## ****Freshco Hypermarket Capstone Data Analysis****

## Order Level Analysis

#### Distribution of Orders by Delivery Area in Slot Order

   Top orders:

       HSR Layout: 4180.85M (Total)

       Bellandur, Green Glen: 36.10M (Total)

       Bomannahali - MicoLayout: 139.43M (Total)

   Slots with high activities:

       Afternoon(Highest): HSR Layout (1089.11M)

       Evening(Highest): HSR Layout (877.84M)

       Morning(Highest): HSR Layout(1007.10M)

       Night(Highest): HSR Layout(953.87M)

       Late Night(Lowest): Koramangala, Ejipura(9.55M)

#### Areas with Most Monthly Order Increases(Jan to Sep)

   Highest total increase:

      Highest order ID increase for HSR Layout, January to September is 1534.

        ITI Layout experienced a rise of about 653 order IDs from January to September.

        From January to September, Harlur had its order IDs increasing by around 486.

   Notable Increases:

      The highest change is noted in the monthly orders for HSR layout i.e., an increment of 1534.

         Monthly orders at ITI layout also had a significant increase of up to six hundred and fifty three.

         On the contrary, Harlur area increased its monthly orders only slightly by four hundred and eighty six.

         There was also a fourteen-monthly order increase at Bellandur, Green Glen.

#### Delivery Charges as % Product Amount By Slot & Month

   General movement:

      From January through September this rate dropped from 19.89% to 4.66%.

      The highest average charges were during late nights when it was at its peak being about 19.72%.

      Lowest average charges were during afternoons which stood at an approximate figure of about 10.03%.

#### Discounts as % Product Amount By Slot & Month

   General movement:

      From January to September however, it went up by more than ten times from 1.04% to 10.21%.

        Highest average discounts were during the Afternoon session, which was about 6.75%.

 In contrast, Late night sales had the lowest monthly discounts at an average of3.40%.

Summary

HSR Layout is the area with the highest order volume as well as significant monthly increases in orders.

Among all slots, Late Night ones carry the greatest delivery charges, whereas Afternoon ones have the lowest charges.

Discounts increase over time especially during Afternoon and Morning slots.

The most discounts for particular slots are given in Bannerghatta and Bellandur, Sakara.

#### Recommendations :

Target High Volume Areas: In particular HSR Layout and other high-volume areas would benefit from marketing and logistical improvements.

Optimize Late Night Deliveries: This could mean investigating ways to bring down delivery charges during late night slot to encourage more orders.

Monitor Discount Strategies: Therefore, discounts need to be optimized concerning drawing customers without compromising profitability. For instance, Bilekahalli and Bannerghatta areas which offer greater discounts.

Completion Rate Analysis

Completion Rate at Slot vs Day of the Week

   High Completion Rates Across All Slots and Days:

       Overall completion rates remained very high across all slots and days with an average overall of 99.55%.

   Highest Completion Rates:

       Evening slot on Sunday, Late Night on Wednesday, and Late Night on Wednesday have the highest completion rates at 100%.

   Lowest Completion Rates:

       With a completion rate of 97.89%, the lowest is night slot on Saturday.

       Also, a slightly lower rate of completion of 98.94% is different for Late Night on Tuesday.

   Consistent Performance:

       The minute disparities not withstanding, almost every time slot/day combination has a score nearing 99%, which suggests that performance has been robust.

#### Completion Rate at Drop Area Level

   Perfect Completion Rates:

   Perfect completion rates of 100% are found in some areas including Akshaya Nagar, Arekere, Bellandur (multiple sub-areas), Bilekahalli, Devarachikanna Halli etc.

   High Volume Areas:   HSR Layout and ITI Layout had the highest number of completed orders (15,595 and 3,930 respectively) and their completion rates were between 99.60% to 99.59%.

Areas with Slight Issues:

 However, there is a noticeable problem with respect to the delivery rates around Bellandur while ETV had its rate standing at zero percent during such a period as reviewed by Whitefield.  
  
Completion Rate on Volume of Products Ordered

Stable Completion Rates:  
  
The completion rates are stable at different volumes of products ordered, albeit with marginal fluctuations.  
  
