Consumers’ response to Aavin milk price rise in Coimbatore city

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Abstract
India is the largest producer of milk at the global level. In India, development in dairying would have direct impact on the lives of 8.475 million people working in Indian dairy sector. The Dairy Industry as an important allied sector continues to provide additional income to lakhs of people who depend on dairy related activities. Milk is nutritionally rich food to meet the daily needs of people. In Tamil Nadu, AAVIN is the successful cooperative society which deals with milk procurement, processing and marketing the milk and its value added products. The main objective of the study focused on consumer response towards rise of Aavin milk price. This study was limited to Coimbatore city comprising of 100 sample respondents. The results of the study indicated that, majority of the sample respondents were affected by the rise in price, even though there was comparatively low shift to other brands. The sample respondents also reduced their purchase quantity of milk. Freshness, better quality and quantity were the major factors influenced them to purchase and consume the Aavin milk in a constant manner.

Keywords: Consumer response, brand, price rise, quality, freshness

Introduction
India has the highest livestock population in the world and largest producer of milk. India’s production of milk during 2018-19 and 2017-18 was 187.7 million tonnes and 176.3 million tonnes; per capita availability was 394 gm per day and 375 gm per day respectively (https://www.nddb.coop/information/stats/milkprodindia). In India, development in dairying would have direct impact on the lives of 8.475 million people working in Indian dairy sector. The Dairy Industry as an important allied sector is providing additional income to lakhs of people who depend on dairy activities. Milk is nutritionally rich food to meet the daily needs of people and inevitable requirement for all the age group of people in their day to day food intake. The consumption of milk and milk products was improving among the people due to their changing consumption pattern and also due to rising health consciousness witnessed in urban areas. So the requirement of milk is surging day by day. The foundation of the Milk Cooperative Movement lies in the conviction that our country’s socio-economic development is intertwined with the development of rural India. The “Anand” pattern of milk co-operatives pioneered by the “Milk Man of India” Dr. Verghese Kurien has been successfully implemented in Tamil Nadu state. AAVIN cooperative society was formed in July 1972 mainly for procurement, processing and marketing of milk and its products to consumers. Tamil Nadu Co-operative Milk Producers Federation (TCMPF) formed in February 1981. This was formed as an apex body with three tier structure at different levels such as Federation at apex level, District Unions at middle level and MPCS at field level under the popular brand name “AAVIN”.

Tamil Nadu is one of the frontline States in milk production. In Tamil Nadu milk production were 7556 million tonnes, 7742 million tonnes and 8362 million tonnes in 2016-17, 2017-18 and 2018-19 respectively (nddb.coop/information/stats/milkprodstate). In Tamil Nadu, in the daily milk production of 206 lakh litres, 25 Lakh litres per day (LLPD) is retained for household consumption, about 51% of total milk production i.e. 105 LLPD is procured through unorganized sector and 37% i.e. 76 LLPD is procured through organized sector like dairy co-operatives and private sector dairies. The share of co-operatives in overall milk production in the State is around 18.50% and stands fourth among the State dairy cooperatives with a daily average milk procurement of 34 lakh litres. (Diary Development Policy
Note, 2020). Under the dairy co-operative ambit, there are 12,585 village level primary Milk Producers Co-operative Societies (MPCs) having 20.30 lakh members. About 30 lakh cows supply milk for Aavin. About 21.91 lakh litre of milk is supplied by Aavin across the state and it procures around 34 lakh litres from the farmers. In order to support the milk farmers, the state government increased the procurement price for cow milk from Rs. 28 to Rs. 32 per litre and buffalo milk procured at Rs. 41 per litre. Hence the consumer price of blue-sachet toned milk has been hiked from Rs 37 to Rs 43 per litre while green-sachet standardised milk has been increased from Rs 41 to Rs 47 (hindubusinessline.com-17.08.2019). Another factor that had induced to study the consumer behaviour is the recent study by the Food Safety Standards Authority of India (FSSAI) reporting that processed milk samples contained Aflatoxin M1 that comes from fungus in cattle feed. However, the milk samples from Tamil Nadu were found to be free of other adulterants including detergent. Consumer preferences are defined as the subjective (individual) tastes, as measured by utility, of various bundles of goods. They permit the consumer to rank these bundles of goods according to the levels of utility they give the consumer (Hanishkanthraja and Subburaj, 2018) [6]. Majority of urban consumers prefer the particular brand for best quality and highly satisfied with easy availability of milk in a study conducted by Sivasankaran and Sivanesan, 2013 [14]. In a study on price hike of daily essentials in Bangladesh (Sakar and Sikder, 2009) it was reported that the low income and middle income consumer livelihood were affected and suggested that government should control the price hike, thereby they could survive in a better way. Research on consumer behaviour plays crucial role for all competing firms to design new dairy products that suits to the requirements and expectations of the target consumer segments. The main objective of this paper is to study the consumer response in urban city towards the rise in price of Aavin milk.

