

Market Segmentation Analysis

(Understanding It, Doing It, and Making It Useful)

Study task report.

Submitted by:

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“Marketing is not just selling; it’s about knowing and understanding your customers.”

- Unknown 😊

Chapter 1 Market Segmentation

1.1 Strategic and Tactical Marketing:

The purpose of marketing is to match the genuine needs and desires of consumers with the offers of suppliers particularly suited to satisfy those needs and desires. Marketing planning is a logical sequence and a series of activities to achieve the marketing objective. A marketing plan consists of two components: **a strategic** and **a tactical** marketing plan.

Strategic plan: The strategic plan outlines the long-term direction of an organisation, but does not provide much detail on short term marketing action required to move in this long-term direction.

Tactical plan: The tactical marketing plan does the opposite. It translates the long-term strategic plan into detailed instructions for short-term marketing action. The tactical marketing plan contains instructions on what needs to be done to get there.



The tactical marketing plan depends entirely on the strategic marketing plan, but the strategic marketing plan does not depend on the tactical marketing plan. The importance of strategic and tactical marketing for organisational success is

asymmetric. Good tactical marketing can never compensate for bad strategic marketing. Strategic marketing is the foundation of **organisational success**.

1.2 Definitions of Market Segmentation:

Market segmentation is a decision-making tool for the marketing manager in the crucial task of selecting a target market for a given product and designing an appropriate marketing mix. Market segmentation is one of the key building blocks of strategic marketing. Market segmentation is essential for marketing success.

Smith (1956) was the first to propose the use of segmentation as a marketing strategy. Market segmentation means cutting markets into slices.

Concentrated strategy: A concentrated strategy is attractive for organisations who are resource-poor, but are facing fierce competition in the market. Concentrating entirely on satisfying the needs of **one market segment** can secure the future for such an organisation.

Differentiated market strategy: Product variations can thus be customised to meet the needs of a **number of market segments**.

Undifferentiated market strategy: where the **same product** is marketed using the same marketing mix to the **entire market**. Examples of undifferentiated marketing include **petrol** and **white bread**. consumers are not yet able to discriminate between alternative products.

1.3 The Benefits of Market Segmentation:

Market segmentation forces organisations to take stock of where they stand, and where they want to be in future, market segmentation offers an opportunity to think and rethink, and leads to critical new insights and perspectives. Market segmentation has also been shown to be effective in sales management, because it allows direct sales efforts to be targeted at groups of consumers rather than each consumer individually.

1.4 The Costs of Market Segmentation:

Implementing market segmentation requires a substantial investment by the organisation. A large number of people have to dedicate a substantial amount of time to conduct a thorough market segmentation analysis. If a segmentation

strategy is pursued, more human and financial resources are required to develop and implement a customised marketing mix.

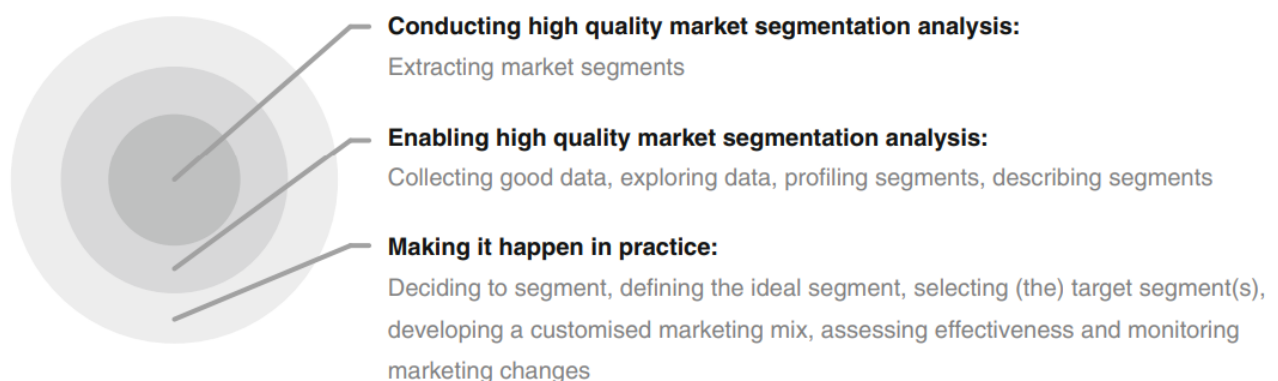
These resource commitments are made under the assumption that the organisation will benefit from a return on this investment. Yet, the upfront investment is substantial.

