Product Sales Performance Analysis Report

(Using SQL & Excel)

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1. Project Overview

This project focuses on analysing product sales data to understand revenue performance, customer behaviour, return trends, and operational efficiency.
The analysis was performed using **SQL for data querying** and **Excel for visualization and dashboarding**.

The dataset contains order-level sales information such as region, product, customer type, promotions, delivery time, and returns.

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2. Business Problem Statement

The company wants to understand:

- Which regions, products, and promotions drive the most revenue
- Why return rates are high
- How sales performance changes over time
- How efficiently orders are delivered
- Which customer segments and salespersons perform best

The objective is to **increase profitability** and **reduce revenue loss due to returns**.

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3. Business Goal

The goal was to understand what is driving revenue, where losses are happening (returns), and how promotions, regions, and people impact sales.

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4. Tools & Technologies Used

Tool	Purpose
MySQL	Data storage & analysis
SQL	Data querying, KPI calculation
Microsoft Excel	Dashboard & visualization
Pivot Tables	Aggregations & analysis
Charts & Slicers	Interactive reporting

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5. Dataset Description

Table Name: product_sales

Key Columns Used:

- OrderID
- Region
- Product
- Quantity
- UnitPrice
- TotalPrice
- CustomerType
- Promotion
- Returned
- ShippingCost
- OrderDate
- DeliveryDate
- Salesperson
- PaymentMethod

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6. Key KPIs Calculated

KPI	Value
Total Revenue	₹4,379,992
Total Orders	1,500
Average Order Value (AOV)	₹2,919.99
Total Units Sold	15,616
Return Rate	24.8%
Avg Delivery Time	~6 days
Avg Shipping Cost	₹27.51

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7. Analysis & Insights

7.1 Overall Sales Performance

- The business has **strong revenue and order volume**
- High AOV indicates good pricing strategy

7.2 Return Analysis (Critical Insight)

- **Returned Orders:** 372
- **Return Rate:** 24.8%

Nearly **1 in every 4 orders is returned**, which is very high.

Possible reasons:

- Promotion-driven low-quality orders
- Delivery or product mismatch issues

7.3 Region-wise Analysis

- **Highest Revenue:** North
- **Lowest Revenue:** South
- **Highest Return Rate:** North

Insight: North region generates high revenue but also faces high returns, indicating quality or logistics issues.

7.4 Promotion Performance

Top promotions by revenue:

- Freeship – ₹1.23M
- Winter15 – ₹1.07M
- Save10 – ₹0.99M

Insight: Free shipping is the most effective promotion, but promotions may increase return rates.

7.5 Customer Type Analysis

- Retail Revenue: ₹2.19M
- Wholesale Revenue: ₹2.18M

Insight: Both customer segments contribute equally, suggesting balanced demand.

7.6 Salesperson Performance

Top performers:

- Bob – ₹796K
- Alice – ₹786K

Insight: Sales performance is consistent across salespersons, indicating a stable sales process.

7.7 Time-based Trend Analysis

- Highest revenue month: **March**
- Lower sales observed in **Q4**
- Revenue increased from **2023 to 2024**

Insight: Clear seasonality exists, with strong sales in early months.

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8. Excel Dashboard Summary

The Excel dashboard includes:

- KPI cards (Revenue, Orders, AOV, Return Rate)
- Revenue by Region
- Top Products & Salespersons
- Promotion-wise Revenue
- Year-wise & Month-wise Revenue Trends
- Interactive slicers for Year, Month, Payment Method

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9. Business Recommendations

- Reduce return rate by improving product quality checks
- Optimize promotions instead of applying them broadly
- Improve logistics in high-return regions
- Focus marketing efforts on high-performing months
- Train underperforming regions using best practices

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10. Final Conclusion

The company shows strong revenue performance but faces significant losses due to high return rates. By optimizing promotions, improving delivery quality, and focusing on high-performing regions and seasons, the business can improve profitability and operational efficiency.

📁 Sales-Analysis-SQL-Excel

Sales_Data.csv

SQL_Queries.sql

Excel_Dashboard.xlsx