Review of Literature
Nidhyananth and Sugapriya (2011) [11] studied the overview of consumer behaviour of Aavin milk with reference to Erode District and found that Aavin milk has a good reputation among the consumers so it can be sustained by maintaining the quality so as the consumer would stay loyal to Aavin brand. Vinayagamoorthy et al. (2012) [17] found that consumer preference towards AAVIN milk was because of its good quality that leads to increased demand of milk and preferred by all age group of people. The chief factors that influenced the consumption of milk were easy availability, income level and price. Milk was an essential item, also most frequently and commonly consumed by the people. Subramaniya Bharathy, et al (2013) [16] stated that Salem is a leading producer of milk and due to that many firms have started flooding in the market and because of several attributes the consumers continue to be brand loyal to Aavin. Franklin John, et al., (2013) [15] investigated the influence of milk brand rating and different dimensions of milk brand from 325 consumers, who are all using branded milk. The findings revealed that significant differences were found in the milk brand rating and the different brand dimensions like imagery, judgement, feelings and resonance and there is no statistically significant difference in dimension performance and milk brand rating. Sivasankaran and Sivanesan (2013) [14] stated that India has 50 percent of the buffaloes and 20 percent of the world cattle population with milk processing around 35 percent, of which the organized dairy industry accounts for 13 percent of the milk produced, while the rest of the milk is either consumed at the farm level, or sold as fresh, non-pasteurized milk through unorganized channels. Dairy cooperatives account for the major share of processed liquid milk marketed in India. Ananda Kumar and Babu (2014) [2] studied customer preferences on dairy products in Pondicherry state and found that packaging, cost, availability, product quality, taste, etc., influences the choice of a brand. Rajeshwaran et al., (2015) [12] stated that skim milk powder, butter and per capita income had significant influence on milk price in the long and short-term. Beef price was found to have a significant long-term influence and finally concluded that few policy areas required attention to augment the much needed growth in milk supply. Ahila and Boopathi (2015) [11] viewed that, demand for dairy products in India has increased both in rural and urban sectors. In Tamil Nadu, Aavin milk brand is the major player that leads in the milk and milk products sale among consumers and inferred that taste and quality influenced consumers to purchase AAVIN milk and further suggested that reduction of price, extra taste, easy availability and quality of the product, festival offers and free gift coupons while purchasing could satisfy the consumers and also increase the sales. Balakrishnan and Manimegali (2019) [3] stated that consumer preference towards AAVIN milk was based on their socio-economic characteristics such as age, gender, income and educational qualification. Majority of the sample respondents were aware and buy the AAVIN products. The suggestions given by them were reduction of price, preservation and quality should increase and finally they revealed that 250 ml packet size should be made available for the convenience of consumers.

Methodology
This study was carried out in Coimbatore city. The survey was carried out through well structured and pre-tested interview schedule. Convenience sampling was adopted to collect information from the sample respondents who purchased Aavin milk. The study was limited with 100 sample respondents. In order to draw meaningful conclusions, the questions included socio economic details of the respondents, the sample respondent feedback towards the rise in price and the major factors influencing them towards purchase of milk were collected. Likert scale technique was used to analyse the factors that influenced the purchase of milk. Sorrel brown (2010) [15] scale was adopted for this study based on five pointed rating scale, factors influenced to purchase Aavin milk was analysed.

