



Supermarket Customer Satisfaction Analysis

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1. Introduction

Understanding customer satisfaction is crucial for enhancing service quality and keeping devoted clients in the cutthroat retail industry of today. Because they offer necessary products and services, supermarkets are an integral part of people's daily lives. Customer expectations, however, are constantly changing, so it's critical for companies to periodically assess their performance from the viewpoint of their clients.

The **Supermarket Customer Satisfaction Analysis** project seeks to determine how satisfied consumers are with various aspects of supermarket services, including overall shopping experience, staff behavior, pricing, and product quality. The study finds important trends, frequent grievances, and areas for improvement by examining survey responses gathered from different provinces.

The ultimate objective is to offer practical insights that supermarkets can use to boost customer loyalty, operational effectiveness, and customer satisfaction.



2. Objectives

Analyzing customer satisfaction levels across different supermarkets and determining the elements affecting the overall customer experience are the primary goals of this project. Among the particular goals are:

- Key factors like product quality, cost, employee friendliness, and store atmosphere can be used to gauge customer satisfaction.
- Based on consumer feedback, determine which supermarkets are the most well-liked.
- To identify regional trends, compare the satisfaction levels in various provinces.
- Examine consumer complaints to determine the most prevalent problems encountered when shopping.
- Make suggestions on how supermarkets can increase customer retention and service quality.

3. Methodology

In order to comprehend customer satisfaction trends and produce insightful findings, this project used a structured data analysis process.

a. Data Collection

A survey asking about spending patterns, province, satisfaction level, supermarket visits, and propensity to refer others to the store was used to gather customer responses.

b. Data Preprocessing

- The raw dataset was cleaned using Python (Pandas and NumPy).
- Missing or inconsistent values were identified and handled appropriately.
- Irrelevant or duplicate entries were removed.
- The cleaned dataset was saved as **responses_cleaned.csv** for analysis and visualization.

c. Data Analysis

- Spending trends and customer satisfaction ratings were compiled using descriptive statistics.
- Complaint feedback was subjected to text analysis in order to find recurrent themes and common problems.
- The provinces with the highest response rates and the most popular supermarkets were determined using aggregates.

d. Visualization

- Charts, bar graphs, and pie charts were included to highlight patterns and relationships in the data.

e. Insight Generation

- Both statistical metrics and visual patterns were used to create insights.

- The examination of customer feedback and satisfaction ratings yielded suggestions for enhancement.

4. Questionnaire

<https://forms.gle/urXvp1PXudQzb8ck6>



Customer Satisfaction in Sri Lankan Supermarkets

General Information

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Which province do you live in? *

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Which supermarket do you visit most often? *

Keells
 Cargills Food City
 Arpico Supercentre
 Laughs Super
 SPAR
 Giomark
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How often do you shop at supermarkets? *

Daily
 Weekly
 Twice a month
 Monthly
 Rarely

What is your age group? *

- Under 18
- 18-25
- 26-35
- 36-50
- Above 50

What is your gender? *

- Male
- Female
- Prefer not to say

What is your occupation? *

- Student
- Employed (Full-time)
- Employed (Part-time)
- Self-employed
- Unemployed
- Retired

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Customer Satisfaction in Sri Lankan Supermarkets

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Shopping Experience

How long do you usually spend per supermarket visit? *

- Less than 15 minutes
- 15–30 minutes
- 31–60 minutes
- More than 1 hour

On average, how much do you spend per visit? *

- Less than Rs. 1,000
- Rs. 1,000–2,500
- Rs. 2,501–5,000
- Rs. 5,001–10,000
- More than Rs. 10,000

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Customer Satisfaction in Sri Lankan Supermarkets

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Satisfaction Ratings

Rate the following aspects of your preferred supermarket: *

	1	2	3	4	5
Product quality	<input type="radio"/>				
Product availability	<input type="radio"/>				
Price fairness	<input type="radio"/>				
Staff friendliness	<input type="radio"/>				
Store cleanliness	<input type="radio"/>				
Checkout speed	<input type="radio"/>				
Parking convenience	<input type="radio"/>				

Overall, how satisfied are you with your supermarket? *

1 2 3 4 5

1 – Very Dissatisfied 5 – Very Satisfied

How likely are you to recommend this supermarket to others?

1 2 3 4 5 6 7 8 9 10

0 (Not likely at all) 10 (Extremely likely)



Customer Satisfaction in Sri Lankan Supermarkets

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Customer Loyalty

How long have you been shopping at this supermarket? *

- Less than 6 months
- 6 months – 1 year
- 1–3 years
- More than 3 years

Do you have a loyalty/reward card for this supermarket? *

- Yes
- No

How often do you return to the same supermarket? *

- Always
- Often
- Sometimes
- Rarely

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Customer Satisfaction in Sri Lankan Supermarkets

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Complaints & Improvement

Have you ever faced any issues or complaints at this supermarket? *

Yes

No

If yes, how was your issue resolved?

