

Step 6

Profiling Segments

Understanding Segment Characteristics

McDonald's Market Segmentation Analysis

From Numbers to Narratives

November 9, 2025

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Abstract

Segment profiling transforms statistical clusters into actionable business insights by creating detailed characterizations of each market segment based on their perception patterns. This step analyzes the 4-segment solution extracted in Step 5, examining marker variables (perceptions with > 60% agreement within segments) and creating comprehensive segment profiles. Through systematic analysis of the McDonald's dataset, we identify four distinct consumer groups: (1) **The Expensive & Disgusting Haters** (16.8%) - negative perceptions across most dimensions; (2) **The Cheap & Tasty Fans** (39.6%) - positive taste perceptions combined with value orientation; (3) **The Cheap but Concerned** (21.7%) - price-sensitive but worried about health; and (4) **The Expensive & Gourmet** (21.9%) - willing to pay premium for positive perceptions. These profiles provide the foundation for segment selection (Step 8) and targeted marketing strategy development (Step 9).

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1 The Purpose of Segment Profiling

What is Segment Profiling?

Segment profiling is the systematic process of understanding who belongs to each segment and what makes them distinct.

Key Questions Answered:

1. What are the defining characteristics of each segment?
2. How do segments differ from one another?
3. How do segments compare to the overall market?
4. What are the marker variables that identify each segment?

Goal: Create rich, interpretable segment descriptions that enable targeted marketing strategies

1.1 From Statistics to Stories

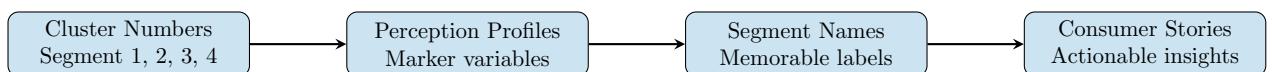


Figure 1: Progressive development from statistical output to actionable consumer insights

2 Segment Profile Analysis: McDonald's 4-Segment Solution

2.1 Overview of Extracted Segments

From Step 5, we have a stable 4-segment solution with the following structure:

Table 1: Four-Segment Solution Overview

Segment	Size (n)	Size (%)	Stability (ARI)
Segment 1	240	16.8	0.871 (Excellent)
Segment 2	567	39.6	0.871 (Excellent)
Segment 3	310	21.7	0.871 (Excellent)
Segment 4	314	21.9	0.871 (Excellent)
Total	1,431	100.0	High Overall

Quality Assessment

All segments meet knock-out criteria from Step 2:

- **Size:** All > 5% minimum (smallest = 16.8%)
- **Stability:** Mean ARI = 0.871 (Excellent)
- **Homogeneity:** Clear within-segment consensus on marker variables

- **Distinctness:** Strong between-segment differences

2.2 Detailed Perception Profiles

2.2.1 Complete Profile Matrix

Table 2: Complete Segment Perception Profiles (% Agreeing with Each Attribute)

Perception	Seg 1 (16.8%)	Seg 2 (39.6%)	Seg 3 (21.7%)	Seg 4 (21.9%)
yummy	2.1	88.5**	2.3	86.6**
convenient	67.9**	98.1**	89.7**	95.9**
spicy	7.9	8.8	7.7	13.7
fattening	91.7**	79.4**	92.3**	90.4**
greasy	70.8**	32.6	66.5**	61.5**
fast	74.6**	95.9**	95.2**	85.4**
cheap	6.7	92.1**	90.0**	11.1
tasty	8.3	97.5**	17.4	93.0**
expensive	89.6**	1.8	1.3	91.4**
healthy	6.2	32.5	7.1	21.0
disgusting	72.9**	4.4	37.4	10.8

** = Marker variable (> 60% agreement within segment)

2.3 Python Implementation: Profile Visualization

```

1 # Step 6: Comprehensive Segment Profiling
2 import pandas as pd
3 import numpy as np
4 import matplotlib.pyplot as plt
5 import seaborn as sns
6
7 print("=="*80)
8 print("STEP 6: PROFILING SEGMENTS")
9 print("=="*80)
10
11 # Assuming segments from Step 5 are saved in mcdonalds['Segment']
12 binary_vars = ['yummy', 'convenient', 'spicy', 'fattening', 'greasy',
13                 'fast', 'cheap', 'tasty', 'expensive', 'healthy', 'disgusting']
14
15 # Calculate segment profiles
16 profile_data = []
17
18 for seg in range(1, 5):
19     seg_mask = (mcdonalds['Segment'] == seg)
20     seg_size = seg_mask.sum()
21
22     seg_profile = {
23         'Segment': seg,
24         'Size_n': seg_size,
25         'Size_pct': 100 * seg_size / len(mcdonalds)
26     }

