

## STUDY ON CONSUMER PREFERENCE AND BRAND PERCEPTION OF ICE CREAM IN TAMIL NADU USING MULTIDIMENSIONAL SCALING

M. Praveen Kumar<sup>1</sup>, G. Senthilkumar<sup>2</sup> and R. Ramachandran<sup>3\*</sup>

*Department of Dairy Business Management,  
College of Food and Dairy Technology,  
Tamil Nadu Veterinary and Animal Sciences University  
Koduveli, Chennai - 600 052*

### ABSTRACT

*Ice cream is a widely consumed dairy product across all age groups in Tamil Nadu, where intense market competition makes consumer preference and brand perception critical determinants of purchasing behaviour. This study examines consumer preferences and brand perception towards major ice cream brands and identifies key factors influencing buying decisions. Primary data were collected from 109 respondents through a structured questionnaire administered via Google Forms, covering demographics, brand awareness, consumption patterns, influencing factors, and brand-switching behaviour. Secondary data were sourced from academic journals, books, and relevant online literature. Data analysis was performed using percentage analysis, mean score, standard deviation, and Multidimensional Scaling (MDS) to evaluate perceptual positioning of brands. The results indicate that taste, quality, and brand image are the most influential factors in purchase decisions. Established and regional brands such as Arun, Aavin, and Amul show higher consumer awareness and preference. The findings also reveal significant price sensitivity and a tendency among consumers to switch brands in the absence of preferred options. The study provides insights for marketers to enhance branding, pricing, and promotional strategies in the competitive Tamil Nadu ice cream market.*

**Keywords:** Consumer preference, brand perception, ice cream brands, multidimensional scaling (MDS)

Received : 17.06.2026

Revised : 12.08.2026

Accepted : 14.08.2026

<sup>1</sup>UG Scholar,

<sup>2</sup>Professor, Department of Livestock Economics and Business Management, Madras Veterinary College, Chennai - 600 007.

<sup>3</sup>Ph.D Scholar,

\* Corresponding Author Email: ramac3356@gmail.com

### INTRODUCTION

Ice cream is one of the most widely consumed frozen dairy products across all age groups due to its pleasant taste, refreshing nature, nutritional value, and wide variety of flavours. Traditionally regarded as a luxury

food item, ice cream has evolved into a commonly consumed dairy product owing to rapid urbanization, rising disposable incomes, changing lifestyles, and increasing consumer preference for convenience foods (Goff, 2018). The growing demand for value added dairy products has further accelerated the expansion of the ice cream industry worldwide.

India has emerged as one of the fastest growing ice cream markets globally. The growth of the sector is supported by increasing per capita income, expansion of organised retail outlets, favourable demographic characteristics, and greater awareness regarding food safety and quality. Industry reports indicate that the Indian ice cream market has experienced consistent growth in recent years, driven by a large young population, changing consumption patterns, and increasing demand for branded products. Furthermore, improvements in cold chain infrastructure, refrigeration facilities, and distribution networks have enhanced product availability and quality across urban and semi urban regions (India Brand Equity Foundation, 2025).

Consumer purchasing behaviour for food products is influenced by several socioeconomic and demographic factors. Previous studies have reported that age, education, income, family size, and lifestyle significantly affect consumer preferences and purchase decisions (Kotler *et al.*, 2022). In the case of ice cream, consumers evaluate products based on multiple attributes, including taste, flavour, quality, price, packaging, availability, promotional

activities, and brand image (Keller, 2013). Studies have shown that sensory characteristics such as taste and texture remain the primary determinants of consumer acceptance and repeat purchases of ice cream products (Ares *et al.*, 2010). In addition, health perceptions, product innovation, and value for money considerations increasingly influence consumer preferences in the modern marketplace (Sipple *et al.*, 2022).

