

A Study on Consumer Feedback Analysis for Product Improvement: An Empirical Study of Pagariya Consumer Food PVT. LTD., Nagpur

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Abstract

In the rapidly evolving Fast-Moving Consumer Goods (FMCG) industry, consumer feedback has emerged as a strategic asset for product development, innovation, and long-term brand sustainability. This study explores the role of consumer feedback analysis in improving product performance, with special reference to Pagariya Consumer Food Pvt. Ltd., Nagpur. The research aims to measure consumer satisfaction, identify key determinants influencing loyalty, and recommend practical strategies for product improvement based on customer insights.

A mixed-method research design was adopted. Primary data was collected from 100 consumers through structured questionnaires and supported by qualitative feedback from open-ended questions. Secondary data was obtained from journals, research articles, and company sources. Statistical tools such as percentage analysis, mean, correlation, and regression were used to analyze quantitative data, while qualitative content analysis helped identify recurring themes in customer suggestions. The results reveal that product quality, taste, reasonable pricing, and product availability are the primary drivers of customer satisfaction. Packaging, labeling transparency, and brand trust also influence buying behavior. However, consumers expressed the need for improvement in packaging durability, distribution expansion, and introduction of innovative product variants. The study concludes that systematic integration of consumer feedback into product development enhances competitiveness, customer loyalty, and brand reputation. This research provides a practical framework for regional FMCG firms to adopt consumer-driven improvement strategies.

Keywords: Consumer Feedback, Product Improvement, Customer Satisfaction, FMCG, Voice of Customer, Product Development.

1 Introduction

In today's customer-centric marketplace, organizations can no longer rely solely on internal assumptions to design products. Consumers actively participate in shaping brand value through feedback, reviews, and purchase behavior. As competition intensifies, especially in the FMCG sector, firms must continuously adapt their offerings based on customer expectations. Consumer feedback refers to information provided by customers regarding their experiences, satisfaction levels, and expectations from a product or service. It acts as a communication bridge between consumers and producers. Businesses that analyze feedback systematically can identify strengths, weaknesses, and opportunities for improvement. Product improvement is a continuous enhancement process aimed at refining product attributes such as quality, packaging, design, pricing, and usability. In the FMCG sector, where products are purchased frequently and brand switching is easy, even small dissatisfaction can lead to customer loss. Therefore, feedback-driven improvement becomes essential.

Pagariya Consumer Food Pvt. Ltd., Nagpur, is a regional FMCG company dealing in pulses, flours, spices, and grocery items. Despite maintaining quality standards, the company faces growing competition from established national brands. Hence, understanding customer perception through structured feedback analysis is critical for sustaining market position. This study attempts to analyze consumer feedback regarding Pagariya products and link it to product improvement

strategies. The research integrates theoretical concepts with empirical data to demonstrate the importance of feedback-driven decision-making.

In the contemporary business environment, organizations operate in markets characterized by intense competition, rapid technological advancement, and constantly evolving consumer expectations. In such a dynamic setting, the success of a company largely depends on its ability to understand customer needs and respond effectively. Consumers today are more informed, expressive, and quality-conscious than ever before. They actively share their opinions through feedback forms, reviews, social media platforms, and word-of-mouth communication. This shift from product-centric to customer-centric markets has made consumer feedback a vital strategic resource for businesses.

Consumer feedback refers to the information provided by customers regarding their experiences, satisfaction levels, and expectations from a product or service. It serves as a communication bridge between consumers and organizations. By systematically collecting and analyzing feedback, companies can identify product strengths, detect weaknesses, and recognize opportunities for improvement. In essence, consumer feedback enables firms to align their offerings with market demand, thereby enhancing customer satisfaction and loyalty. Product improvement is a continuous process that involves refining existing product features such as quality, packaging, design, pricing, and usability. In the Fast-Moving Consumer Goods (FMCG) sector, product improvement plays a particularly significant role because products are purchased frequently, margins are low, and brand switching is common. Even minor dissatisfaction can result in the loss of customers to competitors. Therefore, companies in this sector must consistently monitor consumer perception and adopt feedback-driven strategies. The FMCG industry in India is one of the largest and fastest-growing sectors, contributing significantly to the nation's GDP. It includes essential daily-use products such as food items, beverages, personal care products, and household goods. The food segment of FMCG is highly sensitive to consumer preferences related to taste, freshness, hygiene, packaging, and price. With rising income levels, urbanization, and awareness about quality and safety standards, Indian consumers are increasingly demanding better products and transparent information.

