SQL and Databases: Project Report

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Business Overview
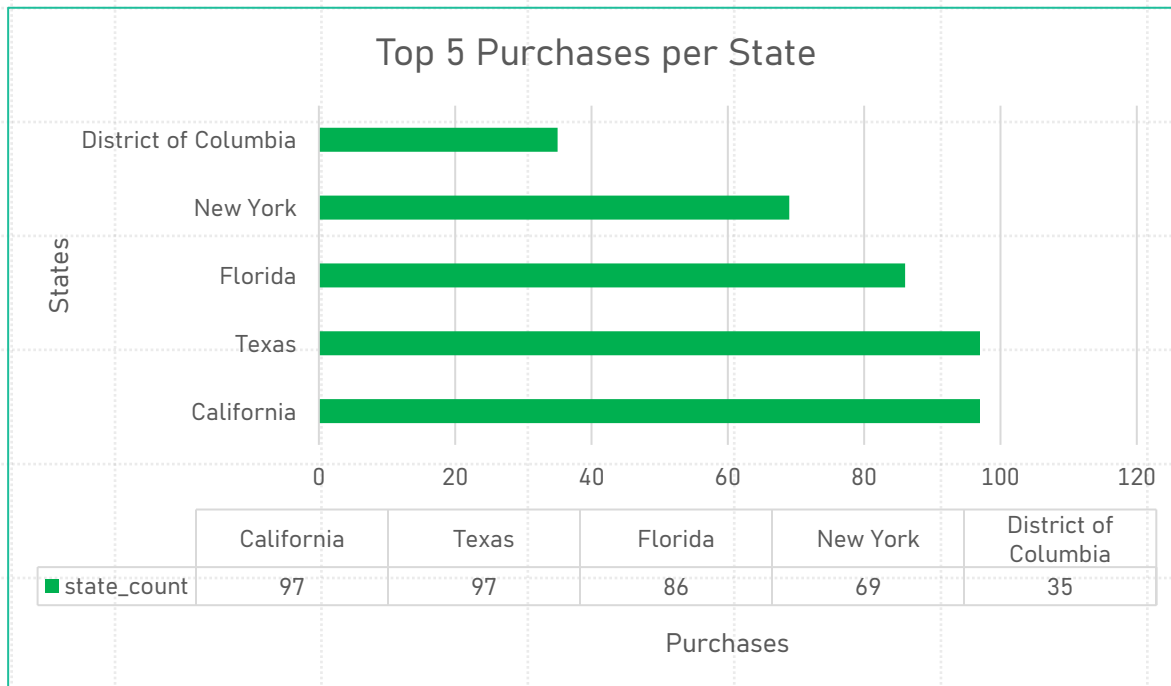
- **Total Revenue:**
  $124,714,086.32

- **Total Orders:**
  1000

- **Total Customers:**
  994

- **Average Rating (Out of 5):**
  3.07

- **Last Qtr Revenue:**
  $23,346,779.63

- **Last Qtr Orders:**
  199

- **Avg Days to Ship:**
  105

- **% Good Feedback:**
 **23.32%**

Customer Metrics

Distribution of Customers across State

Top 5 Purchases per State

|	California	Texas	Florida	New York	District of Columbia
state_count	97	97	86	69	35

Purchases

- **Observations/Findings:**

- **Top 5:** California and Texas lead the nation in car purchases, followed by Florida, New York and the District of Columbia.

- **Population Density:** These states tend to have high population densities, which could lead to a greater overall need for cars.

- **Urbanization:** More urban areas often rely less on public transportation and more on personal vehicles.

