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Marketing of Packaged Drinking Water in Chandigarh City

MONIKA THAKUR, M. S. GANAPATHY AND M. T. LAKSHMINARAYAN
Department of Agricultural Marketing, Co-operation and Business Management
College of Agriculture, UAS, GKVK, Bangalore - 560 065
E-mail : ganapathy.agmaco@gmail.com

ABSTRACT

The present study was carried out in Chandigarh city during 2015-16 to analyze the consumer behaviour and marketing of packaged drinking water. Data were collected from 80 packaged drinking water consumers and retailers of packaged drinking water. The required data was collected using a pre-tested interview schedule and the data was analyzed using frequency, percentage, mean and garett ranking technique. The results of the study revealed that a greater proportion of the consumers using packaged drinking water were males, graduates and students, aged less than 25 years with a monthly family income ranging from ₹ 25,000/- to 50,000/-. Bisleri and Kinley brands of packaged water were the most popular among consumers of Chandigarh city. Quality, brand name and easy availability were the major factors influencing the consumer behavior for packaged drinking water. It was also found that the cost of production of one litre of packaged water is ₹ 5/-, while the purchase price of one litre branded water for retailer is ₹ 12.50/- and the consumers pays ₹ 20/- for one litre bottle. The retailers sold one litre of packaged drinking water to the consumers at ₹ 20/- in ordinary retail outlets or shops, whereas, it was sold in the price range of ₹ 28/- ₹ 30/- at bus stands, ₹ 30/- to ₹ 60/- at restaurants / malls and ₹ 60/- at airports. Heavy competition, illegal manufacturers, lack of consumer brand loyalty and seasonal demand were the major marketing constraints faced by the retailers.

Keywords : Packaged, drinking water, marketing, constraints

DRINKING water needs of an individual vary depending on the climate, body constitution and physical activity. At the same time, on an average, a human being requires two to four litres of water a day. Safe drinking water is essential to humans and other life forms, even though it provides no calories or organic nutrients. Unfortunately, sufficient and safe drinking water is not available everywhere and many people do not have access to consume safe and clean drinking water. Water may be contaminated due to harmful chemical substances that found in the layers of the earth or by pathogenic micro- organism. Consumption of contaminated water causes many water-borne diseases. Due to these reasons, it has become imperative to process and purify drinking water. The demand for purified water has become more intensive, particularly in towns and cities. Packaged drinking water is widely used in offices, restaurants, hospitals and to a considerable extent in households. Hence, there is great scope for packaged drinking water business to flourish.

Bottled water in India under the name ‘Bisleri’ was first introduced in Mumbai by Bisleri Limited, a company of Italian origin in 1965. This company was started by Signor Felice, who first brought the idea of selling bottled water in India. Later, Parle bought over Bisleri (India) Ltd. In 1969 they started bottling mineral water in glass bottles under the brand name ‘Bisleri’. Later Parle switched over to PVC non-returnable bottles and finally advanced to PET containers. Other companies lile Coca-Cola, Pepsi-co etc. jumped into the packaged water industry (Doria, 2006).

Packaged drinking water is one of the segments of bottled water market. Bottled water can be defined as any product, including natural, spring or well water, taken from municipal or private utility systems or other water, distilled water or any of the foregoing to which chemicals are added, which are put into sealed bottles, packages or other containers, to be sold for domestic consumption or culinary use. It uses water from any source which has to be treated and disinfected, a process that could involve filtration, UV or ozone treatment or reverse osmosis before it is fit for human consumption.

Packaged drinking water has become an essential consumable product in the present era. Market stimulants for bottled water include rising population, consumer spending patterns, lifestyle trends and growing levels of health consciousness among consumers. There is a marked increase in the demand for pure drinking water during travels and tours undertaken by the people. Because of dwindling safe fresh water supplies, people in urban and semi-urban areas are increasingly looking towards packaged water as a means of meeting some or all of their daily requirements. Although the packaged drinking water cannot be a substitute for drinking water provided through piped distribution systems, it yet holds significance, as it provides a safe option that is readily available, has much better quality perception and is easy to carry anywhere at any time. Against this background, the present study was undertaken in Chandigarh city with the following specific objectives:

1. To know the personal and economic profile of consumers using packaged drinking water
2. To study the consumer buying behavior for packaged drinking water.
3. To analyze the pricing strategy of one litre branded bottle of packaged drinking water.
4. To find out the association between personal and economical characteristics of consumers with their buying behaviour
5. To examine the constraints in the marketing of packaged drinking water.

