

# New Wheels

SQL and Database Project Report

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# BUSINESS OVERVIEW



Total Revenue

**124.7M**



Total Orders

**1000**



Total  
Customers

**994**



Average Rating

**3.135**



Last Quarter  
Orders

**199**



Last Quarter  
Revenue

**23.3M**



Average  
Shipment  
Days

**98**



% Good and  
Very Good  
Feedback

**44.1%**

## CUSTOMER METRICS



## Distributions of customer across states

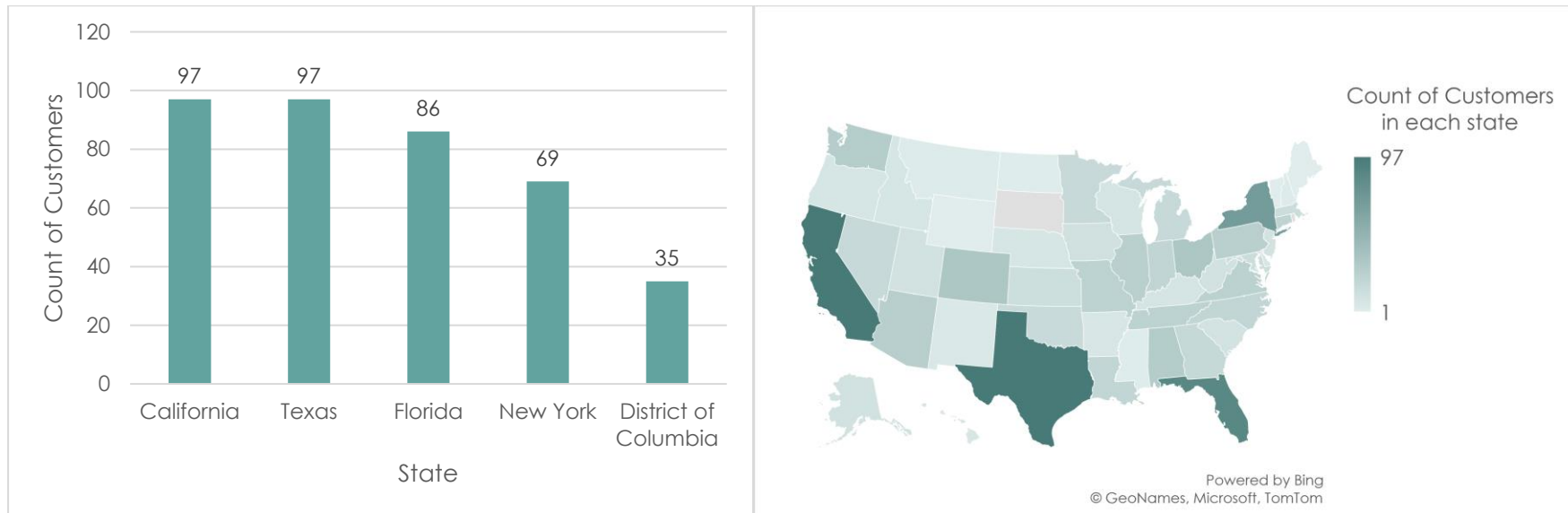


Figure 1: Distribution of Customers across states in the form of bar chart and on Map of United States of America

### 📌 Observations

- Top 5 states with maximum customers are California and Texas each having 97 customers, Florida has 86 customers, New York has 69 customers and District of Columbia has 35 customers.
- Maine, Wyoming and Vermont have the just 1 customer each
- 38.4% of the customers are coming from these 5 states.

