarily easy and it requires various considerations that should be taken into account.

From the literature it is evident that many marketers are expressing concern about implementation and the integration of segmentation into marketing strategy. To address this, priorities in the area of future segmentation research include the selection and incorporation of new variables into segmentation models, as well as developing new and innovative segmentation strategies.

Using market segmentation, companies are able to identify their target audiences and personalize marketing campaigns more effectively. This is why market segmentation is key to staying competitive. It allows you to understand your customers, anticipate their needs, and seize growth opportunities. This powerful technique allows you to improve your decision-making, marketing efforts, and improve your company's bottom line.

The key to successful market segmentation remains data quality; therefore, you need to pick your data provider after doing your due diligence, ensuring that you have access to the latest industry information in accessible and easy-to-understand formats.

Market Segmentation Case Study on McDonalds Dataset

https://github.com/Anjanss098/FeyNN-Labs-internship/blob/main/mcdonalds_code_replication.ipynb