METHODOLOGY

The present study was carried out in Chandigarh city during 2015-16. Chandigarh is the first planned modern city of India designed by French architect Le. Corbusier. It is a city that serves as the capital of two states-Punjab and Haryana. However, the city does not belong to either state. Rather, the city is administered by Federal Government and hence classified as Union Territory. It is a major study hub for students from Punjab, Haryana Himachal Pradesh and South-East Asian countries.

Chandigarh, being a modern city, has developed a modern culture of itself. Being the capital of two states, it has developed a fusion of culture. Next to Delhi, it serves as an employment provider to many job seekers heading from Punjab, Haryana and Himachal Pradesh. City residents are facing acute water crisis with the arrival of summers. During 2016, the water availability of the Union Territory is 87 million gallons daily (MGD). Of it, 67 MGD comes from Kajauli waterworks, Phases I, II, III and IV, which is about 27 kilometers from Chandigarh, and the remaining 20 MGD is generated through 207 tube wells. There is a gap of 29 MGD between the demand and supply. The city is receiving 87 MGD water against the demand of 116 MGD in summers. (Sandeep *et al.*, 2014). The shortage of water in summers has lead to low-water pressure on the upper floors of marla houses, the Chandigarh Housing Board (CHB) flats and societies in southern sectors. The Municipal Corporation has stated recently that the situation will become worse for getting drinking water in the following years. Hence, it was felt ideal for selecting Chandigarh city for the research study

Data was collected from 80 packaged drinking water consumers and retailers of packaged drinking water, who were voluntarily willing to provide the required information. The required data was collected using a pre-tested interview schedule and the collected data was analyzed using frequency, percentage and mean. Henry Garett Ranking technique was also used to work out the mean score for indentifying the factors influencing the consumer buying behavior for packaged drinking water and also to identify the constraints in marketing of packaged drinking water as perceived by retailers

RESULTS AND DISCUSSION

Personal and economic profile of consumers using packaged drinking water

Table I presents the data on the personal and economic profile of consumers using packaged drinking water. It is observed from the table that a majority (53.75%) of the consumers using packaged drinking water were males, while 46.25 per cent of the consumers were females. Table I also reveals that 37.50 per cent of the consumers were aged below 25 years, followed by 32.50, 17.50 and 12.50 per cent of the consumers were in the age groups of 25 to 35 years, more than 45 years and 36-45 of years, respectively. It was also found that half (50.00%) of the consumers were graduates, whereas 26.25 per cent were postgraduates. 17.50 per cent had studied up to higher secondary and 6.25 per cent of the consumers had studied up to high school.

TABLE I

Personal and economic profile of consumers using packaged drinking water

(n=80)

Characteristics	Consumers	
	No.	Per cent
Gender		
Male	43	53.75
Female	37	46.25
Age (years)		
-Up to 25-	30	37.50
26 to 35	26	32.50
36 to 45	10	12.50
More than 45	14	17.50
Education		
Up to High school	5	6.25
Higher secondary	14	17.50
Graduate	40	50.00
Post graduate	21	26.25
Occupation		
Student	25	31.25
Business men	12	15.00
Government Employee	15	18.75
Private employee	21	26.25
Others	7	8.75
Family income (Rs./ month)		
Less than 25,000	21	26.25
25,001 to 50,000	36	45.00
50,001 to 75,000	8	10.00
More than Rs.75000	15	18.75

Less than one-third (31.25%) of the consumers were students, while 26.25, 18.75, 15.00 and 8.75 per cent of the consumers were private employees, government employees, business men and others, respectively. Forty five per cent of the consumers using packaged drinking water were having family monthly income of less than ₹ 25,000/- to ₹ 50,000/, while 26.25, 18.75 and ten per cent of the consumers were having family monthly income of less than ₹ 25,000/-, more than ₹ 75,000/- and ₹ 50,001 to 75,000/-, respectively.

It can be inferred from the above data that a greater proportion of the consumers who were using packaged drinking water were males, graduates and students aged below 25 years with a monthly family income ranging from ₹ 25,001/- to 50,000/-.