## Average Customer rating by the quarter

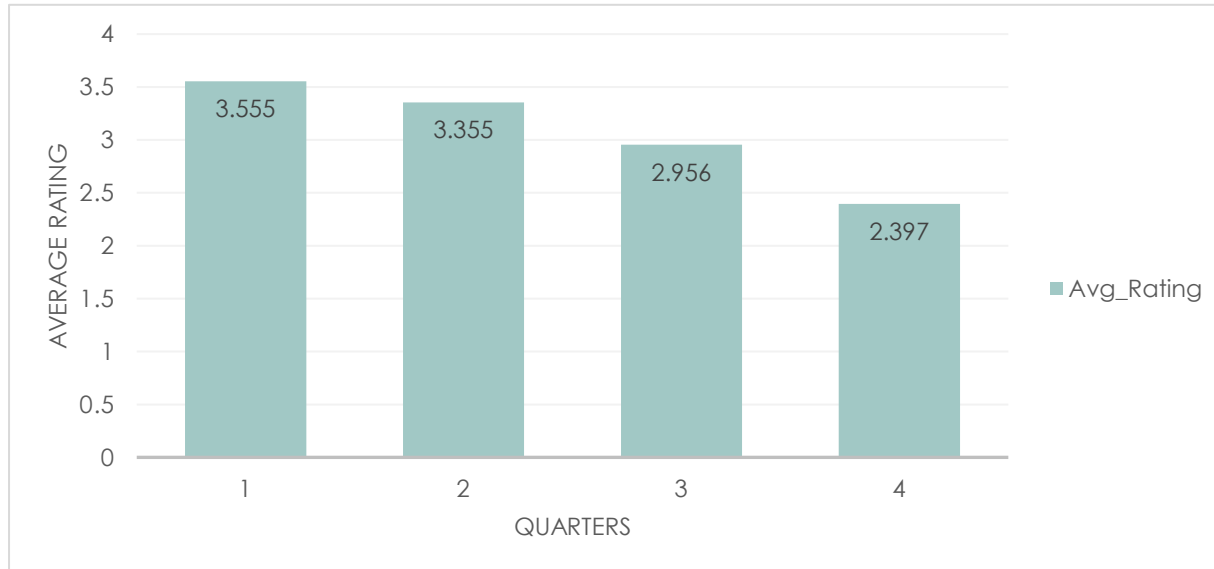


Figure 2: Average Customer Ratings by Quarter

### 📌 Observations

- Quarter 1 saw an average rating of 3.55
- Quarter 2 saw an average rating of 3.35
- Quarter 3 saw the average rating of 2.95
- Quarter 4 saw the average rating of 2.39
- Average customer rating has been declining quarter on quarter

## Observations

Quarter 1 30% of feedback was very good , 28.7% of feedback was good, 19.03 % feedback was Okay, 11.29% feedback was bad, 10.97% feedback was Very Bad

Quarter 2 28.63 % of feedback was very good , 22.14% of feedback was good, 20.23 % feedback was Okay, 14.12 % feedback was bad, 14.89% feedback was Very Bad

Quarter 3 16.59 % of feedback was very good ,20.96% of feedback was good,21.83 % feedback was Okay, 22.71% feedback was bad, 17.9% feedback was Very Bad

Quarter 4 10.05 % of feedback was very good ,10.05% of feedback was good,20.1 % feedback was Okay,29.15 % feedback was bad, 30.65 % feedback was Very Bad

Good and Very Good feedbacks % is declining whereas bad and Very Bad feedback % is increasing quarter on quarter . Okay feedback is averaging around 20%. There is increasing dissatisfaction among customers.

## Trend of Customer satisfaction



Figure 3: Percentage Feedback per quarter



## Top Vehicle makers preferred by the customers

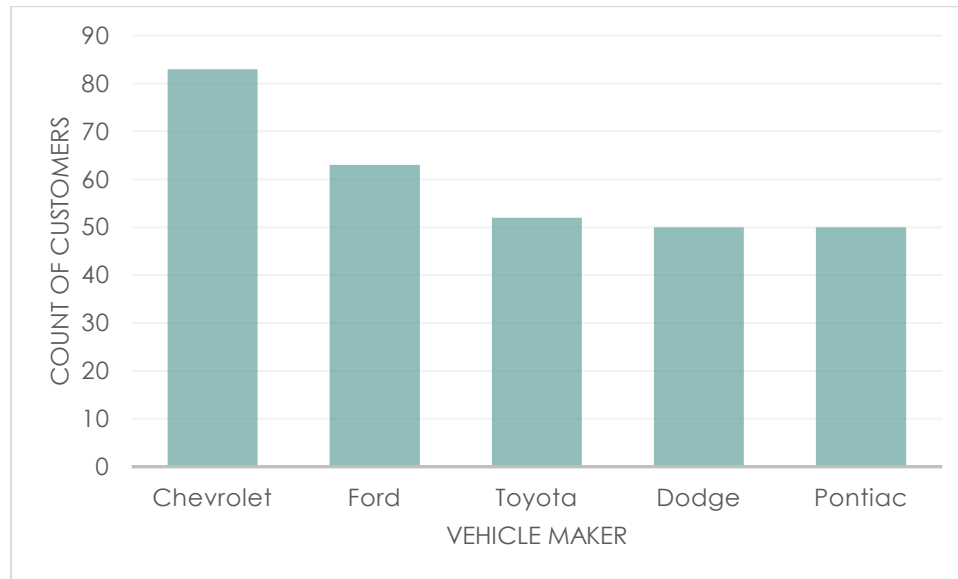


Figure 4: Top 5 vehicles preferred by the customers

### Observations

The Top 5 most preferred vehicle maker by the customers is Chevrolet, Ford, Toyota, Dodge and Pontiac .

