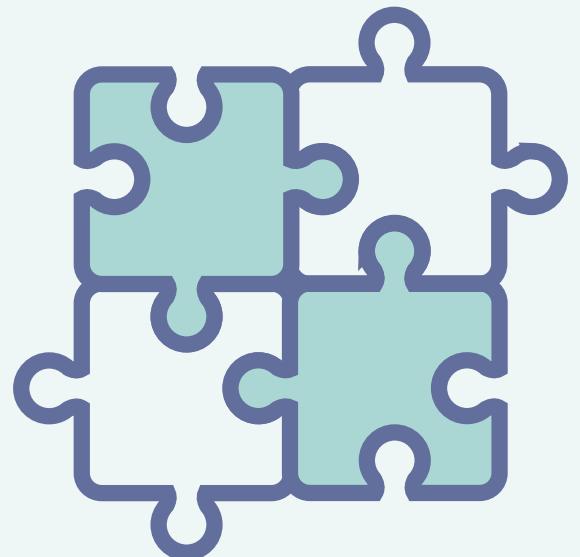


# **SALESCOPE**

## **An E-commerce business Analysis**

**PRESENTED BY ADARSH VERMA**

# AGENDA



1

- 1. Business Problem Statement**
- 2. Approach**
- 3. Data Overview**
- 4. Project Workflow**
- 5. EDA**
- 6. Key Insights**
- 7. DASHBOARD-POWERBI**

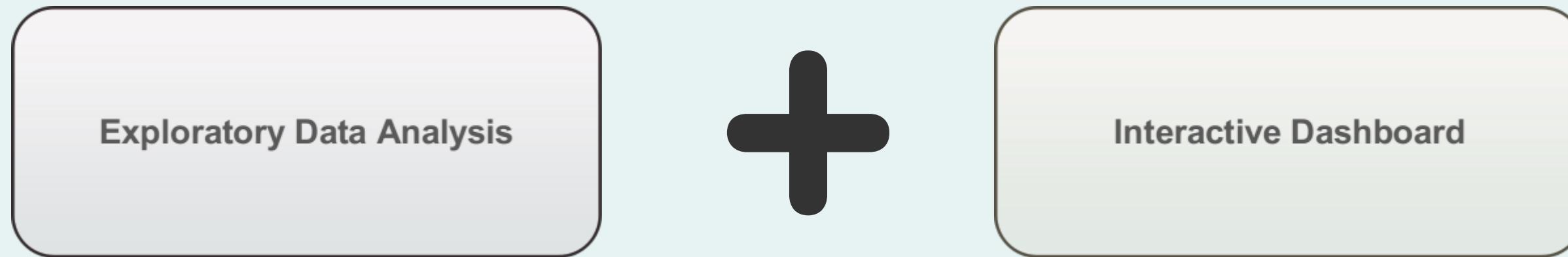
# PROBLEM STATEMENT

Sales teams often lack a clear, data-driven understanding of regional performance, making it difficult to identify growth opportunities and optimize resources. This project aims to analyse and visualize regional sales data to uncover trends, evaluate profitability, and support strategic decision-making.

## What's the Business Question?

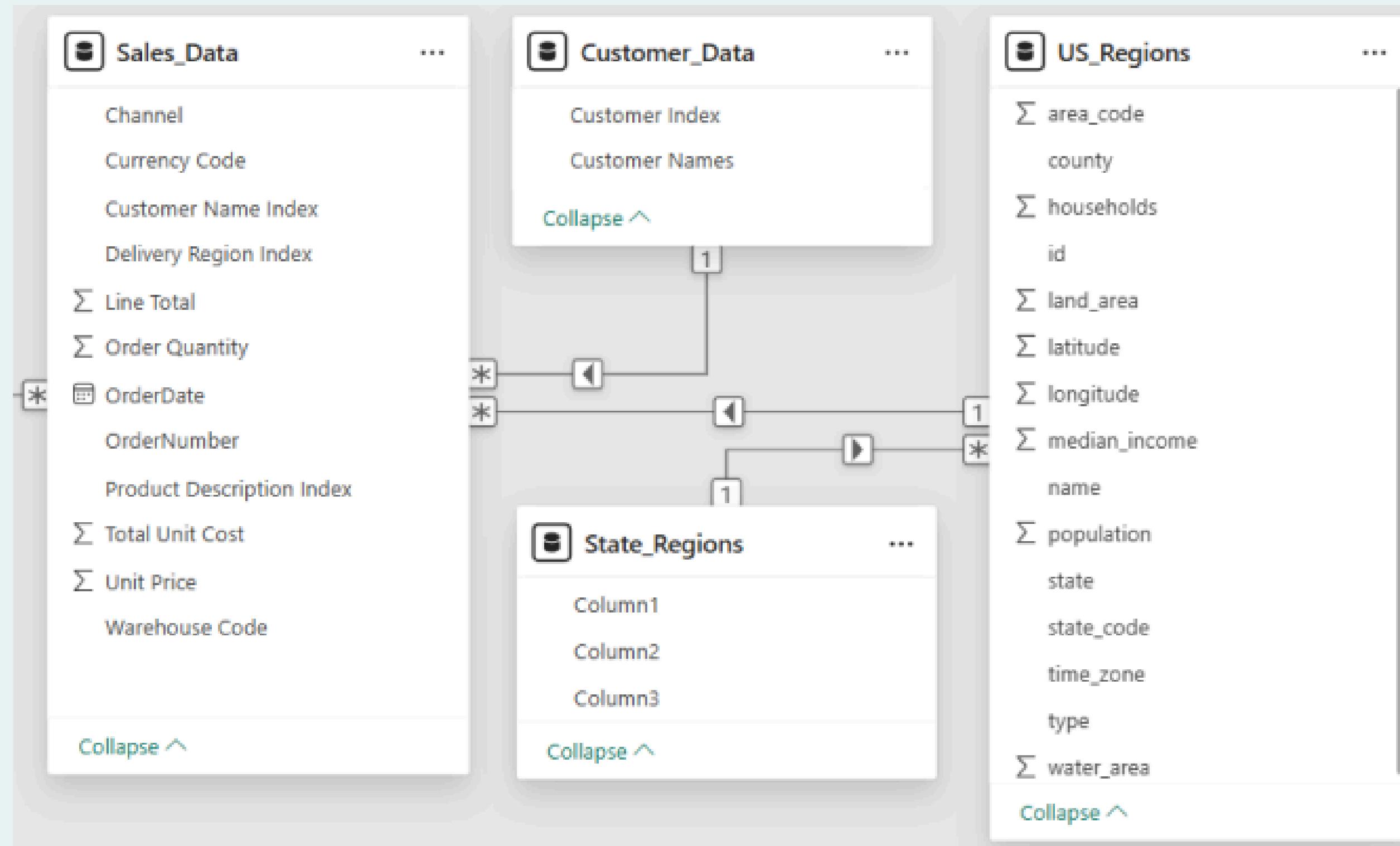
- Inconsistent revenue and profit performance across U.S. regions□□
- Lack of visibility into seasonal swings, top SKUs, and channel profitability□□
- Goal: Leverage 5 years of historical data to pinpoint growth levers and optimize strategy

# Approach



- Dive into historical sales, margins, products, channels, regions
- Surface trend, outliers & relationships
- Build a live view for business Users to self serve insights

