Flipkart

Understanding the Impact of Customer Service on Customer Retention

Background

Flipkart is one of India's leading e-commerce platforms, offering a wide range of products, including electronics, fashion, home goods, and more. As a major player in the online retail space, Flipkart strives to provide exceptional customer service to maintain its competitive edge and ensure customer satisfaction.

In recent times, Flipkart has observed a decline in customer retention rates. To address this issue, the company is focusing on analysing its customer service operations to identify any underlying problems that may be contributing to the decline. Effective customer service is crucial for retaining customers, building loyalty, and enhancing the overall shopping experience.

The goal is to analyse customer call data and assess various aspects of customer service performance to determine if and how it impacts customer retention. To identify specific issues within customer service operations that may be affecting customer satisfaction and retention rates.

Objective

The primary objective is to understand the impact of customer service on customer retention. By analysing customer call data through the lens of data analysis and utilizing Excel's capabilities, the aim is to identify key performance indicators and underlying trends influencing customer satisfaction. The main goal is to uncover specific issues within customer service operations that may be contributing to the observed decline in retention rates, ultimately informing strategies to enhance overall customer experience and loyalty.

Hence, Flipkart's customer service operations dataset need to be analysed to understand how customer service factors impact customer retention and identify specific areas where improvements are needed in order to improve the customer retention.

Dataset

Below given table shows the first 3 rows and mentioned columns of provided raw Flipkart's customer call data:

1. id – Unique identifier for each record
2. customer_name – Customer's full name
3. Gender – Customer's gender
4. sentiment – Customer's sentiment/review about customer service
5. csat_score - Customer's score for the received customer service
6. call_timestamp – Date on which the call took place
7. reason – Reason for seeking customer service
8. city – Customer's city
9. state – Customer's state
10. channel – Channel through which service was received
11. response_time – Resolution category as per duration of service
12. call duration – Duration of call in minutes
13. call_center – Center which received the call

id	customer_name	Gender	sentiment	csat_score	call_timestamp	reason	city	state	channel	response_time	call duration in minutes	call_center
DKK-57076809-w-055481-fU	khushbu	f	Neutral	7	10/29/2020	Billing Question	Nandyal	Andhra Pradesh	Call-Center	Within SLA	17	Delhi
QGK-72219678-w-102139-KY	shikha garg	f	Very Positive		10-05-2020	Service Outage	Hindupur	Andhra Pradesh	Chatbot	Within SLA	23	Mumbai
GYJ-30025932-A-023015-LD	dhannu	m	Negative		10-04-2020	Billing Question	Delhi	Delhi	Call-Center	Above SLA	45	Delhi

This dataset needs to be cleaned and prepared to conduct the required analysis.

Defining the Metrics

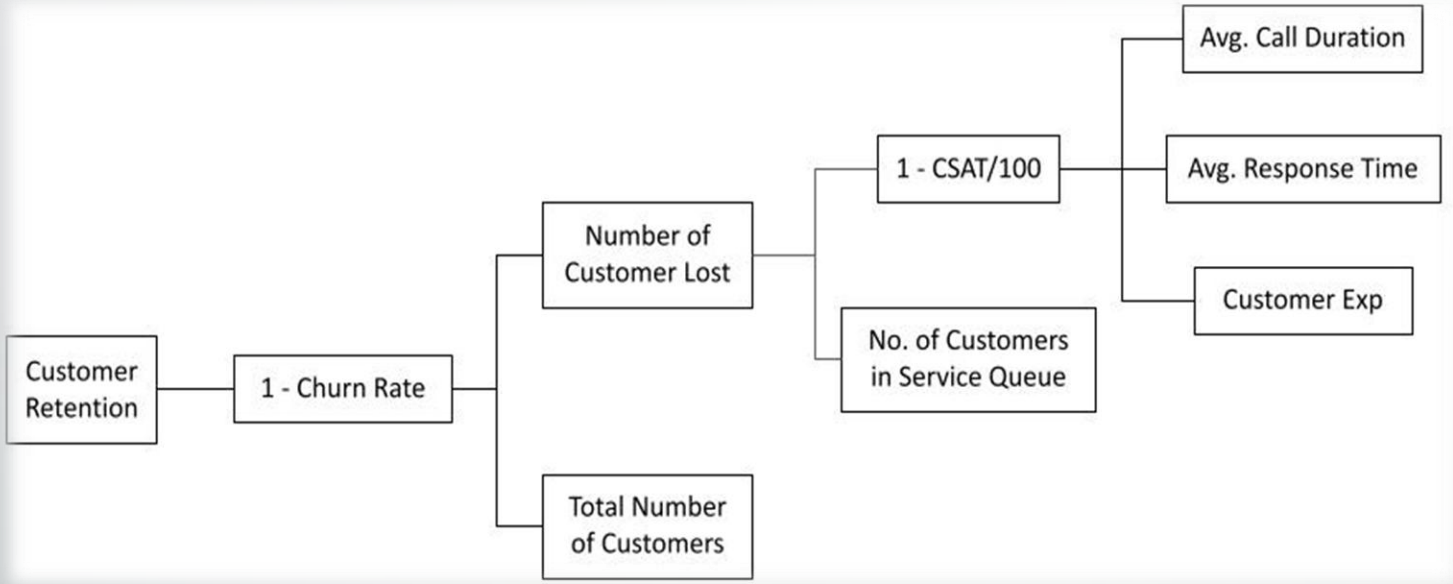
Since the goal is to analyse customer service operation and the aspects that can affect customer satisfaction and retention, below are some of the factors from customer service operation point of view that could impact/result in customer satisfaction or retention.

