THINK INDIA JOURNAL

ISSN:0971-1260

Vol-22-Issue-10-November-2019

Consumption Behaviour Of Liquid Milk In Imphal East District Of Manipur

Lalgoulen Khongsai

Research Scholar, Department of Commerce, Manipur University

Email: goukhongsai@gmail.com

Dr. A.S. Rapheileng

Research Associate, Department of Commerce, Manipur University

Email: rapheilengas@gmail.com

Kh. Tomba Singh

Professor, Department of Commerce, Manipur University

Email: kctomba@gmail.com

Dr. Md. Kheiruddin Shah

Associate Professor, D.M College of Commerce, Imphal

ABSTRACT

Milk is one of the most nutritious foods for mankind. Milk production gives employment and at the same time, generates revenue to the rural poor. This study investigates the consumer behaviour of liquid milk in the Imphal East district of Manipur. It studies the factors responsible for the influence of purchasing liquid milk and the relationship between the different factors. The findings will be helpful for both the producers and consumers in making an economic decision on liquid milk. The production and consumption patterns of the state and the national level were analyzed and found that there was a massive gap of difference at the consumption level. The average size of the family was found to be around five with an average monthly income of thirty thousand and consuming one and a half litres of milk daily. Correlation analysis showed that there is no relationship between the respondents' size of family and income with their amount of consumption. There is great potential for liquid milk consumption in the study area, and learning the factors responsible for consumption will be a massive boost in marketing liquid milk.

Keywords: *Liquid milk, Production, Consumption, Consumption behaviour, buying decision, consumer preference, per capita milk availability, and correlation analysis.*

ISSN:0971-1260

Vol-22-Issue-10-November-2019

INTRODUCTION

Imphal East is a home for an estimated 456,113 persons. The District has an area of 709 square kilometers representing 3.18 percent of the total geographical area of the state. It is the sixth-largest district in Manipur and is the biggest of the four valley districts in the area (**Directorate of census Operation, 2011*)***. The district has produced a total of 791,000 tonnes of milk during the year 2015-16 (*Economic Survey Manipur 2016-17*, 2017)**.** The availability of milk in the district per person during the year 2015-16 is a mere 0.067 gms per day, which is much below the national and state level. The overall Per Capita Availability of Milk for the Year 2016-17 at all India level is 352 gms per day whereas Per Capita Availability of Milk for the Year 2016-17 of Manipur is 75 gms per day **(Department of Animal Husbandry, 2017).**

Imam, Zadeh, and Dubey (2011) pointed out that though India is the world's largest milk producer; it is consuming almost 100% of its milk production. Dairy products are a major source of cheap and nutritious food to millions of people in India and the only acceptable source of animal protein for the large vegetarian segment of the Indian population, particularly among the landless, small and marginal farmers and women.

Manipur is a storehouse of games, and sports and milk are the essential dietary foods for a sportsperson. There is an enormous scope of improvement in the production of milk in the study area, which is the location of the sports institute and Khuman Lampak main stadium. However, **Huiyen Lanpao (2015),** a local daily newspaper has reported a drastic drop in the production of milk in the state by citing the frequent flood, bandhs, and blockades which had created transportation bottlenecks in the regular supply of cattle fodder from outside the state. They also reported that milk collectors, unscrupulous traders, and suppliers had committed unfair trade practices by selling adulterated milk, unhygienic packages, and milk without an expiry date, which can be harmful for human consumption.