# Raw Data

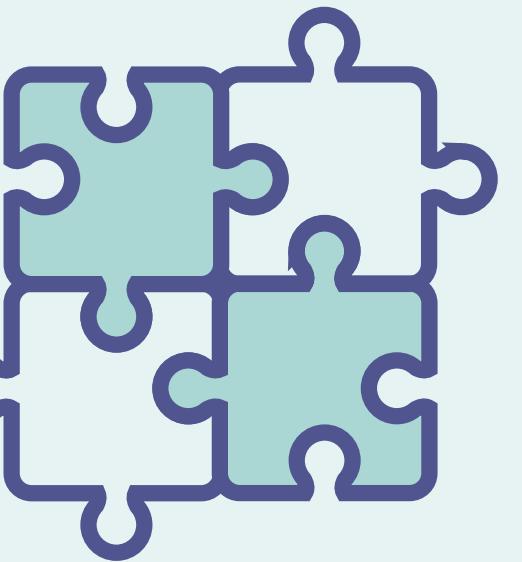


Sales, products, budgets, customers, regions, and states were spread across unlinked tables. No relationships were defined initially— Pre-processing was required to clean, normalize, and join them for analysis.

# **EDA- EXPLORATORY DATA ANALYSIS**

**Uncovering patterns, trends, and business insights from historical data !**

- Understanding the “What, Where & Why” behind the sales numbers
- □Exploring data through visuals, aggregations, and comparisons□
- Laying the groundwork for informed recommendations



# EDA

## STEP-BY-STEP

1

**1. Import Libraries**

**2. Load Data**

**3. Initial Exploration**

**4. Pre-processing & Cleaning**

**5. EDA & Visualization**

**6. Key Insights**

**7. Recommendations**

# Pre Processing

The necessary steps applied to prepare this dataset for analysis.

- Set header row for state – region table□
- Merge Sales, Customers, Products, Regions, State–Region & Budgets tables□
- Drop redundant columns□
- Standardize column names to lowercase□
- Select key columns that are used for that analysis□
- Rename columns to more sensible names□
- Create profit and profit\_margin\_pct columns

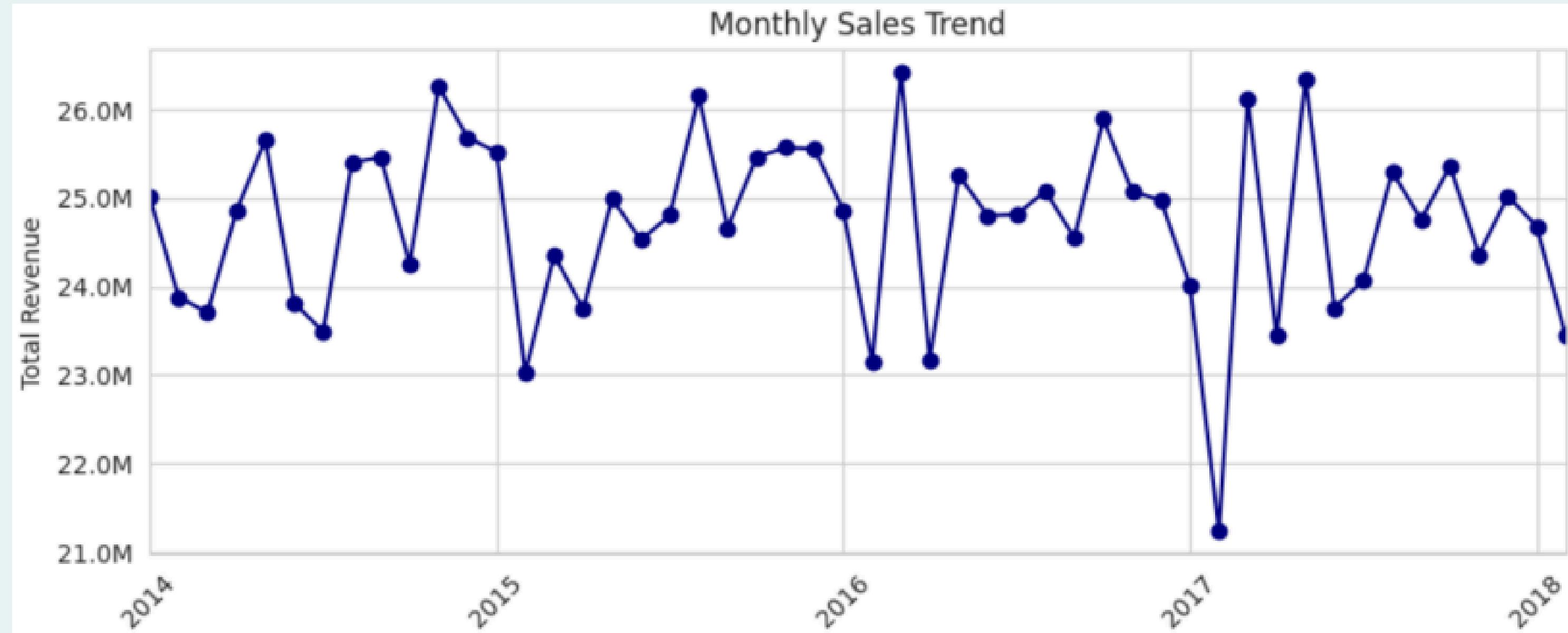
# Final Dataset Structure – Ready for Analysis

	order_number	order_date	customer_name	channel	product_name	quantity	unit_price	revenue	cost	state	state_name	us_region	lat	lon	budget	profit
0	SO - 000225	2014-01-01	Rhynoodle Ltd	Wholesale	Product 27	6	2499.1	14994.6	1824.343	GA	Georgia	South	32.08354	-81.09983	NaN	13170.257
1	SO - 0003378	2014-01-01	Thoughtmix Ltd	Distributor	Product 20	11	2351.7	25868.7	1269.918	IN	Indiana	Midwest	39.61366	-86.10665	NaN	24598.782
2	SO - 0005126	2014-01-01	Amerisourc Corp	Wholesale	Product 26	6	978.2	5869.2	684.740	CA	California	West	37.66243	-121.87468	NaN	5184.460
3	SO - 0005614	2014-01-01	Colgate-Pa Group	Export	Product 7	7	2338.3	16368.1	1028.852	IN	Indiana	Midwest	39.16533	-86.52639	NaN	15339.248
4	SO - 0005781	2014-01-01	Deseret Group	Wholesale	Product 8	8	2291.4	18331.2	1260.270	CT	Connecticut	Northeast	41.77524	-72.52443	NaN	17070.930

- **Identifiers:** order\_number, order\_date, customer\_name, channel, product\_name
- **Financials:** quantity, unit\_price, revenue, cost, profit, profit\_margin\_pct
- **Calendar:** order\_month\_name, order\_month\_num, order\_month
- **Geography:** state (code), state\_name, us\_region, lat, lon

