

Phase 2:-

with

Power BI



Sales Performance



About Walmart



Walmart -
ecommerce



WALMART IS A MULTINATIONAL RETAIL CORPORATION THAT OPERATES AS A CHAIN OF HYPERMARKETS, DISCOUNT DEPARTMENT STORES, AND GROCERY STORES. FOUNDED IN 1962 BY SAM WALTON AND JAMES "BUD" WALTON, IT'S KNOWN FOR ITS "EVERYDAY LOW PRICES" AND LARGE STORE FORMAT. WALMART IS HEADQUARTERED IN BENTONVILLE, ARKANSAS, AND HAS A SIGNIFICANT GLOBAL PRESENCE WITH STORES IN THE UNITED STATES AND 23 OTHER COUNTRIES.



challenges in e-commerce



Sales Performance

Customer Insights

Time Trends & Seasonality

Regional & Seller Metrics

Operational Performance



Walmart -
ecommerce

Problem Statement

Sales Performance

- Total Sales Revenue: Overall revenue across all time.
- Total Quantity Sold: Items sold by Walmart.
- Average Order Value (AOV): Average spend per order.
- Sales by Product Category & Customer State: Understand which categories perform best across regions.
- Top-Selling Products: Top 5 products by revenue.

Customer Insights

- Customer Lifetime Value (CLV): Total revenue by customer.
- Top 10 Loyal Customers: Highest purchase frequency and spend.
- Customer Segments: From clustering analysis (e.g. loyal high spenders, discount-driven, churn risks).
- Customer State AOV: Comparison of average order value across different customer states.

Regional & Seller Metrics

- Revenue by Customer State: Identify top contributing states.
- Average Delivery Time by Seller State: Understand regional operational efficiency.
- Top Sellers by Revenue: Showcase sellers driving the most sales.

Operational Performance

- Average Delivery Time: Overall average, minimum, and maximum delivery times.
- Delivery SLA Compliance: % of orders delivered within target period (for example, within 5 days).
- Freight Cost Trends: Freight values relative to product price.

17 Time Trends & Seasonality

- Monthly Revenue Trend: Observe growth over time.
- Rolling 3-Month Average Sales: Highlight short-term shifts.
- Monthly New Customer Acquisition: Unique new customers joining each month.