Brand perception plays a crucial role in shaping consumer attitudes and purchase behaviour. Strong brand awareness and favourable brand associations contribute significantly to customer satisfaction, loyalty, and repeat purchasing behaviour (Aaker and Equity, 1991; Keller, 1993). Consumers often rely on trusted brands as indicators of product quality, safety, and consistency, particularly in highly competitive food markets. Previous research has demonstrated that brand image, consumer trust, and past consumption experiences are important determinants of ice cream purchasing decisions (Topcu, 2015). Therefore, understanding consumer perception towards different ice cream brands is essential for developing effective marketing and branding strategies.

Tamil Nadu represents an important regional market for ice cream consumption due to its tropical climate, growing urban population, and increasing purchasing power. Consumers in the state exhibit a strong preference for branded ice cream products that offer consistent quality, hygiene, and a diverse range of flavours. Both national and regional brands actively compete by

introducing innovative products, expanding distribution networks, and implementing targeted promotional strategies to strengthen their market position. As competition intensifies, consumer perception becomes a key factor influencing brand preference and market success.

Despite the rapid growth of the ice cream industry, there remains limited empirical evidence regarding consumer perception, brand preference, and factors influencing purchase decisions among consumers in Tamil Nadu. Therefore, the present study aims to analyse consumer perception and preference towards ice cream brands, assess purchase and consumption behaviour, and identify the demographic factors influencing brand choice. Primary data were collected through a structured questionnaire administered through Google Forms. Statistical techniques, including Multidimensional Scaling (MDS), were employed to evaluate brand positioning and perceptual differences among competing brands (Hair *et al.*, 2019). The findings of this study are expected to provide valuable insights for marketers, dairy companies, and policymakers in developing effective branding, promotional, and product development strategies that align with consumer expectations and enhance competitiveness in the growing ice cream market.

## **MATERIALS AND METHODS**

### **Research Design**

The study adopts a descriptive research design to analyse consumer

perception and preference towards ice cream brands in Tamil Nadu. This design facilitates the systematic understanding of consumer attitudes, perceptions, and purchasing behaviour, along with the factors influencing brand choice. The study was conducted in Tamil Nadu, a region characterised by a warm climate, high ice cream consumption, increasing urbanisation, and growing preference for branded food products. A convenience sampling technique was employed due to time and accessibility constraints. The sample comprised 109 respondents, primarily college students and school peers, representing an active consumer segment. The sample size was considered adequate for identifying general trends in consumer behaviour.

### **Sources of Data**

#### **Primary Data**

Primary data were collected using a structured questionnaire developed through Google Forms and circulated via WhatsApp. The questionnaire captured information on demographics, brand awareness, perception, consumer preferences, purchase behaviour, and satisfaction levels were collected as per Table 1.

#### **Secondary Data**

Secondary data were obtained from textbooks, research journals, published articles, and relevant online sources to support the theoretical framework and contextual understanding of consumer behaviour and brand perception.

## Statement Collection

Initial statements were gathered from various sources, including literature reviews, research paper and articles.

## Pilot Study

Data were collected from 109 respondents in a pilot study to test the scale.

## Multidimensional Scaling (MDS)

Multidimensional Scaling (MDS) was used to understand the similarities and differences perceived by consumers among the selected ice cream brands. It provides a visual representation of the perceived relationship between brands, where brands positioned closer to each other are considered more similar, while brands positioned farther apart are considered less similar. The MDS analysis was carried out using the PROXSCAL procedure in SPSS, and a two-dimensional perceptual map was developed to represent the positioning of the selected brands. The goodness of fit (mentioned in table 2) of the MDS solution was assessed using Normalized Raw Stress, S-Stress, Dispersion Accounted For (DAF), and Tucker's Coefficient of Congruence.

## RESULTS AND DISCUSSION

### Socio demographic and economic characteristics of respondents

The socio demographic and economic characteristics of the respondents are presented in Table 3. The results revealed that the majority of households (83.49 %)

were headed by males, while only 16.51 % were female headed. This distribution reflects the prevailing sociocultural and family structure in rural and semi urban areas of Tamil Nadu, where males often serve as primary decision makers in household purchases. Similar observations were reported by Kaakandikar *et al.*, (2023) who emphasized the influence of household headship on food purchasing and consumption behaviour.