# **CHARTS AND INSIGHTS**

# Monthly Sales Trend Over Time



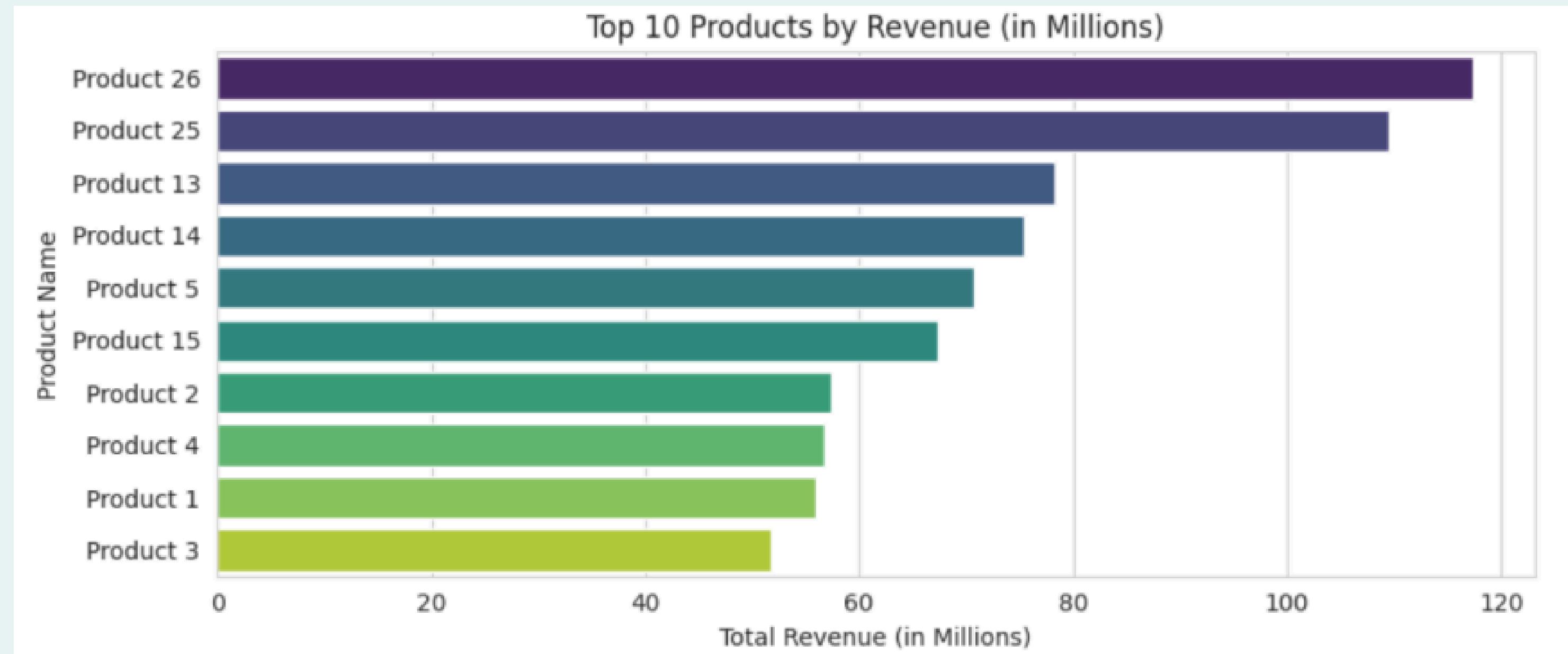
**Consistent sales cycle:** \$24M to \$26M.

**Seasonal peaks:** Late spring/early summer (May-June).

**Annual low:** January.

**Notable outlier:** Sharp revenue drop in early 2017.

# Top 10 Products by Revenue



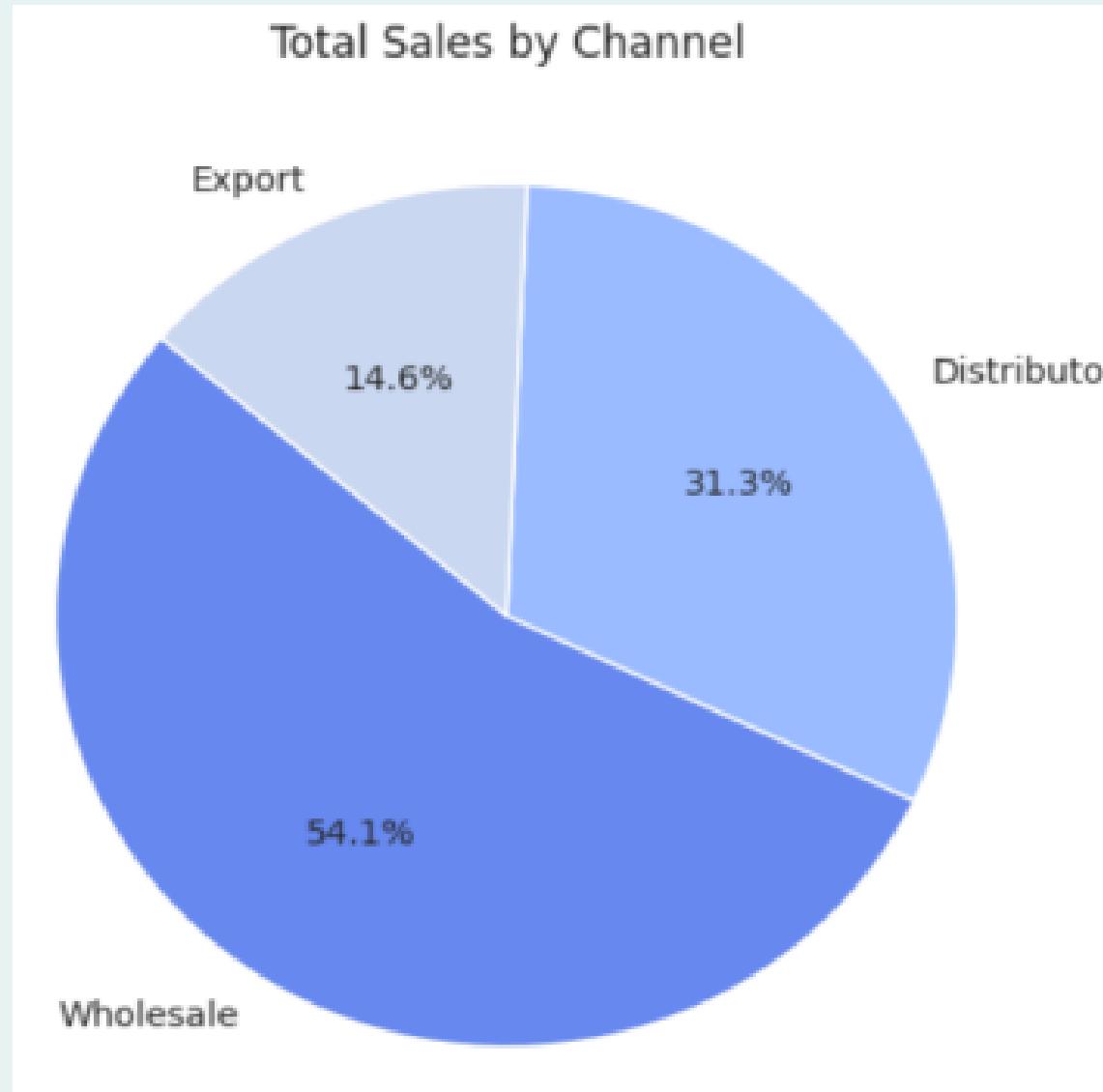
**Revenue leaders:** Products 26 & 25 dominate.

