Data Analysis for Business Performance Improvement

December 20, 2023

Performed by Dariia Dragunova

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Data Overview

The dataset provided covered a 6-month time span of sales and revenue data including product, division and sales channel information.

Key variables included:
- Month
- Number of Units Sold
- Number of Units Offered
- Product
- Sales Channel
- Division
- Total Revenue

The dataset was cleaned and pre-processed using Python libraries, further explored using SQL and visualized using Tableau.

Executive Summary

- Total Revenue was $9.09 million in June, compared to $7.26 million in January, an increase of 19.5% month-over-month

- 87% of the total revenue comes from the top 3 products (products Three, Four, and Two)

- Division B was consistently the top performing (total $19.6M; $4.5M greater than the next highest division)

- Channel Z was consistently the top performing with over 224 thousands units sold ($23.9M in revenue; $12.1M greater than the next highest)
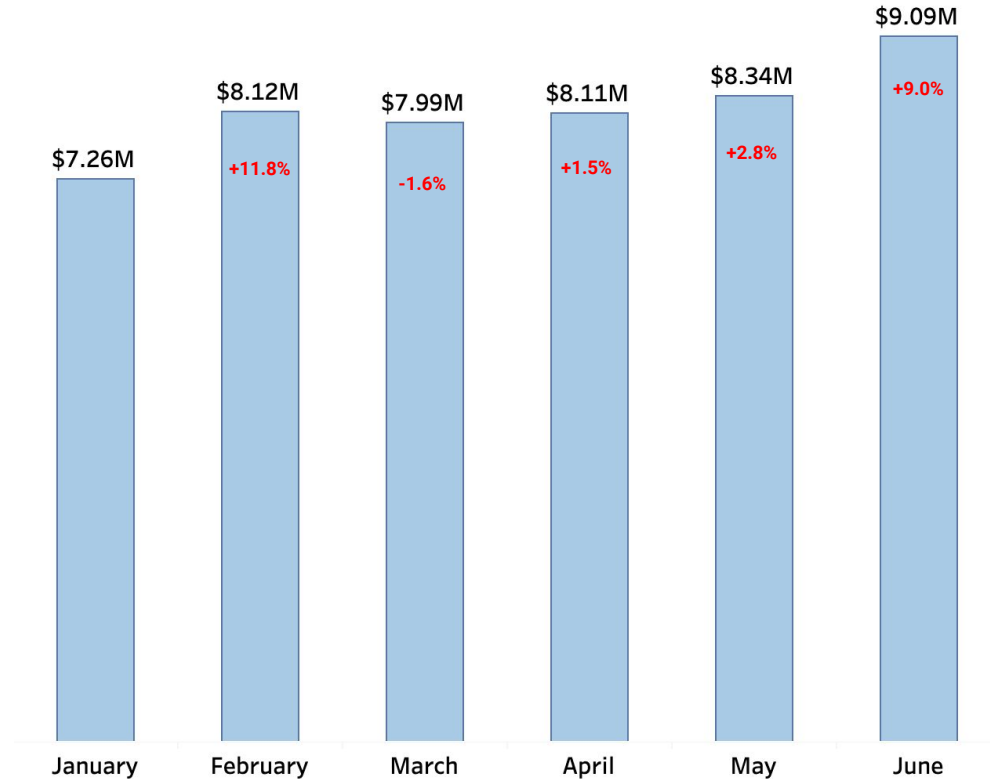
Financial Results

Overall Financial Results over a 6-month span (January–June)

