Amazon Sales Data Analysis

Amazon India Marketplace — Executive Tableau Report

Comprehensive analysis across 16 SQL queries covering KPIs, product performance, geographic reach, customer segments, operational efficiency, and seasonal trends.

1. Executive Summary — Key Performance Indicators

Query 1: Executive KPI Summary

Purpose: High-level overview of business performance including total orders, revenue, cancellation rate, and market reach.

Overall Business Performance

- **120,378 total orders** processed — strong transaction volume
- **₹78,592,678 total revenue** generated — significant gross sales scale
- **Average order value: ₹609.36** — mid-range spend per transaction

Order Fulfillment & Operations

- **109,696 orders shipped** — majority of transactions successfully fulfilled
- **18,332 orders cancelled** — notable operational loss
- **Cancellation rate: 14.21%** — relatively high, suggesting issues in stock availability, delivery timelines, or customer commitment

Product Portfolio & Market Reach

- 7,195 unique products sold — very wide catalog coverage
- 116,649 total units sold — roughly 1 unit per order on average, indicating many single-item purchases
- 48 states served — extensive geographic penetration across India

Executive Takeaway: Revenue scale is strong, but cancellations are the biggest performance leak. Moderate AOV signals opportunity for bundles, cross-selling, and minimum cart incentives.

2. Revenue by Product Category

Query 2: Revenue by Product Category

Purpose: Identify which product categories drive the most revenue, critical for inventory planning and marketing focus.

Revenue Leaders
- **Set category dominates — ₹35.44M revenue** (49.87% of total)
  - ◦ Highest average order value: ₹832.20 — core profit driver
- **Kurta — ₹19.28M revenue** (27.13% share)
  - ◦ High order volume but lower AOV (₹455.69) — volume-driven sales engine

Mid-Tier Categories
- **Western Dress — ₹10.08M revenue** (14.19% share, high AOV ₹763.30 — premium pricing)
- **Top — ₹4.86M revenue** (6.85% share, mid-price segment)

Low Revenue Categories
- Ethnic Dress, Blouse, Bottom, Saree, Dupatta combined contribute under 2% of total revenue
- These categories may benefit from pricing review, promotion strategy, or inventory rationalization

Product Strategy Insights
- Revenue is highly concentrated — top 3 categories generate approximately 91% of total revenue
- Business performance depends heavily on ethnic wear sets and kurtas
- High AOV categories (Set, Western Dress, Saree) indicate premium positioning opportunities

Executive Takeaway: Focus inventory, promotions, and visibility on the Set and Kurta categories. These two lines alone represent over 75% of revenue and are the clear growth engines.

3. Top 20 Best-Selling Products by Revenue

Query 3: Top 20 Best-Selling Products

Purpose: Identify star products that generate the most sales to prioritize inventory and marketing efforts.

Star Product Families
- **Style J0230 (Set category)** — top revenue generator, highest single SKU revenue ₹483,611, premium price range ₹1,100+
- **Style JNE3797 (Western Dress)** — dominates by frequency, consistent demand across all sizes XS through 3XL
- SET268 and SET183 series also perform strongly — bundled ethnic sets drive repeat revenue

Pricing & Revenue Patterns
- Set category products command higher price points — many SKUs priced ₹1,100+, confirming premium positioning
- Western Dress products show balanced strategy: mid-to-high pricing (₹720–₹830) with high order frequency
- **SET278-KR-NP-M** shows ultra-premium positioning with highest avg price ₹1,443 — niche high-margin product

Size & Demand Structure
- Top products sell consistently across multiple sizes — no single dominant size
- Inventory should remain balanced across the size range for best-selling styles
- Revenue concentration driven by a small number of repeat styles and multi-size availability

> **Executive Takeaway:** A small portfolio of repeat styles functions as the company's revenue backbone. Protecting availability of J0230, JNE3797, and SET series SKUs is critical to sustaining sales performance.

4. Geographic Performance — Top States

Query 4: Geographic Performance by State

Purpose: Understand which states are the strongest markets and identify regional opportunities and operational risks.