This trend emphasizes the importance of consumer feedback in guiding product development decisions.

Pagariya Consumer Food Pvt. Ltd., located in Nagpur, Maharashtra, is a regional FMCG company engaged in the manufacturing and distribution of food products such as pulses, flours, spices, rice, and ready-to-cook items. The company focuses on providing hygienic, quality food products at affordable prices. Over the years, Pagariya has built a loyal customer base in central India. However, the company faces intense competition from national brands with strong marketing, distribution networks, and product innovations. In this context, understanding customer expectations and improving products accordingly is crucial for maintaining competitiveness. Despite the company's emphasis on quality, structured academic research on consumer feedback related to Pagariya products has been limited. Without systematic feedback analysis, product development decisions may rely on assumptions rather than evidence. This study addresses this gap by analyzing consumer feedback scientifically and linking it to product improvement strategies.

The present research aims to evaluate consumer satisfaction, identify key factors influencing purchase decisions, and suggest practical recommendations for product enhancement. The study integrates theoretical concepts such as the Voice of Customer (VoC) and customer satisfaction theory with empirical data collected from consumers. By doing so, it highlights the role of feedback as a strategic tool in product development and organizational growth.

Overall, this study contributes to both academic understanding and managerial practice by demonstrating how consumer insights can drive product improvement in a regional FMCG company. The findings are expected to help Pagariya Consumer Food Pvt. Ltd. enhance customer satisfaction, strengthen brand loyalty, and achieve sustainable market growth.

1.1 Theoretical Background Consumer Feedback Concept

Consumer feedback can be categorized into:

- Direct feedback: Surveys, interviews, complaint forms
- Indirect feedback: Online reviews, social media comments, repeat purchase behaviour.

According to the Voice of Customer (VoC) framework, organizations must systematically capture and translate customer needs into product improvements. Quality Function Deployment (QFD) is one such method used to convert customer requirements into technical features.

1.2 In FMCG industries, product improvement includes:

- Quality enhancement
- Packaging innovation
- Price optimization
- Variant introduction
- Shelf-life improvement

Continuous improvement ensures long-term competitiveness.

1.3 Industry and Company Profile

1.4 FMCG Industry Overview The Indian FMCG industry is one of the largest sectors, contributing significantly to GDP. Key characteristics include:

- High competition
- Low margins but high volume
- Frequent consumer purchases
- Strong brand influence

Emerging trends include demand for hygienic packaging, healthy food products, and eco-friendly materials.

1.5 Company Profile

Pagariya Consumer Food Pvt. Ltd. is based in Nagpur and operates in food processing and packaging. Its product range includes pulses, flours, rice, spices, and ready-to-cook items. The company aims to provide quality products at affordable prices while maintaining hygiene and freshness.

2 Review of literature

The review of literature provides a theoretical and empirical foundation for understanding how consumer feedback contributes to product improvement and customer satisfaction. Various national and international studies highlight the importance of consumer-driven innovation, especially in the Fast-Moving Consumer Goods (FMCG) sector.

2.1 Concept of Consumer Feedback

Consumer feedback refers to information provided by customers regarding their experiences, satisfaction levels, and expectations from a product or service. According to the Voice of Customer (VoC) framework, feedback is a structured method of capturing customer requirements and translating them into actionable improvements. Feedback may be direct (surveys, interviews, complaint forms) or indirect (online reviews, social media comments, repeat purchase behavior).

Researchers argue that feedback acts as a communication bridge between customers and producers, enabling firms to understand market expectations and adapt accordingly. Companies that systematically analyze feedback are better positioned to enhance product quality and customer loyalty.

