

**Objective**: The report aims to provide insights on various important levels of the business by using raw data and creating various related business metrics, analyzing Orders, revenue generated, delivery analysis and understanding customer behavior

**Audience**: Management &marketing team at state and zonal level so as to find avenue for possible expansion in other metro cities and improvise the operations and profit of Freshco Hypermarket, HSR, Bangalore.

Order Level Analysis

It aims to identify and analyze order count across slot, delivery area and monthly order level and delivery charges and discounts across various metrics.

1. **Identify order distribution at slot and delivery area level**
   1. Top 5 Delivery Areas by Order Count: HSR Layout, ITI Layout, Harlur, Bommanahalli and Kudlu.
   2. Most orders are placed in Afternoon slot, followed by Morning slot. Least orders are placed Late Night slot.
   3. **Solution**
      1. Increase area under serviceability by opening more branches besides HSR Layout by finding out promising and central location with prospects of increasing customer needs
2. **Identify the areas having highest increase in monthly orders (from Jan to Sep) in absolute orders.**
   1. Highest increase in HSR Layout, followed by ITI Layout and Harlur. These 3 areas show increasing trend in order count. Mostly serving area where major Order Pickup HSR Layout is located
   2. Following 6-7 areas in the table have fluctuating order count while rest of the areas almost negligible monthly orders
   3. Total order count increased in September over January month but from limited areas only
   4. **Solution**
      1. Increase availability of products in remote area pin codes.
      2. Optimize supply chain
3. **Calculate delivery charges as a percentage of product amount at slot and month level.**
   1. Delivery charges for Late Night slot are maximum, followed by Night and Evening slots while showing decreasing trends from January to September across all time slots.
4. **Calculate discount as a percentage of product amount at slot and month level.**
   1. Comparatively more discount is offered in Night and Evening slots and least in Late Night slot
   2. Highest discounts offered in August month, followed by September before festive season so as to increase Average Order Value (AOV).
5. **Calculate discount as a percentage of product amount at drop area and slot level.**
   1. Highest discount offered in Harlur, Bilekahalli, Bellandur - Off Sarjapur Road
   2. Maximum discount offered at Night and least in Late Night across drop areas.

**Suggestion for increasing order count**:

1. **open additional branches** -near high demand areas like HSR Layout to capture more customers

2. **Enhance serviceability areas** -Implement targeted marketing in new service areas to attract more customers

3. **Increase product availability** -by establishing by local fulfillment centers to reduce delivery times.

4. **Improve supply chain management**- forecast demand accurately and manage inventory more efficiently.

5. **Discount Strategy Optimization**- try more morning and afternoon slots to boost order count.

6. **Seasonal Promotions-** during August & September to increase AOV.

7. **Targeted Discounts by Area**- localized discount to specific customers, customer loyalty program

8. **Data-Driven Decision Making**- monitor various metrics

It aims to find and analyze completion rate of orders placed by various users across various slots and weekdays and area level

Completion Rate Analysis

1. **Identify Completion rate at slot vs day of the week (Sunday to Saturday) level. Can you spot some pattern in the data.**
   1. The completion rates across all slots and days of the week are generally very high, with most values above 99%.
   2. Maximum successful order delivery occurred on Sunday.
2. **Calculate completion rate at drop area level.**
   1. The top 3 slots by average completion rate are:
      1. Bellandur, APR
      2. Sarjapur Road
      3. Brookefield
   2. Areas performing average (50-80%) are:
      1. Bellandur, ETV
      2. Marathahalli
      3. Domlur, EGL
      4. Viveka Nagar
   3. Whitefield and Cox Town have 0% average completion rate
3. **Completion rate at number of products ordered level.**
   1. Completion rate is independent of number of products ordered since mostly all orders are fulfilled.
4. **Give analysis on any pattern you observe in the completion rate.**
   1. The day with the highest average completion rate is Sunday
   2. The difference between the best and worst days is likely small, given the overall high completion rates.
   3. The mean completion rates are consistently high across all days, with relatively low standard deviations, indicating stable performance
   4. Overall, the completion rates appear to be excellent across most slots and days of the week. The high and consistent rates suggest that the service is performing very well in terms of order completion. However, there might be some data quality issues or specific slots that require attention e.g.- Night and Late Night

**Suggestion for improving completion rate**:

1. **Enhancing Performance in Low**-Completion Areas- Investigate the reasons for low completion, such as logistical challenges, product availability, or customer service issues.