The present study is undertaken with the objectives to know the knowledge of consumer perception and behaviour while making a purchase decision. The findings will be helpful for the consumer to make the right decision while choosing liquid milk. The descriptive statistics of the study will help know the socio-economic conditions of the

ISSN:0971-1260

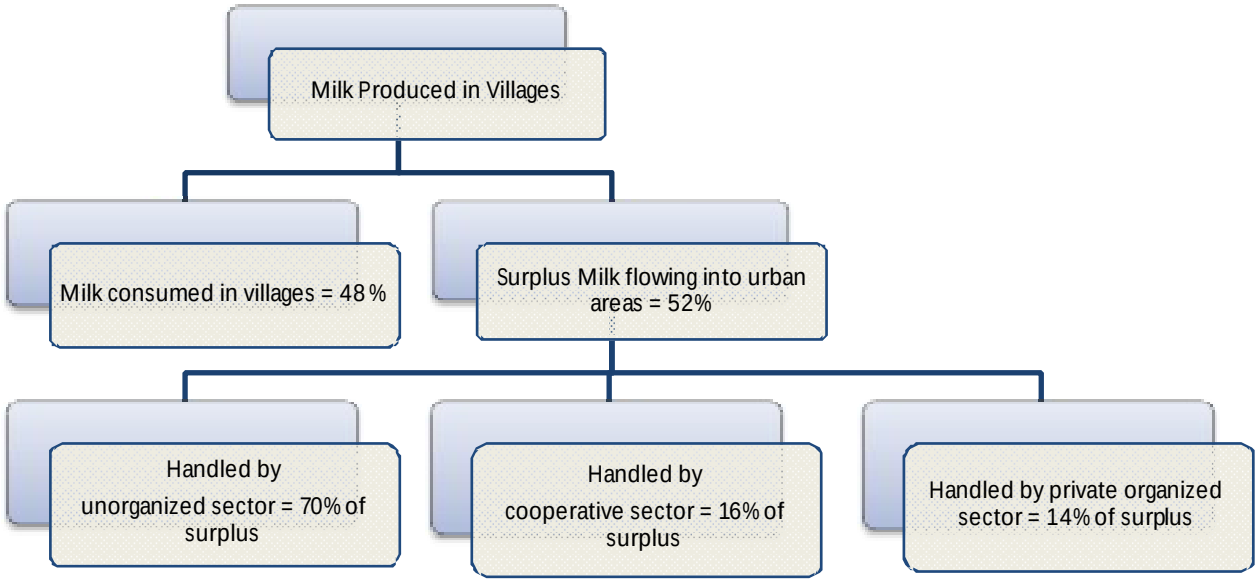
Vol-22-Issue-10-November-2019

consumer of the study area. The relationship study will throw light to obtain in-depth knowledge about the variables under study.

PRODUCTION AND CONSUMPTION PATTERN OF MILK

Dhawan (2016) highlighted that India's milk production exceeds 258 million litres per day (94 million tonnes per annum). Some 70 million farmers maintain a milch herd of about 105 million (58 million cows and 47 million buffaloes) feeding mainly on crop residues, which account for 98 percent of all milk produced in India. The dairy sector in India is important for its complementary relationship with agriculture and its capability to provide a protein-rich diet to the vegetarian population. Due to the remunerative price received by the milk producer, the milk economy is transforming from a subsistence activity to commercial activity. The consumer has also benefited because the increase in milk prices has generally been lower than the rate of inflation comparing to other food products.

Fig. 1: Production, Distribution and Consumption Pattern of Milk Produced In Indian Villages



Source*: National Dairy Plan 2007-08 to 2011-12, Department of Animal Husbandry, Government of India.* ***(adopted from Chawla & Chawla, 2009).***

Sachiffman and Kanuk (2008; as cited in Elangovan & Gomatheeswaran, 2015) defined consumer behaviour as the behaviour that consumers display in searching for, purchasing, using, evaluating and disposing of products and services that they expect will satisfy their needs and wants. They elaborated further by stating that consumer behaviour

ISSN:0971-1260

Vol-22-Issue-10-November-2019

focuses on how individuals make decisions to spend their available resources (time, money, effort) on consumption-related items. That includes what, why, when, where they buy? How often they buy and use it? How do they evaluate it after the purchase and its impact on future purchases? Furthermore, how they dispose of it? They concluded by saying that the consumer buying decision process starts much before the purchase of the products.