Chevrolet is the most preferred maker with 83 customers , followed by Ford with 63, Toyota with 52, Dodge and Pontiac each with 50 customers .

These 5 car makers make up 30% of the total vehicle purchases

## Vehicle Maker preferred in each state

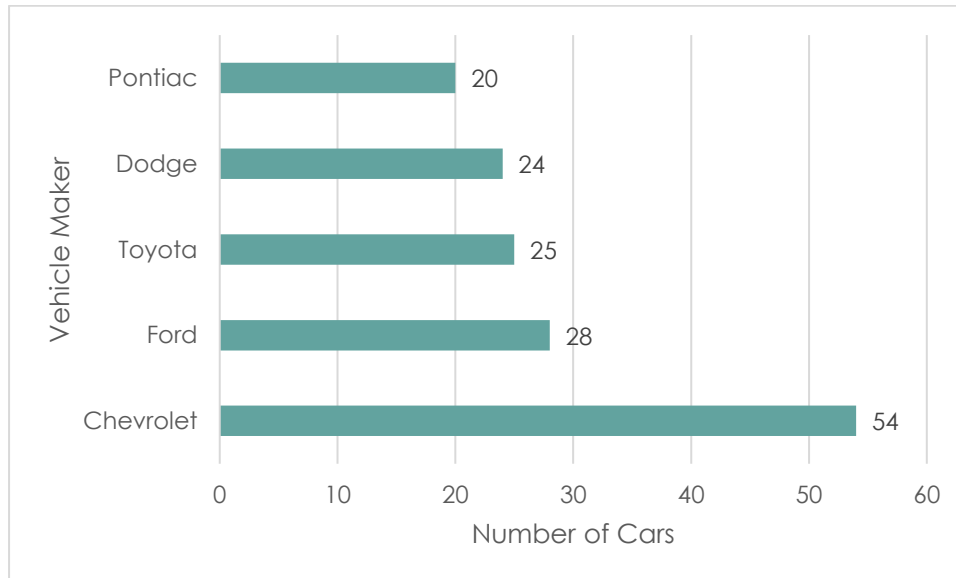


Figure 5: Most Preferred cars across all States

### Observations

Chevrolet is the most popular vehicle makers across all the states with a total of 54 orders. Followed by Ford with 28, Toyota with 25, Dodge with 24 and Pontiac with 20 orders.

State	Preferred Vehicle	Count of Vehicles
Texas	Chevrolet	9
Florida	Toyota	7
California	Ford, Dodge, Audi, Nissan, Chevrolet	6
Ohio	Chevrolet	6
Alabama	Dodge	5
Colorado	Chevrolet	5
Maryland	Ford	5
New York	Toyota, Pontiac	5
Virginia	Ford	5
Washington	Chevrolet	5
District of Columbia	Chevrolet	4
Indiana	Mazda	4
Missouri	Chevrolet	4
Arizona	Pontiac, Cadillac	3
Georgia	Toyota	3
Illinois	Ford, GMC, Chevrolet	3
Michigan	Ford	3
Minnesota	GMC	3
Nevada	Pontiac	3
North Carolina	Volvo	3
Pennsylvania	Toyota	3
Tennessee	Mazda	3
Alaska	Chevrolet	2
Connecticut	Chevrolet, Mercury, Maserati, Volvo	2
Delaware	Mitsubishi	2
Idaho	Dodge	2
Louisiana	BMW, Nissan, Ford, Pontiac, Kia	2
Massachusetts	Dodge, Chevrolet	2

### Observations

The table shows States and their preferred vehicle makers and count of those vehicles for each of the vehicle maker .

Chevrolet is having a maximum count followed by Ford, Toyota ,Dodge and Pontiac

Texas has the greatest number of the Chevrolet cars sold, Florida has the most Toyota's sold.

