AUTOMOTIVE SUPPLY CHAIN REPORT

OUTLINE

1. Overview of a Company's Automotive Supply Chain (total sales, total quantity, top supplier…)

2. Impacts to Automotive Supply Chain from Covid-19.

3. Impact of Total Delivery Days to Customer Feedback.

4. Conclusion.

METHODOLOGY

- Collect data from Kaggle.
- Use SQL to clean and analyze data.
- Identify top suppliers, top states, top car brands based on sales.
- Determine whether total delivery days affect to customer feedback or not.
- Use Power BI to create a dashboard.

DATA AFTER CLEANING

	ProductID	CarMaker	CarModel	CarModelYear	SupplierName	CustomerName	Gender	JobTitle	CustomerFeedback	City	state	Country	OrderDate
1	3983	Isuzu	Rodeo	1994	Wikivu	Ali Topper	Male	Compensation Analyst	Very Bad	Vancouver	Washington	United States	2019-02-06 00:00:00.000
2	8799	Maserati	430	1990	Ainyx	Melantha Fullstone	Female	Product Engineer	Okay	Seattle	Washington	United States	2018-06-26 00:00:00.000
3	7071	Dodge	Charger	1969	Innotype	Yasmeen Antognazzi	Female	Project Manager	Okay	Seattle	Washington	United States	2019-03-09 00:00:00.000
4	3227	Toyota	Previa	1995	Livetube	Aluino Jodkowski	Male	Graphic Designer	Okay	Indianapolis	Indiana	United States	2019-02-06 00:00:00.000
5	8687	Jeep	Grand Cherokee	2009	Quaxo	Audrie Teese	Female	Quality Engineer	Okay	Spring	Texas	United States	2018-11-08 00:00:00.000
6	61	Honda	Accord	1985	Voomm	Bert Giacomoni	Female	Nurse Practicioner	Very Bad	Denver	Colorado	United States	2018-12-02 00:00:00.000
7	331	Volkswagen	Cabriolet	2000	Skinte	Nickey Truelock	Male	Engineer IV	Very Bad	Washington	District of Columbia	United States	2018-12-07 00:00:00.000
8	7642	Buick	Roadmaster	1994	Mynte	Frances Acomb	Female	Safety Technician IV	Bad	Knoxville	Tennessee	United States	2019-03-09 00:00:00.000
9	8398	Ford	E350	2004	Edgeclub	Kienan De Ruel	Male	Software Engineer I	Okay	Wichita	Kansas	United States	2019-01-18 00:00:00.000
10	5694	Lincoln	Town Car	2008	Mynte	Shannan Humfrey	Male	Civil Engineer	Good	Newport News	Virginia	United States	2018-06-28 00:00:00.000
11	8673	Nissan	Sentra	2003	Oozz	Esmeralda Prodrick	Female	Help Desk Operator	Bad	Winston Salem	North Carolina	United States	2018-12-26 00:00:00.000
12	4263	Kia	Sedona	2011	Tagpad	Bambie Freemantle	Female	Dental Hygienist	Good	New Orleans	Louisiana	United States	2018-12-01 00:00:00.000
13	8551	Suzuki	Vitara	2004	Linkbuzz	Brit Brennan	Female	Account Executive	Good	Alhambra	California	United States	2019-02-26 00:00:00.000
14	5589	Chevrolet	Express 2500	1996	Kayveo	Moira Bearward	Female	Chemical Engineer	Very Good	Charlotte	North Carolina	United States	2019-05-19 00:00:00.000
15	9105	Mercedes-Benz	GL-Class	2007	Linkbridge	Vittorio Mariner	Male	Administrative Officer	Very Good	Harrisburg	Pennsylvania	United States	2018-08-30 00:00:00.000
16	6711	Acura	ZDX	2010	Divavu	Nikaniki Ciccottini	Female	Web Designer I	Very Bad	Houston	Texas	United States	2019-05-05 00:00:00.000
17	7722	Volvo	C70	2013	Leexo	Sergeant Walkley	Male	Chief Design Engine...	Good	Anderson	Indiana	United States	2019-01-27 00:00:00.000
18	6299	GMC	Sierra 2500HD	2006	InnoZ	Ali Repper	Female	Systems Administrat...	Bad	Austin	Texas	United States	2019-05-17 00:00:00.000
19	8480	Mazda	Navajo	1993	Pixope	Anna-diane Jeanes...	Female	Recruiter	Very Good	Knoxville	Tennessee	United States	2018-09-17 00:00:00.000
20	7706	Mazda	MPV	1990	Feedbug	Elwira Maylam	Female	Account Representat...	Okay	Norman	Oklahoma	United States	2018-07-29 00:00:00.000
21	2499	Aston Martin	V12 Vantage	2012	Roombo	Zacherie Aartsen	Male	Senior Financial Ana...	Okay	Saginaw	Michigan	United States	V2018-09-22 00:00:00.000
22	593	Pontiac	Grand Prix	1994	Feedmix	Elysha Marquez	Female	Assistant Manager	Bad	Milwaukee	Wisconsin	United States	2019-02-03 00:00:00.000
23	8799	Cadillac	Escalade EXT	2010	Brainsphere	Laurens Wye	Male	Web Developer II	Very Good	New York City	New York	United States	2019-02-21 00:00:00.000
24	8019	Nissan	Frontier	2000	Mymm	Iver Thaxter	Male	Social Worker	Very Good	Milwaukee	Wisconsin	United States	2019-02-09 00:00:00.000
25	1711	Ford	Freestar	2005	Flashdog	Anastasia Margiotta	Female	Chief Design Engine...	Okay	Birmingham	Alabama	United States	2018-11-16 00:00:00.000
26	5785	Lexus	IS	2006	Feedbug	Reena Huelin	Female	Editor	Bad	Portland	Oregon	United States	2018-10-19 00:00:00.000
27	5300	Porsche	911	1998	Twimbo	Estelle Gunter	Female	Business Systems D...	Very Good	Charlotte	North Carolina	United States	2018-11-12 00:00:00.000

