



Review of Consumer Purchasing Patterns for Milk Products in Coimbatore District, Tamil Nadu, India

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

Milk and milk products play a vital role in fast moving consumer goods (FMCG). Milk products have very low shelf life and are prone to detergents, if proper care is not taken while pasteurizing, processing, packaging and handling. Hence, consumers desire local brand milk products than national brands or others, due to its more availability, less preservatives and longer shelf time. It is a well-known fact that most of the consumers still prefer traditional ways for the consumption of milk and milk products. So, the awareness about packed milk products is lower in these days as these products are mostly restricted with urban consumers. Whereas, many consumers feel packed milk products are not safe to consume. So, the main focus of this review was to analyze the buying behavior of consumers towards Aroma milk products. The review was done to determine the perception and attitude of consumers towards buying Aroma milk products which helped to understand the value of the product in consumer's point of view.

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1. INTRODUCTION

"India has been showing a tremendous milk production over these 40 years and now indeed, it has the world's substantial dairy industry in terms of milk production with the estimation of total milk output as 165 million tonnes during the Financial Year 2016-17 (National Dairy Development Board) holding more than 16% contribution to the World's total milk production. Of this, Uttar Pradesh is the massive contributor of 17.6% and Tamil Nadu clinches ninth position by contributing 5.03%. The Indian GDP exhibits a decline phase in agriculture and livestock sector from 34.2 percent and 4.82 percent in 1980-81 to 17.46 percent and 4.43 percent in 2015-16 (National Dairy Development Board), whereas the share of livestock has been subscribing an increase in Indian agricultural GDP from 13.88 percent in 1980-81 to 27.25 percent in 2012-13 (National Accounts Division). Getting the tag of World's largest milk producer, India also clutches the proud of being the largest consumer of dairy products. The consumption of dairy products' has been exponentially growing due to its rich nutritional qualities in the country, and in regards with the facts and figures, India's milk production will further grow at a CAGR of around 14% between 2015-16 and 2021-22. Backed via strong domestic demand for milk, India's per capita availability leans at 289.4 grams in FY2017" (National Dairy Development Board).

"Experts expect that milk production will be transferred from high-production cost countries to low-production-cost countries and regions experiencing a growing demand for milk products, where world milk production is expected to grow. The current share of developing countries accounts for 44% of the world total milk production. The world milk production is estimated to reach 665 million tons in 2010, from cattle (551 million tones; 84%), buffalo (12.5%, mainly from India and Pakistan), sheep and goats (3.2%) and other species (predominantly camels, 0.3%) [1]. Almost all countries produce milk for local consumption. However, the cost of production varies greatly depending on factors including labor costs, animal genetics, on-farm technology, and fodder and water availability" [2]. In EU the breeders of dairy cattle struggle with a number of problems arising from the cost escalation, and from the dramatic fall of milk purchase prices [3].

"The Indian cooperative region is making an appearance as one of the world's largest and engaging an important role in thousands and thousands of rural households by improving their socioeconomic characteristics by holding a distinctive area within the country for its excessive employment capacity and for making sure the availability of nutritious, yet less costly, food for India's ever-growing populace" [4-6]. "Over 10 million dairy farmers have occupied 96,000 local dairy cooperatives, promoting their produces to one in every of 10 milk producers' cooperatives unions caused to turn over with the support of 15 state cooperative milk marketing federations. Our country has been practising dairy business as rural cottage industry over these years and at the end of 19th century, semi-commercial dairy farms have commenced only through the status quo of dairy farms in military areas and cooperative unions throughout the country" [7-11]. Given that Independence, enterprises have shown a speedy development with a huge wide variety of present-day milk and milk product factories, where the Indian organized dairies have been correctly engaged in an ordinary commercial manufacturing of pasteurized bottled milk for Indian Dairy products.

On a note about the Indian Dairy Industry, they have moved to the strength of a producer-owned and professionally-managed cooperative system, in spite of the facts that a majority of dairy farmers are illiterate and sprinting small and marginal operations and apart from other things, selling milk is their sole source of income for many farmers. Witnessing an impressive rapid growth of more than 5% per annum over the last three decades, Indian Economy is providing better rostrum for MNCs and foreign investors to explore the full potential of our dairy industry. Working on with the objective of managing the national resources in order to enhance the entire nation's milk production, the industry has been involved in upgradation of milk processing using innovative technologies. Carrying an incredible record through subsequent increase at exponential rates in milk production, Indian Dairy Industry has augmented with the viability in increasing the production level at per animal level among the dairy units.

"Characterized by high fragmentation and dominated by the unorganized sector, the dairy industry comprises 70 million among the rural

households and the ever-raising mount in domestic demand for dairy products and a large demand-supply gap would make India, a net importer of dairy products in the well-nigh future. As India's milk production is mainly dominated by small and marginal land-holding farmers and landless labourers, who in aggregate own 70% of the national milch animal herd, evidences dairying as a subsidiary source of income and occupation, making a relief to generate sufficient income for breaking the vicious subsistence in the agricultural-debt cycle" [7].

