United States Regional Sales

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Content

- Introduction
- Executive Summary
- Metadata
- Data Wrangling
- Data Transformation
- Data Visualization
- Insights
- Considerations
- Recommendations

Introduction

- Regional Sales refers to the total sales performance within specific geographic areas of a country, this report centers its attention on the United States region.

- The analysis of regional sales data plays a vital role in understanding market dynamics, consumer preferences, and economic trends.

- This dataset is useful for providing insights into regional economic health and aiding in the formulation of targeted policies to promote economic growth and stability.

- In essence, the analysis of United States Regional Sales data is a pivotal step in achieving a deeper understanding of the diverse and ever-evolving American marketplace.

Executive Summary

Project Objective:

The objective of this project is to perform a detailed analysis on sales data to draw out key insights and recommendations which could result in enhancing customer satisfaction, boosting organizational productivity and driving regional sales growth.

Key Insights:

- The repeat customer rate is 100% with C-12 being the highest purchaser whereas the profit increased by 66% between 2018 and 2019, remaining same in 2019 and 2020.

- St-284 store, S-26 sales team, and NMK1003 Warehouse lead in profit. Moreover, Store St-122 and Product P-8 have high profit despite low cost. Additionally, Customers C-12, C-29 and C-3 are best customers due to high profit and number of orders.

- High discounts lower the profit, the In store sales are the most profitable and delivery time should not exceed 30 days.

Immediate Future Actions:

- Offer higher discounts to customers with greater profits and higher order volumes while promoting stores, warehouses, and cost-effective products that yield high profits.

- Adhere to the optimal delivery duration to maximize profits while minimizing costs and plan strategically based on both high and low-profit months.

- Reward sales teams that have delivered high profits while managing costs efficiently, and closely monitor underperforming teams to enhance their productivity.

About the Dataset

- The open-source dataset is taken from Kaggle:

 https://www.kaggle.com/datasets/talhabu/us-regional-sales-data

- This dataset offers a thorough understanding of sales in various regions of the United States through different sales channels, such as In-Store, Online, Distributor, and Wholesale.

- Comprising 17,992 rows and 15 columns, it contains a vast array of information, covering everything from specific order and product details to key sales performance metrics.

- It provides a comprehensive view of sales transactions and customer interactions, facilitating in-depth analysis of sales patterns, trends, and possible opportunities.

Data Wrangling

The csv data file was extracted using Microsoft Excel. The Data Wrangling operations were performed using Power Query in Microsoft Excel. Some of the performed operations were:
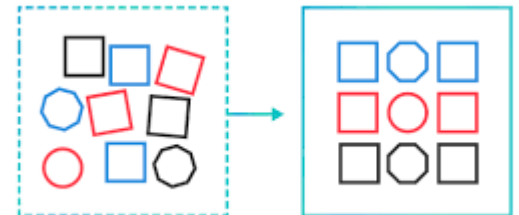
- Header Promotion
- Removal of Duplicates
- Filtering Columns
- Correcting Data Types
- Adding Prefixes
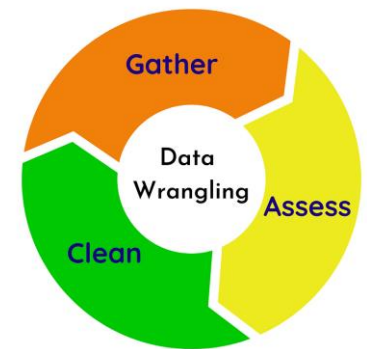
Data Transformation