Average Customer Ratings by Quarter

Average Feedback % per Quarter

	1	2	3	4
■ feedback_avg	3.5548	3.355	2.9563	2.397
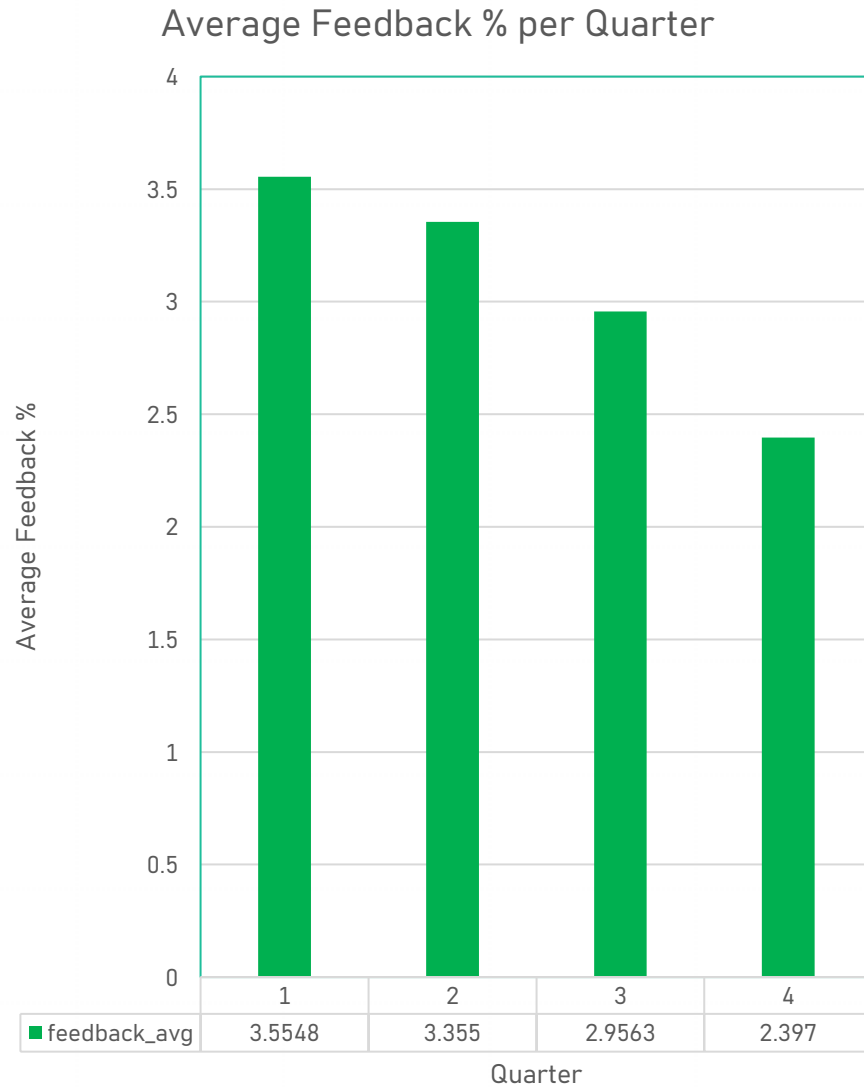
Quarter

▪ **Observations/Findings:**

▪ **Decrease:** There have been a **steady decrease** in the % of customer satisfaction rating received from each quarter.

▪ **Dissatisfaction:** The recurring decline suggest the customer are unhappy with the product or service provided.

▪ **Customer support:** Is customer support responsive and helpful remedy problems?

Trend of Customer Satisfaction

Trend of Customer Satisfaction
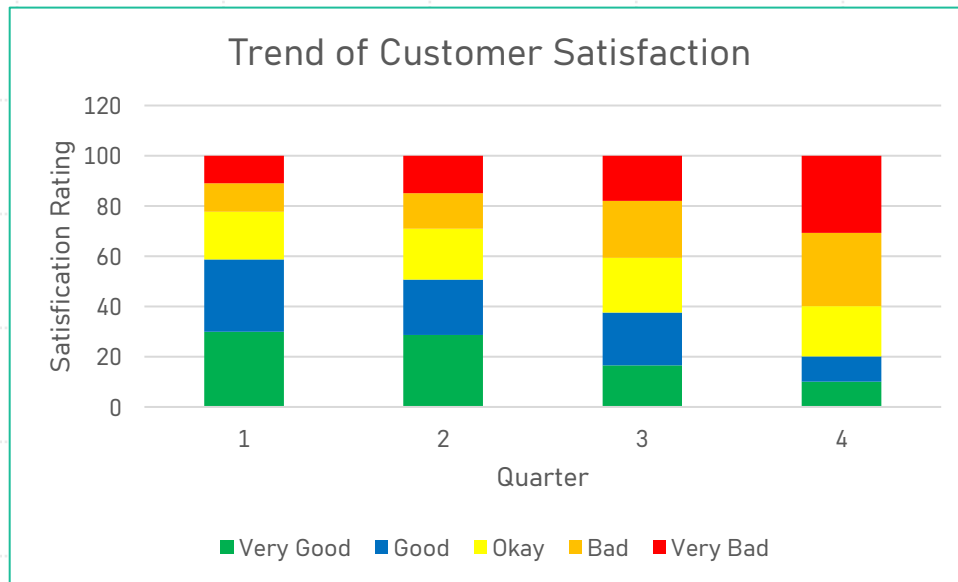
- **Observations/Findings:**

- The severity of the terms from "very good" to "very bad" suggest a substantial shift in the customer perception.