"The Indian economy's sustained growth and a consequent rise in purchasing power over the last two decades resulted in the emergence of end number of dairy plants with the ability to afford fluid milk and diversified dairy products. As the consumer's taste and preferences are changing day by day, the market scenario is also changing day by day. Our country's consumption pattern for dairy products is quite unique as some of the Western Countries which are growing over the years due to increased income levels, migration to urban areas and changes in demographic characteristics" [9].

Now, "every corner in India demands quality and affordable dairy produce. The Dairy industries are stepping ahead for better quality products

with acquired technologies with some quite innovations for their products and better marching in the market. Production of milk is confined only to rural areas, but the demand is found in all areas. Hence, to harmonize a biased supply, fluid milk and value-added milk products have been initiated by the dairy. About 45% of the entire nation's milk production is ingested as liquid milk and the other 47% is further processed as varied traditional products as curd, cheese, butter, butter milk, ghee, khoa (partially dehydrated condensed milk), paneer, chhana (Cottage Cheese) and ice creams. Only 8% of the milk is used in the production of western products like milk powders, processed cheese and processed butter. These products are further branded and supplied throughout the nation to meet the consumer demands" [10]. The milk products and the percentage of processing over the entire milk production are given below in Table 1.

2. GLOBAL SCENARIO ON MILK PRODUCTION

The data reported by USDA (Table 2) designates that the production is grown consistently at an annual rate of about 4.2 percent.

Table 1. India's milk product mix

S.No	Milk Products	Percentage (%)
1.	Liquid Milk	46.0
2.	Khoa	6.5
3.	Curd	7.0
4.	Butter	6.5
5.	Ghee	27.5
6.	Milk powders	3.5
7.	Paneer	2.0
8.	Others (Fresh Cream, Ice Cream)	1.0

(Source: Office of the Economic Advisor, Ministry of Commerce and Industry, GOI - 2017)

Table 2. World milk production

S.No	Country	Production (in Million Tonnes)
1.	India	165.4
2.	United States	90.4
3.	China	39.9
4.	Brazil	32.9
5.	Russian Fed.	31.1
6.	Germany	30.7
7.	Pakistan	29.7
8.	France	24.0
9.	New Zealand	18.5
10.	Turkey	15.6

(Source: USDA, Economic Research Service, FAO, FAOSTAT Database - 2017)

Table 3. Milk production and per capita availability in India

Year	Production (Million tonnes)	Per Capita Availability (gms / day)
1991-92	55.6	178
1992-93	58.0	182
1993-94	60.6	186
1994-95	63.8	192
1995-96	66.2	195
1996-97	69.1	200
1997-98	72.1	205
1998-99	75.4	210
1999-2000	78.3	214
2000-01	80.6	217
2001-02	84.4	222
2002-03	86.2	224
2003-04	88.1	225
2004-05	92.5	233
2005-06	97.1	241
2006-07	102.6	251
2007-08	107.9	260
2008-09	112.2	266
2009-10	116.4	273
2010-11	121.8	281
2011-12	127.9	290
2012-13	132.4	299
2013-14	137.7	307
2014-15	146.3	322
2015-16	155.5	337
2016-17	165.4	355

(Source: National Dairy Development Board, Gujarat)

Table 4. State-wise milk production in India ('000 tonnes)

Year	01-02	03-04	05-06	09-10	11-12	15-16	16-17
All India	84406	88082	97066	116425	127904	155491	165404
Andhra Pradesh	5814	6959	7624	10429	12088	10817	12178
Bihar	2664	3180	5060	6124	6643	8288	8711
Gujarat	5862	6421	6960	8844	9817	12262	12784
Haryana	4978	5221	5299	6006	6661	8381	8975
Karnataka	4797	3857	4022	4822	5447	6344	6562
Kerala	2718	2111	2063	2509	2716	2650	2520
Madhya Pradesh	5283	5388	6283	7167	8149	12148	13445
Maharashtra	6094	6379	6769	7679	8469	10153	10402
Punjab	7932	8391	8909	9389	9551	10774	11282
Rajasthan	7758	8054	8713	12330	13512	18500	20850
Tamil Nadu	4988	4752	5474	6787	6968	7244	7556
Uttar Pradesh	14648	15943	17356	20203	22556	26387	27770
West Bengal	3515	3686	3891	4300	4672	5038	5183

(Source: National Dairy Development Board, Gujarat)

3. INDIAN SCENARIO ON MILK PRODUCTION

India's Milk production and per capita availability over the years are presented in Table 3.

Though India's net import on dairy products, especially milk powder was defeated by

Operation Flood, the milk production has recorded a substantial increase in milk production of about 100 million tonnes, which has almost doubled its level from 1991. This has shown a demand-side development by increasing the per capita availability up to 177 per cent and also supply-side promotions created

a huge demand among consumers for value-added products and extensive dairy development programmes. Highly decentralized India's milk production, supply and marketing updates that 55% of the fluid milk production is consumed by the producer household. Of the remaining, 15-16% enters organized markets throughout the country comprising both the private sector and cooperatives and two-third is sold in informal markets.

