



RESEARCH ARTICLE

# Urban thirst: Exploring consumer dynamics and buying behaviour of soft drinks in Coimbatore city

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Received: 11 May 2025; Accepted: 02 June 2025; Available online: Version 1.0: 30 June 2025

**Cite this article:** Balaji W, Samsai T, Deepa N, Parimalarangan R, Patil SG. Urban thirst: Exploring consumer dynamics and buying behaviour of soft drinks in Coimbatore city. Plant Science Today (Early Access). <https://doi.org/10.14719/pst.9242>

## Abstract

The soft drink market and industry are gaining importance due to growing awareness, rapid urbanization and changing lifestyles. This study aims to assess the consumer preference for soft drinks, analyse the factors influencing consumer buying behaviour and to identify the key constraints faced by consumers in purchasing soft drinks. The study considered key variables such as taste, price, health benefit, digestion, refreshment, convenience, flavour variety, brand image, packaging, size option, size option, lifestyle, consumption occasion, friend circle, peer influence and social media. These variables are selected for the study because they cover all the aspects, such as core sensory, brand influence, cultural and social interaction attributes. The research employs primary data collected through a well-structured questionnaire and secondary data from credible industry sources. The collected data were subjected to percentage analysis, factor analysis and the Garrett ranking techniques. Factor analysis extracted three major components that influenced buying behaviour, explaining a cumulative variance of 53.68 %. These included the essential satisfaction factor (23.59 %) comprising taste, price, health benefits, digestion, convenience, refreshment and flavour variety; the brand influence factor (17.91 %) including brand image, packaging, lifestyle, size option and consumption occasion; and the social interaction factor (12.19 %) involving peer influence, social media and friend circle. Garrett's ranking technique revealed that the primary constraint faced by consumers are unhealthy (Garrett mean score: 69.68), followed by price sensitivity (59.45) and diet consciousness (56.60). The results show that consumers prefer a particular type of soft drink, with components like essential satisfaction and brand influence factors influencing the purchase decision more, major constraints like healthier options and price hinder the buying behaviour of consumers towards soft drinks. The study recommends that soft drink manufacturers and marketers prioritize health-based product innovation, competitive pricing and lifestyle-aligned branding strategies to meet the evolving preferences of urban consumers.

**Keywords:** consumer preference; factor analysis; Garrett's ranking; percentage analysis; soft drinks

## Introduction

Soft drinks, including both carbonated and non-carbonated varieties, remain among the most frequently consumed beverages across the globe. As projected by the 2024 Statista market forecast, the soft drink industry is expected to generate approximately US\$ 1.4 trillion in revenue by 2025, underscoring its strong position in the global non-alcoholic drinks sector (1). Identifying shifts in consumer preferences is crucial for beverage companies to align their products and meet consumer expectations. The soft drinks industry deals with a wide range of products, from traditional carbonated beverages to fruit-based drinks, sports drinks and energy drinks. In the recent years, companies have introduced a variety of offering to cater to the expectations of different market segments, including low-calorie beverages, sugar-free drinks, diet variants, organic beverages and fortified drinks (2). These changes came into existence due to consumer expectations, demand and advancement in food science (3).

In India, demand for soft drinks has gradually increased due to rising disposable income, urbanization, lifestyle changes and shifting dietary habits (4). Both international and local players dominate the soft drinks industry, intensifying competition through innovative products and marketing strategies (5). The Indian beverage sector has adapted to consumer preferences, including Ayurvedic-based and herbal drinks, as well as healthier alternatives.

Today's consumers are well-informed and increasingly health conscious. They more deliberate in their buying behaviour and purchasing decisions, seeking beverages that align with their lifestyle choices, affordability, taste preference and health benefits (6). Furthermore, government regulation and taxation policies also influence the market dynamics and marketing strategies of the soft drink industry. Despite these challenges, the demand for soft drinks continues to grow. Coimbatore, a major industrial city in Tamil Nadu, has a diverse consumer base that includes students, professionals and other

demographic groups. Understanding the consumer behaviour towards soft drinks in this context is crucial for manufacturers and marketers aiming to tailor their strategies effectively to meet local expectations.

