Freshco Hypermarket Delivery Service Analysis

Introduction

Freshco Hypermarket, a prominent retail supermarket in HSR Layout, Bangalore, launched its home delivery service in 2021. This initiative aimed to meet the evolving needs of its customers by providing convenient shopping experiences. As part of this service, Freshco maintains a meticulously organized transaction data sheet that captures detailed information about every order.

The dataset includes the following key parameters:

- **Order Details**: Order timestamp, user ID, and location specifics.

- **Product Information**: Details of the products ordered.

- **Delivery Partner Timelines**: Information on delivery schedules and performance.

- **Order Status**: Completion, cancellation, or pending status.

- **Customer Feedback**: Ratings and comments.

- **Financial Metrics**: Revenue, delivery charges, discounts, and other cost-related data.

This comprehensive dataset provides an opportunity for detailed analysis to uncover actionable insights. The primary focus areas include:

1. **Delivery Performance Analysis**

   o Assessing delivery efficiency by examining metrics like order completion rates, average delivery times, and cancellation rates.

2. **Customer Satisfaction**

   o Evaluating customer feedback and order ratings to gauge satisfaction levels and identify areas for improvement.

3. **Revenue and Cost Analysis**

   o Analyzing revenue streams, delivery charges, and discount impacts to understand the financial implications of the service.

4. **Operational Insights**
   - Identifying bottlenecks in order processing, delivery partner performance, and inventory management for enhanced operational efficiency.

Objective

The primary goal of this analysis is to provide actionable insights that Freshco Hypermarket can leverage to:

- Optimize delivery operations.
- Improve customer satisfaction.
- Enhance financial performance.
- Drive informed decision-making for future growth strategies.

By systematically analyzing the available data, Freshco aims to strengthen its position as a customer-centric retailer while ensuring sustained business growth.

Delivery Order Analysis Report

Summary

This report analyzes delivery order patterns across time slots, drop areas, and key financial metrics, such as delivery charges and discounts, to identify trends and provide actionable recommendations. The primary focus is on improving late-night order volumes, optimizing delivery charges, and maximizing the effectiveness of discounts in high-potential regions.

Key findings include:

1. **Afternoon slot** dominates order volume, while **late night** exhibits low activity.
2. Prominent regions such as **HSR Layout** consistently generate high order volumes.
3. **Delivery charges** are highest during late-night slots, possibly discouraging orders.
4. **Discounts** are strategically utilized during evening slots and in high-demand areas.

Order Level Analysis

1. Order Distribution by Slot

- **Afternoon Slot:** Most active, with 5924 orders.

- **Late Night Slot:** Least active, with only 1589 orders.

- **Morning and Night Slots:** Steady volumes at 5389 and 5209 orders, respectively.

Key Insight: Afternoon is the most preferred time slot, while late-night activity needs attention.

2. Order Distribution by Drop Area (Monthly)

- **High-Activity Areas:**

  - **HSR Layout:** Peaks in September with 2606 orders.

  - **ITI Layout:** Maintains consistent order volumes.

- **Low-Activity Areas:**

  - **JP Nagar** and **Marathahalli** report minimal monthly orders.

Key Insight: HSR Layout and ITI Layout are high-demand regions, while smaller areas require targeted efforts.

3. Delivery Charges and Discounts as a % of PA (Price After Discount)

Delivery Charges:

- **Late Night:** Consistently higher (e.g., January - 15.91%, February - 16.95%).

- **Other Slots:** Remain stable at 10%-11%.

Discounts:

- **Evening Slot:** Receives the highest discounts (e.g., January - 1.23%), driving demand during this period.

- **Late Night:** Receives minimal discounts, contributing to low activity.

Key Insight: Higher delivery charges during late night may deter orders, while discounts during evening slots effectively boost demand.

4. Discounts by Drop Area and Slot

- **High Discounts:**

    o **Bellandur APR (Late Night):** Notable discount percentage (14.23%).

- **Strategic Utilization:**

    o Discounts are concentrated in high-demand areas like **HSR Layout** to sustain high order volumes.

Key Insight: Discounts effectively incentivize demand in high-activity areas and slots but are underutilized in low-activity regions.

Key Performance Indicators (KPIs)

1. **Order Volume by Slot:**
   Goal: Increase late-night orders by 15% over the next quarter.

2. **Delivery Charge Impact:**
   Goal: Reduce late-night delivery charges by 5% to improve affordability and encourage orders.

3. **Discount Utilization Efficiency:**
   Goal: Drive a 10% increase in orders in discounted slots and regions.

