

## Impact of Mobile Marketing Strategies of Dairy Product: A Study on “Milma on Wheels”

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### ABSTRACT

*The "Milma on Wheels" initiative is a novel effort by Milma to enhance the accessibility and availability of its dairy products. Leveraging the high footfall at KSRTC bus stands; this mobile marketing strategy aims to bring fresh and quality dairy products directly to consumers. The study explores the impact of mobile marketing strategies on dairy products, focusing on the innovative "Milma on Wheels" initiative. The researcher used a descriptive research design and the data collected from 324 respondents at KSRTC stands in Palakkad and Thrissur. The result revealed that the customer perceptions regarding the "Milma on Wheels" initiative reveals a largely positive response. The study also found that the factors such as Accessibility, Product Quality, Value, and Service Quality play in shaping customer satisfaction with the "Milma on Wheels" initiative.*

**Keywords:** Accessibility, Milma on Wheels, Product Quality, Service Quality, Value.

### Introduction

The dairy industry plays a crucial role in the global agricultural economy by providing essential nutritional products such as milk, butter, cheese, and yogurt. In India, the dairy sector is the one of the largest contributors to rural livelihoods and nutritional security. In India, heavily reliant on milk as a staple, demand for dairy products has consistently risen. In the digital age, consumer preferences are increasingly influenced by convenience and instant availability. Mobile marketing through physical mobility solutions like "Milma on Wheels" has emerged as a key driver for engaging customers. In the use of mobile vehicles for marketing and distribution enables brands to penetrate previously inaccessible regions, reduce intermediary costs, and provide a direct connection with consumers. These strategies align with global trends emphasizing personalized, localized, and real-time customer interactions. "Milma on Wheels" capitalizes on this trend by addressing the issues in dairy distribution, such as product freshness, transportation inefficiencies, and urban-rural connectivity.

"Milma on Wheels" is an innovative mobile dairy retail project launched by the Kerala Co-operative Milk Marketing Federation (Milma) in collaboration with the Kerala State Road Transport Corporation (KSRTC). The initiative repurposes retired KSRTC buses into mobile supermarkets, offering Milma's range of dairy products, including fresh milk, curd, butter, and ice cream, and snacks to customers at KSRTC bus stands in Kerala, ensuring consistent and reliable access to high-quality dairy products. Beyond selling products, these vehicles also serve as mobile branding platforms, increasing the visibility of the Milma brand across diverse regions. This initiative is particularly relevant in Kerala, where decentralized urbanization and rural settlements pose logistical challenges for traditional retail

outlets. By bringing products directly to consumers, "Milma on Wheels" not only enhances customer convenience but also minimizes product waste.

### Review of Literature

(Anand, 2022) examined the performance and future prospects of dairy sector in Kerala. The study found that milk production in the State, a significant majority of the output 93.54% attributed to crossbred cows, amounting to 25.34 lakh MT. In stark contrast, indigenous cows accounted for a mere 0.319 lakh MT, representing only 1.26% of the total production. Goats contributed 1.19 lakh MT, equating to 4.71% of the milk yield. The remaining production was derived from non-descript cattle, indigenous buffaloes, and non-descript buffaloes, highlighting their minimal role in the overall milk production landscape. (Asha, 2021) investigated the methods adopted by MILMA in business and analysed the market performance of MILMA. The study used both primary and secondary data. The researcher founded that the demand for milk and milk products in the state is steadily increasing. Factors such as rapid urbanization and the growing purchasing power of the middle class are driving changes in lifestyle and consumption patterns. This shift expected to boost the consumption of processed foods, including a wide range of dairy products.

