Free Choice In-Context Preference Ranking: A New Approach for Portfolio Assessment

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Product Challenges

- **Existing Products**
  - How do our products stack up vs. competitors?
    - Are our current products better than the competition?
    - What if we add line extension or replace the existing SKUs with new products? How does this impact the overall portfolio?

- **New Products**
  - What is the optimum mix of products to launch?
    - How many and which ones should be included?
Review of Current Approaches
Review of Current Approach – Hedonic Ratings

- Many companies rely on hedonic ratings (liking or purchase interest)
  - Compare mean liking or TB/T2B on purchase interest
- Compare performance at the product level, but not the product bundle
- Does not reveal products that appeal to a specific consumer segment
Review of Current Approach – Paired Preference Test

- Generally for head to head comparison e.g., own vs. competitor
  - Does not work with a large set of products
- In many cases, the preference question is asked after hedonic ratings – potential consistent bias

% Indicated Most Preferred Product

- Own Product: 53%
- Competitor: 39%
- None: 8%
Review of Current Approach – TURF

- TURF (Total Unduplicated Reach and Frequency)
  - Identify the optimal mix of products (# and components) that maximize consumer reach
    - Pick the combination that compliments well and gains highest reach, regardless of individual product appeal

Ex: Select 2 products to the market

<table>
<thead>
<tr>
<th>Product</th>
<th>TB Purchase Interest</th>
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<tbody>
<tr>
<td>Product A</td>
<td>30%</td>
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<tr>
<td>Product B</td>
<td>20%</td>
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<tr>
<td>Product C</td>
<td>15%</td>
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</table>

Option 1: A+ B
Total Reach = 40%

Option 2: A+ C
Total Reach = 45%
Challenges with TURF

- Does not tell us # products we need to beat the competition
- Does not tell us where we are relative to competition

Ex: Assume 7 fragrances (A,B,C,D,E,F,G) are being considered
Alternative Approach

“Free Choice In-Context Preference Ranking”
Free Choice In-Context Preference Ranking

- Measure preference based on multiple use/free choice in natural setting
- Handle a large set of products, including competitive products
- Apply preference ranking data to address portfolio comparison and optimization questions
How does it work?

- Assign a set of products to use in sequential monadic test over multiple weeks. Everyone receives all products (can include competitive products)

- Within each set, use products in a sequential order and indicate whether it is in their consideration set

- Assign a new set of products (those in the consideration set) – different set for each individual. Freely use products and rank preference at the end
Case Study

Scenario:
- Company X (4 SKUs) vs. Competitor Y (2 SKUs)
- Company X also considers some new products in this product line

Business Questions:
- With the current offering, what is Company X’s reach vs. Competitor Y?
- For Company X, Do they need all 4 SKUs? What if they keep only 2 best performing SKUs?
- If Company X wants to change its product offerings, what is the best mix of their products? How many do they need to beat the competition?
Products

Company X’ Current 4 SKUs

A B C D

Competitors Y - 2 SKUs

E F

Company X’ potential new products

G H I J
### Data

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<th>Participant ID</th>
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NOTE: Product not shown means it is not in the consideration set for that participant.
Question # 1:

- With the current offering, what is Company X’s reach vs. Competitor Y?

Company X’
Current 4 SKUs

[Red circles with A, B, C, D]

Competitors Y -
2 SKUs

[Blue hexagons with E, F]
Analysis Plan

▪ Identify frequency each product gets ranked first
  – Company X: A B C D
  – Competitor Y: E F

▪ If other products, other than these 6 products, are ranked first, go to the next rank until we find one of these products
  – E.g., Rank order: G > J > F > D

▪ In this case, F is considered ranked first

▪ Identify # participants who have none of these 6 products in the consideration set
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</table>
Company X (4 SKUs) vs. Competitors Y (2 SKUs)

Company X
- A (10%)
- B (13%)
- C (18%)
- D (8%)
- E (11%)
- F (16%)

Competitor Y
- A (24%)
- B (16%)
- C (11%)
- D (10%)
- E (13%)
- F (18%)

Competitor Y - 31% Reach
Company X - 59% Reach
Question # 2:

- For Company X, is there a way to streamline the current offering?
  - Do they need all 4 SKUs? What if they keep only 2 best performing SKUs?
Analysis Plan

- Identify frequency each product gets ranked first
  - Company X: A, B
  - Competitor Y: E, F

- If other products, other than these 4 products, are ranked first, go to the next rank until we find one of these products
  - E.g., Rank order: C > J > F > D

  - In this case, F is considered ranked first

- Identify # participants who have none of these 4 products in the consideration set
### Identify # Rank First on 4 Products (A,B vs. E,F)

<table>
<thead>
<tr>
<th>Participant ID</th>
<th>Ranked 1st</th>
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**NOTE:** Product not shown means it is not in the consideration set for that participant.
Company X (2 Leading SKUs) vs. Competitors Y (2 SKUs)

Company X

- A: 20%
- B: 11%
- F: 30%
- E: 11%

Competitor Y

- E: 20%
- F: 18%
- B: 21%
- A: 39%

Competitor Y - 50% Reach

Company X - 39% Reach
Question # 3:

- If Company X wants to change its product offerings, what is the best mix of their products? How many do they need to beat the competition?

Company X
Current 4 SKUs
A B C D
New Products
G H I J

Competitors Y -2 SKUs
E F
## Different Scenarios

**Scenario 1: Company X offers 1 product**

<table>
<thead>
<tr>
<th></th>
<th>% Reach</th>
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<tbody>
<tr>
<td>Company X:</td>
<td>B</td>
</tr>
<tr>
<td>Competitor Y:</td>
<td>E, F</td>
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</tbody>
</table>

30% Reach

**Scenario 2: Company X offers 2 product**

<table>
<thead>
<tr>
<th></th>
<th>% Reach</th>
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</thead>
<tbody>
<tr>
<td>Company X:</td>
<td>B, A</td>
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<tr>
<td>Competitor Y:</td>
<td>E, F</td>
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</table>

39% Reach

**Scenario 8: Company X offers 8 product**

<table>
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<tr>
<th></th>
<th>% Reach</th>
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<tbody>
<tr>
<td>Company X:</td>
<td>A, B, C, D, G, H, I, J</td>
</tr>
<tr>
<td>Competitor Y:</td>
<td>E, F</td>
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</table>

60% Reach

30% Reach
Identify # Product Mix Using Equilibrium Approach

Company X’s Reach

Competitor Y’s Reach with 2 SKUs

% Reach

# Products Company X Considers
Conclusion - Free Choice In-Context Preference Ranking

- Allows us to address complex business questions (e.g., portfolio assessment and optimization)

- Measure preference based on multiple use in natural setting
  - Include a large set of products, including competitive products

- Output is intuitive and easy to understand and easy to communicate to the business
Melissa’s Granddaughter