California has the most number of Ford's and Dodge's sold. New-York has the most Pontiac's sold

The top 5 vehicle makers are the most preferred in following States

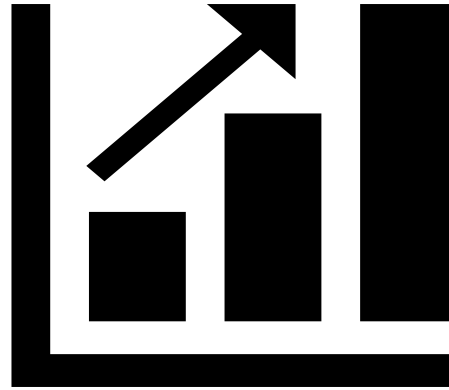
- Chevrolet: Texas, California, Ohio, Colorado, Washington, District of Columbia, Missouri, Illinois, Alaska, Connecticut, Massachusetts, Arkansas, Iowa, Montana, Nebraska, Utah, Wisconsin
- Ford: California, Illinois, Louisiana, Maryland, Iowa, Kansas, Hawaii Virginia ,North Dakota

New Jersey	Mercedes-Benz, Hyundai	2
New Mexico	Dodge	2
Oklahoma	Toyota, Ferrari, Mazda	2
Oregon	Toyota	2
West Virginia	Mercedes-Benz	2
Arkansas	Suzuki, Chevrolet, Pontiac, Volkswagen ,Mitsubishi	1
Arkansas	GMC	1
Hawaii	Ford, Toyota, Pontiac, Nissan, Cadillac, GMC	1
Iowa	Chrysler, Chevrolet, Hyundai, Isuzu, Dodge, Mazda, Porsche, Jeep, Ford, Pontiac, Subaru	1
Kansas	GMC, Lexus, Buick, Mercedes-Benz, Suzuki, Honda ,Dodge, Volkswagen, Ford, Mazda, Maserati, Nissan, Saab	1
Kentucky	Acura, Mercury, Audi, Ram, Volvo, Pontiac, Nissan, Mercedes-Benz	1
Maine	Mercedes-Benz	1
Mississippi	Dodge, Toyota	1
Montana	Chevrolet, Mitsubishi, Dodge	1
Nebraska	Chevrolet, Mercedes-Benz, Volkswagen, Nissan, Pontiac, Toyota, Cadillac	1
New Hampshire	Chrysler, Lincoln, Lexus	1
North Dakota	Hyundai, Ford	1
South Carolina	Acura, Buick, BMW, Kia, Mazda, Mitsubishi, Dodge, Jaguar, Isuzu	1
Utah	Maybach, Volkswagen, Isuzu, Subaru, Lincoln, Chevrolet, Oldsmobile, Pontiac, Dodge, Buick	1
Vermont	Mazda	1
Wisconsin	Pontiac, Chevrolet ,Acura, Mazda, Nissan, Cadillac, Dodge, Honda	1
Wyoming	Buick	1

Figure 6: Table of Count of Vehicle Makers alongside states

- Toyota: Florida, Georgia, New York, Oklahoma, Oregon, Hawaii, Pennsylvania, Mississippi ,Nebraska
- Dodge: Alabama, CA, Idaho, Massachusetts, New Mexico, Iowa, Kansas, Mississippi, Montana, South Carolina ,Utah, Wisconsin ,Louisiana, Nevada, Arizona, New York
- Pontiac: Wisconsin, Utah, Nebraska, Kentucky, Iowa, Arkansas