Data Transformation was done by using Power Query and Pivot tables were made using Power Pivot in Microsoft Excel. Some of the performed operations were:
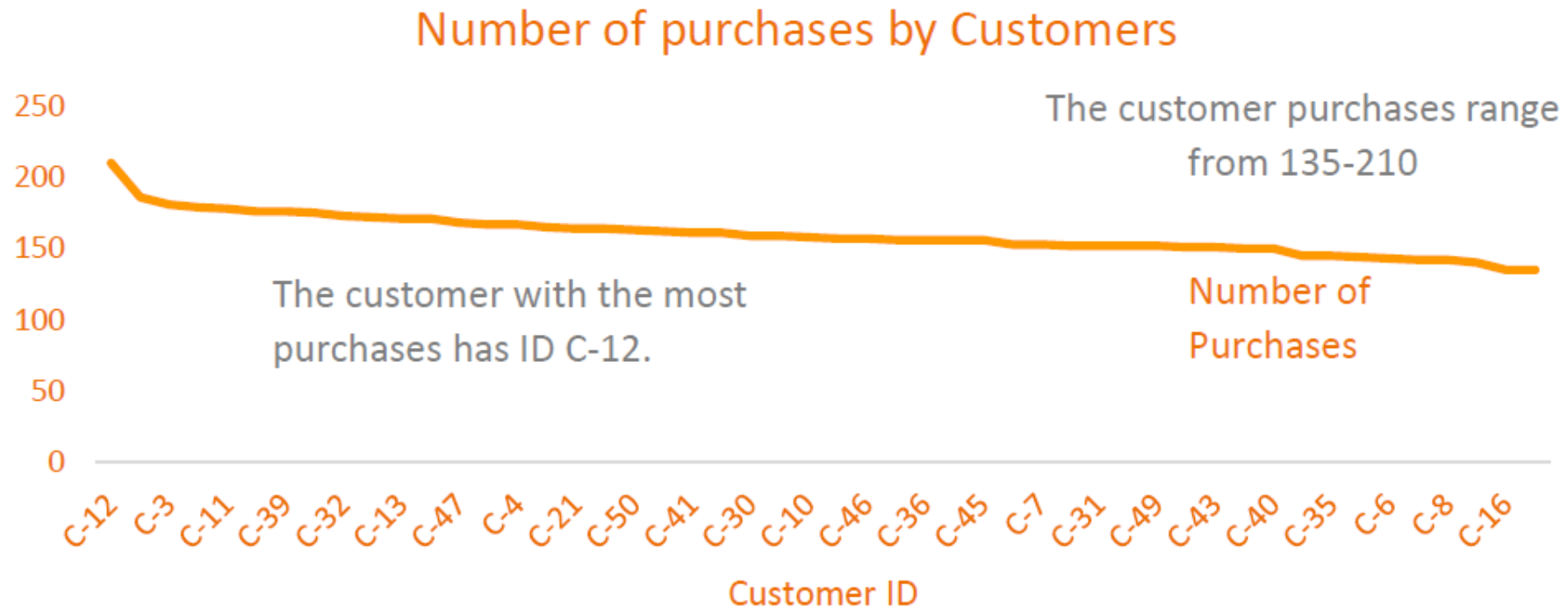
- Removal of Irrelevant Columns
- Addition of calculated columns for further comparisons
- Addition of calculated measures for in-depth study.
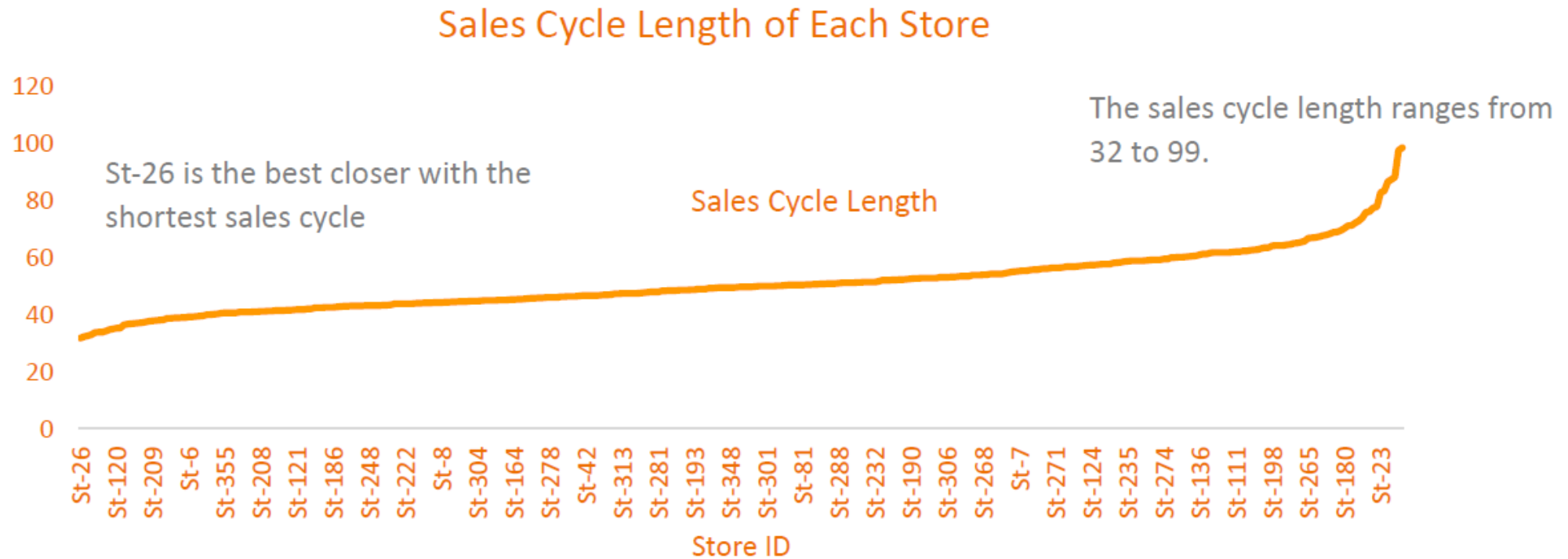- Creation of specific pivot tables for analysis and visualizations