Walmart e-commerce Dashboard's



Walmart -
e-commerce





Walmart Sales & Overview Dashboard

Customer Insights

Regional & Seller Metrics

15.84M

Total_Sales_Revenue

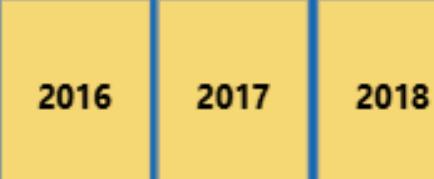
113K

Total_Quantity_Sold

160.99

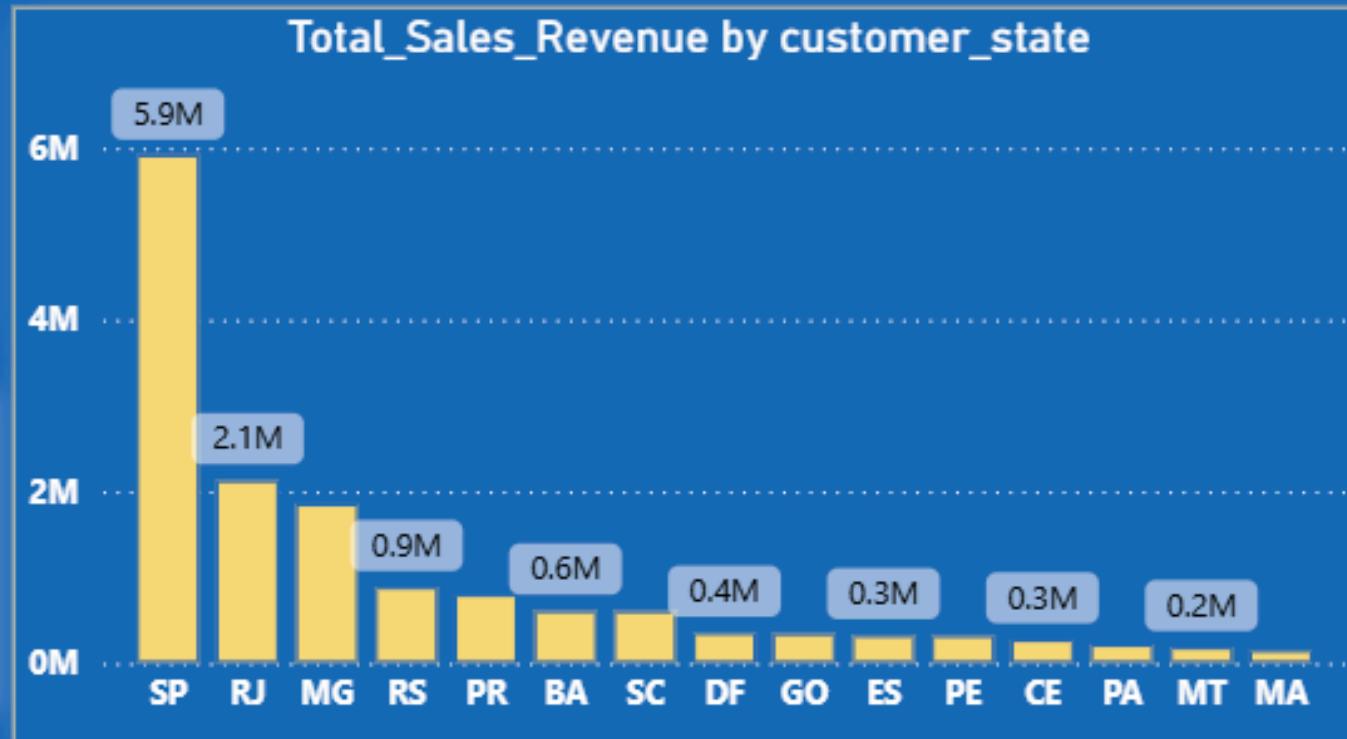
Average_Order_Value

Year



Operational Performance

Time Trends & Seasonality



Sales Performance

Product Category

All

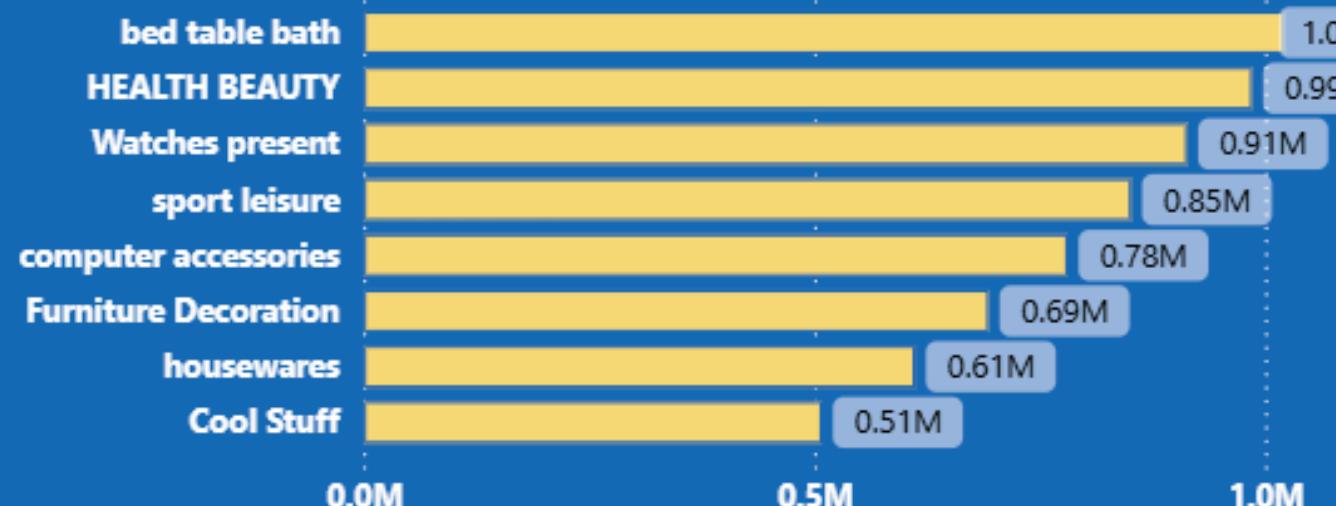
Seller State

All

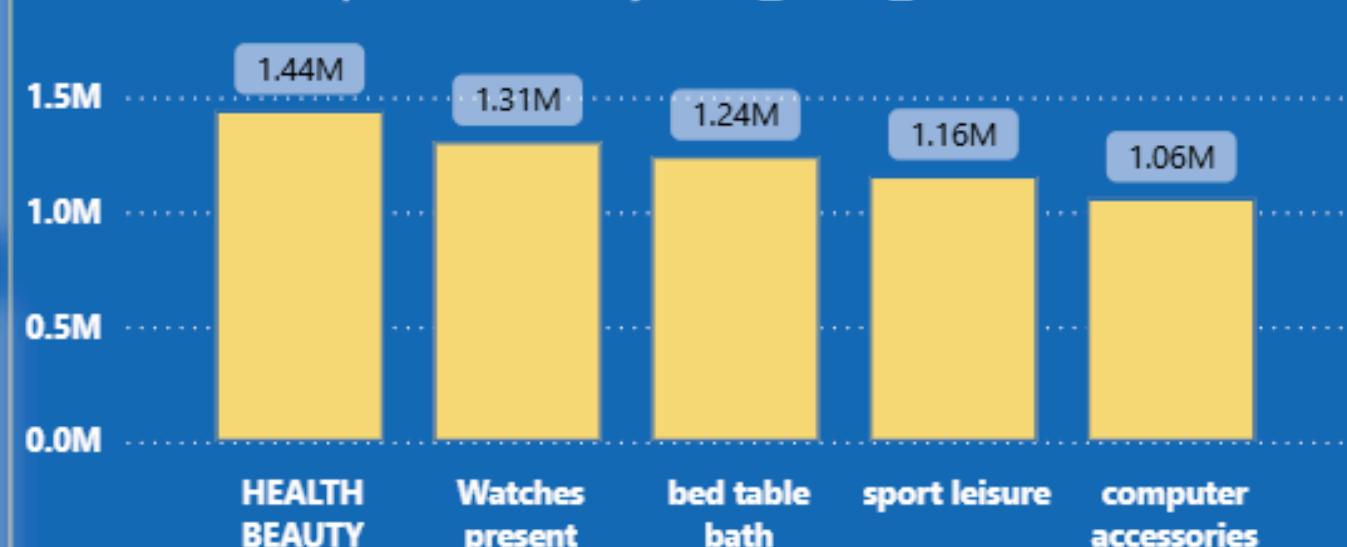
Customer State

All

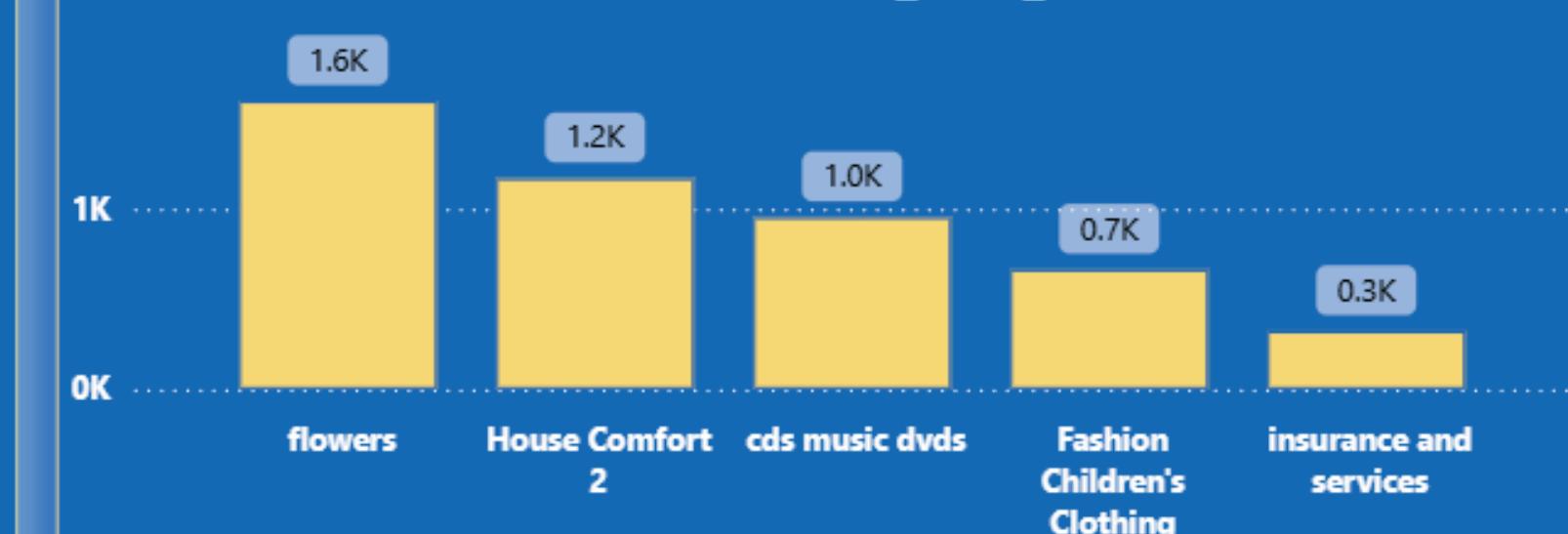
Total_Sales_Revenue by product category



Top 5 Products by Total_Sales_Revenue



Bottom 5 Products Total_Sales_Revenue





Key Insights



Sales Performance

1. Total Performance Overview

- Total Sales Revenue: ₹15.84 Million
- Total Quantity Sold: 113K units
- Average Order Value (AOV): ₹160.99

3. Top Product Categories (by Revenue)

- Bed Table Bath (₹1.02M), Health Beauty (₹0.99M), and Watches Present (₹0.91M) are the leading categories.
- Cool Stuff and Housewares are among the lower-performing in this segment.
- 📌 Focus on top-performing categories to maximize profit.

5. Bottom 5 Products (by Revenue)

- Insurance & Services: ₹0.3K
- Fashion Children's Clothing: ₹0.7K
- CDs Music DVDs: ₹1.0K
- House Comfort 2: ₹1.2K
- Flowers: ₹1.6K

💡 These products are underperforming and may need marketing push or replacement.

2. Top 5 Products (by Revenue)

- Health Beauty: ₹1.44M
- Watches Present: ₹1.31M
- Bed Table Bath: ₹1.24M
- Sport Leisure: ₹1.16M
- Computer Accessories: ₹1.06M

4. Top Performing States (by Customer State)

- São Paulo (SP) leads with ₹5.9M revenue, contributing the highest share.
- Followed by Rio de Janeiro (RJ) with ₹2.1M and Minas Gerais (MG) with ₹0.9M.
- ✓ These top 3 states alone account for more than 60% of the total revenue.