- Potential issue with the product, service, or customer experience.

- Progressive worsening of the situation since the continuous decline. Not a one-time event.

Top Vehicle Makers Preferred By Customers
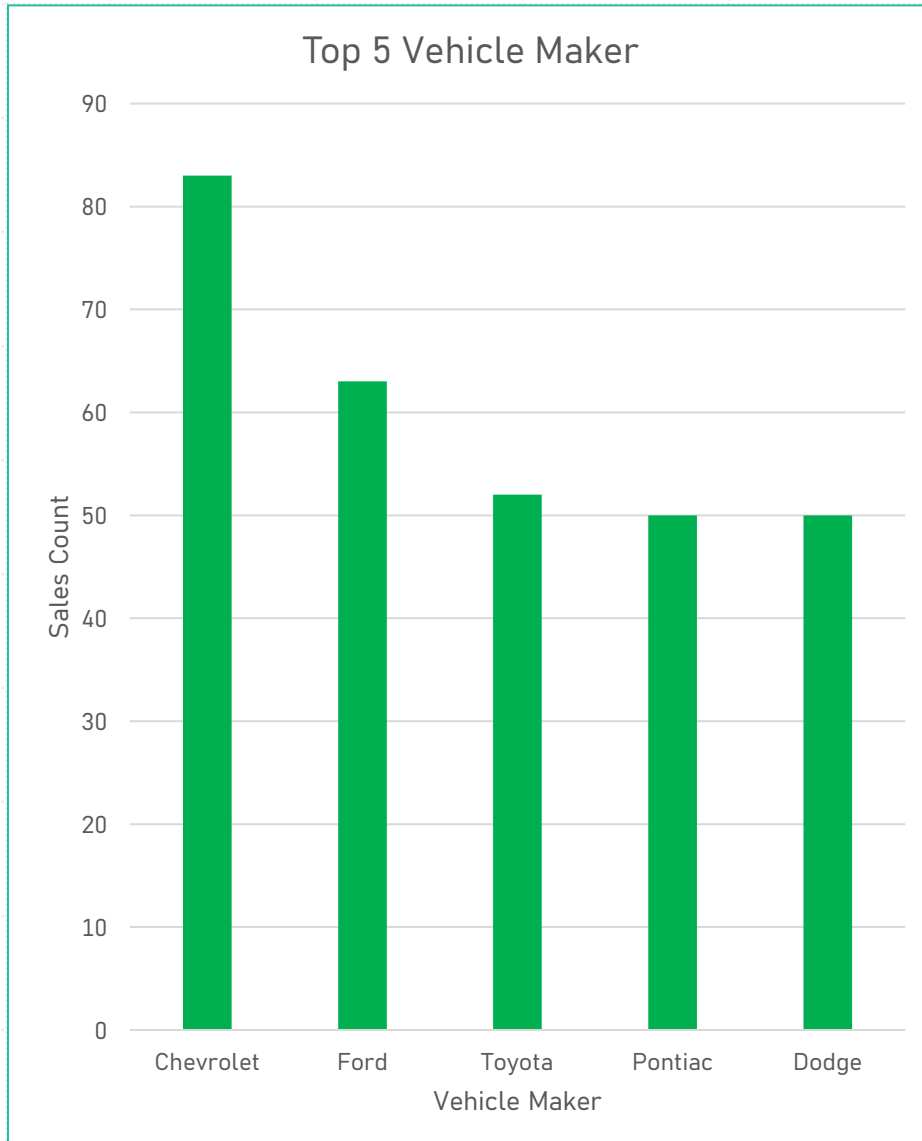
Top 5 Vehicle Maker

- **Observations/Findings:**
- **Domestic** vehicle maker make up the majority of customers.
- **Chevrolet** emerges as the most preferred vehicle maker among customers.
- **Ford** follows behind in second place
- **Toyota** secures the third position, **Pontiac** and **Dodge** follows closely behind in third and fourth respectively.