## REVENUE METRICS



## Trend of purchases by quarter

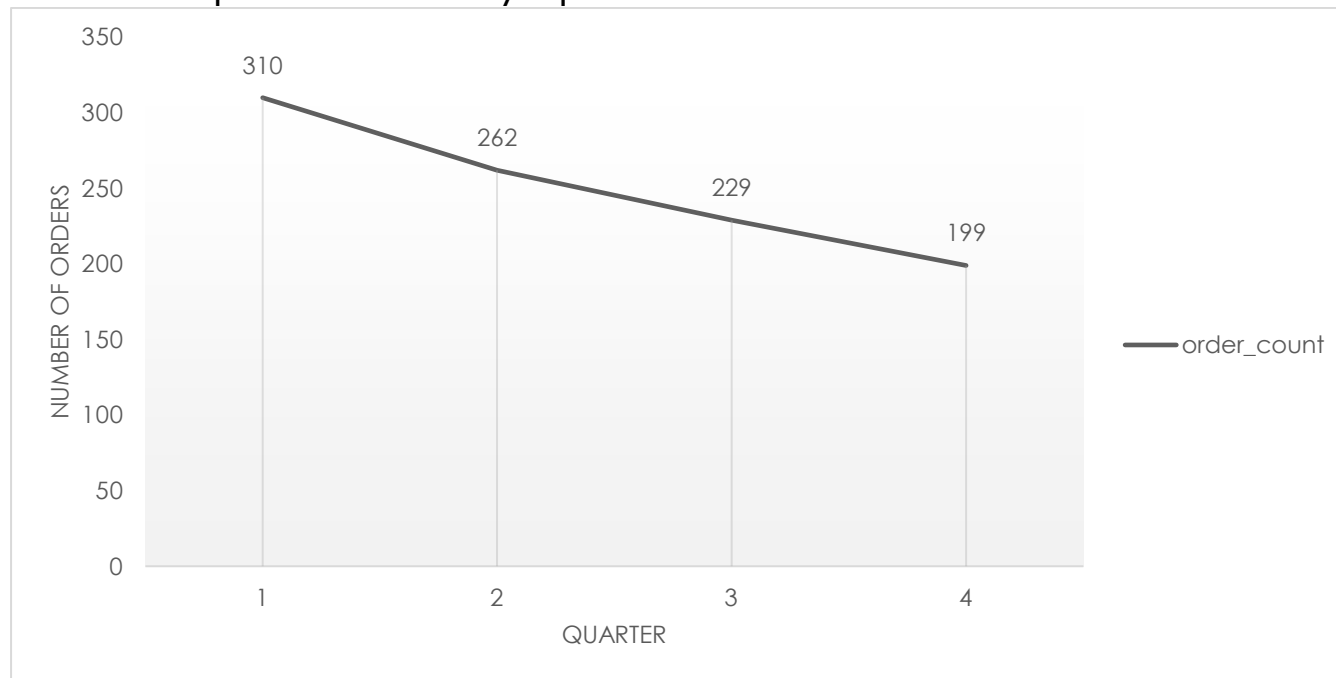


Figure 7: Orders Per Quarter



### Observations

- Orders in Quarter 1 is 310
- Orders in Quarter 2 is 262
- Orders in Quarter 3 is 229
- Orders in Quarter 4 is 199
- There is a steady decrease in the number of orders quarter on quarter .
- There is 35.8% decrease in orders in last quarter as compared to first quarter

## Quarter on Quarter % Change in Revenue

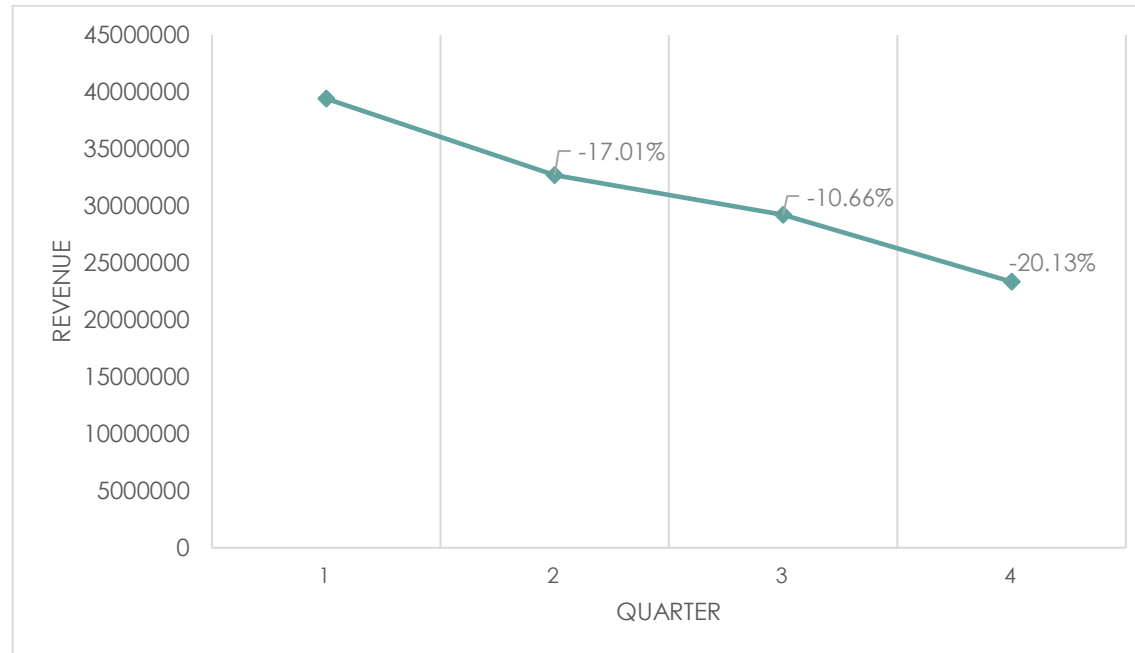


Figure 8: Percentage change in Revenue

### ✦ Observations

- Revenue in Quarter 1 is \$ 39.4 M
- Revenue in Quarter 2 is \$ 32.7M, 17.01 % less than previous quarter
- Revenue in Quarter 3 is \$ 29.2 M, 10.66 % less than previous quarter
- Revenue in Quarter 4 is \$ 23.3M, 20.13 % less than previous quarter
- There is a steady decrease in the Revenue quarter on quarter



