**Analysis of Constraints Faced by Traditional Dairy Sweet Makers in Sustaining Business**

**Abstract**

Traditional dairy sweet makers who practice age-old methods and indigenous knowledge in producing wide range of milk-based sweets such as pedas, barfis, kalakand, and rabri, hold deep cultural, religious and social value, form an integral part of India’s culinary and cultural landscape, contributing to both rural economies and the preservation of indigenous food practices. The study was conducted in Karnal District of Haryana state using descriptive research design to identify and analyze various constraints faced by traditional dairy sweet makers in sustaining their business. In Karnal district all the 8 blocks (Karnal, Assandh, Gharaunda, Indri, Nilokheri, Nissing, Kunjpura, Munak) were selected. The data was collected through a pre-tested structured interview schedule and analysis was done by using descriptive statistics such as frequency, percentage, mean, standard deviation and Garrett ranking technique. Lack of skilled labor is the most important constraint under manufacturing constraints in sweet making with a weighted mean score of 60.25. Costly wages for laborers, was found to be the main constraint and ranked 1st with a mean score of 57.81, under economic constraints followed by high cost of maintaining the shop with mean score of 49.69, poor economic condition with a mean score of 48.88. Capacity-building initiatives focusing on hygiene, quality standards, and the adoption of suitable modern techniques, while respecting this traditional practice is very crucial. Additionally, improving access to credit, promoting cooperative procurement and marketing systems, encouraging better packaging and branding, and leveraging digital platforms for wider reach can significantly enhance the prospects.

**Keywords:** Cultural landscape, Dairy industry, Dairy processors, Rural livelihoods.

**Introduction:**

India boasts the largest dairy industry in the world, contributing significantly to rural livelihoods, nutrition and the national economy. As the largest milk producer in the world, India generates around 239.2 million tonnes of milk during 2023-24 (PIB, 2025), with a substantial share coming from small and marginal farmers. With its vast network of smallholder dairy farmers and a tradition of milk consumption, the sector has evolved into a cornerstone of India’s agricultural economy.

Within this expansive dairy landscape lies a vibrant yet often overlooked segment namely traditional dairy sweet making. India’s milk market is divided into modern (formal) and traditional (informal) channels. Modern channels, such as dairy cooperatives and private processing companies (both Indian and international), collect around 25% of the total milk produced, and this share has grown over time (GoI, 2015). Traditional channels include local milk traders, sweet makers, small dairy processors, and households (Sharma, 2015; Kumar et al., 2018). Small dairy farmers mostly depend on these informal channels, especially in remote areas. Their products are closely associated with festivals, rituals, and social celebrations across regions. A variety of dairy products are made in our country. Some products are popular throughout the country, whereas others are region specific. They are also aimed at conserving the nutrients of highly perishable milk for a long period. Being rich in inherent milk nutrients, they also provide health benefits like strengthening bones and boosting immunity. Demand for these products is rising both in India and globally (Kumar et al. 2021; Shariati et al. 2020).

Despite their contribution, traditional dairy sweet makers have remained on the margins of formal dairy development discourse. Some factors like changing lifestyle, increasing health awareness among people are other factors which can enhance the growth of packaging for the informal sector of traditional Indian milk products and sweets (Gupta, 2016). While India’s dairy sector has modernized rapidly through cooperatives, cold chains and commercial processing, these small-scale artisans continue to face challenges such as limited access to quality milk, lack of technology, lack of proper infrastructural facilities, financial constraints, hygiene issues and competition from branded, mass-produced sweets. The other problems associated were no proper packaging, poor handling of materials, uneven product quality, outdated equipment, and poor waste management (Asgar and Chauhan, 2023).

