

Supply Chain Analysis Dashboard

Overview:

This document provides a comprehensive explanation of the Supply Chain Analysis Dashboard built using Power BI. The dashboard analyzes supplier performance, product categories, transportation efficiency, and manufacturing insights.

Data Source:

The analysis is based on the dataset 'supply_chain_data.csv' containing columns such as Product, Supplier, Cost, Quantity, Lead Time, Defect Rate, Transportation Mode, Routes, and more.

Dashboard Pages:

1. Overview Page:

- Shows KPIs including Average Defect Rate, Total Stock, Average Delivery Time, Total Revenue, and Availability.
- Includes visuals analyzing top products by profit, category revenue, transportation shipments, and geographic distribution.

2. Supplier Page:

- Displays supplier quantity, sales, revenue, shipping costs, and profit.
- Highlights Supplier 1 as the strongest performer.

3. Products Page:

- Contains visuals for lead time, most requested quantities, shipping time by company, and highest shipping cost products.
- Includes defect rate per product type.

4. Manufacturing Page:

- Shows production volume, route performance, cost & quality analysis, lead time vs defect rate, and transportation mode impact.

Key Insights:

- Skincare generates the highest production and revenue.
- Haircare shows higher defect rates.
- Road transportation has more defects compared to Rail and Sea.

- Route A handles the most volume.
- Higher lead time correlates with increased defects.

Recommendations:

- Improve quality control for skincare & haircare.
- Shift shipments toward Rail and Sea.
- Optimize lead time by reducing process delays.
- Expand cosmetics production due to stability.

Tools Used:

- Power BI
- DAX Measures

Conclusion:

This dashboard provides actionable insights to support strategic supply chain decision-making and operational optimization.