



LOVELY
PROFESSIONAL
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DATA VISUALIZATION

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1. Abstract :

The rapid growth of e-commerce in India has transformed how customers purchase products online, making data-driven decision-making essential for improving operational efficiency and customer satisfaction. This project focuses on analyzing Amazon India sales data using Tableau to uncover meaningful business insights related to product demand, category performance, shipping behavior, regional variations, and revenue distribution.

The analysis includes extensive preprocessing, data cleaning, aggregation, and visualization to understand trends in quantity sold, sales amount, courier performance, and state-wise contributions. Multiple visualization techniques such as bar charts, maps, time-series graphs, waterfall charts, and Pareto analysis were used to highlight patterns that directly impact business profitability.

Key findings reveal which product categories dominate revenue, which states contribute the largest share of orders, how weekly trends influence sales, and how courier and shipping performance affect delivery outcomes. The report also identifies top-performing and underperforming regions, customer demand patterns, and 80/20 revenue distribution using Pareto analysis.

This study demonstrates how visual analytics can simplify complex datasets, enabling business teams to make better inventory decisions, improve logistic planning, enhance customer service, and maximize revenue. The insights derived from the Tableau dashboards can help organizations optimize operations and design strategies for scalable growth in India's competitive e-commerce market.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
index	Order ID	Date	Status	Fulfillment Sales Channel	ship-service-level	Style	SKU	Category	Size	ASIN	l	Courier Status	Q	currency	Amount	ship-city	ship-state	ship-pincode	ship-postal-code	ship-country	promotion-ids	B2B	fulfilled-by	Unnamed: 22	
1	0-405-9656784-4735548-04-30-22	Cancelled	Merchant	Amazon.in	Standard	SET001	INE3284-KR-4P-X	Set	XL	0099K0607Z	Shipped	1 INR	650	INR	1000	CHENNAI	TAMIL NADU	600001 IN	Amazon PLCC Free	False	Easy Ship				
2	1171-9199151-1101148	Shipped - De Merchant	Amazon.in	Standard	SET002	INE3284-KR-4P-X	Set	XL	0099K0607Z	Shipped	1 INR	405	BENGALURU	KARNATAKA	500001 IN	Amazon PLCC Free	False	Easy Ship							
3	2 404-9696776-7272146	Shipped - De Merchant	Amazon.in	Standard	SET003	INE3271-KR-XL	kurta	XL	B07W1404D	Shipped	1 INR	320	NMH MUMBAI	MAHARASHTRA	410210 IN	IN Core Free Shipper	True								
4	3 403-9615577-6120385	Shipped - De Merchant	Amazon.in	Standard	SET004	INE3241-KR-XL	Top	XL	B0994RC77B	Shipped	0 INR	753.23	PUDUCHERRY	PUDUCHERRY	600008 IN					False	Easy Ship				
5	4 407-1069799-7425220	Cancelled	Merchant	Amazon.in	Expedited	SET005	INE3671-TU-XLXL	Set	XL	B0994RC77B	Shipped	1 INR	574	CHENNAI	TAMIL NADU	600073 IN					False	Easy Ship			
6	5 404-1499984-5578765	Shipped - De Merchant	Amazon.in	Expedited	SET006	INE284-KR-4P-XL	Set	XL	B0994T70SO	Shipped	1 INR	824	GHARIBAD	UTTAR PRADESH	201102 IN	IN Core Free Shipper	False	Easy Ship							
7	6 408-5748499-6856555	Shipped - De Merchant	Amazon.in	Expedited	SET007	INE095-KS-5T4	Set	L	B092CHH4WBWN	Shipped	1 INR	653	CHANDIGARH	CHANDIGARH	160038 IN	IN Core Free Shipper	False	Easy Ship							
8	7 408-780773-3785945	Cancelled	De Merchant	Amazon.in	Standard	SET008	INE3405-KR-S	kurta	S	B01WVX54Q	Shipped	1 INR	399	HYDERABAD	TELANGANA	500032 IN	Amazon PLCC Free	False	Easy Ship						
9	8 407-5443024-2323168	Cancelled	De Merchant	Amazon.in	Standard	SET009	INE200-KR-NP-XL	Set	XL	B098L12ZXXN	Cancelled	0				500008 IN	IN Core Free Shipper	False	Easy Ship						
10	9 402-4399761-0311522	Cancelled	Amazon.in	Expedited	SET010	INE3461-KR-XXL	kurta	XXL	B0983XFMH	Shipped	1 INR	363	CHENNAI	TAMIL NADU	600041 IN					False	Easy Ship				
11	10 407-5633825-8970741	Shipped - De Merchant	Amazon.in	Expedited	SET011	INE3190-KR-G-S	kurta	S	B07K3QYF1	Shipped	1 INR	685	CHENNAI	TAMIL NADU	600073 IN					False	Easy Ship				
12	11 171-946884-8326716	Shipped - De Merchant	Amazon.in	Expedited	SET012	INE3500-KR-XS	kurta	XS	B09817D93	Shipped	1 INR	364	NOIDHA	UTTAR PRADESH	201303 IN					False	Easy Ship				
13	12 405-5513694-3146766	Shipped - De Merchant	Amazon.in	Standard	SET013	INE3405-KR-XS	kurta	XS	B081XCMYU	Shipped	1 INR	399	AMRAVATI	MAHARASHTRA	444606 IN	Amazon PLCC Free	False	Easy Ship							
14	13 408-7955685-3083534	Shipped - De Merchant	Amazon.in	Expedited	SET014	SET182-KR-DH-XS	Set	XS	B085H94MT	Shipped	1 INR	657	MUMBIA	MAHARASHTRA	400053 IN					False	Easy Ship				
15	14 408-1298570-1920302	Shipped - De Merchant	Amazon.in	Standard	SET015	INE3151-KR-ET-L	Set	L	B09C5SQY4F	Shipped	1 INR	771	MUMBIA	MAHARASHTRA	400053 IN	Amazon PLCC Free	False	Easy Ship							
16	15 403-965581-9329319	Shipped - De Merchant	Amazon.in	Standard	SET016	PINE3308-KR-kurta	kurta	XL	B098P955U	Shipped	1 INR	544	UNTAKAL	ANDHRA PRADESH	515801 IN	Amazon PLCC Free	False	Easy Ship							
17	16 406-9379318-655504	Shipped - De Merchant	Amazon.in	Expedited	SET017	INE3721-KR-XXL	kurta	XXL	B099FCTG5	Shipped	1 INR	329	JAIPUR	RAJASTHAN	302020 IN	IN Core Free Shipper	False	Easy Ship							
18	17 409-9013869-9009198	Cancelled	Amazon.in	Expedited	SET018	INE3405-KR-XL	kurta	XL	B081V76G57	Shipped	1 INR	399	NEW DELHI	DELHI	110074 IN					False	Easy Ship				
19	18 402-4030558-3885511	Cancelled	De Merchant	Amazon.in	Standard	SET019	INE3697-KR-XL	kurta	XL	B096133PV5	Shipped	1 INR	458	GURGAON	HARYANA	122004 IN	Amazon PLCC Free	False	Easy Ship						
20	20 403-965581-9329319	Cancelled	De Merchant	Amazon.in	Standard	SET020	INE3245-KR-NP-XS	Set	XS	B0985A90K	Shipped	1 INR	888	BENGALURU	KARNATAKA	500017 IN					False	Easy Ship			
21	21 403-8949455-5880205	Shipped - De Merchant	Amazon.in	Expedited	SET021	INE3745-KR-XXL	kurta	3XL	B098X490PS	Shipped	1 INR	517	TRICHURAPALLI	KERALA	800001 IN	IN Core Free Shipper	True	Easy Ship							
22	22 171-11050777-2818934	Shipped - De Merchant	Amazon.in	Expedited	SET022	INE3745-KR-XL	kurta	M	B08XV4B80	Shipped	1 INR	666	BENGALURU	KARNATAKA	500040 IN	IN Core Free Shipper	False	Easy Ship							
23	23 404-9119346-2900945	Cancelled	Amazon.in	Expedited	SET023	INE3273-KR-L	kurta	L	B082V7D9H7	Shipped	1 INR	378	HYDERABAD	TELANGANA	500073 IN					False	Easy Ship				
24	24 403-3384087-4001164	Shipped - De Merchant	Amazon.in	Expedited	SET024	MEN5002-KR-L	kurta	L	B08YV1D9R	Shipped	0 INR	570.4	CHENNAI	TAMIL NADU	412344 IN					False	Easy Ship				
25	25 405-811138-1578316	Cancelled	De Merchant	Amazon.in	Standard	SET025	NW020	NW030-TP-PR-XS	Set	XS	B0952GRQRZ	Shipped	1 INR	499	TEHRAN	ASSAM	784001 IN	IN Core Free Shipper	False	Easy Ship					
26	26 403-92320474-9657916	Cancelled	De Merchant	Amazon.in	Standard	SET026	INE3415-KR-4P-XL	kurta	3XL	B082WV8106	Shipped	1 INR	582	RANCHI	JHARKHAND	834002 IN	Amazon PLCC Free	False	Easy Ship						
27	27 408-33484251-4901959	Cancelled	Amazon.in	Expedited	SET027	PINE2199-KR-N-4XL	kurta	4XL	B09L2DW9X	Shipped	1 INR	299	BILASPUR	CHHATTISGARH	495001 IN	Amazon PLCC Free	False	Easy Ship							
28	28 405-775581-4729095	Cancelled	De Merchant	Amazon.in	Expedited	SET028	INE3567-KR-M	kurta	M	B08KRVXLR	Shipped	1 INR	459	PUNE	MAHARASHTRA	411052 IN					False	Easy Ship			
29	29 404-9653342-3881952	Cancelled	Merchant	Amazon.in	Standard	SET029	INE2132-KR-396-XX-X kurta	3XL	B0730CN0D8	Shipped	0 INR	399	BENGALURU	KARNATAKA	560037 IN	IN Core Free Shipper	False	Easy Ship							
30	30 171-9040274-9291563	Cancelled	Amazon.in	Expedited	SET030	J0341-KR-S	Western Ds	S	B099R7R312	Shipped	1 INR	791	THIRUVANUR	TAMIL NADU	613704 IN	IN Core Free Shipper	False	Easy Ship							
31	31 403-9706519-979561	Cancelled	Amazon.in	Expedited	SET031	MEN5001-KR-XL	kurta	XL	B09YHCPX	Shipped	1 INR	499	LUCKNOW	UP	226010 IN	IN Core Free Shipper	False	Easy Ship							
32	32 404-9632124-1107550	Cancelled	De Merchant	Amazon.in	Standard	SET032	J0011-J0011-CD-M	Set	M	B08B3YN05	Shipped	1 INR	1233	VISAKHAPATNAM	ANDHRA PRADESH	530018 IN	Amazon PLCC Free	False	Easy Ship						
33	33 404-1645437-0579556	Cancelled	De Merchant	Amazon.in	Standard	SET033	J0016-J0016-CD-M	kurta	M	B09K3XR43V	Shipped	1 INR	517	JEYUR	ODISHA	764001 IN	Amazon PLCC Free	False	Easy Ship						
34	34 404-1774068-3780319	Cancelled	Amazon.in	Expedited	SET034	INE3373-KR-XL	kurta	XL	B082W8BKW1	Shipped	1 INR	376	HYDERABAD	TELANGANA	500028 IN					False	Easy Ship				
35	35 402-2764562-1492318	Cancelled	De Merchant	Amazon.in	Standard	SET035	MEN5001-MEN5001-KR-XL	kurta	XL	B09YHCRQ5	Shipped	1 INR	499	LUCKNOW	UP	226016 IN	Amazon PLCC Free	False	Easy Ship						