Consumer preference for various brands of packaged drinking water

The results in Table II presents the data on the consumer preference for various brands of packaged drinking water. A bird's eye view of Table II reveals that nearly half (48.75%) of the consumers preferred Bisleri, followed by 32.50 per cent preferring Kinley, 8.75 per cent preferring Aquafina, 6.25 per cent preferring Kingfisher and 3.75 per cent of the consumer preferring Bailey.

TABLE II

Consumers preference for various brands of packaged drinking water

(n=80)

Brands	Consumers	
	No.	Per cent
Bisleri	39	48.75
Kinley	26	32.50
Aquafina	7	8.75
Kingfisher	5	6.25
Bailey	3	3.75
Total	80	100.00

Brands like Bisleri and Kinley are marketing packaged drinking water in an effective manner using catchy slogans/taglines like 'The Sweet Taste of Purity' and 'Trust in Every Drop of Water', respectively. These companies are into aggressive promotional strategies for gaining customer attention and preference for the packaged drinking water produced and marketed by them. Hence, Bisleri and Kinley brands of packaged drinking water are more preferred by the consumers.

Consumer buying behavior for packaged drinking water

The data on consumer buying behavior for packaged drinking water is presented in Table III. A majority (65.00%) of the consumers preferred specific brand of packaged drinking water, whereas the rest (35.00%) of the consumes preferred any brand of packaged drinking water.

TABLE III

Consumers buying behavior for packaged drinking water

(n=80)

Brands	Consumers	
	No.	Per cent
Type		
Specific brand	52	65.00
Any brand	28	35.00
Frequency of purchase		
Daily or weekly	21	26.25
Fortnightly	35	43.75
Once in a month	24	30.00
Quantum of purchase		
250 ml bottle	15	19.00
500 ml bottle	6	7.50
1 litre bottle	40	50.00
2 litre bottle	5	6.00
5 litre can	8	10.00
20 litre can	6	7.50
Amount spent (Rs./month)		
Less than 100	44	55.00
101 to 150	24	30.00
151 to 200	5	6.25
More than 200	7	8.75
Place of purchase		
Any nearby place	32	40.00
Restaurants	14	17.50
Retails outlets or supermarkets	23	28.75
Home delivery/Dealers	11	13.75
Time of purchase		
Travelling	28	35.00
Party time	13	16.25
Scarcity or contamination of water	27	33.75
Workplace	20	15.00

It is observed from Table III that more number (43.75%) of the consumers had purchased packaged drinking water once in fortnight, while 30.00 and 26.25 per cent of the consumers had purchased packaged drinking water once in a month and daily or weekly, respectively. Half (50.00%) of the consumer had purchased packaged drinking water of 1 litre bottle, whereas 19.00 and 10.00 per cent of consumers had purchased packaged drinking water of 250 ml bottle and 5 litre can, respectively. An equal number (7.50% each) of consumers had purchased packaged drinking water of 500 ml bottle and 20 litre can. The remaining six per cent of the consumer had purchased packaged drinking water of 2 litre bottle.

Table III also reveals that majority (55.00%) of the consumers had spent less than ₹ 100/- per month towards purchasing packaged drinking water, whereas 30.00, 8.75 and 6.25 per cent of the consumers had spent ₹ 101/- to 150/-, more than ₹ 200/- and ₹ 151/- to 200/- per month towards the purchase of packaged drinking water, respectively. Forty per cent of the consumers had purchased the packaged drinking water in any nearby place, while 28.75, 17.50 and 13.75 per cent of the consumers had purchased the packaged drinking water from retail outlets or supermarkets, restaurants and took home delivery or from dealers, respectively. As high as 35.00 per cent of the consumers had purchased the packaged drinking water at the time of travelling, while 33.75, 16.25 and 15.00 per cent of the consumers had purchased drinking water at the time of scarcity or contamination of water, party time and at workplace, respectively. More or less similar findings were reported by Vanitha *et al.* (2013).

It can be concluded that a larger number of consumers had preferred a specific brand of packaged drinking water. The consumers had purchased 1 litre bottle during travelling from nearby place once in fortnight spending less the ₹ 100/- per month.