High Completion Rates for Single Product Orders:  
  
The most common order type, single product orders, has a completion rate of 99.27% (4,223 total orders).  
  
Perfect Completion Rates:  
  
Orders containing 12, 13, 15, 17, 18 ,19 ,20 ,21 ,22 ,23 ,24 and 25 products have an accuracy rating of one hundred percent.  
  
Minor Variations:  
  
For instance, the completion rates slightly dip to between approximately 99.4% and about 99.57% for three six nine fourteen unit packages before picking up again in the later units; however this drop is negligible.

#### Recommendations :

To maintain continually excessive finishing touch prices, leverage insights from height times like Sunday evenings to adjust staffing and operations. Address regions with lower of entirety rates, inclusive of Bellandur and Whitefield, thru targeted operational enhancements and customer service enhancements. Implement robust monitoring systems to promptly discover and resolve issues throughout all carrier slots and days. Provide ongoing training for transport groups to improve performance and service reliability. Explore technology answers for course optimization and real-time monitoring to streamline operations and limit delays. These steps will fortify common service best and client pleasure.

## Delivery Analysis

Average Overall Delivery Time by Month and Delivery Area

HSR Layout continually continues an standard shipping time close to the grand total common (0:24:14).

April and May showcase significantly better shipping times (0:27:fifty six and zero:forty four:35, respectively), that can imply operational problems or higher order volumes in the course of those months.

Observation:

HSR Layout appears to have solid transport times with minimum fluctuation, suggesting green delivery processes.

The Grand Total shows a peak in May, suggesting viable outside factors influencing shipping times, along with holidays, fairs, or detrimental climate situations.

Average Overall Delivery Time through Month and Day Type

Delivery times on Weekends are normally higher than on Weekdays, specially in May (0:forty eight:30 on Weekends vs. Zero:42:32 on Weekdays).

There is a great spike in delivery times for both weekdays and weekends in May.

Observation:

Weekends see a higher average shipping time, in all likelihood due to improved order volumes while greater humans are at home.

May sticks out with the best shipping instances, indicating ability call for spikes or operational challenges.

Average Overall Delivery Time by using Slot and Day Type

The Late Night slot consistently has shorter delivery times in comparison to different slots.

The Afternoon and Evening slots have a tendency to have longer transport instances, in particular on weekends.

Observation:

Late Night deliveries are quicker, in all likelihood because of decrease traffic and less orders.

Afternoon and Evening slots revel in delays, which will be due to top ordering instances and higher site visitors congestion.

Delivery Charges by means of Slot and Delivery Area

HSR Layout has the highest general transport charges across all slots, specifically inside the Afternoon and Night slots.

Certain areas like ITI Layout and Harlur additionally show high transport expenses, indicating excessive delivery volumes or higher fees according to shipping.

Observation:

HSR Layout being a sizable contributor to transport charges suggests it is a densely populated vicinity with excessive demand.

Higher transport costs in sure areas might also suggest longer distances or extra complex transport routes.

#### Delivery Time via Delivery Area

Brooke-field and Vimanapura have the highest common transport instances, indicating demanding situations in these regions.

HSR Layout once more indicates green delivery times (0:22:28), aligning with preceding insights.

Observation:

Areas with better transport instances, such as Brookefield and Vimanapura, would possibly face challenges together with traffic congestion, longer distances from delivery hubs, or higher order volumes.

HSR Layout's lower delivery instances endorse nicely-mounted logistics and delivery networks.

## Patterns and Analysis

#### Pattern in Delivery Charges with Slot and Delivery Area:

HSR Layout always shows high delivery charges, indicating a excessive extent of deliveries.

Afternoon and Night slots have the best expenses, which may be due to peak ordering times main to elevated transport fees.

#### Pattern in Delivery Time and Delivery Area:

Areas with excessive average delivery instances, which include Brookefield, Vimanapura, and Pattandur, could be dealing with logistical demanding situations like visitors congestion, longer distances, or inefficiencies in the delivery network.

Efficient regions like HSR Layout have lower average transport times, indicating optimized transport tactics and probable higher infrastructure.