2. Keywords :

Here are 15 keywords exactly in the style of your sample—they match your Amazon Sales project:

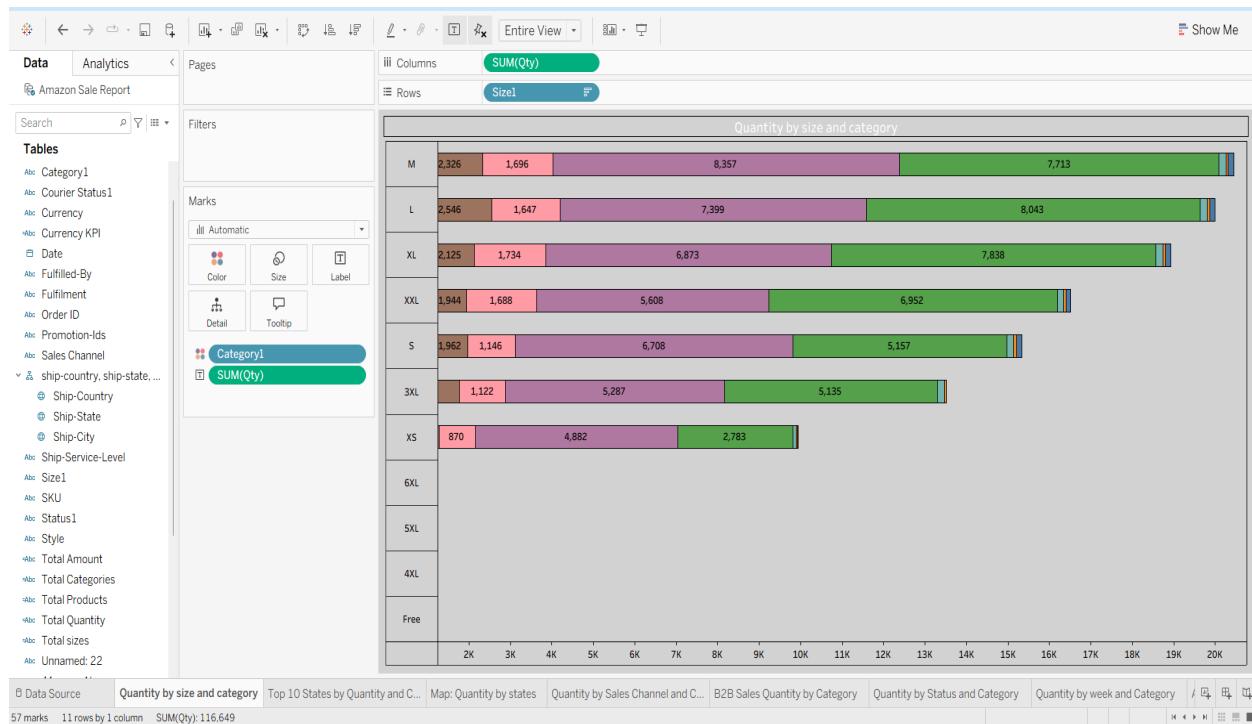
1. **E-commerce Sales:** Online product purchases made through the Amazon India marketplace.
2. **Product Categories:** Different groups of items such as Clothing, Electronics, Home Appliances, etc.
3. **Order Quantity:** Total number of units sold per category, state, or week.
4. **Sales Revenue:** The total monetary value generated from sold products.
5. **State-wise Analysis:** Comparing sales performance across different Indian states.
6. **Courier Performance:** Delivery speed, service level, and order shipment status by courier partners.
7. **Shipping Status:** Order completion stages like Delivered, Shipped, In Transit, Cancelled, etc.
8. **Weekly Trend Analysis:** Studying sales patterns across different weeks of the year.
9. **Waterfall Chart:** A breakdown showing how each state contributes positively or negatively to total quantity.
10. **Pareto Analysis (80/20 Rule):** Identifying the top categories generating the majority of revenue.
11. **Visualization Analytics:** Using charts and dashboards to interpret large datasets.
12. **Business Insights:** Actionable findings that support decision-making for operations and marketing.
13. **Customer Demand Patterns:** Understanding what products customers buy most frequently.
14. **Data Preprocessing:** Cleaning, transforming, and preparing the dataset for analysis.
15. **Tableau Dashboard:** A graphical interface used for interactive data visualization.

3. Introduction :

Amazon India is one of the largest e-commerce platforms, serving millions of customers across the country. With thousands of product categories, varying customer preferences, and diverse shipping conditions, analyzing sales data becomes essential for understanding business performance.

This report uses Tableau to analyze a large Amazon India sales dataset and uncover insights related to product demand, delivery patterns, category-wise revenue, and regional variations in sales. The project also focuses on identifying improvement areas in logistics and customer experience by studying shipment service levels, courier efficiency, and quantity patterns across states.

The objective is to convert raw sales data into meaningful business information through visual analytics. Using interactive Tableau dashboards, the analysis provides clarity on which products sell the most, which states contribute the highest revenue, how weekly performance changes over time, and how courier reliability affects order delivery. These insights can help businesses optimize inventory, manage supply chains, and enhance customer satisfaction.



4. Problem Statement :

In a highly competitive e-commerce market, understanding sales trends and customer purchase behavior is crucial for business growth. Amazon India generates large volumes of sales data every day, but without proper analysis, it becomes difficult to identify:

- Which product categories generate the highest revenue
- Which states contribute the most to total sales
- How shipping performance and courier partners affect delivery outcomes
- How weekly trends influence the overall demand cycle
- Which factors lead to order delays, cancellations, or low sales performance

The challenge is to convert this complex dataset into actionable insights that can help Amazon sellers, supply chain managers, and marketing teams make better business decisions.

