

CONSUMER BEHAVIOR SURVEY WITH MULTIVARIATE ANALYSIS USING SPSS FOR FMCG PURCHASE PATTERNS

1. Background and Problem Statement

A national FMCG company wanted to understand what drives customer purchase behavior for personal care products across urban and semi-urban regions. While sales data was available, it lacked behavioral insights. The company initiated a survey-based study to quantify the influence of factors such as price sensitivity, brand loyalty, advertisement recall, and packaging appeal. SPSS was used for multivariate analysis to discover latent segments and assess the impact of different predictors on purchase likelihood.

2. Objectives

- To design a structured consumer survey covering key behavioral and demographic variables
- To quantify the influence of various factors (e.g., brand loyalty, price sensitivity) on purchase decision
- To identify consumer segments through cluster analysis
- To generate data-driven recommendations for targeted marketing strategies

3. Methodology

3.1 Survey Design

- Total Questions: 30 (Mix of Likert-scale, ranking, and categorical variables)
- Sections: Demographics, Buying Frequency, Attitude toward Branding, Price Consciousness, Influence of Ads, Packaging Appeal

3.2 Data Collection

- Sampling Method: Stratified Random Sampling
- Sample Size: 600 (Urban: 350, Semi-Urban: 250)
- Data Collection Mode: Google Forms + In-store tablets

3.3 Variables Captured

- Dependent Variable: Purchase Likelihood (Likert scale)
- Independent Variables: Ad Recall, Packaging Appeal, Brand Preference, Price Score, Brand Switching History

4. SPSS Analysis Techniques Used

- Descriptive Statistics: Frequency tables for demographic segmentation
- Reliability Analysis: Cronbach's Alpha for attitude-based scales
- Factor Analysis: Reduced 12 attitude questions into 3 latent dimensions
- Multiple Linear Regression: Modeled Purchase Likelihood as a function of independent variables
- K-Means Cluster Analysis: Segmented consumers into 3 behavioral clusters

5. Results and Insights

- 68% of participants showed high brand loyalty, but were moderately price-sensitive
- Packaging was the top-ranked influencer for first-time purchase, especially among Gen Z
- Regression Model:
 - $R^2 = 0.61$ (Good fit)
 - Significant predictors: Ad Recall ($p < .01$), Price Sensitivity ($p < .05$), Packaging Appeal ($p < .01$)
- Cluster Analysis revealed:
 - Cluster 1: "Brand-Faithful Budgeters" – loyal but cautious buyers
 - Cluster 2: "Impulse Shoppers" – low brand loyalty, high packaging responsiveness
 - Cluster 3: "Value Seekers" – price-driven buyers with low ad recall

6. Deliverables

- SPSS Output Files (.sav and output viewer)
- Survey Questionnaire and Codebook
- Word Document Report (APA formatted) with visualizations

- Actionable Insights Slide Deck for Marketing Team

7. Stakeholder Relevance

Academic

- Demonstrates use of SPSS for factor analysis, regression, and clustering in consumer behavior research
- Suitable for coursework in marketing analytics, applied statistics, and behavioral research

Corporate

- Offers practical insights into consumer segmentation and buying patterns
- Helps inform branding, pricing, and campaign strategies