



Shiprocket Final Report

Insights from Shiprocket Data Analysis using SQL & Power BI

1. Order and Customer Overview

- Total Orders: 100,000
- Unique Customers: 100,000

Top 5 Regions by Orders:

- South: 20,146 orders
- North: 20,021 orders
- Central: 19,997 orders
- East: 19,931 orders
- West: 19,905 orders

2. Delivery Performance

- Average Delivery Time: Data for exact days was not calculated, but delays were noted.
- Orders Delivered Late: 14,270 orders exceeded expected delivery time.
- Delivery Efficiency by Region: Fastest: West (7.50 days on average) Slowest: Central (7.56 days on average)

3. Sales Performance Over Time

- Highest Daily Sales: 162,360.32 (January 30, 2023)
- Lowest Daily Sales: 112,793.75 (January 15, 2023)
- Total Revenue: ₹102.4 Million
- Monthly Revenue Trends: Sales fluctuated, with February 2023 showing a 10.7% drop, while May 2024 saw an 8% increase.

4. Product & Customer Segmentation

- Best-Selling Products:
- Quick (₹17.23M revenue)
- ShipX (₹17.13M revenue)
- Cargo Shipping (₹17.06M revenue)
- Customer Segmentation:
- High Spenders: Customers spending over ₹2000
- Medium Spenders: ₹500-₹1000
- Low Spenders: Below ₹200

5. Delivery Personnel & Vendor Performance

- Top Vendors: Many had 5-star ratings but handled only 1 order each, making rating-based conclusions unreliable.
- Fastest Delivery Vendors: Delivered in 1 day on average.

6. Order Status Analysis

- Total Orders:
- Delivered: ~51,023 (51%)
- Late Deliveries: ~48,977 (49%)
- Most Returns by Product:
- Quick: 50.38% return rate
- Fulfillment: 50.10% return rate
- Order Status Breakdown:
- Pending Orders: ~24,876
- Cancelled Orders: ~24,963
- Returned Orders: ~25,036
- Revenue Lost Due to Incomplete Orders: ₹76.6M

7. Payment & Discount Impact

- Most Used Payment Methods:
- Debit Card (20,213 orders)
- UPI (20,090 orders)
- Net Banking (19,995 orders)
- Cash on Delivery (19,956 orders)
- Discount Impact: High discounts (above 40%) resulted in more revenue per order, but no clear trend on profitability.

8. Marketing Channel Performance

- Top Revenue Sources:
- Organic Search (₹25.8M revenue, 25,210 orders)
- Referral (₹25.6M revenue, 25,005 orders)
- Paid Ads (₹25.5M revenue, 24,938 orders)

Conclusions

- Order fulfillment and delivery efficiency need improvement, with nearly 49% of orders being late.
- Sales show seasonal trends, with certain months experiencing steep drops (e.g., February).
- Returns are a major concern, with top products having a ~50% return rate.
- Incomplete orders cause significant revenue loss, amounting to ₹76.6M.
- South leads in sales and orders, followed closely by North and Central.
- Payment preference is shifting towards digital methods, with UPI and Debit Cards being most popular.
- Organic and referral traffic drive the most revenue, making them key for marketing focus.

In-Depth Conclusions from Shiprocket Data Analysis using SQL & Power BI

1. Order Volume and Regional Trends

- Shiprocket processed 100,000 orders, with a nearly 1:1 ratio between orders and unique customers, suggesting a high proportion of one-time buyers.

- Geographic trends reveal South as the largest market (20,146 orders), with North (20,021 orders) and Central (19,997 orders) closely following.
- Revenue contribution by region:
- South generated ₹20.6M, the highest revenue.
- North, despite having almost the same number of orders as South, had lower revenue (₹20.3M), indicating lower average order value.
- Revenue in East and West was also substantial (~₹20.4M each), but Central lagged behind.

Implication:

- South performs well in both order volume and revenue, making it a high-priority region for marketing and logistics optimization.
- Lower revenue from North suggests either a different product mix or smaller order sizes, requiring further investigation.

2. Delivery Performance & Efficiency

- Nearly 14,270 orders were delivered late, representing ~14% of all orders.
- Average delivery times were highest in Central (7.56 days) and lowest in West (7.50 days).
- Fastest vendors delivered within 1 day, but their volume was minimal.
- Challenges Identified:
- Delivery delays indicate operational inefficiencies, possibly due to vendor constraints or route planning issues.
- West being the fastest region suggests better last-mile delivery operations or shorter delivery distances.
- Recommendations:
- Analyze vendors with lower average delivery times and prioritize their services.
- Implement AI-based route optimization to improve on-time delivery rates.

3. Sales Performance & Revenue Trends

- Total revenue generated: ₹102.4M
- The highest sales were recorded in January 2023 (₹4.32M), while February 2023 had the lowest revenue drop (-10.7%).
- Revenue fluctuated month-over-month, with the highest monthly growth observed in May 2024 (+8%).
- Sales dip in certain months (e.g., February, June, September) suggests a seasonal impact or reduced marketing efforts.
- Key Findings:
- Consistent sales fluctuations suggest a lack of long-term customer retention strategies.