Customer Insights

Sales Performance

Regional & Seller Metrics

Operational Performance

Time Trends & Seasonality

Product Category

Customer City

Customer State

13.59M

Customer_Lifetime_Value

99K

Order_Frequency

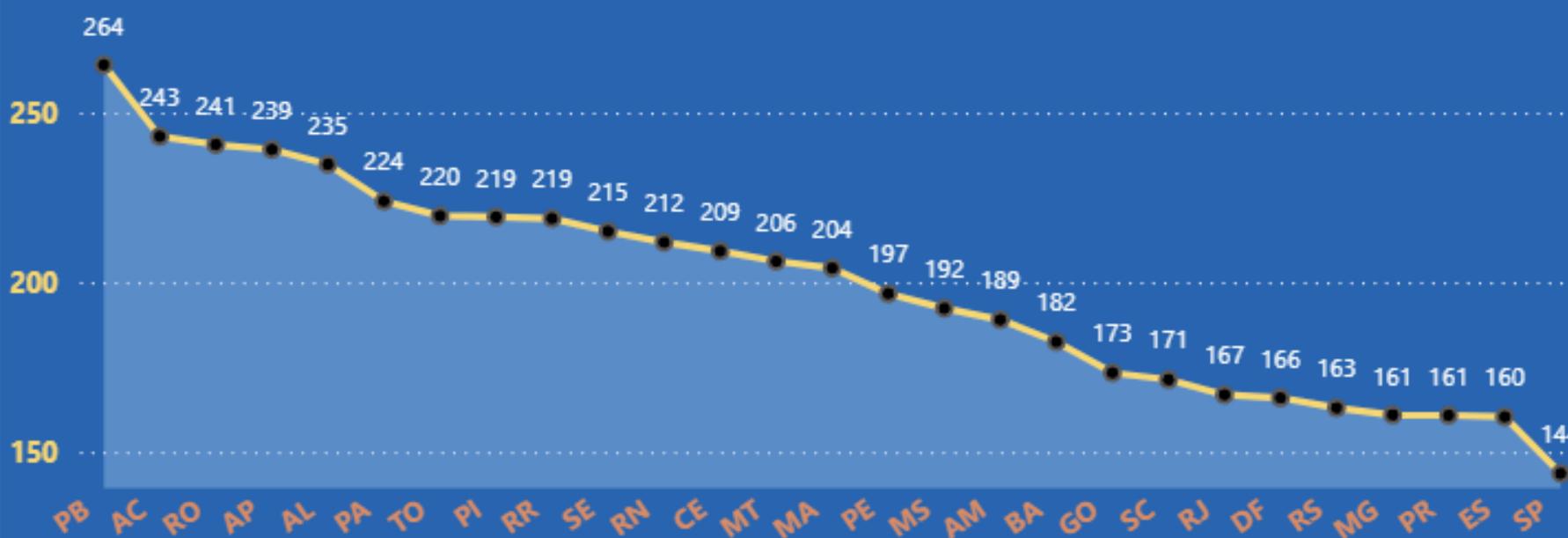
160.99

Average_Order_Value

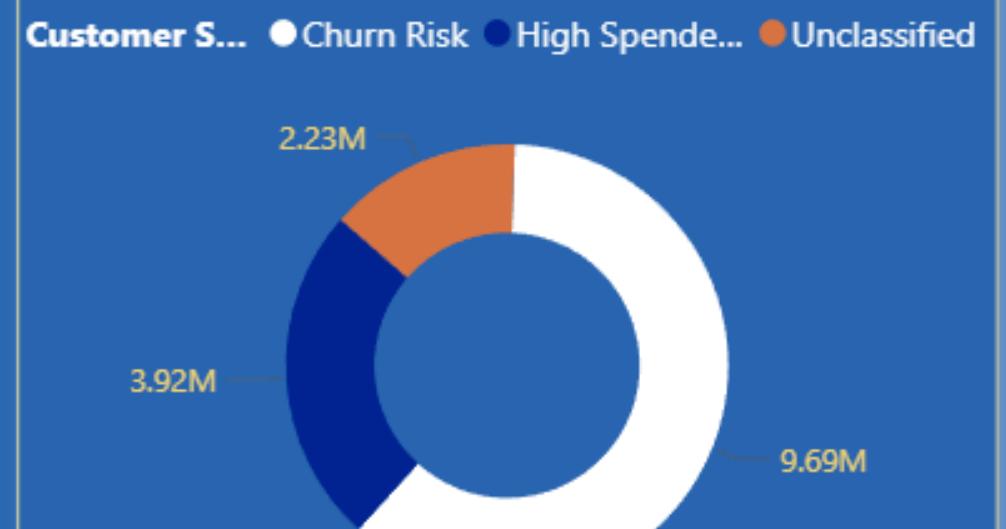
Year,Month



Average_Order_Value by customer_state



Total_Sales_Revenue by Customer Segment





Customer Insights



1. Overall Customer Metrics

Customer Lifetime Value (CLV): ₹13.59 Million

Order Frequency: 99K orders

Average Order Value (AOV): ₹160.99

4. Average Order Value by Customer State

Top 3 States with Highest AOV:

PB: ₹264

AC: ₹243

RO: ₹241

Lowest AOV:

SP (São Paulo): ₹144 (despite being the highest in total revenue earlier)

📌 Insight: SP brings in huge volume but at low per-order value. High AOV states may reflect premium customers.

🎯 Focus more on customer segmentation marketing (High Spenders vs. Churn Risk).

💡 Launch state-specific promotions in high AOV regions to boost overall revenue.

⌚ Monitor and expand the repeat customer base, as a few loyal buyers generate consistent revenue.

3. Top Customers by Lifetime Value

Top customer generated ₹13K in revenue.

Others in the top 10 range between ₹5K–₹7K each.

📌 Insight: High-value customers are present and should be targeted with personalized offers to maximize retention.

2. Top Customers by Order Frequency

One customer placed 17 orders, which is almost double the next highest (9 orders).

Several customers placed 6–9 orders, showing consistent repeat buyers.

📌 Insight: A few loyal customers contribute heavily. Loyalty programs and exclusive deals can increase retention.

5. Revenue by Customer Segment

High Spenders: ₹9.69M (≈ 70% of revenue!)

Churn Risk Customers: ₹3.92M

Unclassified: ₹2.23M

📌 Insight:
Majority of revenue comes from High Spenders → nurture with loyalty rewards.
Churn Risk segment still contributes significantly → re-engagement strategy needed.