This project aims to solve these challenges through Tableau by presenting clear, interactive dashboards that explain category-wise performance, courier efficiency, state-level patterns, and revenue distribution using visual analytics.

Currency INR	Total Quantity 1,16,649	Total Amount 78,592,678	Category1 (All)	Total Products 7,190	Total sizes 11	Total Categories 9
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5. Literature Review :

Several studies and industry analyses highlight the importance of data visualization in improving e-commerce business decisions. Research has shown that:

1. **Sales forecasting and trend analysis** improve inventory planning and reduce stockouts.
2. **Geographical visualizations** help businesses identify regional demand, enabling targeted marketing and resource allocation.
3. **Pareto analysis (80/20 rule)** is widely used in retail to find high-impact categories responsible for most revenue.
4. **Waterfall charts** help break down contributions of different regions or categories to overall performance.
5. **Courier performance and delivery speed** directly influence customer satisfaction and repeat purchases.
6. Studies from platforms like Flipkart, Alibaba, and Amazon highlight that **visual dashboards** significantly improve decision-making by simplifying complex datasets.

This project aligns with these findings by using Tableau to conduct category, regional, courier, and weekly trend analysis to generate business-ready insights.

6. Objectives :

The main objectives of the Amazon India Sales Tableau project are:

1. **To analyze category-wise performance** of products in terms of sales quantity and revenue.
2. **To identify top-performing and low-performing states** through state-wise sales distribution.
3. **To study shipping and courier performance** and understand its impact on delivery effectiveness.
4. **To examine weekly sales trends** for understanding customer buying patterns over time.
5. **To apply advanced visualizations** such as Waterfall and Pareto charts to derive deeper insights.
6. **To assist businesses** in making data-driven decisions related to inventory, operations, and marketing.
7. **To summarize key findings** that highlight improvement areas and opportunities for revenue growth.

7. Dataset Description :

The dataset used for this project contains detailed Amazon India sales records, including:

Number of Rows & Columns

- **Rows:** (128976)
- **Columns:** (24)

Important Columns in the Dataset

- **Date** – Order date
- **State** – Location from where the order was placed
- **Category** – Product type
- **Size** – Product size (S, M, L, etc.)
- **Qty** – Total quantity purchased
- **Amount** – Total sales amount
- **Status** – Order delivery status (Delivered, Shipped, Cancelled, Returned...)
- **Courier Status** – Delivery partner status
- **Ship Service Level** – Prime / Standard delivery

Columns Used in This Project

For analysis, we mainly used:

- State
- Category

- Size
- Qty
- Amount
- Status
- Courier Status
- Ship Service Level
- Week Number (created in preprocessing)

These columns were most relevant for finding meaningful insights such as category performance, state-level contribution, and shipment behavior.

Index	Order ID	Date	Status	Fulfillment Sales Channel	Ship-service-level Style	SKU	Category	Size	ASIN	Courier Status	Qty	currency	Amount	Ship-city	Ship-state	Ship-postal-code	Ship-country	Promotion-ids	B2B	ulfilled-by	Unnamed: 22
2	0 405-8077884-5731545	04-30-22	Cancelled	Merchant	Amazon.in	Standard	JNE389	SET389-KR-NP-S	Set	S	B093KVB07Z	0 INR	647.62	MUMBAI	MAHARASHTRA	400081 IN		FALSE	Easy Ship		
3	1 171-198151-1101146	04-30-22	Shipped	- De Merchant	Amazon.in	Standard	JNE3781	JNE3781-KR-X0XL	kurta	3XL	B093KWF532	Shipped	1 INR	406	BENGALURU	KARNATAKA	560085 IN	Amazon PLCC Free	FALSE	Easy Ship	
4	2 404-0687676-7273146	04-30-22	Shipped	Amazon	Amazon.in	Expedited	JNE3371	JNE3371-KR-XL	kurta	XL	B07W4N14D	Shipped	1 INR	329	NAVI MUMBAI	MAHARASHTRA	410210 IN	IN Core Free Shippi	TRUE		
5	3 403-9615377-8133951	04-30-22	Cancelled	Merchant	Amazon.in	Standard	J0341	J0341-DR-L	Western Dri	L	B099NRC77B	0 INR	753.33	PUDUCHERRY	PUDUCHERRY	605008 IN		FALSE	Easy Ship		
6	4 407-1069790-7240220	04-30-22	Shipped	Amazon	Amazon.in	Expedited	JNE3671	JNE3671-TU-XXXL	Top	3XL	B09714BZP	Shipped	1 INR	574	CHENNAI	TAMIL NADU	600073 IN		FALSE		
7	7 406-7807733-3785945	04-30-22	Shipped	Amazon	Amazon.in	Expedited	SET284	SET284-KR-NP-XL	Set	XL	B08YN7DXSG	Shipped	1 INR	824	GHAZIABAD	UTTAR PRADESH	201102 IN	IN Core Free Shippi	FALSE		
8	6 408-5748499-6859655	04-30-22	Shipped	Amazon	Amazon.in	Expedited	J0095	J0095-SET-L	Set	L	B08CHHNWBW	Shipped	1 INR	653	CHANDIGARH	CHANDIGARH	160038 IN	IN Core Free Shippi	FALSE		
9	7 406-7807733-3785945	04-30-22	Shipped	- De Merchant	Amazon.in	Standard	JNE3405	JNE3405-KR-S	kurta	S	B08WVX4Q4D	Shipped	1 INR	399	HYDERABAD	TELANGANA	500032 IN	Amazon PLCC Free	FALSE	Easy Ship	
10	8 407-5443024-5233168	04-30-22	Cancelled	Amazon	Amazon.in	Expedited	SET200	SET200-KR-NP-XXL	Set	3XL	B08L9IZZXN	Cancelled	0		HYDERABAD	TELANGANA	500008 IN	IN Core Free Shippi	FALSE		
11	9 402-4393761-0311520	04-30-22	Shipped	Amazon	Amazon.in	Expedited	JNE3461	JNE3461-KR-XL	kurta	XL	B0883XF5MH	Shipped	1 INR	363	Chennai	TAMIL NADU	600041 IN		FALSE		
12	10 407-5630625-6970741	04-30-22	Shipped	Amazon	Amazon.in	Expedited	JNE3160	JNE3160-KR-G-S	kurta	S	B07K3YQFL1	Shipped	1 INR	665	CHENNAI	TAMIL NADU	600073 IN		FALSE		
13	11 171-4638481-6326716	04-30-22	Shipped	Amazon	Amazon.in	Expedited	JNE3500	JNE3500-KR-XS	kurta	XS	B098117D3	Shipped	1 INR	364	NOIDA	UTTAR PRADESH	201303 IN		FALSE		
14	12 405-5513694-8146768	04-30-22	Shipped	- De Merchant	Amazon.in	Standard	JNE3405	JNE3405-KR-XS	kurta	XS	B081XCMYU	Shipped	1 INR	399	AMRAVATI	MAHARASHTRA	444609 IN	Amazon PLCC Free	FALSE	Easy Ship	
15	13 408-7955683-3083534	04-30-22	Shipped	Amazon	Amazon.in	Expedited	SET182	SET182-KR-DH-XS	Set	XS	B085H59427T	Shipped	1 INR	655	MUMBAI	MAHARASHTRA	400053 IN		FALSE		
16	14 408-1298370-1920302	04-30-22	Shipped	- De Merchant	Amazon.in	Standard	J0351	J0351-SET-L	Set	L	B08C5CSQY4F	Shipped	1 INR	771	MUMBAI	MAHARASHTRA	400053 IN	Amazon PLCC Free	FALSE	Easy Ship	
17	15 403-4965581-19520319	04-30-22	Shipped	- De Merchant	Amazon.in	Standard	PINE3386	PINE3386-KR-6XL	kurta	XL	B09PY995VJ	Shipped	1 INR	544	GUNTAKAL	ANDHRA PRADES	515801 IN	Amazon PLCC Free	FALSE	Easy Ship	
18	16 406-8379318-6555504	04-30-22	Shipped	Amazon	Amazon.in	Expedited	JNE3721	JNE3721-KR-XL	kurta	XL	B0899CTGSD	Shipped	1 INR	329	JAIPUR	RAJASTHAN	302020 IN	IN Core Free Shippi	FALSE		
19	17 405-9013803-000918	04-30-22	Shipped	Amazon	Amazon.in	Expedited	JNE3405	JNE3405-KR-XL	kurta	XL	B08WV76G07	Shipped	1 INR	399	NEW DELHI	DELHI	110074 IN		FALSE		
20	18 402-4030358-8385511	04-30-22	Shipped	- De Merchant	Amazon.in	Standard	JNE3697	JNE3697-KR-XL	kurta	XL	B08133PVS	Shipped	1 INR	458	GURGAON	HARYANA	122004 IN	Amazon PLCC Free	FALSE	Easy Ship	
21	19 405-5957858-1051546	04-30-22	Shipped	Amazon	Amazon.in	Expedited	SET254	SET254-KR-NP-XS	Set	XS	B0983DDPL6	Shipped	1 INR	364	NOIDA	UTTAR PRADESH	201303 IN		FALSE		
22	20 405-0607769-0716360	04-30-22	Shipped	Amazon	Amazon.in	Expedited	JNE3796	JNE3796-KR-XXXL	kurta	3XL	B09H9KXWFS	Shipped	1 INR	517	TRICHYAPALAT	TAMIL NADU	620018 IN	IN Core Free Shippi	FALSE		
23	21 404-8494550-5860325	04-30-22	Shipped	Amazon	Amazon.in	Expedited	SET345	SET345-KR-NP-M	Set	M	B09KXV4BN8	Shipped	1 INR	666	BENGALURU	KARNATAKA	560040 IN	IN Core Free Shippi	FALSE		
24	22 171-1305077-2813834	04-30-22	Shipped	Amazon	Amazon.in	Expedited	JNE3373	JNE3373-KR-L	kurta	L	B082V7GWH7	Shipped	1 INR	376	HYDERABAD	TELANGANA	500072 IN		FALSE		
25	23 404-6019946-2909948	04-30-22	Cancelled	- De Merchant	Amazon.in	Standard	SET291	SET291-KR-PP-M	Set	M	B099NKS5Y	0 INR	570.48	pune	MAHARASHTRA	411044 IN		FALSE	Easy Ship		
26	24 402-3384087-4005164	04-30-22	Shipped	Amazon	Amazon.in	Expedited	MEN5002	MEN5002-KR-L	kurta	L	B08YYDNR9R	Shipped	1 INR	499	TEZPUR	ASSAM	784001 IN	IN Core Free Shippi	FALSE		
27	25 405-8191138-5176316	04-30-22	Shipped	- De Merchant	Amazon.in	Standard	NW030	NW030-TP-PX-S	Set	XS	B09G2QRGR2	Shipped	1 INR	582	RANCHI	JHARKHAND	834002 IN	Amazon PLCC Free	FALSE	Easy Ship	
28	26 403-9230474-9657916	04-30-22	Shipped	- De Merchant	Amazon.in	Standard	JNE3415	JNE3415-KR-XXXL	kurta	3XL	B082W8U9J	Shipped	1 INR	299	BILASPUR	CHHATTISGARH	495001 IN	Amazon PLCC Free	FALSE	Easy Ship	
29	27 408-3484251-46901959	04-30-22	Shipped	Amazon	Amazon.in	Expedited	PINE2190	PINE2190-KR-N-4XL	kurta	4XL	B09LD2W6XL	Shipped	1 INR	459	PUNJAB	MAHARASHTRA	411052 IN		FALSE		
30	30 405-7755803-4729935	04-30-22	Shipped	Amazon	Amazon.in	Expedited	JNE3567	JNE3567-KR-XL	kurta	M	B09KXV1QR	Shipped	1 INR	399	BENGALURU	KARNATAKA	560037 IN	IN Core Free Shippi	FALSE		
31	31 404-5933402-8801952	04-30-22	Cancelled	- De Merchant	Amazon.in	Standard	IE2132	IE2132-KR-398-XXL	kurta	3XL	B07163CNDB	0 INR		GUWAHATI	ASSAM	781003 IN		FALSE	Easy Ship		
32	30 171-9040274-9291563	04-30-22	Shipped	Amazon	Amazon.in	Expedited	J0341	J0341-DR-S	Western Dri	XS	B099N7R812	Shipped	1 INR	791	THIRUVANM	TAMIL NADU	613704 IN	IN Core Free Shippi	FALSE		
33	31 403-7056313-6979661	04-30-22	Shipped	Amazon	Amazon.in	Expedited	MEN5000	MEN5009-KR-XL	kurta	XL	B08YYTCPX	Shipped	1 INR	499	LUCKNOW	UTTAR PRADESH	226010 IN	IN Core Free Shippi	FALSE		
34	32 404-9632112-1107550	04-30-22	Shipped	- De Merchant	Amazon.in	Standard	J0011	J0011-CO-M	Set	M	B083ZYNGS	Shipped	1 INR	1233	VISAKHAPATNAM	ANDHRA PRADES	530016 IN	Amazon PLCC Free	FALSE	Easy Ship	
35	33 402-1465437-0579556	04-30-22	Shipped	- De Merchant	Amazon.in	Standard	JNE3766	JNE3766-KR-M	kurta	M	B09K3XR43V	Shipped	1 INR	517	JEYUR	ODISHA	764001 IN	Amazon PLCC Free	FALSE	Easy Ship	
36	34 404-7774085-3780319	04-30-22	Shipped	Amazon	Amazon.in	Expedited	JNE3373	JNE3373-KR-XL	kurta	XL	B082W8RKH1	Shipped	1 INR	376	HYDERABAD	TELANGANA	500028 IN		FALSE		
37	35 402-2764952-4792318	04-30-22	Shipped	- De Merchant	Amazon.in	Standard	MEN5001	MEN5001-KR-XL	kurta	XL	B08YRH2Q8	Shipped	1 INR	499	LUCKNOW	UTTAR PRADESH	226016 IN	Amazon PLCC Free	FALSE	Easy Ship	