With respect to age, most respondents (79.81%) belonged to the 40–60 years age group, followed by those aged 20–40 years (13.76%) and above 60 years (6.42%). The predominance of middle aged respondents suggests that economically active individuals play a major role in household consumption decisions. Age has been identified as an important determinant of food preferences and brand choice behaviour (Verain *et al.*, 2015).

The family size distribution showed that 89.90 per cent of households comprised four to five members, indicating the predominance of medium sized families in the study area. Household size significantly influences food expenditure patterns and consumption levels, particularly for dairy and value added food products (Macwana *et al.*, 2025).

Regarding educational status, Higher Secondary (24.77%) and Undergraduate (22.02%) qualifications represented the largest respondent groups. Higher educational attainment is generally associated with greater awareness of

product quality, nutritional value, and brand attributes, which may positively influence purchasing decisions. Keller (2013) reported that education enhances consumers' ability to evaluate product information and brand credibility.

Occupational analysis revealed that farmers constituted the largest occupational category (30.27%), followed by government employees (18.34%), private sector employees (15.59%), and businesspersons (15.59%). This occupational pattern reflects the agricultural dominance of the region and suggests that occupation related income stability may influence consumer spending behaviour and food preferences (Ramkumar *et al.*, 2024).

Income distribution indicated that 41.28 per cent of respondents earned between ₹10,000 and ₹30,000 per month, while 21.10 per cent reported monthly incomes between ₹30,000 and ₹50,000. Only 11.00 per cent earned more than ₹1,00,000 per month. The predominance of low and middle income households suggests that price sensitivity and affordability remain important determinants of food purchasing decisions. Similar findings were reported by Ares *et al.* (2010), who highlighted the role of economic factors in shaping consumer food choices.

Household expenditure patterns further supported this observation, with 47.71 per cent of respondents spending less than ₹5,000 per month and 26.61 per cent spending between ₹5,000 and ₹10,000.

These findings indicate the presence of a relatively price conscious consumer segment, which may influence demand for discretionary food products such as ice cream.

### **Brand awareness and preference towards ice cream brands**

The level of brand awareness and preference among respondents is presented in Table 4. Arun recorded the highest awareness level (70.64%), followed by Amul (61.46%) and Aavin (52.29%). Kwality Wall's (38.53%) and Dairy Day (37.61%) also showed considerable levels of brand awareness among the respondents. The higher awareness of these brands may be attributed to their extensive distribution networks, strong regional presence, and sustained promotional activities. Brand awareness is widely recognized as a critical factor influencing consumer purchase intentions and brand selection (Keller, 2013).

Among the brands evaluated, Arun emerged as the most preferred brand (52.29%), followed by Amul (22.94%), Aavin (12.84%), Ibaco (10.09%), Dairy Day (1.83%), and Kwality Wall's (1.83%). The strong preference for Arun may be attributed to favourable consumer perceptions regarding taste, quality, product availability, and brand reliability. Similar findings were reported by Kadigi *et al.*, (2024), who identified perceived quality and brand trust as major determinants of consumer preference and brand loyalty in food markets.

Interestingly, although Amul and Aavin demonstrated relatively high awareness levels, their preference shares remained considerably lower than that of Arun. Similarly, Dairy Day and Kwaliti Wall's showed moderate levels of brand awareness but very low preference shares (1.83% each). This difference indicates that brand awareness alone does not necessarily translate into consumer preference. Product satisfaction, sensory appeal, product availability, and overall consumption experience may also influence consumer preference and long-term brand loyalty (Kanon and Waaje, 2024).

### **Consumer consumption behaviour and purchase preferences towards ice cream**

The consumption behaviour and purchase preferences of respondents are presented in Table 5. The findings revealed that 35.77 % of respondents consumed ice cream rarely, while 32.11 % reported monthly consumption. Daily consumption was observed among only 2.75 % of respondents, indicating that ice cream is generally perceived as an occasional or recreational food item rather than a staple dietary product. Similar observations were reported by Dagevos and Van Ophem, (2013).

