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Steps Summary

Step First:-Deciding not to segment

We need to identify what steps should not segmented in business market segmentation because the resources are always limited we cannot waste resources and time it can also increase the cost of segmentation.

There are some steps that should be in mind Deciding not to segment:-

• Can be expensive. It takes research to survey customers and define segments, and surveys can cost many thousands of dollars.

• Time-consuming. Market segmentation entails developing customer profiles and personas from the research data, and that takes time away from potentially more pressing tasks.

• Can miss important customers. A significant consumer segment may fall through the cracks. The Houston Chronicle gives the example of a small cereal company that markets its sweeter products during cartoons or kids' programs, forgetting that lots of adults also love sweet cereals for breakfasts and snacks. "The failure to target secondary consumers may cause a small company to lose significant sales," the paper reports.
If you misread the desires of a target segment, it can cause consumer backlash, says the Content Marketing Institute.

Step two: Specifying the ideal target segment

A market segment can be based on almost any criteria, including demographics, customer behavior, location, lifestyle and personality. A good segmentation strategy can focus on multiple, specific segments or overlapping segments that consider different combinations of variables.

Some strategies for choosing a market segmentation strategy include:

- Considering who needs your products

- Gathering data about your customers
- Looking for underserved segments
- Researching audience behaviors
- Developing buyer personas
- Considering positioning options
- Studying the competition
- Testing your appeal with each segment
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Step three: Collecting Data

To collect data for market segmentation, you can use a variety of methods, including:

- Surveys: Get information about demographics, purchasing patterns, and preferences
- Interviews: Gather data from your customers
- Lead generation forms: Collect data from potential new customers
- Feedback forms: Collect data from your customers
- Website analytics: Collect data about your website
- Social media insights: Collect data about your customers
- Purchase history: Collect data about your customers
- Data tracking tools: Capture customer interactions and behaviors

You can also use secondary resources and market research surveys to study your market.

Some segmentation approaches include:

- Factor segmentation
- K-means clustering
- Two Step cluster analysis
- Latent class cluster analysis

Code: Case study of McDonald's

```python
import pandas as pd

mcdonalds=pd.read_csv("https://raw.githubusercontent.com/terrytangyuan/MSA/master/data/mcdonalds.csv")

print(mcdonalds.columns)

print(mcdonalds.shape)

print(mcdonalds.head(3))

import numpy as np


MD_x = np.array(mcdonalds.iloc[:, 0:11])

MD_x = (MD_x == "Yes").astype(int)

np.round(np.mean(MD_x, axis=0), 2)


import numpy as np

from sklearn.decomposition import PCA


MD_pca = PCA()

MD_pca.fit(MD_x)


print("Importance of components:")

print("PC1 PC2 PC3 PC4 PC5")

print("Standard deviation", np.round(MD_pca.explained_variance_, 4))

print("Proportion of Variance", np.round(MD_pca.explained_variance_ratio_, 4))
```

```python
print("Cumulative Proportion", np.round(np.cumsum(MD_pca.explained_variance_ratio_), 4))

print("PC6 PC7 PC8 PC9")

print("Standard deviation", np.round(MD_pca.explained_variance_[5:], 4))

print("Proportion of Variance", np.round(MD_pca.explained_variance_ratio_[5:], 4))

print("Cumulative Proportion", np.round(np.cumsum(MD_pca.explained_variance_ratio_)[5:], 4))

print("PC10 PC11")

print("Standard deviation", np.round(MD_pca.explained_variance_[9:], 4))

print("Proportion of Variance", np.round(MD_pca.explained_variance_ratio_[9:], 4))

print("Cumulative Proportion", np.round(np.cumsum(MD_pca.explained_variance_ratio_)[9:], 4))

import numpy as np


print(MD.pca.round(1))

# Standard deviations (1, .., p=11):

# [1] 0.8 0.6 0.5 0.4 0.3 0.3 0.3 0.3 0.3 0.2 0.2

print("Rotation (n x k) = (11 x 11):")

print("PC1 PC2 PC3 PC4 PC5 PC6 PC7")

print("yummy 0.477 -0.36 0.30 -0.055 -0.308 0.17 -0.28")

print("convenient 0.155 -0.02 0.06 0.142 0.278 -0.35 -0.06")

print("spicy 0.006 -0.02 0.04 -0.198 0.071 -0.36 0.71")

print("fattening -0.116 0.03 0.32 0.354 -0.073 -0.41 -0.39")

print("greasy -0.304 0.06 0.80 -0.254 0.361 0.21 0.04")

print("fast 0.108 0.09 0.06 0.097 0.108 -0.59 -0.09")

print("cheap 0.337 0.61 0.15 -0.119 -0.129 -0.10 -0.04")
```

```python
print("tasty 0.472 -0.31 0.29 0.003 -0.211 -0.08 0.36")

print("expensive -0.329 -0.60 -0.02 -0.068 -0.003 -0.26 -0.07")

print("healthy 0.214 -0.08 -0.19 -0.763 0.288 -0.18 -0.35")

print("disgusting -0.375 0.14 0.09 -0.370 -0.729 -0.21 -0.03")

print("PC8 PC9 PC10 PC11")

print("yummy 0.01 -0.572 0.110 0.045")

print("convenient -0.11 0.018 0.666 -0.542")

print("spicy 0.38 -0.400 0.076 0.142")

print("fattening 0.59 0.161 0.005 0.251")

print("greasy -0.14 0.003 -0.009 0.002")

print("fast -0.63 -0.166 -0.240 0.339")

print("cheap 0.14 -0.076 -0.428 -0.489")

print("tasty -0.07 0.639 -0.079 0.020")

print("expensive 0.03 -0.067 -0.454 -0.490")

print("healthy 0.18 0.186 0.038 0.158")

print("disgusting -0.17 0.072 0.290 -0.041")
# Import the necessary module

from flexclust import MD_pca


# Plot the predicted values from MD_pca

predicted_values = MD_pca.predict()

plt.scatter(predicted_values[:, 0], predicted_values[:, 1], color='grey')


# Project the axes of MD_pca
```

```
MD_pca.projAxes()

# Import the necessary library

from flexmix import flexmix

import numpy as np


# Set the random seed

np.random.seed(1234)


# Fit the flexmix model

MD_m28 = flexmix(MD_x ~ 1, k=range(2, 9), nrep=10, model=FLXMCmvbinary(), verbose=False)


# Print the model

print(MD_m28)

MD.ref2 = refit(MD.reg2)

print(summary(MD.ref2))
```