



AN ANALYSIS OF CUSTOMER CHURN AT SRI MAHALAKSHMI DAIRY PVT LTD IN SOUTH COIMBATORE

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Cite This Article: Divya D & Raj Kumar S, “An Analysis of Customer Churn at Sri Mahalakshmi Dairy Pvt Ltd in South Coimbatore”, International Journal of Computational Research and Development, Volume 11, Issue 1, January - June, Page Number 14-16, 2026.

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Type of Review: Peer Reviewed as per |C|O|P|E| Guidance.

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DOI: <https://doi.org/10.5281/zenodo.18708981>

Abstract:

Customer churn threatens the profitability and sustainability of companies in highly competitive markets such as the dairy industry. This study investigates churn drivers and pricing impacts on switching behavior of customers at Sri Mahalakshmi Dairy Pvt Ltd in South Coimbatore. Using data collected from 316 customers through structured surveys, advanced statistical tools including chi-square tests and logistic regression were employed to identify key churn factors and analyze price sensitivity. Results reveal poor product quality and service as primary churn causes, with pricing influencing customer decisions moderately. Strategic recommendations emphasize enhancing product quality, improving customer service responsiveness, and applying selective pricing to optimize customer retention and strengthen loyalty.

Key Words: Customer churn, Dairy industry, Customer retention, Pricing strategy, Product quality, Service quality, Loyalty, Behavioural analysis, Churn prediction, South Coimbatore

Introduction:

Customer churn signifies the loss of business when customers stop purchasing or switch to competitors. Managing churn is vital for business growth, especially in the dairy industry, where consumer loyalty supports steady demand and farmer livelihoods. Sri Mahalakshmi Dairy Pvt Ltd, a prominent dairy producer in South Coimbatore, competes with numerous regional and multinational brands. The company’s mission emphasizes quality and social responsibility towards economically weaker farmers. However, pressures from product quality issues, customer service, and pricing create churn risks. Understanding why customers churn can inform retention strategies and operational improvements. This study focuses on three objectives to deepen this understanding and guide management actions.

Review of Literature:

Alsheikh et al. (2025) proposed a hybrid machine learning model for customer churn prediction in the telecom industry. The model combined support vector machines and decision trees, and achieved a higher accuracy rate than traditional machine learning algorithm.

Bao et al. (2025) proposed a hybrid model for customer churn prediction in the telecom industry that combined random forest and gradient boosting. The model achieved a higher accuracy rate than traditional ML algorithms.

Ramírez-Tapia et al. (2025) compared the performance of different machine learning algorithms for customer churn prediction. The study found that gradient boosting and random forest performed better than other algorithms, such as logistic regression and support vector machines.

Statement of Problem:

Customer churn poses a significant challenge to Sri Mahalakshmi Dairy Pvt Ltd, affecting its revenue stability, market share, and long-term sustainability in the competitive dairy sector of South Coimbatore. Despite efforts to maintain product quality and service standards, the company continues to face customer attrition due to factors including inconsistent product quality, inadequate customer service, pricing pressures, and competitive offerings.

Objectives of the Study:

- Identify key factors contributing to customer churn, examining demographic, behavioral, and experiential variables influencing churn decisions.
- Examine the effect of pricing strategies and price sensitivity on customer switching behavior.

Scope of the Study:

The scope of this study encompasses an in-depth analysis of customer data to identify patterns and trends related to customer churn, focusing on aspects such as demographic information, purchase history, and customer feedback. It aims to determine the most significant factors contributing to customer churn, including product quality, customer service, pricing, and competitor activity. Based on these insights, the study seeks to develop targeted retention strategies to minimize customer attrition and maintain existing customer relationships. Additionally, it explores opportunities to enhance the overall customer experience and foster greater loyalty by improving product quality, customer service, and communication. Ultimately, the study provides recommendations to support business growth and sustainability by leveraging the findings from customer churn and retention analyses.

Limitations of the Study:

The study has several limitations. It primarily focuses on specific aspects of Sri Mahalakshmi Dairy’s operations, which may limit the applicability of its findings to other regions or companies within the dairy industry. The reliability of results could be affected by data quality issues such as incomplete or inaccurate records. If based on surveys or interviews, the sample size may be limited and might not fully represent the broader customer base or industry. The study’s limited timeframe could hinder its ability to capture long-term trends accurately. Methodological constraints, including potential biases during data collection or analysis, may impact the validity of the conclusions. Furthermore, the unique challenges inherent to the dairy industry, such as product perishability and seasonality, might not be fully addressed. Lastly, the absence of longitudinal data restricts the ability to observe changes and trends over an extended period.

Research Methodology:

Research Design:

A descriptive research design was selected to examine customer churn factors within a quantitative framework.

Data Collection:

Primary data were collected via a structured questionnaire administered to 316 dairy customers in South Coimbatore, covering demographics, churn reasons, perception of pricing, product quality, service experience, and competitor usage.

Sampling:

Stratified random sampling ensured representation across income groups, ages, and customer loyalty categories.

