

Unraveling Industrial Patronage: Insights into Lubricant Preferences in Surat

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Abstract

This study investigates the industrial patronage of lubricants in Surat, Gujarat, India, a significant industrial hub encompassing diverse sectors such as textiles, diamonds, chemicals, petrochemicals, and engineering. Through a descriptive research design incorporating both primary and secondary data collection methods, the study identifies common lubricant brands used by industrial establishments, examines factors influencing brand preferences, assesses brand loyalty and purchasing behavior, and explores the impact of competitor brands on decision-making. Findings reveal significant differences in brand attitudes among industrial users, with preferences varying across sectors. Brands like Castrol, Balmerol, and Gulf emerge as popular choices, influenced by factors such as product quality, brand reputation, and recommendation behavior. Moreover, brand loyalty and resistance to brand switching are observed among certain segments of industrial consumers. The study underscores the importance of tailored marketing strategies and brand positioning efforts by lubricant manufacturers to meet diverse consumer preferences effectively. Insights from this research provide valuable guidance for stakeholders in Surat's lubricants market, enabling informed decision-making and enhancing market competitiveness.

Keywords: Lubricants; Industrial Patronage; Brand Preferences; Brand Loyalty; Competitive Dynamics

1. Introduction

Industrial patronage for lubricants in Surat, a major industrial hub in Gujarat, India, plays a pivotal role in sustaining and enhancing the efficiency of various manufacturing processes. Surat, renowned for its thriving textile and diamond industries, relies heavily on lubricants to ensure smooth operations across a spectrum of industrial activities. The city's industrial landscape, characterized by a diverse range of sectors including manufacturing, construction, transportation, energy, agriculture, etc underscores the significance of lubricants as indispensable assets in maintaining machinery and equipment.

Surat's textile industry, one of the largest contributors to its economy, extensively utilizes lubricants to facilitate the seamless functioning of intricate machinery involved in spinning, weaving, and dyeing processes. Lubricants not only aid in reducing friction and wear but also contribute to optimizing energy efficiency and prolonging the lifespan of critical components, thereby enhancing overall productivity and cost-effectiveness within the textile sector (Patel and Shah, 2018). Moreover, Surat's prominence as a hub for diamond cutting and polishing necessitates the utilization of specialized lubricants tailored to the unique requirements of diamond processing machinery. These lubricants not only ensure precision in cutting and polishing operations but also help mitigate the risk of damage to valuable gemstones, thereby safeguarding profitability and quality standards in the diamond industry (Gandhi and Patel, 2019). In addition to textiles and diamonds, Surat's engineering sector, encompassing diverse subsectors such as metal fabrication,

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machinery manufacturing, and automotive components, underscores the multifaceted demand for lubricants tailored to specific applications. Whether it be for the lubrication of heavy-duty machinery in industrial workshops or the maintenance of precision components in automotive assembly plants, the availability of high-quality lubricants is indispensable for ensuring optimal performance, reliability, and longevity of equipment (Sharma and Gupta, 2017). Furthermore, Surat's other industries also rely on a myriad of lubricants to facilitate the smooth functioning of equipment involved in processes such as refining, distillation, and synthesis. (Chauhan et al., 2020).

Industrial Patronage for lubricants in Surat epitomizes the symbiotic relationship between lubricant manufacturers/suppliers and the city's diverse industrial base. Through the provision of specialized lubrication solutions tailored to the unique requirements of various sectors, lubricant suppliers contribute significantly to enhancing operational efficiency, reliability, and profitability across Surat's industrial landscape.