Row Labels	% of State
Acura	2.10%
Audi	1.40%
BMW	1.40%
Buick	2.80%
Cadillac	2.80%
Chevrolet	11.89%
Chrysler	1.40%
Dodge	8.39%
Ferrari	0.70%
Ford	6.99%
GMC	3.50%
Honda	1.40%
Hyundai	2.10%
Isuzu	2.10%
Jaguar	0.70%
Jeep	0.70%
Kia	1.40%
Lexus	1.40%
Lincoln	1.40%
Maserati	1.40%
Maybach	0.70%
Mazda	5.59%
Mercedes-Benz	4.20%
Mercury	1.40%
Mitsubishi	2.80%
Nissan	4.90%
Oldsmobile	0.70%
Pontiac	7.69%

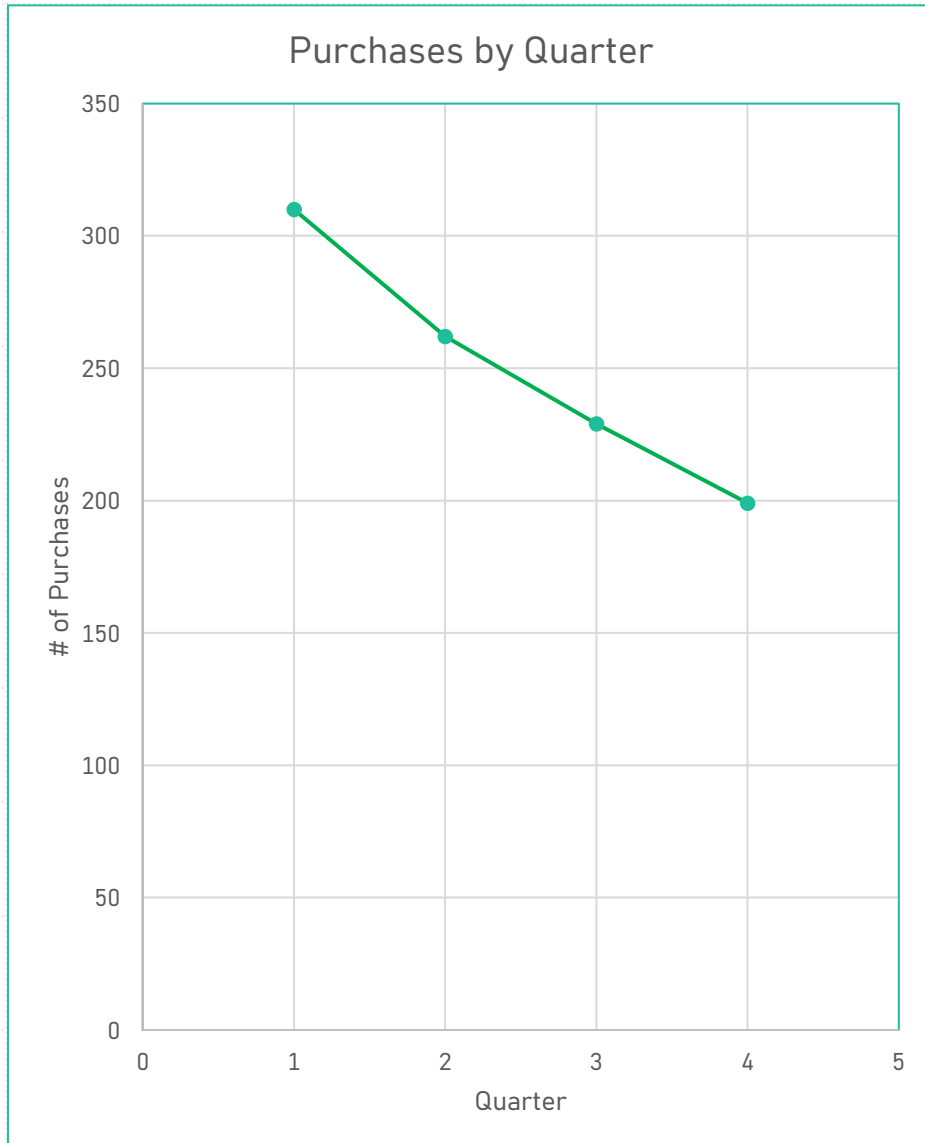# Most Preferred Vehicle Make In Each State

- **Observations/Findings:**
- **Chevrolet** emerges as the most preferred vehicle maker across states.
- **Dodge** follows behind in second place.
- **Pontiac** secures the third position; **Ford** follows behind in fourth and many others in a tie for fifth place.

Revenue Metrics

Purchases by Quarter

Trend of Purchases by Quarter

- **Observations/Findings:**
- **Q1:** Highest purchase volume at 310.
- **Q2:** Dip from Q1, with purchases at 262.
- **Q3/Q4:** Continued decline, at 229 and 199 purchases.