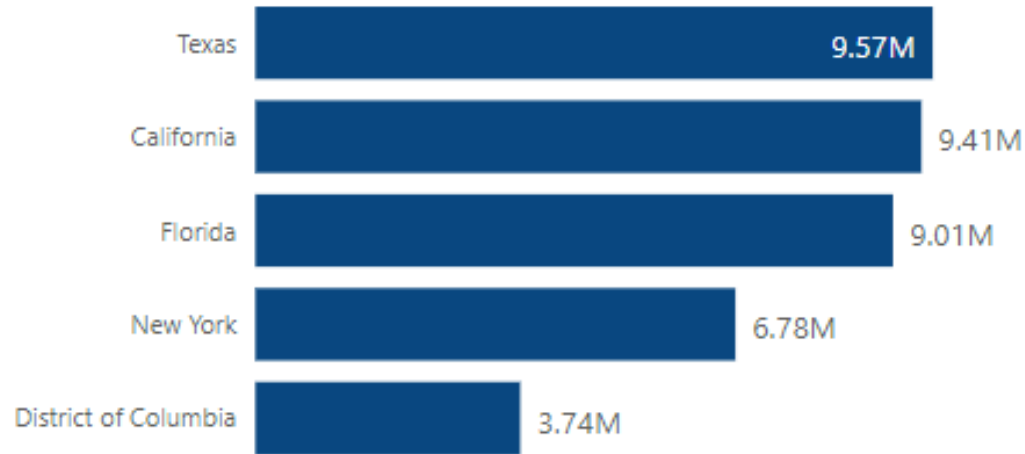# 1. Overview of a Company's Automotive Supply Chain