Table.1: Year-wise milk production (000' tonnes)

Year	All India	Manipur (%)	Year	All India	Manipur (%)
2002-2003	86159	69(0.08)	2009-2010	116425	78(0.07)
2003-2004	88082	71(0.08)	2010-2011	121848	78(0.06)
2004-2005	92484	75(0.08)	2011-2012	127904	79(0.06)
2005-2006	97066	77(0.08)	2012-2013	132431	80(0.06)
2006-2007	102580	77(0.08)	2013-2014	137685	82(0.06)
2007-2008	107934	78(0.07)	2014-2015	146314	82(0.06)
2008-2009	112183	78(0.07)	2015-2016	155491	79(0.05)

Source: *Department of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture, GoI.*

Table 1 shows the average milk production for the last 14 years at the national and Manipur. From the table, we understand that the average production of milk at the national level is 116041.85 thousand tonnes (min=86159 and max=155491.00), whereas Manipur produces milk on an average of 77.35 thousand tonnes with a maximum of 82.00 and a minimum of 69.00 thousand tonnes in the last 14 years.

Table.2: Year-wise Per Capita Milk Availability (gms/day)

Year	All India	Manipur (%)	Year	All India	Manipur (%)
2002-2003	230	85	2009-2010	273	88
2003-2004	231	85	2010-2011	281	88
2004-2005	233	90	2011-2012	290	80
2005-2006	241	92	2012-2013	299	80
2006-2007	251	91	2013-2014	307	80
2007-2008	260	91	2014-2015	322	80
2008-2009	266	90	2015-2016	337	76

Source: *Department of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture, GoI.*

LITERATURE REVIEW

Barad and Mehta (2017), in their study on consumer preference towards the pack and unpack milk in Veraval city, suggested that the consumer always considered different

ISSN:0971-1260

Vol-22-Issue-10-November-2019

factors like the standard quality of milk, fat level, price, freshness, and availability before making a purchase. They concluded that these are the various variables that guide or direct the consumer to make the purchase decision.

Naami et al. (2015) developed a dynamic model to evaluate the factors affecting the ice cream promotion methods and its brands. He found that key characteristics of the product, such as having standard, taste, brand reputation, quality, type of packaging, are the characteristics that have the most significant impact on consumer behaviour and they are very useful to make a decision and adopt strategies for marketing ice cream.

Trung et al. (2014) had applied a two-step econometric technique to measure the effects of the socio-economic and demographic factors and characteristics of the milk market on milk consumption of the rural households, and they found that household's income and convenience in milk buying has strong positive effects on milk consumption. At the lighter level, numbers of children and elders also had positive effects on the probability of milk, both purchasing and milk expenditure, whereas educational level was found to affect milk expenditure only. In contrast, the age of the rural household head and the importance of milk and its price had significant adverse effects on both the decisions of milk consumption and the level of milk expenditure.

Papaioannou, Tzimitra-Kalogianni, and Tegkelidou, (2015) concluded that consumers mainly purchase fresh milk from the supermarket. Brand of the fresh milk's, the taste, the nutritional ingredients, the quality, the location, the packaging, the price, and discounts are factors responsible for purchasing decisions. They found that brands and advertisements as the main factor for the purchase decision. They also found that televisions were the leading mass media for fresh milk, followed by the internet, magazines, and newspapers. They suggested that advertisements should include information on the safety of fresh milk**.**

Haghighat and Niavand, (2015) in their study on the analysis of marketing milk factories and effects on customers behaviours mechanism revealed that income, familiarity with various types of dairy products, easy access to milk, packaging and the importance and awareness of the benefits of milk were the main factors in the marketing and consumption of dairy products.

OBJECTIVES OF THE STUDY

ISSN:0971-1260

Vol-22-Issue-10-November-2019

1. To study milk production and consumption pattern at the national level and Manipur state.
2. To examine the socio-economic characteristics of the consumers and their impact on liquid milk consumption.
3. To identify the factors influencing consumers' buying decisions on liquid milk.

HYPOTHESIS

Ho1: Size of the family and total family income does not have a significant relationship with the average daily consumption of liquid milk.

Ho2: The average consumption level of liquid milk in Manipur does not differ with the average consumption level of liquid milk at the national level.