Data Visualization

Number of purchases made by each Customer

Number of purchases by Customers

The customer purchases range from 135-210

The customer with the most purchases has ID C-12.

Number of Purchases

Customer ID

The overall repeat customer rate is 100%. This shows that all the customers have multiple purchases and the customers with most purchases are important.

Sales Cycle Length of Stores

Sales Cycle Length of Each Store

St-26 is the best closer with the shortest sales cycle

Sales Cycle Length

The sales cycle length ranges from 32 to 99.

Store ID

The stores with shorter sales cycle should be given more leeway in sales operations whereas those with longer sales cycle need to determine why it takes longer for them to close sales.

Percentage Year on Year growth in Revenue

YEARS	Sum of Total Profit	Change in Revenue	YOY Growth %
2018	7138111.43		
2019	11861063.63	$4,722,952.20	66.17%
2020	11875482.66	$14,419.03	0.12%
Grand Total	30874657.72	$4,737,371.23	66.37%

There is a big jump in profit between years 2018 and 2019 with a growth of 66%.

The profit remains nearly the same in year 2019 and 2020.

The reasons for the big jump in profit need to be determined and the same principles are to be applied in future to ensure a steady growth.

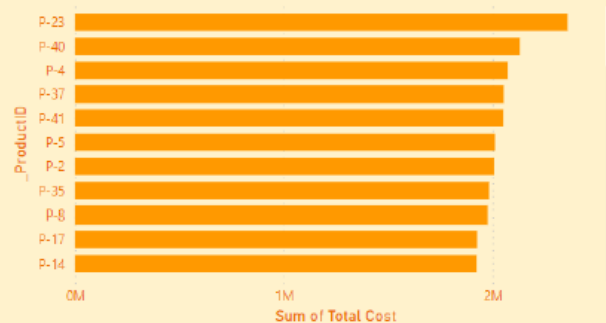# Profit Dashboard
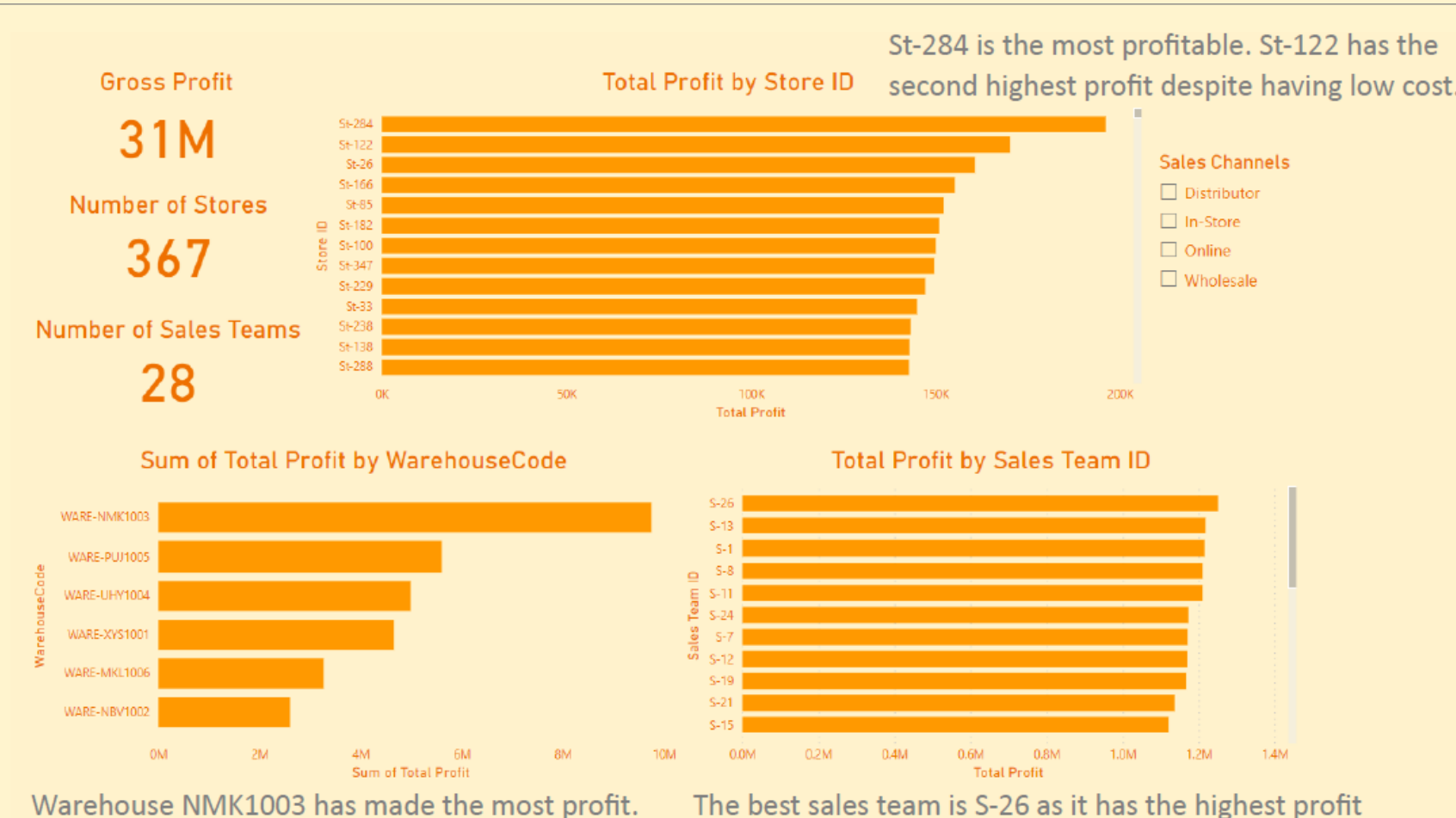
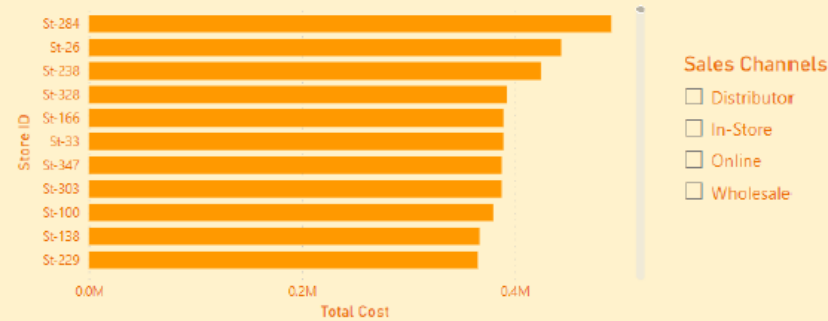# Cost Dashboard