### Observations

- Revenue in Quarter 1 is \$ 39.4 M with 310 orders
- Revenue in Quarter 2 is \$ 32.7M, 17.01 % less than previous quarter .
- Revenue in Quarter 3 is \$ 29.2 M, 10.66 % less than previous quarter
- Revenue in Quarter 4 is \$ 23.3M, 20.13 % less than previous quarter
- Orders in Quarter 1 is 310
- Orders in Quarter 2 is 262, 15.5% orders less than previous quarter
- Orders in Quarter 3 is 229, 12.6% orders less than previous quarter
- Orders in Quarter 4 is 199, 13% orders less than previous quarter
- There is a strong correlation between orders and revenue. As the numbers of orders are decreasing quarter on quarter ,revenue is also proportionally decreasing

## Trend of Revenue and orders by Quarter

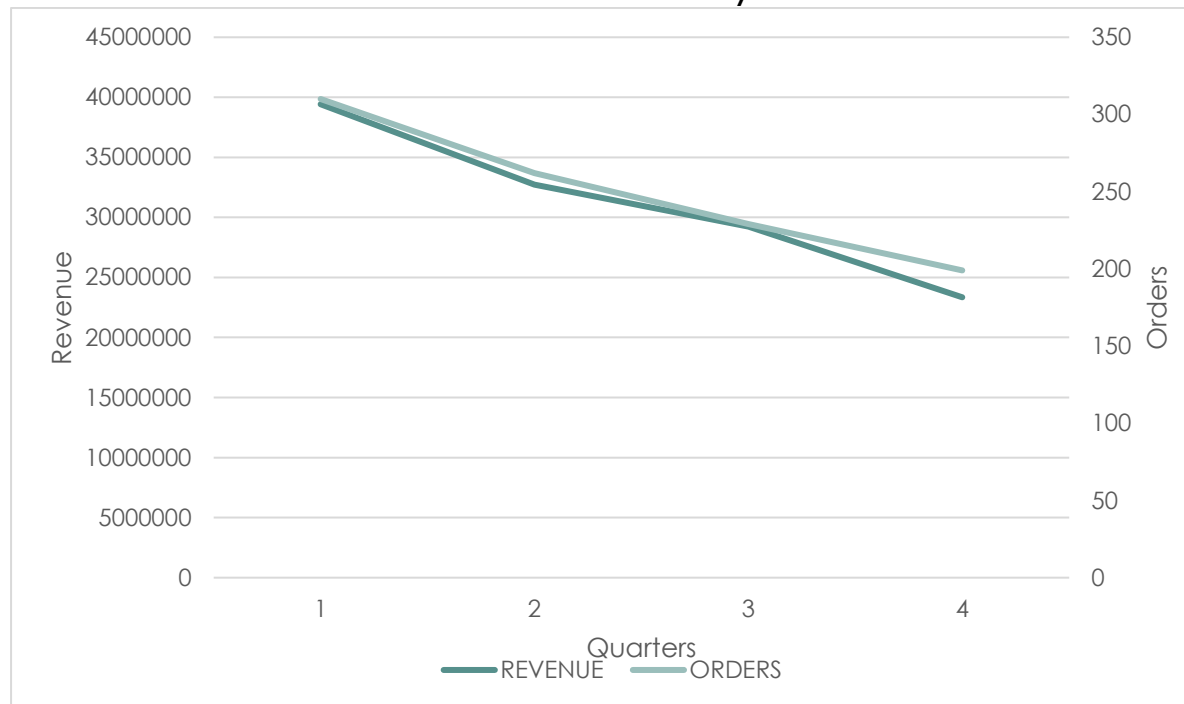


Figure 9: Revenue and Orders trends per Quarter



## SHIPPING METRICS



## Average discount offered by Credit card type

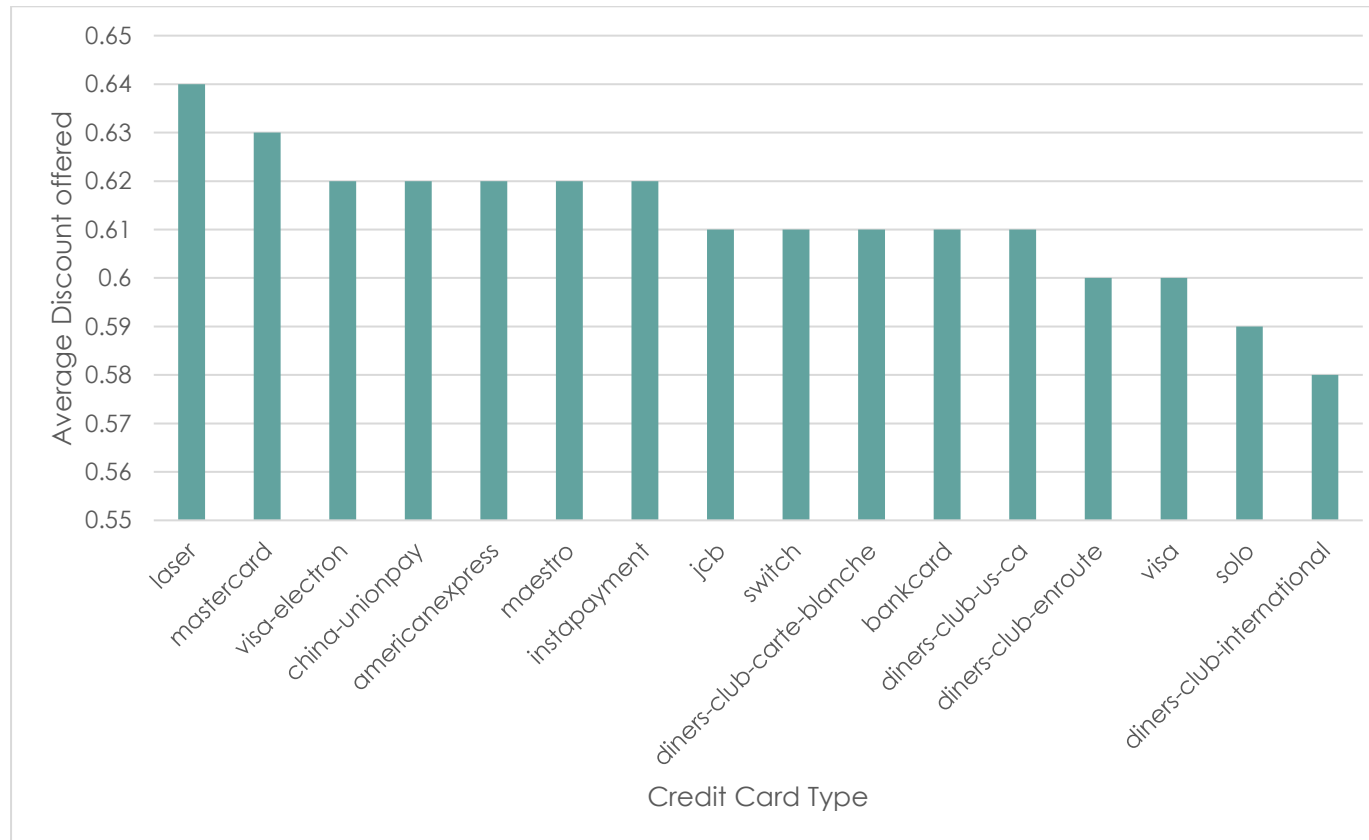


Figure 10: Discount offered by credit cards

### Observations

- The credit card discount ranges from 0.64% to 0.58%
- Laser Card type is offering the highest discount of 0.64%.
- Diners-club-international card is offering the lowest discount of 0.58%.