RESEARCH METHODOLOGY

SAMPLES

The study, which was conducted in the Imphal East District of Manipur, is a composition of different communities namely, Meitei, Meitei pangal, Kuki, Nagas, and others (minor communities like Nepali, Biharis, and Marwaris). Considering the different communities which comprised the population of the study area, the researchers took due care to include respondents from each community. Thus a total of 105 respondents representing the various communities were selected through random sampling and interviewed by using a structured interview schedule.

MATERIALS

Both primary and secondary data were used for the study. Primary data was collected through the way of direct conversation with the consumer by using the questionnaire method. Whereas Secondary data was collected from various publications, journals, magazines, articles from the newspaper, publications from state and central government departments, research articles available on various websites and other internet sources. The data were collected during the month of April 2017 to August 2017.

ANALYSES

The data gathered were codified and then administered using SPSS English version 21.0 for analyses. Statistical tools like descriptive statistics, independent t-test, and correlation were used for the analyses of research data.

ISSN:0971-1260

Vol-22-Issue-10-November-2019

Table 3: Socio-Economic Profile of the respondents

Variables	Group	n= 105 (%)
Gender	Male	69 (65.7 %)
	Female	36 (34.3 %)
Marital Status	Unmarried	30 (28.6%)
	Married	70 (66.7%)
	Divorced	5 (4.8%)
Educational Qualification	Below 10th	42 (40%)
	10 + 2	32 (30.5%)
	Graduate	19 (18.1%)
	Postgraduate	10 (9.5%)
	Any other	2 (1.9%)
Occupation	Govt. employee	23 (21.9%)
	Business	46 (43.8%)
	Professional	3 (2.9%)
	Any other	33 (31.4%)
Religion	Christianity	45 (42.9%)
	Hinduism	33(31.4%)
	Islam	23 (21.9%)
	Others	4 (3.8%)
Social Status	ST	51 (48.6%)
	OBC	35 (33.3%)
	General	19 (18.1%)
Types of family	Joint	40 (40%)
	Extended	14 (13.3%)
	Nuclear	49 (46.7%)

Source: *Computed from Primary data.*

ISSN:0971-1260

Vol-22-Issue-10-November-2019

Table 3 exhibits the socio-economic profile of the respondents. Out of the total 105 respondents, males comprised 69(65.7%) and female comprised of 36(34.5%), of which 70(66.7%) were married. Educational qualification showed that more than one-fourth of the respondents' numbering 42 (40%) possessed an educational level, which is below 10^{th} standard. 46 (43.8%) of the respondents are engaged in business. The highest numbers of respondents are Christian, comprising of 45 (42.9%). Nearly half of the respondents, 51 (48.6), are under the ambit of Schedule Tribe. Out of the total respondents, the nuclear type of family is the maximum, with 49 (46.7%) of the family belonging to this structure.

Table 4: Factors influencing liquid milk consumption

Variables	Group	n= 105 (%)
Consumption Motivation	Lifestyle	3 (2.9%)
	Health consciousness	83 (79%)
	Taste	17 (16.2%)
	Influence by family/friends	2 (1.9%)
Purchase Motivation	Taste	20 (19%)
	Price	4 (3.8%)
	Easy availability	16 (15.2%)
	Home delivery	46 (43.8%)
	Any other	19 (18.1%)
Preference types	Package pasteurized milk	48 (45.7%)
	Unpack local fresh milk	57 (54.3%)
Packaging preference	Colour	7 (6.7%)
	Design	7 (6.7%)
	Brand	25 (23.8%)
	Size	22 (21%)
	Loose pack	44 (41.9%)

Source: *Computed from Primary data.*

Table 4 presents the factors influencing the consumption of liquid milk. Maximum of the respondents, 83 (79%) were motivated to consume milk due to health consciousness. Regarding the reasons for the purchase decision, 46 (43.8%) respondents rated home delivery

ISSN:0971-1260

Vol-22-Issue-10-November-2019

as the most important, followed by taste (19%). As with package preference, more than half 57 (54.3%) preferred to unpack local fresh milk, whereas the others 48 (45.7%) preferred pack pasteurized milk. The colour and design of the package did not have much influence on the purchase of liquid milk.