**Methodology:**

The study was conducted in Karnal District of Haryana state using descriptive research design. In Karnal district all the 8 blocks (Karnal, Assandh, Gharaunda, Indri, Nilokheri, Nissing, Kunjpura, Munak) were selected. From each block, 20 respondents were selected randomly, which included 10 urban and 10 rural respondents, with a total of 160 respondents. The criteria for selection of the respondents were dairy sweet makers having a minimum of 5 years of experience in sweet making. The information was gathered through a pre-tested structured interview schedule and analysis was done by applying appropriate statistical procedures viz., frequency, percentage, mean, standard deviation and Garrett ranking technique.

**Results and Discussion:**

For better understanding of various constraints faced by traditional dairy sweet makers, the constraints have been collected under different categories *viz.,*

1. **Manufacturing constraints**

Results in Table 1, showed the most important constraint under manufacturing constraints was the lack of availability of skilled labor in the sweet making with a weighted mean score of 60.25, which was ranked 1st among the manufacturing constraints; Results and Discussion followed by raw material price inflation (2nd rank with 54.59 mean score) i.e., raising the cost of raw materials. Perishability of raw materials was perceived as a constraint at 3rd rank with a 49.84 mean score. Following this, problems in the storage of raw materials and availability of quality raw materials were considered as constraint at 4th and 5th rank, with mean scores of 45.97 and 39.34, respectively.

1. **Infrastructural constraints**

It can be explained in Table 1, that among the constraints related to infrastructure as faced by respondents in the study area, storage problems i.e., storage equipment which were used to store the raw materials, prepared sweets, etc. was the most important constraint faced by respondents, especially during the summer season (Selvi, 2017). Therefore, it was ranked 1st with a mean score of 60.28, followed by non-availability of space for the preparation of sweets ranked 2nd with a 49.19 mean score. Next problem related to electricity and fuel was ranked as a constraint at 3rd rank, with a mean score of 48.94. Problem in sanitation and pest control was ranked as a constraint at 4th rank (47.06 mean score) and non-availability of the required equipment in the local market was ranked as the 5th (44.53 mean score) most important infrastructural constraint.

1. **Technical constraints**

Respondents were not much affected by the technical constraints according to the responses recorded. It is evident from Table 1, that lack of knowledge on improved practices of sweet making was perceived as a constraint, and ranked 1st with a mean score of 62.59. Handling of machines by workers was perceived as a constraint at 2nd rank, with a mean score of 53.63. Non-availability of training on manufacturing of new dairy products was perceived as a constraint at 3rd rank, with a mean score of 49.81; followed by lack of knowledge about food safety guidelines and the unavailability of extension/expert advisory services being perceived as constraints, and ranked 4th and 5th with mean scores of 48.09 and 35.88, respectively.

**Table 1: Garrett score and ranks for constraints faced by the traditional dairy sweet makers in their business (n=160)**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No** | **Constraints** | **Garrett mean Score** | **Rank** |
| **A. Manufacturing Constraints** | | | |
| 1 | Lack of availability of skilled labor | 60.25 | 1 |
| 2 | Raw material price inflation | 54.59 | 2 |
| 3 | Perishability of raw products | 49.84 | 3 |
| 4 | Storage of raw products | 45.97 | 4 |
| 5 | Availability of quality raw material | 39.34 | 5 |
| **B. Infrastructural constraints** | | | |
| 1 | Storage problems | 60.28 | 1 |
| 2 | Availability of less space for preparation of sweets | 49.19 | 2 |
| 3 | Electricity problems, fuel problems | 48.94 | 3 |
| 4 | Problems in sanitation and pest control | 47.06 | 4 |
| 5 | Non-availability of required equipment in local market | 44.53 | 5 |
| **C. Technical constraints** | | | |
| 1 | Lack of knowledge about food safety guidelines | 62.59 | 1 |
| 2 | Handling of machines by the workers | 53.63 | 2 |
| 3 | Non availability of training on manufacturing of new dairy products | 49.81 | 3 |
| 4 | Lack of knowledge on improved practices of sweet making | 48.09 | 4 |
| 5 | Unavailability of extension/experts advisory services | 35.88 | 5 |
| **D. Marketing constraints** | | | |
| 1 | Consumer’s preference towards packed foods | 61.84 | 1 |
| 2 | Increase in market competitors | 54.47 | 2 |
| 3 | Fluctuation and demand of sweet products in market | 51.16 | 3 |
| 4 | Problems in UPI (online) transactions during payment | 44.88 | 4 |
| 5 | Less likeliness towards traditionally prepared sweets by consumers | 37.66 | 5 |
| **E. Economic constraints** | | | |
| 1 | Costly wages for labors | 57.81 | 1 |
| 2 | High cost of maintaining the shops | 49.69 | 2 |
| 3 | Poor economic conditions | 48.88 | 3 |
| 4 | No access to credit facility | 47.50 | 4 |
| 5 | High cost of building rent in city centres | 46.13 | 5 |
| **F. Miscellaneous constraints** | | | |
| 1 | Credibility (trustworthiness) of labors | 65.63 | 1 |
| 2 | Aged consumers are preferring sweets less due to diabetes awareness | 56.08 | 2 |
| 3 | Difficulty in maintaining documents and records | 40.59 | 3 |
| 4 | Disposal of waste (spoiled sweets) | 37.70 | 4 |