1) **Service Response Time** – Faster response improves customer experience.
2) **Issue Resolution** – Getting solution to the problem builds customer loyalty, trust and customer satisfaction (CSAT).

Hence improving on Service Response Time and Customer Satisfaction (CSAT) can help with customer retention.

Building Metric Tree

Metric Tree helps in understanding how different aspect of the process are linked with each other and help us in carrying out analysis accordingly.



This metric tree indicates that in order to improve customer retention we need to focus on improving metrices like average call duration, response time, customer experience or the satisfaction which is CSAT.

Hence, below are some metrics that we can work on:

1) **CSAT** – Measuring how satisfied customers are from the service being received by them.
2) **Call Duration** – How long it took for customer concern to be resolved.
3) **Percentage of issues resolved** under/within SLA time.

Formulating and Testing Hypothesis

Since now we know the metrics to focus on, we can now build hypothesis to check and analyse during EDA. Below are some Hypothesis formulated and need to be tested:

1) Issue Type (Billing Questions, Payments, Service Outrage) , CSAT score
    1.1) Particular type of issue is reported more compared to other type of issues leading to lower average CSAT score.
2) Call centres, CSAT Score, Call Duration
    2.1) Certain call centres have lower CSAT score compared to other call centres
    2.2) Call centres with higher response time have lower CSAT score
    2.3) Call centres with higher traffic have lower CSAT score
3) Location, CSAT Score
    3.1) Customers at certain locations face more issues compared to other locations resulting in lower CSAT score
    3.2) Locations with high issue reporting are causing increased pressure on call centres, resulting in poorer service quality.
4) Support Channel, CSAT score
    4.1) Certain support channel is frequently used and is more effective compared to other channels
    4.2) Effectiveness of different support channels varies by call centre, impacting overall CSAT scores.
5) Weekdays, CSAT Score
    5.1) There are specific days of week when the number of issues reported is significantly higher, impacting CSAT scores.

These hypothesis now need to be tested using the cleaned dataset.