As consumers become more health-conscious, there is a noticeable shift towards zero sugar and low calories beverages, which makes the challenge to traditional soft drink beverages. Analysing these trends can provide valuable insights for the business, it helps to capture a large market share of Coimbatore. Although several studies have examined consumer behaviour towards soft drinks in India, limited research focuses specifically on buying behaviour in Coimbatore city. Addressing these gaps helps to enhance the understanding of consumer buying behaviour in Coimbatore city. This research helps to target the consumers and to formulate marketing strategies. Hence, the present study aims to assess consumer preference of soft drinks, factor influencing consumer buying behaviour and constraints faced by the consumers to purchase soft drinks in Coimbatore city.

## Materials and Methods

### Selection of study area

Coimbatore city, located in the state of Tamil Nadu, was selected as the study area. Coimbatore, the third largest city in the state of Tamil Nadu, is one of the fastest growing cities in India (7). All five zones of Coimbatore-East, West, North, South and Central-were included in the study. This city host a wide range of industries across sectors, making it one of the most industrialized and urbanized cities in the country (7). Due to urbanization, the change in lifestyle and culture of the people have led to an increase in the demand for soft drinks.

### Sample design

The study was based on both primary and secondary sources of data. Primary data were obtained through scheduled, in-person interviews using a well-structured questionnaire aimed to capture key aspects of consumer buying behaviour. A simple random sampling technique was employed to reduce selection bias and to ensure that every resident within each zone had an equal chance of being selected. The sample was evenly distributed across all five administrative zones of Coimbatore-East, West, North, South and Central-with 25 respondents selected from each zone, resulting in a total sample size of 125. The administration of the questionnaire was carried out directly with respondents across the various zones of Coimbatore city to ensure the accuracy and representativeness of the data collected. Secondary data were collected from reputable and authoritative references, including government publications, industry reports and established online databases such as Statista and ResearchGate, to provide contextual support and enhance the depth of analysis.

The questionnaire was organized into four key sections: demographics, consumption patterns, factors influencing purchasing decisions and challenges faced by consumers when buying soft drinks. The majority of the questions were closed-ended, allowing for the collection of both quantitative and categorical data. A 5-point Likert scale was used to assess respondent's views and opinions on various factors affecting

their soft drink choices, ranging from 1 (strongly agree) to 5 (strongly disagree), ensuring a consistent evaluation of both behavioural and attitudinal responses (8). To ensure the reliability of the measurement scale, Cronbach's alpha was computed. The analysis yielded a value of 0.829, indicating good internal consistency among the 5 Likert-scale items. This confirms that the instrument used was reliable and appropriate for subsequent analyses, such as factor analysis and ranking techniques.

### Tools for analysis

#### Percentage analysis

Percentage analysis is a traditional tool used to interpret primary data. It is calculated as the number of responses to a specific question divided by the total number of respondents.

$$\text{Percentage} = \frac{\text{Number of response}}{\text{Total number of response}} \times 100 \quad (\text{Eqn. 1})$$

#### Factor analysis

Factor analysis reduces a large number of variables into fewer number of factors. This technique extracts the maximum common variance from all variables and puts them into the common score. Factor analysis is applied to determine the major influences on consumer soft drink preferences, such as price sensitivity, health awareness, brand loyalty and taste preferences.

#### Garrett's ranking

Garrett's Ranking is a method used to rank multiple attributes and parameters based on respondent preferences (9). It converts ranks assigned by respondents into scores to prioritize factors. A key advantage of this method is that it ranks issues based on their perceived severity by respondents.

Garrett's formula for converting ranks into percent is below:

$$\text{Percent position} = 100 \times \frac{R_{ij} - 0.5}{N_j} \quad (\text{Eqn. 2})$$

Where,

$R_{ij}$  = rank given for  $i^{\text{th}}$  constraint by  $j^{\text{th}}$  individual.