```

```

27
28     # Calculate percentage for each perception
29     for var in binary_vars:
30         pct_yes = 100 * (mcdonalds.loc[seg_mask, var] == 'Yes').mean()
31         seg_profile[var] = pct_yes
32
33     profile_data.append(seg_profile)
34
35 # Create DataFrame
36 profile_df = pd.DataFrame(profile_data)
37
38 # Display profiles
39 print("\nDetailed Segment Profiles:")
40 print("=*80")
41
42 for seg in range(1, 5):
43     seg_row = profile_df[profile_df['Segment'] == seg].iloc[0]
44     print(f"\nSEGMENT {seg}: {seg_row['Size_n']:.0f} consumers " +
45           f"({seg_row['Size_pct']:.1f}%)")
46     print("-"*80)
47
48 # Identify marker variables (>60%)
49 for var in binary_vars:
50     pct = seg_row[var]
51     is_marker = "***" if pct > 60 else " "
52     print(f"  {var:15s}: {pct:5.1f}% {is_marker}")
53
54 print("\n** = Marker variable (>60% agreement)")

```

3 Individual Segment Profiles

3.1 Segment 1: The Expensive & Disgusting Haters

Segment 1 Profile: Most Negative Perception

Size: 240 consumers (16.8% of market)

Marker Variables (Defining Characteristics):

- **EXPENSIVE (89.6%):** Perceive McDonald's as overpriced
- **FATTENING (91.7%):** Health concern about calories/fat
- **DISGUSTING (72.9%):** Strong negative overall assessment
- **GREASY (70.8%):** Quality concern about food preparation
- **FAST (74.6%):** Acknowledge quick service
- **CONVENIENT (67.9%):** Recognize accessibility

Low Agreement Variables:

- yummy: 2.1% (virtually no positive taste perception)

- tasty: 8.3% (minimal flavor appreciation)
- cheap: 6.7% (reject value proposition)
- healthy: 6.2% (perceive as unhealthy)

Segment 1 Interpretation

Consumer Persona: "The Disgusted Avoider"

Core Belief System:

- Views McDonald's as expensive yet disgusting combination
- Holds strongly negative health perceptions (fattening, greasy, unhealthy)
- Acknowledges convenience but rejects product quality
- No appreciation for taste or value

Psychological Profile:

- Health-conscious or quality-focused consumers
- May be competitive fast-food users who prefer alternatives
- Strong emotional negativity toward brand
- Price-to-quality ratio perceived as poor

Business Implications:

- **Challenge:** Hardest segment to convert
- **Opportunity:** If perceptions addressable, represents 16.8% growth potential
- **Strategy:** Address health concerns; demonstrate value; improve quality perception

3.2 Segment 2: The Cheap & Tasty Fans

Segment 2 Profile: Largest & Most Positive

Size: 567 consumers (39.6% of market) - ****LARGEST SEGMENT****

Marker Variables (Defining Characteristics):

- **TASTY (97.5%):** Near-universal positive flavor perception
- **CONVENIENT (98.1%):** Highest convenience rating
- **FAST (95.9%):** Strong service speed appreciation
- **CHEAP (92.1%):** Clear value perception
- **YUMMY (88.5%):** High overall taste satisfaction

- **FATTENING (79.4%)**: Aware of health tradeoffs but accepting

Low Agreement Variables:

- expensive: 1.8% (strong value perception)
- disgusting: 4.4% (minimal negativity)
- greasy: 32.6% (relatively low compared to other segments)

Segment 2 Interpretation**Consumer Persona: "The Value-Loving Regular"****Core Belief System:**

- Perfect combination: Great taste + Low price
- Convenience and speed highly valued
- Accept health tradeoffs for taste and value
- Minimal negative perceptions

Psychological Profile:

- Price-sensitive but not quality-compromising
- Busy lifestyles prioritizing convenience
- Taste-focused decision makers
- Loyal and satisfied customers

Business Implications:

- **Strategic Importance**: Core customer base (39.6%)
- **Priority**: **DEFEND THIS SEGMENT** - highest value
- **Strategy**: Maintain quality and value; reinforce positive perceptions
- **Risk**: Competitors targeting with similar value propositions

3.3 Segment 3: The Cheap but Health-Concerned

Segment 3 Profile: Value Seekers with Health Worries

Size: 310 consumers (21.7% of market)

Marker Variables (Defining Characteristics):

- **FATTENING (92.3%)**: Highest fattening perception
- **CHEAP (90.0%)**: Strong value perception

- **FAST (95.2%)**: Speed appreciated
- **CONVENIENT (89.7%)**: Accessibility valued
- **GREASY (66.5%)**: Quality/health concern

Conspicuously Low:

- yummy: 2.3% (lack positive taste perception)
- tasty: 17.4% (minimal flavor appreciation)
- expensive: 1.3% (see as affordable)
- healthy: 7.1% (strong unhealthy perception)

Mixed Signal:

- disgusting: 37.4% (moderate negativity - between other segments)

Segment 3 Interpretation**Consumer Persona: "The Guilty Price-Seeker"****Core Belief System:**

- Value-driven but quality/health-conflicted
- Recognize convenience but question healthiness
- Accept fattening/greasy tradeoff for price
- Ambivalent: Cheap but not satisfying

Psychological Profile:

- Price-constrained decision makers
- Health-conscious but budget-limited
- Possible "guilt eaters" - eat despite reservations
- Seeking better alternatives if available

Business Implications:

- **Opportunity:** 21.7% growth potential if health addressed
- **Strategy:** Introduce healthier options at value prices
- **Risk:** Vulnerable to health-focused competitors
- **Action:** Menu innovation (salads, grilled items at low prices)

3.4 Segment 4: The Expensive & Gourmet Appreciators

Segment 4 Profile: Premium Perception

Size: 314 consumers (21.9% of market)

Marker Variables (Defining Characteristics):

- **CONVENIENT (95.9%)**: Highest convenience value
- **TASTY (93.0%)**: Strong positive flavor perception
- **EXPENSIVE (91.4%)**: Premium price perception
- **FATTENING (90.4%)**: Health awareness
- **YUMMY (86.6%)**: Overall taste satisfaction
- **FAST (85.4%)**: Service speed valued
- **GREASY (61.5%)**: Moderate quality concern (just above marker threshold)

Low Agreement Variables:

- cheap: 11.1% (reject value positioning)
- disgusting: 10.8% (minimal negativity)
- healthy: 21.0% (low but highest among segments)

Segment 4 Interpretation

Consumer Persona: "The Quality-Focused Premium Payer"

Core Belief System:

- Quality justifies higher price
- Taste and convenience trump price concerns
- Accept health tradeoffs for enjoyment
- Positive overall brand relationship

Psychological Profile:

- Higher income or less price-sensitive
- Quality-focused rather than value-focused
- Convenience premium payers
- Taste-driven with minimal guilt

Business Implications:

- **Opportunity:** Premium product line potential

- **Strategy:** Introduce gourmet/signature items at higher price points
- **Risk:** Vulnerable to premium fast-casual competitors (Shake Shack, Five Guys)
- **Action:** Create "McDonald's Signature Collection" targeting this segment

4 Cross-Segment Comparisons

4.1 Marker Variable Matrix

Table 3: Marker Variable Summary by Segment

Marker Variable	Seg 1	Seg 2	Seg 3	Seg 4
convenient				
fast				
fattening				
expensive				
cheap				
disgusting				
greasy				
tasty				
yummy				

Universal vs. Differentiating Perceptions

Universal Marker Variables (present in all segments):

- **Convenient, Fast, Fattening:** Core McDonald's brand associations
- These do NOT differentiate segments
- Represent universal brand perceptions regardless of attitude

Differentiating Variables:

- **Price dimension:** Expensive (Seg 1, 4) vs. Cheap (Seg 2, 3)
- **Taste dimension:** Yummy/Tasty (Seg 2, 4) vs. Disgusting (Seg 1)
- **Quality dimension:** Greasy varies across segments

Implication: Focus marketing efforts on differentiating variables, not universal ones