Recommendations

1. **Boost Late-Night Orders:**

    o Introduce higher discounts during late-night slots to attract more customers.

    o Launch targeted campaigns highlighting cost savings for late-night deliveries.

2. **Optimize Delivery Charges:**

    o Lower late-night delivery fees by 5% to balance affordability with operational costs.

    o Analyze customer feedback on delivery charges to identify areas for improvement.

3. **Focus on High-Potential Areas:**

   o Enhance service offerings in regions like **HSR Layout** and **ITI Layout** to maximize returns.

   o Use predictive modeling to anticipate demand surges and allocate resources effectively.

4. **Expand Services in Low-Activity Areas:**

   o Investigate reasons for low activity in areas like **JP Nagar** and **Marathahalli.**

   o Offer introductory promotions or partnerships with local businesses to increase visibility and demand.

5. **Optimize Discounts:**

   o Concentrate discounts in regions and time slots that exhibit potential for growth.

   o Monitor the impact of discounts on customer acquisition and retention.

Conclusion

The data reveals clear trends in order distribution, delivery charges, and discount utilization. Afternoon and high-demand regions drive the majority of activity, while late-night orders and low-activity areas require targeted strategies. By optimizing delivery charges, adjusting discounts, and focusing on underperforming areas, significant growth can be achieved.

Next Steps:

- Implement promotional campaigns for late-night orders.

- Monitor changes in order volume and customer feedback after reducing delivery charges.

- Conduct a detailed study of low-activity regions to identify barriers and growth opportunities.

Completion Rate Analysis Report

Summary

This report analyzes the completion rate of orders across various dimensions, including time slots, weekdays, drop areas, and the number of products ordered. With an overall completion rate of **99.55%**, the delivery system demonstrates exceptional efficiency. However, slight variations in specific slots, weekdays, and regions highlight areas for further optimization.

Key Highlights:

1. **Overall Completion Rate:** 99.55%, indicating strong order fulfilment.

2. **Time Slot Performance:** Late Night slot shows slightly lower completion rates.

3. **Weekday Variations:** Friday reports the lowest completion rates compared to other weekdays.

4. **Drop Area Analysis:** Most drop areas have 100% completion rates, with some exceptions like Marathahalli and Bellandur.

5. **Impact of Product Quantity:** Completion rates remain high across all product ranges, with a slight dip for minimal orders (1-5 products).

Completion Rate Analysis

1. Overall Completion Rate

- The overall completion rate is **99.55%**, demonstrating a highly efficient order fulfilment process.

Key Insight: This high rate indicates strong performance, reflecting well on the operational efficiency and reliability of the delivery system.

2. Completion Rate by Slot and Weekday

- **Weekday Variations:**

  o Most weekdays have high completion rates.

  o **Friday** exhibits the lowest completion rate, warranting further investigation.

- **Slot-wise Performance:**
  - **Afternoon and Evening Slots:** Highest completion rates across all days.
  - **Late Night Slot:** Consistently has the lowest completion rate compared to other slots.

Key Insight: The Late Night slot and Thursday underperform slightly, indicating potential challenges such as operational inefficiencies or lower availability of delivery resources.

3. Completion Rate by Drop Area

- **High-Performing Areas:** Most drop areas achieve a **100% completion rate**, reflecting efficient delivery operations.
- **Low-Performing Areas: Marathahalli** and **Bellandur** show slightly lower completion rates.

Key Insight: While delivery to most areas is highly efficient, areas like Bannerghatta and Bellandur may require targeted reviews of logistical challenges or operational bottlenecks.

4. Completion Rate by Number of Products Ordered

- **General Trend:** Completion rates remain consistently high even as the number of products per order increases.
- **Slight Dip:** Orders with **1-5 products** show a marginal dip in completion rates but remain above **99%**.

Key Insight: Efficient order fulfilment is maintained across varying order sizes, showcasing robust logistical processes.

Key Performance Indicators (KPIs)

To monitor and improve performance further, the following KPIs should be tracked:

1. **Overall Completion Rate:** Percentage of orders successfully completed.
2. **Ontime Delivery Rate:** Percentage of orders delivered within the promised time.
3. **Cancellation Rate:** Percentage of orders cancelled before completion.
4. **Delivery Time:** Average time taken to deliver orders.
5. **Customer Satisfaction:** Feedback and ratings from customers post-delivery.

Recommendations

1. Investigate Friday and Late Night Performance

- Analyze factors contributing to lower completion rates during these periods.

- Review resource allocation for Late Night slots and identify gaps in scheduling or delivery partner availability.

2. Monitor and Improve Drop Area Performance

- Focus on areas like **Marathahalli** and **Bellandur** to identify and address logistical challenges.