$N_j$  = the number of constraints ranked by  $j^{\text{th}}$  individual.

## Results and Discussion

### Demographic details of respondents

Table 1 shows the demographic details of the respondents considered for the analysis, while Fig. 1 illustrates the demographic characteristics of the sample. Among the respondents, 52 % are male and 48 % are female. The majority (42.4 %) of fall within the 18-30 age group. Approximately 68 % of the respondents are graduates. Of these, 36.8 % are students, 32.8 % are employed and 20.8 % are self-employed. About 43.2 % of the respondents have a monthly family income of less than ₹20000, while 30.4 % have a monthly income between ₹20001-30000 per month. A previous study noted that younger consumers tend to be more engaged with beverage consumption due to lifestyle preferences and social exposure

**Table 1.** Demographic details of respondents

S. No.	Gender	No. of sample respondents	Percentage to total (n = 125)
1	Male	65	52
2	Female	60	48
S. No.	Age (in years)	No. of sample respondents	Percentage to total (n = 125)
1	Below 18	22	17.6
2	18-30	53	42.4
3	30-50	32	25.6
4	Above 50	18	14.4
S. No.	Qualification	No. of sample respondents	Percentage to total (n = 125)
1	Illiterate	8	6.4
2	Primary	6	4.8
3	Secondary	26	20.8
4	Graduate	85	68
S. No.	Occupation	No. of sample respondents	Percentage to total (n = 125)
1	Student	46	36.8
2	Employed	41	32.8
3	Self employed	26	20.8
4	Home maker	6	4.8
5	Retired	6	4.8
S. No.	Monthly income	No. of sample respondents	Percentage to total (n = 125)
1	Less than 20000	54	43.2
2	20001-30000	38	30.4
3	30001-50000	22	17.6
4	Above 50000	11	8.8

**Fig. 1.** Demographic characteristics of the sample respondents.

(10). The prevalence of students and lower-income groups highlighted the importance of affordability and accessibility in marketing strategies (3). The significance of gender diversity in market research, noting that male and female consumers often differ in their consumption motivations, especially in fast-moving consumer goods like beverages (11).

### Consumer awareness

Table 2 indicates that 59.2 % of the respondents are highly aware of soft drinks, which means they are well-informed about the various brands and varieties of soft drinks and have a comprehensive understanding of the features, quality and benefits. Whereas 27.2 % of the respondents are moderately aware have some knowledge about soft drinks and have a basic understanding of their key features and 13.6 % are less aware, such as they have limited knowledge about the soft drinks and less familiar with the range of options available, features and benefits.

A study in India found that 60 % of nursing students had inadequate knowledge about the health hazards of soft drinks (12). Another study reported that 68 % of young adult respondents were overweight or obese, with 88 % aware of soft drinks' unhealthy effects (13).

### Preferred types of soft drinks

Table 3 indicates that non-carbonated drinks are preferred highly among 59.2 % of the sample respondents. This preference suggests that consumers are inclined more towards healthier options and prefer non-carbonated beverages over other beverages, so it occupies a higher percentage. Whereas 45.6 % of sample respondents preferred carbonated drinks. Similar results were observed in Kolhapur, where functional and fruit-based drinks were increasingly preferred over traditional carbonated sodas (14). Consumers now increasingly prefer non-carbonated and functional beverages with nutritional value, which can explain the reduction in soft drink quantity, as consumption shifts to other healthier categories (15).

### Preferred flavours of soft drinks

Table 4 shows that 48 % of sample respondents prefer lemon

flavoured soft drinks over other flavours due to their antioxidant properties and digestive capacity. Whereas 45.6 % of sample respondents also prefer citrus (orange) flavour because of the presence of vitamin C and citric acid components. The shift towards non-carbonated drinks supports the findings (6) which reported a growing consumer preference for beverages perceived as healthier (5). The popularity of lemon and citrus flavours, rich in vitamin C, aligns with health-related motivations for beverage consumption.

