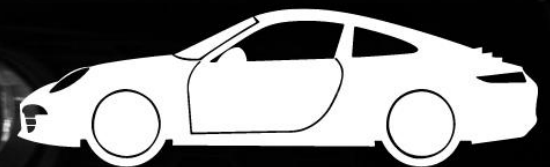


- 
- Best Selling Vehicles
  - True Value - Buy / Sell
  - Quality Customer Support



*New Wheels*

# ***New-Wheels***

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A vehicle resale company

Quarterly Business Report  
January 2023  
Roman Kharchenko

# Business Overview

Total Revenue

125.48 M

Total Orders

1000

Total Customers

994

Average Rating

3.07

Last Quarter Revenue

23.35 M

Last Quarter Orders

199

Average Days To Ship

105

% Of Good Feedback

44.1

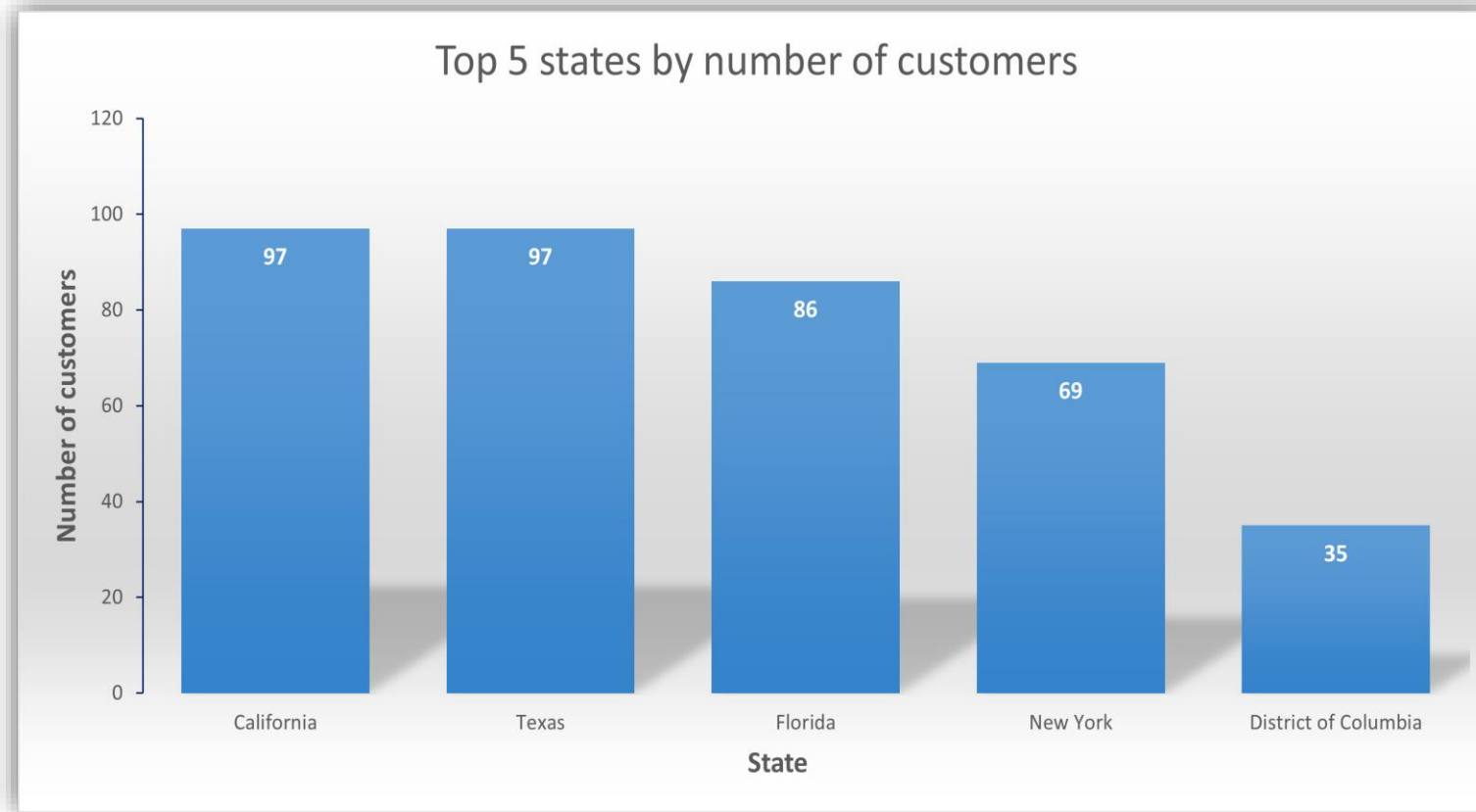
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# **Customer Metrics**

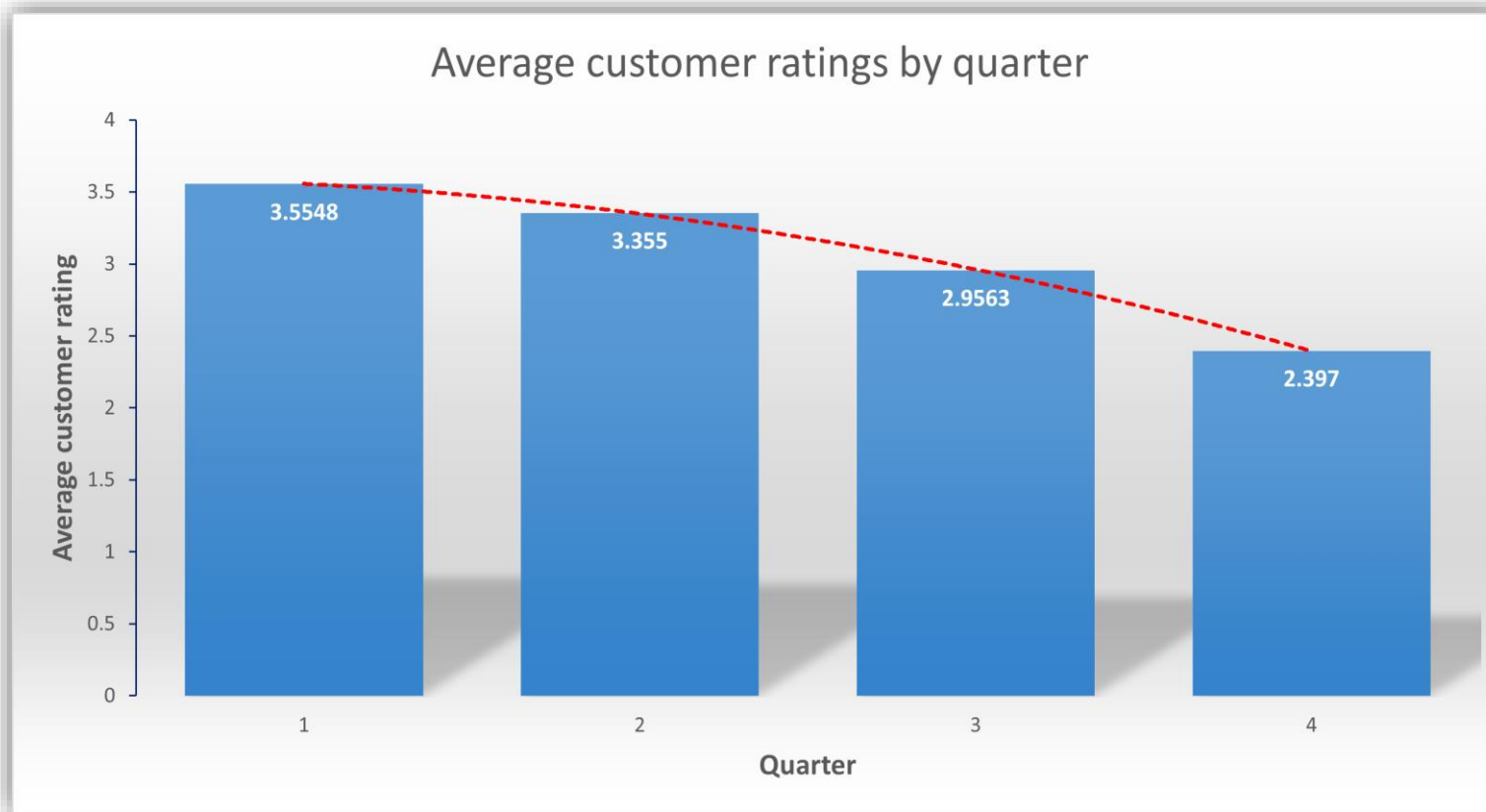
# Distribution of Customers across States