## Time taken to ship orders by Quarter

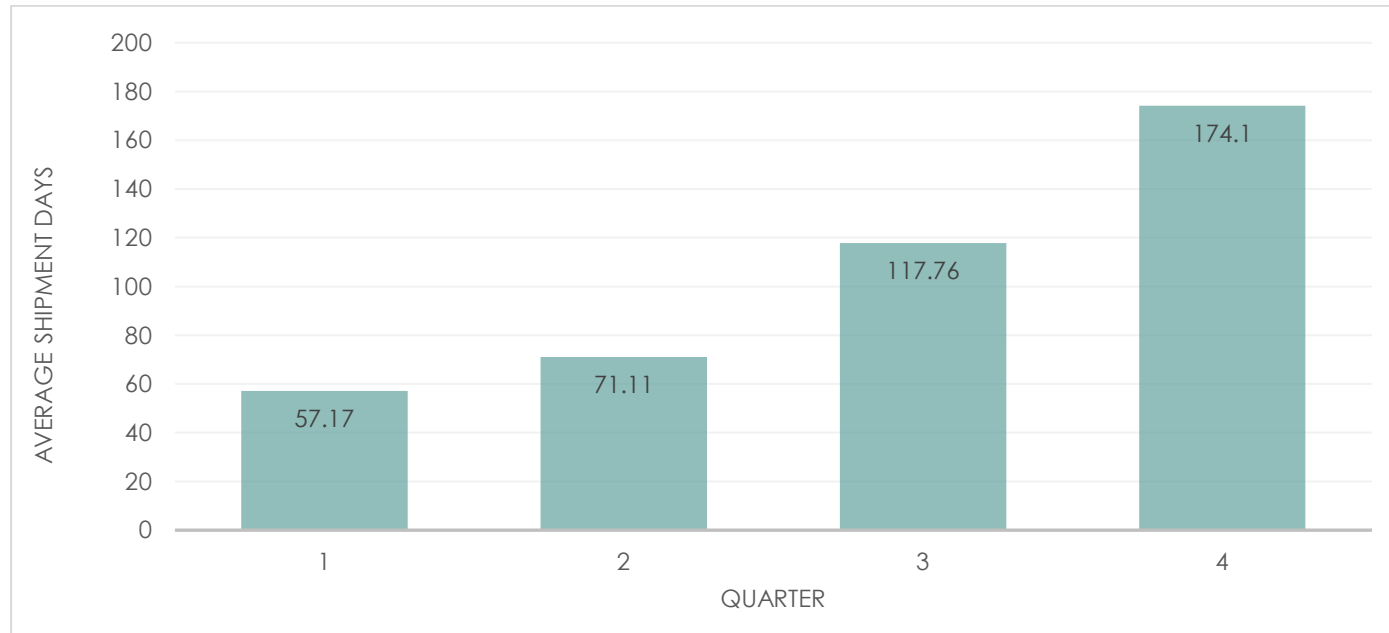


Figure 11: Shipment Days per quarter

### 📌 Observations

- In Quarter 1, time taken to ship orders is on an average 57 days.
- In Quarter 2, time taken to ship orders is on an average 71 days.
- In Quarter 3, time taken to ship orders is on an average 118 days.
- In Quarter 4, time taken to ship orders is on an average 174 days.
- Average days to ship is increasing quarter on quarter . The shipping time is doubled in the third quarter and tripled in the last quarter as compared to first quarter .



## Insights

- California, Texas, Florida is having the greatest number of orders . Some states like Maine, Vermont and Wyoming have just one order in the entire year .
- Chevrolet is most preferred car across all the states, followed by Ford, Toyota, Pontiac and Dodge.
- Customer satisfaction level is declining every quarter, reason could be delay in shipment, customer service, post-sales support, condition of the car etc
- Orders are declining quarter on quarter. Reasons could be preferred cars not available or the shipment taking very long.
- Revenue is declining quarter on quarter as a result of declining orders .
- Average customer Rating is declining every quarter, because customers are dissatisfied quarter on quarter which is also quite evident from the customer feedback which had more negative reviews than positive reviews as the quarter progressed.
- Time taken to ship orders is increasing quarter on quarter, reasons could be short supply of vehicles in demand, longer distances to be covered by shipment companies by truck, Shipment companies not having enough transport vehicles, vehicles getting damaged during transport etc .



## Recommendations

- The company must tie up with shipment companies that offer faster and efficient deliveries. Availability of the preferred vehicles locally will cut down delays in delivery .
- Customers satisfaction is declining quarter on quarter , reasons could be preferred vehicle not in stock, delay in shipment or pricing of the vehicles or the condition of the vehicles, after sales support and services not being good etc , So proper feedback mechanism has to be devised to work on the suggestions provided by the customers to improve sales.
- Some cars are more in demand than others . So, procuring more cars that are in great demand might improve the number of orders .
- Sales are coming majorly from few states. Strategies to increase sales in other states should be devised .Having company presence in other states might attract more customers and also reduce shipment delays. Promotion campaigns to attract customers from other states to be devised.
- Company must tie up with more finance companies offering attractive credit card rates to attract more customers.
- Increasing online presence by running interesting Ad-campaigns to attract more customers from all over US .