Gross Profit

31M

Total Cost

83M

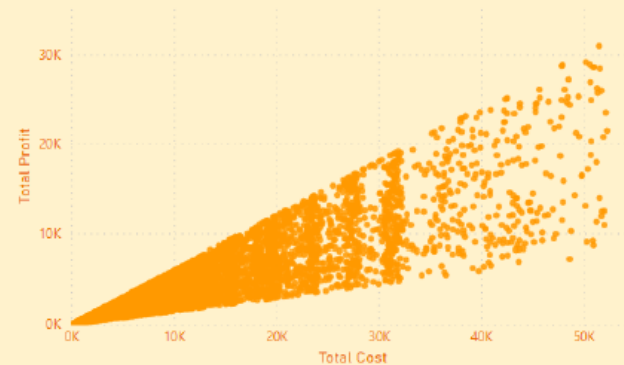**Number of Orders**

36K

Total Cost by Store ID

Sales Channels
- ☐ Distributor
- ☐ In-Store
- ☐ Online
- ☐ Wholesale

St-284 has the highest cost but makes the most profit. St-236 however has high cost and low profit.
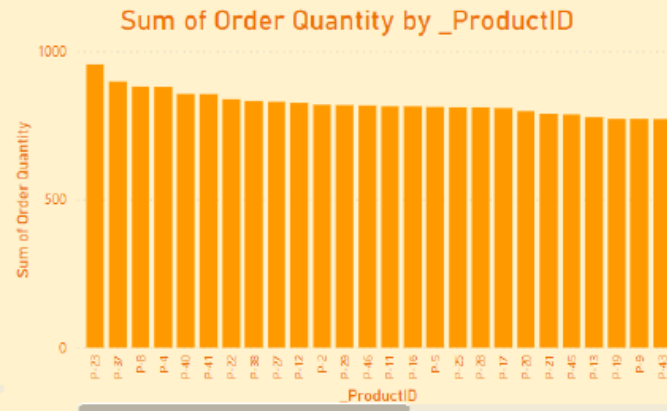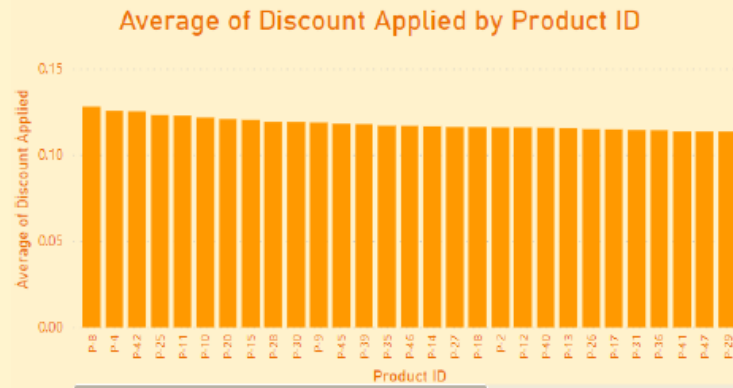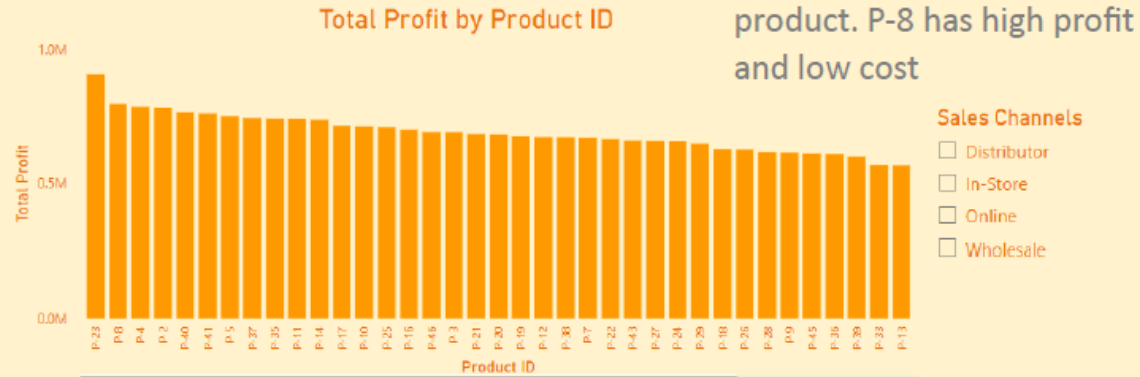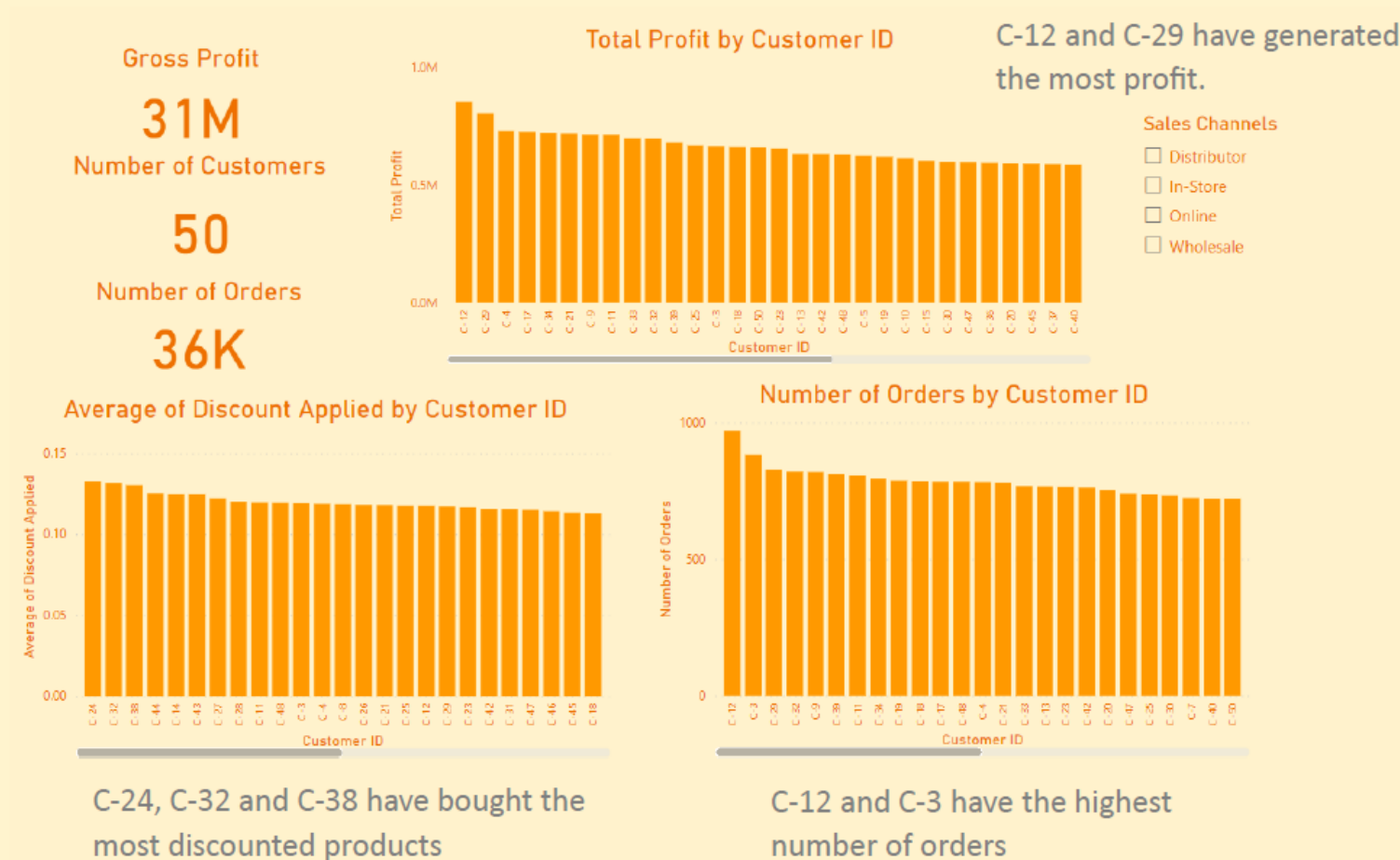
Sum of Total Cost by _ProductID