Chapter 2

Market Segmentation Analysis

2.1 The Layers of Market Segmentation Analysis:

The process of **grouping consumers** into **naturally existing or artificially created segments** of consumers who share similar product preferences or characteristics.



If all the tasks in the **first (core)** and **second layer** of market segmentation analysis have been implemented well, the result is a theoretically excellent market segmentation solution. But a theoretically excellent market segmentation solution is meaningless unless users can convert such a solution into strategic marketing decisions and tactical marketing action. Therefore, a **third layer** is required.

Data analysts can provide facts about these segments, but cannot select the most suitable ones. **This selection is driven**, in part, by the strengths and opportunities of the organisation, and their alignment with the key needs of the market segments. Finally, as soon as one or more target segments have been selected,

users need to develop a marketing plan for those market segments, and design a customised marketing mix.

2.2 Approaches to Market Segmentation Analysis:

No one single approach is best when conducting market segmentation analysis. Instead, approaches to market segmentation analysis can be systematised in a number of different ways. We present two systematics here,

- **Based on Organisational Constraints**
- **Based on the Choice of (the) Segmentation Variable(s)**

Based on organisational constraints:

The approach of market segmentation based on organizational constraints involves dividing a heterogeneous market into smaller, more homogeneous groups of customers **based on factors that are relevant to a company's organizational structure and resources**. This can include factors such as size, industry, location, and buying behaviour.

Based on the Choice of (the) Segmentation Variable(s):

The approach of market segmentation based on the choice of segmentation variables involves dividing a heterogeneous market into smaller, more homogeneous groups of customers **based on specific characteristics or variables**. The choice of segmentation variables can vary depending on the company's product or service offerings, customer needs and preferences, and market conditions.

Common-sense and data-driven segmentation are **two extremes**, the two pure forms of segmentation approaches based on the nature of the segmentation criterion.

common-sense segmentation results from splitting consumers up into groups using one segmentation variable first. Then, one of the resulting segments is selected and split up further using a second segmentation variable.

Data-driven segmentation is the result of combining two sets of segmentation variables.

Whichever approach the data analyst chooses, it will provide insight as to the concept of market segmentation study that can be implemented. when data are entirely

unstructured, the data analyst must work hand in hand with users of the market segmentation solution to construct the most strategically useful market segments.

2.3 Market Segmentation Analysis Step-by-Step:

We recommend a ten-step approach to market segmentation analysis. The basic structure is the same for both common-sense and data-driven market segmentation,



Chapter 3

Step 1: Deciding (not) to Segment

3.1 Implications of Committing to Market Segmentation:

The key implication is that the organisation needs to commit to the segmentation strategy on the long term. The commitment to market segmentation goes hand in hand with the willingness and ability of the organisation to make substantial changes and investments.

Cahill **recommends not to segment** unless the expected increase in sales is sufficient to justify implementing a segmentation strategy, one of the truisms of segmentation strategy is that using the scheme has to be more profitable than marketing without it, net of the expense of developing and using the scheme itself.

Because of the major implications of such a **long-term organisational commitment**, the decision to investigate the potential of a market segmentation strategy must be made at the **highest executive level**, and must be systematically and continuously communicated and reinforced at all organisational levels and across all organisational units.

3.2 Implementation Barriers:

The first group of barriers relates to **senior management**. Lack of leadership, pro-active championing, commitment and involvement in the market segmentation process by senior leadership undermines the success of market segmentation.

A second group of barriers relates to **organisational culture**. Lack of market or consumer orientation, resistance to change and new ideas, lack of creative thinking, bad communication and lack of sharing of information and insights across organisational units, short-term thinking, unwillingness to make changes and office politics have been identified as preventing the successful implementation of market segmentation.

Another potential problem is **lack of training, lack of a formal marketing function or at least a qualified marketing expert in the organisation, lack of financial resources, or the inability to make the structural changes required, lack**

of planning or bad planning, a lack of structured processes, a lack of allocation of responsibilities.

Most of these barriers can be identified from the outset of a market segmentation study, and **then proactively removed**. If barriers cannot be removed, the option of abandoning the attempt of exploring market segmentation as a potential future strategy should be seriously considered.