#### Logical Reasons for Patterns:

High Delivery Times: Areas with high delivery instances would possibly have poor infrastructure, better site visitors congestion, or extra distances from the shipping hubs.

High Delivery Charges: Areas with high delivery fees regularly correlate with excessive call for or longer shipping routes. Time slots with excessive transport fees possibly coincide with height ordering durations, main to surge pricing.

#### Recommendations :

Analyzing the facts well-known shows several opportunities for improving average shipping efficiency and consumer satisfaction:

The spikes in shipping times for the duration of April and May advocate a need for proactive measures to deal with elevated order volumes. Implementing scalable answers, along with transient staffing will increase or optimized direction planning at some stage in top months, can mitigate delays efficiently.

Weekends continuously display better delivery times compared to weekdays. To stability this load, do not forget reallocating sources to decorate weekend shipping skills. This should involve incentivizing weekday orders or adjusting staffing schedules to deal with weekend demand spikes more correctly.

Afternoon and evening slots always experience longer shipping times. Implementing dynamic routing algorithms that reply to actual-time traffic conditions can reduce delays in those height intervals. Additionally, promoting off-peak orders via incentives should help distribute demand extra flippantly at some stage in the day.

High shipping prices in sure areas and slots, appreciably in HSR Layout and at some stage in precise time slots, suggest massive demand. Introducing tiered pricing based totally on delivery urgency or subscription models for common clients can optimize revenue at the same time as coping with operational charges efficiently. Partnering with neighborhood transport services in high-demand areas can also streamline operations and reduce common transport charges.

Areas with continuously high transport times, including Brooke-field and Vimanapura, require centered attention on infrastructure improvements. Establishing or improving micro-fulfillment facilities towards those regions can extensively lessen transport times. Leveraging superior analytic s to expect and preempt potential delays in these regions will in addition enhance transport efficiency and client delight.

## Customer Level Analysis

#### Completion Rate at Source Level

The universal finishing touch rate is extraordinarily excessive throughout all assets, averaging round ninety nine.Fifty five%.

Organic sources have the best completion fee (99.Sixty three%), suggesting that clients who locate the agency organically are more likely to finish their orders.

Instagram has the lowest completion price among the sources however still continues a high fee of 99.46%.

Offline campaigns have a slightly lower of entirety charge as compared to other sources but continue to be very near at 99.Forty four%.

Observations:

High of completion quotes across all resources imply robust patron engagement and pride.

The minimum variant in of entirety charges shows that the organization's advertising and marketing strategies are equally powerful across specific structures.

LTV (Lifetime Value) at Customer Acquisition Source Level

Insights:

Organic resources have the best LTV, amounting to ₹2,287,431, indicating that those customers have a tendency to generate extra sales through the years.

Google follows with an LTV of ₹1,939,010, displaying that it is a substantial contributor to sales.

Offline campaigns actually have a widespread LTV, suggesting that conventional advertising and marketing methods are still effective.

Observations:

Organic and Google resources are the most treasured in phrases of purchaser lifetime price, highlighting the importance of seo and on-line advertising and marketing.

A balanced method between online and offline campaigns can yield great returns.

LTV at Acquisition Month Level

September has the best LTV at ₹1,322,471, suggesting a height in high-value consumer acquisition for the duration of this month.

The values normally growth from January to September, indicating a fashion of better patron cost acquisition in the latter a part of the yr.

Observations:

The employer may revel in seasonal tendencies, with better fee customers being obtained inside the second half of the 12 months.

Strategic advertising efforts may be intensified in the course of these months to capitalize on this fashion.

Average Revenue consistent with Order at Different Customer Acquisition Source Level

Snapchat has the very best common sales in line with order at ₹344.Sixteen, observed through Google at ₹342.55.

Instagram has the lowest common sales according to order at ₹301.10.

Observations:

Snapchat and Google are key structures for producing higher average revenue per order.

Instagram, regardless of having a excessive completion price, generates decrease revenue in step with order, indicating a want for techniques to increase the common order cost from this platform.