- Collaborate with local delivery partners to ensure consistent service levels.

3. Optimize Order Fulfilment Processes

- Conduct a detailed review of order processing, packing, and dispatch procedures to further reduce potential delays.

4. Enhance Delivery Partner Management

- Provide additional training and support for delivery partners.

- Introduce incentives for high performance, especially during Late Night and Friday deliveries.

5. Implement Robust Tracking and Data Analytics Systems

- Use real-time tracking to monitor order status and progress.

- Leverage data analytics to identify trends, detect anomalies, and optimize performance across all dimensions.

6. Conduct Regular Customer Feedback Analysis

- Collect feedback regularly to identify pain points.

- Use insights to drive customer-centric improvements in delivery services.

Conclusion

The high overall completion rate of **99.55%** reflects exceptional efficiency in the order fulfilment process. However, slight variations in performance across weekdays, slots, and specific regions present opportunities for targeted improvement. By addressing these areas and implementing the recommendations, the completion rate can be further enhanced, solidifying customer satisfaction and operational excellence.

Next Steps:

- Deep dive into Late Night and Friday performance issues.

- Establish action plans for low-performing drop areas.

- Continuously monitor and refine order fulfilment processes.

Customer Analysis Report

Summary

This report presents a detailed analysis of customer acquisition sources, aggregated lifetime value (LTV), revenue metrics, and order satisfaction. It identifies trends and provides actionable insights to optimize performance across customer acquisition channels and order fulfilment processes.

Key Highlights:

1. **Completion Rates:** All customer acquisition sources show high completion rates, with Organic and Facebook channels performing the best.

2. **Lifetime Value (LTV):** Organic and Google channels yield the highest LTV, while Instagram performs the lowest.

3. **Order Ratings:** Afternoon and evening slots, smaller order sizes, and moderate delivery charges consistently achieve higher customer ratings.

4. **Customer Acquisition Trends:** January-acquired customers exhibit the highest LTV and revenue per order.

5. **Discount and Delivery Charges:** Moderate charges and discounts lead to higher order ratings, indicating a preference for balanced pricing.

1. Completion Rate by Acquisition Source

The completion rates are consistently high across all customer acquisition sources, indicating efficient order fulfilment.

- **Top Performers:**

  - **Organic** (99.63%) and **Facebook** (99.58%) channels lead in completion rates, demonstrating their reliability and effectiveness in attracting customers with fewer order issues.

- **Areas of Concern:**
  - **Instagram** (99.46%) and **Offline Campaigns** (99.44%) show slightly lower rates, suggesting potential inefficiencies in these channels.

Key Insight: Organic and Google drive not only high completion rates but also attract customers who are less prone to disruptions in order completion.

2. Lifetime Value (LTV) by Acquisition Source

LTV analysis highlights significant differences in the value generated by customers from various sources.

- **Highest LTV Sources:**
  - **Organic and Google** customers contribute an aggregated LTV of ₹12,479 and ₹12,204 respectively reflecting their long-term profitability.
- **Lowest LTV Source:**
  - **Instagram** customers exhibit the lowest LTV at ₹2,870, suggesting a mismatch between the channel's audience and long-term customer retention efforts.

Key Insight: Channels like Organic and Google not only attract reliable customers but also foster relationships that yield higher lifetime value.

3. Lifetime Value (LTV) by Acquisition Month

LTV varies significantly based on the customer acquisition month, indicating seasonality's impact on customer behaviour.

- **Peak Performance:**
  - **January** customers exhibit the highest LTV of ₹14,000, alongside the highest average revenue per order (₹360).
- **Decline Over Time:**
  - LTV steadily declines from February to September, with **September** showing the lowest value (₹1,338).

Key Insight: Customers acquired in January tend to be more engaged and profitable, emphasizing the importance of seasonal targeting and acquisition timing.

4. Revenue Metrics by Source and Month

The **Average revenue** per order offers additional insights into the spending behaviour of customers.

- **Top Performers:**
  - **Snapchat** leads with ₹344 per order, followed closely by **Google** at ₹343, reflecting their ability to attract high-spending customers.

- **Lowest Performer:**
  - **Instagram** again ranks lowest with ₹301 per order, suggesting that customers acquired here may prioritize discounts or lower-value purchases.

Key Insight: While Snapchat delivers the highest per-order revenue, Organic and Google excel in retaining long-term value, balancing immediate and sustained returns.

5. Order Ratings Across Slots and Items

Customer satisfaction (measured through order ratings) varies depending on delivery slots and order characteristics.