2. Literature Review

Table 1 Literature Review

Author and Year of Publication	Key Points
Smith (2018)	Branded lubricants enhance equipment performance, prolong lifespan, and lead to cost savings.
Johnson and Brown (2019)	Product quality, reliability, and supplier reputation are critical in shaping industrial patronage decisions.
Chen and Wang (2020)	Brand loyalty is paramount and depends on consistent delivery of high-quality products and exceptional customer service.
Garcia and Rodriguez (2017)	Brand image significantly influences purchasing decisions among industrial buyers.
Patel and Sharma (2018)	Understanding buyer behavior towards branded lubricants is crucial, with brand reputation and product quality playing pivotal roles.
Garcia and Martinez (2019)	Brand experiences, trust, and loyalty are positively correlated among industrial customers.
Wang and Zhang (2021)	Brand trust plays an instrumental role in shaping purchase behavior and fostering long-term patronage.
Turner and Rogers(2019)	Branded lubricants positively impact machinery efficiency and durability.
Hernandez and Gomez (2018)	Strategic branding efforts are essential for enhancing brand salience and nurturing enduring customer relationships.
Yang and Liu (2020)	Brand awareness and credibility significantly influence industrial purchasing decisions.
Kim and Han (2018)	Tailored strategies are imperative to navigate regional preferences and regulatory landscapes.
Patel and Shah (2019)	Governmental policies and technological advancements shape the trajectory of the lubricants sector.
Desai and Joshi (2020)	Trends and growth prospects of the lubricants industry in Gujarat, are influenced by factors including market dynamics and consumer preferences.

The literature review highlights how branded lubricants influence industrial patronage through factors like product quality, brand image, and market dynamics. Understanding these dynamics is crucial for lubricant manufacturers and distributors to enhance competitiveness and market share. Tailored strategies that consider regional preferences and regulatory landscapes are essential to navigate the changing industrial landscape and seize new opportunities in the lubricants sector.

3. Research methodology

The research employed a descriptive approach to investigate the patronage motives of industries towards branded lubricants in Surat, India. Data were collected by a questionnaire which was rigorously pretested and validated through a pilot study to ensure reliability. Data analysis utilized IBM SPSS and Microsoft Excel, employing various statistical techniques such as frequency analysis, reliability testing, Kruskal-Wallis, factor analysis, and KMO-Bartlett's test. These methods provided a comprehensive framework for interpreting the data. The sampling design targeted a diverse range of industries in Surat District, comprising over 41,300 establishments. A sample of 109 industrial units was selected using convenience sampling, ensuring representation across sectors such as manufacturing, construction, transportation, and agriculture. This meticulously structured approach facilitated a nuanced understanding of industrial buying behavior in the lubricating oil market of Surat.

3.1. Research Objective

- To identify the most commonly used lubricant brands among industrial establishments in Surat.
- To understand the factors influencing industrial users' brand preferences for lubricants.
- To assess the level of brand loyalty and purchasing behavior among industrial users in Surat.
- To examine the effect of competitor brands on the decision-making process of industrial users in Surat when purchasing lubricants.

4. Results and discussions

The analysis of industrial patronage for branded lubricants in Surat reveals significant insights into the preferences and behaviors of industrial users. Among the surveyed industries, manufacturing emerges as the predominant sector, with 50.5% of companies utilizing branded lubricants. This underscores the critical role of lubricants in supporting manufacturing processes within Surat's industrial landscape. Construction follows at 18.3%, while transportation and agriculture account for 16.5% and 12.8%, respectively, highlighting the widespread reliance on lubricants across diverse industrial sectors in Surat.

In terms of employee experience, the majority (38.5%) have been in their industry for 6 to 10 years, indicating a seasoned workforce familiar with lubrication requirements. Regarding positions within companies, 40.4% are Owner/CEO/President, suggesting that high-level decision-makers are involved in lubricant procurement decisions. This emphasizes the importance of understanding their preferences and considerations in brand selection.

4.1. Reliability Analysis

Table 2 Reliability Test

Section	Category	N	%
Case Processing Summary			
Cases	Valid	109	100
	Excluded	0	0
Reliability Statistics			
Cronbach's Alpha		27	
0.888			

The reliability analysis conducted for industrial patronage of branded lubricants in Surat yielded a high Cronbach's Alpha coefficient of 0.888, indicating strong internal consistency among the 27 items measuring industrial patronage. This suggests reliable and consistent results from the measurement instrument, enhancing the validity of the study. The 27 items cover multiple dimensions of industrial patronage, including product quality, brand reputation, pricing, and customer service.

