

## 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.