4. STATE-WISE MILK PRODUCTION IN INDIA

More than 90% of the nation's milk production is concerted with 14 states among that Uttar Pradesh ranks first followed by Rajasthan, Andhra Pradesh, Gujarat and Punjab in which only 20 percent is incorporated by Organized Dairy sector, including both Government supported dairy cooperatives and private dairy sectors. Though these sectors are expanding their processing capacities and distribution network, only a few dairy cooperatives and private dairies market have a wider national presence beyond the growing demand for fluid milk and other value-added products.

Below is the list of highest 13 milk producing states in India over the years. These states altogether hold a share of 40% in the aggregate milk production of the world.

5. PROCESSING

With more diversified products, India's dairy segment is growing with the major demand drivers as raising income level, migration to rural areas, households with dual income and other demographic shifts for the products such as cheese, butter, yogurt, dairy whitener, ghee, paneer, ice cream, milk powder, flavored milk and ethnic sweets. As per the study conducted by Rabobank, the market share has raised from 20-30 percent for value-added products from fiscal year 2012-13 to 2017-18. Yogurt and probiotic dairy shows an increasing demand, due to its nutritious manner among the health mentis customers. As per the National Dairy Development Board, approximately 43 million litres per day is the processing capacity of the cooperative sector whereas in case of private sector is not available. However, the total registered processing capacity is 73 million litres per day for the private dairy sector.

6. MILK MARKETING

The Government of India estimated that nearly half the country's milk production is majorly consumed by the households and is not marketed, which is either consumed in unprocessed fluid form or converted in the form of butter, ghee, paneer and curd. Apart from these, only 15% of the produced milk is processed and marketed outside the household as fluid milk or processed products manufactured by structured cooperatives or private firms which is prevalent throughout rural and urban India and typically involves a chain of intermediaries procuring milk directly from the producers for retail distribution within small areas.

7. INDIAN DAIRY COOPERATIVES

Prior to Independence, the Indian network of farmer-owned dairy cooperatives was organized using the "Anand Model" which was originated in the State of Gujarat that has been the most successful cooperative movements and also the key early driver of dairy development in India. With a total membership of about 15.1 million dairy farmers, the dairy cooperatives holds 22 State milk marketing federations, 183 district milk producer unions, and nearly 1,56,000 village-level cooperative societies [11]. At present available data records that there are 263 cooperative dairy plants with the total processing capacity of about 43 million liters of fluid milk per day with the accordance of States of Gujarat, Maharashtra, Karnataka, and Tamil Nadu accounting for large shares of cooperative-owned processing capacity.

8. PRIVATE DAIRY PROCESSING

Investment in dairy marketing and processing facilities were restricted to the cooperative sector with few expectations prior to 1991, which later was delicensed to private investment without proper forgoing approval, leading to the expansion of to the expansion of private investment in the sector. They are now expanding faster than cooperatives, where data specified that about 765 private organizing plants were established during 2011, with the total capacity of 73 million litres and about more than 70 percent are from the cooperative capacity. Though the private and cooperative sectors handles equal shares of milk output, only private sector have been forward for large amount of investment and innovations on Since the private and cooperative sectors now handle roughly

equal shares of milk output, these data suggest a large amount of excess capacity has been developed by private investment. The contribution towards private capacity are majorly taken over by Northern state of Uttar Pradesh, the Western state of Maharashtra, but with substantial capacity in the other major milk producing states of Punjab, Andhra Pradesh, Madhya Pradesh and Tamil Nadu.

9. CONSTRAINTS

In the present study, to rank, the constraints faced by the sample respondents purchasing the product from retail stores were studied using Garrett's ranking technique. [12-13] deliberated the factors influencing the performance of BAMUL milk with a sample of one hundred respondents and therefore the factors like door delivery, clean packing, quality, sanitary preparation, time-saving, and responsibility, sensible worth for cash, freshness and desired flavor were thought-about as necessary constraints. [14] ruled "a study on assessing the issues confronted by entrepreneurs to facilitate putting in of property export units and searching for the link between entrepreneurs freelance variables with problems encountered. The study resulted with many serious promoting issues like inadequate accessibility of export data, cheaper or superior competitive substitute, identification of mega-markets or potential markets for exports, high value of package whereas strangeness with export activities, lack of market intelligence, lack of subtle technology of packaging for export, quality specification, competition from already established and bigger units, cumbersome procedure cardinal and export were serious issues". [15] appraised "the selling issues and prospects of horticultural crops within the North-Eastern hill region of India, comprising the states of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, and Tripura. Area and productivity of horticultural crops, enactment of market legalization, market intelligence and market performance were the key aspects examined throughout the survey. The North-Eastern region of India has ample scope for increasing the horticultural sector and also the main issues were inadequate market intelligence, lack of adequate market infrastructure (such as transportation network, storage, and processing facilities) and extension and lack of economic market legislation and

regulation". [16] resulted "the key issues intimated by farmers on adoption of vermin-compost technology were shortage of water, attack by ants, marketing problems and storage issues, which were experienced by 13.5%, 39%, 79% and 13.5% of the respondents interviewed respectively".