- A strong push in May 2024 improved sales, likely due to promotions or external demand shifts.
- Recommendations:
- Target weak months with promotional campaigns to maintain steady revenue flow.
- Introduce customer loyalty programs to drive repeat purchases.

4. Best-Selling Products & Revenue Contribution

- Top products: Quick (₹17.23M), ShipX (₹17.13M), Cargo Shipping (₹17.06M)
- Top product categories: Shipping (₹51.2M, 50.05% of revenue) and CROSS-BORDER (₹51.1M, 49.95% of revenue)
- 50% of revenue is driven by CROSS-BORDER shipments, indicating strong international trade reliance.
- Challenges:
- Over-reliance on a few high-performing products makes the business vulnerable to market changes.
- A high return rate (nearly 50%) in these categories is a major issue.
- Recommendations:
- Diversify product offerings to reduce dependency on a few best-sellers.
- Investigate reasons for high returns and improve quality control.

5. Customer Segmentation & Spending Patterns

- Top spenders contribute significantly to revenue, with some spending over ₹2000.
- Majority of customers fall into the 'Low Spender' category (< ₹200), indicating lower average basket sizes.
- Repeat customers seem to be rare, highlighting customer churn issues.
- Challenges:
- Low-value transactions dominate, which may lead to high operational costs with limited profitability.
- Customer retention is low, with many one-time buyers.
- Recommendations:
- Introduce bulk purchase discounts or subscription models for long-term engagement.
- Use targeted marketing campaigns based on past purchase behaviors to increase repeat sales.

6. Payment Preferences & Discount Impact

- Top payment methods:
- Debit Card (20,213 orders)
- UPI (20,090 orders)
- Net Banking (19,995 orders)
- Cash on Delivery (19,956 orders)
- Cash on Delivery (COD) still constitutes ~20% of payments, posing a risk of non-payment or returns.
- High discounts (above 40%) generated more revenue, but there was no clear profitability trend.
- Recommendations:
- Encourage prepaid transactions via UPI or card-based discounts.
- Optimize discount structures to maximize profits instead of focusing only on volume.

7. Order Status & Returns Impact

- 51% of orders were delivered successfully, but 49% were delayed or incomplete.
- Returns are a major issue, with categories like 'Quick' and 'Fulfillment' experiencing over 50% return rates.
- Return-related revenue loss: ₹25.5M (approximately 25% of total revenue).
- Challenges:
- High return rates lead to revenue losses and increased logistics costs.
- Pending and canceled orders contribute to ₹50M+ in lost potential revenue.
- Recommendations:
- Implement stricter return policies and quality checks.
- Offer customer support and incentives for exchanges instead of returns.

8. Vendor Performance & Logistics Optimization

- Vendor performance is inconsistent, with some handling just 1 order but maintaining high ratings.
- Top 5 fastest vendors delivered within 1 day, but their impact on total sales was negligible.
- On-time delivery percentage is inconsistent, requiring optimization.
- Challenges:
- Vendor reliability varies significantly, leading to unpredictable delivery times.

- Fastest vendors may not be handling bulk orders, reducing their overall impact.
- Recommendations:
- Optimize vendor allocation based on performance history.
- Work with vendors to improve logistics efficiency.

9. Marketing Channel Insights

- Top sources of revenue:
- Organic Search: ₹25.8M (25,210 orders)
- Referral Traffic: ₹25.6M (25,005 orders)
- Paid Ads: ₹25.5M (24,938 orders)
- Social Media: ₹25.4M (24,847 orders)
- Challenges:
- Despite similar order volumes, paid channels incur additional marketing costs.
- Organic and referral traffic provide high returns, but growth is needed.
- Recommendations:
- Increase focus on SEO and referral partnerships to drive organic traffic.
- Optimize ad spend to reduce cost-per-conversion.

10. Predicting Late Deliveries & Operational Improvements

- Shiprocket faces nearly 50% late deliveries, indicating a significant supply chain issue.
- Potentially delayed orders can be predicted based on past trends.
- Machine learning models can be implemented to estimate delivery delays and adjust logistics accordingly.
- Recommendations:
- Implement AI-based predictive analytics to adjust delivery estimates dynamically.
- Prioritize shipping routes and vendors that consistently perform well.

Final Key Takeaways & Business Actions

- Reduce return rates by improving product quality and enforcing stricter return policies.
- Improve delivery efficiency through better vendor selection and AI-driven route optimization.
- Boost customer retention via loyalty programs, targeted discounts, and subscriptions.

- Leverage high-performing marketing channels (organic & referrals) to reduce paid acquisition costs.
- Increase prepaid transactions to minimize COD-related risks.
- Analyze and optimize the discounting strategy for profitability instead of pure sales volume.
- Diversify product offerings to reduce over-reliance on a few best-sellers.