Local retail shops were identified as the most preferred purchase outlet (38.53%), followed by ice cream parlours (32.11%) and supermarkets (25.68%). This preference highlights the importance of accessibility, convenience, and proximity in influencing purchase decisions. Printezis *et al.* (2019)

similarly reported that convenience remains a major determinant of food retail outlet selection.

Among product formats, cone ice cream emerged as the most preferred option (70.64%), considerably surpassing cup ice cream (12.84%) and other variants. The popularity of cone ice cream may be attributed to its affordability, portability, and suitability for impulse consumption. Massaut *et al.*, (2023) reported similar trends, emphasizing the growing consumer preference for convenient food products.

Chocolate (41.28%) and butterscotch (29.35%) were the most preferred flavours among respondents. The dominance of these flavours indicates the importance of familiarity and sensory satisfaction in shaping consumer preferences. Similar findings have been reported by Ares *et al.* (2010), who highlighted flavour familiarity as a significant determinant of food acceptance and purchase intention.

Taste and enjoyment were identified as the primary motivations for ice cream consumption (68.80%), followed by refreshment (15.59%) and celebratory occasions (10.09%). These findings underscore the importance of hedonic and sensory attributes in driving consumer behaviour. Prayogi *et al.*, (2022) reported that sensory pleasure remains one of the strongest predictors of indulgent food consumption.

Monthly expenditure on ice cream was relatively modest, with 31.19 per cent

of respondents spending between ₹51 and ₹100 and 23.85 per cent spending less than ₹50. This expenditure pattern suggests that ice cream represents a small proportion of overall household food spending and is often regarded as a discretionary purchase (Schiffman and Wisenblit, 2019).

Social media emerged as the most influential advertising medium (39.44%), followed by television (27.52%). The increasing influence of social media reflects changing communication patterns and the widespread adoption of digital technologies among consumers. Dwivedi *et al.* (2021) reported that social media marketing significantly affects consumer attitudes, brand perception, and purchase intentions. Nevertheless, nearly one-fifth of respondents indicated that advertisements did not influence their purchasing decisions, suggesting that personal experience, product quality, and word of mouth communication continue to play important roles in shaping consumer behaviour.

### **Multi Dimensional Scaling of ice cream brand**

The Multidimensional Scaling (MDS) analysis was conducted using PROXSCAL in SPSS to examine consumer preferences for different ice cream brands. The two dimensional solution provided an effective representation of the data, with the final coordinates showing how each brand was positioned in the perceptual space. Goodness-of-Fit Statistics: Normalized Raw Stress: 0.0822 (indicating a good fit); Stress-I: 0.9064; Stress-II: 0.22905;

S-Stress: 0.01929; Dispersion Accounted For (DAF): 0.99178; Tucker's Coefficient of Congruence: 0.99588. The MDS model shows a good fit, with Normalized Raw Stress ( $0.0822 < 0.10$ ), indicating accurate representation of dissimilarities. S-Stress (0.01929) is very low, and DAF (0.99178) indicates that over 99% variance is explained. Tucker's Coefficient (0.99588) confirms an excellent fit. Overall, the two-dimensional solution is reliable and suitable for interpreting brand positioning (Hair *et al.*, 2019).

As shown in Figure 1, the perceptual map generated through multidimensional scaling (MDS) revealed distinct patterns in consumer perceptions of the selected ice cream brands. Aavin and Ibaco were positioned in close proximity, indicating a high degree of perceptual similarity among consumers. Likewise, Dairy Day and Kwality Wall's formed another cluster, suggesting that these brands were perceived similarly. Amul was located relatively closer to the Aavin-Ibaco cluster, indicating moderate similarity with these brands. In contrast, Arun was positioned distinctly away from the remaining brands, particularly along Dimension 1, reflecting a differentiated market position. Overall, the perceptual map suggests the presence of two perceptual groupings (Aavin-Ibaco and Dairy Day-Kwality Wall's), while Arun emerged as the most distinct brand in consumers minds. These findings highlight differences in brand positioning and consumer perceptions within the ice cream market (Hair *et al.*, 2019).