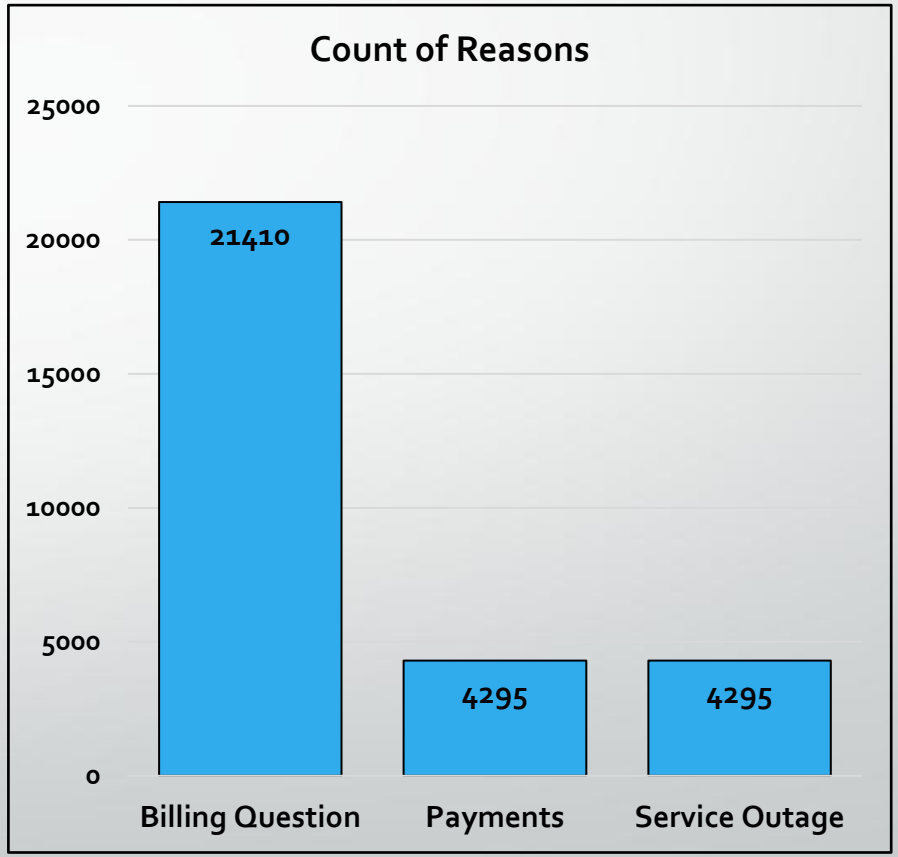
H1 – Issue Type

Hypothesis 1.1 - Particular type of issue is reported more compared to other type of issues leading to lower average CSAT score.

Reason	Average of csat_score_imputed
Billing Question	5.57
Payments	5.55
Service Outage	5.57

Analysis:
Bar Chart shows that Billing related issues are highest among all the issue types. Average CSAT score for billing issues is better than Payment related issues but Payment related issues are not as much in number compared to billing.

Conclusion:
In order to improve overall CSAT, customer service for Billing related issues need to be improved.



H2 – Call Center

Hypothesis 2.1 - Certain call centers have lower CSAT score compared to other call centers.

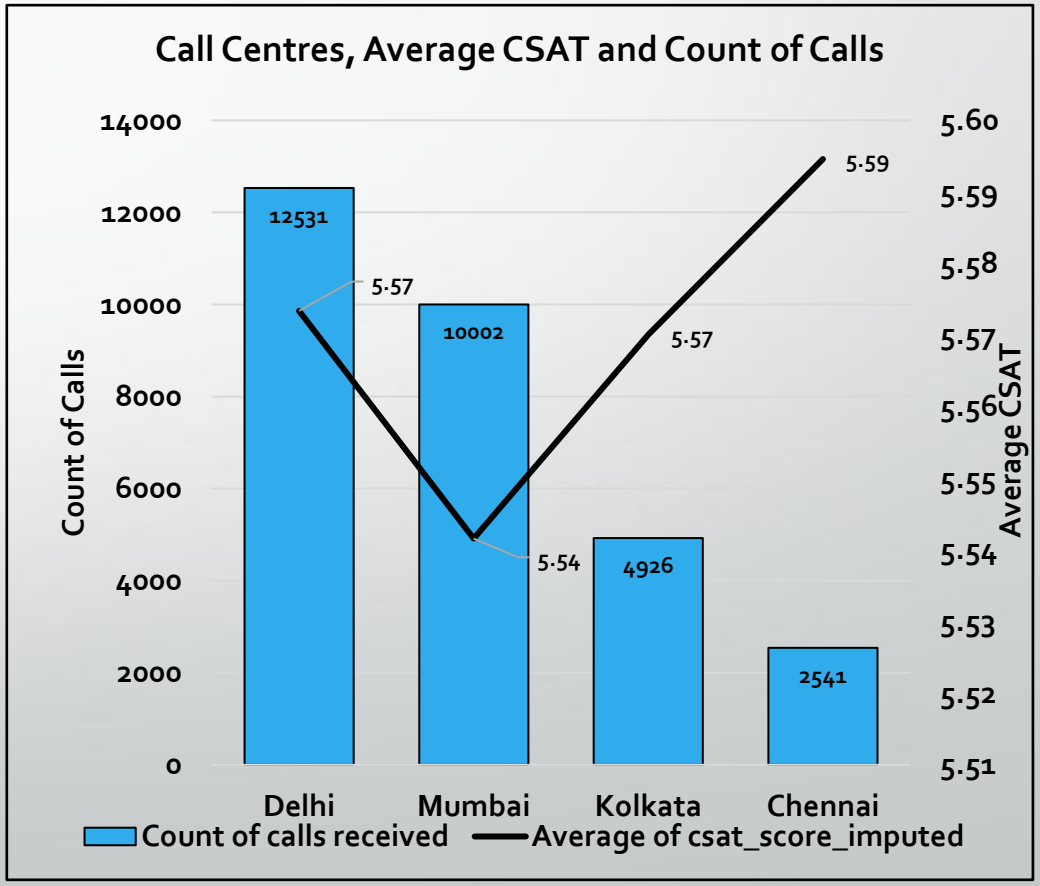
Hypothesis 2.3 - Call centers with higher traffic have lower CSAT score.