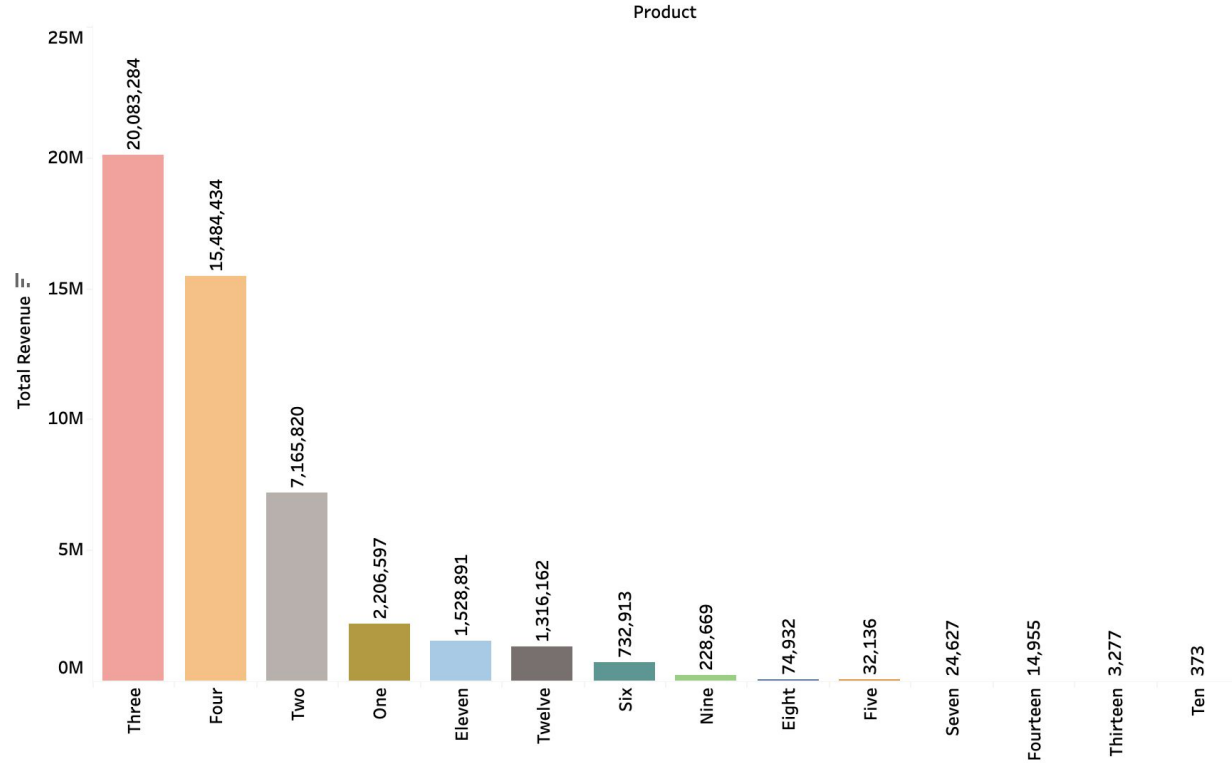|	
Total Revenue	$48,897,070
Monthly Revenue Growth over 6 months	19.5%

Seasonal Analysis

- Strong revenue growth of 19.5% over 6-month period
- Peak performing month was **June** with $9.09 million in revenue, while **January** was lowest performing month with $7.26 million

Product Performance

- The dataset had 14 reportable Products
- The chart on the right shows product performance by total revenue generated

Product

Total Revenue

| Product	Total Revenue
Three	20,083,284
Four	15,484,434
Two	7,165,820
One	2,206,597
Eleven	1,528,891
Twelve	1,316,162
Six	732,913
Nine	228,669
Eight	74,932
Five	32,136
Seven	24,627
Fourteen	14,955
Thirteen	3,277
Ten	373

Top 3 Performing Products

Product	Revenue	Total Units Sold	% of Total Revenue
Three	$20,083,284	185,137	%41.07
Four	$15,484,434	143,447	%31.67
Two	$7,165,820	101,412	%14.65

