



# Freshco Hypermarket Project

## Project Description

Freshco Hypermarket, situated in HSR, Bangalore, has established itself as a prominent supermarket in the region, catering to a wide range of customers. It provides customers with access to fresh, organic, and healthy produce to promote and support well-being in a mindful and sustainable way. In response to evolving customer needs and to enhance convenience, Freshco introduced a home delivery service in the year 2021.

To ensure seamless operations and optimize customer satisfaction, the store diligently maintained a comprehensive transaction data sheet, containing detailed information at the order level and to understand their customer base, the store has maintained a sheet to note the acquisition source of each customer.

The project aims to harness insights from the given data sheets by performing several types of analysis to find overall delivery time, customer acquisition month and how it affects the revenue generated, etc., that may lead to improved delivery efficiency and cost effectiveness.

# Data Dictionary

Terms	Explanation
Order Timestamp	Order placed time.
User ID	User Id of the customer.
Order Pickup Geo	Order Pickup area location.
Order Drop Geo	Drop area location.
Order ID	Unique id to identify an order.
Products	List of products.
Partner Store Reach Time	Time when the delivery partner reaches the pickup location.
Partner Start for Delivery Time	Time when delivery partner starts its journey to delivery item.
Completed/Cancelled Timestamp	It is the completed time when delivery is finished or cancelled.
Completion Flag	It is a status of delivery whether the delivery are done or not by the delivery partner.
Order Rating	This refers to the customer ratings provided to the delivery partner and store service.
Product Amount	This refers to the total amount of products ordered by the customer.
Delivery Charges	Cost of transporting or delivering goods, which may vary depending on the location.
Discount	Refers to a reduced price or a price reduction offered on a product or service. It is typically lower than the original or regular price and is often provided as an incentive to encourage customers to make a purchase.

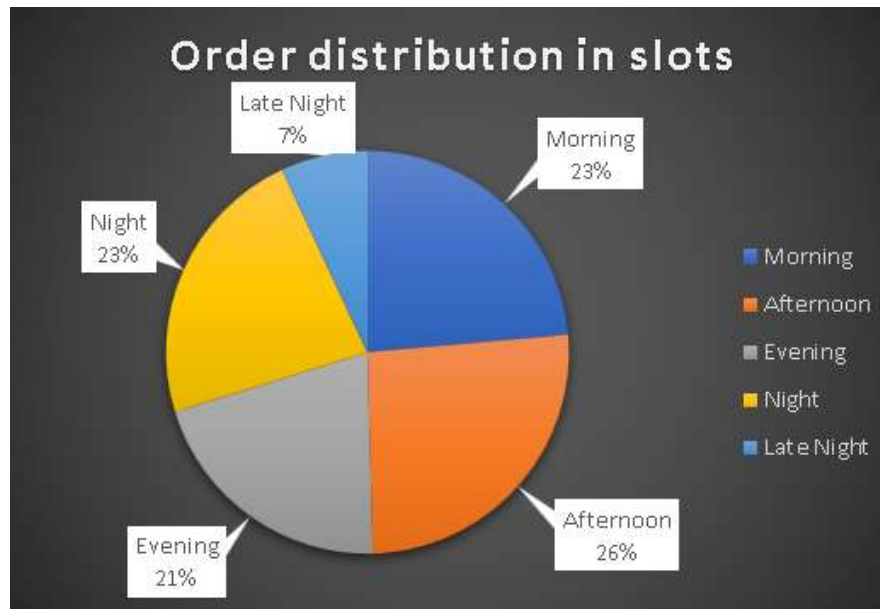
## Business Metrics

- **Completion rate:** This refers to the rate at which orders are completed. It is calculated as (The No. of Order successfully delivered / Total order placed).
- **Customer Lifetime value:** It refers to the total revenue generated per customer, and it is the sum of the product amount and the delivery charges for all orders placed by the customer.
- **Acquisition month:** First month of transaction by the customer.
- **Slot definition:** A time slot is a specific interval when a customer chooses to place an order from a specific store or location. The slots considered are as follows:
  - **Morning:** Orders placed between 05:00 Hours TO 12:00 Hours (12 PM)
  - **Afternoon:** Orders placed between 12:00 Hours TO 17:00 Hours (5PM)
  - **Evening:** Orders placed between 17:00 Hours TO 20:00 Hours (8 PM)
  - **Night:** Orders placed between 20:00 Hours TO 23:00 Hours (11 PM)
  - **Late Night:** Orders placed between 23:00 Hours TO 05:00 Hours (5 AM)
- **Customer acquisition source:** It is the source from which a customer got acquired to the platform.
- **Overall delivery time:** It refer as the time difference between the order placed time and the completion time of the delivery process. It measures the total elapsed time required for the entire delivery process i.e., (Time when order was placed – Time when the delivery was completed).
- **Revenue:** It is the amount of after removing discount from the product amount.

