

# Seals Analysis Report

Exploratory Data Analysis of Seals Dataset

Dataset size: 200.000 orders

Period: 2022-2024

Tools: Python (Pandas, Matplotlib, Seaborn), Excel

Prepared by: Yevhenii T.

# Dataset Overview

Number of orders: 200.000

Countries: multiple international markets

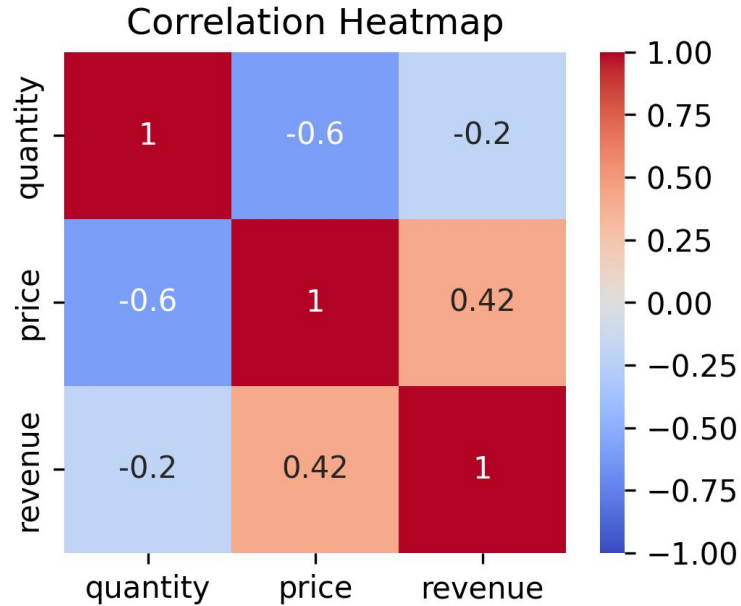
Categories: Electronics, Clothing, Gaming, Accessories, Office, Food

Metrics analyzed: Price, Quantity, Revenue

## **Goal of analysis:**

To identify key drivers of revenue, customer behavior patterns, and potential business opportunities

# Correlation Between Price, Quantity and Revenue



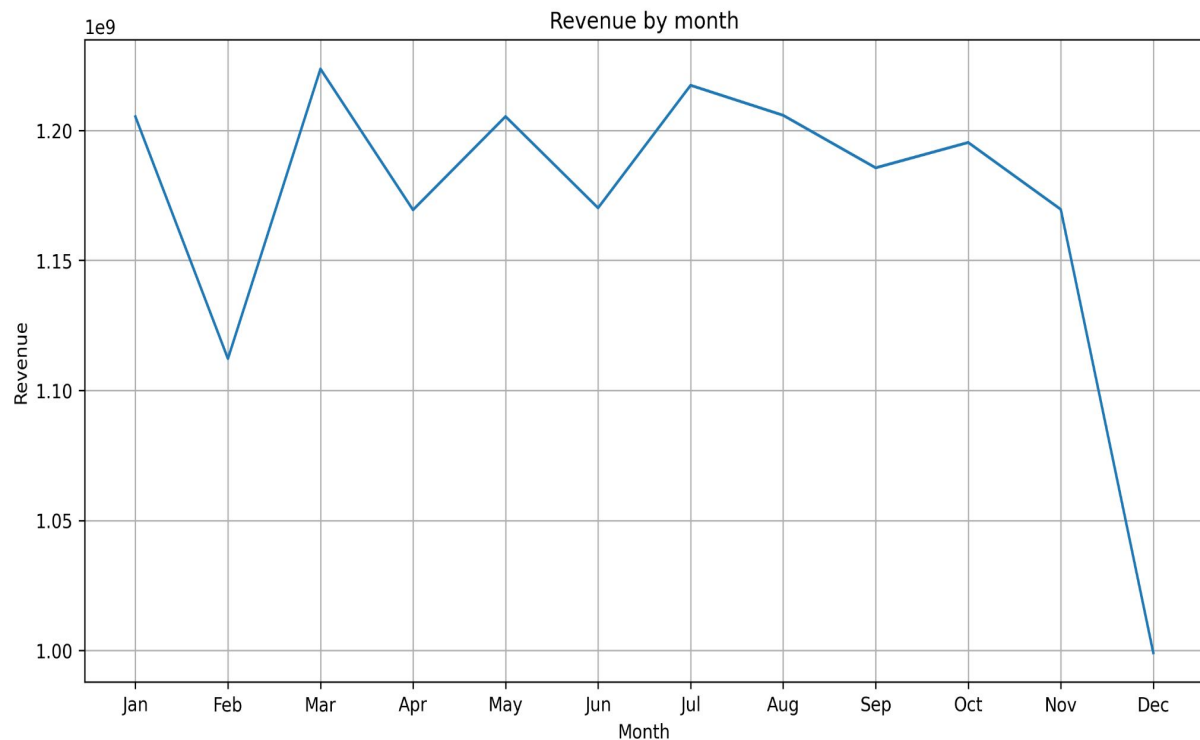
## Key findings:

- *Strong negative correlation between Price and Quantity (-0.6)*
- *Moderate positive correlation between Price and Revenue (0.42)*
- *Weak relationship between Quantity and Revenue (-0.2)*

## Insight:

Revenue is more influenced by pricing strategy than by sales volume.

# Revenue by Month



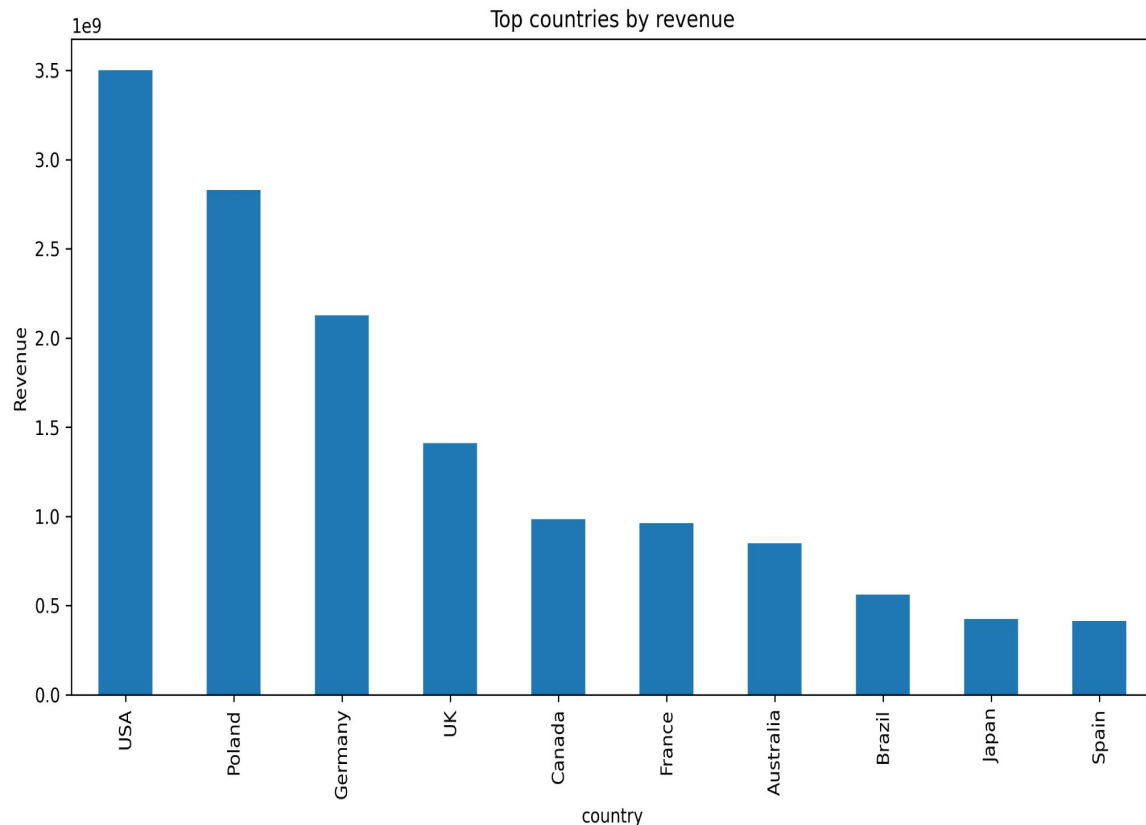
## Observations:

- *Revenue remains relatively stable throughout the year.*
- *Slight dip observed in February.*
- *Drop in December likely caused by incomplete data.*

## Insight:

No strong seasonality detected, but data completeness should be considered.