## Observations / Findings

- The 4 states, where the company's services are most in demand, have about 70-100 customers each.
- And this is twice or more than the number of customers in other states.
- With 994 customers overall, California and Texas have almost 10% of the total customers each.

## Average Customers Ratings by Quarter



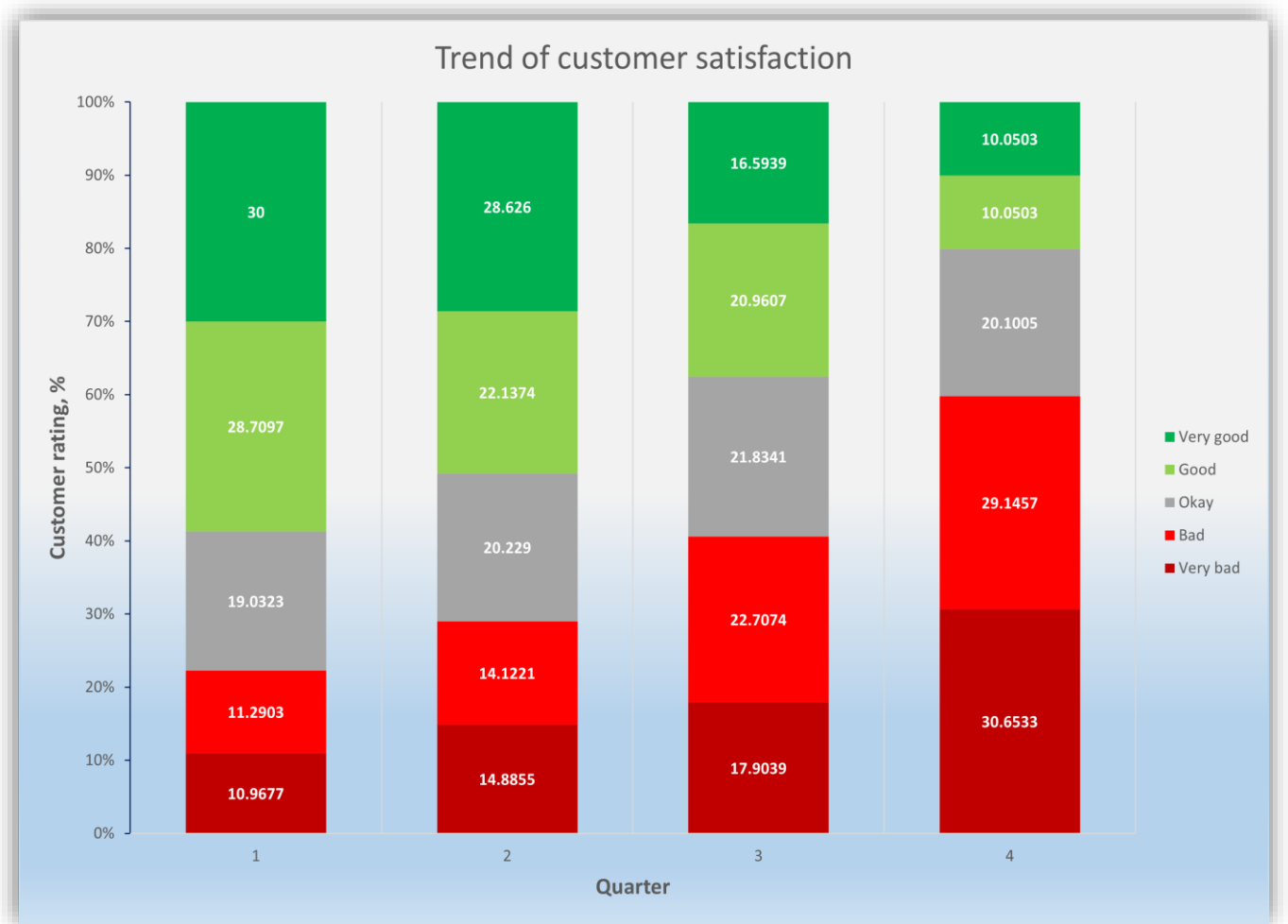
### Observations / Findings

- It can be observed that gradually, from Q1 to Q4, the average customer feedback rating decreases.
- This indicates a significant increase in negative customer feedbacks.
- In the Q4, the number of negative feedbacks is so high that the average rating drops to a low value, given the scale from 1 to 5.