Top Revenue-Generating States
- **Maharashtra** — ₹13.34M revenue, 20,780 orders, cancellation rate 13.32% (manageable)
- **Karnataka** — ₹10.48M revenue, strong order volume, stable cancellation rate 12.96%
- Telangana, Uttar Pradesh, Tamil Nadu form the next revenue tier — each generating ₹6.5M–₹6.9M

High Customer Value Regions
- Bihar, Haryana, Rajasthan, Odisha show higher average order values (AOV ₹648–₹670)
- Customers spend more per purchase despite lower order volumes in these states

Operational Risk Areas — High Cancellations
- **Kerala** — highest cancellation rate at 17.84%
- Andhra Pradesh, Bihar, Odisha, and Uttar Pradesh also exceed 15% cancellation rate
- Potential causes: logistics challenges, delivery time issues, or fulfillment gaps

> **Executive Takeaway:** Western and southern states are the core revenue engines. Improving fulfillment reliability in high-cancellation states (Kerala, Bihar, UP) could unlock significant additional revenue without increasing demand generation spend.

5. Top Cities by Sales Volume

Query 5: City-Level Sales Analysis

Purpose: City-level breakdown for targeted local marketing to identify urban centers with highest purchase activity.

Major Urban Revenue Hubs
- **Bengaluru** — ₹6.67M revenue, 9,708 orders — primary urban revenue engine
- **Hyderabad** — ₹5.01M revenue, strong AOV (₹649)
- Mumbai and New Delhi: each generates ₹3.5M+ revenue with consistent high transaction frequency
- Chennai and Pune form the next revenue tier — strong secondary metro demand

High-Spending Cities
- Patna, Lucknow, and Gurugram show higher average order values — customers spend more per transaction despite lower volume

Metro Cluster Patterns
- Maharashtra cities: Mumbai, Pune, Navi Mumbai, Thane, Nagpur

- Uttar Pradesh cities: Lucknow, Noida, Ghaziabad
- These clusters indicate strong regional urban ecosystems worth targeting as integrated markets

Executive Takeaway: Revenue is metro-driven. A small group of major cities forms the core demand base, while emerging cities represent growth opportunities through targeted expansion strategies.

6. Monthly Sales Trend Analysis

Query 6: Monthly Sales Trends

Purpose: Track revenue patterns over time to identify seasonal trends, growth trajectory, and peak periods.

Revenue Trend Over Time
- **April 2022 — Peak month**: ₹28.84M revenue, 45,858 orders
- May 2022: ₹26.23M — gradual post-peak decline
- June 2022: ₹23.43M — continued downward trend in orders and revenue
- March 2022: Only 158 orders — likely partial data or system start period

Customer Spending Behavior
- Average order value increases after April despite declining order volume
  - April: ₹587.74 → May: ₹623.85 → June: ₹621.42
- Rising AOV during declining demand may indicate a shift toward premium products or fewer low-value orders

Cancellation Trend
- Highest cancellations occur in peak months: April (7,137), May (5,874), June (5,303)
- Operational strain increases during high-demand periods — fulfillment capacity requires scaling

Executive Takeaway: The business experienced a clear demand peak followed by contraction, while spending per order improved. Managing fulfillment capacity during peak periods is critical to maximize revenue capture.

7. B2B vs B2C Customer Segment Analysis

Query 7: B2B vs B2C Segment Comparison

Purpose: Compare business customers vs individual consumers to understand which segment drives value and buying patterns.

Segment Revenue Contribution
- **B2C (Consumer)** — ₹78.00M revenue, 119,584 orders — core revenue engine
- **B2B (Business)** — ₹591K revenue, only 794 orders — niche but present

Customer Value Comparison
- B2B customers spend significantly more per order
  - Avg order value: ₹678.78 (B2B) vs ₹608.89 (B2C)
  - Revenue per order: ₹744.61 (B2B) vs ₹652.27 (B2C)

Cancellation Risk

- B2C cancellations: 18,259 — volume-driven risk
- B2B cancellations: only 73 — business buyers show more stable purchasing commitment
- B2B cancellation rate is proportionally far lower, indicating stronger purchase intent

Executive Takeaway: Revenue scale comes from consumers, but business customers are more valuable per transaction. Developing targeted B2B programs could improve profitability and reduce cancellation risk.

