

Inventory Performance Analysis Report

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1. Introduction

This report presents a comprehensive analysis of inventory performance using Microsoft Power BI. The goal is to evaluate stock efficiency, profitability, turnover, and overall inventory health. The dashboard developed for this project provides decision-makers with actionable insights for optimizing procurement, pricing, and operational strategies.

2. Project Objectives

- Assess inventory turnover and stock movement.
- Identify slow-moving and overstocked items.
- Evaluate product-level profitability and cost efficiency.
- Analyze total inventory value and stock exposure.
- Build an interactive Power BI dashboard for data-driven decision-making.

3. Data Description

The dataset includes detailed product-level information such as product name, sales, cost price, inventory quantity, stock value, turnover ratio, and profitability metrics.

3.1 Data Preparation & Cleaning

- Removed duplicate and inconsistent entries.
- Standardized financial values and numeric formats.
- Corrected data types for analysis accuracy.
- Created calculated fields and validated dataset integrity.

4. Data Modeling & DAX Measures

A structured data model was developed and enhanced with custom DAX measures such as Total Stock Value, Total Inventory Value, Average Cost per Unit Sold, Sales-to-Purchase Ratio, Inventory Turnover Ratio, and Profit Margin per Unit.

5. Dashboard Design & Visual Components

The dashboard includes KPI cards, bar charts, tables, and interactive filters to present insights clearly. It enables stakeholders to quickly identify inventory issues, profitability trends, and operational gaps.

6. Key Insights

- Total inventory value stands at ₹17 million, indicating significant capital investment.
- Inventory turnover ratios remain low (0.10–0.23), highlighting slow movement.
- Profitability is concentrated in a few high-margin items such as laptops and smartphones.
- Several SKUs are overstocked, showing inefficiency in procurement.
- Average unit cost is benchmarked at ₹1,027, offering visibility for cost optimization.

7. Business Recommendations

- Optimize purchasing cycles for low-turnover items.
- Focus sales strategy on high-margin products.
- Implement ABC inventory classification.
- Utilize promotional strategies to clear stagnant stock.
- Improve forecasting and demand planning.

8. Conclusion

This Power BI-based analysis provides a strategic understanding of inventory performance and profitability. The insights derived support data-driven decision-making that can significantly improve financial efficiency, inventory turnover, and overall operational performance. The dashboard demonstrates advanced analytical competency and visualization skills essential for business intelligence roles.