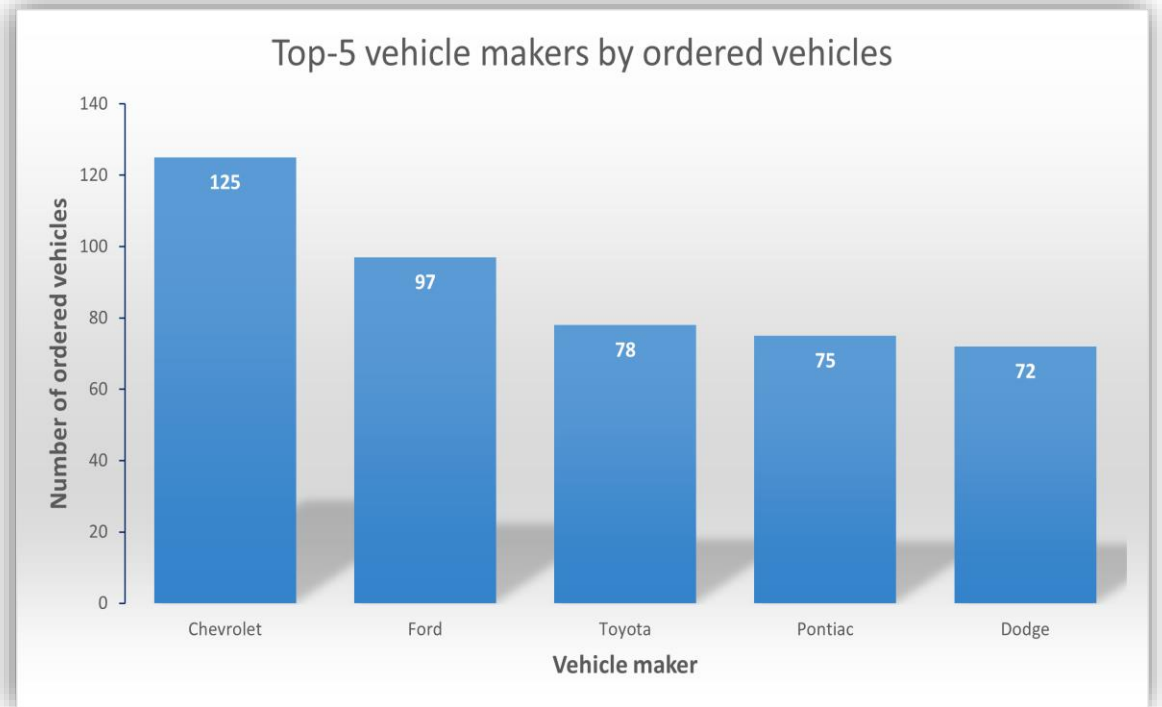
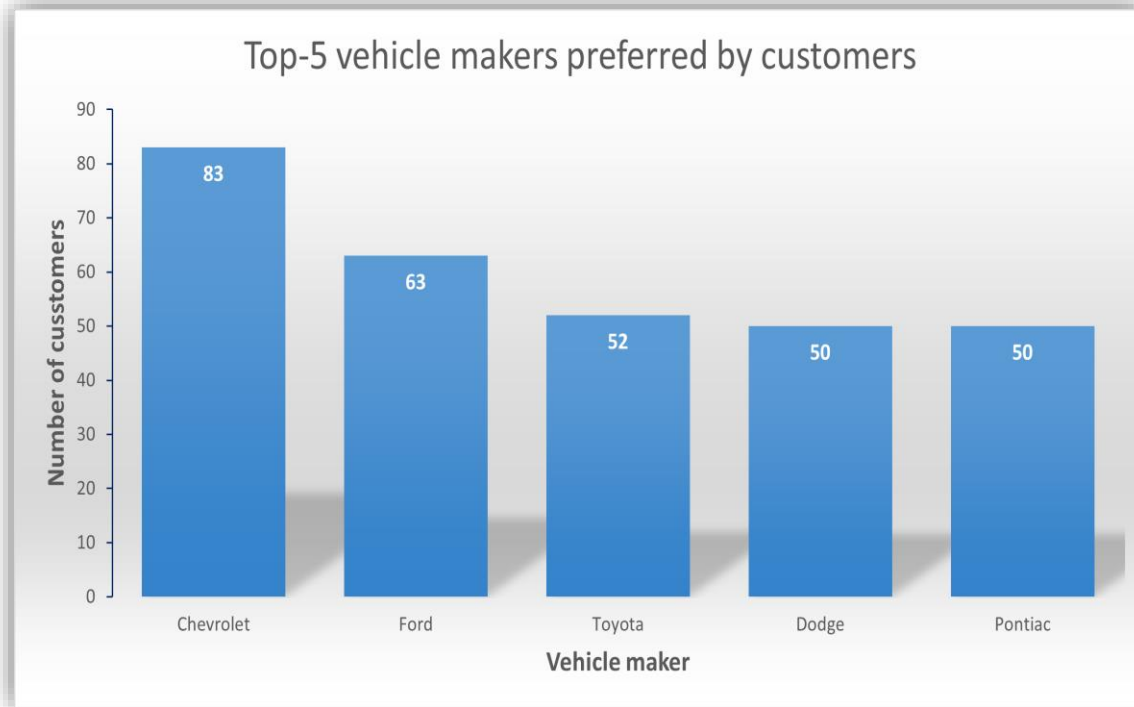
# Trend of Customer Satisfaction

## Observations / Findings

- It can be observed that over the course of the year, customers become more and more dissatisfied.
- The number of positive feedbacks decreases by about 3 times, and the number of negative feedbacks, respectively, increases in the same amount.
- The annual trend of negative feedbacks is constantly growing, which indicates a general trend, not isolated cases.
- The customer's rating of "Okay" remains almost at the same level across the year.



# Top-5 Vehicle Makers Preferred by Customers and by Ordered Vehicles



## Observations / Findings

- It can be observed that the top 5 vehicle makers together have about 30% of the total number of customers.
- And these same makers maintain their positions both in terms of the number of customers and the number of ordered cars.
- Chevrolet, Ford, and Toyota are the top three.



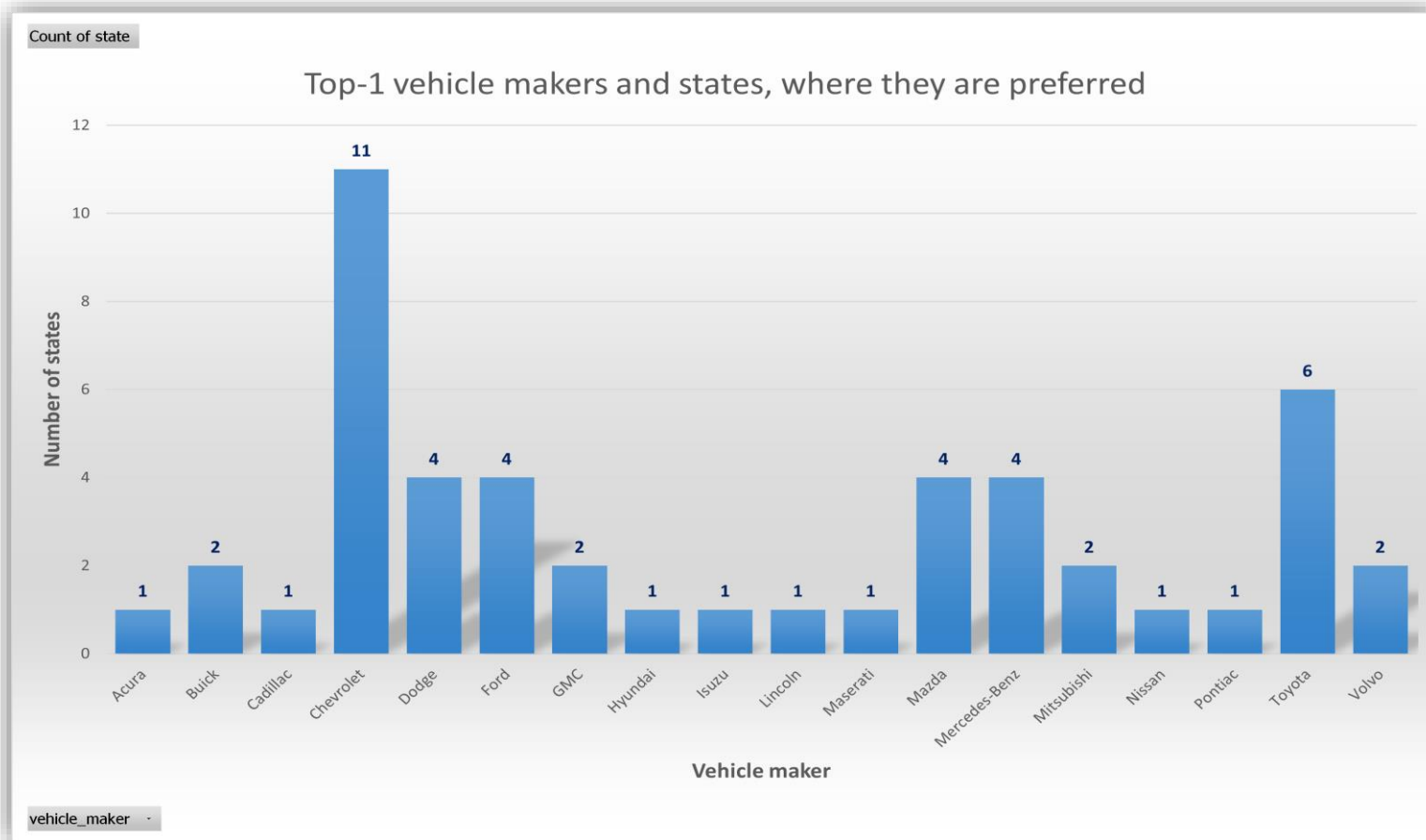
## Most preferred Vehicle Maker in Each State