## CONCLUSION

The findings of this study have important implications for ice cream manufacturers, marketers and policy makers in Tamil Nadu. Since taste, quality, price and brand image were identified as the primary determinants of consumer purchase decisions, companies should focus on maintaining consistent product quality and improving sensory attributes to enhance consumer satisfaction and brand preference. The results indicate that accessibility and availability significantly influence purchasing behaviour. Therefore, strengthening distribution networks and ensuring product availability across retail outlets, supermarkets and ice cream parlours may help improve consumer retention and reduce brand switching. Given the moderate level of brand loyalty observed among consumers, firms should implement customer engagement and loyalty building strategies to strengthen long term consumer relationships. The study also highlights the growing influence of social media and television advertising on consumer behaviour, particularly among younger consumers. Accordingly, marketers should adopt integrated promotional strategies that combine digital marketing, influencer

engagement and traditional advertising to improve brand visibility and market reach. The Multidimensional Scaling (MDS) analysis revealed distinct perceptual positions of ice cream brands in the minds of consumers. Regular assessment of consumer perceptions and competitive positioning is therefore recommended to identify market opportunities and formulate effective branding strategies. Brands occupying weaker perceptual positions should focus on improving product attributes and communication strategies to enhance their competitive standing. Future research may extend the present study by incorporating a larger geographical area, additional product attributes and advanced analytical techniques to obtain a more comprehensive understanding of consumer behaviour and brand positioning in the Indian ice cream market.

## ACKNOWLEDGEMENT

The authors thank the College of Food and Dairy Technology, Koduveli for their support during the study.

## CONFLICTS OF INTEREST

The authors declare no conflict of interest.

**Table.1. List of Variables**

| Section                                  | Category                  | Variables / Items Measured                                                                                              |
|------------------------------------------|---------------------------|-------------------------------------------------------------------------------------------------------------------------|
| <b>Demographic profile</b>               | Personal & socio-economic | Age, Gender, Education, Occupation, Income, Family size, Number of adults, Number of children, Monthly food expenditure |
| <b>Brand perception &amp; preference</b> | Awareness & usage         | Brand awareness, Preferred brand, Frequency of consumption                                                              |
|                                          | Product preference        | Type of ice cream, Flavour preference                                                                                   |
|                                          | Purchase behaviour        | Place of purchase, Average spending per purchase                                                                        |
| <b>Consumer behaviour</b>                | Decision factors          | Factors influencing purchase (taste, quality, price, brand image, etc.)                                                 |
|                                          | Consumption motive        | Reason for buying ice cream                                                                                             |
|                                          | Promotion influence       | Type of advertisement influencing buying behaviour                                                                      |

**Table.2. Goodness of fit**

| Measures                           | Value   |
|------------------------------------|---------|
| Normalized Raw Stress              | 0.0822  |
| Stress – I                         | 0.9064  |
| Stress – II                        | 0.22905 |
| S – Stress                         | 0.01929 |
| Dispersion Accounted For (DAF)     | 0.99178 |
| Tucker's Coefficient of Congruence | 0.99588 |

**Table.3. Socio-demographic and economic profile of respondents' households in Tamil Nadu**

| Test of Association                  |         | Responses (n=109) | Percentage |
|--------------------------------------|---------|-------------------|------------|
| <b>Gender of head of the family</b>  | Male    | 91                | 83.49      |
|                                      | Female  | 18                | 16.51      |
| <b>Age of the head of the family</b> | 20 – 40 | 15                | 13.76      |
|                                      | 40 – 60 | 87                | 79.81      |
|                                      | 60 – 70 | 7                 | 6.42       |
| <b>Size of the family</b>            | 1 -3    | 7                 | 6.42       |
|                                      | 4 – 5   | 98                | 89.90      |
|                                      | > 5     | 4                 | 3.66       |