Regional & Seller Metrics

Sales Performance

Customer Insights

Operational Performance

Time Trends & Seasonality

Year

2016

2017

2018

Seller State

All

Seller City

All

SP

Top Seller State

sao paulo

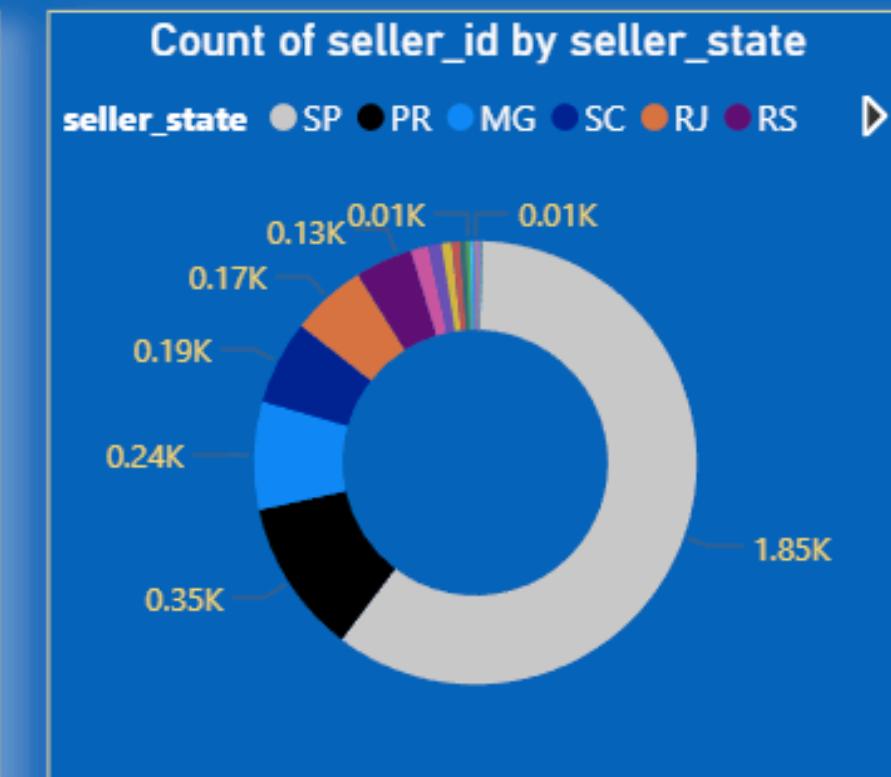
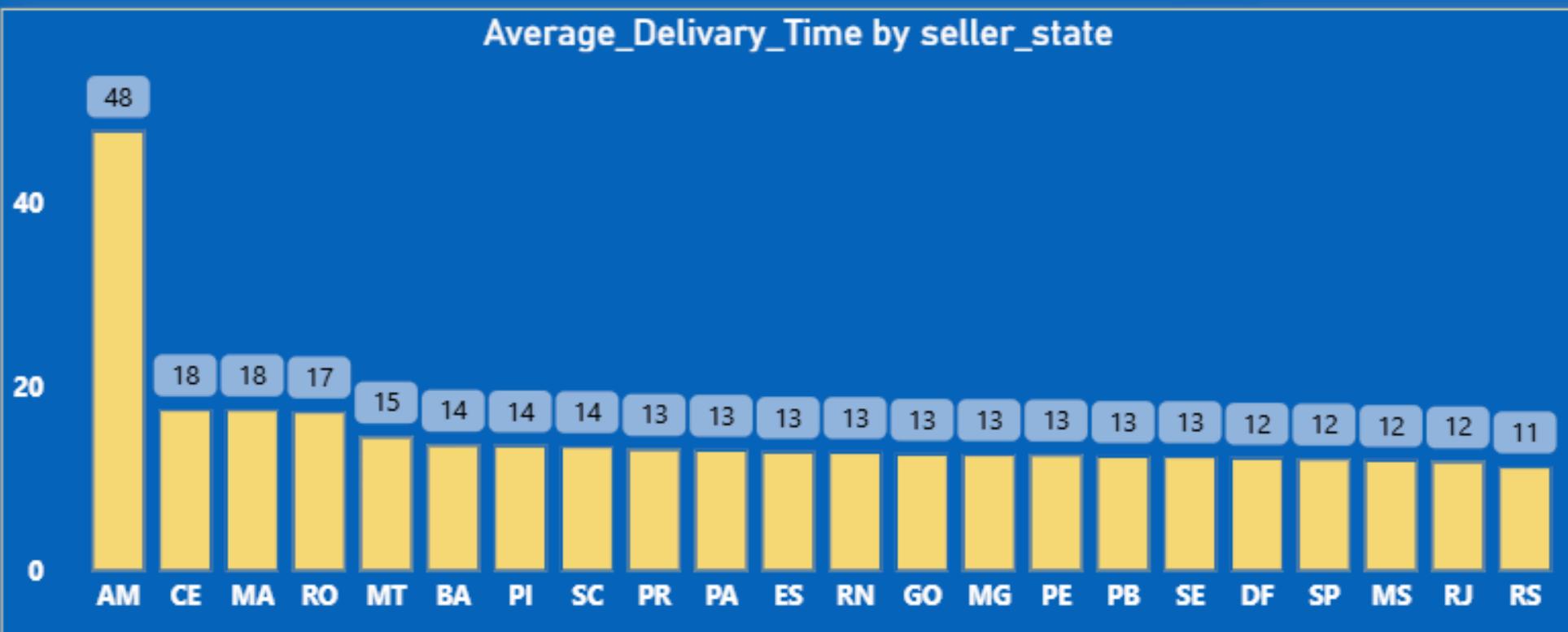
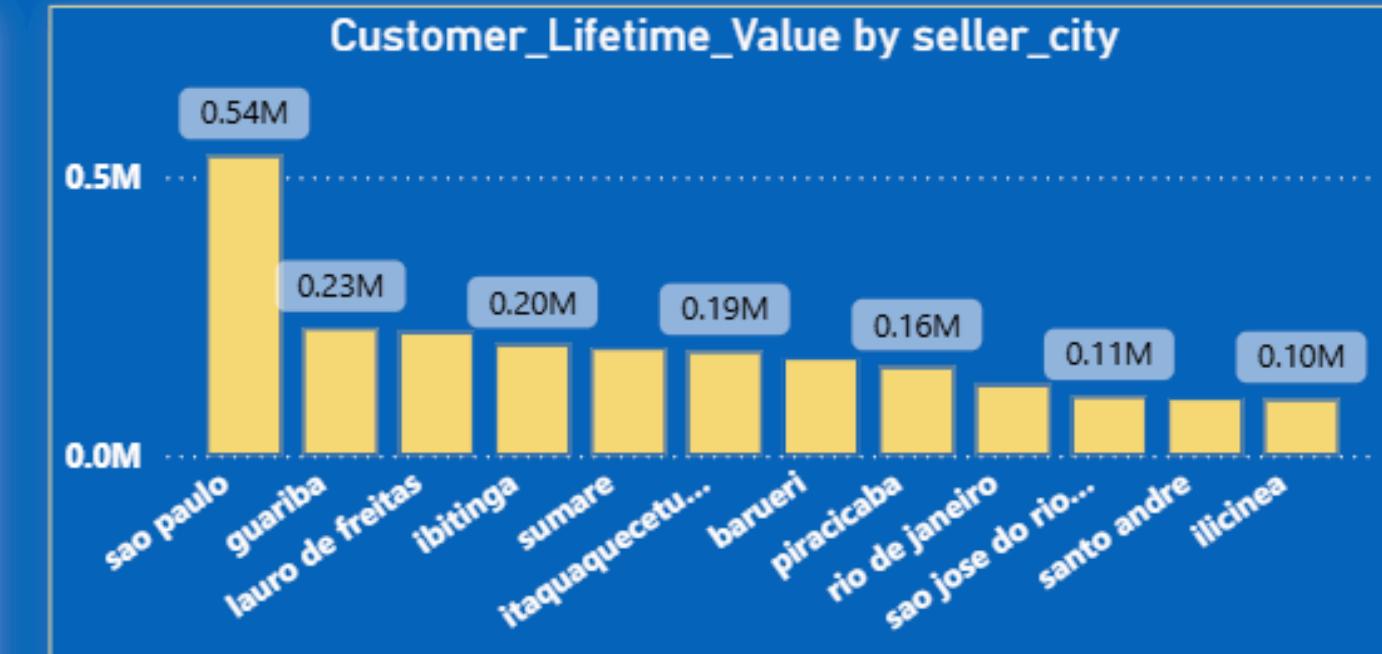
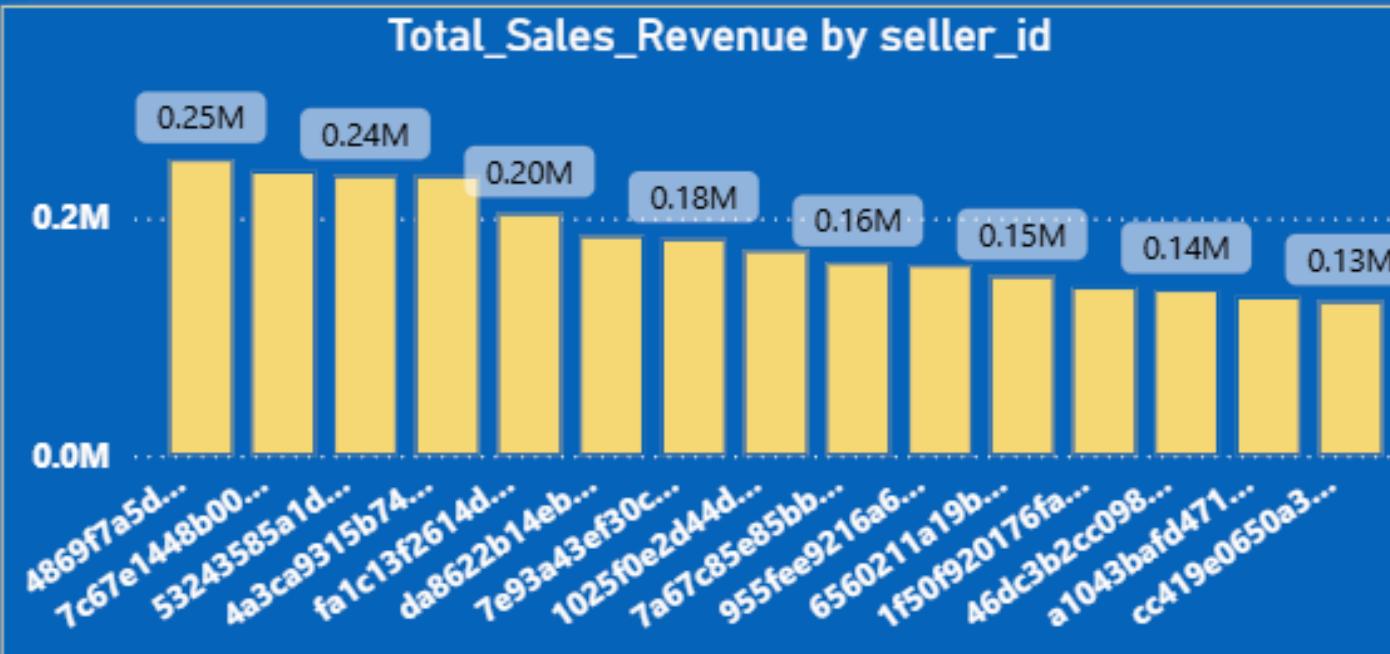
Top Seller City