Quarter on Quarter % Change in Revenue

QOQ% Change in Revenue
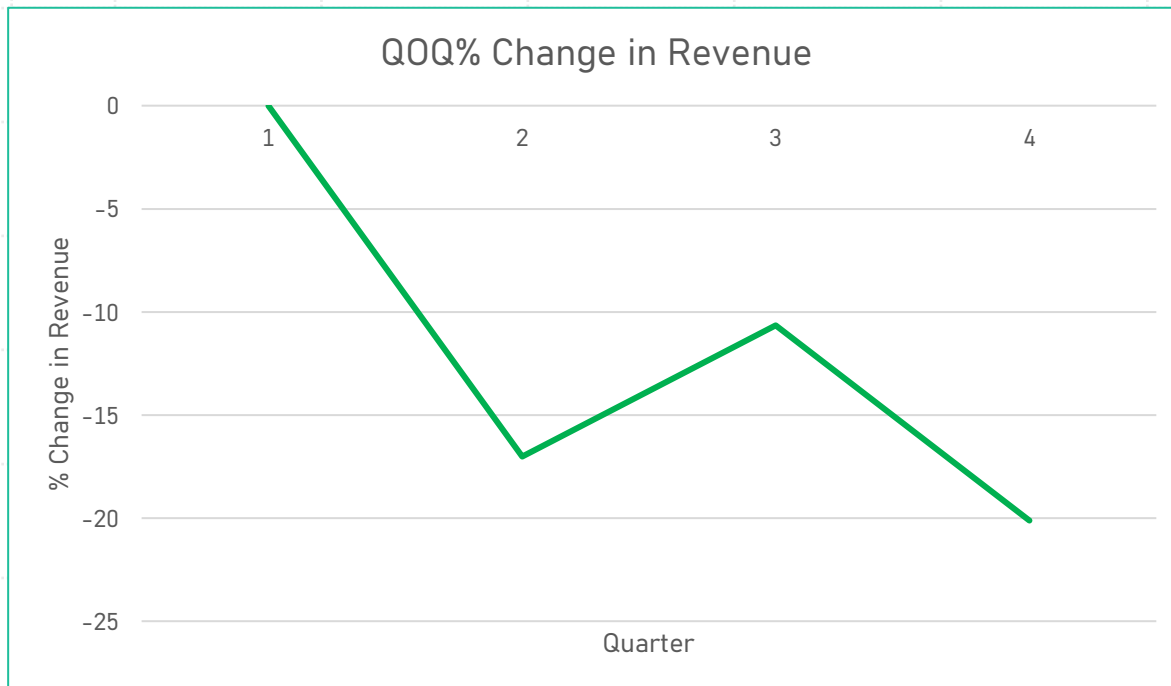
- **Observations/Findings:**
- **Q2:** Revenue **decreased by 17%** compared to **Q1**.
- **Q3:** Revenue **decreased by 10%** compared to **Q2**.
- **Q4:** Revenue **decreased by 20%** compared to **Q3**.