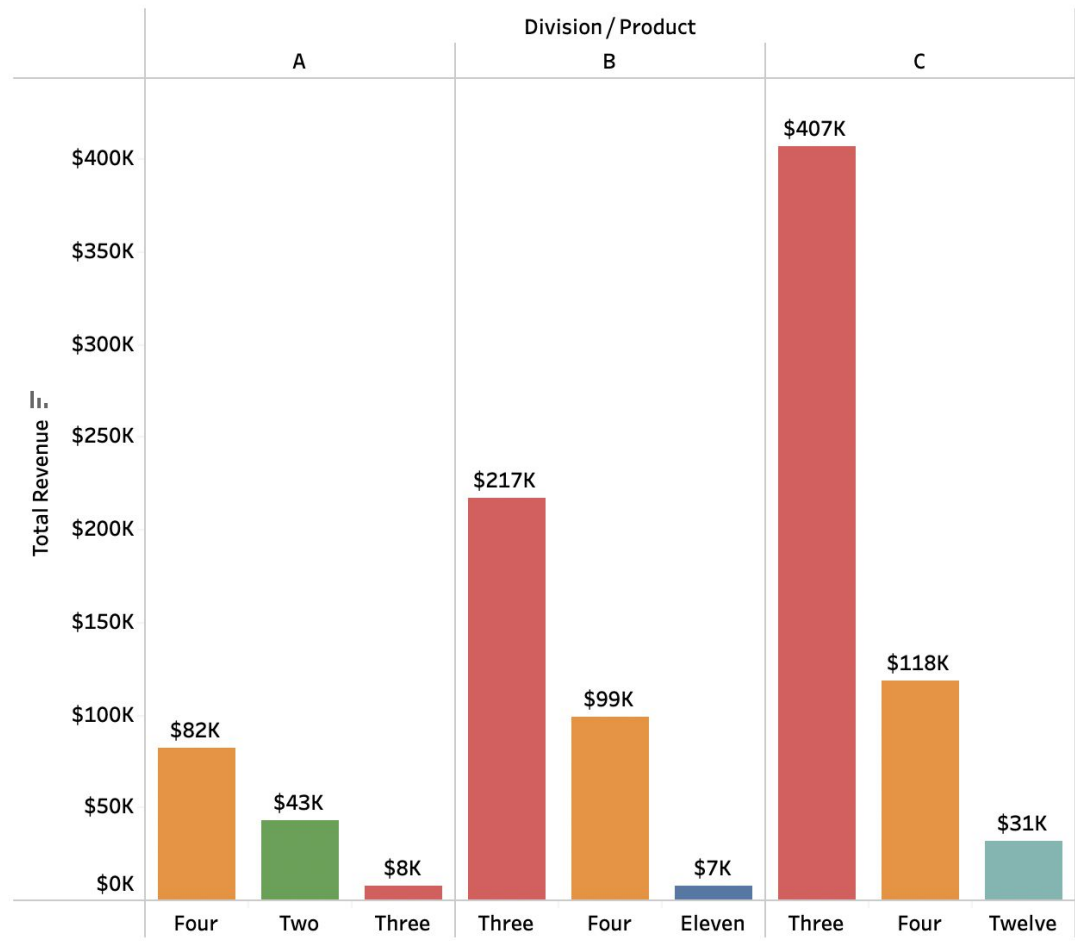The top 3 performing products comprise 87.4% of the total revenue

Sales Performance by Division

- The chart on the right represents sales performance by Division based on Units Sold and Total Revenue over the 6-month period