macatuba

Worst Seller City

AC

Worst Seller State





Regional & Seller Metrics – Key Insights



1. Top & Bottom Performers

● Top Seller State: São Paulo (SP)

● Top Seller City: São Paulo

● Worst Seller State: Acre (AC)

● Worst Seller City: Macatuba

📌 Insight: Focus on expanding operations in SP; look into reasons for poor performance in AC and Macatuba (low demand, logistics, etc.).

2. Revenue by Seller

Highest earning seller contributed ₹0.25M.

Top 10 sellers earned between ₹0.13M – ₹0.25M.

📌 Insight: Heavy dependency on a few sellers.

Consider onboarding & training more high-potential sellers to reduce risk.

3. Customer Lifetime Value (by Seller City)

São Paulo: ₹0.54M CLV (highest)

Other high CLV cities: Curitiba, Lauro de Freitas, Ibitinga

📌 Insight: Prioritize retention strategies in top CLV cities (loyal customers live there).

4. Delivery Performance (by Seller State)

Worst Delivery Time: AM (Amazonas) – 48 days average! 🚛

Best Delivery Time: SE, DF, SP, MS, RJ, RS – 11-12 days average.

📌 Insight:

Delivery delays in Amazonas need urgent attention (may impact customer satisfaction).

Benchmark fast-performing states to improve others.



Strategic Recommendations

🚚 Reduce delivery delays in high-latency states like Amazonas.

💡 Explore why sellers in AC and Macatuba are underperforming (low sales, poor coverage?).

💼 Recruit more sellers in underrepresented but high-demand states to balance load.