2. **Optimizing Delivery Scheduling**- focus on time slots, Night slot has lower completion (97.89% on Friday).

3. **Leverage Successful Patterns**- of ITI Layout, HSR Layout

4. **Improve Order Management**- Encourage customers to bundle products by offering discounts for orders with 2 or more items, which can also improve average order value.

5. **Data-Driven Decision Making**- monitor various metrics

6. **Customer Feedback and Engagement**-

7. **Staff training and development**

It aims to find LTV (Life Time Value) of customers, aggregated LTV and average revenue per order at acquisition month and acquisition source level and analyze customer behavior and resulting order ratings.

Customer Level Analysis

1. **Identify Completion rate at source level.**
   1. The completion rates are generally very high, with most sources having rates above 99%
2. **Calculate LTV for every customer.**
   1. LTV varies significantly across customers. Some customers have exceptionally high LTV compared to others.
   2. 914 customers out of 3733 have above average LTV
   3. **Challenges**-
      1. LTV varies significantly across customers. Some customers have exceptionally high LTV compared to others.
   4. **Solution**-
      1. Conduct **cohort analysis** to understand characteristics of high LTV customers.
      2. Implement **personalized marketing strategies** to increase engagement and purchases for lower LTV customers.
      3. Develop a **customer segmentation model** based on LTV to tailor services and offers.
3. **Calculate aggregated LTV at customer acquisition source level.**
   1. Higher aggregated LTV for Snapchat and Google and least for Instagram
   2. **Challenges**:
      1. Balancing user acquisition costs with potential LTV from each source.
      2. Optimizing marketing spend across different acquisition channels.
   3. **Possible Solutions**:
      1. Calculate **Return on Ad Spend (ROAS)** for each acquisition source.
      2. Reallocate **marketing budget** based on source performance (user count, product amount, and LTV).
      3. **A/B test** different marketing strategies for underperforming sources.
4. **Calculate aggregated LTV at acquisition month level.**
   1. January shows the highest user count and total LTV, but not the highest average LTV per user.
   2. Least LTV for September month
   3. Decreasing trend of aggregated LTV observed from January to September.
   4. **Challenges**
      1. Seasonal fluctuations in user acquisition and spending.
      2. Maintaining consistent growth in user base and LTV.
   5. **Solutions**
      1. Implement **seasonal marketing campaigns** to boost slower months.
      2. **Analyze factors** contributing to higher average LTV in specific months and apply learnings to other periods.
      3. Develop **retention strategies** to maintain user engagement across all months. E.g. Flipkart giving Plus access to almost all users.
5. **What is the average Revenue (Product amount after discount) per order at different customer acquisition source level?**
   1. Snapchat and Google are significant sources of orders and average revenue per order.
   2. Least average revenue per order from Instagram.
   3. Highest revenue generated from Organic source
   4. **Challenges**
      1. Maximizing revenue from each acquisition source.
      2. Balancing the number of orders with average revenue per order.
   5. **Solutions**
      1. Optimize **marketing campaigns** for high-performing sources to increase order volume.
      2. Implement **upselling and cross-selling** strategies to increase average revenue per order.
      3. Investigate **user behavior** from different sources to tailor the shopping experience.
6. **What is the average Revenue (Product amount after discount) per order at acquisition month level?**
   1. Revenue and order count vary significantly by month. January shows the highest order count and total revenue, but not the highest average revenue per order.
   2. Least average revenue per order observed for August and September months. Decreasing trend observed from January to September for the same alike aggregated LTV.
   3. **Challenges**
      1. Managing inventory and resources to handle monthly fluctuations.
      2. Increasing average revenue per order in high-volume months.
   4. **Solutions**
      1. Implement **dynamic pricing strategies** based on monthly demand patterns.
      2. Develop **targeted promotions** for slower months to boost order volume.
      3. Analyze **product mix** in high-volume months to identify opportunities for increasing average order value.
7. **Is there any pattern in order rating across slots, number of items placed, delivery charges, discount?** 
   1. The afternoon slot has a high average order rating of 4.86 out of 5 while late night has least, that is, 4.84 which is negligible variation across slot
   2. Higher number of items in an order, higher is the order rating
   3. Order rating corresponding to higher order counts with least delivery charges 0-50 is respectable which is 4.86.
   4. Least order rating (4.5) for discount between 450-499 but this slab has only 2 order counts.
   5. Delivery charges are higher for Late Night slot than other slots
   6. **Challenges**
      1. Maintaining high order ratings across all time slots.
      2. Understanding factors contributing to low ratings in the late-night slot.
   7. **Possible Solutions**:
      1. Analyze operational differences between time slots (e.g., delivery speed, product availability) to identify best practices.
      2. Implement customer feedback loops to quickly address issues in lower-rated time slots.
      3. Consider adjusting resource allocation to ensure consistent service quality across all time slots.