### Preferred place of purchase

As indicated in Table 5, 66.4 % of the respondents are buying the soft drinks from local stores, followed by supermarkets and bakeries. Most respondents preferred local stores due to easy availability and greater accessibility compared to other points of purchase. This suggests that convenience and proximity are crucial factors in consumer purchase decisions, echoing the findings (16) reported that accessibility played a central role in rural and urban beverage markets (15).

### Preferred packaging and quantity of consumption

As shown in Table 6, 48 % of sample respondents prefer bottles as a packaging material for soft drinks because of their resealable and portable property. Whereas 32.8 % of sample respondents offered pouches because of their affordability and ease of use. Cans are preferred least in amount among the sample respondents. The preference for bottles and pouches over cans also reflects practicality and cost considerations, which are consistent with (17) that packaging influences perceived value and convenience (16).

As indicated by Table 7, 62.4 % consume less than 500 mL per week. Whereas 30.4 % of sample respondents consume 500-1000 mL in a week. None of the sample respondents consume more than 2000 mL in a week. These findings are consistent with (18) that health concerns and changing lifestyle patterns among urban consumers have led to a reduction in soft drink consumption frequency (17). Consumers are gradually shifting from high-sugar beverages to healthier alternatives such as fruit juices and herbal drinks.

**Table 2.** The level of awareness of the sample respondents on the soft drinks

Level of awareness	No. of sample respondents	Percentage to total respondents (n = 125)
<b>Highly Aware</b> -I am well-informed about various brands, flavors, promotions and campaigns	74	59.2
<b>Moderately aware</b> -I know about some brands and their general offerings but not in detail	34	27.2
<b>Less Aware</b> - I have limited knowledge of most soft drink brands or their offerings	17	13.6

**Table 3.** Preferred types of soft drinks by sample respondents

Types of soft drinks	No. of sample respondents	Percentage to total (n = 125)
Carbonated drinks	57	45.6
Non-carbonated drinks	74	59.2
Energy drink	35	28
Diet/low-calorie drinks	29	23.2

**Table 4.** Preferred flavours of soft drinks by sample respondents

Most preferred flavours in soft drinks	No. of sample respondents	Percentage to total (n = 125)
Mango	36	28.8
Citrus (orange)	57	45.6
Lemon	60	48
Apple	34	27.2
Cola	35	28
Others	10	8

**Table 5.** Preferred place of purchase of soft drinks

Place of purchase	No. of sample respondents	Percentage to total (n = 125)
Bakery	46	36.8
Local store	83	66.4
Online market	13	10.4
Supermarket	46	36.8

**Table 6.** Preferred packaging of soft drinks

Packaging type	No. of sample respondents	Percentage to total (n = 125)
Cans	24	19.2
Bottles	60	48
Pouches	41	32.8

### Key influencing factors in consumer buying behaviour

Factor analysis was conducted to determine the major factor influences on consumer buying behaviour. The various factors used for factor analysis, are taste, health benefit, price, brand image, packaging, flavour variety, peer influence, consumption occasion, social media, digestion, friend circle, convenience, refreshment, lifestyle and size option.

Cronbach's alpha is a statistical measure of internal consistency or reliability of a set of scale or test items, particularly those measured using Likert-type scales. The value of Cronbach's alpha ranges from 0 to 1, with higher values indicating greater internal consistency. A commonly accepted rule of thumb is: values of 0.90 and above suggest excellent reliability, values between 0.80 and 0.89 are considered good, 0.70 to 0.79 indicate acceptable reliability, scores from 0.60 to 0.69 are seen as questionable and values below 0.60 are typically regarded as poor (19).

As shown in Table 8, the Cronbach's alpha coefficient for the Likert-scale items was calculated to be 0.829, indicating a strong internal consistency among the scale items. This confirms that the questionnaire items were reliably structured to capture various dimensions of consumer buying behaviour toward soft drinks.