According to the study conducted by [17] in Punjab (India) to establish the issues associated with organic farming, many respondents are predicting to discontinue organic farming due to weed problem, lack of awareness concerning organic farming, non-availability of vermicompost, and breaching of agreements by the farmers were the issues faced by the companies. [18] conveyed "an overview about the Indian coconut industry and explained the root cause of the current production crisis and also indicated that low rate of returns from the coconut holdings and the deduced input-output realization, especially in traditional growing coconut states, were the biggest obstacles for the competitiveness of India's coconut sector and measures were explored to revitalize the industry". [19] managed a study on technology utilization behavior of paddy growers in Gujarat state. The study concluded that the farmers had less adoption of technology which was a major constraint.

10. CONSUMER

Consumer as an individual who consumes goods whether it is manufactured by business unit or designed by nature such as air, water, etc. and the utilities offered by the business organizations like hospitals, religious, educational and other voluntary organization, etc. and even government organizations [20] defined "consumer as a person who bought goods or services for own use and needs and not for sale. [21] referred consumer as people living together in families and certain kind of households, purchasing and utilizing products in order to satisfy their personal needs and wants. [22] defined consumer as an individual who selects, purchases, uses or dispose of products and services, ideas or experiences to satisfy their needs and desires. [23] defined a customer as an individual who consumed goods, and services of manufacturers or retailers. [24] described consumers including from the individual being to all the households who obtained goods and services especially for personal consumption and non-business use.

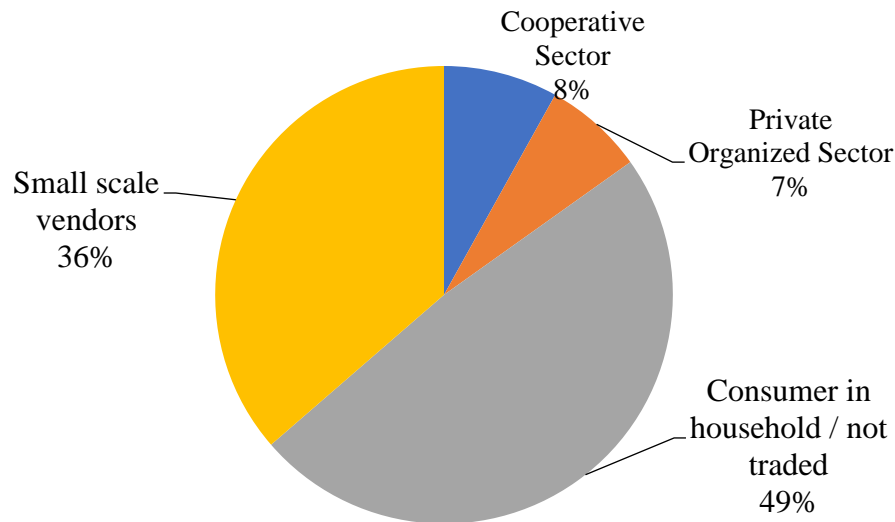


Fig. 1. Fluid marketing channels in India

11. CONSUMER BUYING BEHAVIOR

In the present study, consumer buying behavior was referred to make a decision related to the consumers' buying of milk products. [25] defined buying behavior as a process wherein the individuals decide on whether, what, where, when, how and from whom to purchase their wanted goods and services. [26] meant "buying behavior as human activities in the consumption role. The act of individual and organization directly in acquiring and using products and services included in the process of decision making. This includes problem recognition, search for alternatives, evaluation, and assessment of options, and the decision to buy, postpone, or search further and post-decision evaluation". [27] stated that consumer behavior referred to the selection of specific brand of a product out of the available brands in the market by considering their various attributes such as size, texture, material, taste, hardness, brand, price, name and distribution.

According to [11], consumer's behavior referred to the selection of specific brand of product, out of the available brands in the market by considering their various attributes, price, name, and distribution. [15] argued that "buying behavior as a human activity in the consumption role. The act of individual and organization directly in acquiring and using products and services included in the process of decision making. This includes problem recognition, a search of alternatives, evaluation, and

assessment of options, decision to buy, postpone, or search further and post-decision evaluation". [22] found in his study that "most of the people were willing to buy pre-packed ones because it would be easier for shopping when packed in particular weights. On the other hand, some people are willing to keep the fruits and vegetables to be kept often so that they can pick and choose the quantity and quality that they require". [8] characterized the factors influencing consumer behavior into certain specific variables as personal, social, culture and psychological. [21] defined consumer behavior as a set of activities that involves the purchase and use of certain goods and services which resulted from the consumer's emotional and mental needs and behavioral responses. [18] defined "consumer buying behavior as a process through which the inputs and their use lead to satisfaction of needs and wants, through certain process and actions and has numerous factors as a part that are believed to have some level of effort over the consumer's purchasing decisions". [16] examined "the temperament of the consumers to pay a premium worth for organic products in Kathmandu Valley where 180 sample respondents were surveyed through semi-structured questionnaires and to research the consumer's perception and their disposition to pay money for organic products. The study brought out that every respondents were willing to pay a worth premium, however the extent of satisfactoriness varied considerably and in total of 58% of the consumers are willing to pay 6-20% price premium, whereas 13% were willing to

pay up to 50% price premium. Almost 39 percent of the respondents felt the additional value for organic products is affordable, while 27 percent considered it as too high. Also, this study recommended that the consumption of organic products is increasing, on the opposite hand, development and innovations in certification, processing, labeling, and packaging square measure needed to spice up the demand for organic products”.