Step 2: Specifying the Ideal Target Segment

4.1 Segment Evaluation Criteria:

After having committed to investigating the value of a segmentation strategy in Step 1, the organisation has to make a major contribution to market segmentation analysis in Step 2. While this contribution is conceptual in nature, it guides many of the following steps, most critically Step 3 (data collection) and Step 8 (selecting one or more target segments).

In Step 2 the organisation must determine two sets of segment evaluation criteria,

- **knock-out criteria:** These criteria are the essential, non-negotiable features of segments that the organisation would consider targeting.
- **Attractiveness criteria:** These criteria are used to evaluate the relative attractiveness of the remaining market segments

knock-out criteria automatically eliminate some of the available market segments, attractiveness criteria are first negotiated by the team, and then applied to determine the overall relative attractiveness of each market segment in Step 8.

knock-out criterion:

- The segment must be homogeneous;
- The segment must be distinct;
- The segment must be large enough;
- The segment must be matching the strengths of the organisation;

- Members of the segment must be identifiable;
- The segment must be reachable;

Attractiveness Criteria:

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.

4.2 Implementing a Structured Process:

A structured process when assessing market segments is beneficial, the most popular structured approach for evaluating market segments in view of selecting them as target markets is the **use of a segment evaluation plot**, showing **segment attractiveness** along one axis, and **organisational competitiveness** on the other axis.

The segment attractiveness and organisational competitiveness values are determined by the segmentation team. This is necessary because there is **no standard set of criteria** that could be used by all organisations.

Obviously, the segment evaluation plot cannot be completed in Step 2 of the market segmentation analysis because at this point – no segments are available to assess yet, it also makes the task of **selecting a target segment in Step 8 much easier** because the groundwork is laid before the actual segments are on the table.

Optimally, **approval by the advisory committee** should be sought because the advisory committee contains representatives from multiple organisational units bringing a range of **different perspectives to the challenge** of specifying segment attractiveness criteria.

Step 3: Collecting Data

5.1 Segmentation Variables:

Empirical data forms the basis of both common-sense and data-driven market segmentation. Empirical data is used to identify or create market segments then to describe these segments in detail.

Segmentation variable:

In common-sense segmentation, the **segmentation variable** is typically **one single characteristic** of the consumers in the sample. An **entry of 1** in the data set indicates that the consumer has that characteristic. An **entry of 0** indicates that the consumer does not have that characteristic.

Descriptor variables:

They are used to describe the segments in detail. Describing segments is critical to being able to develop an effective marketing mix targeting the segment.

Sociodemographics		Travel behaviour		Benefits sought			
gender	age	N° 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					

Good market segmentation analysis requires good empirical data, Empirical data for segmentation studies can come from a range of sources:

- From survey studies.

- From observations.
- From experimental studies.

Survey data: Surveys should therefore not be seen as the default source of data for market segmentation studies. Rather, a range of possible sources should be explored. The source that delivers data most closely reflecting actual **consumer behaviour** is preferable.

5.2 Segmentation Criteria:

The organisation must make an important decision in choosing which segmentation criteria to use. The term segmentation criterion is used here in a broader sense than the term **segmentation variable**. The most common segmentation criteria are geographic, sociodemographic, psychographic and behavioural. Generally, the recommendation is to use the simplest possible approach. If **demographic segmentation** will work for your product or service, then use demographic segmentation. If **geographic segmentation** will work because your product will only appeal to people in a certain region, then use it. Better is **what works for your product or service** at the least possible cost.

5.2.1 Geographic Segmentation:

Geographic information is seen as the original segmentation criterion used for the purpose of market segmentation. Typically, when geographic segmentation is used the **consumers location of residence** serves as the only criterion to form market segments. While simple, the geographic segmentation approach is often the most appropriate.

The **key advantage** of geographic segmentation is that each consumer can **easily be assigned to a geographic unit**. As a consequence, it is easy to target communication messages, and select communication channels (such as local newspapers, local radio and TV stations) to reach the selected geographic segments.

The **key disadvantage** is that living in the same country or area does not necessarily mean that people share other characteristics relevant to marketers, such as benefits they seek when purchasing a product.

Despite these potential shortcomings, the location aspect has experienced a revival in international market segmentation studies **aiming to extract market**

segments across geographic boundaries. Such an approach is challenging because the segmentation variables must be meaningful across all the 11 included geographic regions, and because of the known biases that can occur if surveys are completed by respondents from different cultural backgrounds.