- The dataset had four reportable Divisions: A, B, C and Other

- Division B was top-performing with over 197 thousands units sold resulting in $19.6 millions in revenue ($4.5M more than the next highest, Division C)
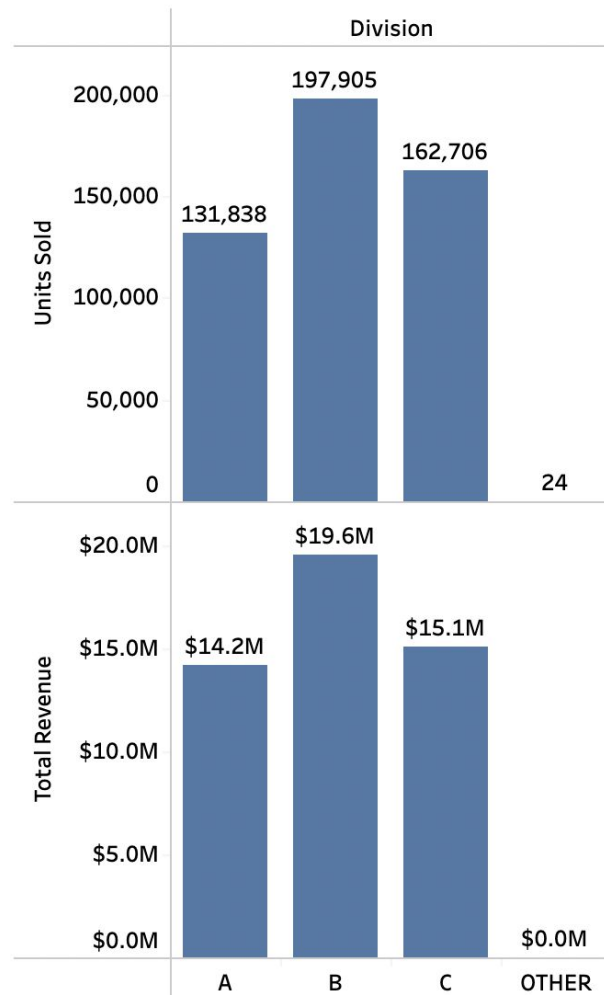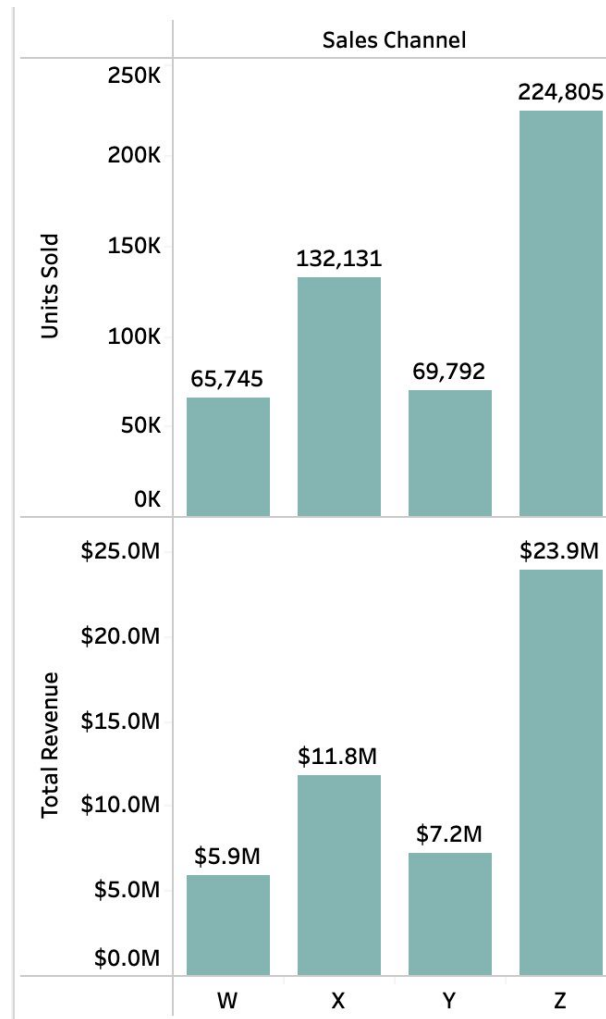
Top 3 Performing Products by Division