|                                              |                     |    |       |
|----------------------------------------------|---------------------|----|-------|
| <b>Education qualification of the family</b> | Illiterate          | 6  | 5.50  |
|                                              | Primary             | 6  | 5.50  |
|                                              | Secondary           | 21 | 19.27 |
|                                              | Higher Secondary    | 27 | 24.77 |
|                                              | Diploma/ITI         | 10 | 9.17  |
|                                              | UG                  | 24 | 22.02 |
|                                              | PG                  | 14 | 12.84 |
|                                              | PhD                 | 1  | 0.92  |
| <b>Occupation of head of the family</b>      | Farmer              | 33 | 30.27 |
|                                              | Government employee | 20 | 18.34 |
|                                              | Private employee    | 17 | 15.59 |
|                                              | Business            | 17 | 15.59 |
|                                              | Professional        | 4  | 3.66  |
|                                              | Retired             | 3  | 2.75  |
|                                              | Daily Wage Labour   | 15 | 13.76 |
| <b>Family's monthly income</b>               | < ₹10,000           | 17 | 15.59 |
|                                              | ₹10,000 - ₹30,000   | 45 | 41.28 |
|                                              | ₹30,000 – ₹50,000   | 23 | 21.10 |
|                                              | ₹50,000 – ₹70,000   | 7  | 6.42  |
|                                              | ₹70,000 - ₹1,00,000 | 5  | 4.58  |
|                                              | > ₹1,00,000         | 12 | 11.00 |
| <b>Family's monthly expenditure</b>          | < 5,000             | 52 | 47.71 |
|                                              | 5,000 – 10,000      | 29 | 26.61 |
|                                              | 10,000 – 15,000     | 15 | 13.76 |
|                                              | 15,000 – 20,000     | 6  | 5.50  |
|                                              | > 20,000            | 7  | 6.42  |

Table.4. Brand awareness and preferred ice cream brands among consumers in Tamil Nadu

| Test of Association    |               | Responses (n=109) | Percentage |
|------------------------|---------------|-------------------|------------|
| <b>Brand awareness</b> | Arun          | 77                | 70.64      |
|                        | Aavin         | 57                | 52.29      |
|                        | Ibaco         | 44                | 40.36      |
|                        | Amul          | 67                | 61.46      |
|                        | Dairy Day     | 41                | 37.61      |
|                        | Kwality Walls | 42                | 38.53      |

|                                 |               |    |       |
|---------------------------------|---------------|----|-------|
| <b>Consumer Preferred Brand</b> | Arun          | 57 | 52.29 |
|                                 | Amul          | 25 | 22.94 |
|                                 | Aavin         | 14 | 12.84 |
|                                 | Ibaco         | 11 | 10.09 |
|                                 | Dairy Day     | 2  | 1.83  |
|                                 | Kwality walls | 2  | 1.83  |

**Table.5. Consumer consumption behaviour and purchase preferences towards ice cream in Tamil Nadu**

| <b>Test of Association</b>          |                      | <b>Responses (n=109)</b> | <b>Percentage</b> |
|-------------------------------------|----------------------|--------------------------|-------------------|
| <b>Consumption of ice cream</b>     | Daily                | 3                        | 2.75              |
|                                     | Weekly ones          | 24                       | 22.01             |
|                                     | 2-3 times in week    | 8                        | 7.33              |
|                                     | Monthly              | 35                       | 32.11             |
|                                     | Rarely               | 39                       | 35.77             |
| <b>Place of purchase</b>            | Ice cream Parlour    | 35                       | 32.11             |
|                                     | Super Market         | 28                       | 25.68             |
|                                     | Local shops          | 42                       | 38.53             |
|                                     | Restaurant           | 1                        | 0.91              |
|                                     | Street Vendors       | 3                        | 2.75              |
| <b>Type of ice cream preference</b> | Cup                  | 14                       | 12.84             |
|                                     | Cone                 | 77                       | 70.64             |
|                                     | Stick/Bar            | 9                        | 8.25              |
|                                     | Ball                 | 1                        | 0.91              |
|                                     | Small Tub            | 4                        | 3.66              |
|                                     | Family Pack          | 4                        | 3.66              |
| <b>Flavour of ice cream prefer</b>  | Vanilla              | 16                       | 14.67             |
|                                     | Chocolate            | 45                       | 41.28             |
|                                     | Strawberry           | 9                        | 8.25              |
|                                     | Butterscotch         | 32                       | 29.35             |
|                                     | Mango                | 1                        | 0.91              |
|                                     | Pista                | 3                        | 2.75              |
|                                     | Black currant        | 3                        | 2.75              |
| <b>Reason for buying ice cream</b>  | For Taste/ Enjoyment | 75                       | 68.80             |
|                                     | For children         | 6                        | 5.50              |
|                                     | For celebrations     | 11                       | 10.09             |
|                                     | For refreshment      | 17                       | 15.59             |