Analysis:

Combination of Bar chart representing count of call received by a call center and Line chart representing the average CSAT per call center show that the Delhi call center receives highest number of calls followed by Mumbai with send highest count of calls. Delhi with an avg CSAT of 5.57 despite having higher pressure compared to Mumbai is able to perform better than Mumbai having an avg CSAT of 5.54. Kolkata and Chennai on other hand handle only half the number of issues handled by Mumbai or Delhi and are also performing better compared to Delhi and Mumbai depicting that both Kolkata and Chennai can handle more issues.

Conclusion:

In order to improve CSAT for Mumbai either service needs to be improved or call pressure needs to be reduced by diverting the issues towards Kolkata or Chennai call centers.

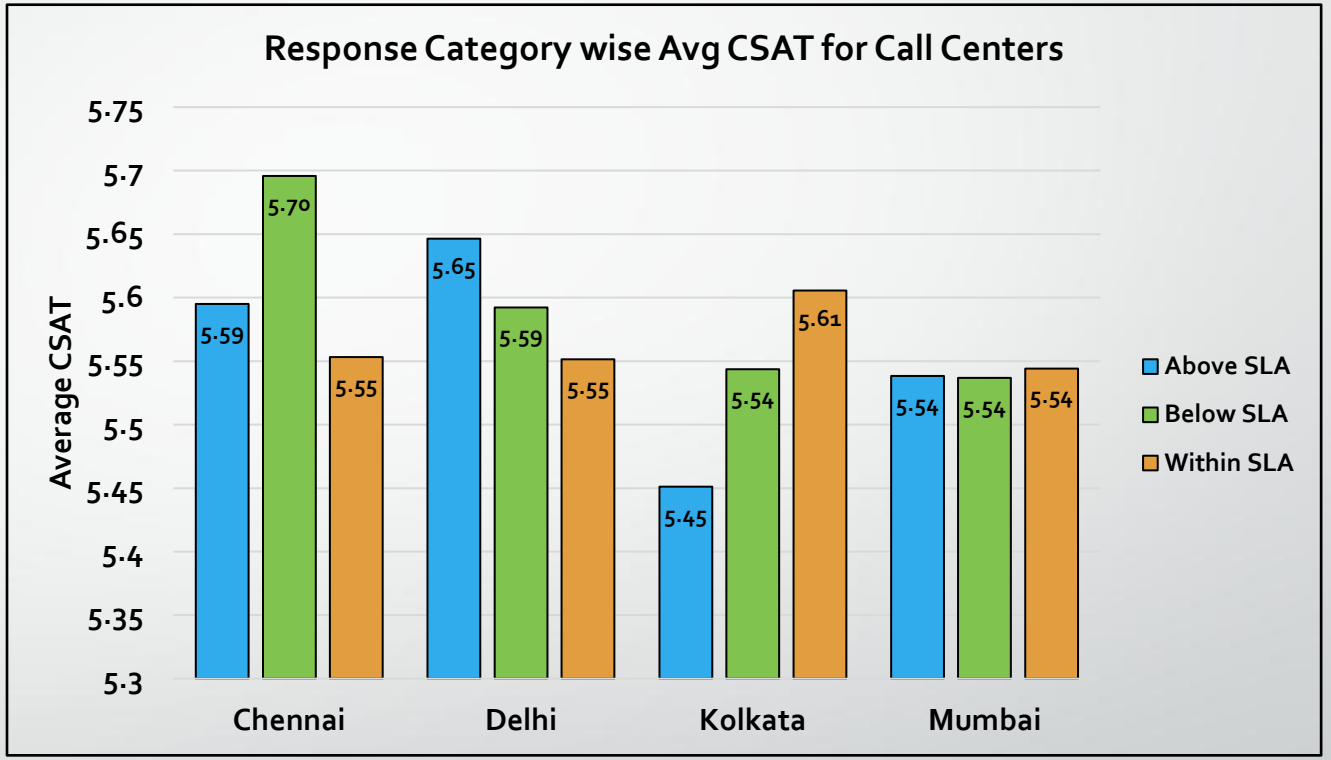


H2 – Call Center

Hypothesis 2.2 - Call centers with higher response time have lower CSAT score.