Association between personal and economical characteristics of consumers with their buying behavior

The results in Table IV revealed that age, gender, education, occupation and family income of the consumers have no significant association with their

TABLE IV

Association between personal and economical characteristics of consumers with their buying behavior

(n=80)

Characteristics	Chi-square value
Age	0.28 NS
Gender	1.968 NS
Education	1.82 NS
Occupation	0.92 NS
Family income	0.87 NS

buying behavior of packaged drinking water. It can be concluded that irrespective of the consumers' age, gender, education, occuption and family income, the consumers were buying packaged drinking water whenever there was a need.

Factors influencing consumer behavior for packaged drinking water

It is observed from Table V, that 'quality' was the major factor influencing consumer buying behaviour for packaged drinking water with first rank as per the Garrett score of 93.27. The second ranking was assigned to 'brand name' of packaged drinking water with Garrett score of 76.92. 'Easy availability' was ranked as number three among the factors influencing consumer buying behaviour with a Garrett score of 72.80. 'Price' was one of the factors influenced the buying behaviour for packaged drinking water with fourth rank having Garrett score of 66.87. 'Convenient package' was another factor influencing the buying behaviour with Garrett score of 52.33 followed by 'promotion or advertisement' occupying the last rank with a Garrett score of 37.82. The highest ranking was assigned to 'quality' in Garrett ranking may be due to the growing awareness among the consumers about health hazards regarding consumption of contaminated and poor quality water. The second rank was assigned to 'brand' with Garrett score of 76.92. Reputed beverage firms like Bisleri, Kingfisher, Coca Cola, Pepsi Co etc., have entered into branded packaged drinking water market and consumers prefers to buy packaged drinking water produced from these big and popular firms perceiving that these companies produce 'quality' packaged water. 'Easy availability' of packaged drinking water is assigned third rank by the consumers. A person cannot delay his/her thirst to later time, it need to be satisfied at that moment, hence the consumers have assigned third rank to 'easy availability' of packaged drinking water.

TABLE V

Factors influencing consumer behavior for packaged drinking water

(n=80)

Influencing factors	Total Score	Mean Score	Rank
Quality	5596	93.27	I
Brand	4615	76.92	II
Price	4012	66.87	IV
Convenient package	3140	52.33	V
Promotion/Advertisement	2269	37.82	VI
Easy availability	4368	72.80	III

In addition to the quality of product and brand consciousness of any product, the consumers are price conscious also. Hence, consumer have given 'price' as fourth rank in Garrett ranking. Convenient package is also one of the main factors deciding the preference of choosing packaged drinking water. Normally consumers buy packaged drinking water when they are travelling to attend office work and various functions. Therefore, consumers mostly buys one litre bottle as it is more convenient to carry on such occasions. Various promotional strategies are taken up by the packaged drinking water firms to distinguish their products from products of other companies. Hence, consumer have 'assigned promotion or advertisement' as sixth rank with Garrett score 37.82.

Pricing of one litre branded bottle of packaged drinking water

The details about the pricing of one litre branded bottle of packaged drinking water is presented in Table VI. The cost of perfrom/bottle (₹ 2.00/- to ₹ 2.50/-), cartons (₹ 1.50/-), caps (₹ 0.30/-), tapes (₹ 0.17/-), treatment cost (₹ 0.10/- to ₹ 0.25/-), labels (₹ 0.45/-), poly bags for carton (₹ 0.15/-) and labour charges (₹ 0.10/-) are the various costs spent by the packaged

TABLE VI

Pricing of one litre branded bottle of packaged drinking water

Characteristics	Amount (Rs.) Per bottle (1 Litre)
Cost of perform/bottle	2.00-2.50
Cartons	1.50
Caps	0.30
Tapes	0.17
Treatment cost	0.10-0.25
Labels	0.45
Ploy bags for carton	0.15
Labour	0.10
Total cost (Excluding - transporting, marketing cost and tax)	4.85-5.42
MRP	20.00
Purchase price for retailer	12.50
Purchase price of consumer	20.00
Margin for retailer on MRP (%)	37.50
Discount to customers on bulk purchase @10-15% per case on MRP	2.00

drinking water firms to produce one litre branded bottle of packaged drinking water.