Results and Discussion
The respondents’ demographic features were collected to draw meaningful conclusions on their response to consumption of Aavin milk after the rise in price. The table 1, revealed that majority of the sample respondents (64 percent) were female whereas male sample respondents were 36 percent. In the context of age category, 36 percent of the sample respondents were under category of 36 to 45 years of age whereas 35 percent sample respondents fall under the age category of 26 to 35 years followed by 46 to 55 years (11 per cent) and above 55 years (8 per cent). Regarding educational qualification of sample respondents, majority (61 per cent) of the sample respondent were graduates. The sample respondents who finished their postgraduate were 19 percent followed by secondary (15 per cent) and primary (5 per cent) education.
Table 1: Demographic Features of sample respondents (n= 100)

| Characteristics          | Category | Number | Percentage |
|--------------------------|----------|--------|------------|
| Gender                   | Male     | 36     | 36.00      |
|                          | Female   | 64     | 64.00      |
| Age (years)              | <25 years| 10     | 10.00      |
|                          | 26-35 years| 35     | 35.00      |
|                          | 36-45 years| 36     | 36.00      |
|                          | 46-55 years| 11     | 11.00      |
|                          | > 55 years| 8      | 8.00       |
| Educational Qualification| Primary  | 5      | 5.00       |
|                          | Secondary| 15     | 18.00      |
|                          | Graduation| 61     | 61.00      |
|                          | Post Graduate| 19     | 19.00      |
| Monthly Income (Rs/ Month)| >20,000 | 6      | 6.00       |
|                          | 20,001 - 30,000 | 47   | 47.00      |
|                          | 30,001 - 40,000 | 36   | 36.00      |
|                          | >40,000 | 11     | 11.00      |
| Size of the Family (numbers) | 3 members| 37     | 37.00      |
|                          | 4 members| 42     | 42.00      |
|                          | 5 members| 11     | 11.00      |
|                          | 6 and above| 10   | 10.00      |

The sample respondents were well educated and they had a preference towards Aavinmilk. The income factor also influences their milk consumption quantity and 43 percent of the sample respondents were earning Rs.20,001 to Rs. 30,000 per month, whereas 36 percent of the sample respondents were earning Rs. 30,001 to Rs. 40,000 per month followed by above Rs. 40,000 (11 per cent) and less than Rs. 20,000 (6 per cent). The size of the family and income reflects the consumption of milk in every family, 42 per cent of sample respondents family size was 4 members whereas, 37 per cent of the sample respondent family had 3 members followed by 5 members (11 percent) and six and above members in family (10 per cent). Majority of sample respondents were categorised under nuclear family type that was predominant in the present status.

The responses from the consumers after the price rise in terms of purchase of milk quantity, their income level and shift to other brands were depicted in Table 2.

Table 2: Consumer response to rise in price of Aavin milk

| Sl.no | Characteristics                          | Category | Number | Percentage |
|-------|------------------------------------------|----------|--------|------------|
| 1.    | Whether the price rise affects your purchase and consumption of AAVIN milk? | Yes     | 63     | 63.00      |
|       |                                          | No       | 18     | 18.00      |
|       |                                          | Might be | 21     | 21.00      |
| 2.    | Are you shifting to other brands of milk? | Yes     | 42     | 42.00      |
|       |                                          | No       | 58     | 58.00      |
| 3.    | How much quantity did you buy before price rise? | Upto 1 litre | 34     | 34.00      |
|       |                                          | 1.1-2 litres | 45     | 45.00      |
|       |                                          | 2.1-3 litres | 11     | 11.00      |
|       |                                          | > 3 litres | 10     | 10.00      |
| 4.    | How many litres are you buying after price rise? | Upto 1 litre | 53     | 53.00      |
|       |                                          | 1.1-2 litres | 30     | 30.00      |
|       |                                          | 2.1-3 litres | 9      | 9.00       |
|       |                                          | > 3 litres | 8      | 8.00       |
| 5.    | Which brand did you shift after price rise? | Aroma    | 15     | 15.00      |
|       |                                          | Hatsun   | 4      | 4.00       |
|       |                                          | Cavin    | 7      | 7.00       |
|       |                                          | Local Brands | 11     | 11.00      |
|       |                                          | Arokya   | 5      | 5.00       |