**Conclusion**

* + 1. Develop an **integrated customer analytics** platform to track and analyze user behavior, LTV, and revenue across acquisition sources and time periods.
    2. Create a **dynamic marketing strategy** that adapts to monthly trends and leverages high-performing acquisition sources.
    3. Focus on **improving the customer experience** across all time slots to maintain high order ratings- better UX of website,24x7 customer support
    4. Regularly conduct **cohort analysis** to understand the long-term value and behavior of customers acquired from different sources and in different months.
    5. By addressing these challenges and implementing these solutions, we can optimize marketing spend, improve customer acquisition and retention, and ultimately drive growth in revenue and customer lifetime value.

It aims to find variation in average delivery time at month, slot and weekday levels and its impact on delivery charges.

Delivery Analysis

1. **Calculate average overall delivery time at month and delivery area level.**
   1. Highest average delivery time for May month during summer season
   2. Least average delivery time for February followed by September.
   3. Delivery to Mahadevapura Area took longest and occurred only in May month showing anomaly in data for highest time for May month overall.
   4. Following areas: Brookefield, Vimanapura, Pattandur, CV Raman Nagar, Richmond Town, JP Nagar Phase 8-9 had placed ordered only in single month out of 9 months data set and also took highest time
   5. While, Bellandur, Ecospace, Cox Town, Whitefield areas also placed orders only in single month out of 9 months but took least time.
2. **Calculate average overall delivery time at month and weekday/weekend level.**
   1. In May month, orders took longest time to deliver.
   2. Orders in February, March, July took least time.
   3. It takes longer on weekend to deliver orders
3. **Calculate average overall delivery time at slot level.**
   1. It takes least time to deliver at Late night and Night due to lower traffic congestion. Highest time taken during afternoon and evening slot alike.
4. **Do you see any pattern in delivery charges with slot or delivery area?**
   1. Delivery charges are considerably higher in Late night slot and almost similar for rest of the slots.
   2. Delivery areas having most order count like HSR Layout and ITI Layout are having *least* delivery charges while areas with single order count have *highest* delivery charges.
5. **Do you see any pattern in delivery time and delivery area. If yes then find out logical reason.**
   1. Yes, the area where delivery time is longer are usually charged higher delivery fee.
   2. Highest for Brookefield, CV Raman Nagar, Frazer Town accounting for single order count each. The possible reasons could be
      1. Longer distance from HSR Layout which is only order pickup location
      2. Lack of connectivity
      3. Rugged Geographical terrain
      4. Poor supply chain management

**Suggestion for improving delivery time**:

1. **Identify High-Impact Areas**: Focus on Slow Delivery Areas like Mahadevapura and Brookefield

2. **Optimize Delivery Slots**: incentivizing customers to select less congested delivery windows.

3. **Human Resource**: Increase delivery personnel or vehicles during peak times

4. **Targeted Resource Allocation**: Weekdays generally show slightly better delivery times. Schedule more deliveries on weekdays and optimize routes during weekends to alleviate congestion.

5. **Dynamic Pricing**: Implement a dynamic pricing model based on delivery times and demand, incentivizing off-peak delivery.

6. **Leverage Technology**: using route optimization like GPS and planning software.

7. **Feedback Mechanism**: analyze patterns and improve service