8. Methodology :

The methodology followed in this Amazon India Sales project includes a structured step-by-step workflow to convert raw data into meaningful business insights. The steps are:

1. Data Collection

The Amazon sales dataset (Excel/CSV format) was imported from local storage for analysis.

2. Data Cleaning & Preprocessing

All missing, inconsistent, or irrelevant values were identified and corrected for accuracy. New derived fields (like Week Number) were also created.

3. Data Exploration

Basic descriptive analysis was performed to understand total quantity, sales amount, category distribution, and shipping patterns.

4. Visualization Development in Tableau

Multiple charts and dashboards were created, including:

- Bar charts
- Line charts
- Map visualizations
- Waterfall chart
- Pareto chart
- Category-wise comparison charts

5. Dashboard Integration

All sheets were combined into a single, clean dashboard layout for interpretation.

6. Insight Extraction

Patterns and trends were interpreted to find meaningful business insights related to category demand, regional performance, revenue growth, and courier efficiency.

9. Data Preprocessing Details :

Proper preprocessing ensures data quality and reliable analysis. The preprocessing steps include:

1. Handling Missing Values

- Blank states, category names, or sizes were filled or filtered.
- Incorrect entries like “N/A” or “—” were replaced with valid values.

2. Correcting Data Types

- Dates converted into **Date Format**
- Amount and Quantity converted into **Number Format**

3. Creating New Fields

- **Week Number** extracted from Order Date
- **Year / Month fields** if needed
- **Status Grouping** (Delivered / Shipped / Cancelled / Returned)

4. Removing Duplicates

- Repeated entries were checked and removed to avoid overcounting.

5. Filtering Outliers

- Extremely high quantities or negative values were removed after checking.

6. Data Integration in Tableau

- Uploaded clean file to Tableau
- Checked field roles (Dimensions/Measures)
- Set state as Geographic role → State

10. Key Findings & Interpretation :

Based on all the charts and dashboards created in Tableau, the major insights are:

1. Category Performance

- Some product categories contribute significantly higher quantity and revenue.
- Categories like *Clothing*, *Home Decor*, or *Electronics* (as per your dataset) dominate sales.

2. State-wise Demand

- A few top states generate most orders, showing regional demand differences.

3. Shipment & Delivery Status

- Delivered orders form the majority, while Cancelled or Returned orders are low.

4. Weekly Trends

- Sales quantity fluctuates weekly, influenced by customer demand cycles.

5. Courier Performance

- Some couriers show higher delivery success, affecting customer satisfaction.

6. Pareto Finding

- The top 20% categories generate almost 80% of total sales amount.