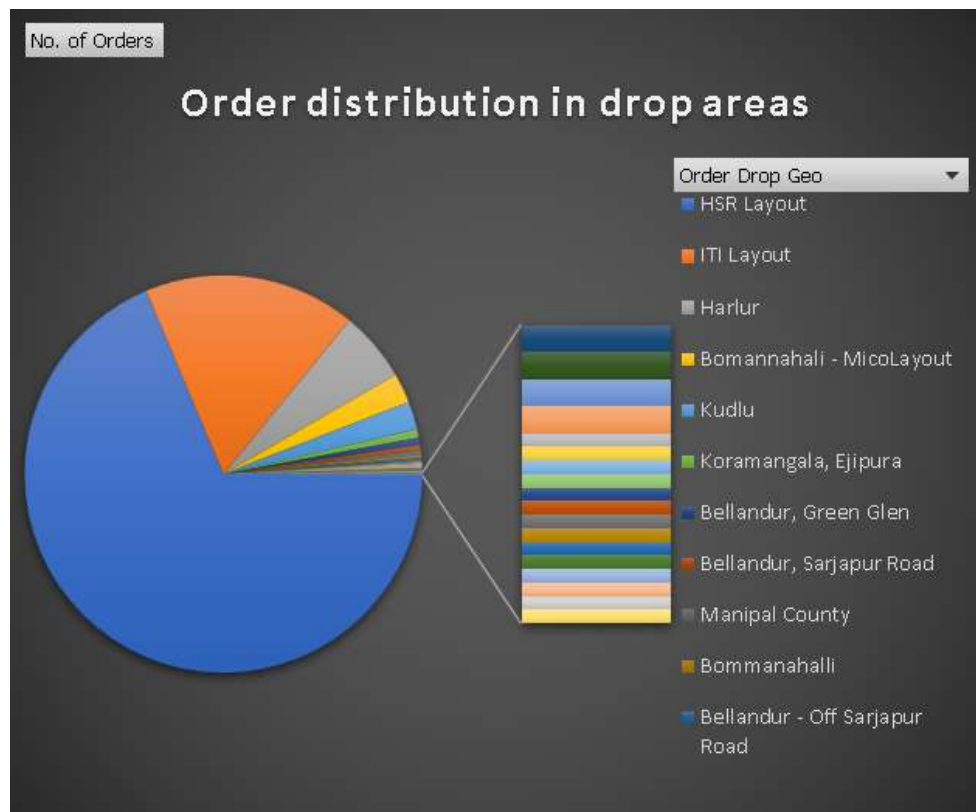
# Insights and Observations for each analytical phase

## 1. Order Level Analysis

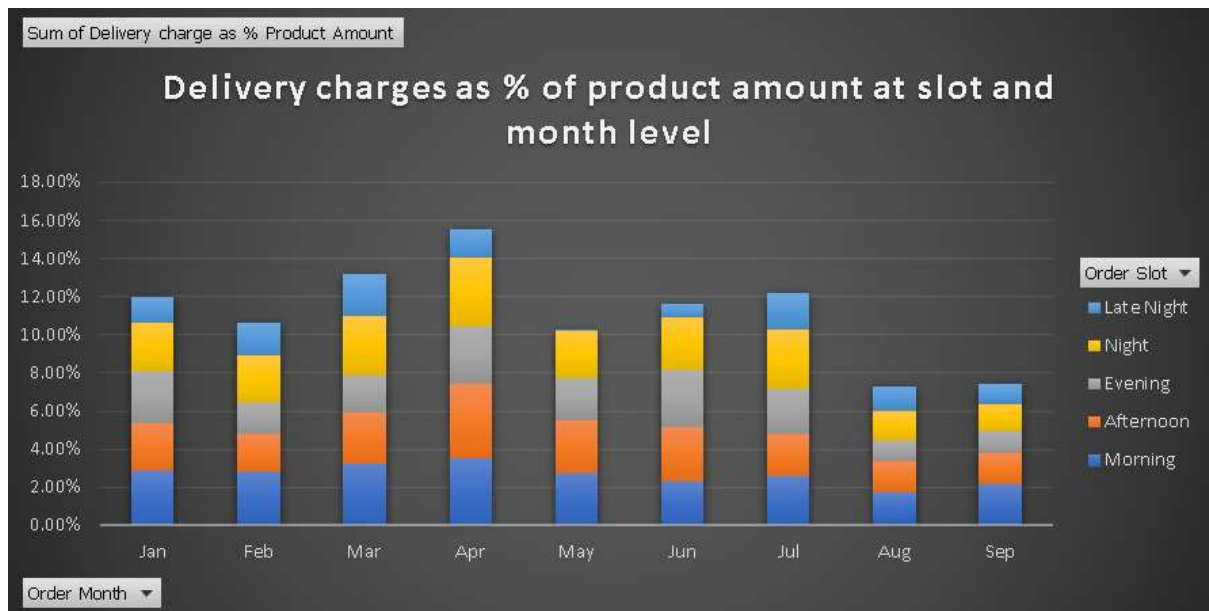
- It was observed that the number of orders in the Morning and Afternoon make up almost 50% of the total orders while the least number of orders during Late Night.



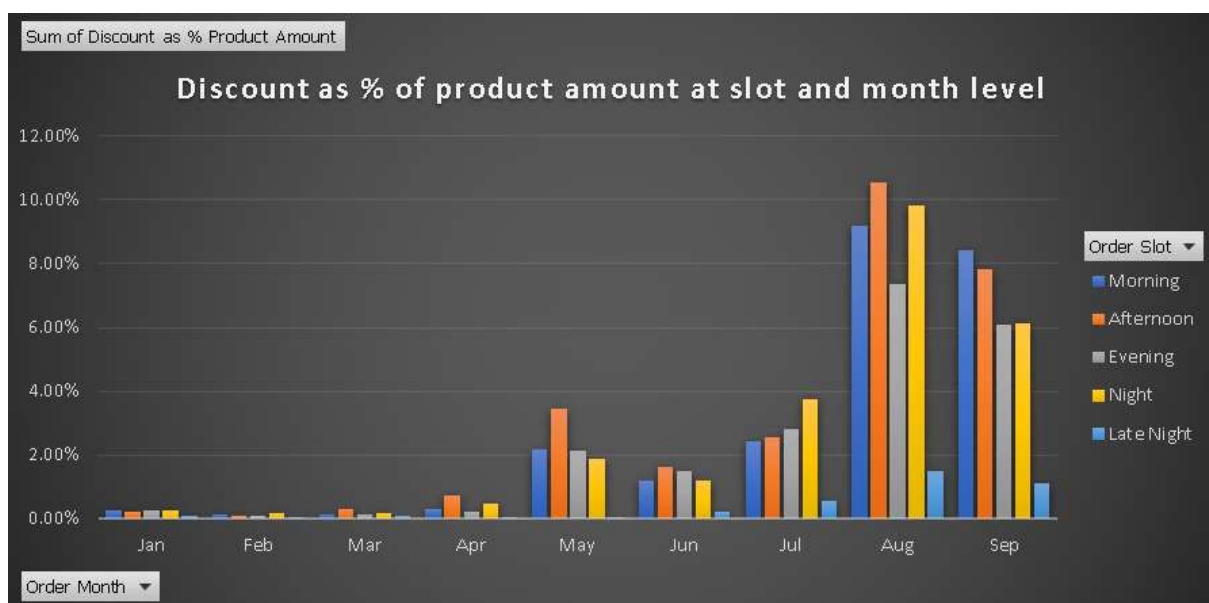
- HSR Layout has the greatest number of orders (almost 70%) delivered to it, followed by ITI Layout and Harlur while areas such as Whitefield, Mahadevapura and Jayanagar have less than 5 orders delivered.