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What improvements would you like to see in your supermarket?

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Customer Satisfaction in Sri Lankan Supermarkets

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Additional Feedback

Any comments or suggestions for improving customer satisfaction?

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Consent to participate

I voluntarily agree to take part in this survey. My responses are confidential and used for academic and research purposes only.

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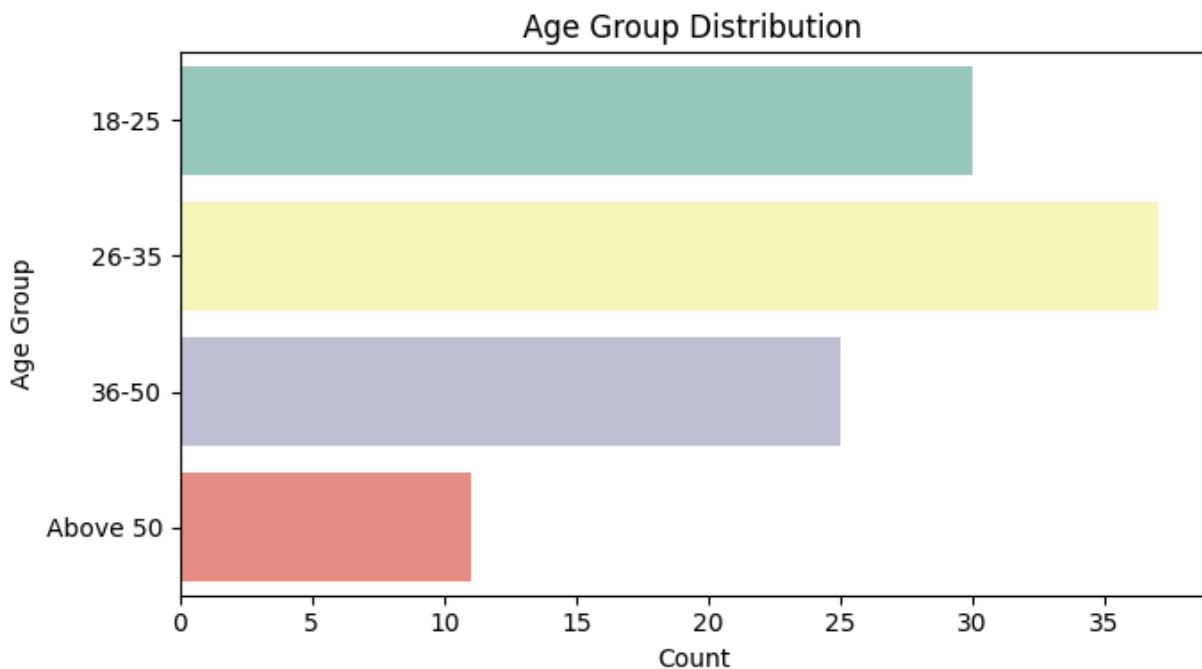
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5. Analysis and Interpretation

Demographics

1. Age Group Distribution



The distribution of respondents in the Supermarket Customer Satisfaction Analysis survey by age group is shown in this horizontal bar chart.

Important Notes:

- The majority of respondents (approximately 37) are in the 26–35 age range, suggesting that young adults are the dataset's most frequent supermarket shoppers.
- With about 30 responders, the 18–25 age group comes in second, demonstrating that younger consumers also make a sizable contribution to supermarket purchases.
- About 25 responders, or a moderate percentage of the clientele, are in the 36–50 age range.

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- With only about ten responders, the Over 50 group is the smallest, which may indicate that older consumers are underrepresented in the sample or may not shop as frequently.

Perspective:

