Dangote Cement 2024 Sales & Stock Data Analysis Report

Introduction

This report summarizes the sales and stock performance of Dangote Cement in 2024. The analysis focuses on:

- Evaluating sales performance across regions, products, and months.
- Assessing inventory efficiency and sales velocity.
- Analyzing profitability metrics including revenue, cost of goods sold (COGS), and profit margin.
- Understanding customer and payment behavior to improve cash flow and credit control.
- Evaluating stock price and volume trends.

The data used comes from the sales dataset and stock dataset.

Data Preparation & Cleaning using Python

The dataset was load into python using Pandas.

The sales dataset includes key fields: Date, Product, Region, Sales_Channel, Unit_Price, Quantity_Sold, Discount, Revenue, COGS, Profit, Payment_Status.

The stock dataset contains: Date, Open, High, Low, Close, Adj Close, Volume.

The dataset was then cleaned and transformed using python.

Observation: Python code was written to handle missing values if at all it appears in the dataset. The date format was converted to normal date (Y/M/D). Python code was written to remove duplicates values if any.

A new column (profitmargin) was generated by dividing total revenue by total profit and multiplied by 100.

New columns was also generated from Date column (Month, Monthname, Year).

Finally the cleaned data was saved into a csv file as **cleaned_sales, cleaned_stock** to further use with power bi and sql for analysis.

Analysis Using SQL

Using the cleaned dataset, the following objectives were pursued using SQL queries:

1. Evaluate sales performance by region, product, and month.

2. Assess inventory efficiency through sales velocity (slow, moderate, fast-moving products).
3. Analyze profitability metrics (Revenue, COGS, Profit, ProfitMargin).
4. Understand customer and payment behavior (paid vs. pending transactions).
5. Stock analysis – daily price ranges and trading volume trends.

Using MYSQL Workbench, a database was created (dangcem), the cleaned datasets was then imported into the created database as tables: cleaned_sales, cleaned_stock.

Data transformation was also performed in SQL (on date column) to convert the date to normal date format YMD. Note: it was converted back to normal because of the csv conversion. The date column in the datatypes were transformed and the datatype was also changed to maintain the data integrity.

Objectives:

Evaluate sales performance across multiple dimensions — region, product, and time period.

o Regions with highest revenue can be identified for focus on sales campaigns.
o Products with highest units sold and profit reveal best-selling and high-margin items.
o Month-over-month trends indicate seasonal demand patterns.
o Average unit price and profit margin help evaluate pricing strategy effectiveness.

Simple inventory efficiency

SQL codes were written to calculate the quantity sold, revenue, profit margin, average profit margin, sales velocity category using quantity sold. For the sales velocity column, quantity sold less than 1000 is categorized as slow-moving, between 5000 and 1000 is categorized as moderate while greater than 5000 is categorized as fast moving where payment status is not pending.

Analyze profitability metrics

SQL query was written to get the total revenue, cogs, profit, profit margin. A table was created to showcase the output.

Analyze customer and payment behavior

SQL queries were written to identify proportion of paid vs. pending transactions, helping cash flow management, reveals regions or products with high unpaid revenue, indicating potential credit risk.

Stock Analysis – Daily Price Range

Daily price range indicates stock volatility, large ranges suggest high risk. Volume indicates trading activity, high volume may align with price spikes. It helps monitor stock market trends and anticipate inventory valuation changes.

Dashboard Analysis (Power Bi)

This Power BI dashboard provides a comprehensive overview of Dangote Cement's 2024 sales and stock performance, integrating insights from three main datasets (Sales, Stock, and a Date Intelligence Table created using DAX).

The dashboard aims to evaluate sales performance, profitability, regional trends, stock efficiency, and payment behavior to support data-driven decision-making.

Creation of the Time Intelligence Table

A DAX formula was used to create a dynamic calendar table for trend analysis.

Usefulness of the Date Table created:

- Enables monthly, quarterly, and yearly trend analysis.
- Supports creation of YearMonth hierarchies for visuals.
- Ensures accurate time-based relationships between Sales and Stock.
- Allows for DAX time intelligence calculations (e.g., Year-to-Date (YTD), Month-over-Month growth).

KPI'S:

Total Revenue: Overall Revenue is 1.61bn, Total revenue generated across all products and regions.

Sum of profit margin: 24.86k

Sum of profit: 402.33m

Sum of COGS: 1.21bn

Sum of quantity sold: 254k

Slicers

Interactive slicers allow for dynamic filtering and drill-down analysis:

Payment status, Region, Product, Month are used as slicers to filter the dashboard. These slicers make the dashboard interactive, helping users explore different business angles in real time.

Other Visuals

Sum of profit margin by year month: Helps identify months with best profitability and detect downward trends early.

Sum of revenue, sum of COGS by year month: Reveals profit fluctuation patterns and cost-control efficiency.

Sum of revenue by Region: Shows which regions drive revenue and which underperform.

Sum of revenue, sum of profit by year month: Displays sales seasons and profitability consistency.

Sum of revenue, sum of profit by product: Identifies best-selling and most profitable products.

Discount by product: Reveals if discounts are driving sales or hurting profitability.

Conclusion

The 2024 Dangote Cement Sales and Stock Analysis showed strong overall performance. Total revenue was 1.61 billion, profit was 402.33 million, and 254,000 units were sold. The average profit margin (24.86k) shows good profitability, though the cost of goods sold (1.21 billion) should be managed better.

Sales analysis showed that some regions and products perform much better than others. The SQL analysis helped identify top-selling and fast-moving products.
The Power BI dashboard made it easy to see trends by month, product, and region.
Payment analysis showed that some sales are still pending, meaning cash flow could be improved.
Stock data also showed some price and trading volume changes, which can help in planning and market monitoring.

Overall, Dangote Cement performed well in 2024, but there's room to improve cost control, stock management, and payment follow-up.

Recommendations

1. Control costs to improve profit and efficiency.
2. Follow up on pending payments to improve cash flow.
3. Use the date table for trend tracking and plan ahead for busy or slow months.
4. Keep using Power BI dashboards to monitor sales, profit, and performance regularly.