(Sreeram et al., 2018) identified the constraints perceived by dairy farmers of Kerala. The study conducted across four purposively selected districts of the state identified and ranked key constraints faced by dairy farmers. Among the most significant issues reported were the escalating price of cattle feed, unremunerated milk prices, high cost of credit, and shortages in work force for cattle healthcare. The unavailability of sufficient dry and green fodder emerged as a critical concern for many farmers. (Rose et al., 2021) examined the satisfaction of consumers and Marketing of Milma Milk Variants in Trivandrum City. The researcher conducted a market survey among the consumers of different age groups. The researcher evident that Milma brand is still the number one among consumers. The result revealed that Local brands are emerging as strong competitors by offering milk at lower rates, albeit often of inferior quality. (Sharath & Seema, 2016) evaluated the performance concerning market share, customer and dealer satisfaction, loyalty, and awareness of its homogenization technique of MILMA. The study employed a combination of statistical and qualitative methodologies, gathering data through both primary and secondary sources, with questionnaires serving as the primary tool for customer and dealer feedback. The findings revealed that while MILMA enjoys a robust demand, its potential as the sole cooperative society in Kerala remains underutilized. Key challenges include a lack of consumer awareness about homogenization an essential process ensuring uniform fat content low commission rates for dealers, and issues related to packaging leakage.

Existing literature largely addresses traditional marketing strategies in the dairy sector and performance of dairy sector, satisfaction of Milma product etc. The studies specific to innovative initiatives like "Milma on Wheels," which leverage mobile marketing to enhance accessibility, brand visibility, and consumer convenience, are limited. This research aims to address this gap by examining the effectiveness of "Milma on Wheels" in enhancing customer accessibility and satisfaction.

### Objectives of the Study

- To understand the perception of customers about the "Milma on Wheels" initiative.
- To analyse the effectiveness of "Milma on Wheels" in enhancing customer accessibility and satisfaction.

### Research Methodology

The study adopts a descriptive research design to analyse the impact of mobile marketing strategies on dairy products, specifically focusing on the "Milma on Wheels" initiative. The data were collected from two locations, namely the KSRTC stands in Palakkad and Thrissur. The sample size of the study is 324. The researcher developed a structured questionnaire and collected primary data through a convenience sampling method. The secondary data are collected from articles, newspapers, magazines, websites etc. The perception of the customers is measured through seven items. The researcher measured the satisfaction regarding Milma on Wheels by using five items. The dependent variable satisfaction influenced by the independent variables such as accessibility, product quality, value and service quality. The researcher framed three items for measuring each variable.

**Result and Discussion****Table 1: Demographic Profile of the Respondent**

		<b>Frequency</b>	<b>Percentage</b>
Gender	Male	169	52.16
	Female	155	47.84
	<b>Total</b>	<b>324</b>	<b>100.0</b>
Age	25 and below	56	17.3
	26-40	117	36.1
	41-60	88	27.2
	61 and above	63	19.4
	<b>Total</b>	<b>324</b>	<b>100.0</b>
Education	SSLC and below	30	9.3
	+2	59	18.2
	Degree	117	36.1
	PG	118	36.4
	<b>Total</b>	<b>324</b>	<b>100.0</b>
Occupation	Govt. Employee	118	36.4
	Private Employee	59	18.2
	Self employed	87	26.9
	Others	60	18.5
	<b>Total</b>	<b>324</b>	<b>100.0</b>
Area	Urban	89	27.5
	Semi-Urban	177	54.6
	Rural	58	17.9
	<b>Total</b>	<b>324</b>	<b>100.0</b>
Income	Less than 10,000	94	29.0
	10,001-25,000	106	32.7
	25,001-50,000	89	27.5
	50,001-75,000	17	5.2
	Above 75,000	18	5.6
	<b>Total</b>	<b>324</b>	<b>100.0</b>

(Source: Computed from primary data)

Table 1 reveals the demographic profile of the respondents. From the above table 52.16% of respondents identifying as male (n=169) and 47.84% as female (n=155). The majority of respondents (36.1%, n=117) were aged between 26 and 40 years, followed by those aged 41 to 60 years (27.2%, n=88). Younger participants (25 and below) constituted 17.3% (n=56), while respondents aged 61 and above represented 19.4% (n=63).