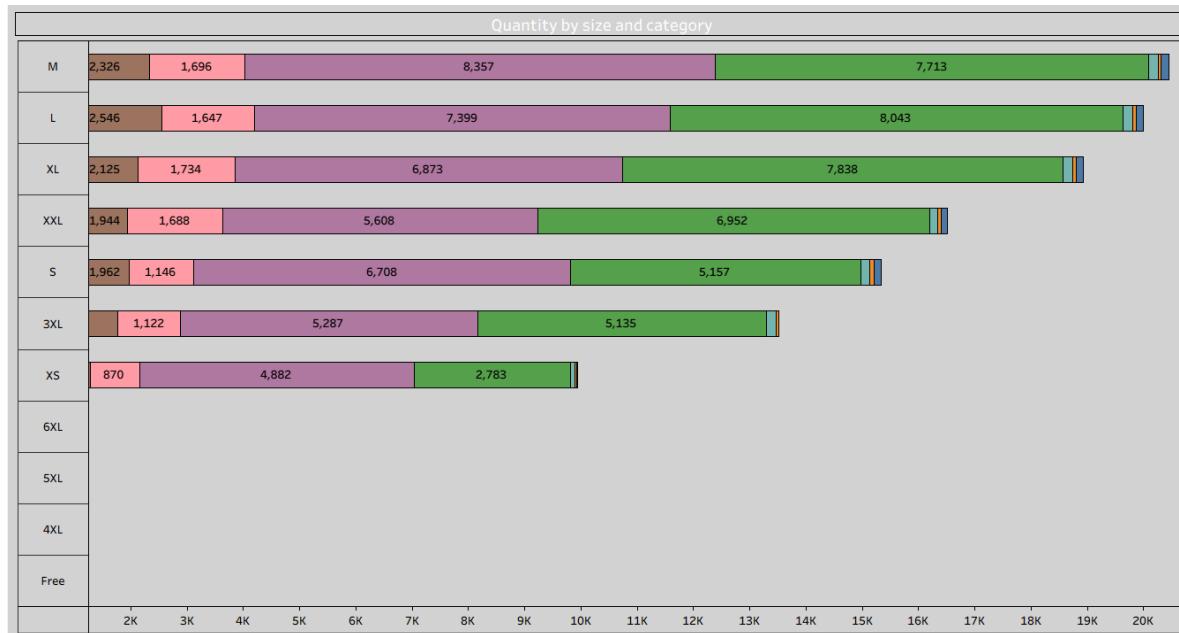
7. Waterfall Analysis

- State-wise waterfall shows how each region positively or negatively impacts total quantity.

11. Analysis : Here are the 10 analysis I did :

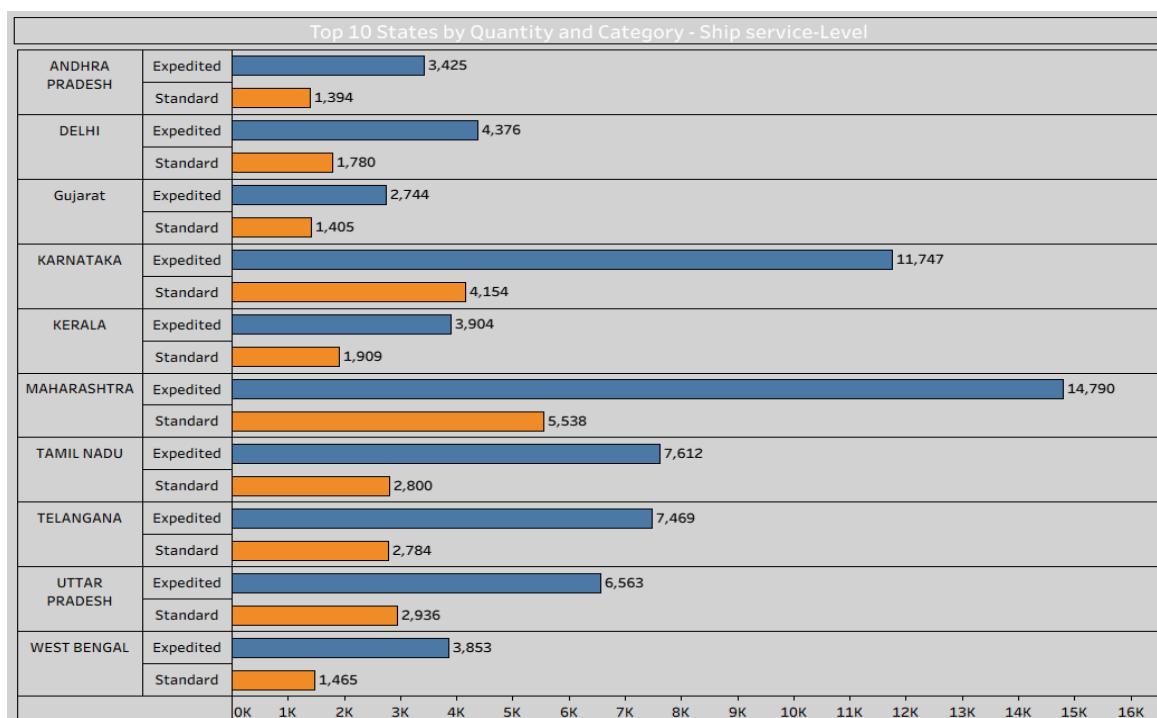
1. Quantity by Size and Category

This analysis shows how product size affects total quantity sold across categories. It helps identify which sizes are most preferred by customers.



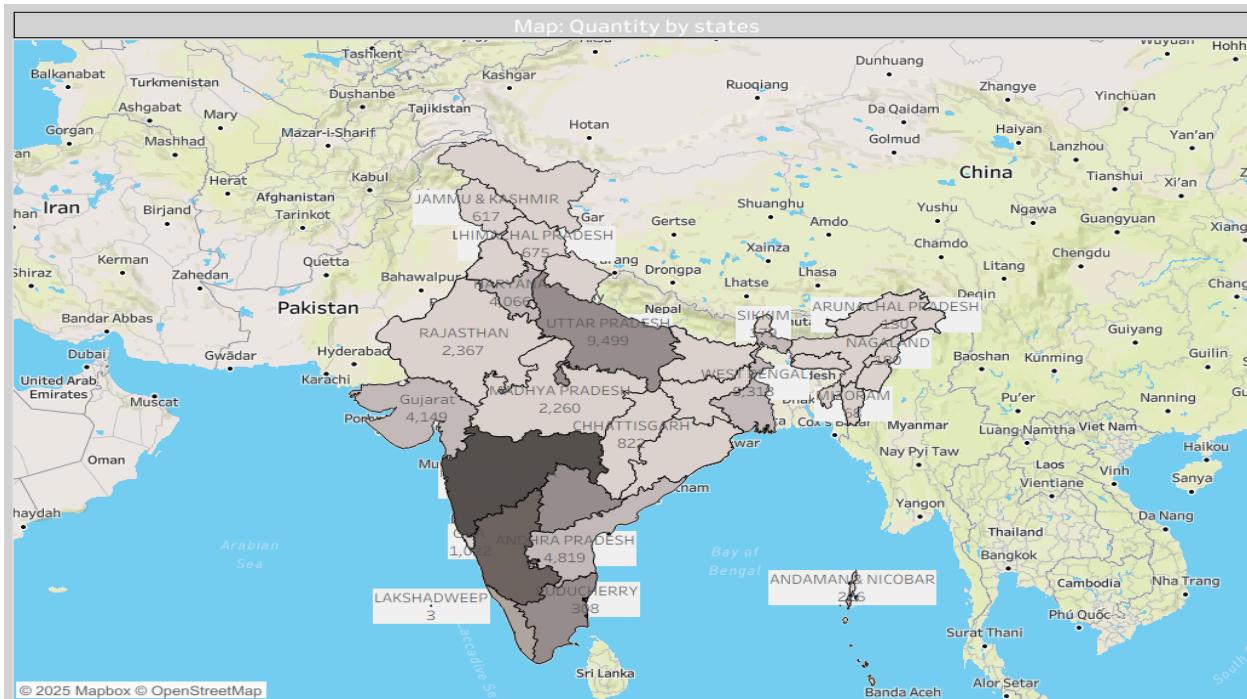
2. Top 10 States by Quantity and Category – Ship Service Level

Shows top-performing states with breakdown by category and delivery service level (Prime/Standard). Useful for regional demand forecasting.