2.2 Consumer Satisfaction and Perception

Oliver (1999) defined customer satisfaction as the psychological outcome resulting from comparing expected and perceived performance. Satisfaction leads to repeat purchases and positive word-of-mouth, while dissatisfaction results in brand switching.

Studies in consumer behavior suggest that perception of quality, packaging, brand image, and price fairness significantly influences satisfaction. In FMCG products, tangible factors such as taste, freshness, and packaging safety, along with intangible factors like brand trust, determine consumer perception.

2.3 Role of Feedback in Product Improvement

Product improvement involves refining product attributes based on consumer insights. Shen et al. (2022) emphasized the integration of real-time VoC systems in product development. Their research demonstrated how structured feedback helps organizations identify specific improvement areas. Mourtzis et al. (2018) highlighted digital tools that collect and manage feedback efficiently, enabling firms to implement design changes. Burzova (2024) concluded that consumer feedback is a key driver of innovation, particularly in food industries where taste and quality strongly affect repeat purchase.

Regional brands face additional challenges such as limited distribution networks and competition from

national brands. Therefore, systematic feedback analysis is essential for regional firms to remain competitive.

2.4 Research Gap

Although numerous studies emphasize the importance of consumer feedback, most focus on large multinational companies. Limited empirical research exists on small and regional FMCG firms in India. Few studies demonstrate the practical translation of consumer feedback into specific product improvements. This study addresses the gap by examining a regional FMCG company, Pagariya Consumer Food Pvt. Ltd., and linking consumer feedback with product enhancement strategies.

Summary The literature review establishes that consumer feedback is a crucial driver of product improvement and customer satisfaction. Theoretical models such as VoC and satisfaction theory support the idea that feedback-driven decisions enhance competitiveness. However, more empirical research is needed in the context of regional FMCG companies, which this study attempts to fulfill.

2.5 Problem Definition

Although Pagariya has a strong regional presence, limited structured research has been conducted to analyze consumer feedback scientifically. Without systematic analysis, product development may not fully align with consumer expectations.

3 Research methodology

This chapter explains the methods and procedures used to conduct the study on Consumer Feedback Analysis for Product Improvement with reference to Pagariya Consumer Food Pvt. Ltd., Nagpur. It includes research design, data sources, sampling, tools of analysis, and limitations.

3.1 Research Design

- The present study adopts a descriptive research design with exploratory elements.
- The descriptive approach helps in systematically describing consumer satisfaction levels, perceptions, and preferences toward Pagariya products.

- The exploratory approach helps identify underlying patterns and themes in qualitative feedback to determine improvement areas.
- This design is appropriate because the research aims to understand what consumers feel and why they feel so about the products.

3.2 Research Approach

A mixed-method approach was used, combining both:

- Quantitative Research – To measure satisfaction levels, preferences, and influencing factors through structured questionnaires.
- Qualitative Research – To analyze open-ended responses and suggestions from consumers regarding product improvement.

This approach provides both numerical data and in-depth insights, ensuring a comprehensive understanding.

3.3 Research Problem

In the competitive FMCG industry, consumer expectations change rapidly. Although Pagariya Consumer Food Pvt. Ltd. maintains quality standards, limited systematic research has been conducted to evaluate consumer feedback and use it strategically for product improvement.

3.4 Objectives of the Study

- To study consumer satisfaction and perception toward Pagariya products.
- To identify factors influencing customer loyalty and repeat purchase.
- To analyze consumer feedback for identifying product improvement areas.
- To suggest practical strategies to enhance product competitiveness.
- To establish a link between consumer feedback and product development.

3.5 Hypothesis Formulation

Based on the objectives, the following hypotheses were tested:

- H_{01} : There is no significant relationship between consumer feedback and overall customer satisfaction.
- H_{02} : Product quality, price, and packaging do not significantly influence customer satisfaction.

3.6 Scope of the Study

The study focuses on consumers of Pagariya Consumer Food Pvt. Ltd. in Nagpur city. It examines satisfaction related to product quality, packaging, price, and availability. The findings are useful for product development and marketing strategies.

