OUTPUT 1 :OPTIMAL PRODUCT

To find the optimal product, you need to calculate the Total Product Utility (TPU) for each possible combination of attributes and levels. Here’s how to do it using the provided re-scaled utilities:

1. Identify Attributes and Levels:

2. Calculate TPU:

- For each attribute, select the level with the highest utility.

- Sum these utilities to get the TPU for the optimal product.

3. Select Highest Utilities:

- Price: 100-150 = 0.808823529

- Subscribers: >2000 = 0.220588235

- Ads: frequent interruptions = 0.220588235

- Titles per Month: <5 titles per month = 0.382352941

- Ratings: 3-4.5 stars = 0.617647059

- Duration: <30 min = 0.602941176

- Streams: 1 stream = 0.367647059

4. Calculate TPU:

- TPU = 0.808823529 + 0.220588235 + 0.220588235 + 0.382352941 + 0.617647059 + 0.602941176 + 0.367647059

- TPU = 3.220588235

However, the intercept value (1) should be considered as it represents the minimum acceptable product for it to be part of the target market’s consideration set. Therefore, the optimal product’s TPU should be greater than the intercept.

Optimal Product:

- Price: 100-150

- Content library: >2000

- Ads: frequent interruptions

- Titles per Month: <5 titles per month

- Ratings: 3-4.5 stars

- Duration: <30 min

- Streams: 1 stream

- TPU: 3.220588235

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Description automatically generated

OUTPUT 2: OVERALL FEATURE IMPORTANCE

1. Price:

- Highest utility: 0.808823529

- Lowest utility: 0.220588235

- Range: 0.808823529 - 0.220588235 = 0.588235294

2. Subscribers:

- Highest utility: 0.220588235

- Lowest utility: 0.147058824

- Range: 0.220588235 - 0.147058824 = 0.073529411

3. Ads:

- Highest utility: 0.220588235

- Lowest utility: 0.176470588

- Range: 0.220588235 - 0.176470588 = 0.044117647

4. Titles per Month:

- Highest utility: 0.382352941

- Lowest utility: 0.220588235

- Range: 0.382352941 - 0.220588235 = 0.161764706

5. Ratings:

- Highest utility: 0.617647059

- Lowest utility: 0.220588235

- Range: 0.617647059 - 0.220588235 = 0.397058824

6. Duration:

- Highest utility: 0.602941176

- Lowest utility: 0.220588235

- Range: 0.602941176 - 0.220588235 = 0.382352941

7. Streams:

- Highest utility: 0.367647059

- Lowest utility: 0 (since 2-3 streams has a utility of 0)

- Range: 0.367647059 - 0 = 0.367647059

- Sum of all ranges:

- 0.588235294 + 0.073529411 + 0.044117647 + 0.161764706 + 0.397058824 + 0.382352941 + 0.367647059 = 2.014705882

- Feature Importance:

- Price: 0.588235294 / 2.014705882 = 0.2921 (or 29.20%)

- Subscribers: 0.073529411 / 2.014705882 = 0.0365 (or 3.65%)

- Ads: 0.044117647 / 2.014705882 = 0.0219 (or 2.19%)

- Titles per Month: 0.161764706 / 2.014705882 = 0.0802 (or 8.03%)

- Ratings: 0.397058824 / 2.014705882 = 0.1971 (or 19.71%)

- Duration: 0.382352941 / 2.014705882 = 0.1897 (or 18.98%)

- Streams: 0.367647059 / 2.014705882 = 0.1825 (or 18.25%)

Overall Feature Importance:

- Price: 29.20%

- Subscribers: 3.65%

- Ads: 2.19%

- Titles per Month: 8.03%

- Ratings: 19.71%

- Duration: 18.98%

- Streams: 18.25%

Order of importance based on Percentage

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OUTPUT 3 : CALCULATION OF MARKET SHARE

To calculate market share using conjoint analysis, you need to follow these steps:

1. **Calculate Utilities for Each Product**:
   * Use the re-scaled utilities for each attribute level.
   * Sum the utilities for each attribute level to get the Total Product Utility (TPU) for each product.
2. **Example Calculation**:
   * Suppose we have three products:
     + **Product A**: <50, under 500, no ads, <5 titles per month, 3-4.5 stars, <30 min, 1 stream
     + **Product B**: 100-150, 500-2000, occasional interruptions, 5-20 titles, 3-4.5 stars, 30-90, 1 stream
     + **Product C**: >150, >2000, frequent interruptions, >20 titles per month, >4.5, >90, >3 streams
3. **Calculate TPU for Each Product**:
   * **Product 1**:
     + **Price**: <50 = 0.661764706
     + **Subscribers**: under 500 = 0.147058824
     + **Ads**: no ads = 0.176470588
     + **Titles per Month**: <5 titles per month = 0.382352941
     + **Ratings**: 3-4.5 stars = 0.617647059
     + **Duration**: <30 min = 0.602941176
     + **Streams**: 1 stream = 0.367647059
     + **TPU**: 2.957382353
   * **Product 2**:
     + **Price**: 100-150 = 0.808823529
     + **Subscribers**: 500-2000 = 0.176470588
     + **Ads**: occasional interruptions = 0.191176471
     + **Titles per Month**: 5-20 titles = 0.25
     + **Ratings**: 3-4.5 stars = 0.617647059
     + **Duration**: 30-90 = 0.426470588
     + **Streams**: 1 stream = 0.367647059
     + **TPU**: 2.837235294
   * **Product 3**:
     + **Price**: >150 = 0.220588235
     + **Subscribers**: >2000 = 0.220588235
     + **Ads**: frequent interruptions = 0.220588235
     + **Titles per Month**: >20 titles per month = 0.220588235
     + **Ratings**: >4.5 = 0.220588235
     + **Duration**: >90 = 0.220588235
     + **Streams**: >3 streams = 0.220588235
     + **TPU**: 1.543529412
4. **Calculate Market Share**:
   * Use the formula: Preference Share = exp(Utility of Us) divided by the sum of exp(Utility of Us + Utility of them)
   * **Product 1**: exp(2.957382353) / [exp(2.957382353) + exp(2.837235294) + exp(1.543529412)]
   * **Product 2**: exp(2.837235294) / [exp(2.837235294) + exp(2.957382353) + exp(1.543529412)]
   * **Product 3**: exp(1.543529412) / [exp(1.543529412) + exp(2.957382353) + exp(2.837235294)]
5. **Compute Exponential Values**:
   * **Product 1**: exp(2.957382353) = 19.23
   * **Product 2**: exp(2.837235294) = 17.08
   * **Product 3**: exp(1.543529412) = 4.68
   * **Sum**: 19.23 + 17.08 + 4.68 = 40.99
6. **Calculate Market Share**:
   * **Product 1**: 19.23 / 40.99 = 46.89%
   * **Product 2**: 17.08 / 40.99 = 41.69%
   * **Product 3**: 4.68 / 40.99 = 11.42%

Market Share:

* **Product 1**: 46.89%
* **Product 2**: 41.69%
* **Product 3**: 11.42%

These percentages represent the estimated market share for each product based on the calculated utilities and the preference share formula.

Product TPU’s

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CALCULATION OF MARKET SHARE

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A graph of a market share

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OUTPUT 4 : SIMULATION THE MARKET

We have create Four hypothetical Products based on the Previous top performing products and few changes. We choose Product 1,3,9,11 for this simulation. Made changes in their attributes you can see the changes made in BOLD. We have calculate TPU for the new products.

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Computed market share for the new ones and recorded the percentage before and after the changes made to the products.

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The Market share is increasing when we are changing lowest re-scale value to high value in particular attribute and decreasing when we move away from high re-scale value in attribute. In first three products, we changed their attributes containing high re-scale value to lower value. We can see that the percentage change after the market simulation is negative. Whereas in 4th product I have changed > 90 min to < 30 min average content duration because through our optimum product we found that market likes short content compared to long ones. We can see after the market simulation the percentage change is 34%.

With this we can conclude that, different target audience have different optimum product. With this tool, we have better mechanism to make decisions in terms of product packaging and branding as well as marketing.

OUTPUT 5: THE INTERPRETATION OF INTERCEPT

The Re-scaled intercept suggests a market entry barrier as perceived by the target market.

* Minimum acceptable product for it to be part of target’s market’s consideration set
* Any product’s TPU must be greater than the intercept
  + In our case all the TPU’s are greater than intercept.
* All our product surpasses the market’s barrier entry but that doesn't necessarily mean that we should introduce all the products. Considering factors such as resources, target audience, potential for profit and other factors the decision should be taken.