- While being the area with highest order frequency, HSR Layout is also the place that has the highest increase in the number of absolute orders from January to September, followed by ITI Layout and Harlur.
- When finding a trend in the delivery charges as a percentage of the product amount, it is found that during the months of March and April the mentioned percentage increases while it drops in May.

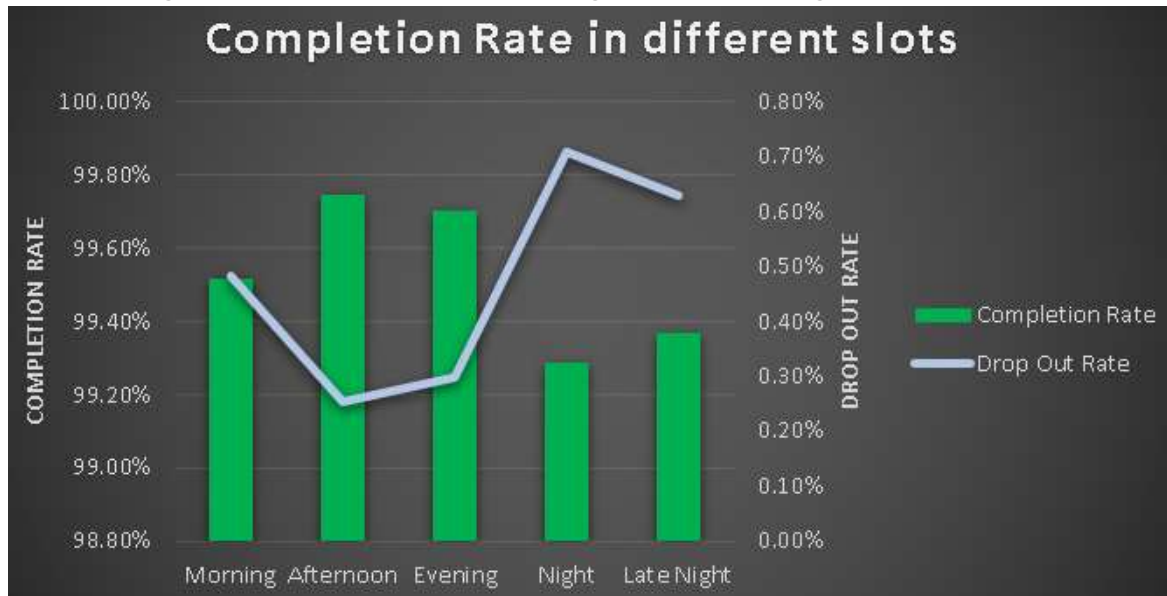


- When finding a trend in the discount as a percentage of the product amount, it is found that during the months of August and September the said percentage is the maximum, them being the month of festivals, and is lowest for orders during Late Night and highest during Afternoon and Morning for those months respectively.

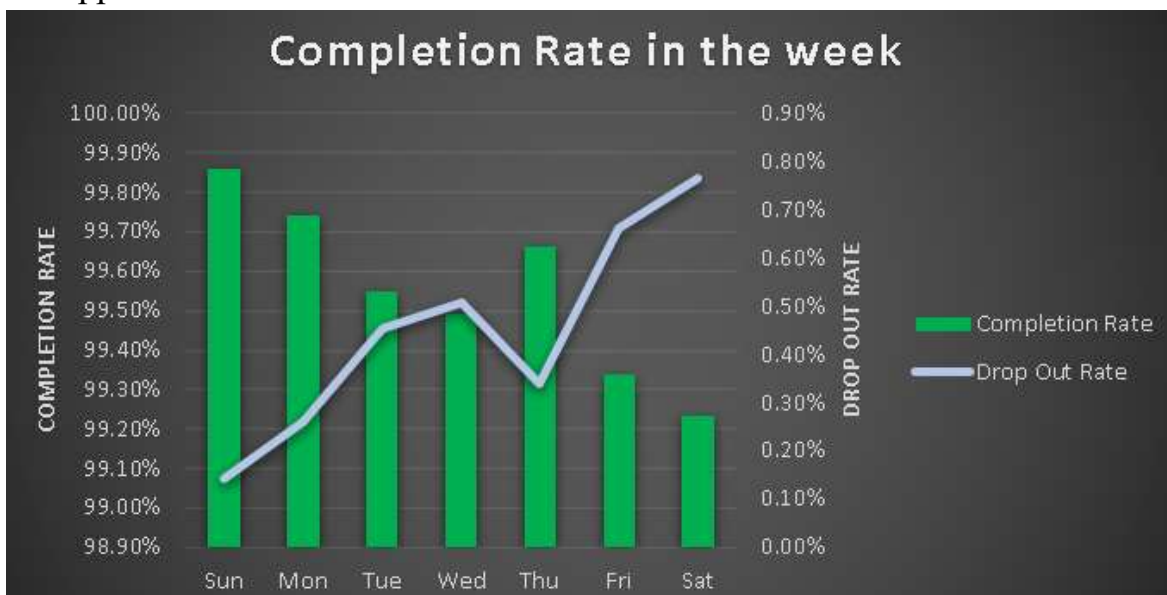


## 2. Completion Rate Analysis

- The completion rate rises during the time between the Morning and Afternoon slot.
- Completion rate gradually starts decreasing as we move towards the Evening and Night slot after which it rises again in Late Night.