Table 5: Consumption Pattern of liquid milk

Variables	Group	n= 105 (%)
Consumption Pattern	Once daily	64 (61%)
	Twice daily	36 (34.3%)
	Thrice daily	4 (3.8%)
	More than thrice daily	1 (1%)
Amount spent	Less than Rs.300	8 (7.6%)
	Rs 300- 600	23 (21.9%)
	Rs 600 – 900	24 (22.9%)
	Rs 900 – 1200	24 (22.9%)
	Rs 1200 and above	26 (24.8%)
Purchase Point	Dairy farm	4 (3.8%)
	Shop	30 (28.6%)
	Milk booth	9 (8.6%)
	Home delivery	61 (58.1%)
	Own Production	1 (1%)

Source: Computed from Primary data.

Table 5 displayed the consumption pattern of liquid milk. The frequency of milk consumption was very low on average as more than half of the consumers, 64(61%) consumed milk only once daily. Out of the total consumer, 71(67.61%), on an average, spend Rs 300 to Rs 1200 monthly. Regarding purchase point, 61(58.1%) of the respondents consider home delivery as the best option which is followed by shop 30 (28.6%)

ISSN:0971-1260

Vol-22-Issue-10-November-2019

Table 6: Mean Standard Deviation, Minimum, and Maximum of the control variables and output variables

Variables	Mean	Standard Deviation	Minimum	Maximum
Size of the family	5.40	2.29	1.0	12.0
Income (in Rs)	29766.66	27719.49	1000	150000
Consumption of milk (in litres)	1.31	0.65	0.50	5.0

Source: *Computed from Primary data.*

Table 6 highlighted the descriptive statistics of the respondents. The minimum size of the family is one while the maximum is 12, with a mean size of 5.40 (SD ± 2.29). The average monthly income of the respondent family was Rs 29,766.66, with a minimum of Rs 1000 and a maximum of Rs 150,000. The average consumption of fresh milk is 1.31 litres per day, with a minimum of 0.50 litres and a maximum of 5 litres.

Table 7: Correlation Analysis of Income and Size of the Family with Consumption (n=105)

Variables	Income	Size of the family
Pearson correlation	0.025	0.156
Consumption sig. (2-tailed)	0.803	0.111

Source: *Computed from Primary data.*

Correlation analyses were used to examine the relationship between size as well as the income of the family with that of the amount of milk consumption. The result indicated that the consumption of liquid milk did not have any significant relationship with size of the family ($r = 0.156$, $p = 0.111$) and income ($r = 0.025$, $p = 0.803$).

Table.8: Mean, SD and T-test of the Per Capita Milk Availability

National		Manipur		t	p-value
Mean	**SD**	**Mean**	**SD**	**20.00**	**0.000**
272.92	34.66	85.42	5.31		

Source: *Computed from Table 2*

ISSN:0971-1260

Vol-22-Issue-10-November-2019

Table 8 presented the result of the t-test of the year-wise per capita availability of liquid milk between all India level and Manipur state. The result revealed that there was a significant difference (t=20.005, p=0.000) in the consumption level of milk between all India level and Manipur, meaning which the null hypothesis (Ho2) was rejected (at 5% significant level). Explaining that the per capita milk availability at the national level (*M*=272.92, *SD*=34.66) was significantly higher than that of Manipur (*M*=85.43, *SD*= 5.31).

DISCUSSION AND CONCLUSION

This study investigated the consumer behaviour and factors influencing the consumption of liquid milk in Imphal East. Though milk economically is cheap and nutritious, the per capita consumption of the state is meager, with only 75 gms per person per day, whereas it was 352 gms per day at the national level during the year under study. There was a considerable gap of differences in the average consumption of milk at the state and the national level. It was found that the production of milk in the state was deficit even for their consumption, which is incongruent with the study by **Imam, Zadeh, and Dubey (2011),** where they pointed out that India consumed 100% of its production. Regarding familial liquid milk consumption level size and income of the family were independent of consumption contradicting the findings of **Trung et al (2014),** where household income had a strong positive impact on milk consumption.