Operational Performance

16.57%
freight %

Sales Performance

Regional & Seller Metrics

Customer Insights

Time Trends & Seasonality

Year

All

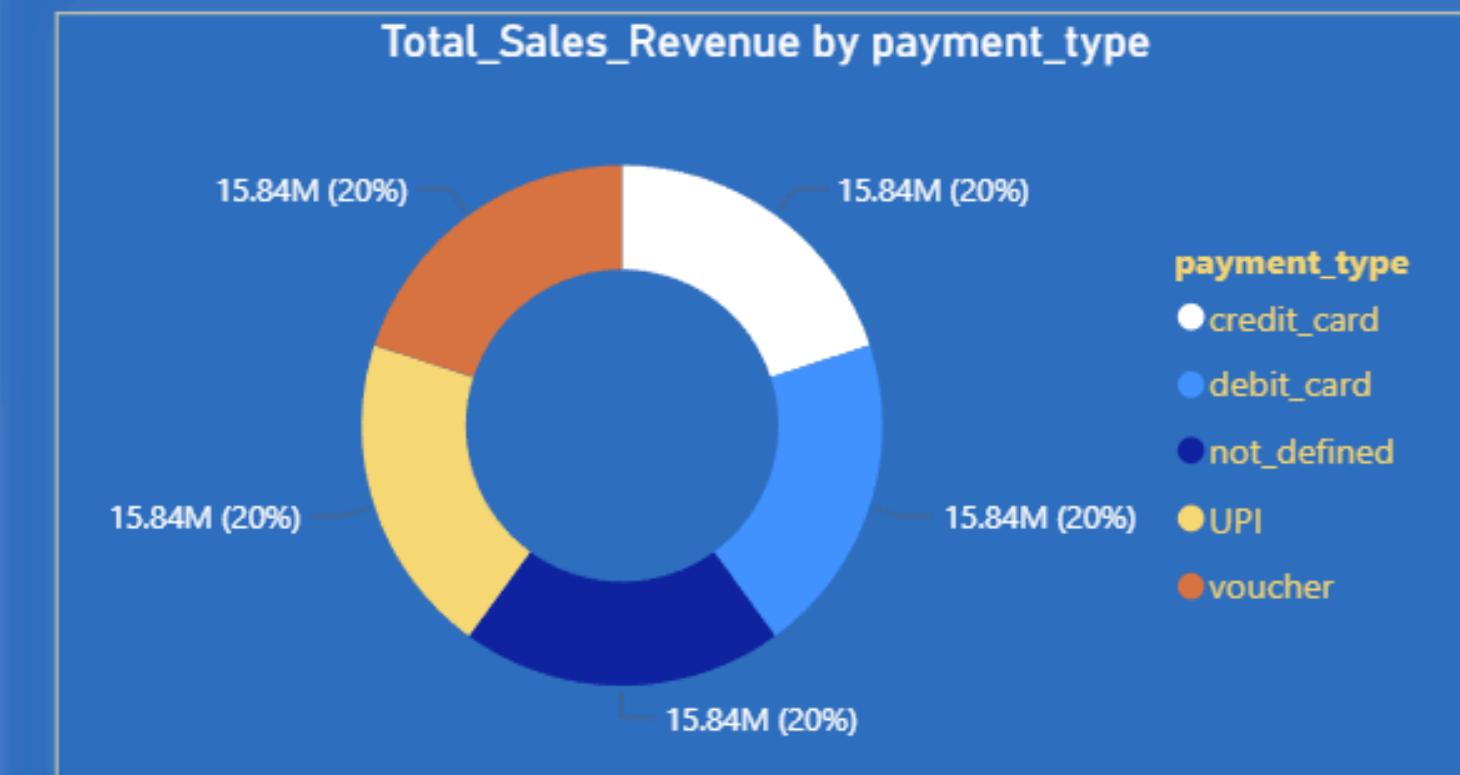
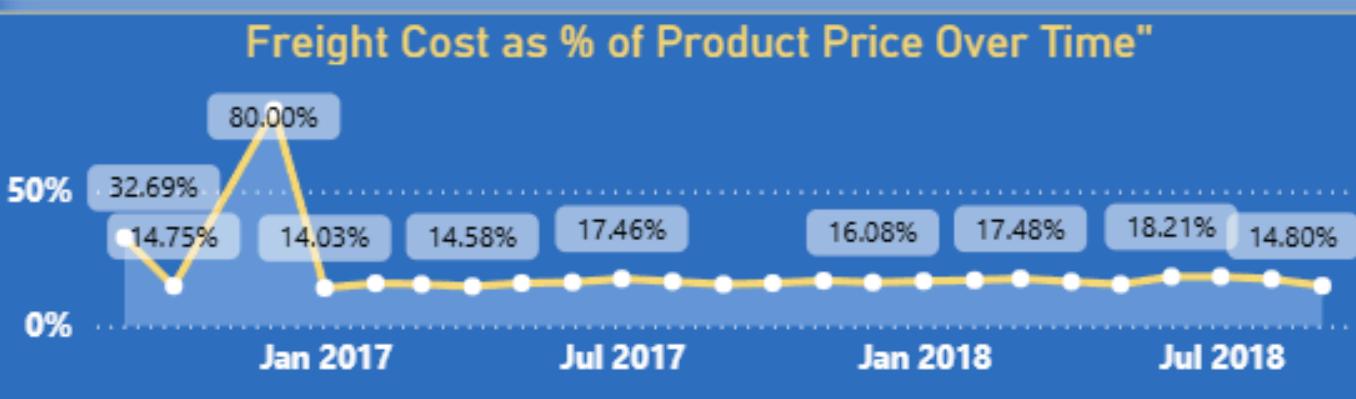
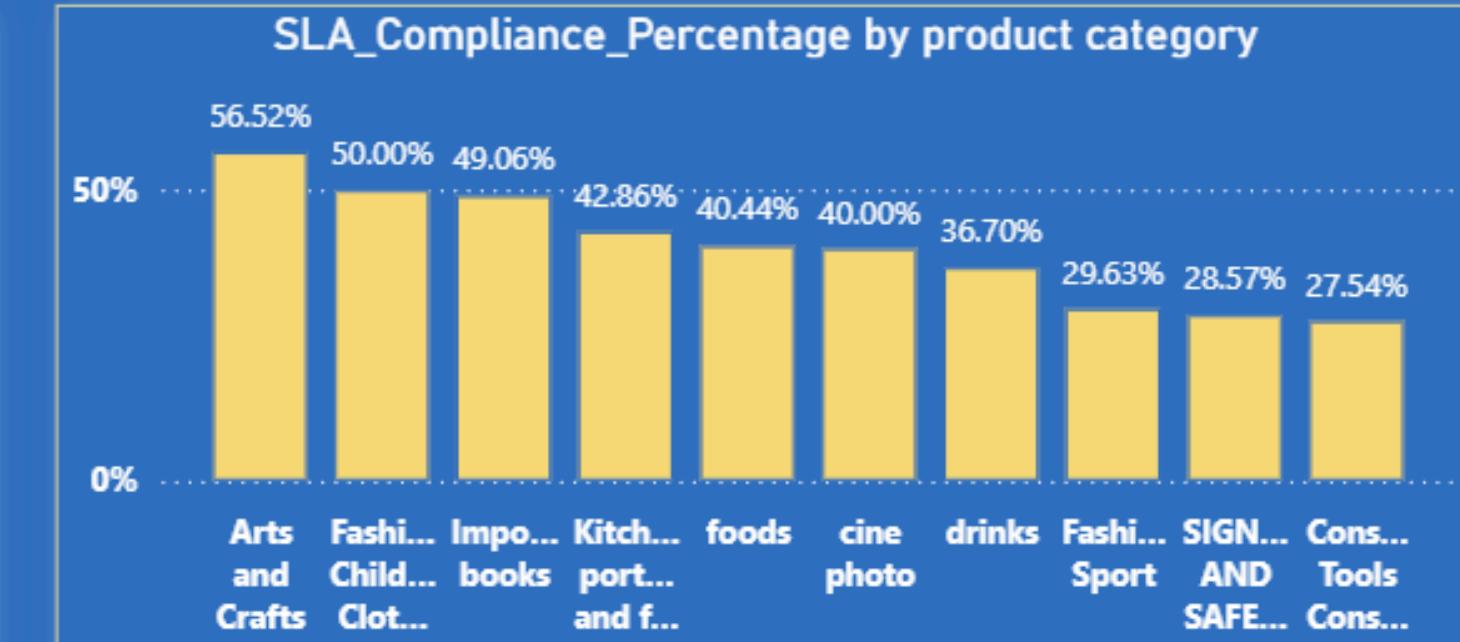
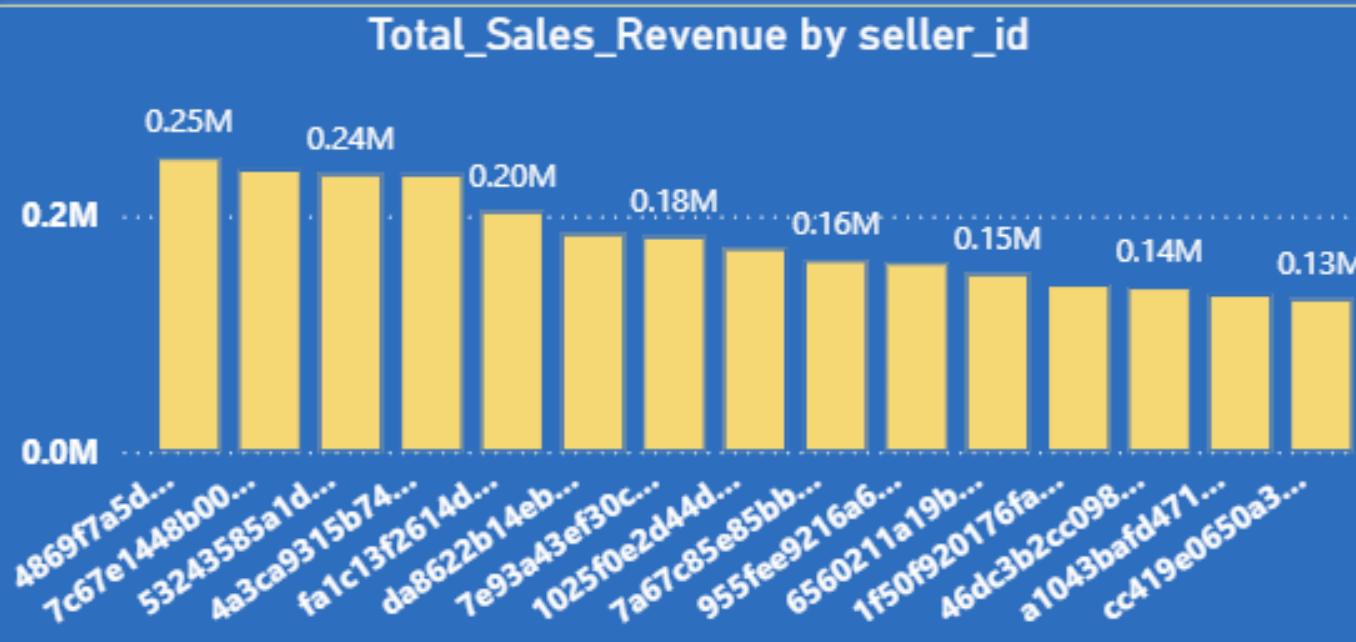
Customer State

All

19.99
Avg_Freight_Cost

210
Max_Delivery_Time

19.78%
SLA_Compliance_Percent...