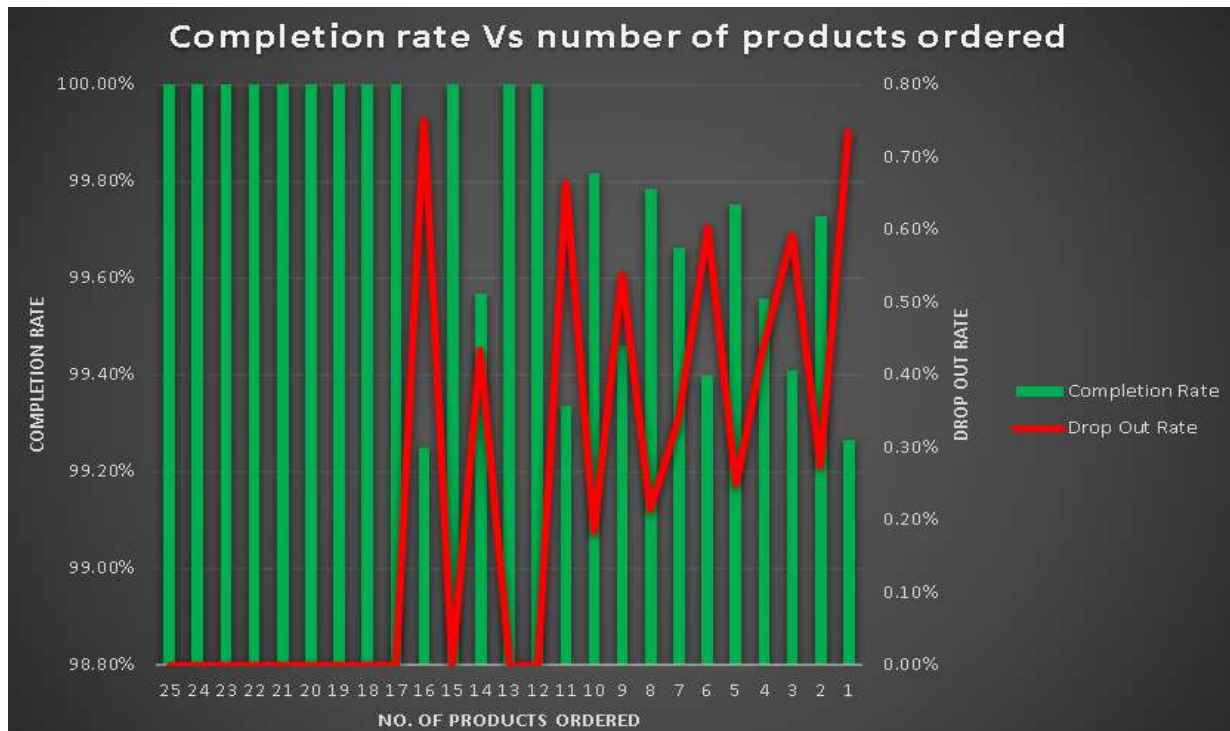
- The trend of completion rate in the week - Sunday to Saturday - is the opposite of that of the slots seen above.



- As it can be seen the completion rate drops from Sunday to Saturday, except for the slight rise on Thursday.

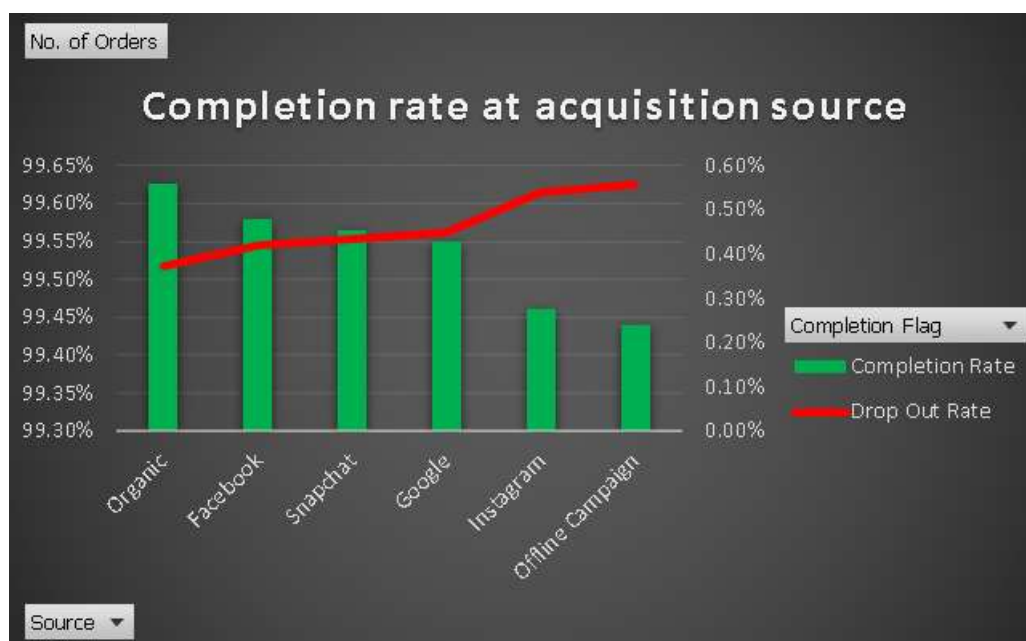


- It was found that if the number of products ordered in an order increase, the higher is the completion rate for that order.

