ELECTRONIC SALES ANALYSIS REPORT

Sales Insights and Interactive Dashboard (2023–2024)

Data Analysis Project
Powered by Excel (Power Query, Pivot Tables & Dashboard)

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Project Overview

This project focused on analyzing a Kaggle dataset of electronic sales (20,000 rows, 2023–2024) to build a structured sales report and deliver actionable insights. The main objective was to demonstrate how common business questions in sales can be answered through data preparation and visualization. Using Excel with Power Query, pivot tables, and pivot charts, the dataset was cleaned, transformed, and enriched with calculated fields.
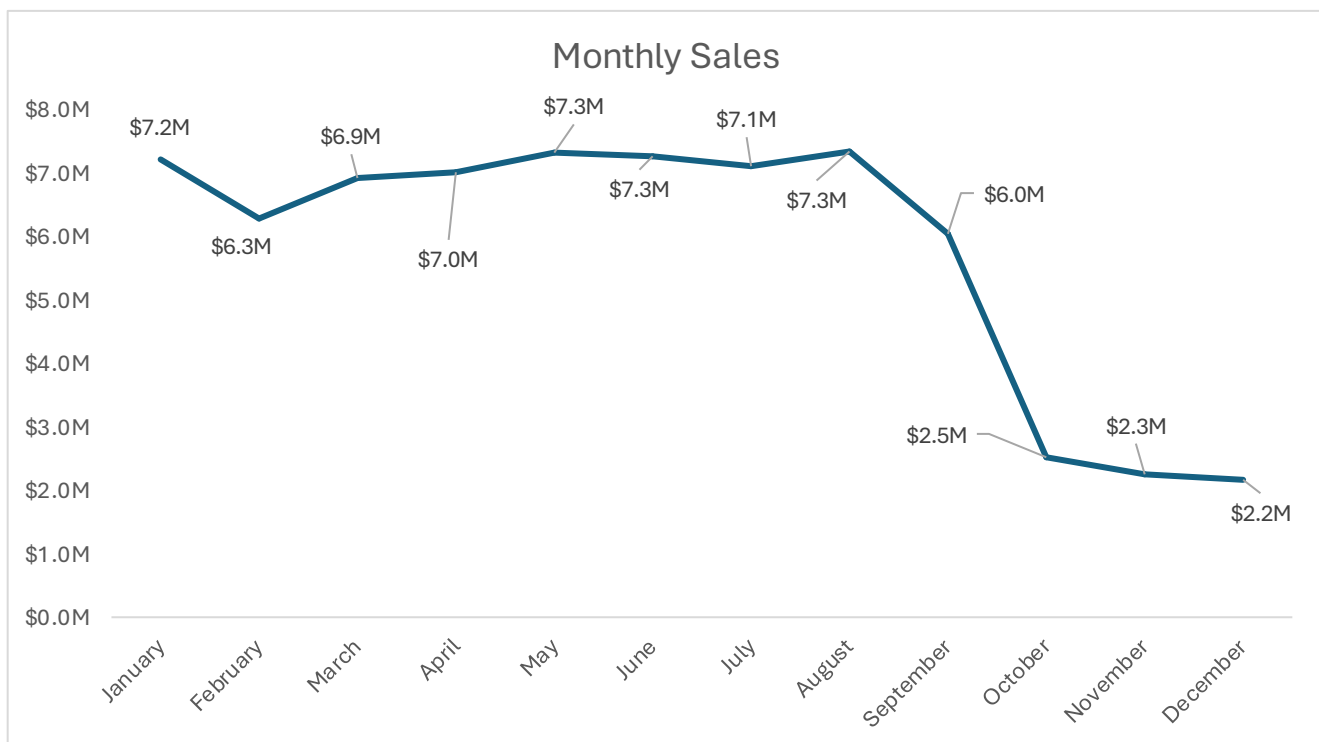
Methodology & Tools