3.7 Population and Sampling

The population consists of consumers who regularly purchase Pagariya food products such as pulses, flour, spices, and grocery items.

3.7.2 Sample Size

A total of 100 consumers were selected for the study.

3.7.3 Sampling Technique

Convenience sampling was used. This method allows the researcher to collect data from easily available and willing respondents. It is suitable for exploratory consumer studies.

3.8 Sources of Data

3.8.1 Primary Data

1. Structured questionnaire
2. Personal interviews with consumers and retailers
3. The questionnaire included:
4. Satisfaction ratings (Likert scale)
5. Purchase behavior
6. Perceptions of quality, packaging, price
7. Suggestions for improvement

3.8.2 Secondary Data

1. Collected from:
2. Research journals
3. Books on consumer behavior
4. Company documents
5. Authentic online sources

3.9 Data Collection Tools

- The questionnaire consisted of:
- Demographic questions
- Satisfaction measurement scale
- Factors influencing purchase
- Product improvement suggestions

3.10 Hypothesis Formulation

Based on the objectives, the following hypotheses were tested:

- H_{01} : There is no significant relationship between consumer feedback and overall customer satisfaction.
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4 data analysis and interpretation

This chapter presents the statistical analysis of consumer feedback collected from 100 respondents regarding Pagariya Consumer Food Pvt. Ltd. The analysis aims to measure satisfaction levels, identify key influencing factors, and test research hypotheses.

Demographic Analysis

The survey included respondents from different age groups, occupations, and income categories. The majority of consumers belonged to the 26–35 age group, indicating active purchasing households. Both male and female consumers participated, showing balanced representation.

Section a: respondent profile

Table 4.1 Age-wise Distribution

| Age Group | Respondents | Percentage |
|-----------|-------------|------------|
| 18–25 | 23 | 23% |
| 26–35 | 35 | 35% |

| Age Group | Respondents | Percentage |
|--------------|-------------|-------------|
| 36–45 | 22 | 22% |
| 46–60 | 15 | 15% |
| Above 60 | 5 | 5% |
| Total | 100 | 100% |

Interpretation:

Most respondents (57%) are between 26–45 years, indicating strong consumption from the working-age population.

Table 4.2 Gender-wise Distribution

| Gender | Respondents | Percentage |
|--------------|-------------|-------------|
| Male | 56 | 56% |
| Female | 42 | 42% |
| Other | 2 | 2% |
| Total | 100 | 100% |

Interpretation:

Pagariya products appeal almost equally to both genders.

Table 4.3 Occupation

| Occupation | Respondents | Percentage |
|---------------|-------------|-------------|
| Student | 19 | 19% |
| Employee | 41 | 41% |
| Self-employed | 18 | 18% |
| Homemaker | 16 | 16% |
| Retired | 4 | 4% |
| Other | 2 | 2% |
| Total | 100 | 100% |

Interpretation:

Employees form the largest consumer group, indicating stable repeat purchases.

Table 4.4 Monthly Income

| Income Group | Respondents | Percentage |
|-----------------|-------------|-------------|
| < ₹20,000 | 27 | 27% |
| ₹20,000–₹40,000 | 37 | 37% |
| ₹40,001–₹60,000 | 21 | 21% |
| Above ₹60,000 | 15 | 15% |
| Total | 100 | 100% |

Interpretation:

Majority belong to the middle-income segment, making price sensitivity important.

Section b: consumer satisfaction & perception

Table 4.5 Satisfaction Level (Mean Score)

| Parameter | Mean | Std. Deviation | Level |
|----------------------|------|----------------|-----------|
| Overall Satisfaction | 4.08 | 0.71 | High |
| Taste & Quality | 4.30 | 0.64 | Very High |
| Availability | 3.82 | 0.83 | Moderate |
| Shelf Life | 4.04 | 0.75 | High |
| Brand Trust | 4.20 | 0.68 | High |

Interpretation:

Taste, quality, and trust are the strongest satisfaction factors.