**Mid-range:** Products 5, 13, 14, 15 show similar revenue.

**Bottom cluster:** Products 1, 2, 3, 4 have the lowest revenue.

**Strategy:** Grow mid-tier, improve lower performers.

# Sales by Channel

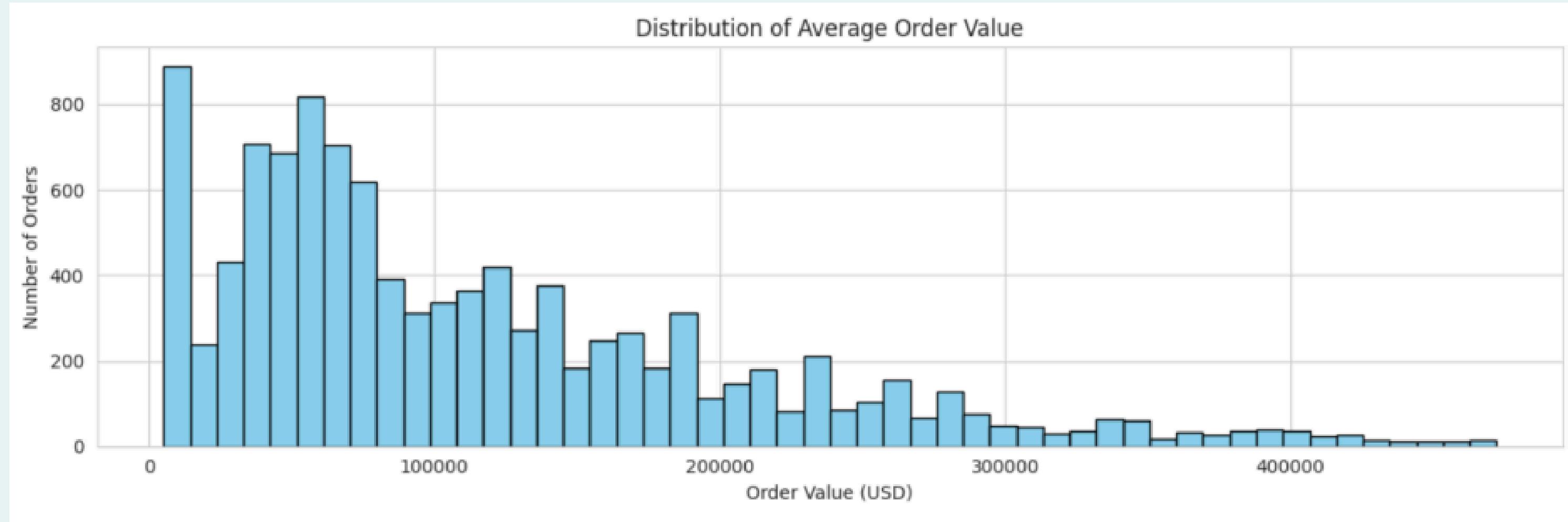


**Wholesale dominates:** Generates the majority of total sales at 54.1%.

**Distributor is significant:** Contributes a substantial 31.3% to total sales.

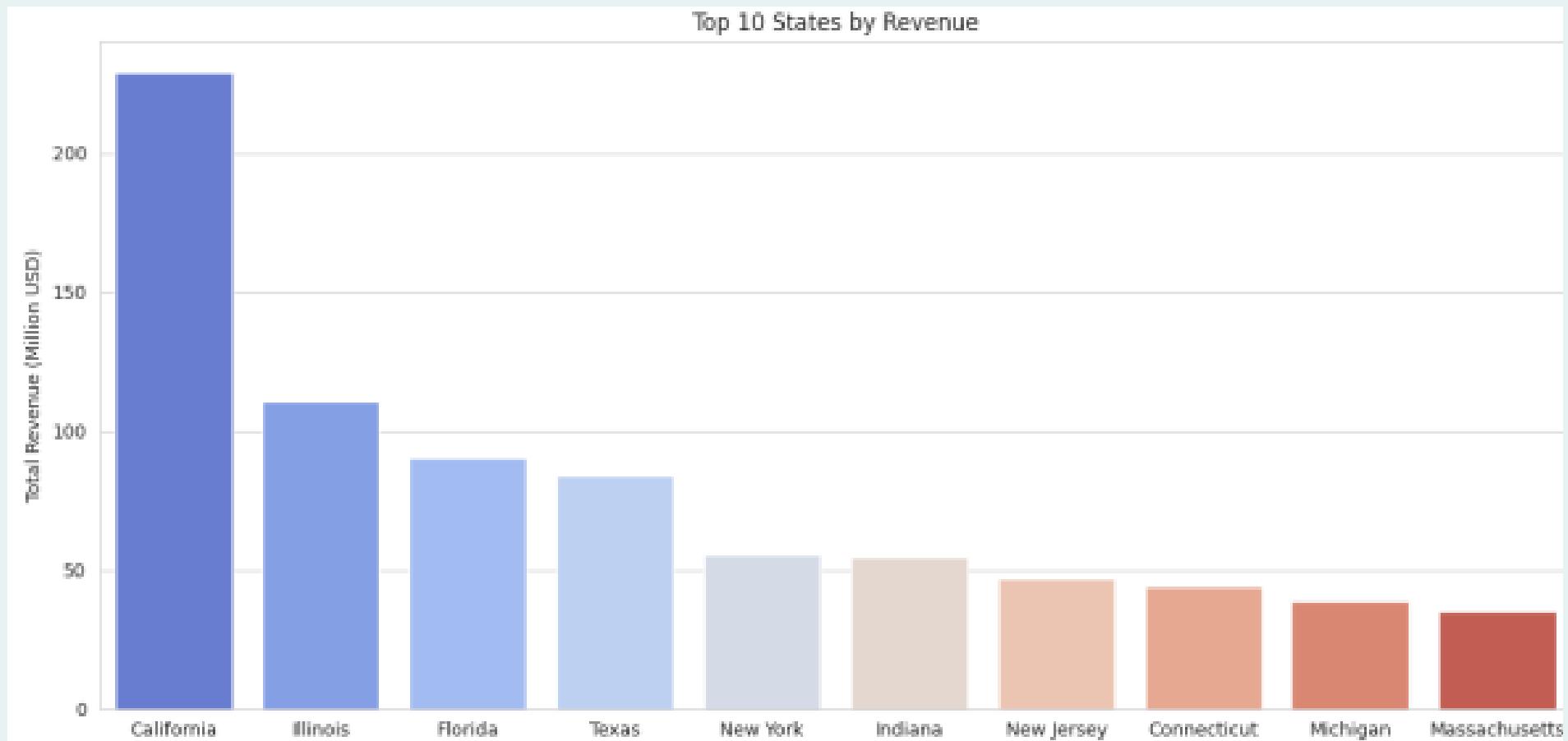
**Export is a smaller portion:** Accounts for 14.6% of the total sales.

# Average Order Value (AOV) Distribution



- Low average order values are frequent.
- Distribution is right-skewed (long tail of high-value orders).
- Multiple order value clusters exist.
- Higher order values are less common.