5.2.2 Socio-Demographic Segmentation:

Socio-demographic segments can be very useful in some industries, socio-demographic segmentation criteria have the advantage that **segment membership** can easily be determined for every consumer. In some instances, the socio-demographic criterion may also offer an explanation for **specific product preferences**. But in many instances, the socio-demographic criterion is **not the cause for product preferences**, thus not providing sufficient market insight for optimal segmentation decisions. However, it should not be the sole criterion for market segmentation, and other segmentation criteria should also be considered to form more effective market segments.

5.2.3 Psychographic Segmentation:

When people are **grouped according to psychological criteria**, such as their beliefs, interests, preferences, aspirations, or benefits sought when purchasing a product, the term **psychographic segmentation** is used. The psychographic approach has the advantage that it is generally **more reflective** of the underlying reasons for differences in consumer behaviour. The disadvantage of the psychographic approach is the **increased complexity** of determining segment memberships for consumers.

5.2.4 Behavioural Segmentation:

A wide range of possible behaviours can be used for this purpose, including prior experience with the product, frequency of purchase, amount spent on purchasing the product on each occasion (or across multiple purchase occasions),

and information search behaviour, the variables used in Behavioural Segmentation is emerged as the **superior variables** than the geographic variables.

The main goal of behavioural segmentation is to **better understand customers' needs and preferences**, and to tailor marketing efforts accordingly. Effective implementation of behavioural segmentation requires **accurate data collection** and **analysis**.

5.3 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 organisation. But survey data – as opposed to data obtained from observing actual behaviour can be contaminated by a wide range of biases.

5.3.1 Choice of Variables:

In this procedure, we need to select the variables more carefully, At the same time, unnecessary variables must be avoided. Including unnecessary variables can make questionnaires long and tedious for respondents, which, in turn, causes respondent fatigue. Including unnecessary variables also increases the dimensionality of the segmentation problem without adding relevant information, making the task of extracting market segments unnecessarily difficult for any data analytic technique. **Noisy variable:** Noisy variables do not contribute any information necessary for the identification of the correct market segments. Instead, their presence makes it more difficult for the algorithm to extract the correct solution.

Therefore, in Segmentation process selection of segmentation variable plays a vital role for achieving a high-quality segmentation solution.

5.3.2 Response Options:

Options allowing respondents to answer in only one of two ways, generate binary or dichotomous data. Such responses can be represented in a data set by 0s and 1s. The distance between 0 and 1 is clearly defined.

Nominal variables: Options allowing respondents to select an answer from a range of unordered categories, nominal variables can be transformed into binary data by introducing a binary variable for each of the answer options.

Metric data: Options allowing respondents to indicate a number, it allow any statistical procedure to be performed and are therefore well suited for segmentation analysis.

The most commonly used response option in survey research, however, is a limited number of ordered answer options larger than two which generates an **ordinary data**,

But the distance between adjacent answer options is not clearly defined.

Preferably, therefore, either metric or binary response options should be provided to respondents if those options are meaningful with respect to the question asked.

5.3.3 Response Styles:

Survey data is prone to capturing biases. A response bias is a systematic tendency to respond to a range of questionnaire items on some basis other than the specific item content. If a bias is displayed by a respondent consistently over time, and independently of the survey questions asked, it represents a response style.

- To minimise the risk of capturing response styles when data is collected for the purpose of market segmentation.
- Respondents affected by such a response style must be removed before choosing to target such a market segment.
- Additional analyses are required to exclude this possibility.

5.3.4 Sample Size:

Many statistical analyses are accompanied by sample size recommendations. If the sample size is insufficient then the segmentation algorithm will face several problems such as it will become impossible to determine which the correct number of market segments is. If the sample size is **sufficient**, however it is very easy to determine the number and nature of segments in the data set.

Viennese psychologist Formann (1984) recommends that the sample size should be at least $2p$ (better five times $2p$), where p is the number of segmentation variables. Similarly, several psychologists have recommended their own proposals based on the Sample size.

Knowing the true structure of the data sets, they tested sample size requirement for algorithms to correctly identify the true segments, increasing the sample size improves the correctness of the extracted segments. Interestingly, however, the biggest improvement is achieved by increasing very small samples. As a result of this larger sample sizes always improve an algorithm and have the ability to identify the correct market segmentation solution.