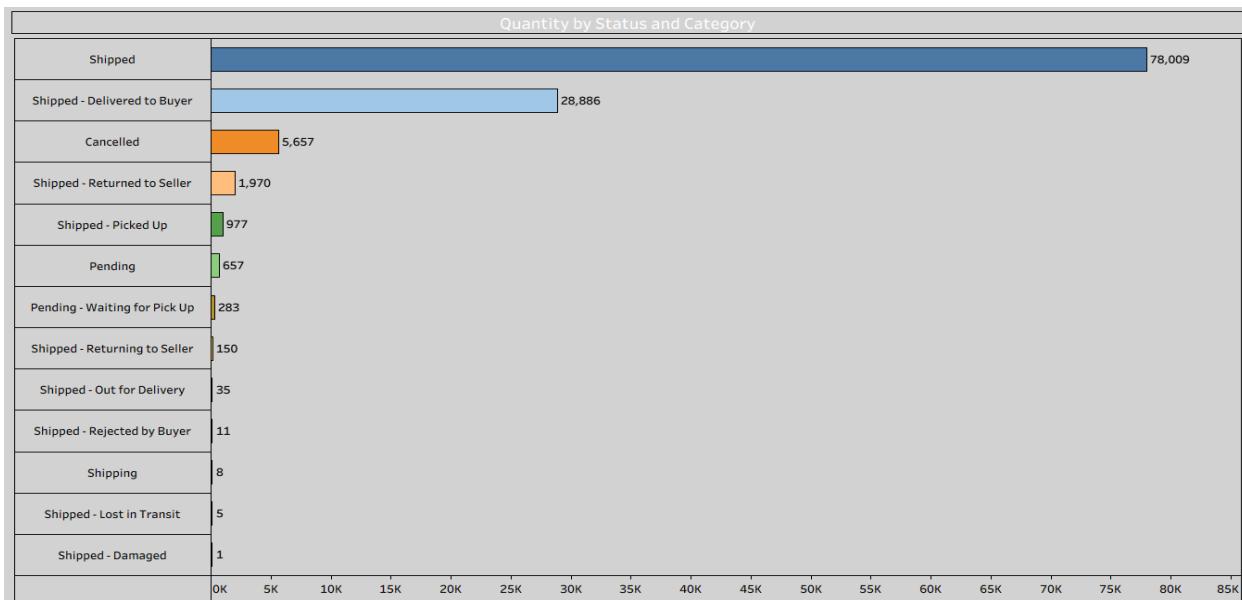
3. Map: Quantity by States

A filled map chart displaying total quantity sold across Indian states. Shows strong and weak markets.



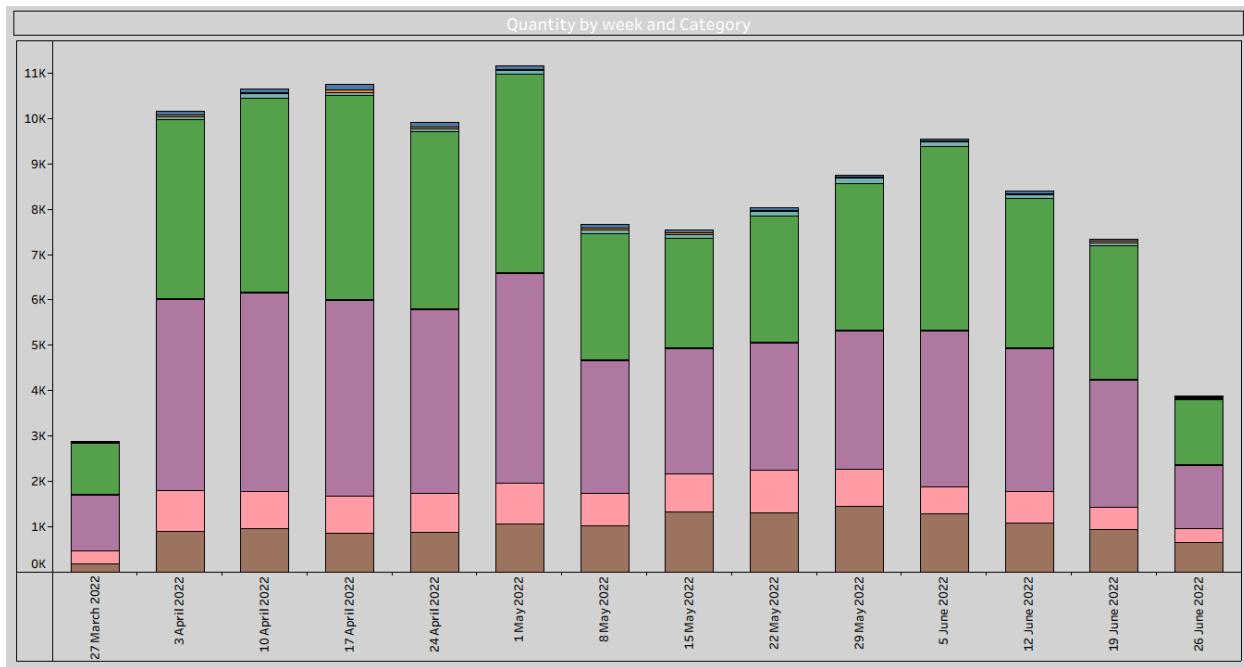
4. Quantity by Status and Category

Shows the distribution of Delivered, Cancelled, Returned, and Shipped orders per category.



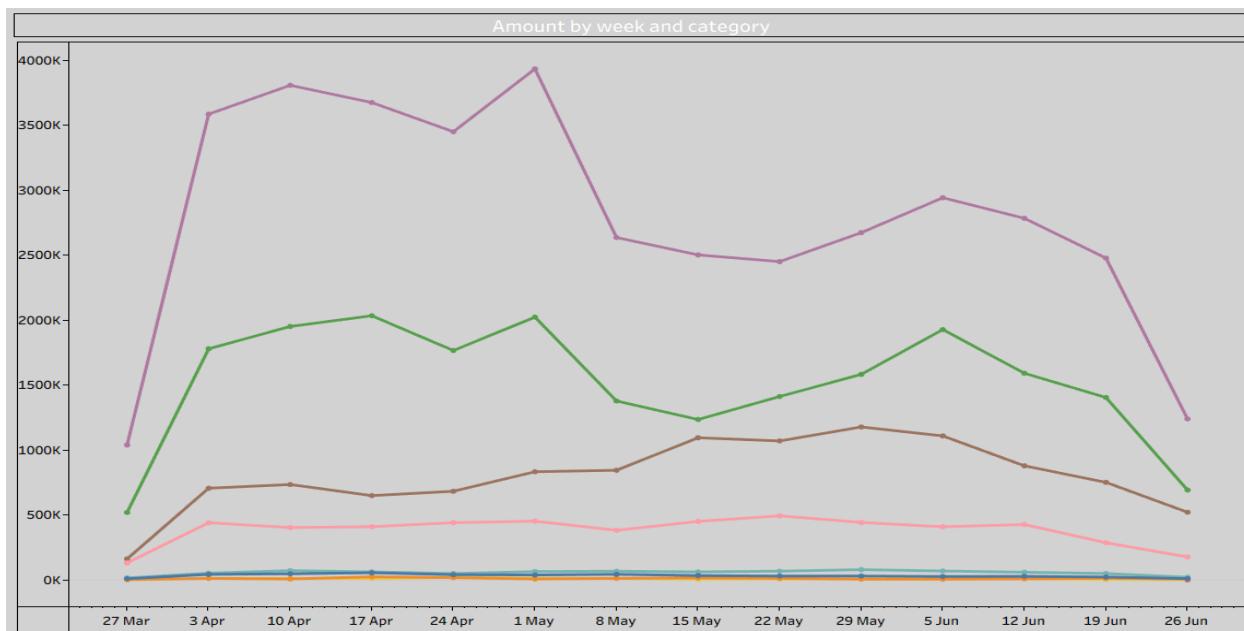
5. Quantity by Week and Category

Shows weekly demand patterns and category-wise movement over time.



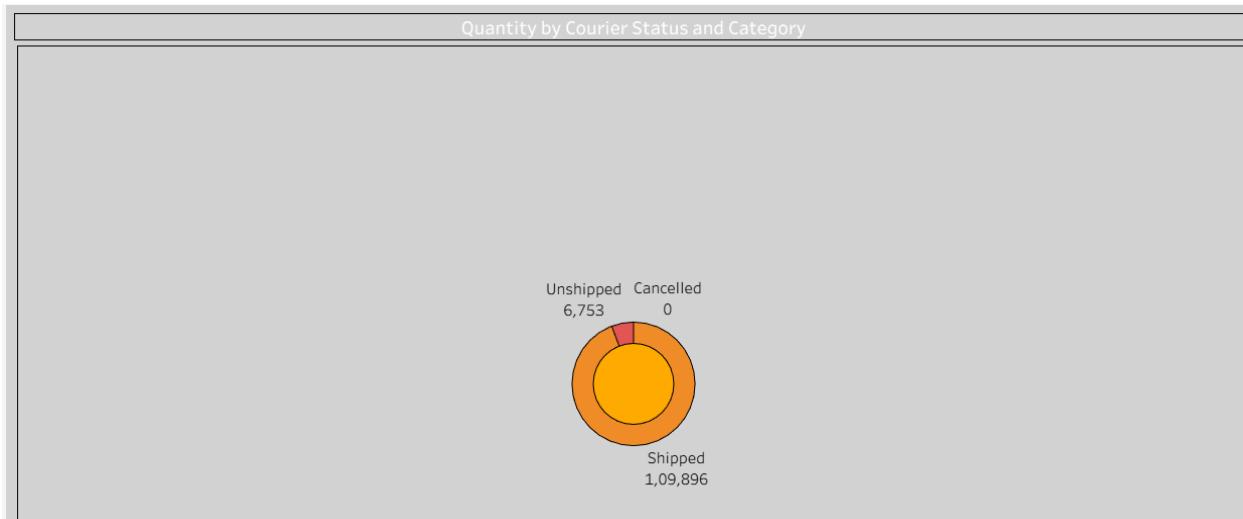
6. Amount by Week and Category

Indicates weekly revenue trends for each category.