Top 10 States by Revenue



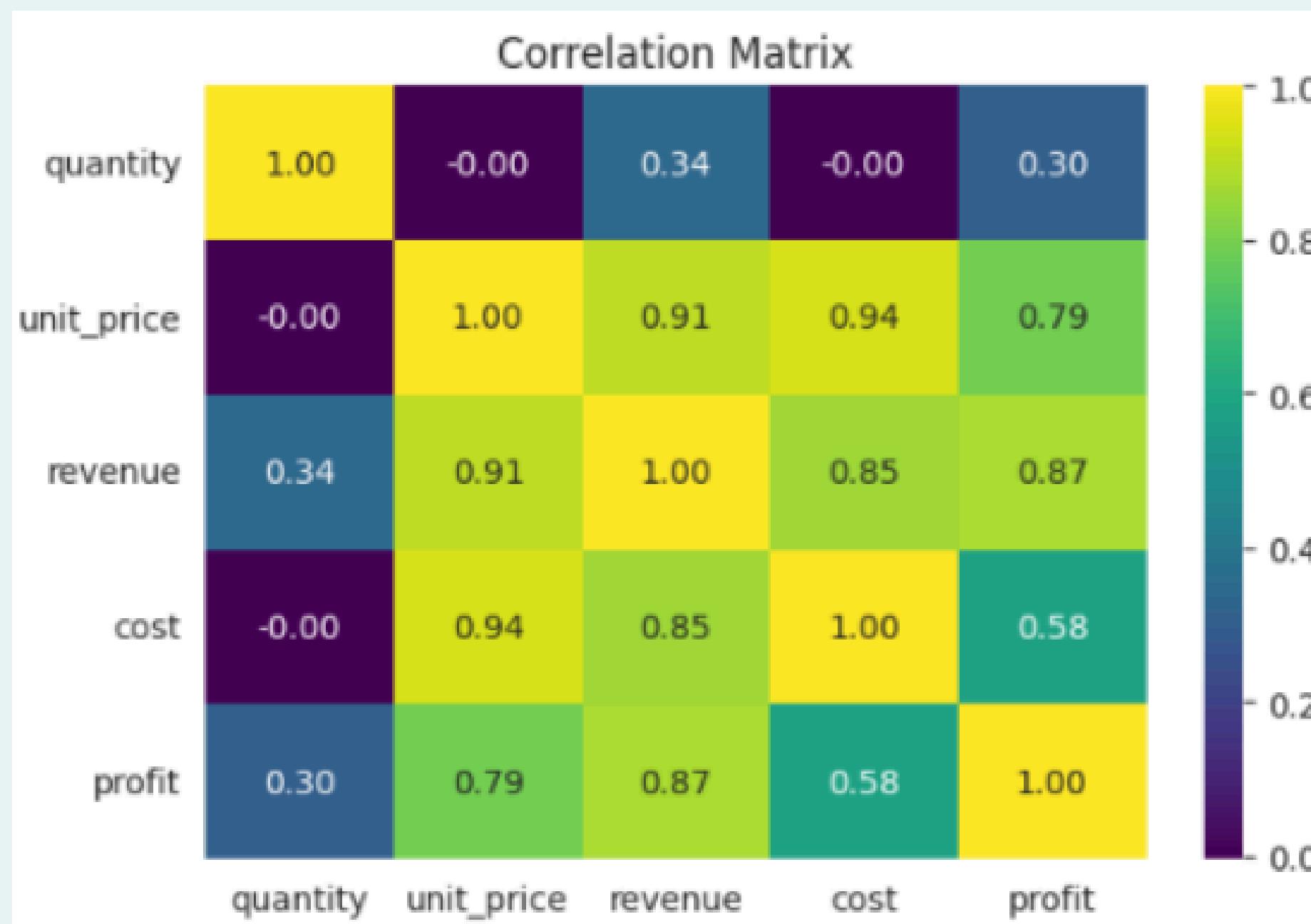
# Top State Performance: Revenue vs. Orders

California tops revenue & orders.  
IL, FL, TX: High in both.  
Revenue & orders linked.  
Other top states: Lower contribution.

Top 10 States by Number of Orders



# Correlation Heatmap of Numeric Features



- Unit price is the primary driver, showing very strong correlations with cost (0.94), revenue (0.91) and profit (0.79).
- Revenue & profit maintain a high link (0.87), underscoring direct profitability gains.
- Quantity's impact is minimal ( $\leq 0.34$  vs. financials), indicating volume plays a secondary role.
- Cost vs. profit correlation (0.58) is moderate, suggesting margin improvement focus should center on pricing.

# KEY INSIGHTS

- **Pronounced Seasonality:** January revenues average \$124 M, dipping to \$95 M in April.□□
- **SKU Concentration:** Products 26 & 25 together drive ~25 % of total sales.□□
- **Channel Trade-Off:** Wholesale captures 54 % of volume; Export leads with ~38 % average margin.□□
- **Geographic Dominance:** California alone logs 7.6K orders (\$230 M); the West region shows the largest swings.□□
- **Aibox Company and State Ltd are the most valuable customers in terms of Revenue.**

# RECOMMENDATION

- **Seasonal Promotions:** Launch recovery campaigns in April and amplify January offers to smooth revenue swings.□□
- **SKU Optimization:** Double down on top products 26 & 25 and re-evaluate pricing or phase out low-margin SKUs.□□
- **Channel Expansion:** Incentivize Export partnerships for high margins and introduce volume deals in Wholesale.□□
- **Regional Investment:** Replicate California's success in other regions and boost marketing in the Northeast & Midwest.□□
- **Margin Monitoring:** Flag orders below 80 % margin and analyse cost drivers to uplift underperforming segments.