|                                                    |                     |    |       |
|----------------------------------------------------|---------------------|----|-------|
| <b>Amount spent for buying ice cream (monthly)</b> | 0 – 50              | 26 | 23.85 |
|                                                    | 51 – 100            | 34 | 31.19 |
|                                                    | 101- 200            | 21 | 19.27 |
|                                                    | 201 – 300           | 8  | 7.34  |
|                                                    | 301 – 500           | 15 | 13.76 |
|                                                    | > 500               | 5  | 4.59  |
| <b>Ad influences purchase</b>                      | Social media        | 43 | 39.44 |
|                                                    | Television          | 30 | 27.52 |
|                                                    | Posters             | 2  | 1.83  |
|                                                    | Words of Mouth      | 10 | 9.17  |
|                                                    | In store Promotions | 3  | 2.75  |
|                                                    | None                | 21 | 19.26 |

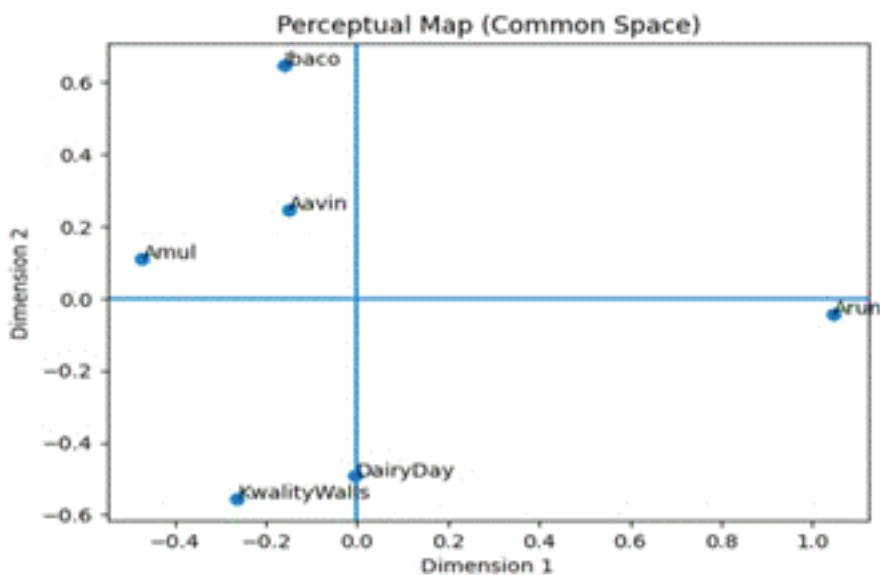


Fig.1 MDS on ice cream brand

## REFERENCE

- Aaker, D.A. and Equity, M.B., (1991). Capitalizing on the Value of a Brand Name. New York, 28(1), pp.35-37.
- Ares, G., Giménez, A. and Deliza, R., (2010). Influence of three non-sensory factors on consumer choice of functional yogurts over regular ones. *Food quality and preference*, **21**(4), pp.361-367.
- Dagevos, H. and van Ophem, J., (2013). Food consumption value: developing a consumer centred concept of value in the field of food. *British food journal*, **115**(10), pp.1473-1486.
- Dwivedi, Y.K., Ismagilova, E., Hughes, D.L., Carlson, J., Filieri, R., Jacobson, J., Jain, V., Karjaluoto, H., Kefi, H., Krishen, A.S. and Kumar, V., (2021). Setting the future of digital and social media marketing research: Perspectives and research propositions. *International journal of information management*, **59**, p.102168.
- Goff, H.D., (2018). Ice cream. In *Lipid Technologies and Applications* (pp. 329-354). Routledge.
- Hair, J.F., Black, W.C., Babin, B.J. and Anderson, R.E., (2019). Multivariate data analysis.
- India Brand Equity Foundation (IBEF). (2025). Scooping Success: Analysing Growth Trends and Opportunities in India's Ice Cream Industry. Retrieved from <https://www.ibef.org>
- Kaakandikar, R., Nerkar, M.S., Madane, M.P., Darware, M.S. and Sutar, M.P., (2023). Analysing consumer buying behaviour and preferences in the ice cream industry: Meridian Ice Cream.