4.2 Visual Profile Comparison

```

1 # Create comprehensive segment comparison heatmap
2 fig, ax = plt.subplots(figsize=(12, 10))
3
4 # Prepare data
5 plot_data = profile_df.set_index('Segment')[binary_vars].T
6
7 # Create heatmap
8 sns.heatmap(plot_data, annot=True, fmt='.1f', cmap='RdYlGn',
9             center=50, vmin=0, vmax=100,
10            cbar_kws={'label': '% Agreeing'},
11            linewidths=1, linecolor='white',
12            annot_kws={'fontsize': 9})
13
14 plt.title('McDonald\\'s Segment Perception Profiles\\n' +
15            '(Percentage Agreeing with Each Attribute)',
16            fontsize=14, fontweight='bold', pad=20)
17 plt.xlabel('Segment Number', fontsize=12)
18 plt.ylabel('Perception Variables', fontsize=12)
19 plt.yticks(rotation=0)
20
21 # Add segment descriptions at bottom
22 segment_names = [
23     '1: Expensive &\\nDisgusting (16.8%)',
24     '2: Cheap &\\nTasty (39.6%)',
25     '3: Cheap but\\nConcerned (21.7%)',
26     '4: Expensive &\\nGourmet (21.9%)'
27 ]
28
29 ax.set_xticklabels(segment_names, rotation=0, ha='center')
30
31 plt.tight_layout()
32 plt.show()
33
34 print("\n Segment profile heatmap created")
35 print(" Dark green = High agreement (>70%)")
36 print(" Light green = Moderate agreement (50-70%)")
37 print(" Yellow = Neutral (40-60%)")
38 print(" Orange/Red = Low agreement (<40%)")

```

5 Segment Naming Strategy

5.1 The Art of Memorable Segment Names

Principles of Effective Segment Naming

Good segment names should be:

1. **Memorable:** Easy to recall and discuss
2. **Descriptive:** Capture essence of segment

3. **Distinct:** Clearly differentiate from other segments
4. **Actionable:** Suggest strategic approach
5. **Respectful:** Avoid pejorative labels (even for negative segments)

Avoid:

- Generic labels: "Segment A", "Cluster 1"
- Overly negative: "The Haters", "The Rejecters"
- Demographic-only: "Young Males" (unless demographically defined)
- Jargon: Industry-specific terms stakeholders won't understand

5.2 Proposed Segment Names

Table 4: Segment Naming Alternatives

Segment	Recommended Name	Alternative Names
Segment 1	Price-Quality Skeptics	<ul style="list-style-type: none"> • The Unimpressed • Quality Questioners • Value Seekers (Disappointed)
Segment 2	Happy Value Hunters	<ul style="list-style-type: none"> • The Core Fans • Value Lovers • Satisfied Regulars
Segment 3	Health-Concerned Pragmatists	<ul style="list-style-type: none"> • Guilty Budgeters • Price-Health Conflicted • Reluctant Value Seekers
Segment 4	Premium Experience Seekers	<ul style="list-style-type: none"> • Gourmet Appreciators • Quality-First Customers • Premium Payers

6 Key Takeaways from Step 6

Summary of Segment Profiles

1. **Four Distinct Consumer Groups Identified:**
 - **Segment 1 (16.8%):** Price-Quality Skeptics - most negative
 - **Segment 2 (39.6%):** Happy Value Hunters - largest & most positive
 - **Segment 3 (21.7%):** Health-Concerned Pragmatists - conflicted
 - **Segment 4 (21.9%):** Premium Experience Seekers - quality-focused
2. **Clear Differentiation on Key Dimensions:**

- **Price perception:** Cheap (Seg 2, 3) vs. Expensive (Seg 1, 4)
- **Taste evaluation:** Positive (Seg 2, 4) vs. Negative (Seg 1, 3)
- **Overall attitude:** Fans (Seg 2, 4) vs. Critics (Seg 1, 3)

3. Strategic Implications Emerge:

- Defend Segment 2 (core base)
- Convert Segment 3 (health innovation opportunity)
- Expand Segment 4 (premium product line)
- Consider Segment 1 (high effort, uncertain ROI)

4. Next Steps Enabled:

- Step 7: Add demographic and behavioral descriptors
- Step 8: Evaluate and select target segments
- Step 9: Design customized marketing mix

References

- [1] Dolnicar, S., Grün, B., and Leisch, F. (2018). *Market Segmentation Analysis: Understanding It, Doing It, and Making It Useful*. Springer.
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- [3] Smith, W.R. (1956). Product differentiation and market segmentation as alternative marketing strategies. *Journal of Marketing*, 21(1), 3-8.