Analysis:
It can be observed from table the average CSAT for call centers for different response categories. No conclusive difference can be observed for avg CSAT for different response categories.

Conclusion:
The analysis does not reveal any conclusive difference in response categories; however, Mumbai is seen to perform consistently poor for all three response categories.

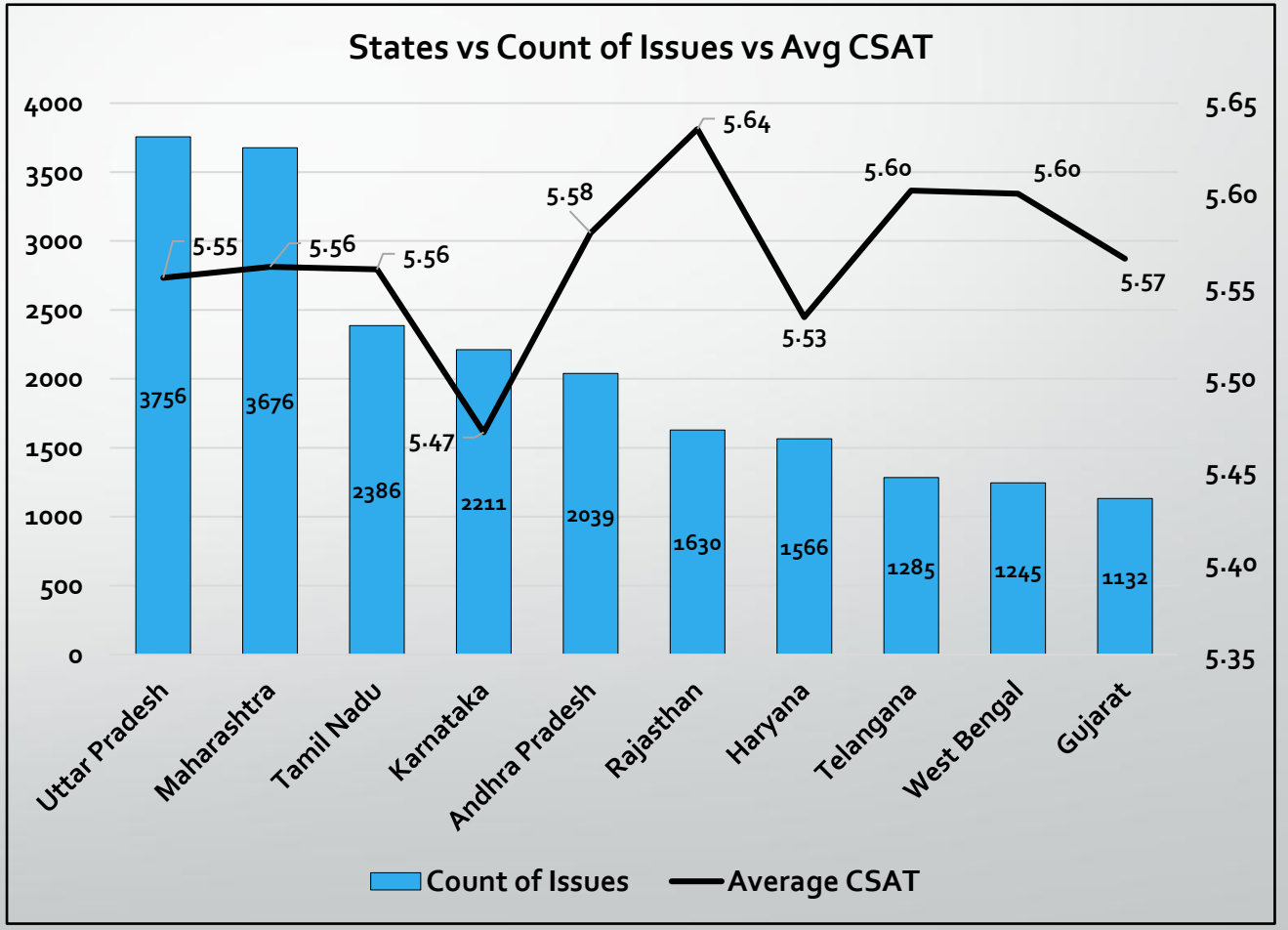


H3 – Location

Hypothesis 3.1 - Customers at certain locations face more issues compared to other locations resulting in lower CSAT score.