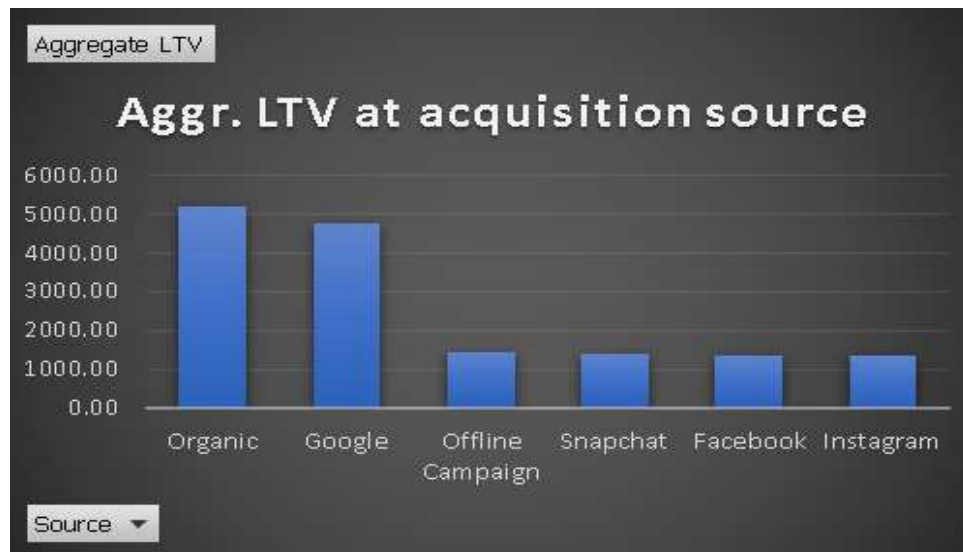


### 3. Customer Level Analysis

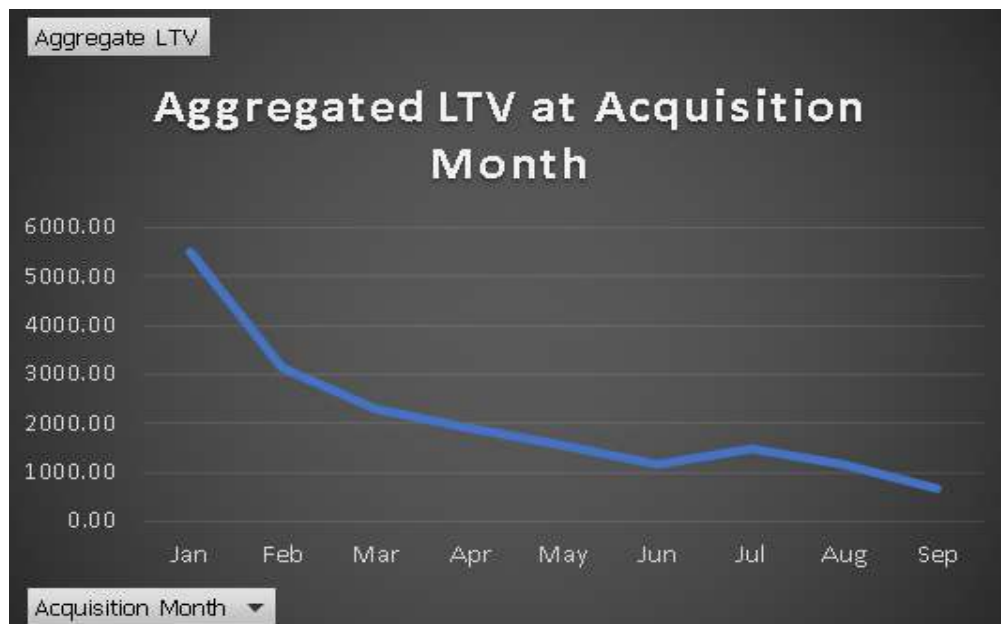
- It is found that the completion rate is lowest when customers were acquired by an offline campaign so it would be better to divert the resources to a social media/network platform.
- Organically acquired customers have the highest completion rate and the average completion rate at all acquisition source level stays at 99.5%.



- Aggregate LTV (Aggr. LTV) is the term used to describe the average LTV for a customer acquired by that source respectively.
- It has been observed that Aggregate LTV is high in case of an organically acquired customer while for customers acquired through a social network platform is low.



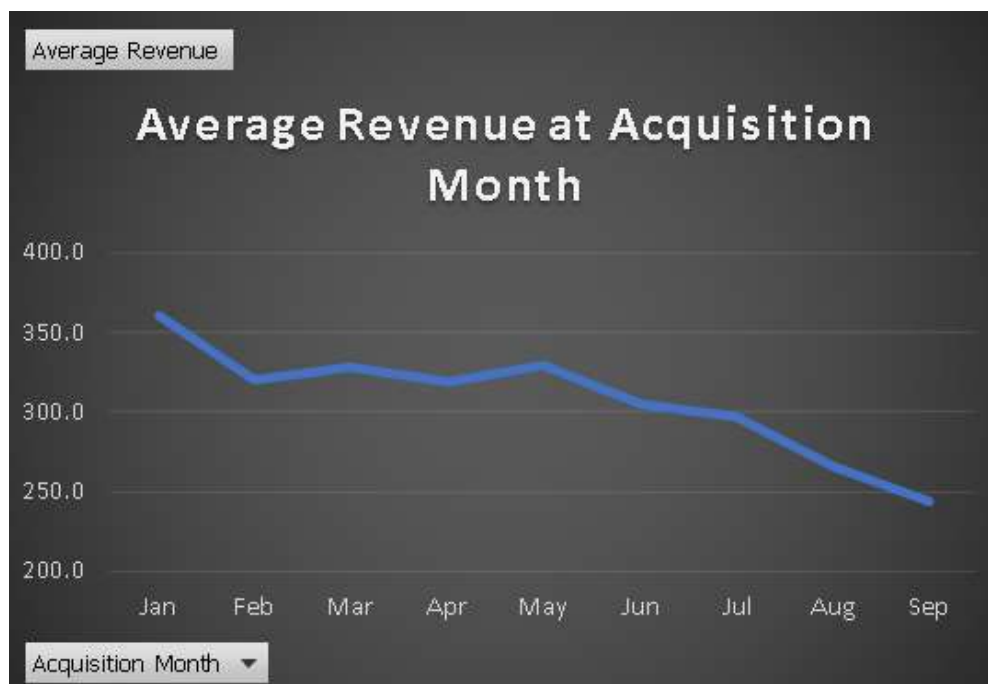
- The Aggregate LTV in accordance with the acquisition month drops, which is expected as the LTV for a new customer is expected to be less than a relatively older customer, except for a slight rise in period of June to July.