$98.24M

was the total sales from 06/2018 – 06/2019

1512

was the total number of cars which are ordered from 06/2018 – 06/2019
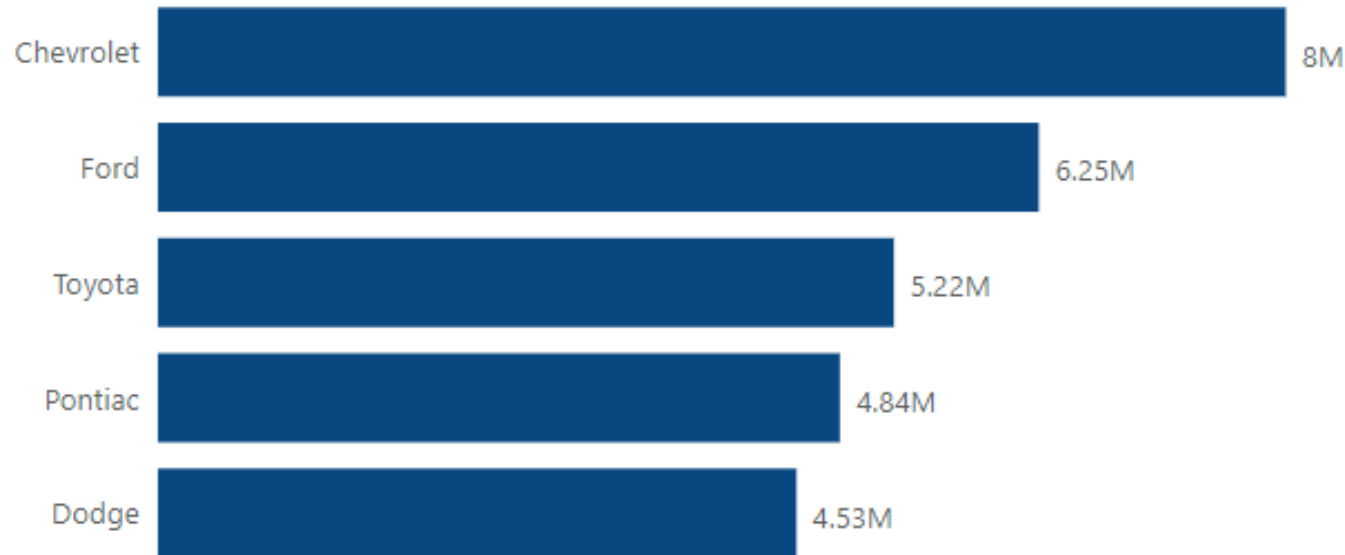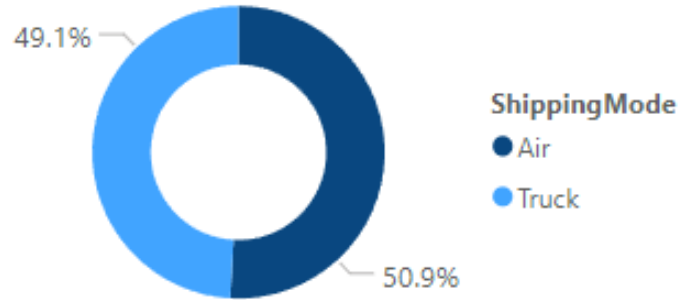
Top 5 states whose sales most

State	Sales
Texas	9.57M
California	9.41M
Florida	9.01M
New York	6.78M
District of Columbia	3.74M

Top 5 suppliers whose sales most

Supplier	Sales
Quatz	891.45K
Abatz	800.14K
Skiptube	728.35K
Skyvu	716.88K
Kazu	712.02K

- Except for District of Columbia, Texas, California, Florida, New York were among the top states with high GDP. This is one of the reasons why the demand of car ordering is always high.

- Quatz supplier ranked first followed by Abatz, Skiptube, Skyvu and Kazu respectively.
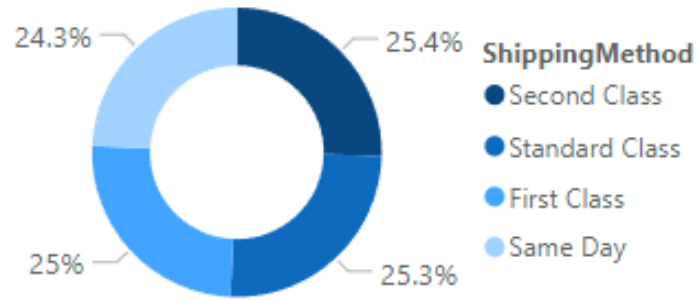
Top 5 brands whose sales most

- American car brands dominated in the top 5 brands whose sales most except for Toyota.
- Chevrolet ranked first, followed by Ford, Toyota, Pontiac and Dodge respectively.
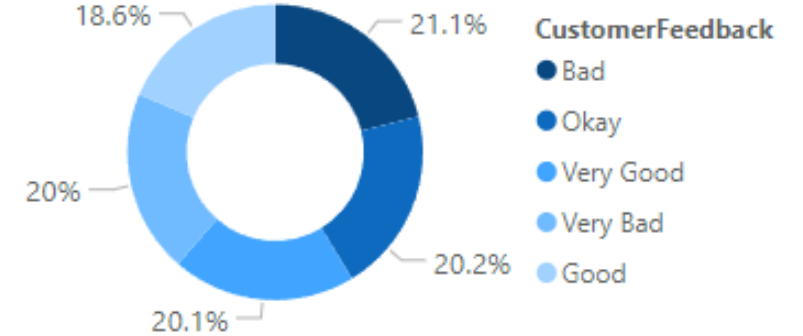
Percentage of Shipping Mode