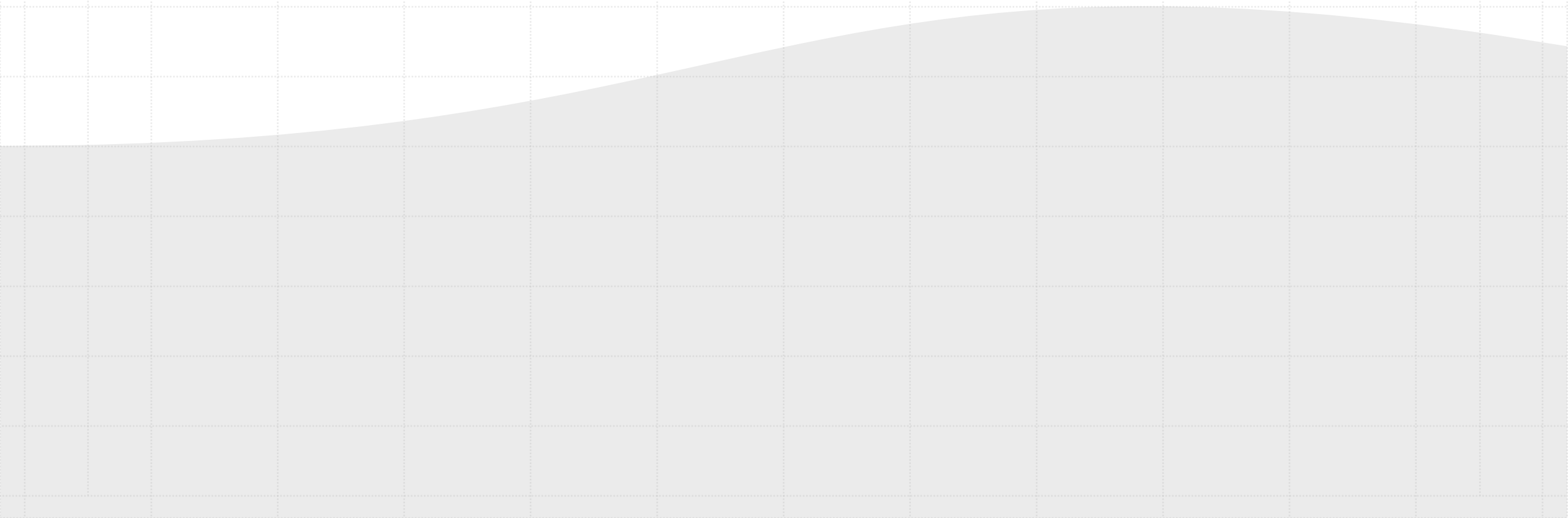Revenue and Orders by Quarter

Trend of Revenue and Orders by Quarter
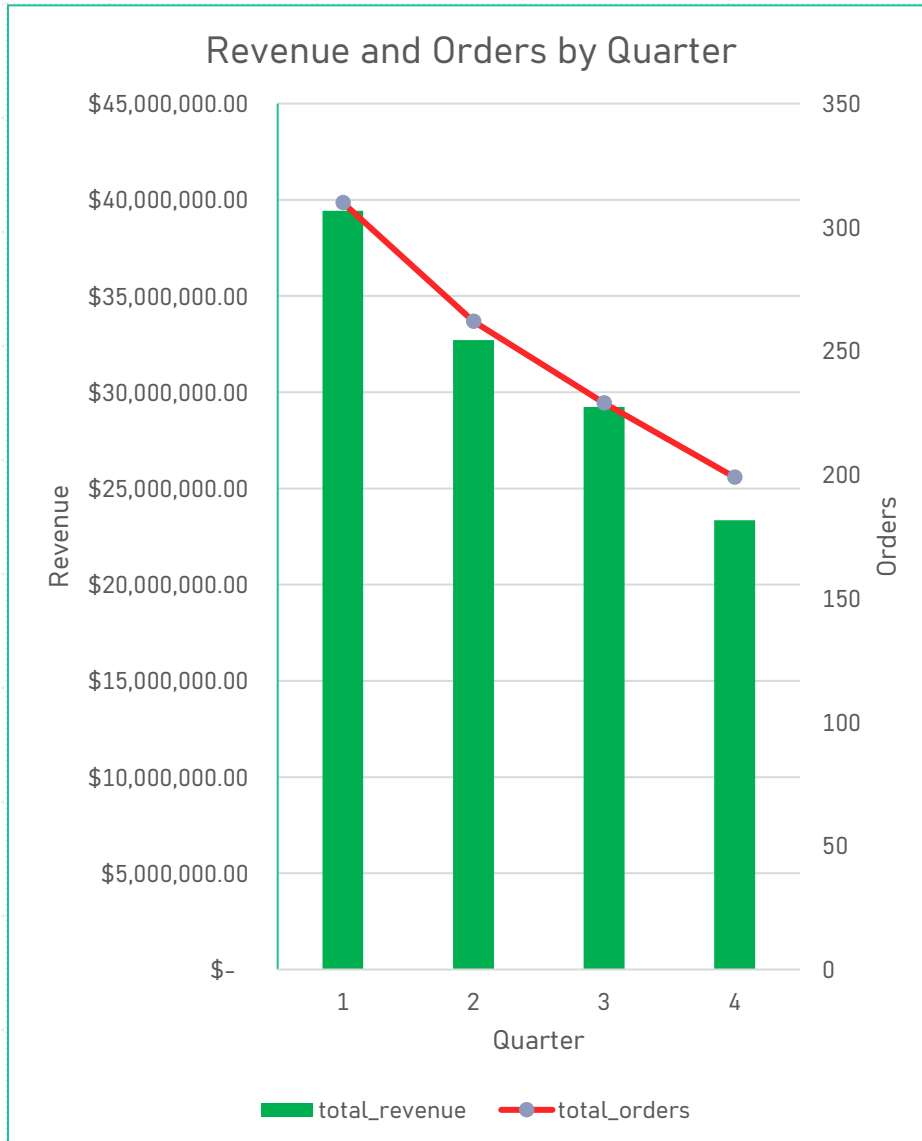
- **Observations/Findings:**

- **Q1:** Highest revenue at ~$39 million.