# Top Countries by Revenue



## Key markets:

- *USA*
- *Poland*
- *Germany*

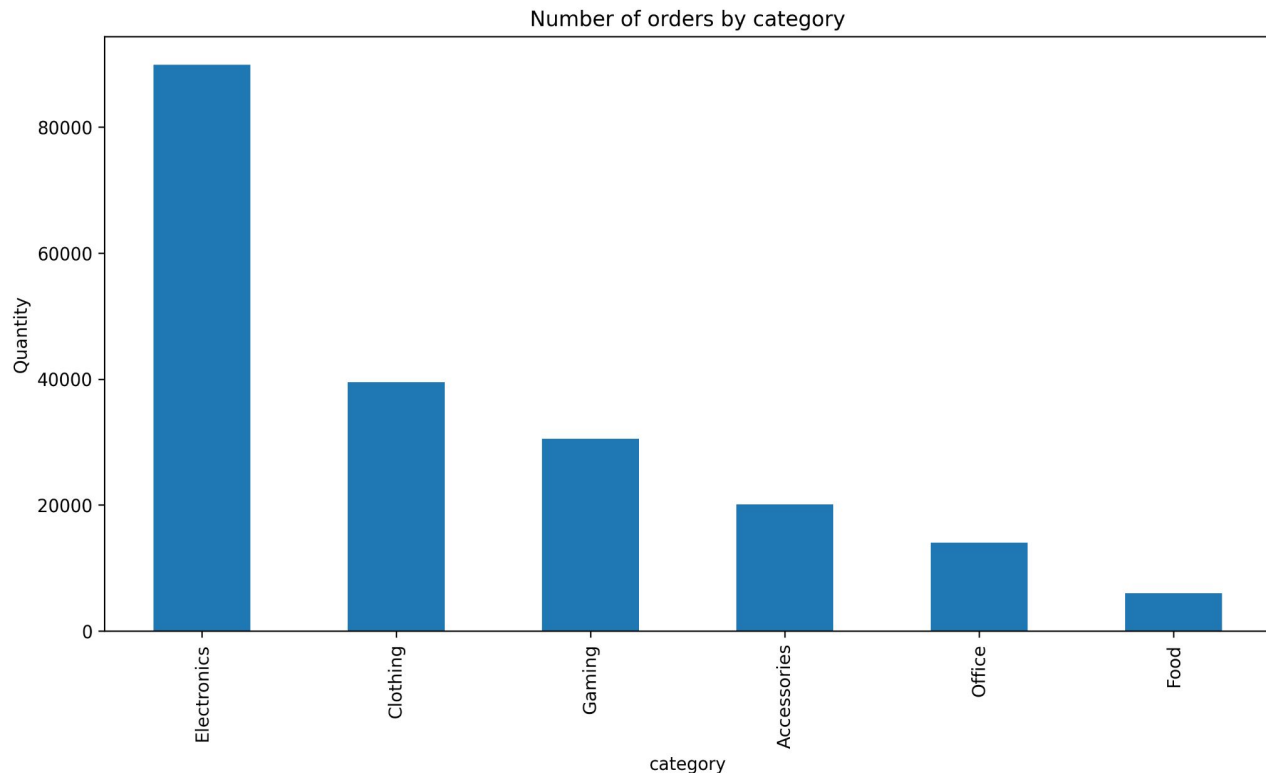
## Low-performing markets:

- *Spain*
- *Japan*

## Insight:

Revenue is concentrated in a small number of countries, creating both growth potential and concentration risk.

