**Data Description:**

**1. Capacity Data**

* **Rows:** 1,517
* **Columns:** 10
* **Columns:**
  + Company
  + Product Segment
  + SKU
  + Product Type
  + Pack Size (kg)
  + Plant Capacity (tons/year)
  + SKUs in Segment
  + SKU Share (fraction)
  + Allocated Tonnes/year
  + Estimated Units/year
* **Example Records:**
  + Unilever | Home Care | UNV-200001 | Laundry Powder | 2.5 kg | 150,000 tons/year | 310 SKUs | 0.00323 share | 483.87 tonnes/year | 193,548 units/year
  + Unilever | Personal Care | UNV-200003 | Shampoo | 0.4 kg | 40,000 tons/year | 335 SKUs | 0.00299 share | 119.4 tonnes/year | 298,507 units/year

**This sheet shows how plant capacity is split across SKUs, estimating yearly tonnage and units per SKU.**

**2. Orders Data**

* **Rows:** 57,825
* **Columns:** 18
* **Columns:**
  + Year, Month\_num, Month
  + Company, Product Segment, SKU, Product
  + Route, Transportation Mode
  + Lead time (Working days)
  + Production volumes (packs)
  + Transport cost (EGP), Manufacturing costs (EGP), Revenue (EGP)
  + Cost per unit (EGP), Per pack revenue (EGP)
  + Order Date, Delivery Date
* **Example Records:**
  + Jan 2022 | Unilever | OMO (Home Care, SKU UNV-200001) | Cairo–Delta route | Road | 3 days lead time | 273,271 packs | Transport: 546,543 EGP | Manufacturing: 148.8M EGP | Revenue: 248M EGP | Unit cost: 544.67 EGP | Pack revenue: 907.78 EGP
  + Feb 2022 | Same SKU, ~273,200 packs, Revenue ~248M EGP
  + Mar 2022 | ~191,240 packs, Revenue ~173.6M EGP

**This sheet is a transaction-level dataset showing production, costs, revenues, logistics, and dates.**

**3. Products Data**

**(SKU Master Data)**

* **Rows:** 1,092
* **Columns:** 6
* **Columns:**
  + Company
  + Product Segment
  + SKU
  + Brand
  + Product Name
  + Pack Size
* **Example Records:**
  + Unilever | Home Care | UNV-200002 | Sunlight | Dishwashing Liquid | 750 ml
  + Unilever | Personal Care | UNV-200003 | Lifebuoy | Handwash | 200 ml
  + Unilever | Beauty & Wellbeing | UNV-200004 | Vaseline | Petroleum Jelly | 100 ml

**This sheet lists the SKU catalog with brand, pack sizes, and company mapping.**

**(Bill of Materials & Costs)**

* **Rows:** 6,543
* **Columns:** 4
* **Columns:**
  + SKU
  + Product Name
  + Material
  + Unit Cost (USD/kg or L)
* **Example Records:**
  + UNV-200001 | Laundry Powder | Linear Alkylbenzene Sulfonate | 0.8 USD/kg
  + UNV-200001 | Laundry Powder | Sodium Carbonate | 0.4 USD/kg
  + UNV-200001 | Laundry Powder | Zeolite | 0.3 USD/kg

**This sheet links SKUs to raw materials with unit costs (a BOM structure).**

✅ **Summary:**

* **Capacity.xlsx:** 1,517 rows → plant capacity allocation by SKU.
* **Orders.xlsx:** 57,825 rows → transactional monthly orders with production, costs, revenues.
* **Products.xlsx:**
  + Sheet1: 1,092 rows → product catalog (brands, pack sizes, SKUs).
  + Sheet2: 6,543 rows → bill of materials with material costs.

**Insights Summary:**

**1. Capacity Data (1,517 rows)**

* **Total Plant Capacity:** **90.66 million tons/year**
* **Average Plant Capacity per SKU:** ~59,763 tons/year
* **Total Allocated Tonnes/year:** **290,000 tons/year**
* **Total Estimated Units/year:** **~750 million units/year**
* **Pack Size (kg):** Avg = 0.74 kg | Min = 0.1 kg | Max = 2.5 kg

**2. Orders Data (57,825 rows)**

* **Total Production Volumes:** **12.18 billion packs**
* **Average Production Volume per record:** ~210,635 packs
* **Total Transport Cost:** **201.48 billion EGP**
* **Total Manufacturing Costs:** **7.10 trillion EGP**
* **Total Revenue:** **11.83 trillion EGP**
* **Avg Cost per Unit:** ~582.76 EGP
* **Avg Per Pack Revenue:** ~971.27 EGP
* **Lead Time:** Min = 3 days | Max = 20 days

**3. Products Data (SKU Master, 1,092 rows)**

* **Unique Companies:** 1 (Unilever only)
* **Unique Segments:** 4 (Home Care, Personal Care, Beauty & Wellbeing, etc.)
* **Unique SKUs:** 1,092
* **Unique Brands:** 14

**4. Products Data (BOM & Costs, 6,543 rows)**

* **Total BOM Records:** 6,543
* **Unique SKUs in BOM:** 1,517 (matches with capacity data SKUs)
* **Unique Materials:** 19
* **Average Unit Cost:** **0.40 USD/kg or L**
* **Min Unit Cost:** 0.05 USD
* **Max Unit Cost:** 1.20 USD