- **Time Slots:**
  - **Afternoon, Evening, and Morning slots** consistently receive higher ratings, indicating better customer experiences during these times.
  - **Night and Late Night slots** show lower ratings, possibly due to operational inefficiencies or customer expectations for promptness.

- **Number of Items Ordered:**
  - Smaller orders (1–5 items) receive the highest ratings, while compared to larger orders (16–20 items) show a noticeable drop in satisfaction.

Key Insight: Afternoon and evening deliveries and smaller order sizes are associated with higher satisfaction, suggesting a need for improved logistics during morning and late-night hours.

6. Impact of Delivery Charges and Discounts on Order Ratings

Order ratings also depend on delivery charges and discount levels, revealing customer preferences.

- **Delivery Charges:**
  - Moderate charges (₹250–299) result in the lowest ratings, possibly due to perceived high costs relative to value.
  - Extremely high charges (₹300–349) surprisingly receive very high ratings, suggesting customers may associate higher costs with premium services.
- **Discounts:**
  - Moderate discounts (₹300–399) correspond to the lowest ratings, while steep discounts (₹700–799) lead to very high ratings.

Key Insight: There's a fine balance between delivery charges and perceived value. Customers appreciate steep discounts and associate high delivery charges with premium service, but moderate charges may fail to meet expectations.

Key Performance Indicators (KPIs)

1. **Completion Rate:** Measure fulfilment success across channels.
2. **Customer LTV:** Evaluate the profitability of acquisition sources.
3. **Average Order Rating:** Assess customer satisfaction levels.
4. **Net Promoter Score (NPS):** Monitor customer loyalty and advocacy.
5. **Customer Satisfaction Score (CSAT):** Identify service quality gaps.

Recommendations

1. Optimize Acquisition Channels

- Invest in **organic** and **Google** channels to attract high-value customers.
- Reassess strategies for Instagram and offline campaigns to improve performance.

2. Enhance Customer Retention

- Implement loyalty programs targeting high-LTV customers.
- Personalize marketing efforts based on customer acquisition trends.

3. Balance Discounts and Delivery Charges

- Maintain moderate pricing to achieve higher satisfaction without compromising profitability.

4. Improve Low-Performing Time Slots and Regions

- Focus on enhancing the Morning and Late Night slot experiences.

- Identify and address operational inefficiencies in low-rated areas.

5. Monitor and Analyze Customer Behaviour

- Continuously collect and evaluate customer feedback.

- Segment customers based on ratings, LTV, and preferences to tailor strategies effectively.

Conclusion

The data underscores the importance of channel-specific strategies, customer satisfaction, and operational efficiency in driving business growth. By focusing on high-performing channels, balancing delivery charges and discounts, and enhancing underperforming slots and regions, the business can maximize value and customer satisfaction.

Next Steps:

- Prioritize action plans for underperforming acquisition sources and slots.

- Refine loyalty and marketing programs to target high-LTV segments.

- Conduct regular reviews of customer behaviour and adjust strategies accordingly.

Delivery Level Analysis Report

Summary

This report presents a delivery performance analysis highlighting key challenges and opportunities to improve delivery times and customer satisfaction. Evening and Late Night slots experience the longest delivery times, while Morning and Night slots perform better. Delivery times are generally higher on weekends and in specific months like March and April, potentially due to seasonal factors. Drop area-level variations indicate operational challenges in certain locations. By addressing these inefficiencies, focusing on key metrics, and implementing targeted improvements, overall delivery performance can be optimized.

Key Highlights

1. **Afternoon** and **Evening** slots have the highest delivery times, while **Late night** and **Night** slots are the most efficient.

2. **Weekdays** show faster delivery times compared to **weekends**, indicating weekend operational delays.

3. Delivery times peak in **April** and **May**, likely due to seasonal demand increases.

4. Certain drop areas consistently face **longer delivery times**, highlighting **logistical challenges**.

1. Delivery Time by Slot Level

- **High Delivery Times:**

  - **Afternoon** and **Evening** slot has the highest average delivery time, making it the worst-performing time slot.

  - **Night** slot also exhibits high delivery times, although not as severe as the Afternoon and Evening slot.

- **Low Delivery Times:**

  - **Night** and **Late Night** slots have the lowest delivery times, indicating a higher level of operational efficiency during these periods.

Implication:
Afternoon and Evening slot deliveries require process optimization to match the performance of Night and Late Night slots.

2. Delivery Time by Weekday vs. Weekend

- **Seasonal Trends:**

  - **April** and **May** exhibit the highest delivery times, possibly influenced by seasonal demand spikes or external factors like holidays or events.

- **Weekday vs. Weekend:**

  - **Weekdays** consistently show **lower delivery times** compared to **Weekends**, suggesting operational challenges during peak weekend periods.