# Orders Distribution by Category



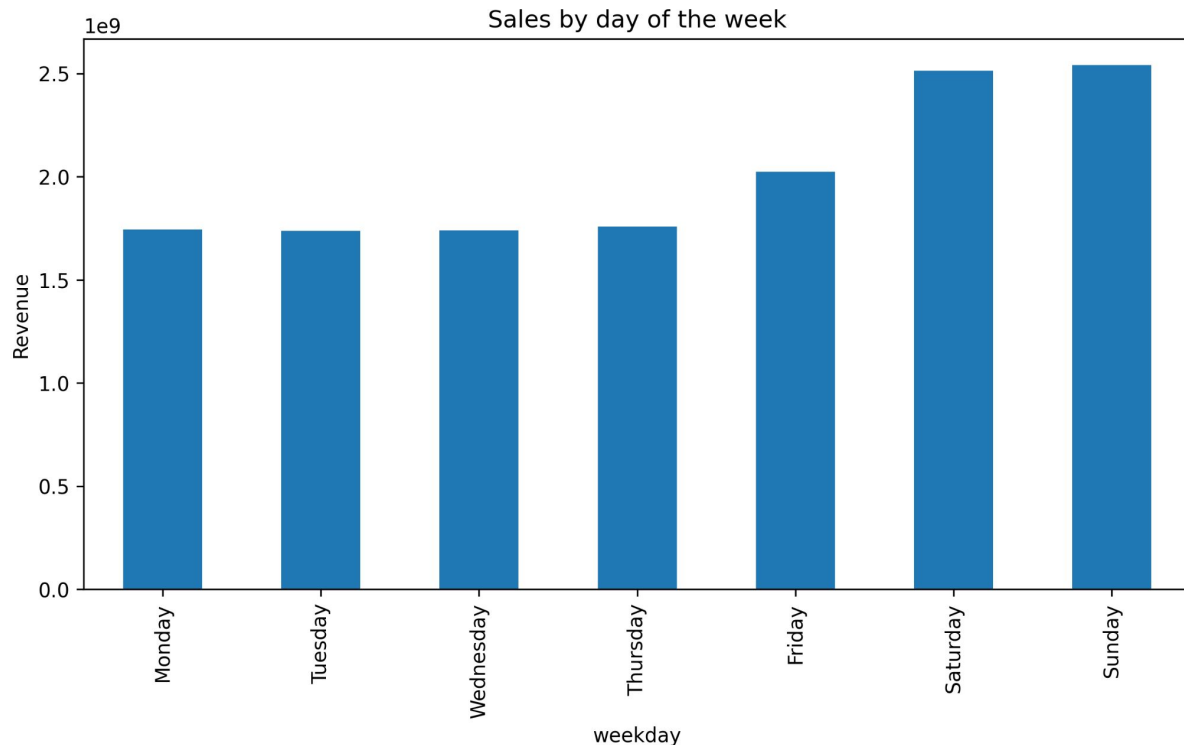
## Observations:

- *Electronics dominate order volume.*
- *Electronic devices exceed the second category by more than 2 times.*
- *Food category has the lowest number of orders.*

## Insight:

Product demand is heavily skewed toward electronics.

# Seals by Day of the Week



## Observations:

- *Stable sales from Monday to Thursday.*
- *Slight increase on Friday.*
- *Peak sales on Saturday and Sunday.*

## Insight:

Customer purchasing activity is highest during weekends.

# Key Business Recommendations

- Correlation analysis shows that it is better to focus on price optimization rather than on increasing sales volumes.
- **Weekends** appear to be the most effective period for marketing campaigns, as peak sales are observed during this time.
- It is recommended to strengthen market presence in top-performing countries such as the **USA**, **Poland**, and **Germany**. At the same time, pricing and distribution strategies in underperforming markets like **Spain** and **Japan** should be reviewed.
- Low-performing categories, such as **Office** and **Food**, should be evaluated for optimization or potential reduction.

# Conclusion

This analysis highlights pricing as a key driver of revenue, a strong concentration of sales across specific markets, and clear temporal patterns in customer behavior.

These insights can be used to inform data-driven decisions in pricing strategy, marketing planning, and market expansion.