# DASHBOARD PREVIEW

# HOME

## Salescope Dashboard



**Overview**

**Product/Channel  
Insight**

**Geographics  
Insight**

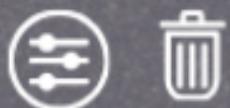
**Q & A**

# Overview

Executive Overview &  
Trends

Profit & Channel  
Performance

Graphical & Customer  
Insight



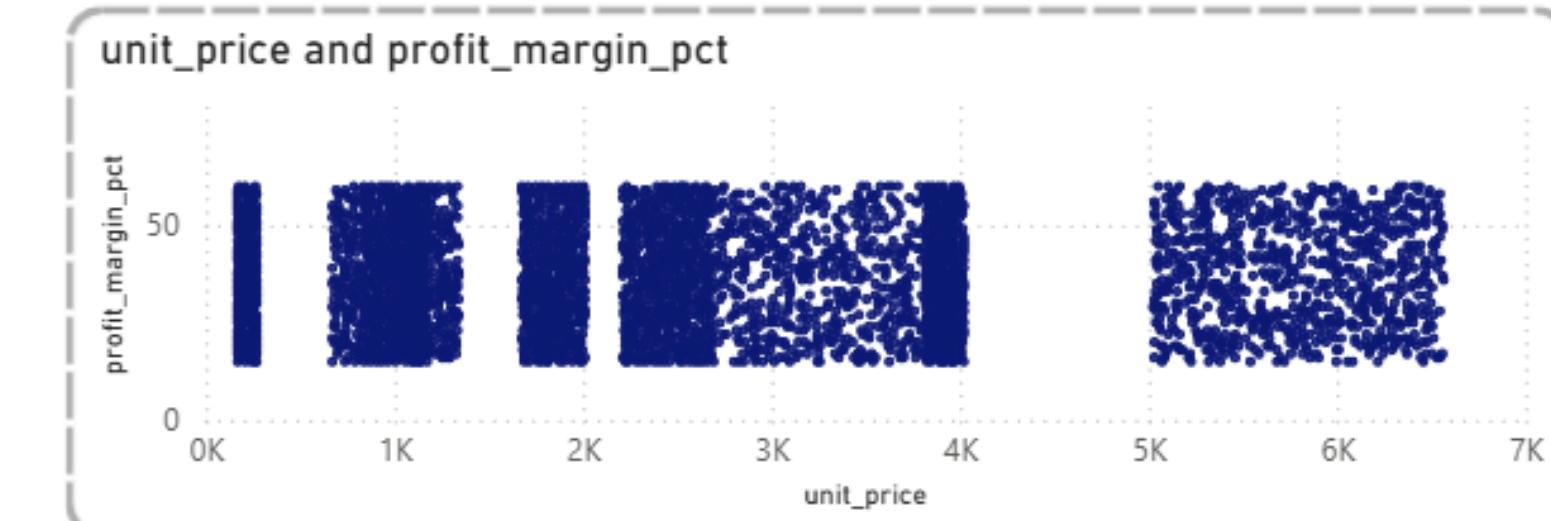
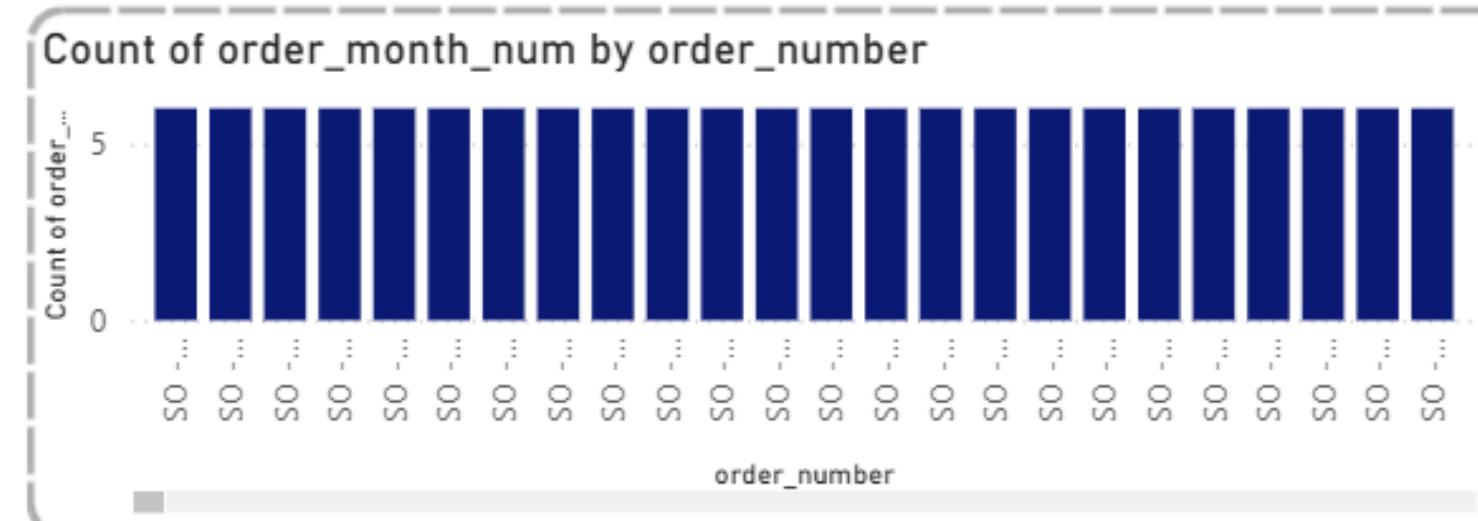
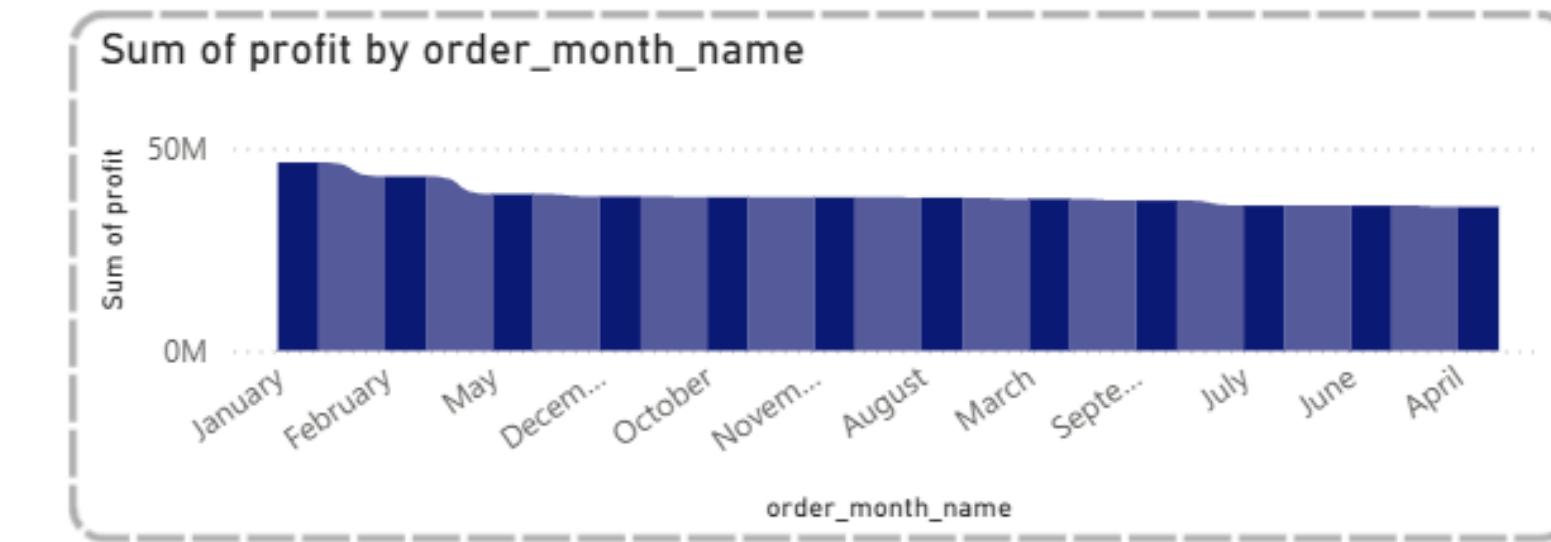
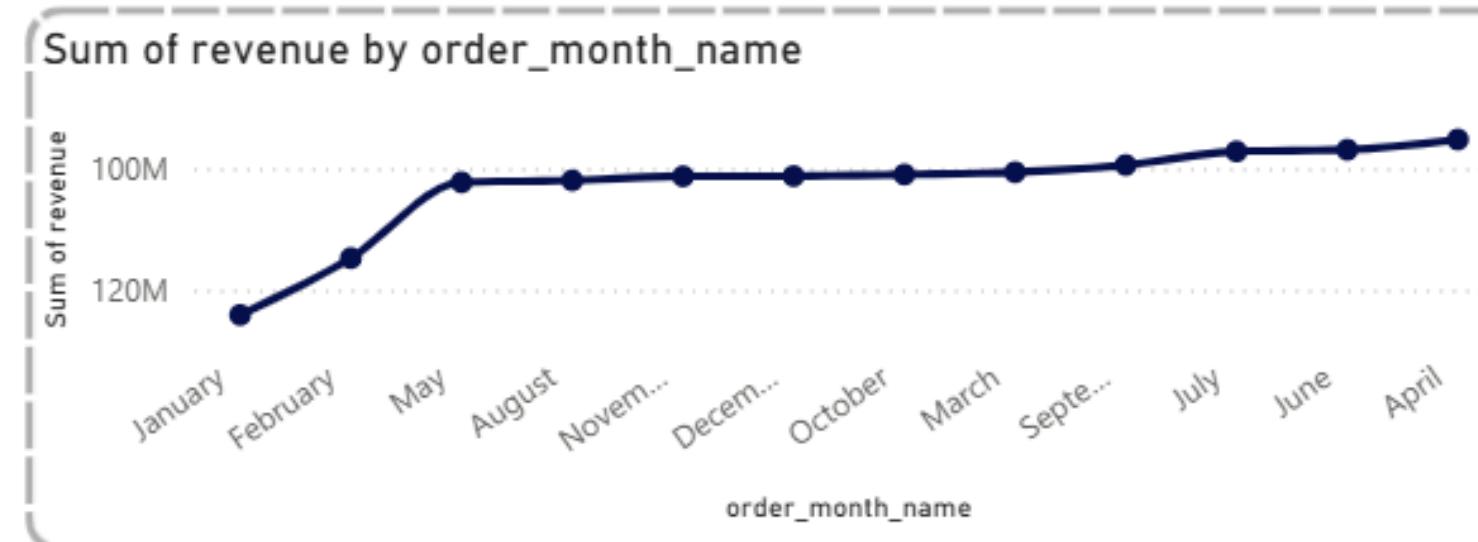
Total Revenue  
**1.24bn**