State	Vehicle maker
Alabama	Dodge
Alaska	Chevrolet
Arizona	Cadillac
Arkansas	GMC
California	Chevrolet
Colorado	Chevrolet
Connecticut	Volvo
Delaware	Mitsubishi
District of Columbia	Chevrolet
Florida	Toyota
Georgia	Toyota
Hawaii	Ford
Idaho	Dodge
Illinois	Chevrolet
Indiana	Mazda
Iowa	Isuzu

State	Vehicle maker
Kansas	Maserati
Kentucky	Acura
Louisiana	Nissan
Maine	Mercedes-Benz
Maryland	Ford
Massachusetts	Chevrolet
Michigan	Ford
Minnesota	GMC
Mississippi	Toyota
Missouri	Chevrolet
Montana	Chevrolet
Nebraska	Mercedes-Benz
Nevada	Pontiac
New Hampshire	Lincoln
New Jersey	Mercedes-Benz
New Mexico	Dodge
New York	Toyota

State	Vehicle maker
North Carolina	Volvo
North Dakota	Hyundai
Ohio	Chevrolet
Oklahoma	Mazda
Oregon	Toyota
Pennsylvania	Toyota
South Carolina	Mitsubishi
Tennessee	Mazda
Texas	Chevrolet
Utah	Buick
Vermont	Mazda
Virginia	Ford
Washington	Chevrolet
West Virginia	Mercedes-Benz
Wisconsin	Dodge
Wyoming	Buick

# Most preferred Vehicle Maker in Each State



## Observations / Findings

- In more than 22% of states, Chevrolet is the most preferred vehicle maker.
- Toyota is in 2nd place in terms of preference, quite far behind Chevrolet.

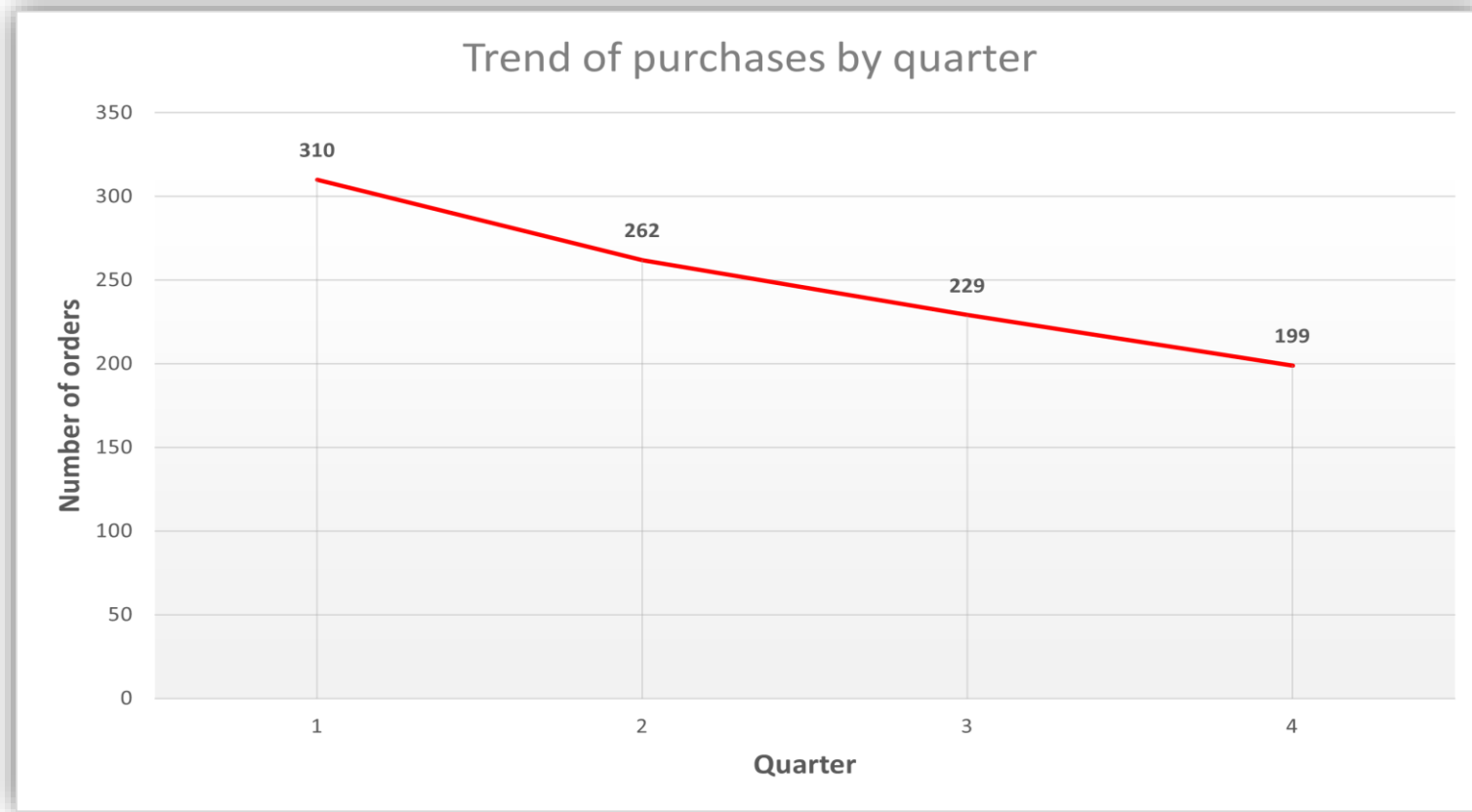
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# **Revenue Metrics**