Koduru [7] referred to consumer buying behavior because the buying behavior of ultimate consumers, each people, and households, who buy goods and services for private consumption and “consumer buying for behavior because the study of the ways in which buying and taking away of goods, services, concepts or experiences by the individuals, groups and organizations so as to satisfy their needs and wants. The decision process and physical activity people have interaction in once evaluating, acquiring, victimization or disposing of goods and services”. [20] conducted “a study among the consumers of organic food in Romania during which he calculable that almost all of the respondents have a positive perspective towards organic food. People having larger concern for health and environment and having a higher level of knowledge about organic food have a higher purchase frequency. This study provided a preliminary analysis of the planned theoretical model outlined organic food consumption. Variables perspective, concern for health, environmental concern and data concerning organic foods have a positive relationship with purchase frequency. These variables are smart predictors of the purchase frequency of organic food”.

12. CONSUMER EXPECTATION

In this present study, expectations are referred to as consumers’ preferred value to be related to the fresh cut vegetables and stated that customers’ expectation was usually based on popularity, past experience or pre-conditioned “set”, explicit that lower expectations typically cause bigger satisfaction, people normally and particularly who are sensitive to the gap between performance and expectations, have the inducement to and actually do “strategically” lower their expectations. [16] opined that customers’ expectation was sometimes expertise, word of mouth and advertising. [17] opined that consumer expectations are based on customers’ information and knowledge and also

found out that majority of the respondent’s expectations from the brand were good taste and quality as it was the major factor influencing their purchase decision of a brand. Number of flavors as in other brands was the expectation to have the brand at a reduced price. About 26.66 percent were expecting to have a different range of pack sizes. The extent of belief in karma, operating largely through its impact on long-run orientation, does moderate (decrease) the effect of disconfirmation sensitivity on expectations. These findings suggest that it is important to tailor advertising messages by matching them with customer expectations and their cultural determinants. [9] interpreted that customer expectation moderate the mediating effect of perceived value while perceived value fully mediates the moderating effect of customer expectations. The results suggest both moderated mediation and mediated moderation. Overall, this study demonstrates a new way of assessing the effect of customer expectations and a better understanding of the perceived value and customer satisfaction. Implications for theory and practice in gaming and marketing studies are delineated and also showed that the way consumers form expectations and how these react to price variations have important implications in terms of the impact of termination charges on retail competition.

13. CONSUMER PERCEPTION

In the present study, the perception was defined as the process by which consumers interpret their views about the fresh cut vegetables. [11] explained perception as a psychological process whereby people select, organize and interpret sensory stimulations into meaningful information about their environment. [28] defined perception as the process by which individuals organized and interpreted their sensory impressions in order to give meaning to the environment. Attitudes, motives, interest, experiences, and expectations influenced the perception of the individuals. [5] defined perception as a process by which individuals organized and interpreted their sensory impressions in order to give meaning to their environment. [6] defined perception as the process by which an individual selects, organizes and interprets information inputs to create a meaningful picture of the world. Perception depends not only on the physical stimuli but also on the stimuli’s reaction to the surrounding field and on conditions within the individual. The key point is that perceptions can vary widely among individuals exposed to the

same reality. Reddy [12] defined perception as of how one would see the world around him/her. [9] defined perception as the process by which individuals organize and interpret their sensory impressions in order to give meaning to their environment and stated that attitudes, motives, interests, experience, and expectations influenced the perception of individuals. [15] in his study of merchandising strategies for enhancing the sales on perishables in Food World stated that the expectation of the customers formed a major part in framing the strategies for the case firm. The result showed that majority of customers wanted the availability of fresh green leafy vegetables during evening times and also stated that quality, taste, and price were the factors considered important for preferring in a particular brand of masala (spice) products. Perception as the felt experience about various attributes of products or services by the customer from the point of view of expectations, requirements, and convenience.