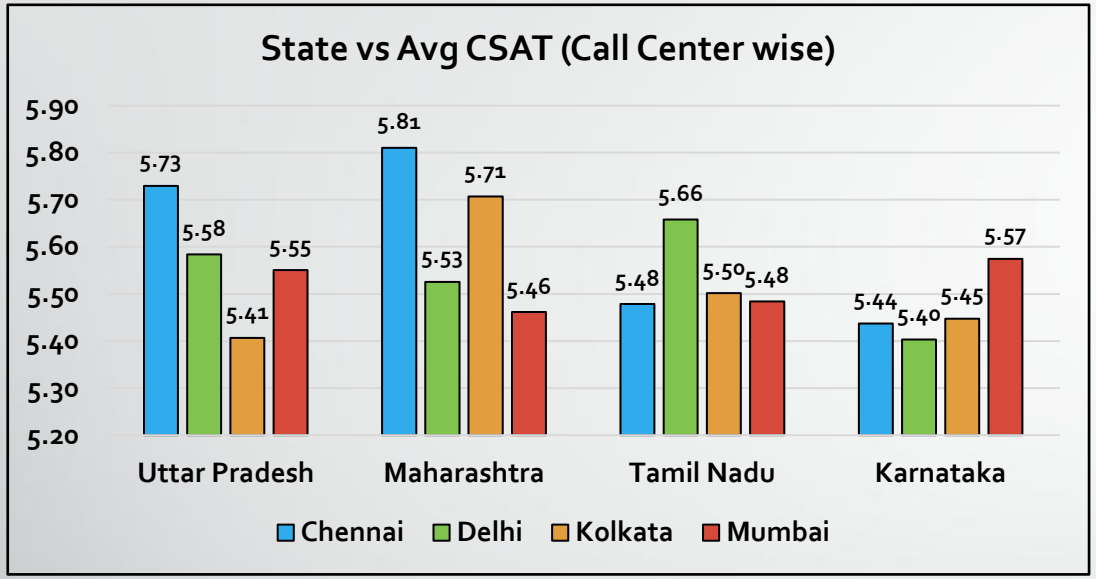
Analysis:
Above table shows top 10 states on the basis of number of issues being reported from that state. UP tops with 3756 issues followed by Maharashtra with 3676, TN with 2386, Karnataka with 2211 and so on with Gujarat at 10 position with 1132 issues. Graph shows variation in avg CSAT for above given states. It is observed that avg CSAT for states with higher number of issues is comparatively lower than states with lesser number of issue.

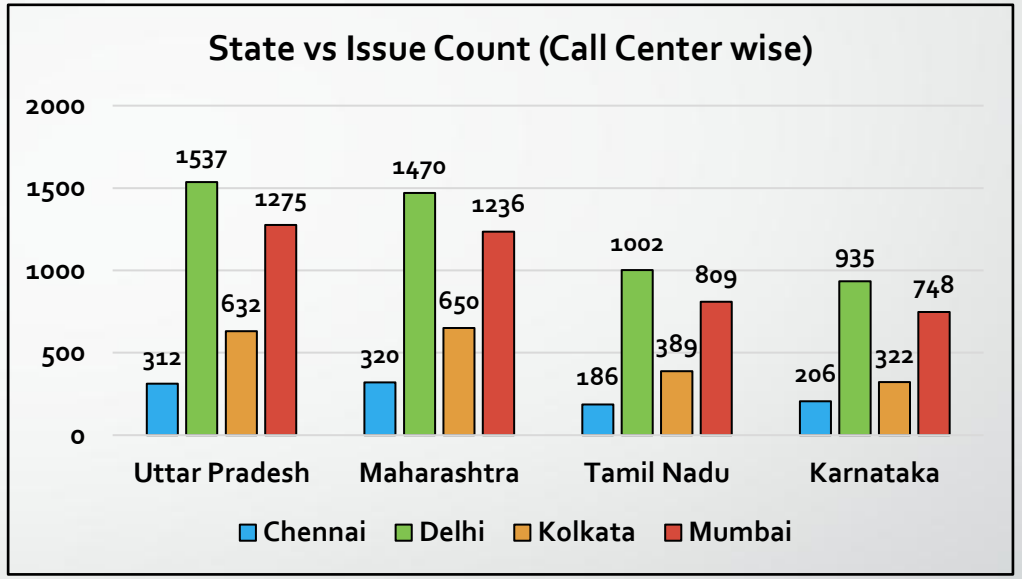
Conclusion:
Services for the issues being reported from states like UP, Maharashtra, TN and Karnataka need to be improved. These locations also need further investigation to lower the amount of issue being reported in order to improve CSAT.