Operational Performance – Key Insights

1. Logistics Overview

Freight % (of product cost): 16.57%

Average Freight Cost: ₹19.99

Max Delivery Time: 210 days 😰 (very high – needs investigation)

SLA Compliance (Overall): 19.78% – very poor!

📌 Insight: Supply chain efficiency is a critical concern; overall SLA compliance below 20% means majority deliveries are not meeting target timelines.

3. Freight Cost Trends

Highest spike in Jan 2017 – 80% of product cost!

Stabilized around 14%–18% afterward.

📌 Insight: Cost control measures post-2017 were effective, but freight cost as a % of product price is still on the higher side for some categories.

5. Payment Type Split

All payment types (Credit Card, Debit Card, UPI, Voucher, Undefined) equally contribute to sales – each 20% share.

📌 Insight: Diverse payment preferences. Important to support all modes consistently to avoid friction.

2. SLA Compliance by Product Category

Best Performing:

Arts and Crafts: 56.52%

Fashion - Kids: 50%

Books: 49.06%

Worst Performing:

Tools and Construction: 27.54%

SIGN AND SAFETY: 28.57%

📌 Insight: Product-specific SLA tracking is essential. Construction-related categories need urgent delivery time optimization.

4. Monthly Freight-to-Price Ratio

Highest ratio in August (0.18) and June (0.175)

Lowest in October (0.154)

📌 Insight: Freight cost varies seasonally. Plan high-demand shipping during low-cost months for savings.

6. Top Sellers by Operational Performance

Same top sellers as previous pages (₹0.25M–₹0.13M revenue range).

Cross-reference these sellers with SLA compliance to assess both profitability and reliability.

Overall Recommendations

- 🚚 Improve SLA Compliance urgently (from 19.78% to at least 70–80%) through better logistics & vendor SLAs.
- 🎯 Optimize high-cost freight months, especially for low-margin products.
- 🔍 Track delivery time outliers (like 210 days) to prevent customer dissatisfaction.
- 🛒 Continue supporting all major payment modes, no need to focus on one over others.

Time Trends & Seasonality

Sales Performance

Customer Insights

Regional & Seller Metrics

Operational Performance

Year

2016

2017

2018

Seller State

All

Customer State

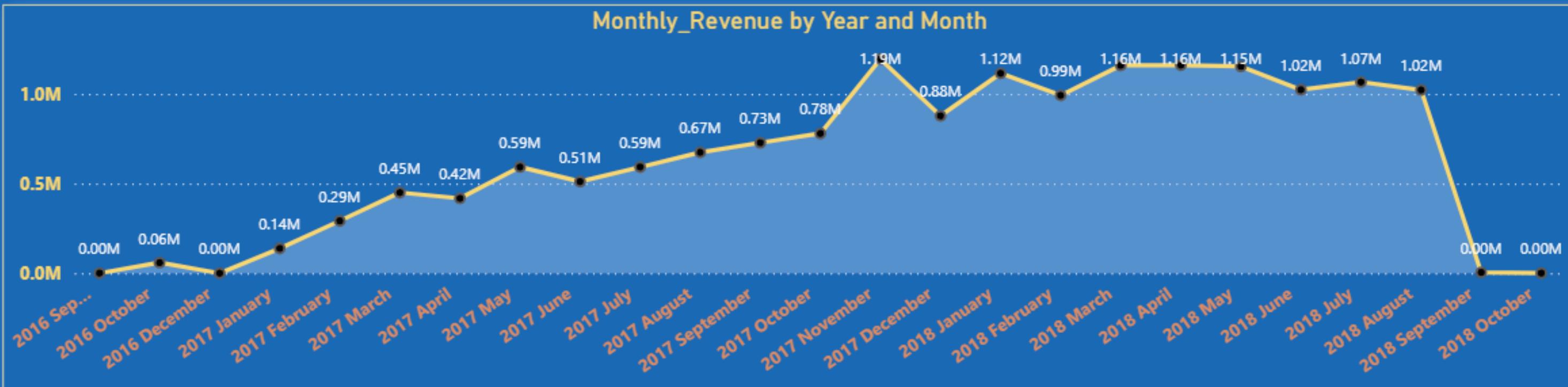
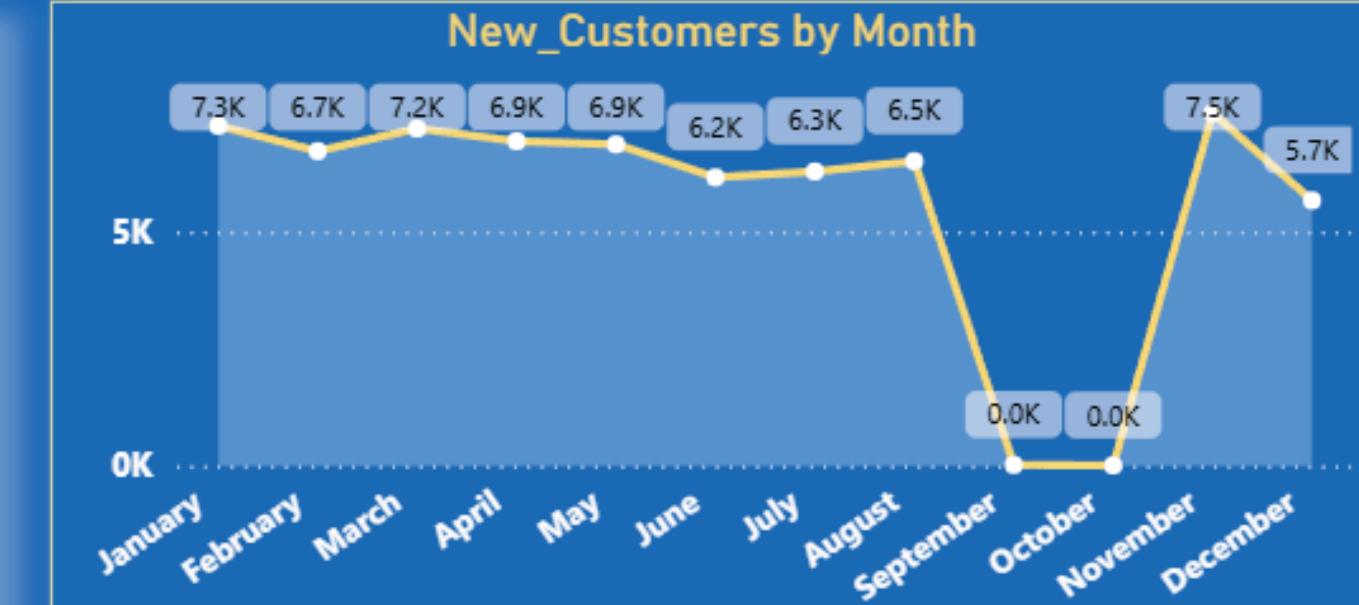
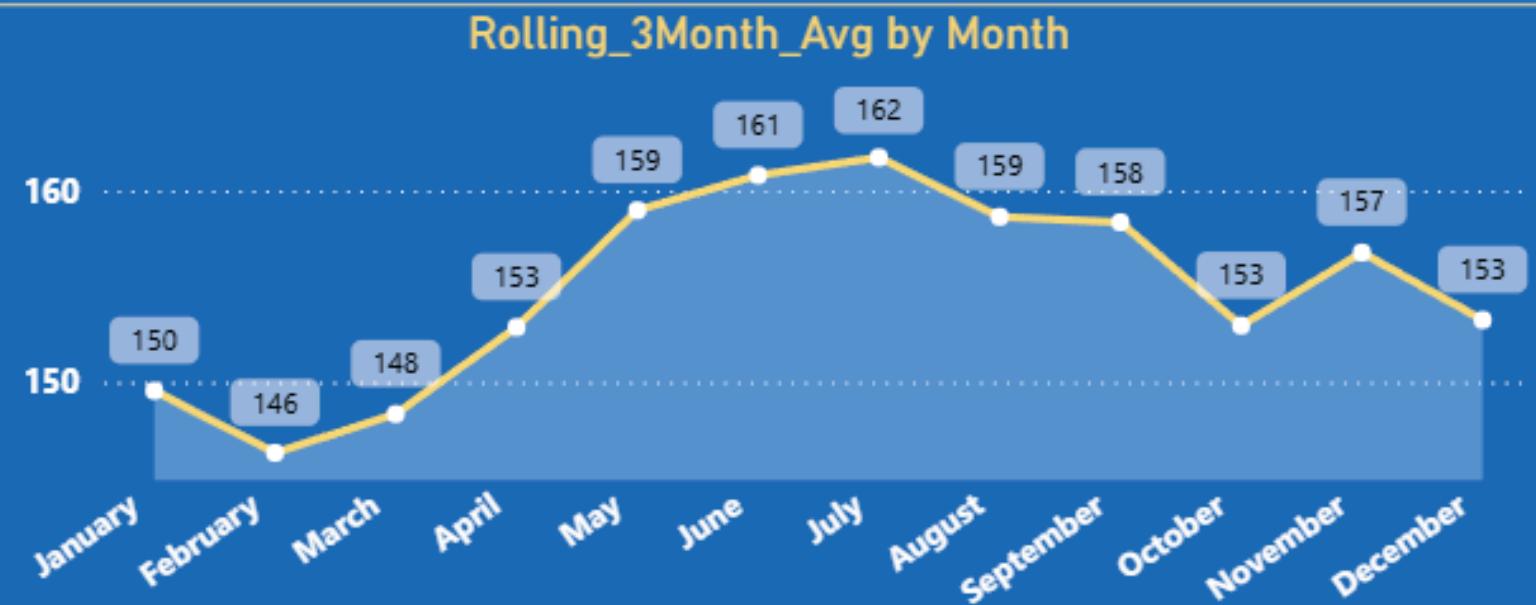
All