- 49.1%
- 50.9%

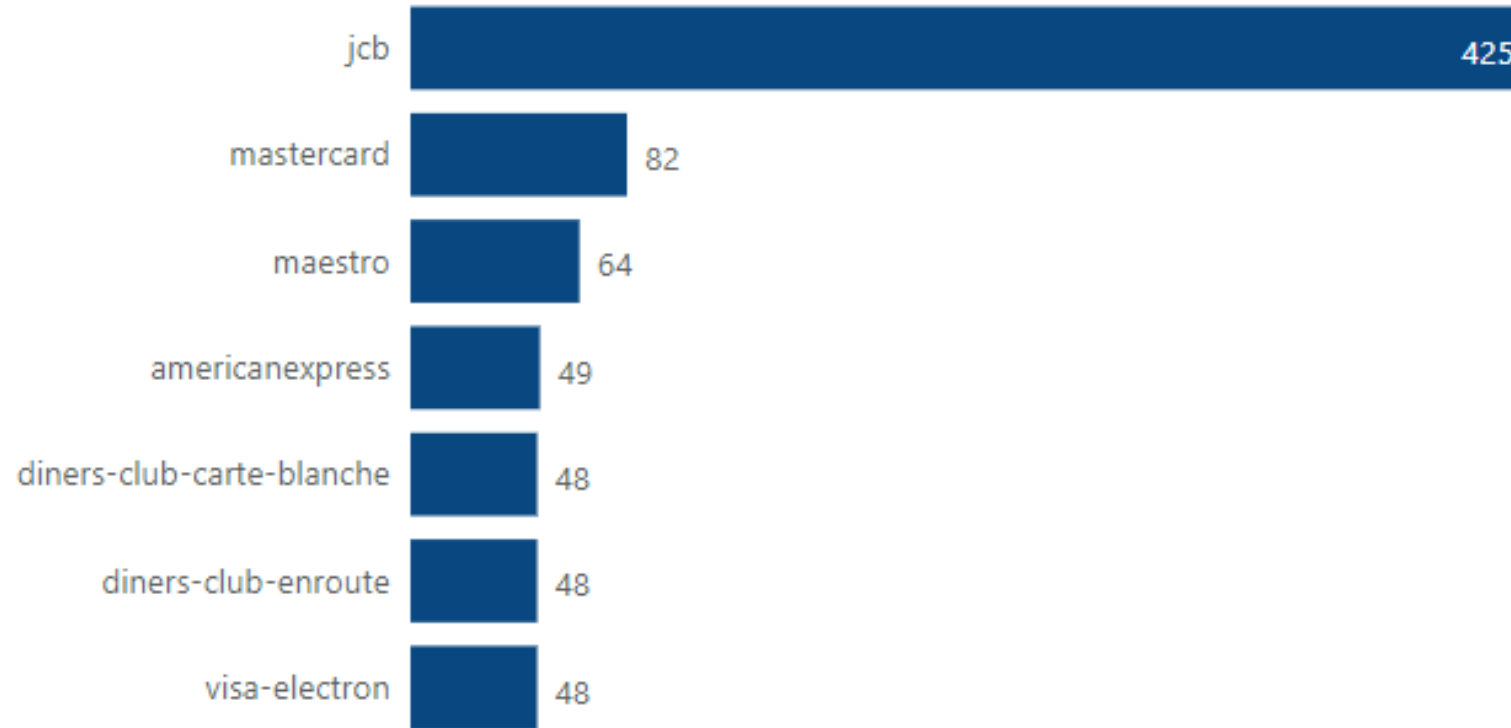**ShippingMode**
- Air
- Truck

Percentage of Shipping Method

- 24.3%
- 25.4%
- 25%
- 25.3%

ShippingMethod
- Second Class
- Standard Class
- First Class
- Same Day

Percentage of Customer Feedback

- 18.6%
- 21.1%
- 20%
- 20.2%
- 20.1%

CustomerFeedback
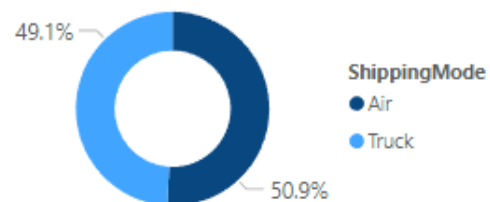- Bad
- Okay
- Very Good
- Very Bad
- Good

In general, the percentage of shipping mode, the percentage of shipping method and the percentage of customer feedback were quite similar.