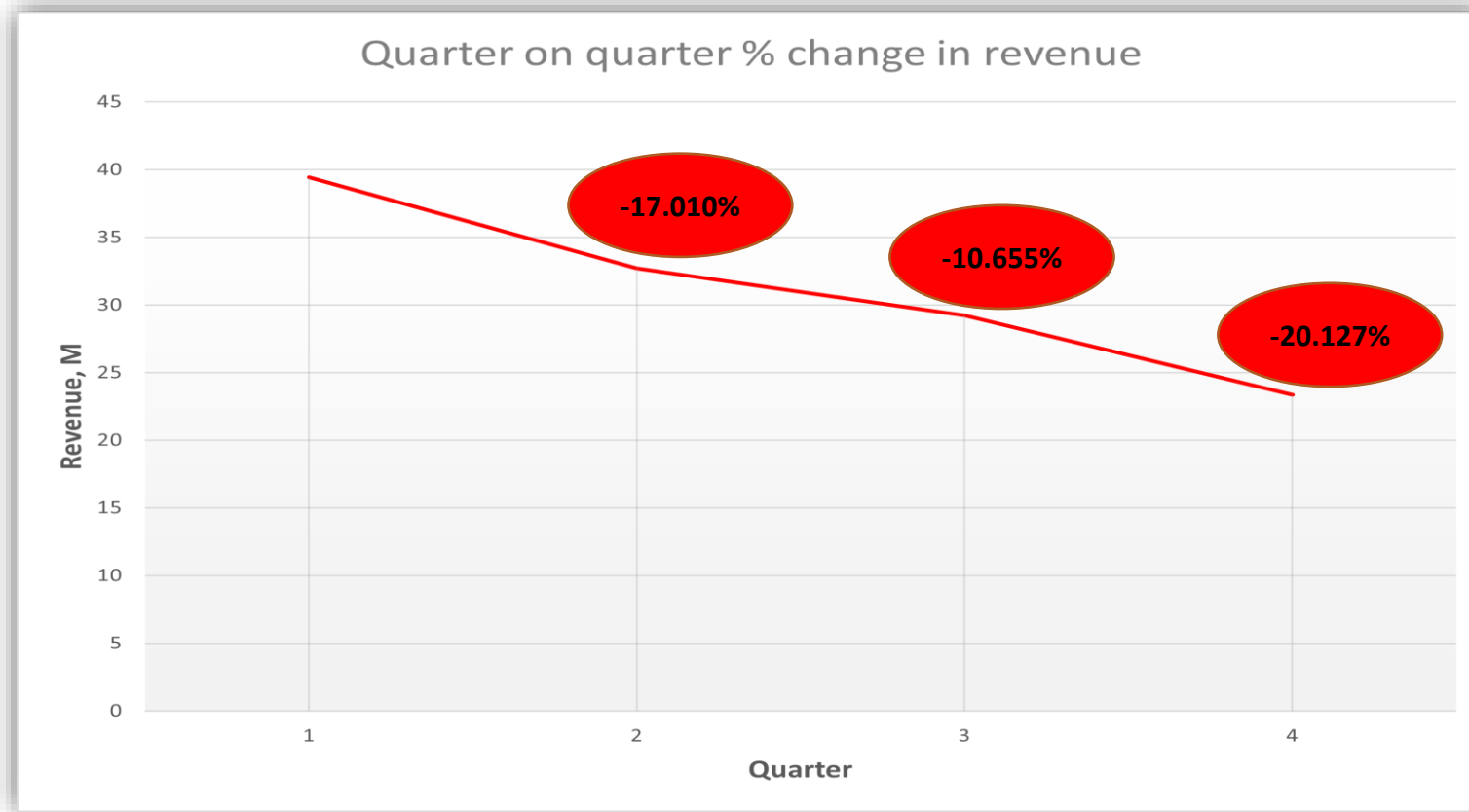
# Purchases across the Year



## Observations / Findings

- It has been discovered that the number of purchases (orders) decreases from Q1 to Q4.
- Moreover, this trend of decreasing the number of orders is constantly falling.
- Comparing the Q1 and Q4, the drop in purchases is more than 35%.

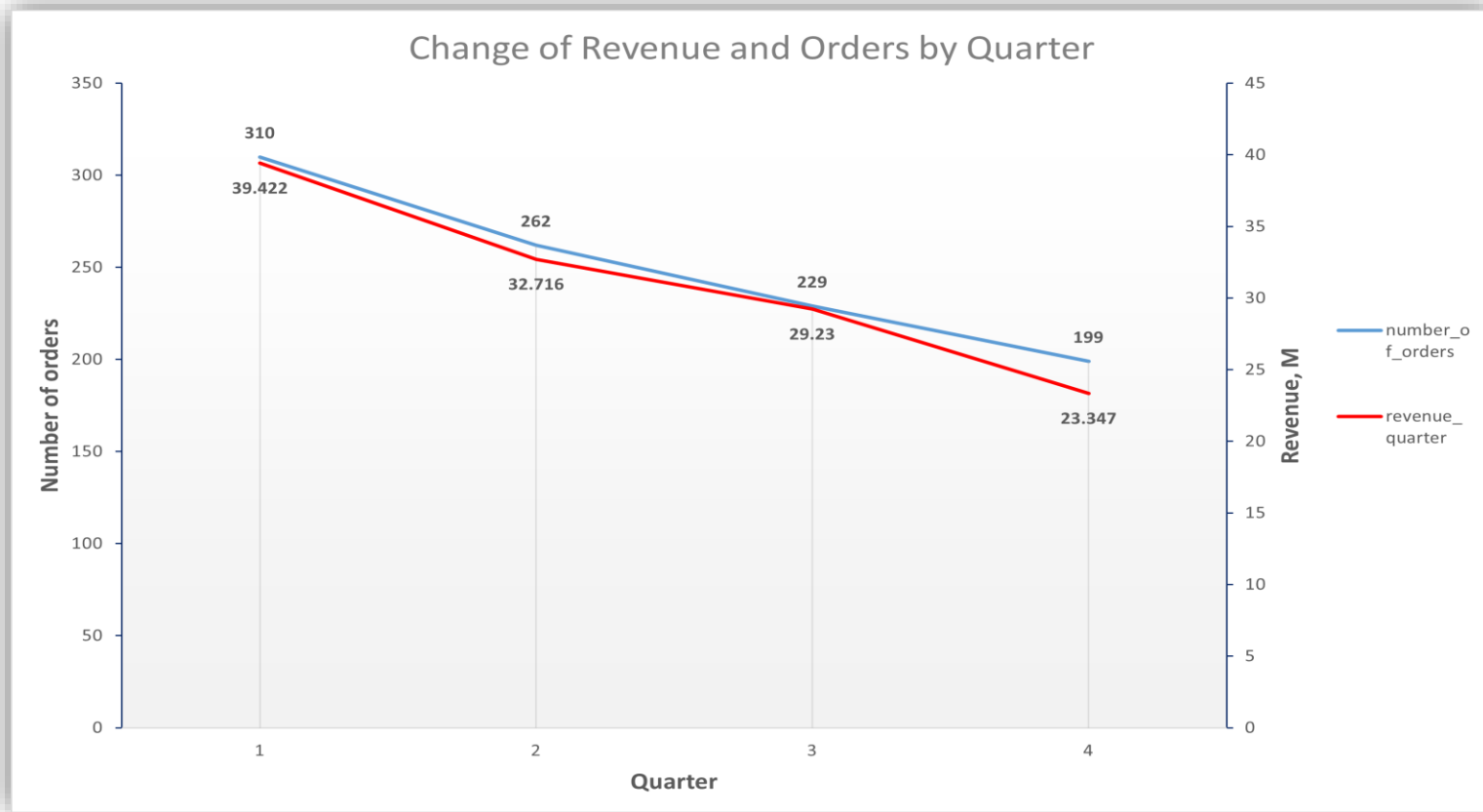
# Change in Revenue across the Year



## Observations / Findings

- It can be observed that the revenue is constantly decreasing from quarter to quarter.
- The drop in the 4th quarter, by 20%, is especially noticeable.
- In absolute terms, comparing the Q1 and Q4, the fall was about 16 MM.