To answer key business questions, the raw Kaggle dataset was processed using **Excel** and **Power Query** for ETL. Key actions included data cleansing, standardization, and feature engineering (creating Total_Calculated, Month, and Group_Age fields). The core analysis was conducted using **Pivot Tables**, and the findings were consolidated into an interactive dashboard with **Pivot Charts** and **Slicers**.
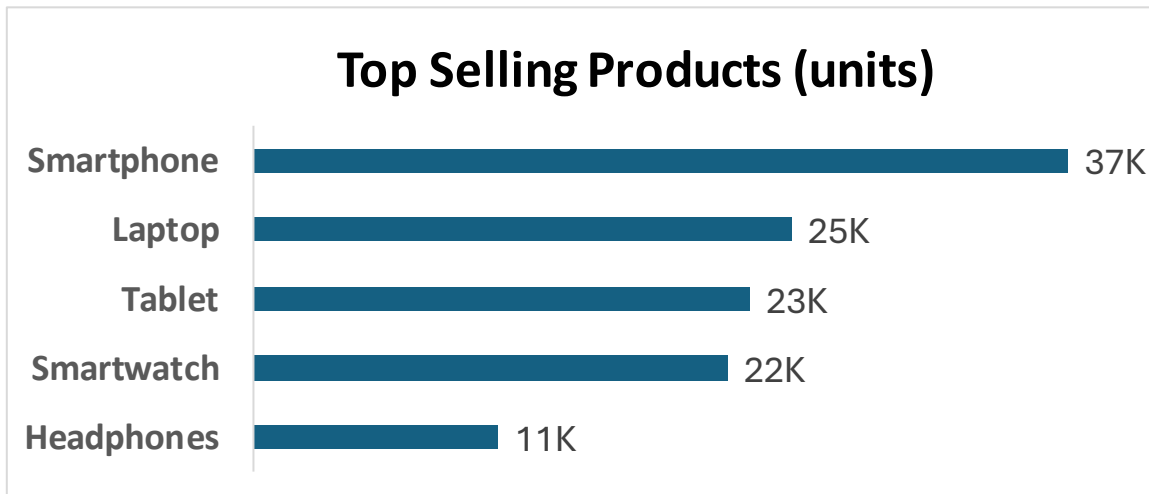

Key Insights from the Analysis

Insight 1: Critical Q4 Revenue Collapse

Analysis of monthly trends revealed a stable performance ($7M avg) from Jan-Aug, followed by a **critical revenue collapse in Q4**, with sales plummeting over 70% by December. This pattern suggests a severe seasonality *or* a major failure in year-end marketing and inventory strategy, creating a significant risk to annual profitability.


Monthly Sales

January $7.2M, February $6.3M, March $6.9M, April $7.0M, May $7.3M, June $7.3M, July $7.1M, August $7.3M, September $6.0M, October $2.5M, November $2.3M, December $2.2M

Insight 2: Revenue Concentration in Smartphones

The business is heavily reliant on a single category, with Smartphones (37K units) outselling the next-closest category by nearly 50%. While this indicates a strong product-market fit, it also creates a **significant concentration risk**. Any disruption in the smartphone supply chain or a shift in market demand would immediately threaten the majority of the company's sales.

Top Selling Products (units)

Product	Units
Smartphone	37K
Laptop	25K
Tablet	23K
Smartwatch	22K
Headphones	11K

Insight 3: 50+ Age Group as the Core Customer

The sales distribution is dominated by customers aged 50+, who account for $33M (48%) of all revenue. This segment is the clear financial engine of the business. In contrast, the under-25 market segment is underdeveloped, representing a potential long-term growth opportunity to diversify the customer base.

Sales Distribution By Age Group

Age Group	Sales
25-35	~$12M
35-50	~$17M
Less than 25	~$7M
Older than 50	~$33M
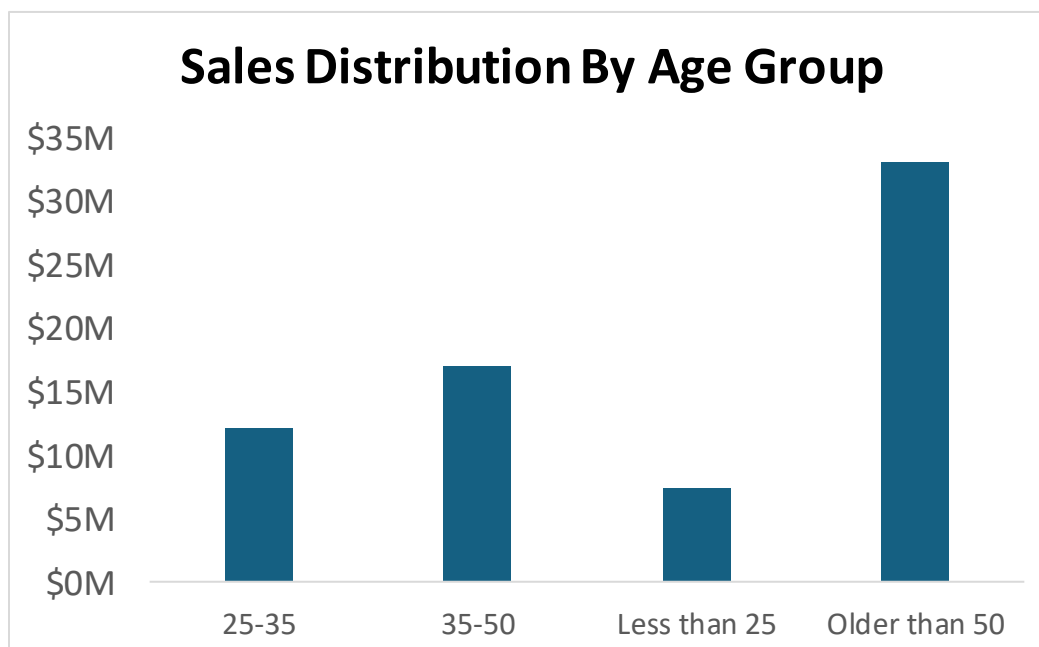
Final Interactive Dashboard