#### Average Revenue per Order at Acquisition Month Level

May has the best common revenue per order at ₹380.52, drastically higher than other months.

September has the bottom common sales in line with order at ₹280.20, in spite of having the highest LTV.

Observations:

May could be a peak month for high-cost orders, indicating a possible seasonal advertising or event using higher spend.

There is a discrepancy among LTV and common sales according to order for September, suggesting that while man or woman orders are smaller, the volume or frequency of orders from clients obtained on this month is excessive.

#### Order Rating Across Slots

Ratings are steady across distinctive time slots, averaging round four.85.

Morning and Afternoon slots have the highest average rating at 4.86.

Observations:

Customer delight is uniformly excessive throughout the day.

No enormous difference in rankings shows that time of order does no longer impact customer delight.

#### Order Rating via Number of Items Placed

Orders with 3 items have the highest average score at four.87.

Orders with greater than 10 objects generally maintain excessive rankings but display some variability.

Observations:

Orders with fewer items (up to three) have a tendency to have better ratings, doubtlessly indicating a extra possible and nice experience for the patron.

Extremely high item counts (above 20) show a mild lower in score, likely because of complexity or troubles in handling large orders.

#### Order Rating via Delivery Charges

Orders with delivery expenses among ₹10 to ₹80 generally have higher ratings, regularly at 5.00.

Orders with out a delivery prices have a slightly lower common rating of 4.Eighty three.

Observations:

Customers are glad even when paying transport costs, probable due to the perceived fee or provider first-class.

Free shipping does now not necessarily lead to better delight, indicating that customers value other aspects of provider extra.

#### Order Rating by Discount

Discounts between 1% to twenty% commonly have high rankings, round 4.87 to 4.89.

Orders without a cut price have a excessive score of 4.87, showing that discounts aren't the only driving force of patron delight.

Observations:

Moderate reductions (1% to twenty%) are powerful in maintaining excessive client pride.

The presence of a reduction, regardless of its size, positively influences client scores.

#### Patterns in Order Rating

Across Slots:

No massive variant so as scores throughout exclusive time slots. All slots hold a excessive common score of around four.85 to four.86.

Number of Items Placed:

Orders with 3 gadgets are normally rated the highest.

Larger orders (above 10 gadgets) display some variability in rankings, suggesting complexity in coping with may additionally have an effect on client delight.

Delivery Charges:

Higher transport expenses do not negatively impact rankings; in truth, a number of the very best scores are associated with orders having delivery expenses.

Free delivery does not always lead to better pleasure, indicating different elements at play.

Discount:

Discounts positively impact customer ratings, with mild discounts (1% to 20%) preserving excessive satisfaction.

Orders with out a discounts still have high rankings, suggesting clients value the general carrier first-rate more than just rate reductions.

#### Recommendations :

Focus on preserving and improving natural and Google channels for excessive crowning glory charges. Optimize Instagram campaigns and refine offline advertising strategies. Leverage natural channels for high LTV through content material and network investment, boom Google Ads spending, and innovate offline campaigns.

Capitalize on high LTV months like September and August with promotions, and address decrease-performing months with targeted campaigns. Enhance Snapchat and Google campaigns for better revenue per order, and enhance Instagram order values with upselling. Replicate successful techniques from excessive-revenue months like May, and target promotions to improve revenue in low months like September.

Maintain high provider fine across all slots, specially morning and afternoon, with centered promotions. Promote medium-sized orders with bundling offers and ensure efficient handling of huge orders for customer pride. Communicate delivery fee cost and experiment with free shipping gives. Use moderate discounts constantly for excessive pride and determine the effect of minimum or no discounts while emphasizing different cost propositions.

Conclusion:

To optimize operational efficiency and consumer satisfaction:

Target High-Volume Areas: Focus marketing efforts on HSR Layout and different developing regions.

Optimize Delivery Operations: Reduce expenses at some stage in Late Night slots and beautify delivery efficiency at some point of top instances.

Enhance Customer Engagement: Improve carrier reliability in regions with lower completion prices and capitalize on excessive LTV months.

Promote Service Quality: Maintain high service standards across all slots, emphasizing cost beyond discounts.