1. **Marketing Constraints**

Among the marketing constraints, “Consumer’s preference towards packed foods” was perceived as 1st rank, with a mean score of 61.84. Increase in market competitors was ranked 2nd, with a mean score of 54.47, followed by problems in fluctuation and demand for sweet products in the market, which was ranked 3rd (mean score 51.16) because of the seasonal demand for sweets, which is seen occasionally high during festivals and fairs, but less during off-season. Next, it was followed by problems in UPI (online) transactions during payment, which was ranked 4th with a mean score of 44.88. Further, 5th rank, constraint as perceived by them was less likeliness towards traditionally prepared sweets by consumers with a mean score of 37.66.

1. **Economical constraints**

As explained in Table 1, among economical constraints faced by traditional dairy sweet makers in the study area, costly wages for labors were found to be the main constraint and ranked 1st with a mean score of 57.81, followed by high cost of maintaining the shop i.e. some of the fixed cost to maintain the shop ranked 2nd (mean score 49.69), and their poor economic condition be (3rd ranked constraint with a mean score of 48.88). Further, no access to credit facilities and the high cost of building rent in city centres were ranked 4th and 5th in terms of perceived constraints, with mean scores of 47.50 and 46.13, respectively.

1. **Miscellaneous constraints**

Miscellaneous constraints were first observed with some pilot study and then the statements were added to the schedule. The pooled data in the Table 1, revealed that credibility (trustworthiness) of labors was found to be a serious constraint, and was ranked 1st with a mean score of 65.63, followed by old-aged consumers not preferring sweets due to diabetes awareness was ranked 2nd (mean score 56.08). Further, difficulty in maintaining documents & records and problems related to the disposal of waste (spoiled sweets) were ranked 3rd and 4th in terms of constraints, with a mean score of 40.59 and 37.70, respectively. It was also found by some respondents in Gharaunda block that rowdyism was much, where some of them demanding money from them to run the shops, although it was not noticed in any other blocks of Karnal.

**Overall constraints perceived by traditional dairy sweet makers in their business**

Table 2 revealed the overall constraints perceived by traditional dairy sweet makers. The ranking of the major constraints was done based on the perception of respondents. Infrastructural constraints were ranked 1st followed by manufacturing constraints (2nd rank). The marketing constraints were considered at 3rd rank. Economical constraints were perceived as 4th most constraints among them. Other constraints and technical constraints were ranked 5th and 6th, respectively, among the overall constraints faced by traditional dairy sweet makers.