The respondents holding a postgraduate degree (PG) constituting the largest group (36.4%, n=118), followed closely by those with a degree (36.1%, n=117). Participants with qualifications of +2 level accounted for 18.2% (n=59), while 9.3% (n=30) had completed SSLC or below. Government employees formed the largest occupational group at 36.4% (n=118), followed by self-employed individuals (26.9%, n=87). Private-sector employees accounted for 18.2% (n=59), with the remaining 18.5% (n=60) classified under other occupations. Majority of respondents were from semi-urban areas (54.6%, n=177), while urban areas accounted for 27.5% (n=89) and rural areas for 17.9% (n=58). Respondents earning between ₹10,001–₹25,000 represented the largest group (32.7%, n=106), followed by those earning less than ₹10,000 (29.0%, n=94). Respondents in the ₹25,001–₹50,000 bracket constituted 27.5% (n=89). Higher income categories (₹50,001–₹75,000 and above ₹75,000) accounted for only 5.2% (n=17) and 5.6% (n=18), respectively.

**Table 2: Perception of Customers Regarding the "Milma on Wheels" Initiative**

Items for measuring Perception	Mean	Std. Deviation
"Milma on Wheels" at KSRTC stands is easily accessible for purchasing dairy products.	4.0000	.85478
The service is a convenient option for commuters and travellers.	3.9105	.67325
The location of "Milma on Wheels" in KSRTC stands saves me time compared to other shopping methods.	4.0031	.74026
The products sold at "Milma on Wheels" are always fresh and of good quality.	4.1821	.57893
There is a sufficient variety of dairy products available at "Milma on Wheels."	3.8272	.64487
The staff at "Milma on Wheels" KSRTC stands are friendly and professional.	4.2778	.69273
The purchasing experience at "Milma on Wheels" is smooth and hassle-free.	4.3086	.46265
Total Perception	4.0728	.22440

(Source: Computed from Primary Data)

The above table represents the mean and standard deviation scores for customer perceptions regarding the "Milma on Wheels" initiative at KSRTC stands. The analysis indicates an overall positive perception, with a high total mean score of 4.0728 and a low standard deviation of 0.22440, reflecting a consistent agreement among respondents.

Accessibility and convenience rated favourably, with mean scores of 4.0000 and 3.9105, respectively, indicating that the service effectively caters to commuters and travellers. Customers appreciate the timesaving location (4.0031) and the fresh and quality of products (4.1821), though the variety of products (3.8272) presents an opportunity for improvement. The staff's friendliness and professionalism (4.2778) and the smooth purchasing experience (4.3086) are standout strengths, reinforcing the initiative's reputation for excellent customer service and operational efficiency.

**Table 3: Factors Influencing the Satisfaction of Customers**

	N	Mean	Std. Deviation
Accessibility	324	3.6358	.76903
Product Quality	324	3.6327	.87852
Value	324	3.9105	.79161
Service Quality	324	3.6358	.76903
<b>Satisfaction</b>	<b>324</b>	<b>4.0895</b>	<b>.89789</b>

(Source: Computed from Primary Data)

The table highlights the four key factors influencing customer satisfaction with the "Milma on Wheels" initiative: Accessibility, Product Quality, Value, and Service Quality. The overall satisfaction level is high, with a mean score of 4.0895, indicating that customers are largely satisfied with the initiative.