The Kaiser-Meyer-Olkin (KMO) measure and Bartlett's test of sphericity are essential tools for assessing the appropriateness of factor analysis in research (20). These tests evaluate sampling adequacy and variable correlations, respectively, with KMO values above 0.5 and significant Bartlett's test results indicating suitability for factor analysis (21). It could be inferred from Table 9 that the KMO measure of sampling adequacy is 0.736 which is larger than 0.5, indicating that the data was adequate for factor analysis. Bartlett's test of sphericity with a chi-square value of 621.26 which is significant

at <0.001 levels. Hence it is confirming the presence of correlations among variables.

Principal component analysis (PCA) was employed as the extraction technique. The number of components to retain was determined using the Kaiser criterion (Eigenvalue > 1). Based on the result presented in Table 10, three components were retained for further analysis, as their Eigenvalues exceeded the threshold. This decision was further supported by the scree plot, which showed a noticeable decline in Eigenvalues after the third component, confirming the suitability of retaining three components.

It could be observed from the Table 10 that 53.682 % was explained by the first three factors of the total variables. Eigenvalues that are greater than one was taken. Table indicates that three components are formed with Eigenvalues of 3.539, 2.686 and 1.828 with percentage variance of 23.59, 17.906 and 12.186 respectively. The screen plot is shown in Fig. 2.

Eigenvalues play a crucial role in factor analysis and principal component analysis. They are used to determine the number of factors to extract, with the Eigenvalue criterion being a common method (22). It was evident from Fig. 2 that after the three component the plot almost becomes a straight line and Eigenvalues drop below one. The Eigenvalues for the first three components are greater than one. Therefore, it could be concluded that the first three components were the major influential factors and were relatively important in the purchase decision of the soft drink whereas the remaining factors are least important as the Eigenvalues are close to zero. The details of the rotated component matrix are provided in Table 11.

To enhance the clarity of the factor structure, varimax rotation, an orthogonal rotation technique that assumes independence among factors was applied. It could be observed

**Table 7.** Quantity of soft drinks consumption per week

Quantity of consumption (mL)	No. of sample respondents	Percentage to total (n = 125)
<500	78	62.4
500 - 1000	38	30.4
1000 - 2000	9	7.2
>2000	0	0

**Table 8.** Result of reliability statistics

Reliability statistics		
Cronbach's Alpha	Cronbach's Alpha based on standardized items	Number of items
0.829	0.835	15

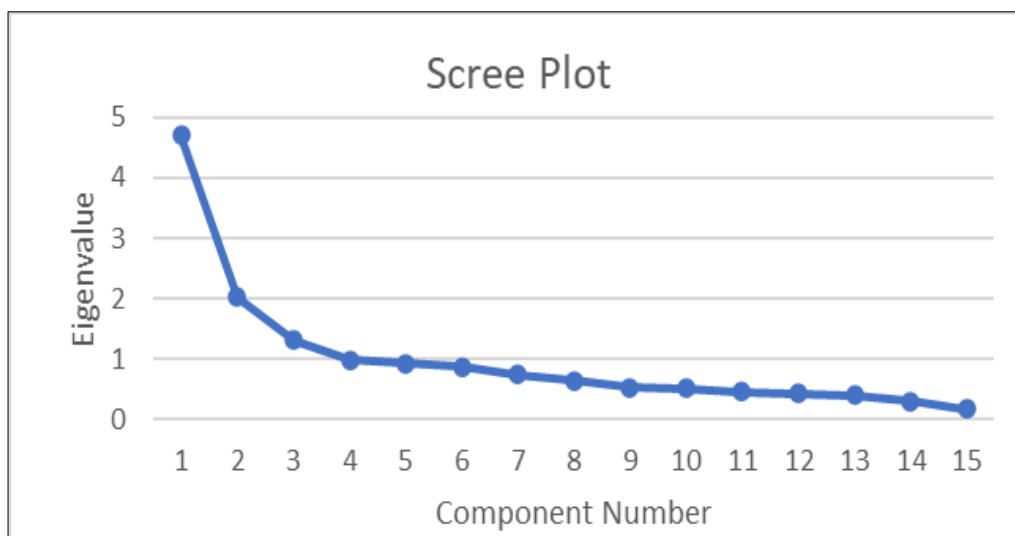
**Table 9.** Results of the Kaiser-Meyer-Olkin (KMO) and Bartlett's test