4.1.1. Kruskal-Wallis Test

Table 3 Kruskal-Wallis Test

Item	Kruskal-Wallis H	df	Asymp. Sig.
I hold a positive attitude towards the current brand of lubricants.	38.766	12	0
I enjoy using the current brand of lubricants.	49.829	12	0
I trust the quality of the current brand of lubricants.	41.812	12	0
Overall, I feel favourably towards the current brand of lubricants.	51.795	12	0
I prefer the current brand of lubricants over other brands available in the market.	45.132	12	0
I would recommend the current brand of lubricants to friends or family.	51.382	12	0
I often suggest the current brand of lubricants to others seeking lubricant recommendations.	42.542	12	0
I am confident in recommending the current brand of lubricants based on my positive experiences.	45.124	12	0
I believe others would benefit from using the current brand of lubricants.	49.674	12	0
I actively promote the current brand of lubricants to people I know.	44.545	12	0
I frequently purchase the current brand of lubricants for my machineries.	39.71	12	0
I have consistently used the current brand of lubricants for an extended period.	41.252	12	0
I intend to continue purchasing the current brand of lubricants in the future.	42.121	12	0
When it's time to buy lubricants, I usually choose the current brand.	51.561	12	0
I am loyal to the current brand and seldom consider other brands when purchasing lubricants.	44.369	12	0
Even when other brands are discounted, I stick with my favorite lubricant.	46.518	12	0
I don't let ads for other brands change my mind.	43.382	12	0
I don't feel tempted to try different brands.	33.935	12	0
I'm committed to using my current brand of lubricants, even with other options around.	42.52	12	0
I always choose my current brand and don't consider others.	48.021	12	0.001

The Kruskal-Wallis's test was conducted to examine whether there are significant differences in attitudes towards various brands of lubricants among industrial users in Surat. The test results indicate that there are significant differences in attitudes towards different brands across all measured dimensions.

- Attitudes towards Different Brands: The Kruskal-Wallis H values for all dimensions (attitudes) towards different brands are statistically significant ($p < 0.05$). This suggests that there are significant differences in attitudes towards various brands of lubricants among industrial users in Surat.
- Preference for Different Brands: The test results indicate that industrial users in Surat have varying preferences and perceptions towards different brands of lubricants across different dimensions such as satisfaction, trust, loyalty, recommendation, and purchase behavior.
- Brand Perception and Loyalty: Some brands consistently rank higher in terms of mean rank across multiple dimensions, indicating a stronger positive perception and loyalty towards those brands compared to others. For example, brands like Castrol, Balmerol, and Gulf tend to have higher mean ranks across various dimensions, suggesting that they are more favored and trusted by industrial users in Surat.
- Potential Implications: These findings have important implications for brand positioning, marketing strategies, and customer engagement efforts of lubricant manufacturers. Understanding the specific dimensions where

brands excel or lag behind can help companies tailor their strategies to better meet the needs and preferences of industrial users in Surat.

4.2. KMO and Bartlett's Test

Table 4 KMO and Bartlett's Test

Measure	Value
Kaiser-Meyer-Olkin	0.76
Bartlett's Test of Sphericity (Chi-Square)	4965.228
Bartlett's df	190
Bartlett's Sig.	0

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was found to be 0.760, indicating that the data is suitable for factor analysis. Bartlett's Test of Sphericity was statistically significant ($p < 0.05$), suggesting that correlations between variables are sufficiently large for factor analysis. These findings validate the appropriateness of the data for conducting factor analysis, ensuring the robustness of the subsequent analysis.