- **Steady Decline:** Revenue dropped to ~$32 million in **Q2** and continue to decline in **Q3** and **Q4**.

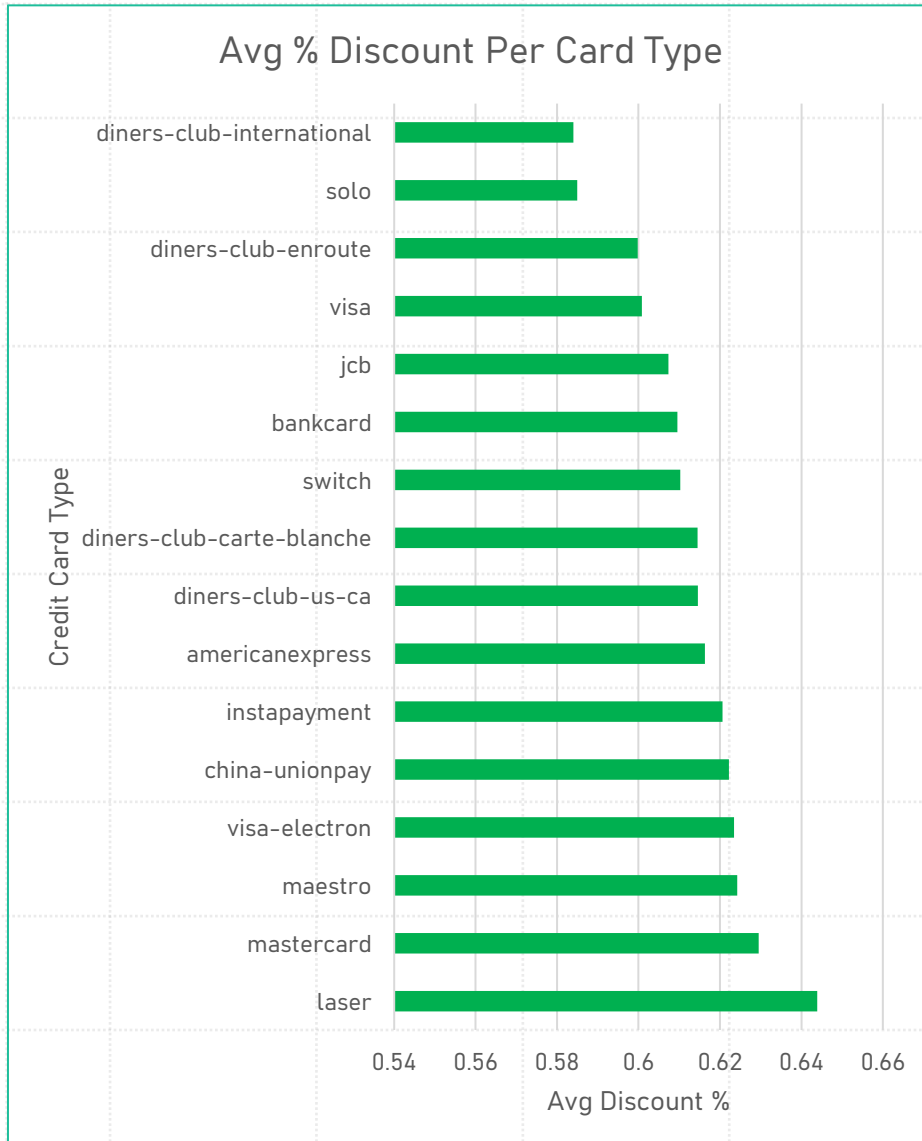- **Overall Decrease:** ~Approximately **41%** from **Q1** to **Q4**.

