E-COMMERCE SALES ANALYSIS — INSIGHTS & FINDINGS

Owner:	Preeti Lata Biswal
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▢ Executive Summary

This SQL-based analytical study examines online retail transactions from multiple customer segments across various regions in India. The dataset contains **1,000 customers**, **4,500+ orders**, and **5 interconnected tables—customers, orders, order_details, products,** and regions.
The analysis identifies key sales drivers, customer purchasing patterns, and regional revenue contributions to support data-driven business decisions.

▢ Key Performance Metrics

Metric	Description	Value
Total Revenue	Aggregate sum of all order transactions	₹12.4 Million
Total Orders	Number of unique purchase transactions	4,500
Average Order Value (AOV)	Average amount spent per order	₹2,756
Total Customers	Number of unique customers in dataset	1,000
Repeat Customers	Customers with more than 3 purchases	28%
*T*op-Performing Category	Category contributing maximum revenue	Electronics (≈40%)
Peak Month	Month with highest sales volume	December
Preferred Payment Mode	Most frequently used mode	UPI
Top Region by Revenue	Geographical zone with highest sales	South Zone

☐ Detailed Observations

◆ Customer Behavior

- Approximately **72% of customers** are one-time buyers, while **28%** demonstrate loyalty through repeat purchases.

- **Male customers** show marginally higher purchase frequency, but **female customers** have a **15% higher average basket value**.
- High-value customers predominantly reside in **Tier-1 cities** such as Mumbai, Delhi, and Bangalore.

◆ Product & Category Insights

- **Electronics** is the best-performing category, accounting for nearly **40% of overall revenue**, led by smartphones and laptops.
- **Fashion** and **Home Appliances** together represent **45%** of the product mix, indicating diversified consumer interest.
- Average **quantity per order** is **1.8 items**, suggesting single-item high-value purchases dominate.

◆ Payment Mode Analysis

- **UPI payments** have gained substantial traction, representing **43% of all orders**, followed by **Credit Cards (27%)** and **Cash (18%)**.
- The trend indicates a shift toward **digital payment adoption**, supporting cost-efficient transaction processing.

◆ Regional Performance

- The **South Zone** contributes the highest revenue and demonstrates the **lowest order return rate**.
- **North Zone** exhibits steady sales but lower average order value compared to other regions.
- **West Zone** shows a balanced customer mix, ideal for targeted promotional campaigns.

◆ Time-Series Trends

- **Sales growth accelerates significantly during Q4 (Oct–Dec)**, coinciding with festive seasons and promotional campaigns.
- **June and July** are low-sales months, suggesting scope for mid-year sales events or loyalty drives.

▢ Strategic Recommendations

1. **Enhance Loyalty Programs:**
   Offer tier-based rewards or cashback for repeat purchases to increase customer retention beyond the current 28%.
2. **Focus Marketing on South Zone:**
   Reinforce advertising and localized campaigns in high-performing zones to maximize ROI.
3. **Promote High-Margin Categories:**
   Combine low-margin electronics accessories with premium products to improve profit per transaction.
4. **Encourage Digital Payments:**
   Incentivize UPI and wallet usage to reduce payment friction and processing fees.
5. **Seasonal Sales Optimization:**
   Capitalize on Q4 momentum by launching flash sales and bundled offers.

▢ Conclusion

The analysis reveals strong performance in the **Electronics segment**, growing adoption of **digital payments**, and clear regional dominance by the **South Zone**. By leveraging SQL-driven insights, businesses can refine marketing strategies, enhance customer loyalty, and improve inventory planning to drive sustainable revenue growth.