4.3. Factor Analysis

Table 5 Rotated Component Matrix

Item	Component 1	Component 2	Component 3	Component 4
I hold a positive attitude towards the current brand of lubricants.			0.829	
I enjoy using the current brand of lubricants.			0.557	
I trust the quality of the current brand of lubricants.		0.656		
Overall, I feel favourably towards the current brand of lubricants.			0.563	
I prefer the current brand of lubricants over other brands available in the market.			0.553	
I would recommend the current brand of lubricants to friends or family.	0.722			
I often suggest the current brand of lubricants to others seeking lubricant recommendations.	0.781			
I am confident in recommending the current brand of lubricants based on my positive experiences.	0.832			
I believe others would benefit from using the current brand of lubricants.	0.716			
I actively promote the current brand of lubricants to people I know.	0.675			
I frequently purchase the current brand of lubricants for my machineries.				0.727
I have consistently used the current brand of lubricants for an extended period.				0.678
I intend to continue purchasing the current brand of lubricants in the future.		0.748		

When it's time to buy lubricants, I usually choose the current brand.		0.677		
I am loyal to the current brand and seldom consider other brands when purchasing lubricants.		0.808		
Even when other brands are discounted, I stick with my favorite lubricant.				0.736
I don't let ads for other brands change my mind.				0.614
I don't feel tempted to try different brands.				0.783
I'm committed to using my current brand of lubricants, even with other options around.		0.796		
I always choose my current brand and don't consider others.	0.704			

Factor analysis further elucidates the underlying factors influencing brand perception and behavior among industrial users. The analysis reveals distinct factors such as general positive attitude, brand loyalty, recommendation behavior, and resistance to external influences. These factors provide valuable insights into the drivers of industrial patronage for lubricants in Surat.

Overall, the research findings underscore the complexity of industrial patronage and the importance of understanding consumer preferences to ensure sustained patronage and competitiveness. By leveraging these insights, lubricant manufacturers can tailor their marketing efforts to better meet the diverse needs of industrial consumers, thereby enhancing brand positioning and market performance.

5. Conclusion

In conclusion, this research has effectively met its objectives by offering comprehensive insights into the attitudes and preferences of industrial users in Surat towards branded lubricants. Initially, the research successfully identified the most commonly used lubricant brands among industrial establishments in Surat, with prominent choices including Castrol, Balmerol, and Gulf. This outcome aligns with the objective of understanding prevailing brand preferences among industrial consumers. Moreover, the study delved into the factors influencing industrial users' brand preferences for lubricants, highlighting dimensions such as product quality, brand reputation, and recommendation behavior as significant drivers of patronage. Furthermore, the research assessed the level of brand loyalty and purchasing behavior among industrial users, revealing patterns of consistent purchase behavior and resistance to brand switching among certain segments of the industrial consumer base. Additionally, the study explored the impact of competitor brands on the decision-making process of industrial users when purchasing lubricants, revealing significant differences in attitudes towards various brands across different dimensions. These insights underscore the competitive dynamics within Surat's lubricants market and emphasize the need for strategic differentiation and value proposition development by lubricant suppliers. Overall, the research findings indicate that industrial users in Surat exhibit diverse preferences and considerations when selecting lubricant brands, influenced by factors such as product performance, brand reputation, and peer recommendations. By addressing the research objectives comprehensively, this study has provided valuable guidance for lubricant manufacturers and marketers seeking to navigate the complexities of the industrial lubricants market in Surat and tailor their strategies to effectively meet the needs and preferences of industrial consumers.

Compliance with ethical standards

Statement of Ethical Approval

The research was conducted in accordance with academic ethical standards. Primary data was collected through structured questionnaires from professionals working in various industrial units in Surat. Participation was entirely voluntary, and no personal or sensitive information was collected. As the study does not involve clinical or sensitive human data, formal approval from an ethics committee was not required.

Statement of Informed Consent

Informed consent was obtained from all individual participants included in the study. Respondents were clearly informed about the purpose of the research, their rights, and the confidentiality of their responses.

Disclosure of conflict of interest

The authors declare that they have no conflict of interest.

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