# Trend of Revenue and Orders by Quarter



## Observations / Findings

- It is clear, that the number of orders and revenue are naturally covariant with each other.
- Both indicators maintain a constantly falling trend throughout the year.
- Moreover, it is especially noticeable in the Q4, that the change in revenue has an increasingly intensifying downward trend.

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**Shipping Metrics**

## Average Discount offered by Credit Card type

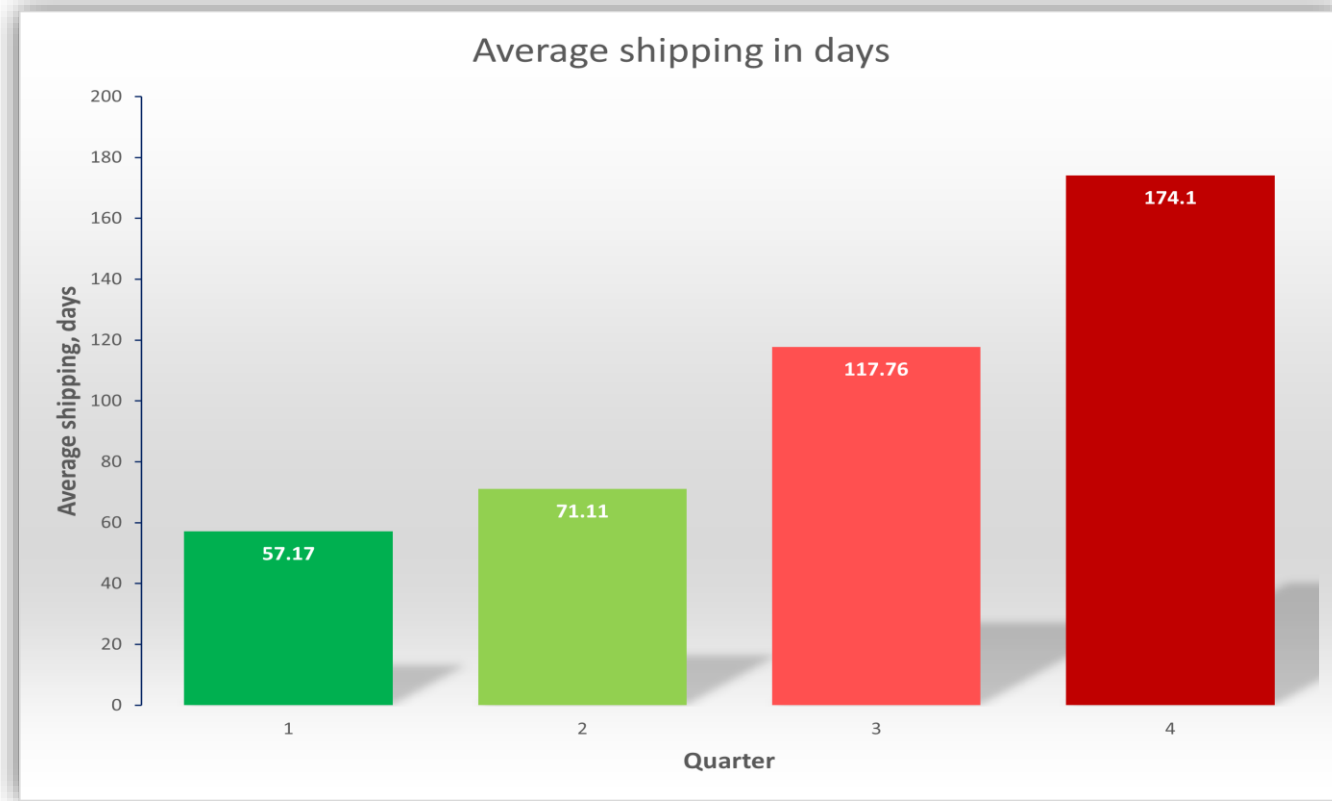
### Observations / Findings

- It can be observed that over the course of the year, and regardless of the type of credit card, average discounts are in the range of 0.58-0.65%.
- The smallest average discounts are for credit cards such as "Diners-Club-International" and "Solo".
- The largest average discounts are on credit cards such as "Laser".

Credit card type	Average discount, %
Americanexpress	0.616
Bankcard	0.610
China-Unionpay	0.622
Diners-Club-Carte-Blanche	0.614
Diners-Club-Enroute	0.600
Diners-Club-International	0.584
Diners-Club-Us-Ca	0.615
Instapayment	0.621
Jcb	0.607
Laser	0.644
Maestro	0.624
Mastercard	0.630
Solo	0.585
Switch	0.610
Visa	0.601
Visa-Electron	0.623