**Table 2: Overall constraints perceived by traditional dairy sweet makers in their business (n=160)**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No** | **Constraints** | **Garrett mean Score** | **Rank** |
| 1 | Infrastructural constraints | 62.44 | 1 |
| 2 | Manufacturing constraints | 54.54 | 2 |
| 3 | Marketing constraints | 54.14 | 3 |
| 4 | Economic constraints | 48.46 | 4 |
| 5 | Miscellaneous constraints | 43.19 | 5 |
| 6 | Technical constraints | 37.23 | 6 |

From the above results, respondents in the study area were facing major problems in terms of storage, lack of skilled labors, consumer’s preference towards packed foods, costly wages for labors, and credibility (trustworthiness) of labors. The above results were found to be similar to the past studies done by Sukhadev (2014) as well as Deka and Patwari (2006).

**Conclusion:**

Traditional dairy sweet makers hold a significant place in preserving India’s traditions, yet they face numerous challenges in managing their businesses efficiently. These challenges include limited access to modern tools and technology, irregular supply of quality raw materials, rising production costs, a shortage of skilled labor, and weak connections to formal markets. Additionally, poor awareness of food safety norms, insufficient financial assistance, and lack of effective branding further affect their growth and adaptability in a competitive market environment. Ensuring the sustainability of their businesses requires a strategic approach. Capacity-building initiatives focusing on hygiene, quality standards, and the adoption of suitable modern techniques, while respecting these traditional practice is very crucial. Improving access to credit, promoting cooperative procurement and marketing systems, encouraging better packaging and branding, and leveraging digital platforms for wider reach can significantly enhance their prospects. Policy-level support and well-designed schemes that acknowledge the socio-cultural and economic value of these artisans are vital to securing the future of traditional dairy sweet-making enterprises.

**DATA AVAILABILITY:**

Data supporting this research would be made available upon request.

**DISCLAIMER (ARTIFICIAL INTELLIGENCE):**

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

Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the

writing or editing of this manuscript.

**COMPETING INTERESTS:**

Authors have declared that no competing interests exist.

**References:**

Asgar, S. and Chauhan, M. (2023). Scope of Technological Intervention in the Sector of Traditional Indian Milk Products Industry for Sustainable Rural Development. Journal of Scientific & Industrial Research, 82(04), 397-406.

Deka, R. and Patwari, P. (2006). The market study of dairy products in Assam. Assam agriculture competitiveness project for market study. NIAM. Kota road, Bambala, Jaipur:19-22.

GoI (Government of India), 2015. Basic Animal Husbandry & Fisheries Statistics, Ministry of Agriculture and Farmers welfare, Department of Animal Husbandry, Dairying and Fisheries.

Gupta, A.K. (2016). World packaged food market-Opportunities and Forecasts, 2014-2020, Allied Market Research Report: 1-123, <https://www.alliedmarketresearch.com/packaged-food-market>.

Kumar, A., Hussain, S. A., Prasad, W., Singh, A. K., & Singh, R. R. B. (2021). Effect of oxygen tolerant probiotic strain, stabilizers and copper addition on the storage stability of Aloe vera supplemented synbiotic lassi. *Future Foods*, *3*, 100021.

Kumar, A., Saroj, S., Takeshima, H., Joshi, P.K., 2018. Does cooperative membership improve household welfare? Evidence from a panel data analysis of smallholder dairy farmers in Bihar, India. Food Policy 75, 24–36.

Press Information Bureau. (2025, March 25). GLOBAL DAIRY INDUSTRY. Retrieved June 16, 2025, from <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2114715>

Selvi, V. D. (2017). Constraints of Dairy Marketing. Carmelight, 13(1):1-9.

Shariati, Z., Jouki, M., & Rafiei, F. (2020). Flavored functional drinking yogurt (Doogh) formulated with Lactobacillus plantarum LS5, cress seed gum, and coriander leaves extract. *Food science & nutrition*, *8*(2), 894-902.

Sharma, V.P., 2015. Determinants of small milk producers' participation in organized dairy value chains: evidence from India. Agric. Econ. Res. Rev. 28, 247–261.

Sukhadev, K.V (2014). Studies on status and prospects of milk sweet makers (halwai) in western Maharashtra. Mahatma Phule Krishi Vidyapeeth, Rahuri.