14. CONSUMER PREFERENCE

In this study, consumer preference was analyzed with reference to the choice of the consumer regarding the purchase of fresh cut vegetables. [26] explained that the consumers preference as that of the consumer which, when the product preferred by him was not available with the dealers, made him walk to another dealer for the same product. According to [20], it is an attempt to create a unique image for their products, which enables them to achieve an advantage over their competitors' products and consumer preference was what the buyer decided in favor of one brand or product, what motivated him or her to select an alternative and who influenced him or her to buy the brand or product. [21] observed that purchasing decision of branded rice was done by housewives and retailers were the main source of information. Most of the consumers preferred to buy 10 kg packs rather than 25 kg. The quality and image of the brand were ranked as major factors for brand preference in purchasing of branded rice. [22] explained that the consumer's satisfaction or dissatisfaction would decide the consumer's preference for the product and if he was satisfied with the product and then he would exhibit a higher probability of purchasing it again. [23] found out that preferences of the consumers clearly indicated their priority for cleanliness/freshness of food products followed by price, quality, variety, packaging and non-seasonal availability. The consumers' preference

of marketplace largely depends on the convenience in purchasing at the marketplace. Fruits and vegetables are mostly purchased daily or twice a week due to their perishable nature, whereas grocery items are less frequently purchased and he also defined consumer preferences as the subjective tastes of individuals, as measured by the utility of various bundles of goods.

15. MARKETING

Problems in marketing of cardamom as declining prices of cardamom and harassment in the tax assessment of small growers. Cheating and exploitation by middlemen / local traders as another problem in the marketing of cardamom in Karnataka. They also stated that to attain success in the international market, it is very essential that research activity is taken up on flavor perseverance, color retention, and packaging, etc [17]. [21] reported that farmers are not aware of the new methods in the marketing of cardamom. Farmers sell their products (cardamom) immediately after drying, without sorting or grading. But some producers, however, store for some period to wait for the high price. [27] said that marketing as a discipline has evolved over a period of time where the traditional concept imparts that goods were produced to be sold to the customers and the modern marketing states that goods are produced according to the needs and demand of the customers.

16. MARKET PROMOTION

Television advertisements have led to increased sales in only half the instances tested, in the case of trade promotions, only 16% instances studied across 65 product categories have resulted in incremental sales, which led them to conclude that many companies could improve profitability by restrained expenses on advertisements and promotions. The traditional notions of marketers of continually raising expenditure on advertisement to promote their brand and increase sales are some of the myths that they have argued against. They also advocated greater usage of empirical studies on the effectiveness of advertisements to justify the continued expenditure. [25] argued that "most responses of consumers to advertisements are low involvement processing in nature and provides a Theory of Low Involvement Processing of advertising, which operates through the repeated processing of elements at

low attention levels leading to the gradual establishment of meaningful brand association in consumers". [22] interpreted from his study that, "there are differential effects for leading brands versus smaller brands. Specifically, smaller brand promotions can often benefit their competitors, while leading brands benefit themselves through promotions. However, because different promotion activities can be tied to different search goals for consumers, it is likely that different promotion types (featuring versus discounting) may interact with the type of brand (market leader or non-market leader). We expect the sales of the focal brand to be positive influences from the presence of the market leader in an adjacent shelf location". [24] found out that "if someone lives in a larger family and is market maven that is well informed about seasonal sales and shares the information with 16 others respond to many different deals. Value-added promotions are favored by fashion followers who have primary school education. Poorly prone customers are loyal and interested in fashion and trends. People highly prone to sales promotion techniques offering economic benefits are involved in fashion and market maven". [20] revealed that "marketing promotions were significantly correlated with purchase behavior and satisfaction of the customers. There was also a significant relationship between product, people, physical evidence with purchase behavior and overall customer satisfaction of the customers". [21] stated that "internet marketing, also known as digital marketing, web marketing, online marketing, search marketing or e-marketing, is referred to as the marketing (generally promotion) of products and services over the Internet. I-Marketing is used as an abbreviated form for Internet Marketing. Internet Marketing is considered to be broad in scope because it not only refers to marketing on the Internet but also includes marketing done via e-mail and wireless media. Digital customer data and electronic customer relationship management (ECRM) systems are also often grouped together under internet marketing. Internet Marketing ties together the creative and technical aspects of the Internet, including design, development, advertising, and sales".

17. MILK AND MILK PRODUCTS

Consumer attitude and perception towards a branded milk product in Sri Lanka. The results showed that consumers tended to purchase tetra-pack considering the attributes included in

value and package subsets mainly, including purity, size, convenience, appearance, and informational labeling etc. However, consumers did not believe that it enhanced certain attributes included in "food safety" and "nutritional" subsets. The statistical outcome showed that age, gender, level of education and income had a significant impact on this behavior Kariyawasam and Weerahewa [13]. A. Alwis et al. (2009) did an analysis regarding the factors influencing consumption of fresh milk among consumers of Sri Lanka and revealed that taste and nutritional content have positive (stimulating) impact towards the consumers and conversely health problems, price level, and product's availability have negative (dissimulating) impact on consumer decision to purchase fresh milk in Sri Lanka. [18] analyzed between packed and unpacked milk preferences in Samsun province of Turkey. The results indicated that better-educated household head, higher income households, younger and female household head and people who consumed more packed fluid milk than did others also agreed with "unpacked milk is not healthy". Moreover, consumers who agreed with statement "price of packed milk is expensive compared to unpacked milk" were less likely to consume packed fluid milk than did others. [14] reported that Indian Economy has been witnessing significant changes in last few years in the retail sector. The major technological advances transformed business practices. The emergence of new formats and changing customer preferences provided an opportunity for people to serve and get served better. [15] conveyed a study amongst 120 consumers of packed milk in 3 cities of Pakistan. The study resulted that consumers mostly distinguish packed milk relatively better due to its various quality attributes. The estimated ordered logistic regression model revealed that younger, married and male consumers irrespective of education level had greater preferences for packed milk.