Section c: factors influencing satisfaction

Table 4.6 Influencing Factors (Likert Mean)

| Factor | Mean Score | Interpretation |
|-------------------|------------|----------------|
| Product Quality | 4.46 | Very Strong |
| Price (Value) | 4.14 | Strong |
| Packaging | 3.65 | Moderate |
| Availability | 4.10 | Strong |
| Label Information | 3.90 | Moderate |

| Factor | Mean Score | Interpretation |
|------------|------------|----------------|
| Promotions | 3.72 | Moderate |

Interpretation:

Product quality is the most influential factor followed by price.

Section d: areas for improvement

Table 4.7 Areas Needing Improvement (Multiple Response)

| Area | Responses |
|------------------|-----------|
| Packaging | 49 |
| Availability | 43 |
| Price / Value | 35 |
| Taste / Recipe | 31 |
| Labeling | 25 |
| Customer Service | 21 |

Interpretation:

Packaging and distribution are the major improvement areas

Section e: suggestions & development

Table 4.8 Willingness to Pay for Eco-friendly Packaging

| Response | Respondents | Percentage |
|----------|-------------|------------|
| Yes | 47 | 47% |
| No | 23 | 23% |
| Maybe | 30 | 30% |

Interpretation:

Nearly half the respondents support eco-friendly initiatives even at a higher price.

Hypothesis testing

H₀₁: There is no significant relationship between consumer feedback and overall customer satisfaction.

Statistical Test Applied: Pearson's Correlation Coefficient.

Table 4.9 Correlation Result

| Variables | r-value |
|--|-------------|
| Consumer Feedback & Overall Satisfaction | 0.67 |

- Sample size (n) = 100
- Degree of freedom = n-2 = 98
- Critical r-value at 5% level = **0.195**

Decision Rule: If calculated r > table r → Reject H₀

Result: 0.67 > 0.195

Decision: H₀₁ is rejected

Conclusion:

There is a **significant positive relationship** between consumer feedback and overall customer satisfaction.

H₀₂: Product quality, price, and packaging do not significantly influence customer satisfaction

Statistical Test Applied:

Table 4.10 Regression Results

| Variable | Beta (β) | t-value |
|-----------------|----------|---------|
| Product Quality | 0.54 | 6.72 |
| Price | 0.29 | 4.10 |
| Packaging | 0.17 | 2.55 |

- R² = 0.63
- F-value = 54.20
- Significance level = 0.05
- Critical t-value = **1.984**

Decision Rule: If t-calculated > t-table → Reject H₀

Result: All t-values > 1.984

Decision: H₀₂ is rejected

Conclusion:

Product quality, price, and packaging **significantly influence customer satisfaction**, with product quality having the strongest impact.

Overall interpretation

- Consumers show **high satisfaction and trust** in Pagariya products
- **Product quality and price** are key drivers of satisfaction
- **Packaging and availability** require improvement
- Hypothesis testing confirms that **feedback and marketing variables significantly affect customer satisfaction**

5 Findings and Discussion

- Product quality is the strongest determinant of customer satisfaction.
- Packaging design influences brand perception.
- Price sensitivity varies among income groups.
- Availability of products affects repeat purchases.
- Customers expect continuous improvement based on feedback. The discussion confirms that analytics-based feedback interpretation helps businesses make targeted improvements rather than relying on assumptions.
- **Conclusion**
- The study concludes that consumer feedback is a strategic asset for product development and marketing success. Pagariya Consumer Food Pvt. Ltd. can enhance competitiveness by integrating business analytics into decision-making processes. Systematic analysis enables identification of customer expectations, satisfaction gaps, and innovation opportunities.

5.1 Suggestions / Recommendations

- Improve packaging quality and design.
- Introduce customer feedback monitoring dashboards.
- Conduct periodic satisfaction surveys.
- Use predictive analytics for demand forecasting.
- Implement loyalty programs to retain customers.

5.2 Limitations of the Study

- Study limited to Nagpur region.
- Convenience sampling may not represent all customers.

- Time constraints affected deeper statistical modeling.

5.3 Scope for Future Research

- Comparative study with other FMCG brands.
- Use of AI-based sentiment analysis.
- Longitudinal study on customer loyalty trends.

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