- Although the Aggregate LTV for Snapchat may not be high, the average revenue brought by it is the highest, followed by sources which are constant source of advertisement i.e., Google and Facebook.



- Contrary to Aggregate LTV, the average revenue in case of organic customers is one the lower side.



- Similarly, it is seen that the average revenue during January is the highest which falls during February and remains at an average of about ₹320 and drops below ₹300 during the period of June to September.



- The following patterns were observed in the order ratings with respect to other data fields and can be seen in the chart.
- The average order ratings increase for orders during the Morning to Afternoon slot. The ratings drop from Afternoon to Evening slots and rises in the Late-Night slot.
- As the delivery charges decrease there is a slight drop in order ratings. On drilling down to investigate why high delivery charges have higher rating, it is found that the orders were placed during the Late-Night slot and the delivery time was 91 minutes (1 hr 31 minutes).
- The inference drawn from this is that customers that place orders at Late Night and are a farther distance from the pick-up location are willing to pay high delivery charges.
- Similar is the case for discount. The order ratings are high if discount is a larger part of the product amount.
- Order ratings drop when the number of products order decreases.

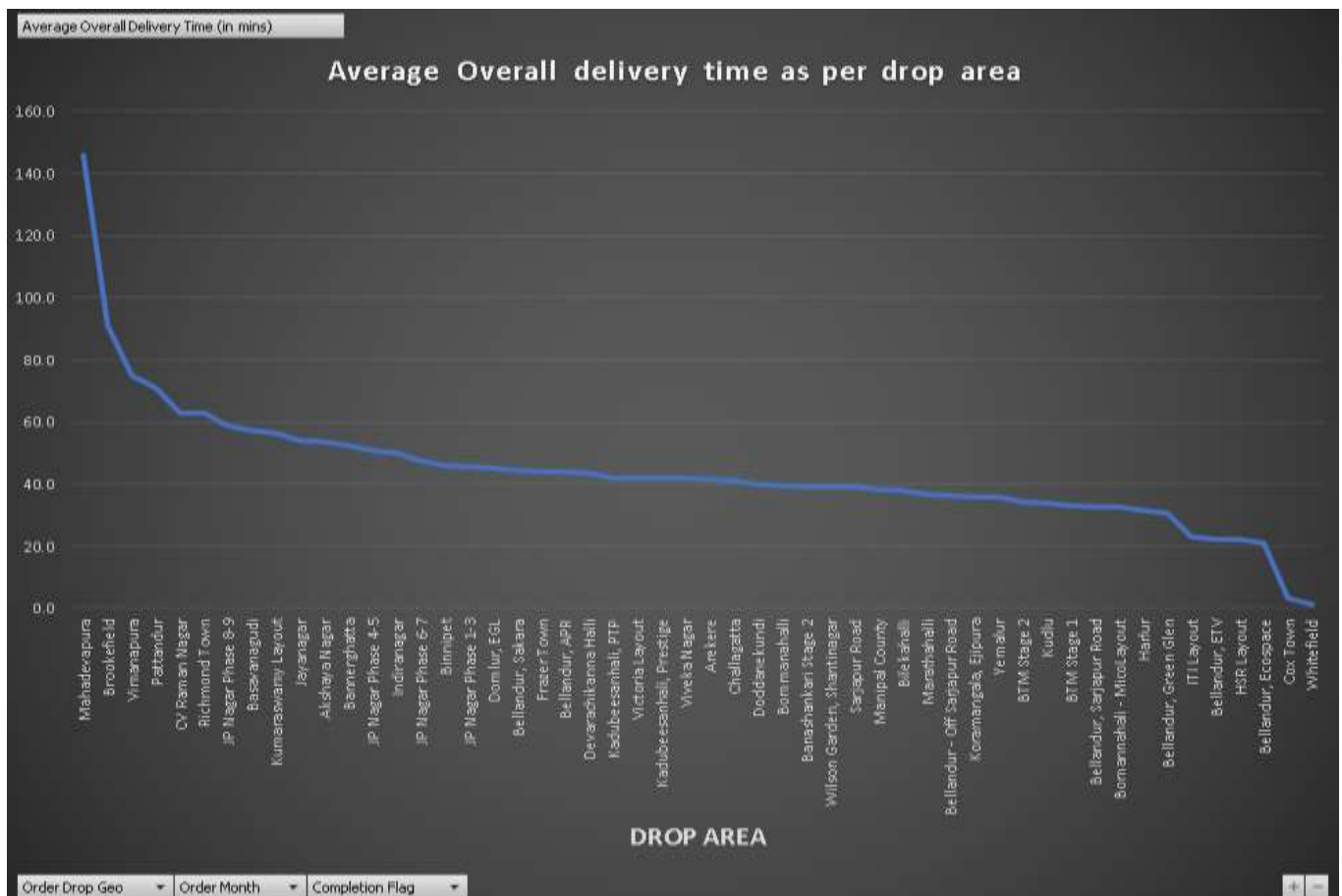


## 4. Delivery Level Analysis

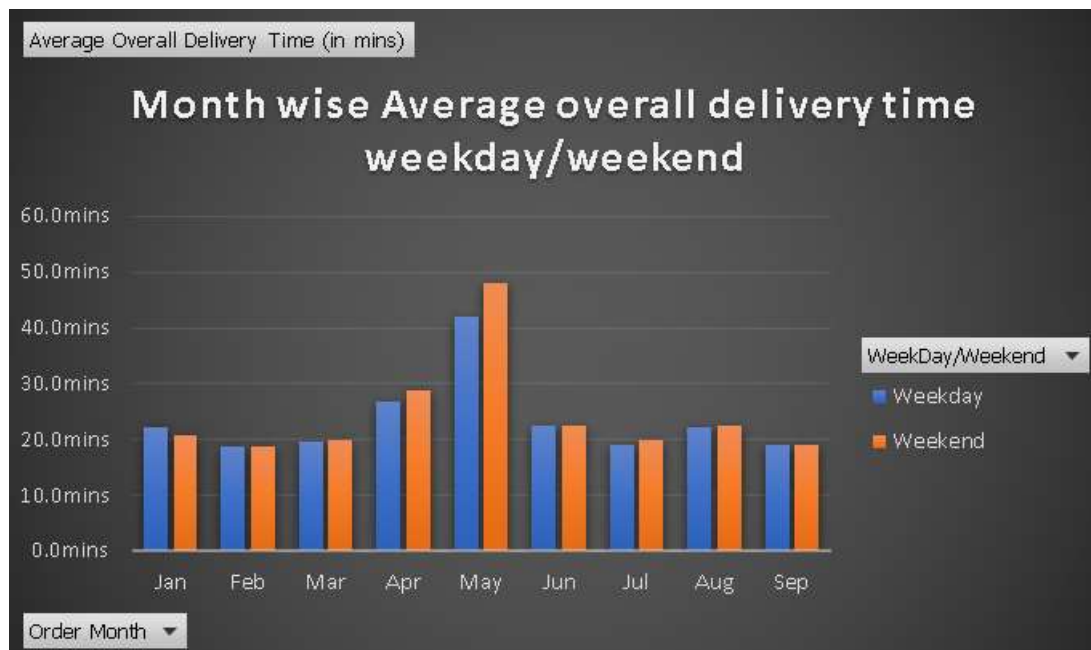
- The highest average overall delivery time is recorded during the month of May whereas the average overall delivery time stays near 20 minutes for all other months.



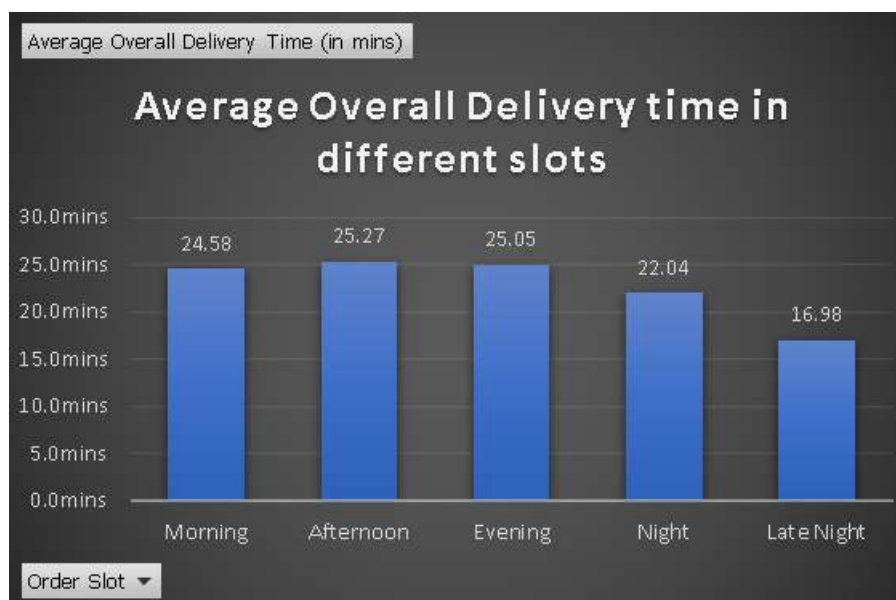
- Mahadevapura, which is the farthest away from the pick-up location (HSR Layout) has the highest overall delivery time of 146 minutes ~ 2 hours.
- After some research, it was found that the delivery areas that are far ~7 Km.) from the pickup location (HSR Layout) usually have higher delivery time.



- When comparing the average overall delivery time of different months, it is found that the average overall delivery time is usually higher on weekends than on weekdays, except in January.