Jothi [16] analyzed between packed and unpacked fluid milk consumption and preference amongst Turkish households using consumer survey. Empirical results indicated that the better-educated household heads, higher income and larger households, and households with children under seven years of age consumed more packed milk than others. A similar result was found for unpacked milk consumption, except for a negative effect of education, working wife and income. [17] found out that health, availability, and education from demographic

factors positively influence the consumer's attitude towards buying organic food. Overall satisfaction of consumers of organic food is more than inorganic food but the satisfaction level varies due to different factors. [28] found in their study, that quality, packaging, price, availability, and advertisement were the factors that affected the preference of branded milk in rural and urban areas and affected the consumption pattern. Ahmed and Amin [14] conducted a research to assess the impact of packaging on product purchase. According to the finding of the research study, it was observed that the packaging was the most important factor. It was further concluded that the packaging elements like its Color, Packaging material, Design of Wrapper and innovation were more important factors when consumers making any buying decision. Finally, it has also been concluded that the Packaging is one of the most important and powerful factors, which influences consumer's purchase decision. [29-30] in his research in Shiraz city with 193 samples using a questionnaire. The results of the study indicated that packaging elements such as color, context image and packaging material, style of writing, cover design, printed information and innovation had a positive and significant relationship with consumer buying behavior. [31] conducted a study on consumer's perception towards different brands of packaged milk in which he concluded that "despite the technological advancement resulting in several varieties of packaged bowls of milk in market, there is a strong felt need for the marketing managers to focus on creating high degree awareness among consumers regarding their product range". Elangovan and Gomatheeswaran [15] found in their study in Tamil Nadu that people preferred retail outlets for purchasing branded milk and milk products and also most of the respondents were influenced by the family members for the purchase of a particular brand of milk [32,33].

18. CONCLUSION

The main focus of this review was to analyze the buying behavior of consumers towards Aroma milk products. The review was to done to determine the perception and attitude of consumers towards buying Aroma milk products which helped to understand the value of the product in consumer's point of view.

DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declares that NO generative AI technologies such as Large Language Models

(ChatGPT, COPILOT, etc) and text-to-image generators have been used during writing or editing of manuscripts.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Dairy Australia: Situation and outlook. Dairy Australia, Melbourne; 2007. Available:[http:// www.dairyaustralia.com.au](http://www.dairyaustralia.com.au)
2. Alqaisi O, Ndambi OA, Hemme T: Development of milk production and the dairy industry in Jordan, Livestock Research for Rural Development. 2009; 21(7).ISSN 0121-3784. AOAD: Arab organization for agricultural development, statistical database department; 2007. Available:<http://www.aoad.org/ASSY27/Default.htm>
3. Mach J, Řezbová H: Comparison of milk production costs among EU members. In: Agris on-line papers in Economics and Informatics. 2009;1(1). ISSN 1804-1930.
4. Valarmathi A. Research on commercial customers preferences and behavior of milk (Brands) in Coimbatore. Asian Journal of Research in Social Sciences and Humanities. 2018;8(4):28-38.
5. Raja K, Kalpana M. A study on consumer brand preference of packed milk in Coimbatore, India. Journal of Advances in Food Science & Technology. 2024 May 4;11(2):57-62.
6. Boopathi C. Consumer behaviour on aavin milk and dairy products in pollachi taluk of Tamil Nadu. behaviour. 2015 Dec; 4(6).
7. Koduru K, Krishna TS. Perception of consumers towards dairy products in Guntur district. NVEO-natural volatiles & essential oils Journal| NVEO. 2021 Nov 7:321-9.
8. Balakrishnan P, Manimegalai S. A study on customer preference towards aavin milk products with special reference to Nilgiri District. International Journal of Trend in Scientific Research and Development. 2019;3(6):888-93.
9. Parimala M, Suruthi S. A study on customer attitude towards dairy products in Madurai north. ARIV International Journal of Business. 2021;1-21.