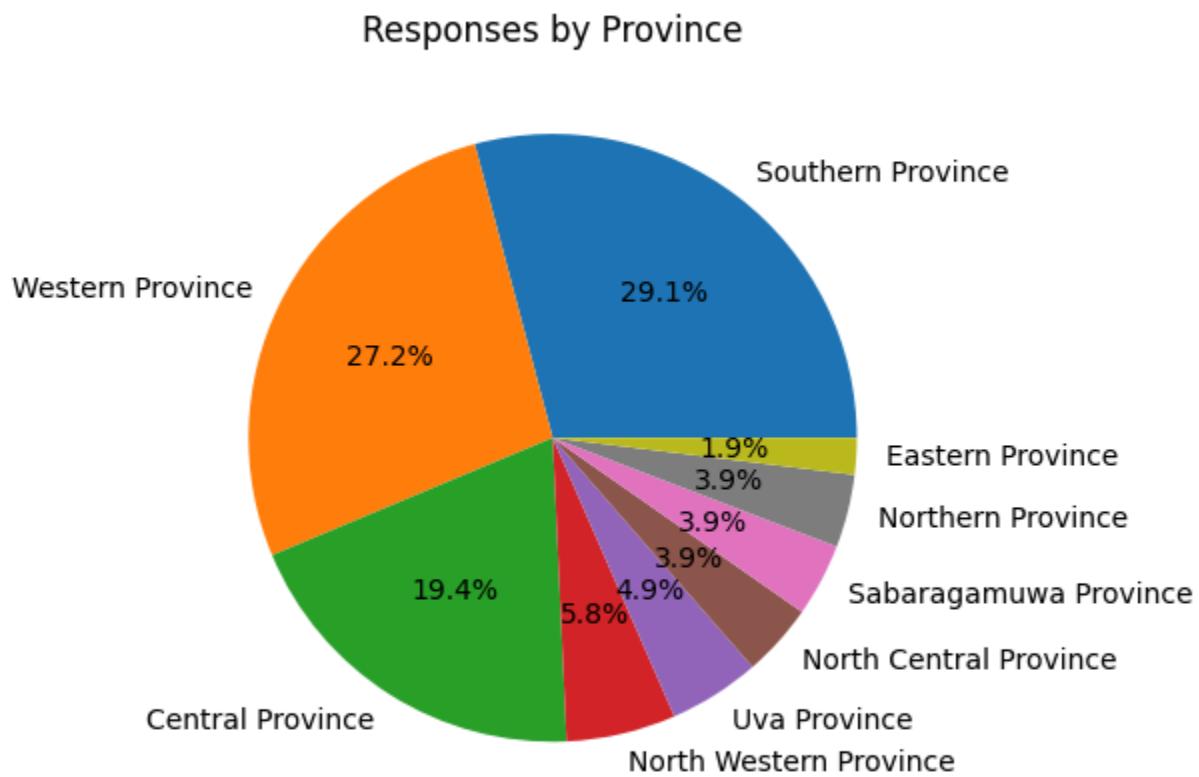
According to the data, supermarkets primarily draw middle-aged and younger consumers (18–35 years old). These demographics tend to be more receptive to promotions, digital marketing, and convenient shopping.

Suggestion:

- Use online promotions and social media to target marketing campaigns to people between the ages of 18 and 35.
- To promote greater engagement, loyalty programs or discounts could be implemented for senior citizens.



