Retail Store Sales Analysis

A Data Analysis Project Using Microsoft Excel

Executive Summary

This project focuses on analyzing retail store sales data using Microsoft Excel. The objective is to identify business opportunities and provide actionable insights by answering key sales-related questions. The analysis explores revenue trends, product performance, customer behavior, and sales channels using Excel features such as pivot tables, data cleaning techniques, and dashboard visualizations.

Project Objectives

1. What is the total revenue generated?
2. Which product category has the highest number of sales?
3. Which branch generated the most revenue?
4. How do monthly sales trend over time?
5. What are the top 5 selling products by quantity and revenue?
6. Which day of the week has the most sales?
7. What is the distribution of payment methods used?

Tools Used

- Microsoft Excel
- Pivot Tables
- Data Cleaning Functions
- Dashboard Creation
- Conditional Formatting
- Charts and Visualizations

Data Cleaning Process

Before analysis, the dataset was thoroughly cleaned:
- Filled missing values with 'Unknown' or 0, depending on context.
- Verified and removed any duplicate rows.
- Calculate missing Price per Unit values by dividing available Revenue by Quantity Sold.
- Standardized columns like Date to appropriate formats.
- Ensured consistency in naming conventions.

Data Analysis & Insights

Total Revenue Generated
$1,552,071 was generated across all branches and product categories.

Top Product Category by Sales
Furniture topped the chart with 8,462 items sold.

Top-Performing Branch
The Online Branch generated the most revenue, totaling $791,401.00.

Monthly Sales Trend
Sales remained consistent with noticeable peaks (e.g., January 2024: ~$47,909).

Top 5 Products by Quantity Sold
Unknown (3,387), Item_2_BEV (676), Item_16_MILK (627), Item_25_FUR (616), Item_19_MILK (589).

Top 5 Products by Revenue
Unknown ($79,073), Item_25_FUR ($25,256), Item_25_EHE ($23,083), Item_25_BUT ($21,894), Item_24_FUR ($21,172).
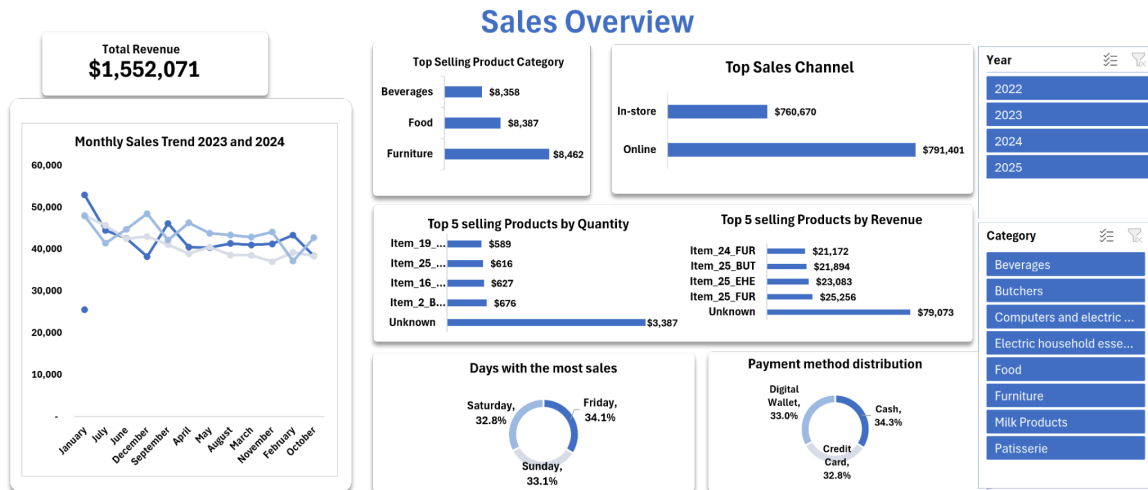
Day of the Week with Most Sales
Friday led with $232,786 in sales, representing 34.1% of total weekly revenue.

Payment Method Distribution
Cash (34.3%), Digital Wallet (33.0%), Credit Card (32.8%).

Dashboard Visualization
The interactive Excel dashboard below presents key KPIs visually:

Sales Overview

Total Revenue
$1,552,071

Monthly Sales Trend 2023 and 2024

Top Selling Product Category
- Beverages $8,358
- Food $8,387
- Furniture $8,462

Top Sales Channel
- In-store $760,670
- Online $791,401

Top 5 selling Products by Quantity
- Item_19_... $589
- Item_25_... $616
- Item_16_... $627
- Item_2_B... $676
- Unknown $3,387

Top 5 selling Products by Revenue
- Item_24_FUR $21,172
- Item_25_BUT $21,894
- Item_25_EHE $23,083
- Item_25_FUR $25,256
- Unknown $79,073

Days with the most sales
- Saturday, 32.8%
- Friday, 34.1%
- Sunday, 33.1%

Payment method distribution
- Digital Wallet, 33.0%
- Cash, 34.3%
- Credit Card, 32.8%

Year
- 2022
- 2023
- 2024
- 2025

Category
- Beverages
- Butchers
- Computers and electric ...
- Electric household esse...
- Food
- Furniture
- Milk Products
- Patisserie

Business Recommendations

- The company should capitalize on High-Performing Categories. It should focus on Furniture, the top-selling category.
-The company should enhance its Online Sales Channel. Improving user experience and offering exclusive discounts should be its priority.
- Noting that the Peak Sales days are around the weekends, the company should plan bonuses and discount sales around Fridays and weekends.
- It should also leverage January peaks by promoting high selling products more.
- the company should further investigate 'Unknown' Products by improving data labeling and tracking.
- The company should offer small incentives for digital payments.
-The company should invest in Data Quality by training staff and implementing validation checks.

Deliverables

- Cleaned Excel dataset
- Pivot table summaries
- Sales dashboard in Excel
- This comprehensive report
- README for GitHub repo

Conclusion

Through this Excel-based sales analysis, we uncovered actionable insights that can help optimize operations, improve marketing strategies, and increase revenue. This project demonstrates the value of even basic tools like Excel in driving data-informed decision-making.