Project Title: Supply Chain Delivery Performance & Profitability Analysis

Tools Used: Excel | Power Pivot | Pivot Charts
Dataset Size: 9,689 orders

Objective:
Conducted an in-depth analysis of supply chain performance, isolating delivered orders to extract meaningful revenue, cost, and profitability insights. Focused on identifying inefficiencies and delay trends to drive actionable business improvements.

My Key Contributions & Achievements:

- Isolated core business performance by excluding 80% of orders that were undelivered (cancelled, returned, or pending), ensuring that all revenue and profit metrics were grounded in real, fulfilled transactions (1,975 delivered orders).
- Uncovered a total profit of ₹1.4 million and revenue of ₹4.9 million from only 20% of the dataset, highlighting the disproportionate financial impact of successful deliveries.
- Identified a 70% delay rate among delivered orders and revealed that 13% of deliveries were late, while only 6.8% were on time, prompting a deeper dive into supplier-level delivery issues.
- Exposed Supplier D as the most critical supplier, with:
  - The highest number of total successful, and unsuccessful orders.
  - $0.77 million in total cost, making it the most expensive supplier.
  - The highest profitability rate for on-time deliveries, showing operational potential if performance is optimized.
- Flagged Supplier E for the highest delay rate, yet discovered it achieved the highest profitability on delayed deliveries, prompting nuanced supplier strategy recommendations.
- Pinpointed December as the peak month for delays, giving the business time-based insights for resource planning and performance improvement.
- Revealed that the Home Goods category faced the most delays, while Toys experienced the least, enabling category-specific delivery strategies.

Designed and calculated custom fields, including:

- Pending Classification Column for non-delivered orders.
- On-Time Indicator to differentiate delay performance.
- Profitability Metrics segmented by supplier and delivery status.

➢ Found that delayed deliveries generated more revenue than on-time deliveries, challenging assumptions and guiding strategic thinking around customer tolerance and pricing strategies.

Business Impact:

- Delivery inefficiency is directly affecting profitability.
- Pending deliveries (nearly 80%) were excluded from revenue and profit calculations.
- Suppliers with high demand are underperforming in terms of fulfilment, especially Supplier D.
- Seasonal issues (e.g., December delays) show the need for better forecasting and capacity management.

Recommendations:

- Prioritize high delay suppliers for process improvements.
- Review penalties/ incentives related to delayed orders.
- Improve logistics planning to increase on time delivery.
- Optimize cost structures for Supplier B to improve margins.
- Focus on supplier D’s delivery rate to turn high demand into real profit.