Data Analysis:

Descriptive statistics summarized customer profiles. Chi-square tests examined associations between churn factors and demographics. Binary logistic regression predicted customer likelihood to churn based on key variable.

Data Analysis:

Chi-Square Test Results between Age and Likelihood to Recommend Dairy Products:

Hypothesis:

- (H0): There is no association between the age group and the likelihood to recommend dairy products.
- (H1): There is an association between age group and likelihood to recommend dairy products.

Chi-square Tests between Age and Likelihood to Recommend Dairy Products:

Test	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	18.16	9	0.033
Likelihood Ratio	23.065	9	0.013
N of Valid Cases	316		

Interpretation:

Since the p-value (0.033) is less than the significance level of 0.05, we reject the null hypothesis. This indicates a statistically significant association between age group and likelihood to recommend the dairy products.

Chi-Square Test - Gender Vs Primary Reason for Churn:

Hypothesis:

- (H0): There is no association between the gender and the primary reason for churn.
- (H1): There is an association between the gender and the primary reason for churn.

	Value	df	Asymptotic Significance (2- sided)
Pearson Chi-Square	8.118	4	0.087
Likelihood Ratio	9.113	4	0.450
Continuity Correction ^b	0.105	1	0.234
Linear-by-Linear Association	0.234	1	0.631
N of Valid Cases	316		

Interpretation:

Since $p = 0.087 > 0.05$, there is no significant association between gender and churn reason. However, the frequency table shows male customers report higher churn due to poor service and quality, suggesting operational issues in servicing male-dominated routes.

Correlation - Customer Experience Vs Recommendation:

Hypothesis:

- (H0): There is no association between the customer experience and recommendation likeliness.
- (H1): There is an association between the customer experience and recommendation likeliness.

		How would you rate your overall experience with our company?	
Spearman's rho	How likely are you to recommend our dairy products to others?	Correlation Coefficient	0.05
		Sig. (2-tailed)	0.373
		N	316

Interpretation:

The correlation is weak and statistically insignificant ($p > 0.05$). This means while customer experience and loyalty are related conceptually, other variables (e.g., quality and service) might play a stronger role.

Findings:

The analysis revealed that poor customer service (26.6%) and product quality issues (23.1%) are the primary drivers of customer churn, with price-related concerns being the most common reason customers stop using the product. Respondents were predominantly middle-aged males (58% aged 34-41; 84% male) with incomes between 30,000 and 40,000 (53%). Statistical

testing showed no significant links between demographic factors such as gender and age and reasons for churn, Also emphasized the importance of pricing, as many customers reported considering switching due to cost concerns. Additionally, 31.33% of respondents recommended price reductions as a key strategy for customer retention.

Suggestions & Recommendations:

To address churn driven by product quality issues, the company should implement more rigorous quality control checks and enhance both packaging and production processes to reduce spoilage and concerns about product thickness. Communicating these improvements proactively and acknowledging customer feedback can help rebuild trust and demonstrate commitment to quality.

Customer service can be strengthened by training frontline staff on empathy, responsiveness, and effective problem resolution. Establishing clear Service Level Agreements (SLAs) for complaint handling and closely monitoring response times will help ensure consistent service standards. Additionally, launching customer satisfaction follow-up surveys after support interactions can provide valuable insights and drive continuous improvement in customer experience.

Conclusion:

The analysis clearly shows that service quality and product quality are the most critical drivers of customer churn. Despite some associations not reaching statistical significance in tests, the practical importance is evident from customer responses. Customers emphasize that poor service and product issues strongly influence their decisions to stop using the company's products.

References:

1. Alsheikh, M. A., et al. (2025). A hybrid machine learning model combining support vector machines and decision trees for customer churn prediction in the telecom industry. *Journal of Telecom Analytics*, 12(3), 45-60.
2. Bao, X., et al. (2025). Hybrid random forest and gradient boosting model for telecom customer churn prediction. *International Journal of Machine Learning Applications*, 15(1), 75-90.
3. Ramírez-Tapia, M., et al. (2025). Comparative analysis of machine learning algorithms for customer churn prediction. *Computational Intelligence Review*, 8(2), 102-118.
4. Ms. C. Ranganayaki, (2024). A study on customer satisfaction towards milky mist Products with reference to Coimbatore city south Zone, *Journal of The Oriental Institute*, Pg. No: 48-54.
5. D Mythili (2020), A Study on Consumer Perception towards Organic Products with reference to Coimbatore City, *Journal of Emerging Technologies and Innovative Research (JETIR)*, March 2020, Volume 7, Issue 3, ISSN-2349-5162, Pg-70-78. IF: 5.87, Date of Publication: 2020-03-25
6. Dr B Merceline Anitha, Prem Kumar M, Munik S, (2023), A Study on Predictive Analysis In E-Commerce Sector With Special Reference To Men's Clothing Apparel, 0378 - 4568, Volume 52, Issue 2, 10-14.