- Kadigi, M.L., Philip, D., Mlay, G.I. and Mdoe, N.S., (2024). Econometric analysis of consumers' preference heterogeneity for yoghurt and ice cream products in Tanzania: A latent class model and mixed logit model. *Heliyon*, **10**(23).
- Kanon, M. and Waaje, A., (2024). Attributes influence customers towards ice-cream purchase with brand preference and income effect on purchasing ice cream: An empirical study on Dhaka city. *GLMBR-B Economics and Commerce*, **23** (B5).
- Keller, K.L., (1993). Conceptualizing, measuring, and managing customer-based brand equity. *Journal of marketing*, **57**(1), pp.1-22.
- Keller, K.L., (2013). Strategic Brand Management: Building, Measuring, and Managing Brand Equity. *Global Edition (4th Edition)*, Pearson Education. **4**(e), 1-591.

- Kotler, P., Keller, K.L. and Chernev, A., (2022). Marketing management, global edition (Vol. 832). Pearson.
- Macwana, P., Gurjar, M.D., Makwana, A.K., Kamani, K.C. and Prajapati, M.C., (2025). A study on ice cream brand preference survey for youth of Anand city. *Journal of Scientific Research and Reports*, **31**(7), pp.196-206.
- Massaut, K.B., Siqueira, M.F.F., Moreira, A.N., da Silva, W.P. and Fiorentini, Â.M., (2023). Consumer perception, preferences and purchase intention towards ice cream in Brazilian regions. *Observatório De La Economía Latinoamericana*, **21**(10), pp.16764-16789.
- Prayogi, P.E., Suripto, S. and Wulandari, J., (2022), Applying customer value analysis to determine differentiating factors in consumer purchase decisions: a comparative study of Aice and Joyday ice cream in Bandar Lampung. *Indonesian Journal of Digital Business*, **5**(4), pp.2878-2882.
- Printezis, I., Grebitus, C. and Hirsch, S., (2019). The price is right!? A meta-regression analysis on willingness to pay for local food. *PloS one*, **14**(5), p.e0215847.
- Ramkumar, R., Manoharan, A.P., Arjunan, S., Thirumalai Rengasamy, P., Pitchaimuthu, S., Janahar, J.J. and Ganesamoorthy, S., (2024). Optimization and characterization of nutrient-fortified milk beverages using conjoint analysis and response surface methodology. *Journal of Food Science and Technology*, **62**(12), pp.2281-2290.
- Schiffman, L.G. and Wisenblit, J., (2019). Consumer Behavior Twelfth Edition Global Edition.
- Sipple, L.R., Racette, C.M., Schiano, A.N. and Drake, M.A., (2022). Consumer perception of ice cream and frozen desserts in the “better-for-you” category. *Journal of dairy science*, **105**(1), pp.154-169.
- Topcu, Y., (2015). Turkish consumer decisions affecting ice cream consumption. *Italian Journal of Food Science*, **27**.
- Verain, M.C., Dagevos, H. and Antonides, G., (2015). Sustainable food consumption. Product choice or curtailment?. *Appetite*, **91**, pp.375-384.