Total Profit by Total Cost

P-23 is the mostly costly to manufacture. P-40 has high production cost despite making relatively lower profit.

The Total Profit is directly proportional to the total cost

Product Dashboard

Gross Profit
31M

Number of Products
47

Number of Orders
36K

Total Profit by Product ID

P-23 is the most profitable product. P-8 has high profit and low cost

Sales Channels
☐ Distributor
☐ In-Store
☐ Online
☐ Wholesale

Average of Discount Applied by Product ID

Sum of Order Quantity by _ProductID

P-8 is the most discounted product followed by P-4

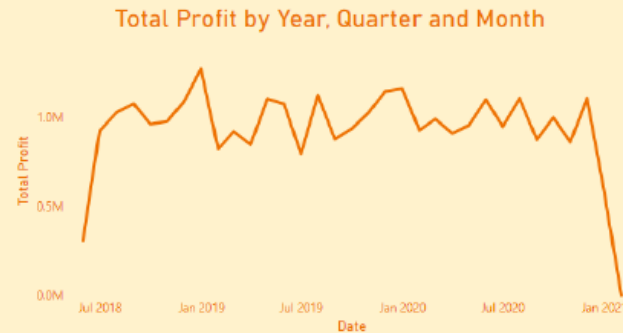P-23 has the most orders followed by P-37
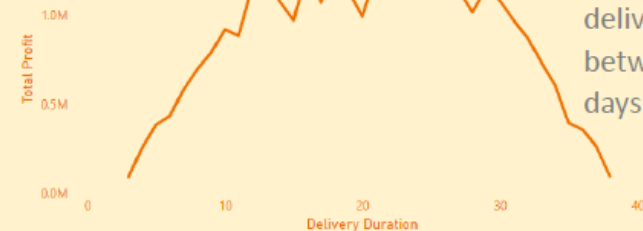
Customer Dashboard

Sales Channels Dashboard
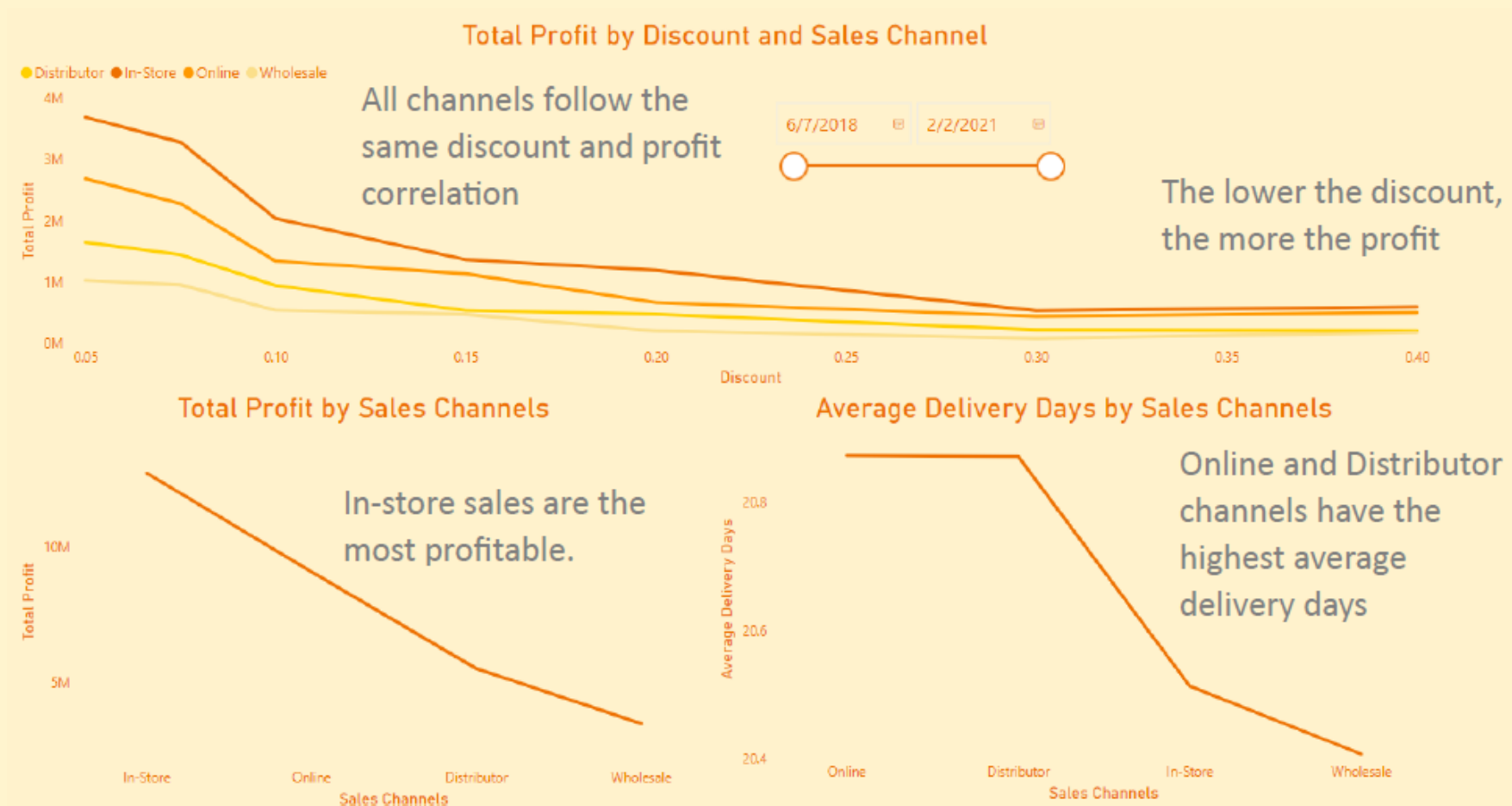
Timeseries Dashboard