10. Rajam S. A study on rural consumer satisfaction of fmcg in Coimbatore District. *International Journal in Management & Social Science*. 2015;3(12):346-54.
11. Poongodi MT, Arumugam A. insights into consumer preferences for aavin milk products In Salem District. *Educational Administration: Theory and Practice*. 2024 Apr 5;30(4):10282-9.
12. Reddy G. Customer perception towards private life insurance companies' policies with reference to Bangalore city. *Indian Journal of Marketing*. 2005;35(4):9-14.
13. Kariyawasam S, Jayasinghe-Mudalige U & Weerahewa J. Assessing consumer perceptions towards attributes of food quality: The case of consumption of tetra-packed fresh milk in Sri Lanka. *Canadian Agricultural Economics Society Annual Meeting*. Montreal, Quebec; 2006.
14. Ahmed RR, Prammar V, Amin AM. Impact of product packaging on consumer's buying behavior. *European Journal of Scientific Research*. 2014;120 (2):145-157.
15. Elangovan N, Gomatheeswaran M. A study on consumer behaviour towards various brands of milk and milk products with special reference to Thudiyalur town at Coimbatore district in Tamil Nadu. *International Journal of Multidisciplinary Research and Development*. 2015;595 - 601.
16. Jothi MC. A study on consumer behaviour of aavin milk in bhel township: Trichy. *International Journal of Advance Research in Computer Science and Management Studies*. 2013;1(4):34-39.
17. Rangasamy N, Dhaka JP. Marketing efficiency of dairy products for cooperative and private dairy plants in Tamil Nadu — A Comparative Analysis, *Agricultural Economics Research Review*. 2008; 21:235-242.
18. Robinson S. Measuring service quality: Current thinking and future requirements. *Marketing Intelligence and Planning*. 1999;17(1):21-32.
19. Saleki ZS, Seyedsaleki SM. The main factors influencing purchase behaviour of organic products in Malaysia. *Interdisciplinary Journal of Contemporary Research in Business*. 2012;4(1):98-116.
20. Ubaina. —A study on customers preference towards dairy products, April; 2010.
21. Venkatesa Palanichamy N, Kalpana M, Balakrishnan N. An analysis of Indian overseas bank's case study on the conceptual framework of lending technologies for financing small and medium-sized businesses. *Asian Journal of Advances in Agricultural Research*. 2024;24(6):13–20. Available:<https://doi.org/10.9734/ajaar/2024/v24i6508>
22. Venkatesa Palanichamy N, Suresh A, Balamurugan V, Kalpana M, Balakrishnan N. Maximizing marketing efficiency: A deep dive analysis into castor crop in Namakkal District, Tamil Nadu, India. *Journal of Agriculture and Ecology Research International*. 2024;25(3):107–113. <https://doi.org/10.9734/jaeri/2024/v25i3598>
23. Venkatesa Palanichamy N, Suresh A, Balamurugan V, Kalpana M, Balakrishnan N. Co-integration and causality analysis of “Castor” (*Ricinus communis* Oil) Markets in India. *Asian Research Journal of Agriculture*. 2024;17(2):225–232. Available:<https://doi.org/10.9734/arja/2024/v17i2441>
24. BDEL F, Hassan M: Economics of milk and dairy production the arab world. *Research journal of agriculture and biological sciences*. 2008;(5):529–536. ISSN 1990-6145.
25. Aden A, Sahomo F, Iniguez L: Helping small enterprises capture the livestock products market in West Asia and North Africa. *The International Center for Agricultural Research in the Dry Areas (ICARDA)*. Issue No. 2005;22. ISSN 1025-0972.
26. Atman M, Beghin J: Global agricultural trade and developing countries. *The International Bank for Reconstruction and Development / The World Bank*; 2005. ISBN 0-8213- 5863-4.
27. Omari A, Quasem A, Mazahreh A: Microbiological analysis of solar and freeze- Dried Jameed produced from cow and sheep milk with the addition of carrageenan mix to the Jameed paste, *Pakistan Journal of Nutrition*. 2008;7:726–729. ISSN 16805194.
28. AOAD: Arab organization for agricultural development, statistical database department; 2008. Available:<http://www.aoad.org/ASSY28/Default.htm>
29. AOAD: Arab organization for agricultural development, statistical database department; 2009.

- Available:http://www.aoad.org/Statistical_Yearly_Book_Vol_29.pdf
30. Blayney D, Gehlhar M, Bolling CH. et al: US dairy at a global crossroads [Online]. 254 M. Maitah, L. Smutka United States Department of Agriculture, Economic Research Service, Economic Research Report number 28, November 2006. Available:<http://www.ers.usda.gov/publications/err28/err28.pdf>
 31. FAO: Syrian agriculture at the crossroads, FAO Agricultural Policy and economic development series. 2003b;8 Available:<http://www.fao.org/docrep/006/y4890e/y4890e00.HTM>
 - . GOFI: General organization for food industry, Syria; 2008.
 32. Grad S: The beef industry in syria, academic series and reports; 2000. Available:<http://www.elitefarmer.com/products/e/Farmer-Market/Farm-Dairy>.
 33. Haddadin J: Kinetic studies and sensorial analysis of lactic acid bacteria isolated from white cheese made from sheep raw milk. Pakistan Journal of Nutrition. 2005;4(2):78–84. ISSN 1680-5194.
 - MEP: Ministry of economy and planning, department of statistics. Riyadh, Saudi Arabia. MOA, 2008: Ministry of Agriculture. Department of Dairy Production. Annual report. Jordan. MOA, 2009: Ministry of Agriculture. Department of Dairy Production. Annual report. Jordan; 2009.

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