H3 – Location

Hypothesis 3.2 - Locations with high issue reporting are causing increased pressure on call centers, resulting in poorer service quality.





Analysis:
Above tables show top 4 States on the basis of number of issues being reported and call center wise count of issues and avg CSAT. It is evident from the graphs that Delhi and Mumbai call centers handle higher number of issue compared to other call centers and they also tend to have lower avg CSAT score.

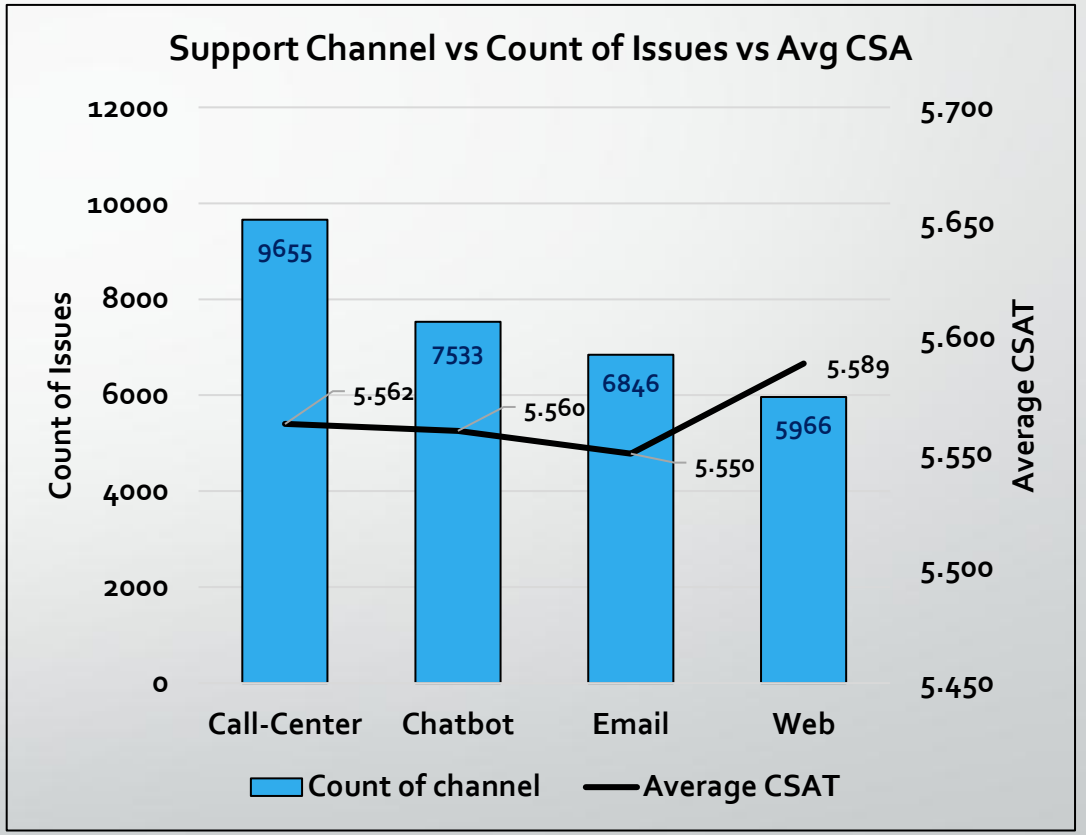
Conclusion:
Above analysis concludes that location with high issues increase pressure on call centers resulting in poor customer service eventually impacting the overall CSAT.

H4 – Support Channel

Hypothesis 4.1 - Certain support channel is frequently used and is more effective compared to other channels.

Analysis:
Graph shows that call center is most frequently used support channel with 9655 issues resolved through call center, followed by chatbot with 7533 issues, Email with 6846 and web as last with 5966. But web has the highest average CSAT among all the channels. Also, there isn't significant difference among the CSAT scores for these channels.

Conclusion:
Call center is the most frequently used channel but we cannot conclude about its effectiveness as it doesn't have the highest CSAT and might depend on other factors hence it requires further investigation.