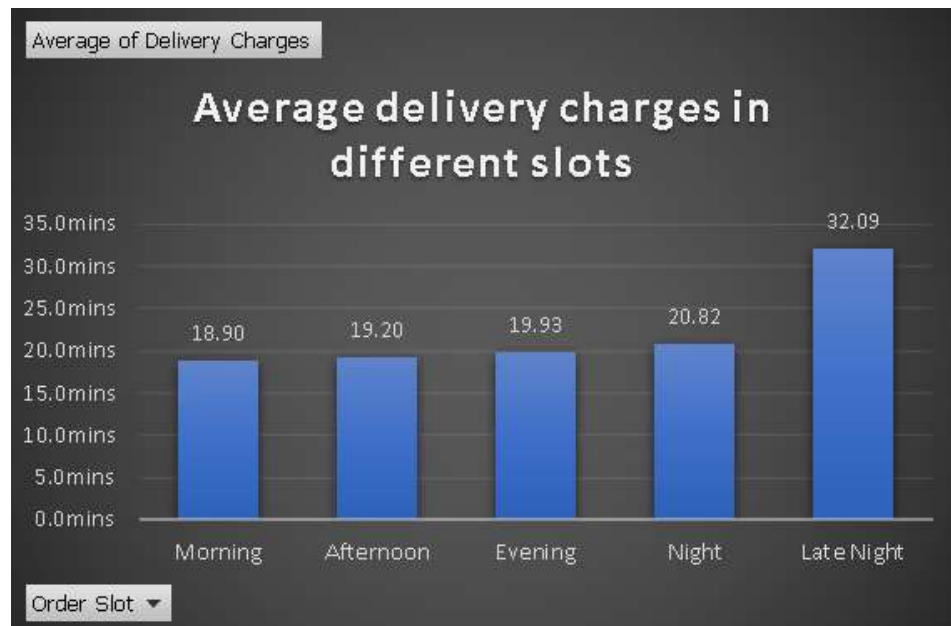


- During the time between the Morning to Afternoon slot the average overall delivery time increases, the simple reason being increased traffic in the pickup location (HSR Layout being a residential area).

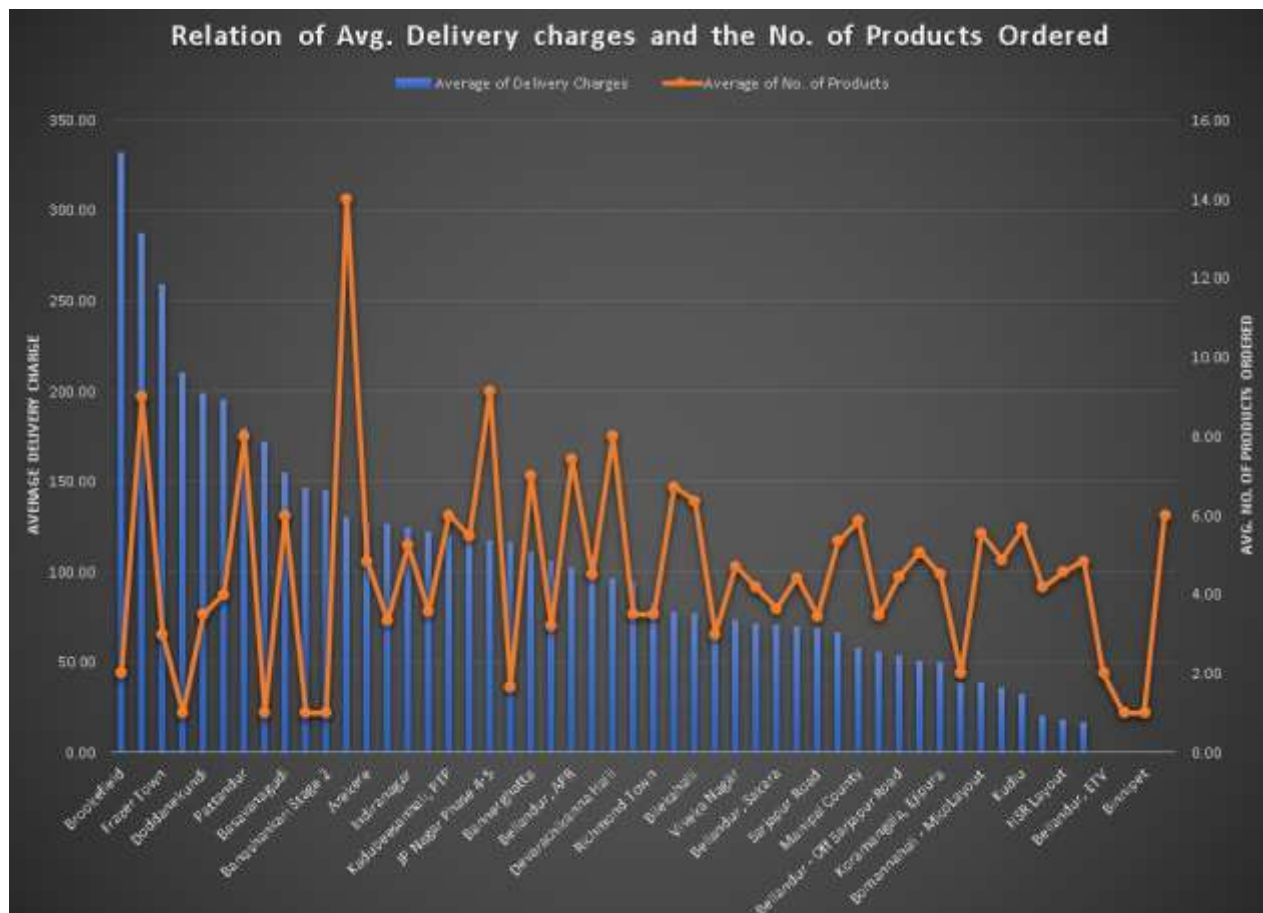


- The average overall delivery time drops by nearly 6 minutes during Late Night slot.

- The average delivery charges are highest during the Late-Night slot and lowest in the Morning slot.



- It has been observed that if the average no. of products ordered in a certain delivery area is comparatively less, then the delivery charges are high.



## Conclusion

Thus, all possible insights that could be derived from the data have been and the project was completed successfully.

## File Links

1. Excel Workbook: [Freshco Hypermarket Capstone Project Workbook](#)
2. Project Report: [Freshco Hypermarket Capstone Project Report](#)
3. Presentation Video: [Freshco Hypermarket Capstone Presentation Video](#)