Total Profit  
**461.8M**

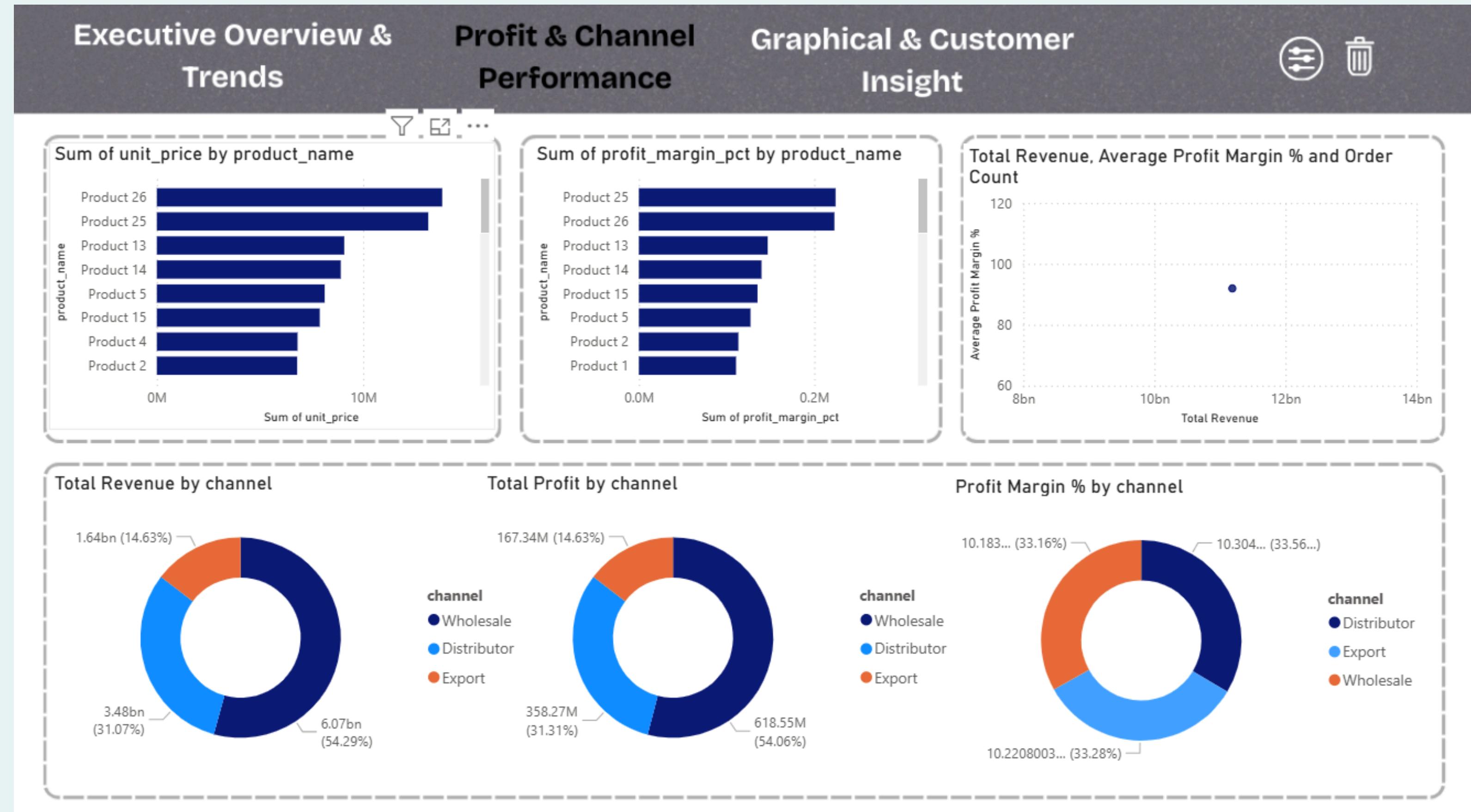
Profit Margin  
**37.36%**

Total Orders  
**64.1K**

Revenue Per Order  
**19.3K**



# Profit and Channel Performance



# Customer Insight

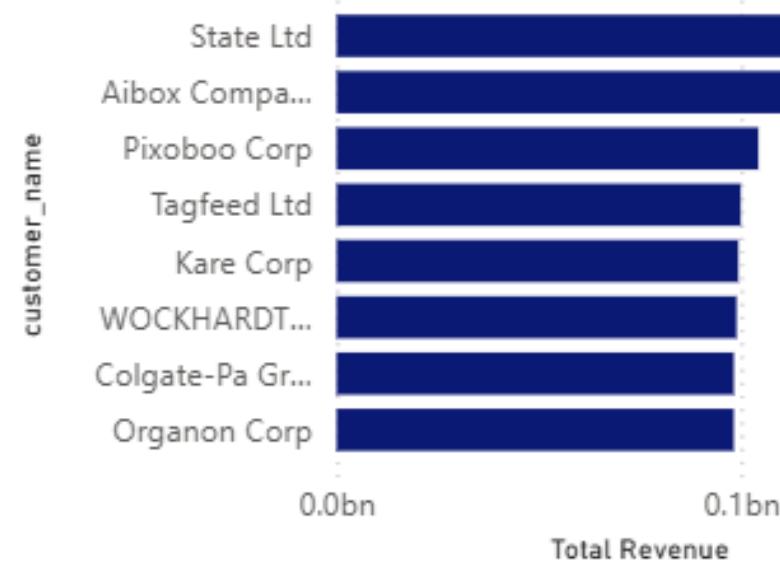
## Executive Overview & Trends

## Profit & Channel Performance

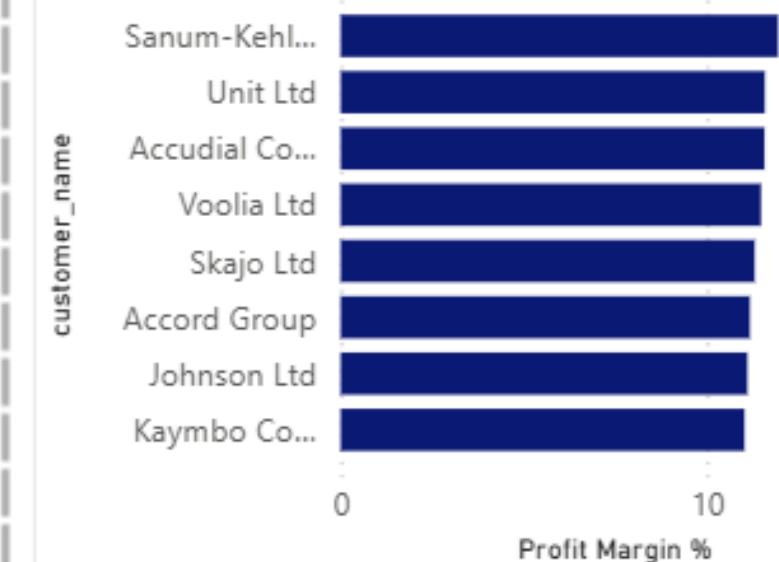
## Graphical & Customer Insight



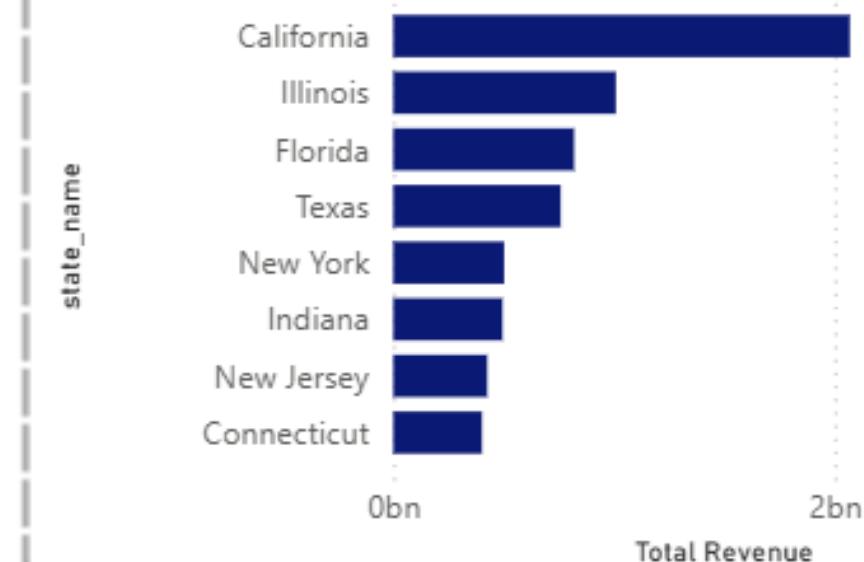
Total Revenue by customer\_name



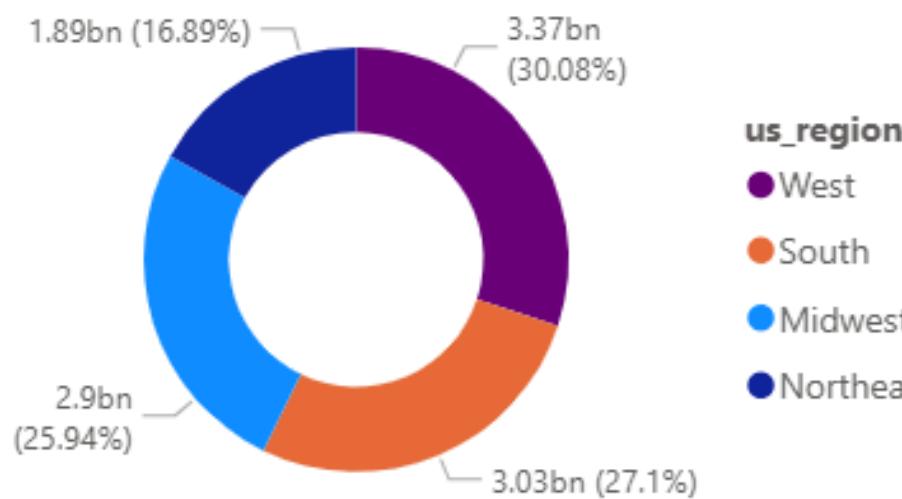
Profit Margin % by customer\_name



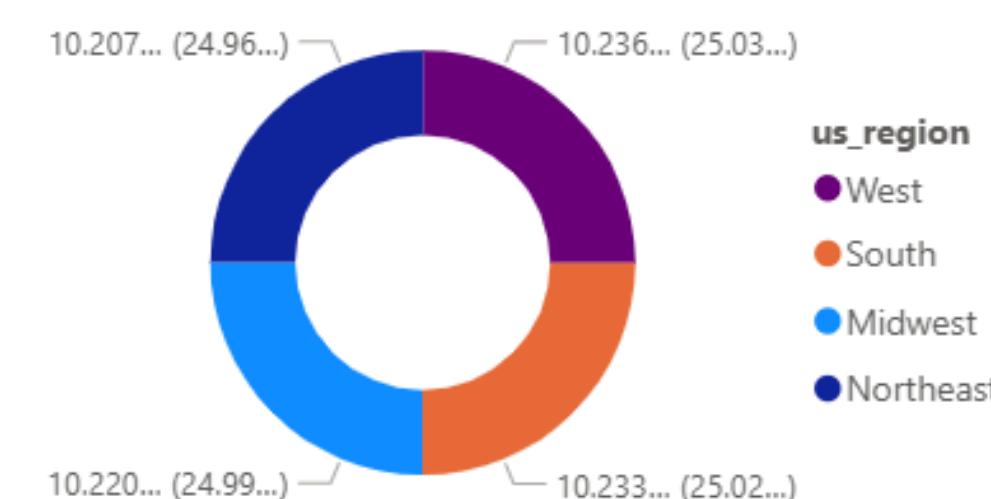
Total Revenue by state\_name



Total Revenue by us\_region



Profit Margin % by us\_region



Map and filled map visuals are disabled. To enable them, go to File > Options and settings > Options > Global > Security. [See details](#)

# CONCLUSION

- Completed end-to-end EDA and interactive Power BI dashboard, surfacing seasonality, SKU, channel & regional insights.
- Insights inform sales policies and operational planning (store & warehouse prep aligned with annual trends).□□
- Stakeholders can self-serve real-time analysis and confidently onboard new datasets for additional use cases.