- The chart on the right presents top 3 performing products by Division

- Product Three was top performing in both Divisions B and C

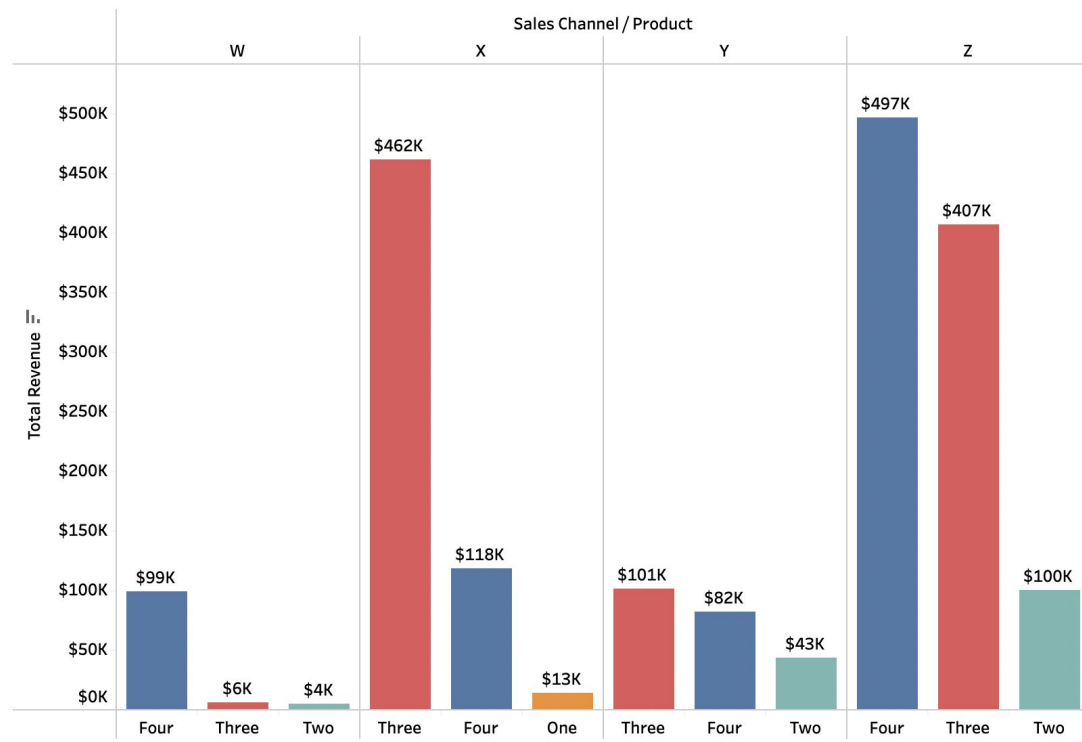- Product Four had consistent performance over the three divisions

Sales Performance by Channel

- The chart on the right presents sales performance by sales channel based on Units Sold and Total Revenue over the 6-month period

- The dataset had four reportable Sales Channels: W, X, Y and Z

- Channel Z was top-performing with over 224 thousands units sold resulting in $23.9 millions in revenue

Top 3 Performing Products by Sales Channel

- The chart on the right presents top 3 performing products by Sales Channel

- Product Four was top performing in Sales Channel Z with over $497K in generated revenue and had consistently high performance over the three divisions

- Product Three was top-performing in Sales Channel X

Sales Channel / Product

| W | X | Y | Z |

Total Revenue

$500K
$450K
$400K
$350K
$300K
$250K
$200K
$150K
$100K
$50K
$0K

W: Four $99K, Three $6K, Two $4K
X: Three $462K, Four $118K, One $13K
Y: Three $101K, Four $82K, Two $43K
Z: Four $497K, Three $407K, Two $100K

Further Research

- Given the trends of the current data, what would the revenue and sales numbers look 6 month ahead?

- What is the conversion rate of customers by product, sales channel and division?

- What is the revenue per product and how does it differ across products?

- Do products belong in different categories and if so, how do different categories perform?

- Where is each division located?