Some limitations were found in the collection and interpretation of the data. Although the sample size was deemed acceptable, a larger sample would have allowed us to run more analyses. Question on the preferred type of milk like skimmed, toned, and pasteurized could have been included in the questionnaire as additional information.

The current study was limited to three aspects, only that is, the study on socio-economic factors influencing purchase decision and relationship between various factors on the amount of liquid milk consumption. Future works can examine other characteristics like age-wise milk consumption, how milk is consumed (with tea or other beverages), and varieties of milk (like cow milk, buffalo milk, or goat milk). Further, it is a well-known fact that no two individuals have the same attitudes, personality, and traits hence different in their motivation factors. Some people are motivated by only one factor, whereas some are motivated by more than one factor. Thus, future researchers could address and improve their study by employing a larger item scale.

ISSN:0971-1260

Vol-22-Issue-10-November-2019

REFERENCES

Barad, B. D., & Mehta, P. L. (2017). A study on consumer's preference towards packed and unpacked fluid milk with special reference to Veraval city. *International Journal of Marketing & Financial Management, 5*(1*)* 12-19. doi:org/10.5281/zenodo.238846

Chawla, A., Chawla, N., Pant, Y., & Kandhari, P. (2009). *Milk and Dairy Products in India-Production, Consumption, and Exports* (Second Edi). Hindustan Studies & Services Ltd and Infolitics.

Department of Animal Husbandry. (2017). *Annual Report 2016-2017*. New Delhi: Ministry of Agriculture and Farmers Welfare. Retrieved from http://dahd.nic.in/sites/default/filess/Annual%20Report%202016-17.pdf

Dhawan, S. (2016). A study of consumer behaviour towards various branded and non-branded milk with special reference to Jabalpur District in Madhya Pradesh. *Imperial Journal of Interdisciplinary Research (IJIR), 2*(12), 1582–1586.

Directorate of Census Operation, Government of Manipur. (2011). *District Census Handbook, 2011*. Directorate of Census Operation. Retrieved from http://www.censusindia.gov.in/2011census/dchb/1407_PART_B_DCHB_IMPHAL EAST.pdf

Elangovan. N., & Gomatheeswaran, M. (2015). 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, 2*(4), 595–601.

Haghighat, F., R, T., & Niavand, H. (2015). The Analysis of Marketing Milk Factories and Effects on Customers Behaviours Mechanism. *Journal of Accounting & Marketing, 4*(3), 1–4. http://doi.org/10.4172/2168-9601.1000143

Huyen Lanpao. (2015, October 5). *Milk, dairy production rate drops in Manip*ur. *Huiyen Lanpao*. Imphal. Retrieved from http://e-pao.net/GP.asp?src=20..051015.oct15

ISSN:0971-1260

Vol-22-Issue-10-November-2019

Imam, A., Zadeh, M. N., & Rani, L. D. (2011). Dairy Marketing Strategies in the Context of Globalization : Issues and Challenges *International Journal of Trade, Economics and Finance*, *2*(2), 138–144.

Naami, A., Hosseinabadi, D. S., Taheri, M., & Samadhi, M. (2015). Dynamics analysis of consumer behavior. *International Journal of Economics, Commerce, and Management*, *III*(2), 1–13.

Papaioannou, I., Tzimitra-Kalogianni, I., & Tegkelidou, E. (2015). The influence of advertisement in fresh milk consumers' behavior. *CEUR Workshop Proceedings*, *1498*, 573–582.

Trung, T. Q., Giam, D. Q., Hai, V. T., Thao, L. P., Thi, N., Hang, T., … Linh, M. (2014). Factors Influencing Milk Consumption of Rural Households in Northern Vietnam. *Green Journal of Business and Management Studies*, *4*(2), 031–040.