8. Shipping Service Level Performance

Query 8: Shipping Service Level Analysis

Purpose: Compare standard vs expedited shipping to analyze customer preferences and impact on cancellations.

Service Preference & Revenue

- **Expedited shipping dominates** — 82,922 orders (₹54.29M revenue, ~69% of total)
- **Standard shipping** — 37,456 orders (₹24.31M revenue)
- Customers clearly prefer faster delivery, and expedited orders have slightly higher AOV (₹612.60 vs ₹602.27)

Operational Efficiency

- Standard shipping shows significantly higher cancellation risk: 17.12% vs 12.89% for expedited
- Delivery speed appears to directly influence customer order commitment
- Expedited shipping handles higher volume with greater operational reliability and lower cancellation risk

Executive Takeaway: Delivery speed is a competitive advantage driver. Encouraging expedited shipping adoption could simultaneously improve revenue retention, reduce cancellations, and enhance customer satisfaction.

9. Fulfillment Channel Comparison

Query 9: Amazon vs Merchant Fulfillment

Purpose: Compare Amazon fulfillment vs Merchant fulfillment to assess efficiency and delivery success rates.

Revenue & Volume Leadership

- **Amazon fulfillment** — ₹54.32M revenue, 84,002 orders — primary operational backbone
- **Merchant fulfillment** — ₹24.27M revenue, 36,376 orders — important secondary channel
- Merchant-fulfilled orders have slightly higher AOV (₹617.93 vs ₹605.61 Amazon)

Operational Efficiency

- Amazon fulfillment: delivery success rate of 86.74%
- Merchant fulfillment: success rate of 81.20% — higher variability in operations
- Centralized logistics improve reliability, while merchant channel introduces inconsistency

> **Executive Takeaway:** Platform fulfillment is the most reliable and scalable channel. Strengthening merchant fulfillment standards would improve total success rates and close the 5.5% delivery gap.

10. Product Size Distribution Analysis

Query 10: Size Distribution by Orders

Purpose: Identify which clothing sizes sell the most to optimize inventory planning and stock allocation.

Most Popular Sizes
- M: 19,219 units (17.47% of shipped orders) — top seller
- L: 18,873 units (17.16%)
- XL: 17,899 units (16.28%)
- M, L, and XL together account for over 50% of total size-based sales
- XXL: 15,611 units (14.17%) and S: 14,420 units (13.12%) follow closely

Niche & Premium Sizes
- 3XL and XS: 12–8% share each — moderate demand
- 4XL, 5XL, 6XL: under 1% each individually, but command higher avg prices (₹805–₹815)
- Free size: only 352 units — negligible revenue impact

Inventory Planning Recommendations
- Prioritize M, L, XL, XXL, S inventory — ensure consistent stock availability
- Manage 3XL, XS, and plus sizes carefully to avoid overstock while capturing premium margins
- Free size can be deprioritized given minimal commercial impact

> **Executive Takeaway:** Focus on M–XL inventory for volume, while maintaining premium and niche sizes for margin opportunities. This ensures both sales scale and profitability.

11. Cancelled Orders Deep Dive

Query 11: Cancellation Analysis by Category & State

Purpose: Understand patterns in cancelled orders to identify revenue loss and problematic operational areas.

Revenue Loss by Category & State
- **Set category dominates cancellations** — highest lost revenue: ₹306,432 (Set, Maharashtra, Expedited)
- Maharashtra and Karnataka lead lost revenue — largest markets also most exposed to cancellations
- Kurta cancellations significant across Maharashtra, Karnataka, Tamil Nadu, and Telangana

Shipping Service Pattern
- Expedited orders dominate cancellations in high-revenue categories — high frequency for Sets and Kurtas
- Standard orders show higher average cancelled order value, compounding financial impact

Geographic Patterns

- High cancellation impact states: Maharashtra, Karnataka, Uttar Pradesh, Telangana, Tamil Nadu, Kerala, Delhi
- These states also correspond to top revenue regions — indicating fulfillment challenges even in strong markets

Avg Cancelled Order Value

- Set cancellations: ₹391–₹630 per order — premium items are most damaging when cancelled
- Kurta cancellations: ₹199–₹325 per order

Executive Takeaway: High-value products and popular states are most exposed to cancellations. Key focus areas: strengthen fulfillment accuracy for expedited orders, monitor stock availability for Set and Kurta categories, and implement pre-order confirmation mechanisms.