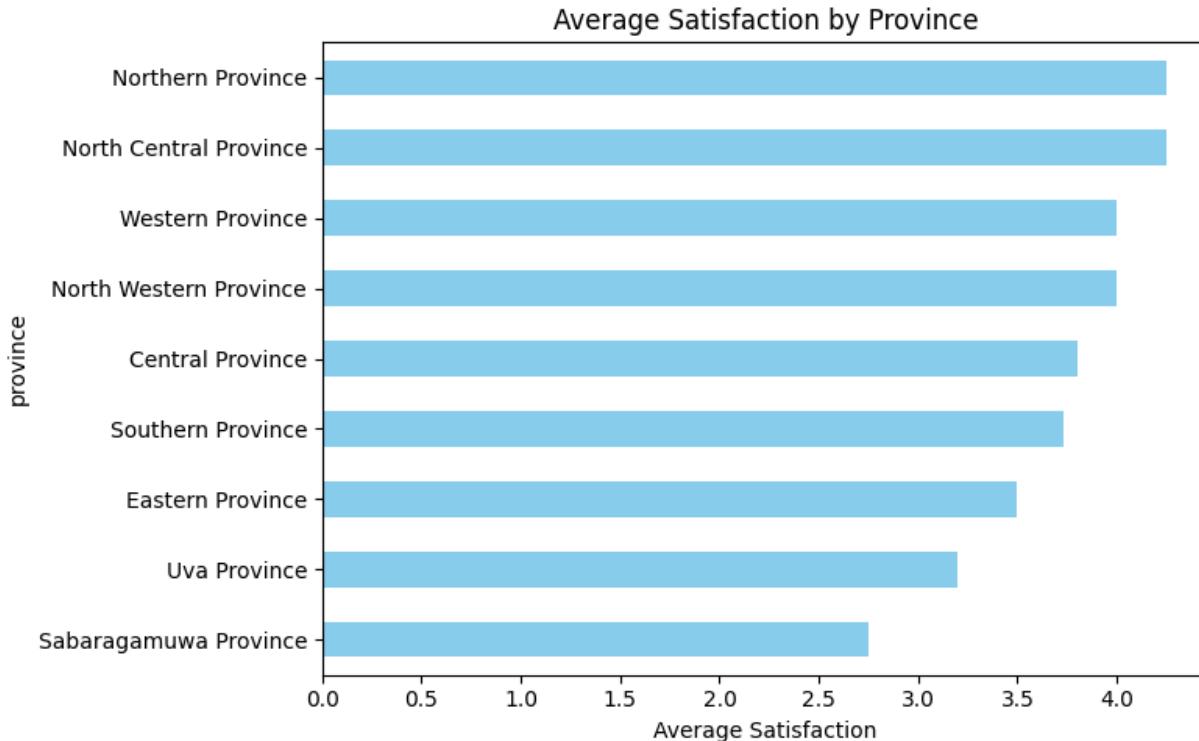
2. Responses by Province



- **Responses are heavily concentrated in three provinces:** Southern, Western, and Central.
- **Southern and Western together account for more than half** of all responses.
- Several provinces show **very low participation**, suggesting uneven distribution of engagement or accessibility.



3. Average Satisfaction by Province



The average customer satisfaction scores from the supermarket customer satisfaction survey are displayed in this bar chart for each province.

Important Notes:

- The highest average satisfaction levels (about 4.2) are reported by Northern Province and North Central Province, suggesting high levels of customer approval and satisfying shopping experiences in these areas.
- The moderately high satisfaction ratings (between 3.9 and 4.0) in the Western, North Western, and Central Provinces point to steady customer engagement and service quality.
- The slightly lower satisfaction ratings (about 3.4–3.7) in the Southern, Eastern, and Uva Provinces may be the result of differences in store accessibility, product availability, or service quality.
- The lowest satisfaction rating (about 2.8) is found in Sabaragamuwa Province, suggesting possible areas for product or customer service enhancement.



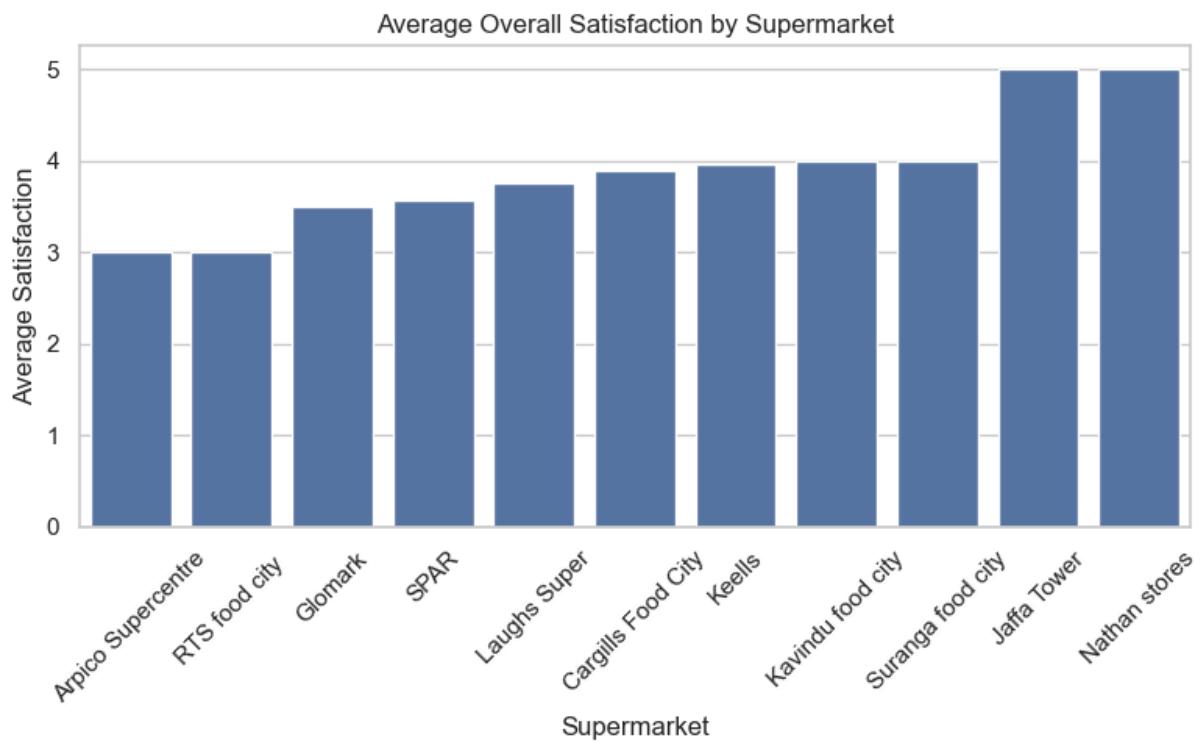
Knowledge:

While southern and rural areas may experience service issues that impact customer experiences, the Northern and North Central regions tend to have higher customer satisfaction rates.