The profit peaks over January but remains fairly consistent throughout the years

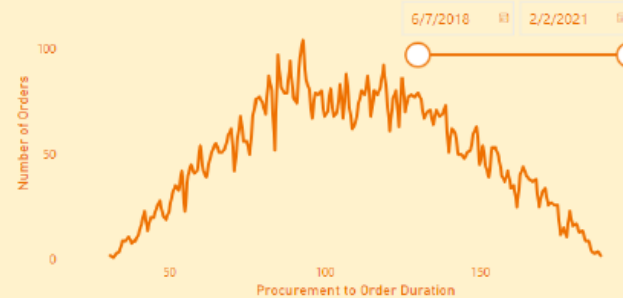**Total Profit by Year, Quarter and Month**
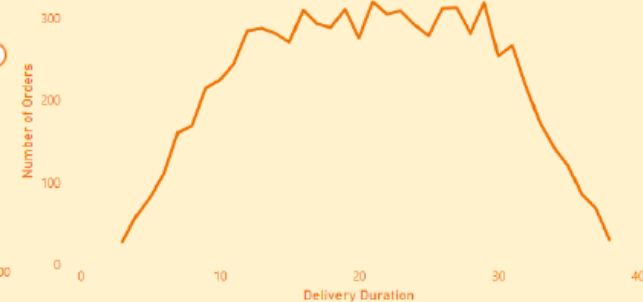

Total Profit by Delivery Duration

Most profit has come when delivery duration is between 10 and 30 days

Number of Orders by Procurement to Order Duration

Number of Orders by Delivery Duration

The general timeframe for orders to transition from procurement to order initiation falls within the range of 80 to 120 days.

Most orders take from 10 to 30 days to delivers

Analysis Insights

1. The repeat customer rate is 100%, indicating that all customers make multiple purchases, with C-12 being the highest purchaser.

2. St-26 is the top performing store with a short sales cycle, and profit increased by 66% between 2018 and 2019, remaining same in 2019 and 2020.

3. St-284 store, S-26 sales team, and NMK1003 Warehouse lead in profit, with St-122 following St-284 closely despite lower costs.

4. Store St-284 is high in cost but highly profitable, while St-236 has high costs and lower profit. Product P-23 is the costliest to produce, and P-40 has relatively high production costs with lower profit. Total profit positively correlates with costs.

Analysis Insights

5. P-23 is the most profitable product, with P-8 having high profit and low costs. P-23 receives the most orders, followed by P-37. P-8 is the most discounted, with P-4 following.

6. Customers C-12 and C-29 generate the most profit, while C-24, C-32, and C-38 buy the most discounted products. C-12 and C-3 have the highest order counts.

7. All channels show the same correlation between discount and profit: lower discount leads to higher profit. In-store sales are the most profitable, with Customers C-12 and C-3 having the highest order counts.

8. Profit peaks in January and remains consistent throughout the year. Most profit occurs with delivery durations of 10 to 30 days. Orders typically take 80 to 120 days from procurement to initiation and 10 to 30 days for delivery.

Considerations to keep in mind

1. The dataset is not inclusive of all the details regarding all the sales in United States. As a result, the accuracy of this information is confined to the scope of the provided dataset.

2. Apart from the discussed metrics there are many other metrics like state of the economy that effect the regional sales.

Recommendations

1. Offer higher discounts to customers with greater profits and higher order volumes, while reducing discounts for those with fewer orders and lower profits.

2. Promote stores, warehouses, and cost-effective products that yield high profits.

3. Adhere to the optimal delivery duration to maximize profits while minimizing costs.

4. Plan strategically based on both high and low-profit months.

5. Recognize and reward sales teams that have delivered high profits while managing costs efficiently, and closely monitor underperforming teams to enhance their productivity.

THE END