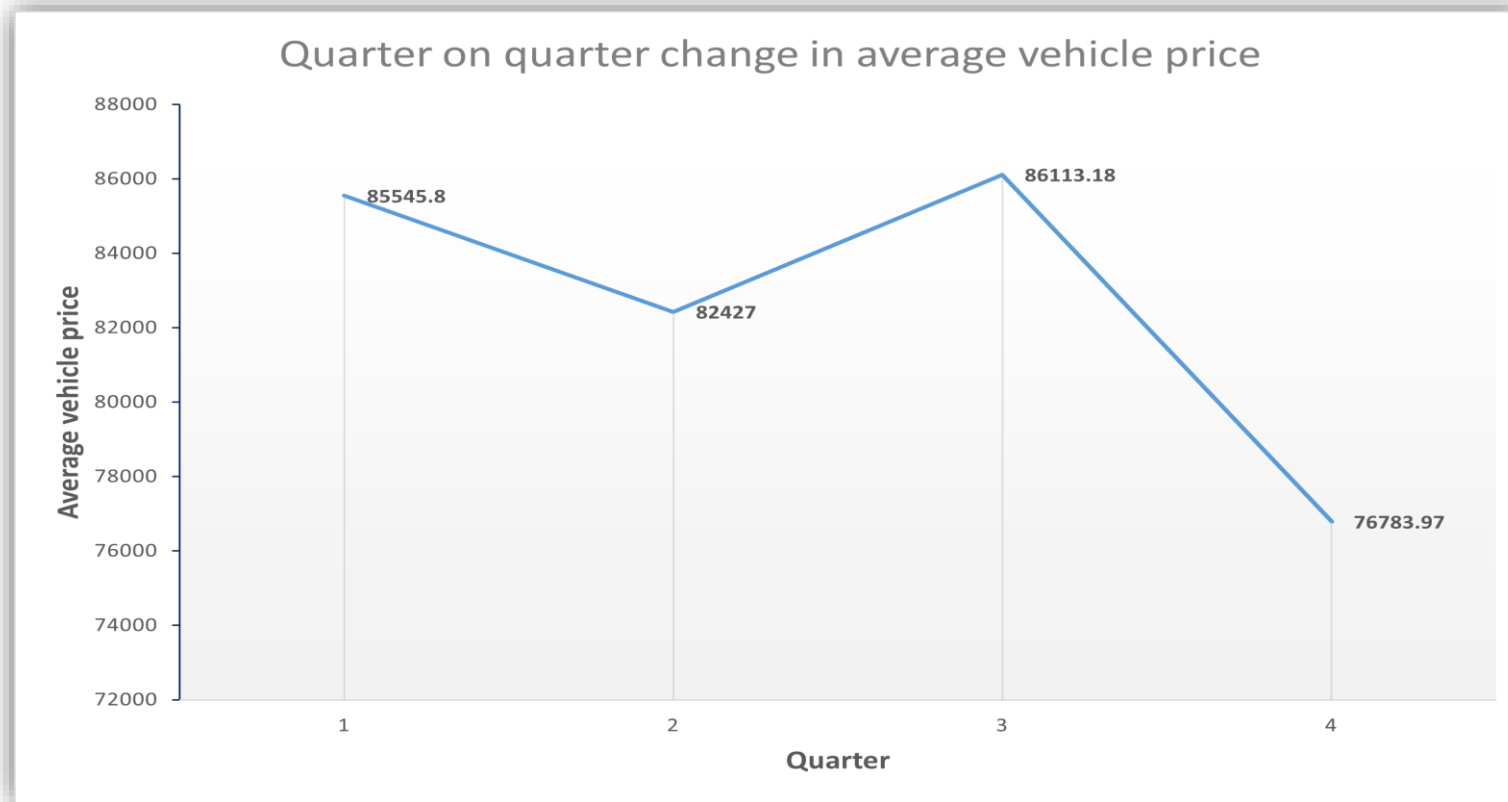
## Time taken to Ship Orders by Quarter



### Observations / Findings

- From here it can be observed that from Q1 to Q4 the average number of shipping days constantly and significantly grows (its value is 3 times more in the Q4 than in the Q1).
- Most likely, it can be concluded that this is one of, if not the main, reason for the growing dissatisfaction of customers, and, accordingly, the decrease in the number of orders and the drop in the company's revenue.

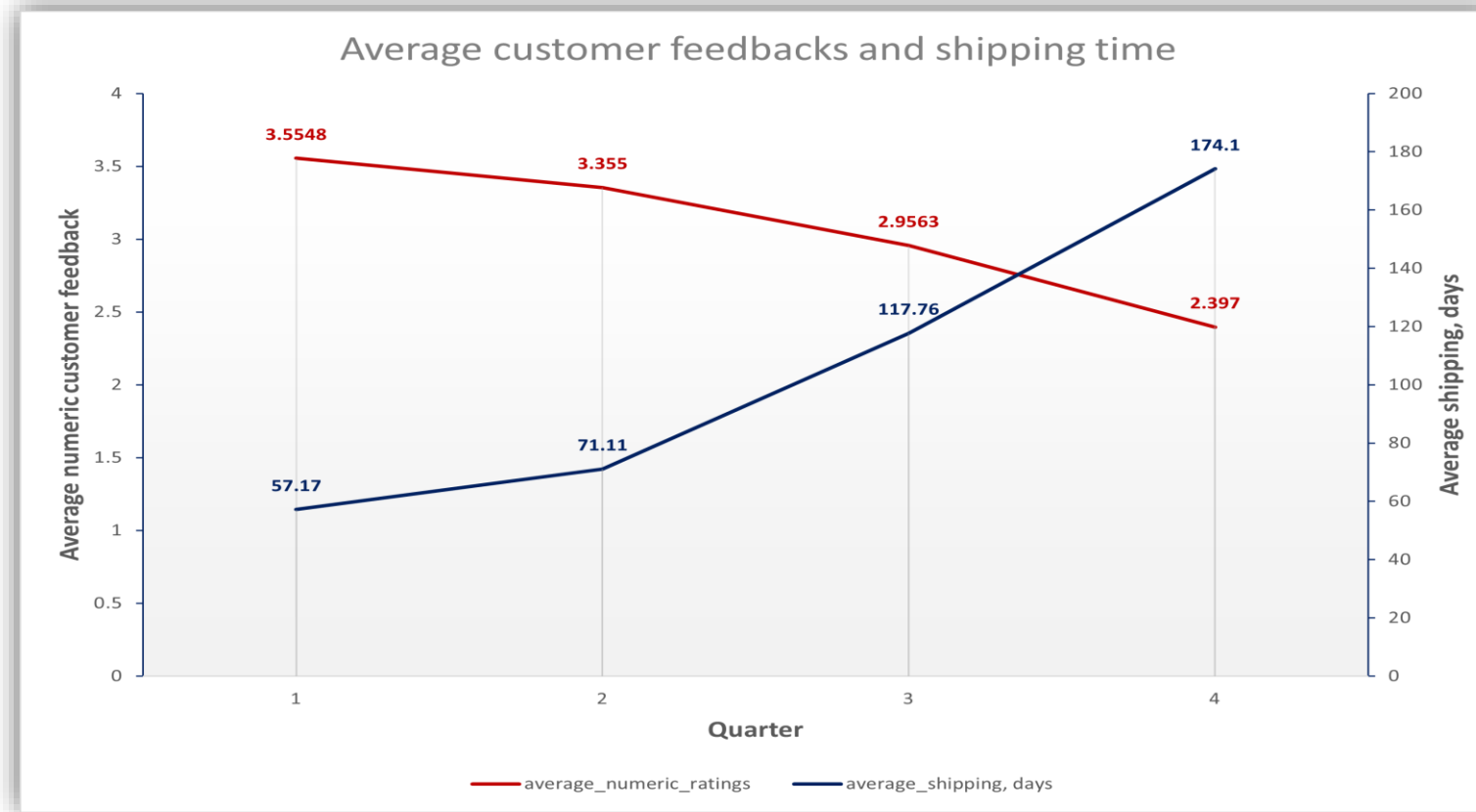
# Change in Average Vehicle Price across the Year



## Observations / Findings

- It can be observed that across the year the average vehicle price changes slightly, but almost does not increase.
- Moreover, in the Q4, where the lowest revenue was recorded, the average vehicle price decreased significantly compared to the Q1.
- Apparently, the drop in sales is unlikely to be related to vehicle prices.