KMO and Bartlett's Test		
KMO measure of sampling adequacy	0.736	
Bartlett's test of sphericity	Approximate chi-square	621.26
	df	105
	Significance	<0.001



**Table 10.** Eigenvalues and extracted sum of scores of components

Components	Initial Eigenvalues			Extracted sums of scores leadings		
	Total	Variance %	Cumulative %	Total	Variance %	Cumulative %
1	4.706	31.372	31.372	3.539	23.590	23.590
2	2.030	13.535	44.907	2.686	17.906	41.496
3	1.316	8.775	53.682	1.828	12.186	53.682
4	0.981	6.539	60.220			
5	0.923	6.152	66.372			
6	0.865	5.769	72.142			
7	0.738	4.923	77.064			
8	0.637	4.245	81.309			
9	0.531	3.538	84.847			
10	0.513	3.417	88.264			
11	0.458	3.055	91.319			
12	0.428	2.854	94.173			
13	0.399	2.657	96.830			
14	0.298	1.987	98.817			
15	0.177	1.183	100.000			

**Fig. 2.** Screen plot - factor analysis.

that after varimax rotation, the factor loadings had arrived (Table 11). Values of 0.5 or above for factor loadings are taken into consideration. The first component had seven factor loadings with values greater than 0.5 followed by second component with five factor loadings and third component with three factor loadings, all with values greater than 0.5. Each component is provided with names based on the factors and the details are provided in Table 12.

Table 12 clearly shows that the first component essential satisfaction factor explained with the variance percentage of 23.59 and it comprises taste, price, health benefits, digestion, convenience, refreshment and flavour variety. The next component is the brand influence factor

explained with the variance of 17.906 % consisting of brand image, packaging, consumption occasion, lifestyle and size option followed by third component explained with the variance of 12.186 %. The factor analysis clearly demonstrated that taste, health benefits and price were the most important variables affecting soft drink buying decisions, aligning with the findings that sensory appeal and health concerns are critical in beverage choice (22, 23). The brand image and packaging influence confirms (5) assertion that branding creates consumer trust and lifestyle fit (4). Lastly, the social interaction component shows the emerging impact of peer networks and social media (24).

**Table 11.** Rotated components matrix of factor analysis

Rotated components matrix	Components		
	1	2	3
Taste	0.820	0.102	-0.134
Price	0.720	0.028	0.101
Health benefit	0.694	0.163	0.209
Digestion	0.648	0.262	0.055
Refreshment	0.634	0.074	0.237
Convenience	0.622	0.218	0.217
Flavor variety	0.597	-0.008	0.316
Brand image	0.021	0.782	-0.225
Packaging	0.099	0.746	0.299
Size option	0.001	0.655	0.256
Lifestyle	0.251	0.644	0.304
Consumption occasion	0.286	0.619	0.304
Friend circle	0.096	0.048	0.710
Peer influence	0.113	0.241	0.663
Social media	0.290	-0.101	0.629

**Table 12.** Components and factors

Components	Factors	Variance %
<b>Essential satisfaction factor</b>	Taste	23.59
	Price	
	Health benefit	
	Digestion	
	Convenience	
	Refreshment	
<b>Brand influence factor</b>	Flavour variety	17.906
	Brand image	
	Packaging	
	Consumption occasion	
<b>Social interaction factor</b>	Lifestyle	12.186
	Size option	
	Peer influence	
	Social media	
	Friend circle	

### Constraints faced by the consumer to purchase soft drinks

The variables analyzed using Garrett's ranking technique include unhealthy composition, diet consciousness, artificial flavours, price, lack of variety, limited availability and storage issues.