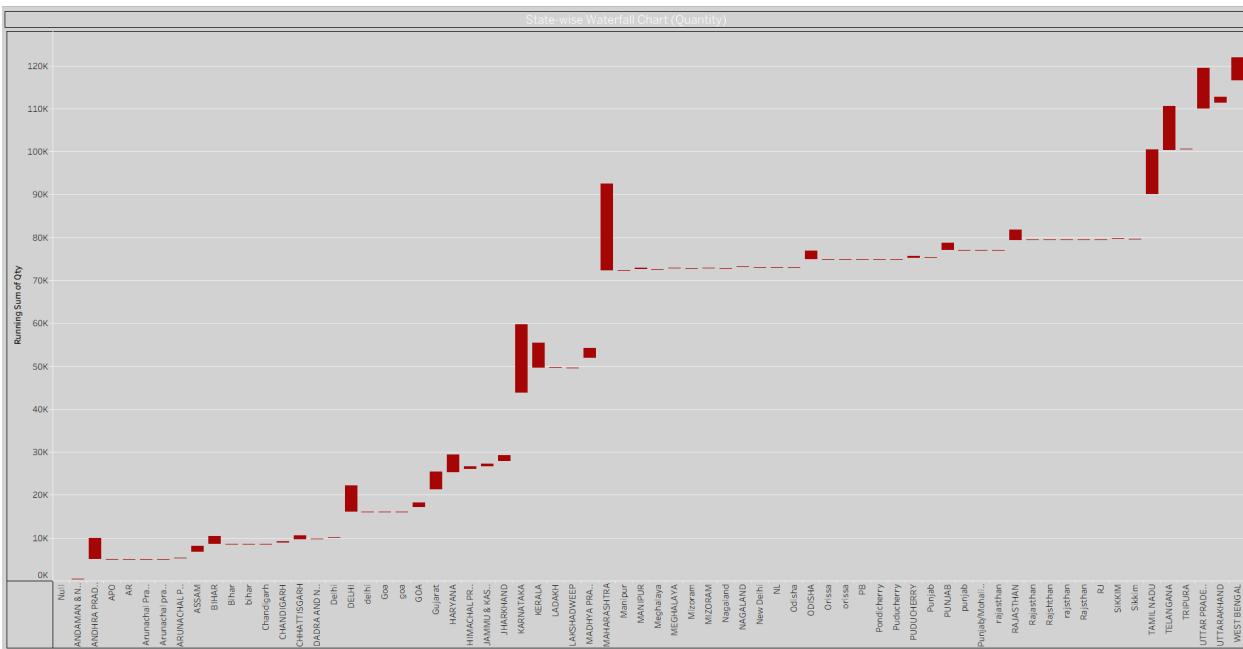
7. Quantity by Courier Status and Category

Helps compare courier efficiency and delivery success rates.



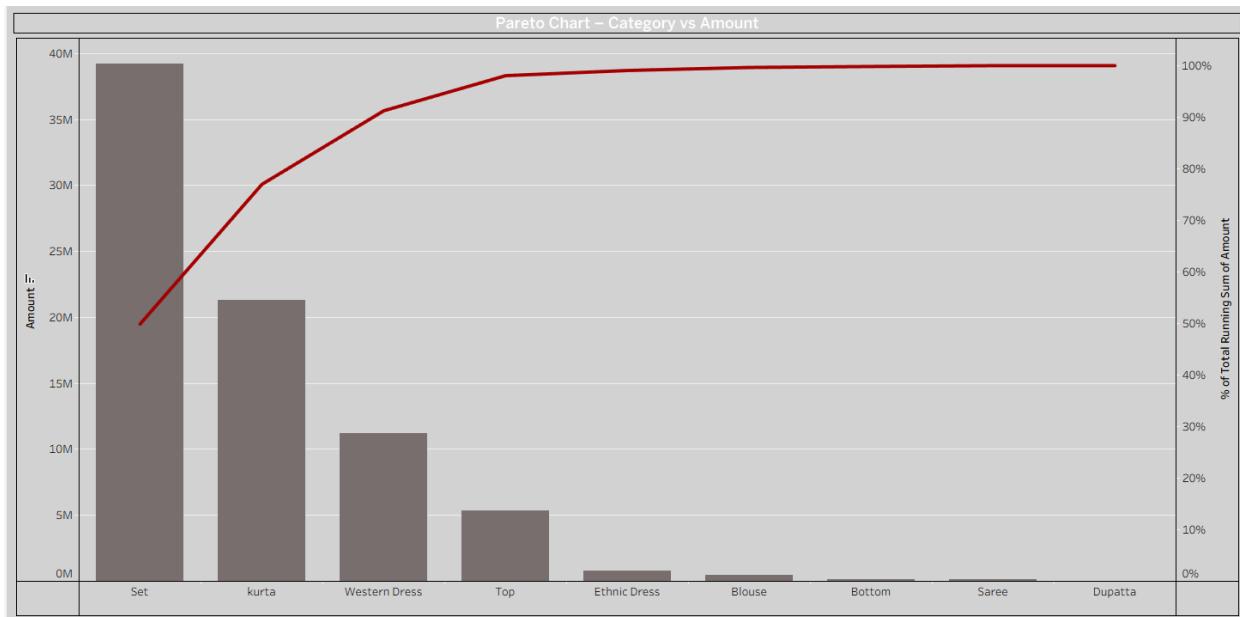
8. State-wise Waterfall Chart (Quantity)

This shows the incremental contribution of each state to the total quantity. Identifies positive and negative contributors.



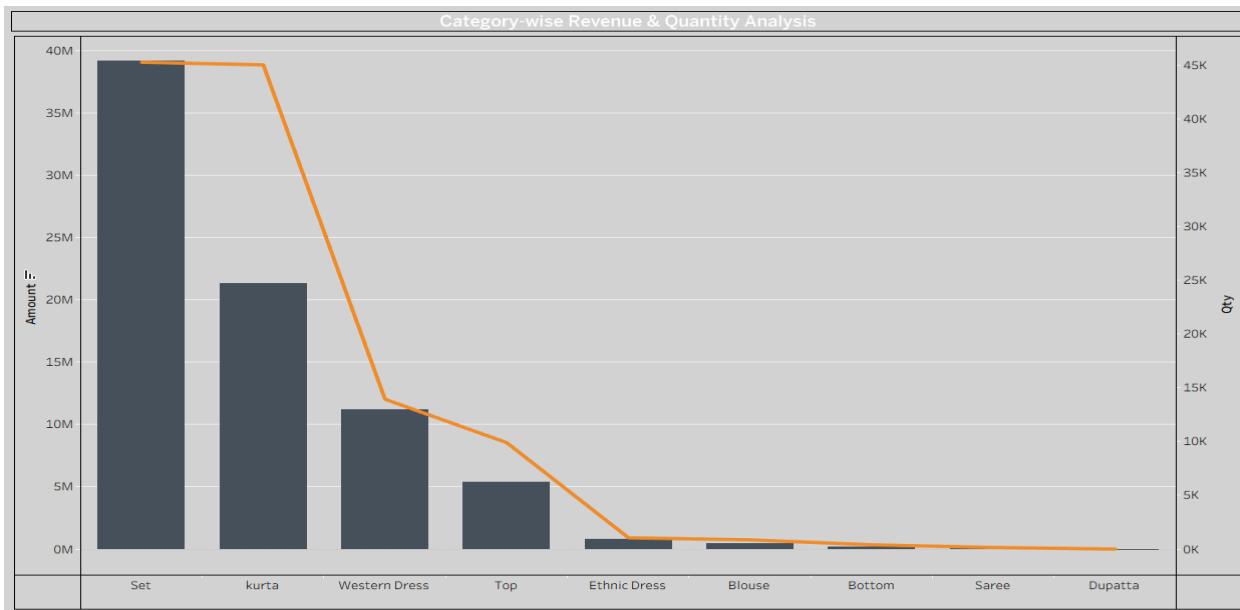
9. Pareto Chart – Category vs Amount

Shows the categories contributing the maximum revenue and identifies the 80/20 revenue pattern.