Shipping Metrics

Average Discount Offered by Credit Card Type

- **Observations/Findings:**
- **Top 5 Credit Card Type Discounts:**
- **1.** Laser
- **2.** Mastercard
- **3.** Maestro
- **4.** Visa-Electron
- **5.** China-Unionpay

Time Taken to Ship Orders by Quarter

- **Observations/Findings:**
- **Q1:** Average shipping time was 57 days.
- **Sharp Increases:** Shipping times jumped to 71 days in **Q2**, nearly doubling **Q1**.
- **Overall increase:** This represents a **tripling** of shipping times from **Q1** to **Q4** (174 days vs 57 days).
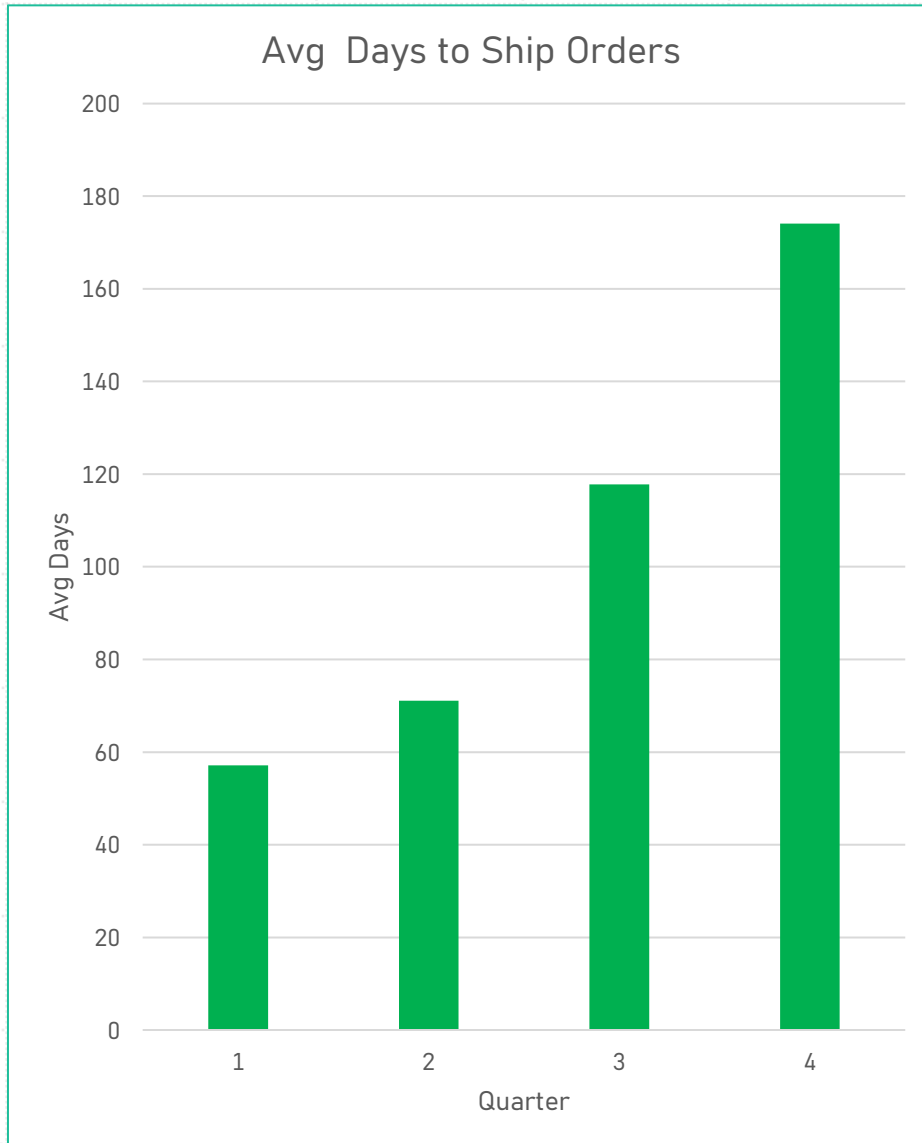
Insights and Recommendations

To better understand the reasons behind the decline, gather additional data and investigate root cause:

- **Analyze customer feedback:** Look for recurring themes or complaints that might indicate specific areas needing improvement.
- **Conduct surveys:** Survey your customers directly to understand their satisfaction levels and gather their feedback.
- **Monitor social media:** See what customers are saying about your brand on social media platforms.
- **Communicate with Customers:** Be transparent about delays and offer faster shipping options.

- **Market conditions:** Has there been a downturn in the overall market that's impacting your industry?
- **Product/Service Issues:** Were there any quality issues or negative customer feedback that affected sales?
- **Competition:** Have new competitors emerged, or have existing competitors gained market share?
- **Marketing/Sales Strategies:** Were there any changes in marketing or sales strategies that might have negatively impacted revenue?