Suggestion:

- Supermarkets in provinces with poor performance should concentrate on enhancing the store environment, product variety, and customer service.
- Finding particular customer needs and adjusting improvements accordingly can be facilitated by conducting regional feedback surveys.

4. Customer Satisfaction Trends





Based on survey data gathered for the project, this bar chart shows the average customer satisfaction scores for each supermarket. A score of 1 indicates "very dissatisfied," while a score of 5 indicates "very satisfied."

Important Notes:

- Customers are very happy with their overall shopping experience at Nathan Stores and Jaffa Tower, as evidenced by their highest satisfaction ratings (≈ 5).
- Additionally performing well and keeping average satisfaction levels above 4.0, Keells, Cargills Food City, and Kavindu Food City demonstrated consistently positive customer experiences.
- Glomark and SPAR received mediocre scores (between 3.5 and 3.8), indicating that they could do better in areas like customer service and pricing.
- The lowest satisfaction ratings (≈ 3.0) were recorded by Arpico Supercentre and RTS Food City, indicating that patrons may have encountered problems with product availability, service speed, or store management.

Perspective:

Supermarkets with excellent customer satisfaction records, such as Jaffa Tower and Nathan Stores, can be used as models for best practices.

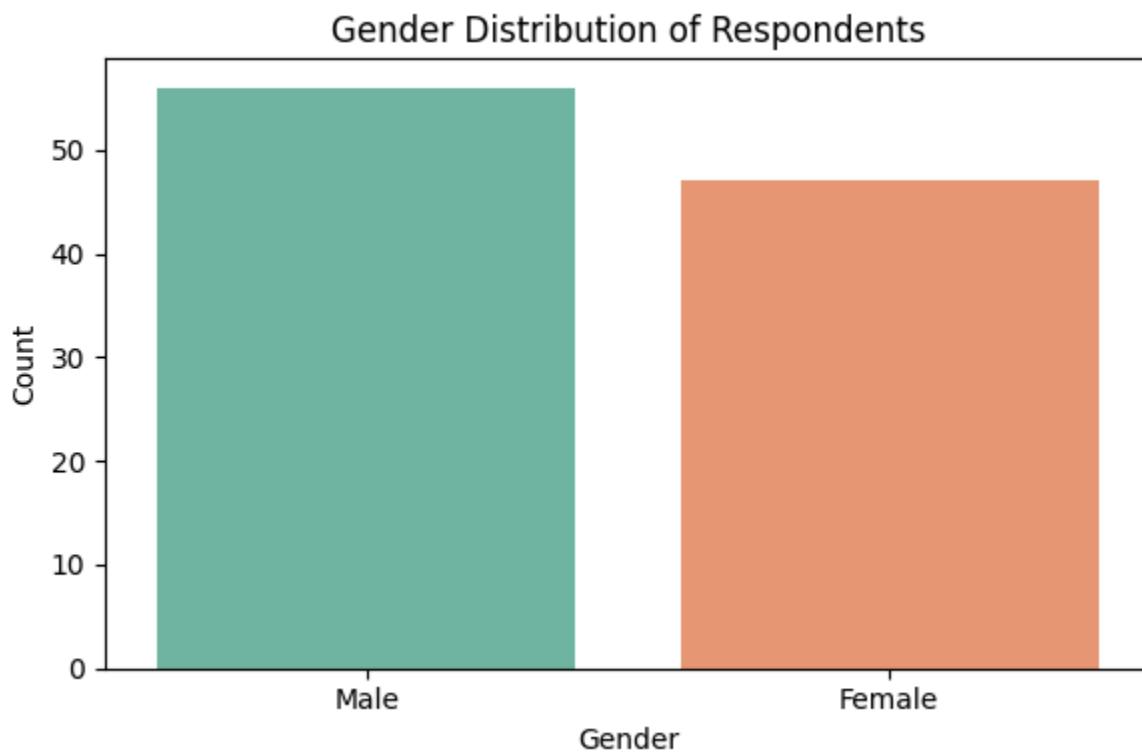
Supermarkets with lower ratings should think about using customer feedback analysis to pinpoint and resolve particular issues with their products or services.

Suggestion:

- Review lower-rated stores in-depth based on customer feedback.
- To raise satisfaction levels, concentrate on increasing product availability and checkout efficiency.
- To keep their lead, high-rated stores should keep up their reward schemes and employee training.



5. Gender Distribution of Respondents



The gender distribution of respondents to the supermarket customer satisfaction survey is displayed in the bar chart.