Implication:
Optimizing weekend deliveries and preparing for seasonal spikes can significantly reduce delivery delays.

3. Delivery Time by Drop Area

- **High Variation:**
  - Delivery times vary significantly across drop areas, with certain locations experiencing consistently longer delays.

- **Possible Causes:**
  - Longer delivery times may result from geographical challenges, traffic congestion, or inadequate resource allocation in specific areas.

Implication:
Identifying bottlenecks and addressing area-specific challenges will improve overall delivery performance.

4. Observed Patterns

1. **Time-Based Patterns:**
   - Evening and Afternoon slots consistently face higher delivery times, suggesting scheduling inefficiencies or resource constraints during these periods.

2. **Seasonal Patterns:**
   - Certain months (e.g., April and May) see elevated delivery times, which may be linked to seasonal demand surges or operational disruptions.

3. **Area-Based Patterns:**
   - Specific drop areas consistently exhibit longer delivery times, indicating the need for tailored strategies to address these localized challenges.

Key Performance Indicators (KPIs)

1. **Average Delivery Time:**
   - Measure the overall average delivery time for all orders to track efficiency.

2. **On-Time Delivery Rate:**

    o   Percentage of orders delivered within the promised time frame, a key indicator of reliability.

3. **Delivery Time by Slot:**

    o   Evaluate delivery times for each slot (Morning, Afternoon, Evening, Late Night) to pinpoint operational inefficiencies.

4. **Delivery Time by Day:**

    o   Compare average delivery times for weekdays and weekends to identify trends.

5. **Delivery Time by Area:**

    o   Analyze delivery times for each drop area to identify and address geographical bottlenecks.

Recommendations

1. **Focus on Evening and Afternoon Slots:**

    o   Investigate the root causes of delays during these slots, such as resource shortages or traffic conditions, and implement targeted solutions.

2. **Optimize Delivery Routes:**

    o   Leverage route optimization software to minimize travel times, reduce fuel costs, and enhance delivery efficiency.

3. **Increase Delivery Capacity:**

    o   During peak periods (e.g., evenings, weekends, and seasonal spikes), consider adding more delivery personnel or vehicles to meet demand.

4. **Improve Communication with Customers:**

    o   Provide accurate delivery time estimates and proactive updates on delays to enhance transparency and customer satisfaction.

5. **Monitor Performance Metrics:**

    o   Regularly track KPIs to identify underperforming areas and measure the effectiveness of implemented changes.

Next Steps:

- **Data Quality:**
  - Ensure the accuracy and completeness of data used for analysis to avoid misleading insights.

- **External Factors:**
  - Account for variables such as traffic conditions, weather, or special events that may impact delivery times.

- **Customer Satisfaction:**
  - Collect and analyze customer feedback to understand how delivery times affect overall satisfaction and loyalty.

Strategic Recommendations:

1. **Boost Late-Night Orders**:
   - Introduce promotional campaigns with higher discounts and reduced delivery charges for late-night slots to attract more customers.
   - Optimize delivery routes and increase resource allocation during late-night hours.

2. **Enhance Efficiency in Underperforming Areas**:
   - Focus on areas like Marathahalli and Bellandur to address logistical challenges and improve completion rates.
   - Collaborate with local delivery partners to ensure consistent service levels.

3. **Leverage High-Performing Channels**:
   - Invest more in organic and Google acquisition strategies while refining Instagram campaigns to attract higher-LTV customers.
   - Launch loyalty programs for long-term retention of high-value customers.

4. **Optimize Discounts and Delivery Charges**:
   - Focus discounts on high-potential but underperforming regions and time slots.
   - Ensure moderate delivery charges align with perceived value to enhance affordability without sacrificing profitability.

5. **Address Operational Inefficiencies**:

   o Enhance delivery time performance during peak slots (evening and Afternoon) and weekends by improving scheduling and workforce planning.

   o Use predictive analytics to anticipate demand surges and allocate resources accordingly.

6. **Focus on Customer-Centric Enhancements**:

   o Collect and analyze customer feedback continuously to address pain points and improve satisfaction.

   o Introduce real-time tracking and communication to enhance transparency and reliability.

Final Remarks:

Freshco Hypermarket's home delivery service is a robust system with excellent baseline performance and clear growth potential. Addressing time slot and area-specific inefficiencies, optimizing financial strategies, and leveraging customer insights will enable Freshco to:

- Improve operational efficiency,

- Enhance customer satisfaction, and

- Drive sustainable growth.

"By implementing these strategies, Freshco can solidify its market position as a customer-centric retailer and ensure long-term profitability and growth."