Based on Table 13, the highest-ranked constraint was unhealthy composition, with a Garrett mean score (GMS) of 69.68. This indicates that consumers increasingly avoiding soft drinks due to high sugar content and artificial additives-an attitude aligned with rising awareness of health issues such as such as obesity and diabetes. This top-ranked constraint reflects growing health concerns, echoing the findings that soft drink consumption with rising non-communicable diseases (25). As health consciousness, continues to rise, especially among urban consumers, there is a increasing demand for low-sugar, natural and functional beverages. Price sensitivity ranked second, with a GMS of 59.45, suggesting that economic affordability is a key barrier to soft drink consumption. This finding supports the conclusions of that affordability significantly influences beverage consumption in lower-income households (16).

Diet consciousness was another important factor, scoring 56.60, as health-conscious consumers are shifting towards healthier alternatives. Artificial flavors (52.36 GMS) were a concern, as consumers prefer natural ingredients. Limited availability of healthier alternatives (43.72 GMS) and lack of flavour variety (40.36 GMS) also impacted choices. Storage concerns (31.79 GMS) highlighted preservation difficulties. Addressing these through healthier formulations, better pricing, wider availability and sustainable packaging can help retain market share. Consumer preferences and buying behaviour for soft drinks are influenced by various factors. Education level and health concerns negatively impact purchase intention, while perceived social status and previous buying experience have positive effects (26). Perceived quality, product attributes, availability and price play crucial roles in consumer evaluation of soft drinks (27).

**Table 13.** Constraints ranked after Garrett ranking technique

S. No.	Constraints	Garrett mean score	Rank
1	Unhealthy	69.68	I
2	Diet conscious	56.60	III
3	Artificial flavours	52.36	IV
4	Price	59.45	II
5	Lack of variety	40.36	VI
6	Lack of availability	43.72	V
7	Storage	31.79	VII

### Limitations of the study

Considering the time and availability of resources, the study was based on the primary data gathered through consumer surveys and secondary data gathered from various published sources. Another notable limitation was that the sample respondents were chosen specifically from Coimbatore city, which does not frame the sample as being away from the state as a whole and only a predetermined number of consumers were surveyed to show the view of preference and consumption of soft drinks. Despite all these constraints, every effort has been taken to minimize the bias by including questions that facilitate cross-checking.

### Conclusion

The growing competition in the beverage sector has compelled industries to offer innovative and high-quality products to meet evolving consumers demands. This study reveals significant trends and challenges in the soft drink market and highlights that manufacturers should focus on product innovation, healthier options, increasing availability and consumer satisfaction. The research finds that factors influencing buying decisions play a significant role. These include health benefits, price, taste, digestion, availability, refreshment, social circle and peer influence. According to this study, factors such as essential satisfaction, brand influence and social interaction play a crucial role in influencing purchasing decision. Based on the findings, the study concluded that urban consumers are becoming more health-conscious, price aware and choice. Addressing the evolving consumer expectations and the constraints they are facing with soft drinks will be a key for companies to be competitive and make relevant changes in the soft drinks market. To enhance the soft drinks industry, there is a need for several policy recommendations. To strengthen the practical implication, this study recommended that manufacturers should prioritize product innovation and need to increase the availability of organic and Ayurvedic soft drinks. Introduction of age-tailored soft drinks to address the needs of different age groups, manufacturers should also prioritize natural colours over artificial flavours and additives and improve product safety and consumer trust. This research fills a gap by providing a detailed analysis of consumer buying behaviour towards soft drinks in Coimbatore city. The findings aim to guide marketers, companies and policymakers in enhancing market dynamics and formulating effective strategies.

### Acknowledgements

The authors are grateful to the Indian Council of Agricultural Research and Department of Agricultural and Rural Management, Tamil Nadu Agricultural University for providing support to write the research article.

### Authors' contributions

BW was responsible for data collection, analysis and drafting the initial version of the manuscript. ST conducted the final formatting and reviewed the article and handled the final formatting. ND, RP and PSG reviewed and approved the final

version of the manuscript. All authors read and approved the final manuscript.

### Compliance with ethical standards

**Conflict of interest:** Authors do not have any conflict of interests to declare.

**Ethical issues:** None

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**Peer review:** Publisher thanks Sectional Editor and the other anonymous reviewers for their contribution to the peer review of this work.

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