Sales Performance Report

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1. Year-over-Year Growth in Total Sales

Insight:
Sales revenue has grown consistently each year between 2015 and 2018. We observed the following totals:

- **2015:** ₹12.68 million

- **2016:** ₹12.99 million

- **2017:** ₹16.32 million

- **2018:** ₹20.89 million

Interpretation & Recommendation:
This growth suggests strong market traction. The 28% year-on-year jump from 2016 to 2017 and another ~28% increase from 2017 to 2018 highlight effective customer engagement and marketing strategy. Management should continue investing in growth-focused campaigns while monitoring operational capacity to scale with demand.

2. Revenue Concentrated in Select Categories

- Office Supplies – ₹37,883,315.36

- Furniture – ₹13,224,661.67

- Technology – ₹11,776,925.25

Insight:
The Office Supplies category leads revenue generation by a significant margin, followed by Furniture and Technology.

Interpretation & Recommendation:
This suggests that operational or corporate bulk purchases might be driving sales. Focused B2B strategies (e.g., subscription models, volume discounts, corporate contracts) could further accelerate growth in this category. Technology, while important, may need revised pricing or bundling strategies to improve its contribution.

3. Top 5 Customers Account for Significant Spend

- John Lee – ₹272,209.28

- Seth Vernon – ₹270,807.21

- William Brown – ₹246,339.93

- Matt Abelman – ₹231,106.26

- Clay Ludtke – ₹229,990.59

Insight:
The top 5 customers, including names like *John Lee* and *Seth Vernon*, contributed disproportionately to total revenue. These customers spent significantly more than the average.

Interpretation & Recommendation:
These customers represent valuable, high-retention opportunities. Tailored strategies such as exclusive discounts, priority delivery, or custom support plans may deepen their loyalty. These insights also support building a customer tiering or rewards program.

4. Customers Spend ₹12,000+ Per Order on Average

Insight:
Contrary to initial assumptions, the average order value per customer is significantly higher, often exceeding ₹12,000, with top customers like Stefanie Holloman spending over ₹22,000 per order.

Interpretation & Recommendation:
This indicates a healthy transaction size and suggests that customers may already be purchasing in bulk or choosing higher-end products.
To capitalize on this behaviour, consider introducing tiered incentives such as:

- Spend ₹25,000 – Get ₹2,000 off

- Buy more, save more bundles

- Loyalty-based cashback on order value

These promotions could encourage even higher basket sizes while reinforcing customer satisfaction and retention.

5. Strongest Regional Sales Came from the East

Insight:
In the most recent year of the dataset, the East region contributed the highest revenue, totalling approximately ₹6.26 million.

Interpretation & Recommendation:
The East region is emerging as a strategic hotspot for sales. This performance indicates strong customer demand, likely supported by effective distribution or marketing efforts in the region.

To maintain momentum and capitalize on this:

- Invest more in regional marketing campaigns focused on top-performing product categories.

- Ensure inventory optimization to meet demand efficiently.

- Consider strengthening local partnerships or delivery infrastructure to enhance customer experience.

At the same time, explore why other regions underperformed and whether issues like limited stock, reach, or awareness may be affecting sales elsewhere.

Final Summary

This report reveals steady year-over-year growth, with total sales rising from ₹12.6 million in 2015 to ₹20.8 million in 2018. Office Supplies emerged as the highest revenue-generating category, contributing over ₹37.8 million, indicating strong demand likely driven by B2B purchases. High-value customers like John Lee and Seth Vernon spent over ₹270,000 each, and average order values exceeded ₹12,000 for several customers, suggesting opportunities for upselling and premium bundles. Regionally, the East led in recent sales performance, contributing ₹6.26 million in the latest year, highlighting the potential for focused regional campaigns. These findings support strategic decisions around customer retention, product bundling, and region-specific growth planning.

Appendix A: Normalization Steps

Initial Dataset Overview

The original dataset was a single, flat CSV file representing Superstore sales data. It included multiple repeating fields such as customer details, product descriptions, regional information, and order line items-all in a single table, which made it non-normalized and prone to data redundancy and update anomalies.

Normalization Process (Step-by-Step)

Step 1: Identify Functional Dependencies

We identified repeating groups and dependencies such as:

- A **customer** could appear in multiple rows (violates 1NF).

- A **state** belonged to one **region** (partial dependency, violates 2NF).

- A **subcategory** always belonged to the same **category** (transitive dependency, violates 3NF).

Step 2: Apply Normalization

Normal Form	Action Taken	Result
1NF	Removed multivalued attributes by creating separate tables for Customer, Product, Region, etc.	Atomic values ensured.
2NF	Separated partial dependencies (e.g., splitting State, Region, and Country into related tables).	Composite keys removed. Partial dependencies resolved.
3NF	Removed transitive dependencies (e.g., SubCategory → Category → Product).	No non-key attribute depends on another non-key attribute.

Appendix B: Final Schema

➤ **Customer (CustomerID, FirstName, LastName, Address, City, StateID*)**

- Linked to: State (StateID)

➤ **State (StateID, State, RegionID*)**

- Linked to: Region (RegionID)

➤ **Region (RegionID, Region, CountryID*)**

- Linked to: Country (CountryID)

➤ **Country (CountryID, Country)**

➤ **Product (ProductID, ProductName, SubCategoryID*, Price)**

- Linked to: SubCategory (SubCategoryID)

➤ **SubCategory (SubCategoryID, SubCategory, CategoryID*)**

- Linked to: Category (CategoryID)

➤ **Category (CategoryID, Category)**

➤ **Orders (OrderID, CustomerID*, ProductID*, OrderDate, Quantity, Sales)**

- Linked to: Customer and Product