# GlobalMart Inc. Backstory, Financial Problem, and Use Case Analysis

## Backstory: GlobalMart Inc.

GlobalMart Inc. is a multinational retail company specializing in consumer goods, electronics, and home essentials. Operating across five regions—North, South, East, West, and Central—GlobalMart serves millions of customers annually through both online and offline sales channels. Its diverse product portfolio includes Electronics, Home Essentials, Groceries, Clothing, and Furniture.

Despite its success, GlobalMart has been facing challenges in maintaining consistent profitability. The leadership team suspects inefficiencies in certain operations, regional disparities in sales performance, and missed opportunities in customer segmentation. They have tasked the analytics team with uncovering actionable insights to drive business growth.

## Financial Problem

GlobalMart is experiencing inconsistent profitability and operational inefficiencies. The company seeks to address the following key questions:

1. Which regions or products contribute the most to revenue and profit?

2. Are there patterns in customer segments or sales channels that can inform marketing strategies?

3. Are there operational inefficiencies causing high expenses or low profit margins?

4. How can the company optimize inventory and pricing strategies to improve performance?

## Use Cases for Analysis

### 1. Profitability Analysis

Identify regions, products, or customer segments with the highest and lowest profit margins. This will help prioritize investments in high-performing areas and address underperforming ones.

### 2. Anomaly Detection

Detect transactions with inflated revenue or negative profits. Use this information to identify potential fraud, data entry errors, or unusual market behavior.

### 3. Operational Efficiency

Analyze the 'Operational\_Inefficiency' column to find areas where expenses exceed acceptable thresholds. This can highlight opportunities for cost-cutting and process optimization.

### 4. Time-Series Analysis

Examine revenue and profit trends across months or years to understand seasonality and forecast future performance. This can guide inventory planning and promotional strategies.

### 5. Customer Insights

Segment customers by age, gender, and segment to tailor marketing strategies. For example, identify high-value customer groups and design targeted promotions to increase loyalty.

### 6. Product and Pricing Optimization

Evaluate the performance of individual products and pricing strategies. Analyze the impact of discounts and taxes on revenue and profit to optimize pricing models.

## Column Descriptions

### Transaction\_ID

A unique identifier for each transaction.

### Date

The date when the transaction occurred.

### Region

The geographical region where the transaction took place.

### Product

The category of the product sold.

### Customer\_Age

The age of the customer who made the purchase.

### Customer\_Gender

The gender of the customer (e.g., Male, Female, Non-Binary).

### Customer\_Segment

The customer segment (e.g., Retail, Wholesale, Enterprise).

### Sales\_Channel

The channel through which the sale occurred (e.g., Online, Offline).

### Units\_Sold

The number of units of the product sold in the transaction.

### Unit\_Price

The price per unit of the product sold.

### Discount

The discount applied to the unit price of the product.

### Tax

The tax applied to the transaction.

### Revenue

The total revenue generated from the transaction.

### Expenses

The total expenses incurred for the transaction.

### Profit

The net profit generated from the transaction.

### Profit\_Margin

The percentage of profit relative to revenue.

### Year

The year in which the transaction occurred.

### Month

The month in which the transaction occurred.

### Day\_of\_Week

The day of the week when the transaction occurred.

### Operational\_Inefficiency

A flag indicating whether the transaction had high operational inefficiency.