The analysis and key insights were consolidated into a single, interactive dashboard in Excel, allowing for dynamic filtering by product, payment method, age group, and month.
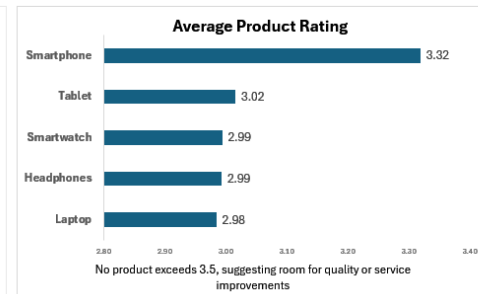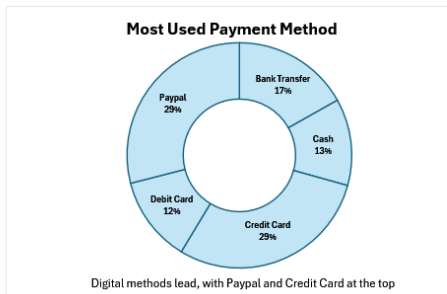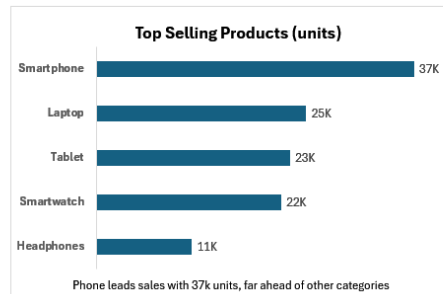
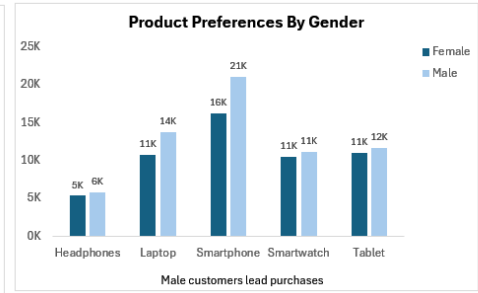### SALES & CUSTOMER INSIGHTS

TOTAL SALES	QUANTITY SOLD	ADDS-ON TOTAL
$69.5M	$117K	$1.2M

Monthly Sales

$8.0M — $7.2M; $6.9M; $7.3M; $7.1M; $6.3M; $7.0M; $7.3M; $7.3M; $6.0M; $2.5M; $2.3M; $2.2M

Sales peaked in august and fell by %70.52 in December

Sales Distribution By Age Group

25-35, 35-50, Less than 25, Older than 50

50+ Age group leads sales, while the under -25 lags behind

Product Preferences By Gender

Female / Male

Headphones 5K 6K, Laptop 11K 14K, Smartphone 16K 21K, Smartwatch 11K 11K, Tablet 11K 12K

Male customers lead purchases

Top Selling Products (units)

Smartphone 37K, Laptop 25K, Tablet 23K, Smartwatch 22K, Headphones 11K

Phone leads sales with 37k units, far ahead of other categories

Most Used Payment Method

Bank Transfer 17%, Paypal 29%, Cash 13%, Debit Card 12%, Credit Card 29%

Digital methods lead, with Paypal and Credit Card at the top

Average Product Rating

Smartphone 3.32, Tablet 3.02, Smartwatch 2.99, Headphones 2.99, Laptop 2.98

No product exceeds 3.5, suggesting room for quality or service improvements

Gender
Female
Male

Loyalty Member
No
Yes

Product Type
Headphones
Laptop
Smartphone
Smartwatch
Tablet

GroupAge
25-35
35-50
Less than 25
Older than 50