**H<sub>0</sub>: Impact of Accessibility, Product Quality, Value, and Service Quality on the customer satisfaction with the "Milma on Wheels" initiative.**

**Table 4: Regression Analysis**

Model	R	R Square	Adjusted R Square	Change Statistics		Durbin-Watson
				R Square Change	F Change	
1	.993 <sup>a</sup>	.986	.985	.986	5483.830	2.263
a. Predictors: (Constant), Service Quality, Accessibility, Value, Product Quality						
b. Dependent Variable: Satisfaction						

(Source: Computed from Primary Data)

The regression analysis reveals that Accessibility, Product Quality, Value, and Service Quality collectively explain 98.6% of the variance in customer satisfaction with the "Milma on Wheels" initiative ( $R^2 = 0.986$ , Adjusted  $R^2 = 0.985$ ). The high correlation ( $R = 0.993$ ) and statistically significant model ( $F$  Change = 5483.830) confirm the substantial impact of these factors on satisfaction. The Durbin-Watson value (2.263) ensures model reliability by indicating no significant autocorrelation. The results shows the importance of enhancing these four factors to sustain and improve customer satisfaction.

**Table 5: ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	256.672	4	64.168	5483.830	.000
	Residual	3.733	319	.012		
	Total	260.404	323			
a. Dependent Variable: Satisfaction						
b. Predictors: (Constant), Service Quality, Accessibility, Value , Product Quality						

(Source: Computed from Primary Data)

The ANOVA results confirm the statistical significance of the regression model analysing the impact of Accessibility, Product Quality, Value, and Service Quality on Customer Satisfaction with the "Milma on Wheels" initiative. The F value of 5483.830 is extremely high, and the significance value (Sig. = 0.000) is well below the standard threshold ( $p < 0.05$ ). This indicates that the model is highly significant and that the independent variables collectively have a substantial impact on customer satisfaction.

**Table 6: Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.697	.034		-20.585	.000		
	Accessibility	.471	.011	.403	41.985	.000	.487	2.054
	Product Quality	.328	.016	.321	21.008	.000	.192	5.196
	Value	.349	.014	.307	25.605	.000	.312	3.206
	Service Quality	.143	.017	.122	8.469	.000	.215	4.644
a. Dependent Variable: Satisfaction								

(Source: Computed from Primary Data)

The regression coefficients show that Accessibility is the most critical factor influencing customer satisfaction, followed closely by Product Quality and Value, while Service Quality has a moderate yet significant effect.

$Satisfaction = -0.697 + 0.471(Accessibility) + 0.328(Product\ Quality) + 0.349(Value) + 0.143(Service\ Quality).$

### Conclusion

The "Milma on Wheels" initiative is a mobile-based service designed to bring high-quality dairy products directly to customers at convenient locations, primarily at KSRTC stands. This innovative approach aims to provide easy access to fresh dairy products for commuters and travellers, catering to the growing demand for convenience and timesaving shopping options. The study on the impact of mobile marketing strategies for dairy products, specifically focusing on the "Milma on Wheels" initiative, reveals that "Milma on Wheels" marketing has played a significant role in improving customer engagement, satisfaction, and accessibility of Milma products. Customer perceptions regarding the "Milma on Wheels" initiative reveals a largely positive response, reflecting high levels of satisfaction and agreement with the service's accessibility, product quality, and overall convenience. The findings of this study emphasize the significant role that Accessibility, Product Quality, Value, and Service Quality play in shaping customer satisfaction with the "Milma on Wheels" initiative. The regression analysis indicates that these factors collectively explain 98.6% of the variance in customer satisfaction, with a high  $R^2$  value of 0.986. Among the four predictors, Accessibility has the most substantial impact on satisfaction.

### Limitations and Scope for Further Study

The research focuses on customer perceptions and satisfaction based on data collected from specific locations, which may not fully represent the broader customer base across different regions. So further studies, it would be beneficial to expand the research beyond a single location to include a broader and more diverse customer base across different regions. This would help capture varying customer perceptions and provide a more representative view of the overall impact of the "Milma on Wheels" initiative. The study relies on primary data gathered through surveys, which may be subject to response biases or inaccuracies. The scope of the study confined to analysing the impact of accessibility, product quality, value, and service quality on customer satisfaction, without exploring other potential

influencing factors such as pricing strategies or external market conditions. So future research could also explore by including additional factors influencing customer satisfaction, such as pricing strategies, promotions, and competitive market conditions.

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