The table 2 depicted 63 percent of the sample respondents were affected by the rise of milk price. The major reason being their income level, since, majority of the sample respondents’ average income level is under low category, whereas 21 percent of the sample respondents’ were partially affected by the rise in price of milk. It is common that if any there is price rise of any brand, then the consumer will shift towards the other brands which are low priced. If not shifted, would be brand loyal due to its beneficial aspects. Here, 42 percent of the sample respondents shifted to other brands even though the felt that other brands quality was not like as Aavin milk and the reason behind the shifting of brand was price rise only. Majority of the sample respondents (58 percent) continue to consume Aavin, the same brand because of their preference and brand loyalty. The average consumption of milk in family was 1.1 to 2 litres per day per family, as it fulfils the basic requirements of the family and the major respondents (45 percent) fall under this category. The sample respondent who falls under the category of up to one litre consumption was 34 percent, as the reason behind it was their income and family size. The sample respondents’ consumption of milk of more than 3 litres was 11 percent and they fall under high income category and also due to their consumption habits. The consumption of milk by the sample respondent as inferred above was before the price rise of milk. The consumption of milk after the price rise, showed changes...
as majority (53 per cent) of the sample respondents reduced their consumption of milk up to one litre, mainly they reduced consumption of milk and milk products, while 30 percent of sample respondents consume milk of 1.1 to 2 litres. The sample respondents, who fall under the category of 2.1 to 3 litres of milk consumption, were nine per cent only and they continued with same quantity due to their habit of consumption of milk as necessity for their day to day life and price rise didn’t affect their consumption of milk. Only small number of respondents (eight) had reduced their consumption of milk from more than three litres per day that was due to their family size and their income level. The consumers who shifted to other brands were, 15 per cent to Aroma, 11 per cent was captured by local milk brands followed by Cavin (7 per cent), Arokya (5 per cent) and Hatsun (4 per cent) respectively.

The factors influencing the sample respondents to purchase the Aavin milk was analyzed using likert scale technique (Sorrel brown, 2010) with five point rating scale. From the table 3, it could be inferred that freshness of milk was the major factor and good quality was the second factor that influenced to purchase the Aavin milk.

### Table 3: Factors that influenced the sample respondents towards purchase of Aavin milk

| Factors                  | Strongly Agree (5) | Agree (4) | Undecided (3) | Disagree (2) | Strongly Disagree (1) | Weighted Score | Rank |
|--------------------------|--------------------|-----------|----------------|--------------|-----------------------|----------------|------|
| Freshness                | 45                 | 25        | 15             | 7            | 8                     | 3.92           | 1    |
| Better Quality           | 37                 | 28        | 25             | 6            | 4                     | 3.88           | 2    |
| Needed Quantity          | 36                 | 28        | 20             | 10           | 6                     | 3.78           | 3    |
| Good Taste               | 24                 | 31        | 33             | 5            | 8                     | 3.61           | 4    |
| Health Conscious         | 27                 | 30        | 22             | 17           | 4                     | 3.59           | 5    |
| Store accessibility       | 30                 | 26        | 24             | 10           | 10                    | 3.56           | 6    |
| Better service           | 28                 | 26        | 24             | 15           | 7                     | 3.53           | 7    |
| Aroma                    | 8                  | 26        | 39             | 13           | 10                    | 2.97           | 9    |

Milk available in needed quantity packs was the third major factor which influenced the sample respondent to purchase because different quantities were available for the consumer convenience whereas the fourth factor considered by the sample respondent to purchase was good taste. People were aware about the product details and are health conscious and it became the fifth factor which influenced the sample respondent to purchase followed by store accessibility, better service provided by the Aavin outlets that includes card system, packing of the milk and aroma in that order.

**Conclusion**

- Milk is the essential commodity inevitable for all ages of the population and in cities, ease of availability in different quantity packs and good quality could affect the sales to large extent.
- The rise in price of Aavin affects the consumption pattern of low and medium income category respondents especially as they had reduced their consumption quantity (63 per cent) which indirectly affects their health and well being.
- Consumers are brand loyal to Aavin as it is being one of the major players in the state and also provide quality milk when compared to other brands and hence consumers (58 per cent) develop loyalty towards Aavin even though they opted quantity reduction.
- Freshness, better quality, needed quantity (available at different pack sizes) of milk provided by AAVIN was the major factors influenced the sample respondents to purchase followed by good taste and health consciousness.

**Suggestions**

- Aavin has a strong brand image among the milk players of the state due to its freshness, quality taste and packing attributes especially in urban areas.
- Efforts to reduce the price hike marginally could lead to more sales volume which would increase their brand image.
- More outlets in the needed locations and efficient service coupled with the regular attributes like quality, freshness, packing would increase their market share especially in the urban and semi urban areas.
- With its brand repute Aavin could cater the other needs (milk products) of the consumers in all places would be a good business strategy and based on the seasonal demand it can come out with innovative products other than what it presently provides in the market.

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