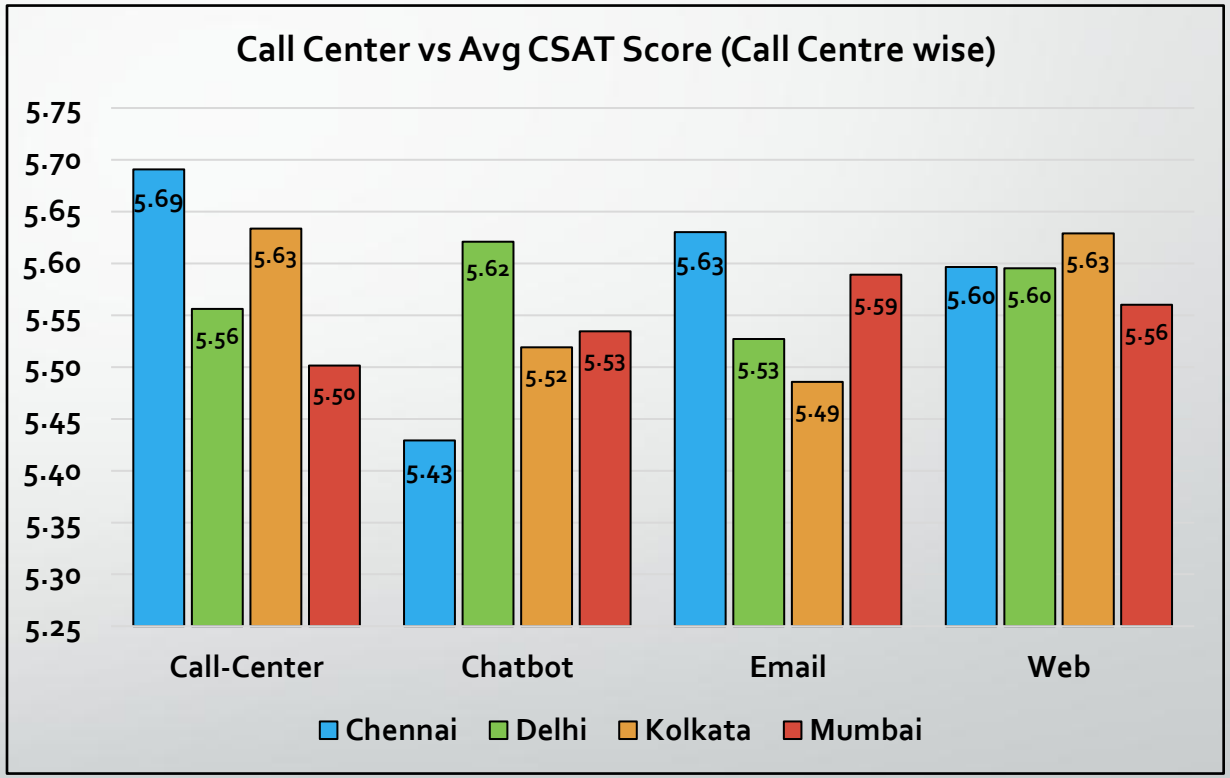


H4 – Support Channel

Hypothesis 4.2 - Effectiveness of different support channels varies by call center, impacting overall CSAT scores.

Analysis:
It can be observed from above table that the average CSAT score varies largely for a support channel for different call centers. Like call center as a support channel has best avg CSAT score for Chennai call center while it is worst for Mumbai. Chat bot on other hand is able to perform best in Delhi and worst for Chennai and so on.

Conclusion:
It can be concluded from above analysis that effectiveness of support channels varies according to call center impact CSAT score.



H5 – Weekdays

Hypothesis 5.1 - There are specific days of week when the number of issues reported is significantly higher, impacting CSAT scores.

Weekdays	Percentage of issues reported	Average CSAT
Friday	20%	5.55
Thursday	17%	5.57
Tuesday	16%	5.57
Wednesday	14%	5.65
Monday	13%	5.49
Saturday	10%	5.54
Sunday	10%	5.57

Analysis:
Pie chart shows that about 20% of total issues are reported on Friday which is the highest, 17% on Thursday and 16% on Tuesday. Also, Monday, Saturday and Friday have lower CSAT scores.

Conclusion:
The numbers tell that most people might prefer reporting the issues towards the end of week like on Fridays. Also, services need improvement on days like Mondays, Saturdays and Fridays.