Important Notes:

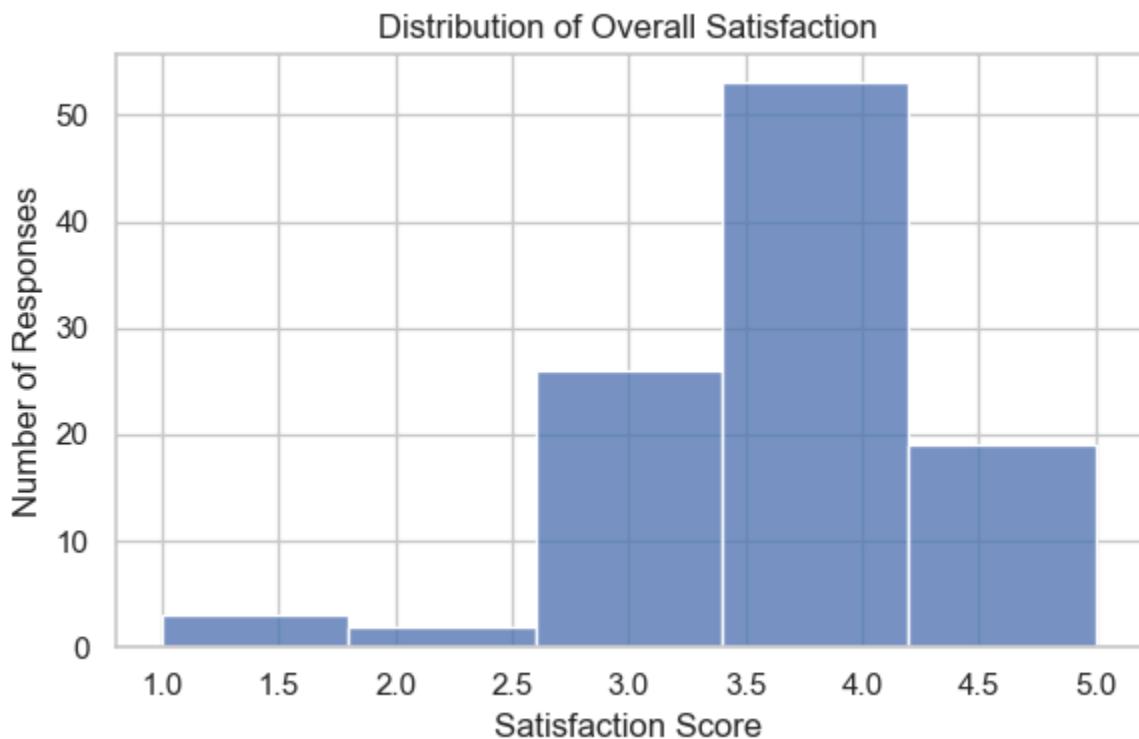
- With about 56 participants, men make up the majority of responders.
- There are about 47 female respondents, which is a little fewer than the number of male respondents.
- The small disparity suggests that the survey fairly represented the opinions of both sexes.

Perspective:

Because of the dataset's balanced gender representation, both male and female shoppers' perspectives are included in the analysis. This improves the accuracy of data on customer satisfaction for both sexes.



6. Distribution of Overall Satisfaction



On a scale of 1 to 5, the histogram shows how satisfied consumers were with supermarkets overall.

Important Notes:

- Customers are generally satisfied with their supermarket experience, as indicated by the majority of ratings falling between 3 and 4.
- The most common score is 4, which indicates that most respondents had a good experience.
- Very few customers received satisfaction ratings lower than three (1 or 2), indicating that very few were unhappy.
- Additionally, a sizable portion of consumers awarded five stars, indicating that some had outstanding experiences.
- There is a greater concentration toward higher ratings, and the distribution is right-skewed.

Knowledge:

There are very few bad experiences, and overall customer satisfaction is good to very good. Although there is still opportunity to move customers from "satisfied" (4) to "highly satisfied" (5), this suggests that supermarkets are doing well in important service areas.

7. Correlation Between Rating Aspects



Based on customer ratings, this heatmap illustrates the relationships between various supermarket service elements. The range of correlation values is 0 to 1, where:

- 1 → An ideal, constructive partnership
- Nearer 1: Strongly favorable relationship
- A relationship that is weaker or nonexistent is closer to 0.

Important Finding :

1. Strongest Correlations

Customers typically give both of these factors high ratings because they are closely related:

- Product Availability & Quality (0.89)
- Fairness of Price and Product Availability (0.86)
- Fairness of Price and Product Quality (0.84)

Interpretation:

Consumers who think the supermarket offers high-quality products also think it offers fair prices and good availability. These three factors seem to have a significant impact on one another.

2. Checkout speed, friendliness, and cleanliness

- Checkout Speed & Store Cleanliness (0.79)
- Checkout speed and staff friendliness (0.72)
- Store cleanliness and staff friendliness (0.73)

Interpretation:

A smoother checkout process is frequently the result of a clean store and welcoming employees. This implies that supermarkets with pleasant surroundings also typically have better customer service departments.