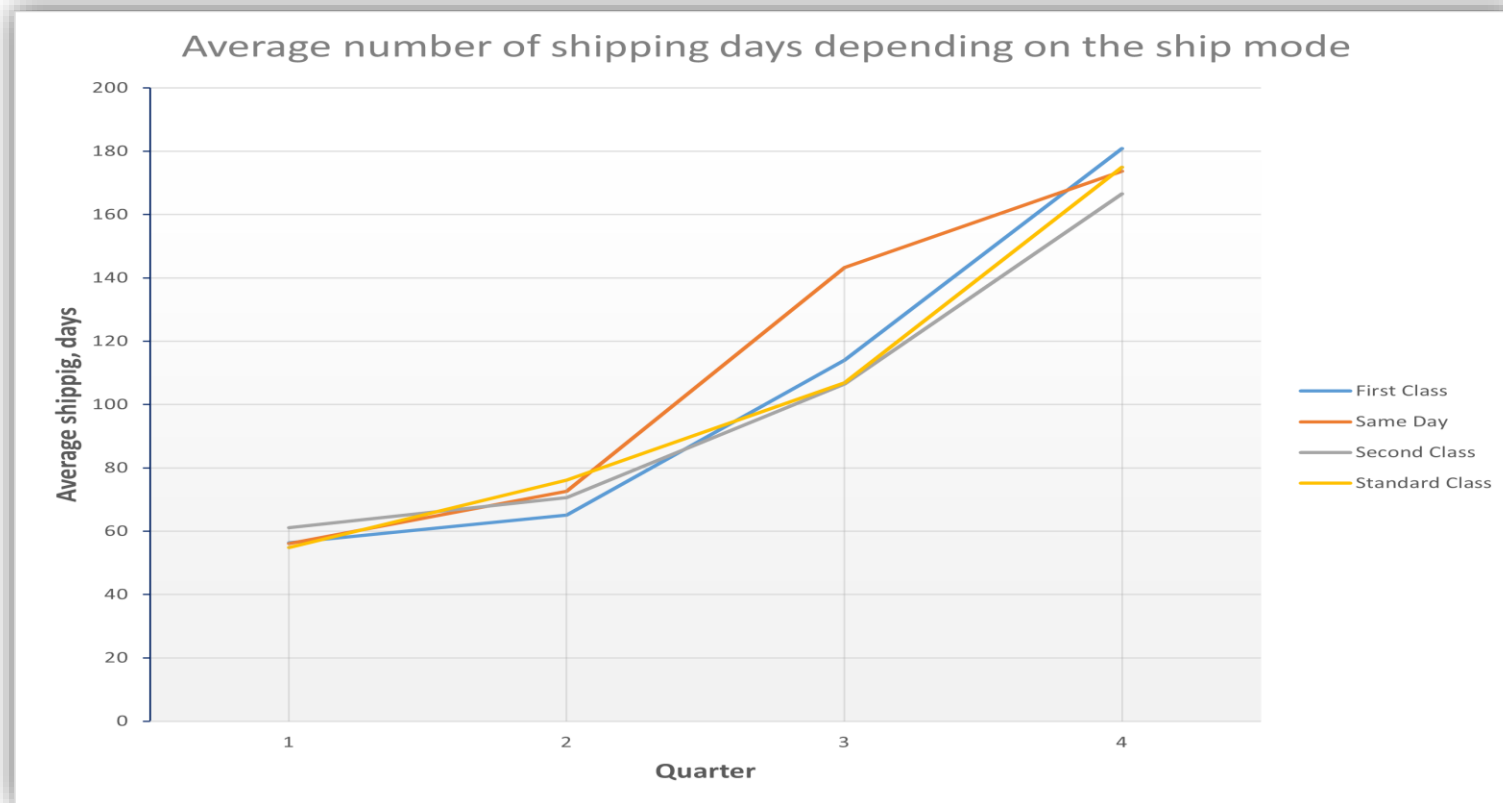
# Comparison of Changes in Customer Feedbacks and Shipping Days across the Year



## Observations / Findings

- Apparently, it can be observed a dependency (correlation) between a decrease in the overall customer rating and an increase in the number of shipping days.
- Therefore, from the point of view of our business task, it is advisable to dive deeper into the study of this area.

# Change in Average Shipping Days Depending on the Ship Mode across the Year



## Observations / Findings

- It can be observed that across the year the average number of shipping days has increased by almost 3 or more times across the year for all ship modes approximately the same.
- It may be worth paying special attention to the "Same Day" and the "First Class" ship modes, because they increased most dramatically.

## Vehicle Makers (top 10) with the Longest Average Shipping Times across the Year

Vehicle maker	Average shipping, days	Slowest overall shipping rank	Overall rank by number of customers
Rolls-Royce	248.5	1	46
Aston Martin	248.5	1	46
Geo	209.8	3	40
Citroën	177	4	50
Saturn	141	5	46
Kia	134.4	6	22
Nissan	132.9	7	12
Porsche	129	8	36
Isuzu	128.9	9	19
Buick	126.2	10	9

### Observations / Findings

- It has been discovered that vehicle makers with the highest "slowness" ratings have an average shipping time of 4 months or more.
- It should be noted that makers such as Buick, Nissan and Isuzu, which have a good rating in terms of the number of customers, also have shipping times in the range of 125-135 days.

## Shippers (top 10) with the Longest Average Shipping Times across the Year

Shipper name	Shipper ID	Average shipping, days	Slowest overall shipping rank	Overall rank by number of customers
Feedspan	3476	525	1	282
Oodoo	2628	519	2	282
Photojam	3887	519	2	282
Tavu	1003	488	4	282
Quinu	3801	488	4	282
Ooba	2069	488	4	282
Dynazzy	2364	469	7	282
Fivechat	3059	469	7	282
Fatz	3823	457	9	282
Dynava	3053	437	10	282

### Observations / Findings

- It can be observed that shippers with the highest "slowness" ratings have an average shipping time of 14 months or more.
- At the same time, these same shippers have the lowest ratings in terms of the number of customers.

## Shippers (top 10) with the Fastest Average Shipping Times across the Year

Shipper name	Shipper ID	Average shipping, days	Fastest overall shipping rank	Overall rank by number of customers
Twitterbeat	1908	1	1	282
Quire	3011	2	2	282
Meeveo	1780	6	3	282
Wordpedia	3581	8	4	282
Tagchat	1955	8	4	282
Demimbu	2613	12	6	282
Zoombox	3083	14	7	282
Skinder	2936	16	8	282
Youopia	1890	17	9	180
Rhyzio	1866	18	10	180

### Observations / Findings

- It can be observed that shippers with the highest "speed" ratings have an average shipping time in the range of 1-18 days.
- Even though these shippers have a low rating in terms of the number of customers, they provide the highest shipping speed.
- Based on the two previous tables, it becomes clear that the difference between "fastest" and "slowest" shippers is dozens of times.

# Insights

- Gradually, from Q1 to Q4, the average customer feedback rating decreases. Customers become more and more dissatisfied.
- At the same time, the number of purchases and the company's revenue decrease too. And the downtrend is getting stronger.
- It can be observed that from Q1 to Q4 the average number of shipping days constantly and significantly grows, and in some cases up to 14 months or more.
- Most likely, it can be concluded that this is one of, if not the main, reason for the growing dissatisfaction of customers, and, accordingly, the drop in the number of orders and the company's revenue.
- However, there are orders completed in a very short time by certain shippers (in the range of 1-18 days).



# Recommendations

- ✓ Determine the reasons for such a significant increase in shipping times.
- ✓ Find out if there are other reasons why average customer feedback is dropping by accessing detailed review data.
- ✓ Conduct additional research on vehicle makers and shippers, most preferred by customers, in order to use their best practices in the work of the company.
- ✓ One of the priorities is to improve the situation with shipping to the states that bring the company the highest revenue and have the most significant number of customers.

# Appendix

1. The "new\_wheels\_sample\_QBR\_template.pdf" from Great Learning was used as a template and guidelines
2. The "new+wheels\_proj.rar" folder was used as a source of original data
3. Used software: MySQL Workbench 8.0 CE, MS Excel, MS PowerPoint, Foxit PDF Reader

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**Thank You**