It is seen from Table VI that the cost of producing one litre branded water is in the range of ₹ 4.85/- to 5.42/-, excluding the marketing cost and taxes. The purchase price of one litre branded water for retailer is ₹ 12.50/-,while he sells it to the consumers at the rate of ₹ 20.00/-. There is a huge margin of profit to the tune of 37.50 per cent for the retailers in selling the one litre branded water. Sometimes, the retailers will provide discount of ₹ 2.00/- to the consumers for bulk purchase of one litre branded water. It can be concluded that there is a huge profit margin enjoyed by the retailers in selling one litre packaged water to the consumers.

Different prices paid by the consumers for one litre packaged drinking water at various locations

Table VII presents the data relating to the price charged for consumers by the retailers for one litre packaged drinking water at different locations. One litre of packaged drinking water was sold at ₹ 20.00/- in ordinary retail outlets or shops, however at bus stand it was sold to the consumers in the price range of ₹ 28.00/- to ₹ 30.00/-. The same was sold at a premium price of ₹ 30.00/- to ₹ 60.00/- at restaurants/malls and ₹ 60.00/- at airports. It can be seen from the above data that different prices were charged for one litre packaged water to the consumers at different places like bus stand, restaurants/malls or airport. Consumers at restaurants/malls or airport are considered as rich and there is also a scarcity of fresh and safe drinking water at bus stand, hence vendors exploit the opportunity and charge higher price for packaged drinking water.

TABLE VII

Different prices paid by the consumers for one litre packaged drinking water at various locations

Characteristics	Amount (Rs.) Per bottle (1 Litre)
Ordinary place	20
Bus stand/Railway station	28-30
Restaurant /Malls	30-60
Airport	60

Marketing constraints of packaged drinking water as perceived by retailers

A perusal of Table VIII reveals that heavy competition (Garrett score 70.70) was the major marketing constraint faced by the retailers of packaged drinking water, followed by other marketing constraints such as illegal manufacturers (Garrett

TABLE VIII

Constraints in marketing of packaged drinking water as perceived by retailers

Constraints*	Garett Score	Rank
Heavy competition	70.70	I
Illegal manufacturers	66.10	II
Consumers brand loyalty	45.15	III
Less demand	44.50	IV
Seasonal business	39.65	V
Small profit margin	33.25	VI

score 66.10), lack of consumer brand loyalty (Garrett score 46.15), less demand (Garrett score 44.50) and seasonal nature of business (Garrett score 39.65) and small profit margin (Garrett score 33.25) occupying second, third, fourth, fifth and sixth ranks, respectively. Similar findings were reported by Rakesh, *et al*. (2015) and Srinivasan and Thirunarayanaswamy (2015).

Almost all the retailers in Chandigarh city are selling the packaged drinking which has good profit margin hence there exist heavy competition among retailers for selling the packaged drinking water. Illegal manufacturing of packaged drinking water is quoted by the retailers as the second marketing constraint. The packaged drinking water business sector is a low entry barrier and many firms are jumping into this sector for producing packaged drinking water illegally. These firms ask the retailers to market the illegally produced packaged drinking water without any license issued by BIS. Consumers quite often shift to other brands of packaged drinking water when their preferred brand is not present in shop, hence the retailers has mentioned lack of consumer brand loyalty as the third marketing constraint. Less demand for packaged drinking water was also considered as one of the marketing constraints by the retailers. People purchase packaged drinking water normally when they are moving out of house for attending functions etc., otherwise they will be consuming water at homes using aquifers and filters. The fifth constraint mentioned by the retailers is the 'seasonal business' of packaged drinking water. Chandigarh city is located in the North India where winters are severe in the months of October-December, which may lead to less sale of packaged drinking water during these months as compared to summer. However, it is quite surprising to note that the retailers have mentioned 'small profit margin' as the marketing constraint, even though they are getting 37.50 per cent of profit margin.

The most popular brand of packaged drinking water preferred by the consumers of Chandigarh city is Bisleri and the consumer preferred one litre bottle as it is more convenient to carry. The important factors influencing consumer behavior for packaged drinking water was quality, brand and easy availability. Therefore, the firms should maintain the quality of packaged drinking water and also make necessary arrangements for the easy availability of packaged drinking water in the retail outlets for the consumers. Heavy competition and illegal manufacturing were the main marketing constraints faced by the retailers. The Government should crack down the water packing units which have not obtained BIS certificate for preventing illegal manufacturing of packaged drinking water for the benefit of public.

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