The Frequency of using Credit Card Types

jcb	425
mastercard	82
maestro	64
americanexpress	49
diners-club-carte-blanche	48
diners-club-enroute	48
visa-electron	48

Customers tended to pay by JCB Card.

AUTOMOTIVE SUPPLY CHAIN DASHBOARD

98.24M
Total Sales

1512
Total Quantity

Supplier

Brand

State

Year

Month

Percentage of Shipping Mode

49.1%
50.9%

ShippingMode
- Air
- Truck

Percentage of Shipping Method

24.3%
25.4%
25%
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Top 5 brands whose sales most

Brand	Sales
Chevrolet	8M
Ford	6.25M
Toyota	5.22M
Pontiac	4.84M
Dodge	4.53M

Total Sales 2018 - 2019

2.3M
8.5M
7.3M
6.4M
8.3M
8.3M
9.6M
16.1M
10.9M
9.0M
7.1M
3.8M
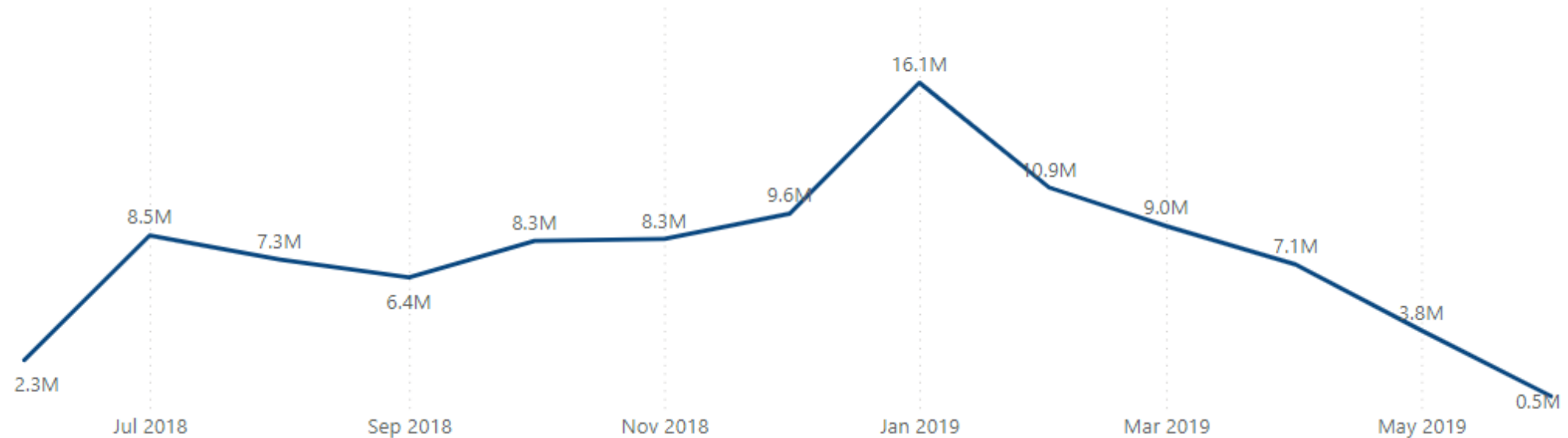0.5M
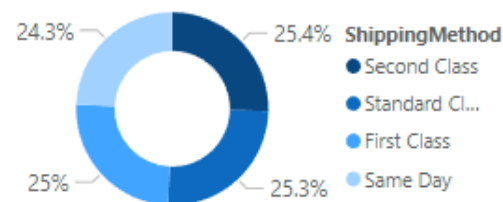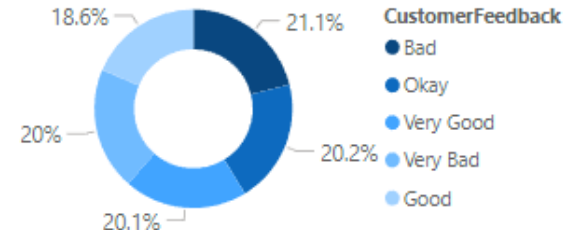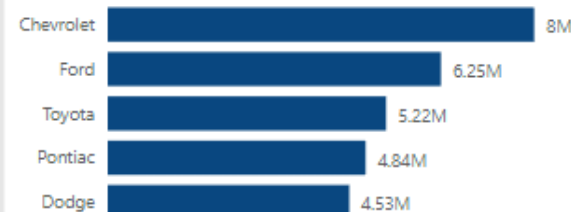
Jul 2018   Sep 2018   Nov 2018   Jan 2019   Mar 2019   May 2019
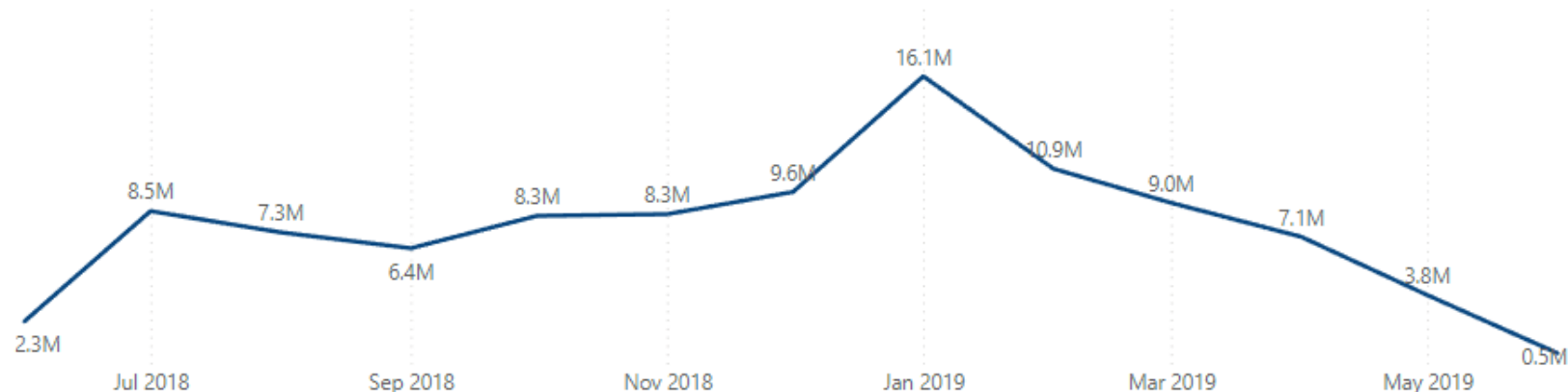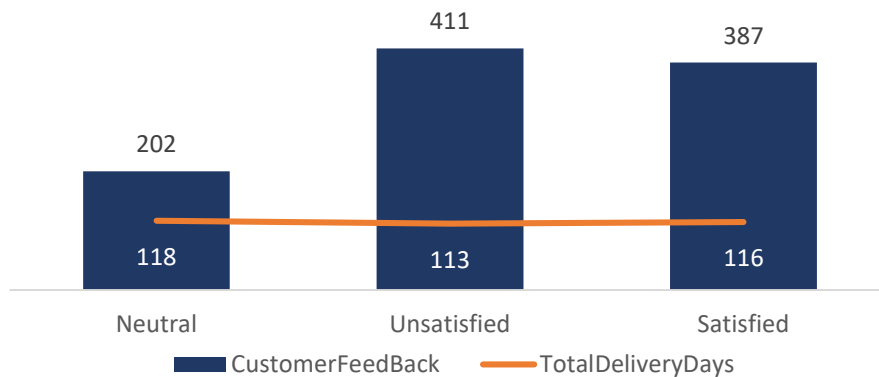
2. Impact to Automotive Supply Chain from Covid-19

Total Sales 2018 - 2019

Before Covid-19, total sales increased by **600%** ($2.3M – $16.1M). But this figure decreased dramatically by **96.89%** ($16.1M – $0.5M) because of the impact of Covid-19.

3. Impact of Total Delivery Days to Customer Feedback

The Number of Customer Feedback and Total Delivery Days

Average Sales by Customer Feedback

- Although the total delivery days decreased, the number of customer feedback changing from neutral to unsatisfied increased.

- Total delivery days were not the primary reason that affected to customer feedback.

- The quality of products and services need to be improved because the average sales of orders whose customer feedback was unsatisfactory ranked second.

CONCLUSION

- The states with high GDP dominated in the top states which have high demand for cars like California, New York, Texas…

- American people tended to buy American cars and pay by JCB card.

- Automotive supply chain was impacted seriously by Covid-19.

- Total delivery days were not the primary reason that affected to customer feedback.

- The quality of products and services need to be improved more.