Overall, this study demonstrates the importance of having a sample size sufficiently large to enable an algorithm to extract the correct segments, Results from this study also highlight the importance of collecting high-quality unbiased data as the basis for market segmentation analysis.

optimally, data used in market segmentation analyses should

- contain all necessary items;
- contain no unnecessary items;
- contain no correlated items;
- contain high-quality responses;
- be binary or metric;
- be free of response styles;
- include responses from a suitable sample given the aim of the segmentation study;
- include a sufficient sample size given the number of segmentation variables (100 times the number of segmentation variables).

5.4 Data from Internal Sources:

Organisations have access to substantial amounts of internal data that can be harvested for the purpose of market segmentation analysis. Another advantage is that such data are usually automatically generated and if organisations are capable of storing data in a format that makes them easy to access no extra effort is required to collect data. The danger of using internal data is that it may be systematically biased by over-representing existing customers, the problem here is this may lead to missing of customers those who differ systematically from current customers in their consumption patterns.

5.5 Data from Experimental Studies:

Experimental data can result from field or laboratory experiments and can also result from choice experiments or conjoint analyses. For example, they can be the result of tests how people respond to certain advertisements. The response to the advertisement could then be used as a segmentation criterion. Consumers then indicate which of the products they prefer. This information can also be used as a segmentation criterion.

Chapter 10

Step 8: Selecting the Target Segment(s)

10.1 The Targeting Decision:

Market segmentation is a strategic marketing tool. The selection of one or more target segments is a long-term decision significantly affecting the future performance of an organisation. After a **global market segmentation** solution has been chosen typically at the end of Step 5 a number of segments are available for **detailed inspection**. These segments are **profiled** in Step 6, and described in Step 7. In Step 8, one or more of those market segments need to be selected for targeting the knock-out criteria have already been applied in previous steps. In both Steps 6 and 7, it would have become clear if a market segment has needed the organisation cannot satisfy. Hence, they require the **STEP 8**.

The first task in Step 8, therefore, is to ensure that all the market segments that are still under consideration to be selected as target markets have well and truly passed the knock-out criteria test. Once this is done, the attractiveness of the remaining segments and the relative organisational competitiveness for these segments needs to be evaluated, in other words, the segmentation team has to ask a number of questions which fall into two broad categories:

1. Which of the market segments would the organisation most like to target?
2. Which of the organisations offering the same product would each of the segments most like to buy from?

Answering these two questions forms the basis of the target segment decision

10.2 Market Segment Evaluation:

In Target market selection, most of the books recommends the use of the **Decision matrix** – To visualise relative segment attractiveness and relative organisational competitiveness for each market segment.

Many versions of decision matrices have been proposed as namely,

- **Boston matrix** - proposed by the Boston Consulting Group.
- **General Electric / McKinsey matrix** - developed jointly by General Electric and McKinsey.
- **Directional policy matrix**
- **McDonald four-box directional policy matrix**
- **Market attractiveness business strength matrix**

The aim of all these decision matrices along with their visualisations is to make it easier for the organisation to evaluate alternative market segments, and select one or a small number for targeting. The market segmentation team has to power of decision making.

Whichever variation is chosen, the **two criteria** plotted along the axes cover two dimensions: **Segment attractiveness**, and **Relative organisational competitiveness** specific to each of the segments.

- Segment attractiveness along the **x-axis**, and relative organisational competitiveness along the **y-axis**.
- Segments appear as **circles**.
- The size of the segments determines the quantity.

The location of each market segment in the segment evaluation plot is then computed by **multiplying** the **weight of the segment attractiveness criterion**

(agreed upon in Step 2) with the **value of the segment attractiveness criterion** for each market segment.

The result is a **weighted value** for each segment attractiveness criterion for each segment. Those values are added up, and represent a segments overall attractiveness which is plotted in x- axis. **First, criteria are agreed upon**, next they are **weighted**, then each segment is **rated**, and finally the values are **multiplied** and **summed up**.

The last aspect of the plot is the **bubble size** which represents a critical value when **target segments are selected**. The bubble plot serves as a useful basic for the segmentation team.

As having the target segmentation team, they discuss using the above determined information and select the appropriate segment for the well-being of the organisation.

Replication of McDonalds Case Study in Python:

GITHUB LINK:

❖ <https://github.com/Deivaprakash56/Feynn-lab-study-task>

MCDONALDS DATASET:

❖ <https://github.com/Deivaprakash56/Feynn-lab-study-task/blob/main/mcdonalds.csv>