3. Convenience of Parking

The majority of aspects exhibit moderate correlations (0.50–0.71) with parking convenience.

Interpretation:

Parking convenience matters but is not directly tied to product quality or pricing. It affects the entire experience, but not in the same way as things related to shopping.

4. The Implications for Supermarkets



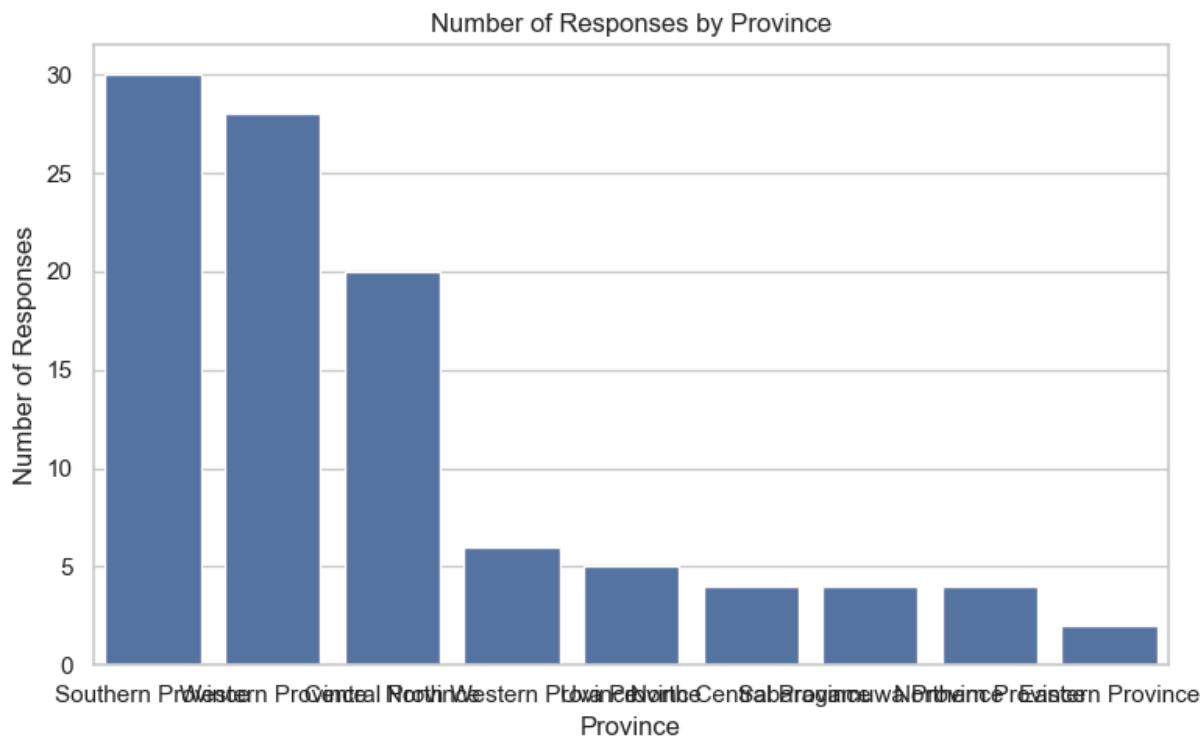
- Customer satisfaction can be greatly increased by improving product quality, availability, and price fairness—all of which are closely related.
- Improving checkout speed, employee conduct, and cleanliness can all improve the in-store experience.
- Regardless of ratings related to shopping, parking improvements will be beneficial.

overall Findings

Two main customer experience clusters are visible in the heatmap:

- Product-focused elements (price, availability, and quality) are closely related.
- Service-oriented elements (cleanliness, friendliness, and checkout procedure) are closely related.

8. The Number of Responses by Province



The distribution of survey responses by province is displayed in the bar chart. With about 30 responses, the Southern Province received the most, closely followed by