12. Promotion Impact Analysis

Query 12: Promotion Effectiveness

Purpose: Assess whether promotions drive more sales and their impact on order value and cancellation rates.

Promotion Effectiveness

- All 120,378 orders in the dataset are associated with promotions — promotions are a core sales driver
- Total revenue: ₹78.59M with avg order value of ₹609.36 — promotions do not heavily discount transactions
- Customers continue spending significant amounts per order even with promotions applied

Cancellation Impact

- Cancellation rate of 14.21% is consistent with overall dataset metrics
- Promotions do not appear to increase cancellation risk — no negative trade-off observed

Business Interpretation

- Promotional campaigns successfully stimulate demand without negatively impacting order completion
- Promotions are integral to sustaining high order volume and customer engagement

Executive Takeaway: Promotions are highly effective in driving sales, contributing to nearly all shipped orders and total revenue, while keeping cancellation rates in line with overall performance. Maintaining targeted promotional campaigns is essential to sustaining revenue.

13. Quarterly Performance Summary

Query 13: Year-over-Year Quarterly Comparison

Purpose: Show business growth and seasonal patterns by quarter to track trajectory and operational scaling.

Quarterly Revenue & Orders

- **Q1 2022**: 140 orders, ₹94,810 revenue — likely partial data or early operations phase
- **Q2 2022**: 102,199 orders, ₹70.96M revenue — explosive growth and full operational capacity

Average Order Value
- AOV increases from Q1 (₹619.67) to Q2 (₹647.75) — customers spend more per order during the high-volume quarter

Business Interpretation
- Units sold expand dramatically: 152 units in Q1 vs 109,892 in Q2
- Q2 growth likely reflects strong seasonal demand, launch initiatives, or promotional campaigns
- Operational readiness and inventory scaling are critical to maintaining performance at Q2 levels

Executive Takeaway: The business experiences explosive growth in Q2, highlighting the importance of scaling operations, inventory, and fulfillment systems to capture peak revenue and maintain service levels.

14. Day of Week Sales Pattern

Query 14: Day-of-Week Sales Analysis

Purpose: Identify which days see the most orders to optimize marketing timing, promotions, and staffing.

Order Volume & Revenue by Day
- **Sunday — peak shopping day**: 15,666 orders, ₹10.97M revenue, 16,935 units sold
- **Saturday and Monday**: ~14,770 orders each, ₹10.28M revenue
- **Thursday — lowest volume**: 13,728 orders, ₹9.47M revenue

Average Order Value
- AOV is remarkably consistent throughout the week: ₹644–₹649
- Customer spending per order is stable regardless of day — no pricing or basket-size variation by weekday

Strategic Implications
- Weekend effect is evident — higher consumer engagement on Sunday and Saturday
- Early weekdays also strong — possibly linked to salary cycles, promotions, or delivery scheduling
- Mid-week (Thursday) dip warrants targeted marketing push or promotions to smooth activity

Executive Takeaway: Sunday is the key revenue day, followed closely by Saturday and Monday. Align staffing, inventory prep, and marketing campaigns to high-demand days. Consider mid-week promotions to reduce the Thursday dip.

15. Category Performance by Size

Query 15: Category & Size Cross-Analysis

Purpose: Detailed breakdown of revenue by category and size to identify which sizes drive performance within each category.