12.50
Average_Delivery_Time

589.67
Monthly_Revenue

152.94
Rolling_3Month_Avg

23.89
Average_Delay_Delivery





Time Trends & Seasonality – Key Insights

1. Monthly Revenue Trends

Peak Revenue: ₹1.19M in Nov 2017

Stable Highs: ₹1.15M–1.16M between Feb–Jun 2018

Sudden Drop: ₹0.00M after Sep 2018 – data cutoff or operations paused

📌 Insight: Business grew strongly till mid-2018, but sudden drop after Sep 2018 needs investigation. Could be due to data error or external business issue.

3. New Customer Trends

Consistent new customers Jan–Aug (~6.2K–7.3K/month)

Sharp drop to 0 in Sep & Oct

Spike again in Nov (7.5K)

📌 Insight: Likely a data gap or customer onboarding issue in Sep–Oct. Otherwise, customer acquisition was consistent.

5. Monthly Revenue (Summary Metrics)

Monthly Avg Revenue: ₹589.67K

3-Month Rolling Avg: ₹152.94 (order value-wise)

📌 Insight: Consistency in revenue across months, but some sudden dips/spikes require closer attention to campaigns or operational disruptions.

2. Rolling 3-Month Avg Order Value (by Month)

Highest average: 162 in July

Strong months: May–August (avg >158)

Weakest month: March (146)

📌 Insight: Summer months (Q2–Q3) have better order values – marketing & inventory planning should align with this seasonal peak.

4. Delivery Timings

Average Delivery Time: 12.5 days (good)

Average Delivery Delay: 23.89 days (bad)

📌 Insight: Despite decent average delivery times, delays are still high → may reflect unreliable delivery timelines or inaccurate SLA targets.

Strategic Recommendations

👉 Fix September–October data gaps (customers & revenue both show 0).

↗ Plan major promotions in Q2–Q3 (May–July) to capitalize on seasonal order value highs.

🚚 Reduce delivery delays, even if overall average time looks fine – delays still cost customer trust.



KEY RECOMMENDATIONS & IMPROVEMENTS (Across All Dashboards)

1. Improve Customer Acquisition & Retention

- Re-target loyal customers with highest spend & frequency (Page 2)
- Improve customer experience in low-AOV states through localized offers
- Identify churn-risk segments and run re-engagement campaigns

2. Optimize Product Portfolio

- Focus on top-selling categories and discontinue underperforming ones (Page 1 & 3)
- Expand SKUs in high-performing categories to increase share
- Analyze product demand seasonality for better stock planning (Page 5)

3. Regional Strategy Adjustment

- Boost inventory & marketing in high revenue and quantity-selling states (Page 1)
- Investigate underperforming states with low AOV or high delays (Page 2 & 4)
- Consider state-wise logistic partners for faster delivery

4. Fix Delivery & Operational Delays

Average delivery delay is 23+ days despite on-time delivery SLA being okay (Page 5)
Re-align delivery partners/SLA policies to avoid hidden delays
Improve order tracking system and proactive customer communication

5. Handle Data Gaps & System Errors

- Sudden zero customer acquisition and revenue in Sep–Oct 2018 (Page 5)
- Check for data extraction/reporting failures during these periods
- Automate regular checks for missing time data in ETL pipeline

6. Boost Sales During Seasonal Peaks

- Highest AOV observed in summer months (May–July) – ideal for promotions
- Plan seasonal campaigns, discounts, and restocks accordingly (Page 5)

7. Increase Customer Lifetime Value (CLV)

- Use behavior-based segmentation (Page 2) to push loyalty programs
- Reward top customers with offers, early access, or bundled products
- Use email/SMS re-marketing for repeat purchases

8. Improve Data Modeling & Dashboard Clarity

- Ensure proper relationships between tables to avoid data duplication (Page 1 issue)
- Use measures instead of calculated columns for dynamic KPIs
- Clearly show date filters/periods used in time-based visuals (Page 5)

9. Deep-Dive Product Insights

- Identify products with high returns or low profitability
- Add metric like Profit Margin or Return Rate to dashboards
- Include inventory turnover ratio for supply chain efficiency

10. Expand Dashboard Coverage

- Add KPIs like:
- 📈 Return Rate
- 💰 Profit per Category
- ⏳ Average Cart Abandonment Time
- Build a separate Executive Summary Dashboard for CXOs



Thank you for giving your Valuable time

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