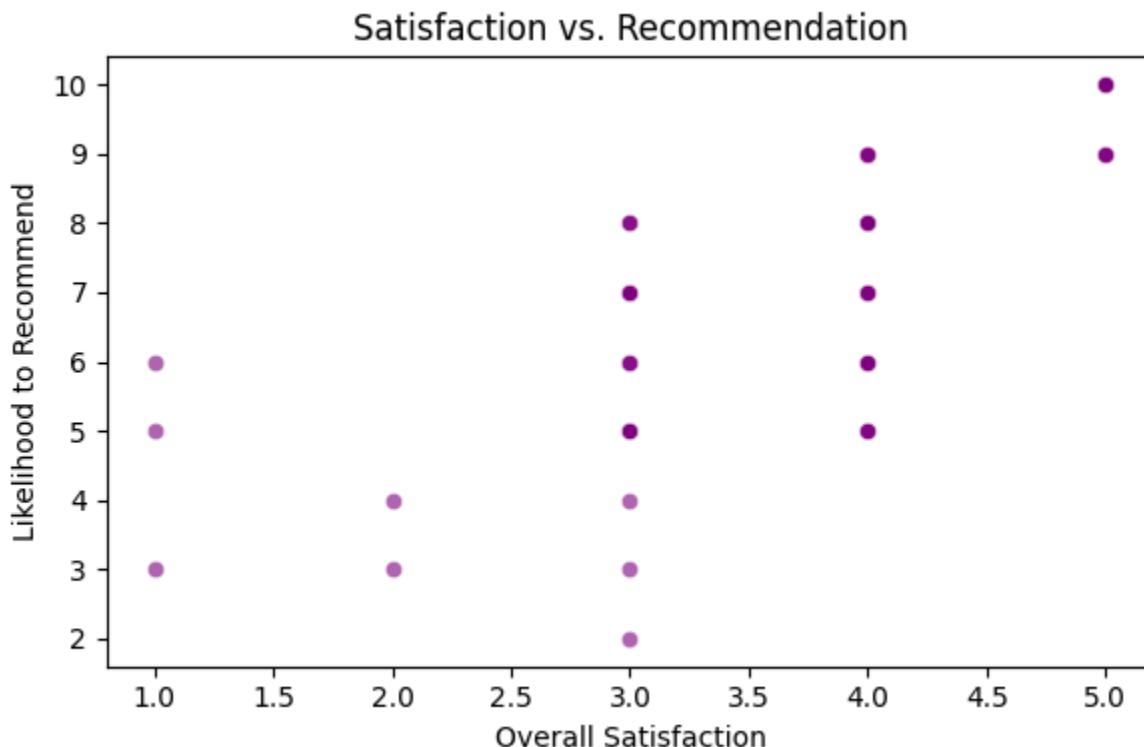
the Western Province with about 28. With roughly 20 responses, the Central Province also made a significant contribution.

All other provinces, however, received noticeably fewer responses. Only roughly four to six responses were provided by the provinces of North Central, Uva, Sabaragamuwa, Northern, and North Western. With only about two responses, the Eastern Province had the lowest participation rate.

Important Takeaways:

- The Southern, Western, and Central provinces' high participation rates imply that these regions might have a larger consumer base or better survey reach.
- Limited participation is indicated by lower response rates in other provinces, which could be the result of lower engagement, smaller customer populations, or restricted survey distribution.
- Potential geographical bias is highlighted by the unequal distribution of responses, which suggests that the overall results might be more representative of the provinces with higher participation rates.

9. The Number of Responses by Province



The scatter plot illustrates the connection between consumers' likelihood of recommending the supermarket to others and their level of overall satisfaction with it. There is a definite upward trend: the more satisfied people are, the more likely they are to recommend someone.

- Low to moderate recommendation scores are typically reported by customers with low satisfaction (1-2), suggesting that unhappy customers are less likely to suggest the supermarket.
- Recommendation scores range more widely but primarily fall within the mid-to-high range at moderate satisfaction levels (3-4), indicating that customers who are somewhat satisfied are more likely to recommend the store.
- Excellent service and customer advocacy are strongly correlated, as evidenced by the consistently high recommendation levels (9-10) reported by customers who give the highest satisfaction score of 5.

Crucial Knowledge:

The pattern indicates that willingness to recommend and satisfaction are strongly positively correlated. This implies that raising general customer satisfaction can greatly boost the supermarket's favorable word-of-mouth advertising.

6. Results

The survey collected responses from multiple provinces across Sri Lanka, with a significant concentration from the Southern, Western, and Central provinces. The Southern Province recorded the highest number of responses, followed closely by the Western Province, while provinces such as Eastern, Northern, Uva, and Sabaragamuwa had very low participation.

Gender distribution was relatively balanced, with a slightly higher number of female participants compared to males. Most respondents fell within the "satisfied" and "moderately satisfied" categories, indicating generally positive customer experiences. Only a small proportion reported dissatisfaction.

Analysis of individual rating components—such as product quality, service quality, pricing fairness, and store accessibility—showed moderate to strong positive correlations. This suggests that improvements in one area (e.g., service quality) are likely to influence overall satisfaction positively.

7. Conclusion

The project successfully analyzed customer satisfaction across several dimensions, revealing key strengths and improvement opportunities. While satisfaction levels are largely positive, the uneven geographical distribution of responses indicates that future data collection should be more inclusive to ensure nationwide representation.

The analysis also reinforces that service quality, product quality, and pricing play integral and interconnected roles in shaping overall customer satisfaction. Businesses can enhance customer loyalty by focusing on these core areas.

Overall, the findings provide actionable insights that can guide management decisions, improve customer experience, and support strategic planning for future growth.

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