Set (Top Revenue Category)
- M, L, XL, S, XXL dominate revenue and units: M (₹6.56M), L (₹5.75M)
- XS and 3XL contribute moderately; 4XL–6XL are niche premium with high avg price (6XL: ₹1,241.93)

Kurta
- Sizes L, XL, M generate largest revenue (₹3.19M–₹3.36M)
- 4XL–6XL are premium, low-volume segments with very high avg price (₹764–₹766)
- Indicates mainstream demand in M–XL with a niche premium segment for larger sizes

Western Dress
- L and M sizes drive most revenue (₹1.67M–₹1.82M)
- XS and 3XL maintain high avg price (₹746–₹769) despite lower volume

Saree & Dupatta
- Single Free size products with high avg price for Saree (₹802) despite smaller volume
- Indicates luxury or special occasion positioning

Overall Size Insights
- Medium sizes (M, L, XL) dominate revenue across almost all categories
- Extra-small (XS) and plus sizes (3XL–6XL) are high-priced niche segments with strong margin potential
- Category-specific sizing data is critical for production, inventory allocation, and pricing strategy

Executive Takeaway: Focus inventory and promotions on M–L sizes for mainstream sales volume. Maintain premium stock for XS and 3XL–6XL to capture niche, high-margin customers without overcommitting inventory.

16. High-Value Orders Analysis

Query 16: High-Value Orders (Top 10% by Value)

Purpose: Identify premium orders to understand characteristics of high-value customers and optimize targeting strategies.

Overview of High-Value Orders
- Order value threshold: ₹1,999–₹5,584 (top decile of shipped orders)
- Customer type: predominantly B2C with some B2B transactions for bulk orders
- Shipping: mostly Expedited — high-value customers prioritize fast delivery
- Fulfillment: Amazon slightly preferred over Merchant for top orders, indicating trust in platform logistics

Category & Size Trends
- Set dominates high-value orders across all sizes (XS, S, M, L, XL, XXL, 3XL)
- Western Dress and Kurta appear frequently in the high-value segment
- Smaller (XS, S) and plus sizes (XXL, 3XL) have higher per-unit price orders

Geographic Distribution
- Maharashtra: Mumbai, Thane, Pune
- Karnataka: Bengaluru, Mangaluru
- Uttar Pradesh: Lucknow, Kanpur

- Telangana: Hyderabad, Secunderabad
- Premium demand is geographically diverse, not limited exclusively to metro hubs

Strategic Recommendations

- **Inventory Planning:** Stock XS, S, XXL, 3XL in sufficient quantities for high-value customers; prioritize Sets and Western Dresses in top sizes
- **Targeted Marketing:** Focus premium campaigns in Bengaluru, Mumbai, and Hyderabad; highlight expedited shipping for high-value buyers
- **Fulfillment:** Maintain Amazon fulfillment for top orders; monitor Merchant fulfillment success rates for premium transactions
- **Customer Loyalty:** Develop VIP or loyalty programs for customers ordering high-value Sets and premium sizes

Executive Takeaway: High-value customers are spread across metros and select tier-2 cities, strongly prefer expedited delivery, and gravitate toward Set and premium size products. A targeted premium segment strategy can disproportionately grow revenue and margins.

Consolidated Recommendations & Strategic Priorities

Revenue Optimization

- Double down on Set and Kurta categories — they represent 77% of total revenue
- Protect availability of top-performing SKUs (J0230, JNE3797, SET series) as the revenue backbone
- Explore bundle and cross-sell opportunities to raise average order value beyond ₹609

Operational Efficiency

- Reduce the 14.21% cancellation rate — particularly in high-cancellation states (Kerala, Bihar, UP)
- Strengthen fulfillment accuracy for expedited orders, especially for the Set category
- Improve Merchant fulfillment standards to close the 5.5% gap vs Amazon fulfillment success rates

Geographic Strategy

- Invest in Maharashtra, Karnataka, and Bengaluru as primary growth markets
- Develop targeted strategies for high-AOV states (Bihar, Haryana, Rajasthan) to convert spending potential into volume
- Improve logistics infrastructure in high-cancellation states to unlock revenue without additional demand spend

Customer Segment Strategy

- Build dedicated B2B acquisition programs — business customers deliver 15–20% higher revenue per order with far fewer cancellations
- Develop VIP loyalty initiatives for top-decile high-value customers who prefer premium sets and expedited shipping

Marketing & Promotions

- Promotions are driving all revenue — maintain and refine campaign targeting rather than reducing promo spend

- Concentrate marketing spend around Sunday–Monday and introduce mid-week promotions to smooth Thursday dips
- Peak-season (Q2/April) preparation must include inventory pre-positioning and fulfillment capacity scaling

— End of Project 3 Analysis Report —