10. Category-wise Revenue & Quantity Analysis

Provides a combined view showing which category contributes maximum in terms of both revenue and quantity.

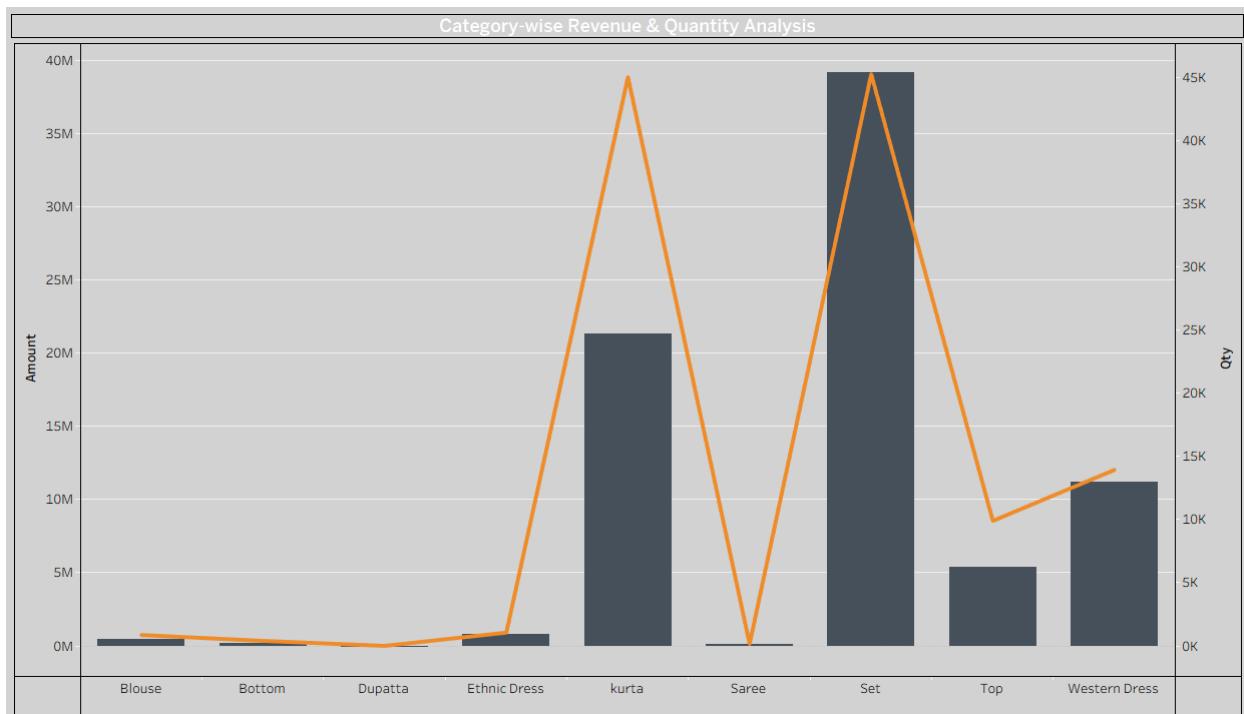


12. Business Applications :

The insights generated from this Amazon Sales Analysis can be used directly in real business situations. Every chart and trend highlights an area where decisions can be improved. For example, category-wise performance helps sellers understand which products are doing well and which need better pricing or promotions. Similarly, identifying the top-performing states allows companies to plan their regional marketing campaigns more effectively.

The weekly trend analysis is especially helpful for inventory teams because it shows the exact weeks where demand increases or drops. This can reduce stockouts and avoid over-stocking. The courier and shipment-related insights also have practical use, as they reveal which delivery partners are performing well and which ones cause delays or returns. Companies can use this information to negotiate better service or shift to more reliable couriers.

Overall, this project provides a structured way for businesses to move from raw data to strategic decisions. Whether it is planning discounts, allocating stock, choosing couriers, or improving customer experience, the analysis supports every major operational area with clear visuals and facts.



13. Financial Helpfulness & Business Impact :

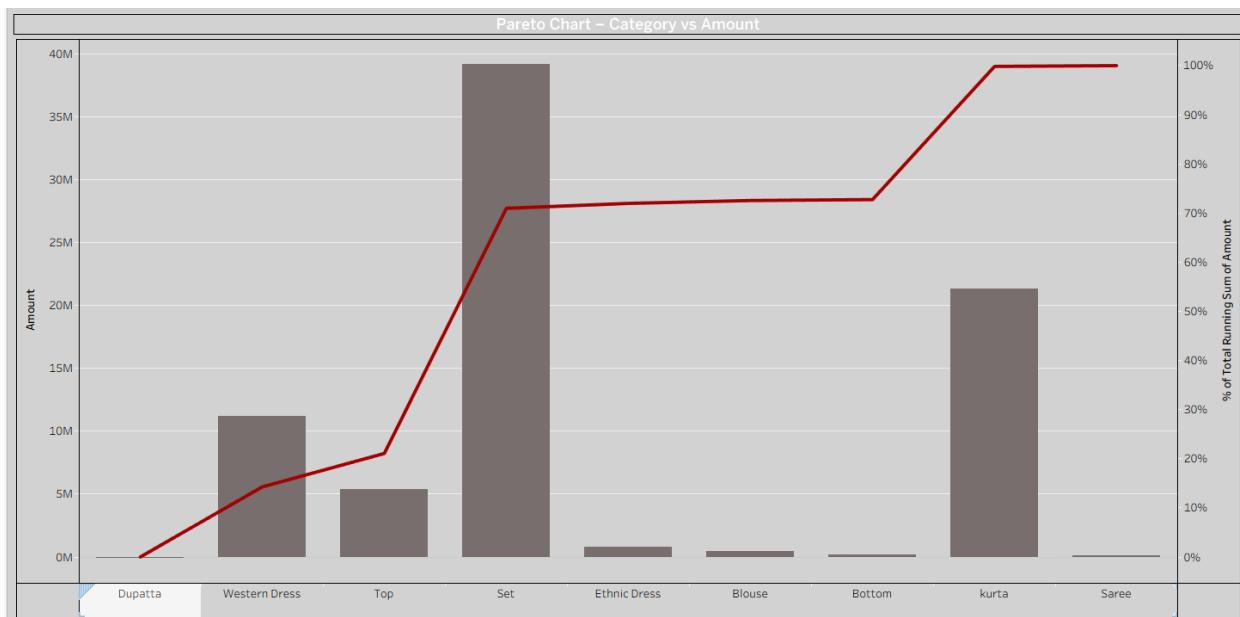
The financial impact of this analysis is quite significant because it highlights where the company is earning the most revenue and where potential losses lie. For example, the Pareto chart clearly shows that only a few categories generate most of the revenue. This helps businesses understand where to invest more money, increase promotions, or launch new variations of products.

State-wise sales distribution also reveals which states give the highest financial return. By focusing more marketing efforts on these states, companies can increase their sales without increasing their overall budget too much. Similarly, understanding poorly performing states helps businesses avoid unnecessary spending.

Shipment and courier performance also affect financial outcomes. Delays and cancellations indirectly increase cost because they require extra customer support, re-shipments, or refunds. By identifying unreliable courier services early, businesses can reduce unnecessary expenses.

In summary, the analysis supports financial planning in three main ways:

1. Increasing revenue by focusing on high-performing categories and states
2. Reducing losses by identifying operational weaknesses
3. Improving delivery efficiency to enhance customer satisfaction and reduce return costs



14. Conclusion :

This project provided a complete overview of Amazon India's sales data using Tableau. By analyzing the dataset from multiple angles—such as category, week, state, courier performance, and shipping status—it became clear how data visualization can simplify decision-making.

The study successfully highlighted which categories contribute the most to total quantity and revenue, which states show strong customer demand, and how delivery performance impacts customer experience. Weekly trend charts revealed important patterns that businesses can use for forecasting and planning stock. Advanced visualizations like the Waterfall and Pareto charts added deeper clarity to how different factors influence overall performance.

Overall, this analysis shows the power of data-driven insights in improving business operations. Whether it is sales strategy, inventory management, logistics, or marketing planning, Tableau has helped convert raw sales numbers into clear, actionable findings. This approach can be further expanded in future projects by adding more customer-related data, seasonality trends, or predictive analytics.

