

# Amazon Sales Data Analysis Report.

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Tool Used: Power BI

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## 1. Introduction

This project is aimed at analyzing the data on sales transactions at Amazon to identify valuable patterns, trends, and information to enable informed decision making by business leaders. The dataset includes the information about the orders, amount sold, types of products, size, the method of delivering those products to a customer, type of customer, and geographical location in India. An interactive Dashboard was developed with the help of the Power BI and used to visualize key performance indicators and create actionable business insights.

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## 2. Dataset Overview

The dataset contains more than 121,000 sales transactions that have the following attributes:

- Order ID and Date
- Sales Amount and Quantity
- Product Category and Size
- Status of Fulfillment and Courier.
- Customer Type (B2B/B2C)
- Shipping State and City

Power query was used to clean and preprocess the data to be sure of the correct types of data, eliminate inconsistencies and prepare the data to be analyzed.

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### 3. Sales Overview

#### Key Findings

- Total Sales: 78.59 Million
- Total Orders: 121.18K
- Average Order Value: 648

The trend analysis of the monthly sales indicates that there are definite seasonal changes in the sales in the period between March and June 2022. There are certain months that the sales are at their highest point, which implies that there is promotion, seasonal demand, or special events in sales. Although it shows irregularities, the general trend shows that there is a steady and positive business performance.

#### Insight:

The fact that the monthly revenues are constant indicates the presence of a stable customer demand, whereas the peaks in sales indicate that the maximization of revenue can be achieved with the help of specific campaigns.

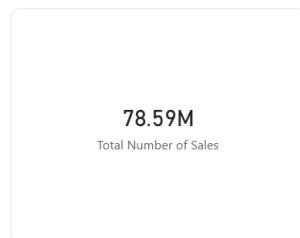


Fig 1.1 Total Number of Sales

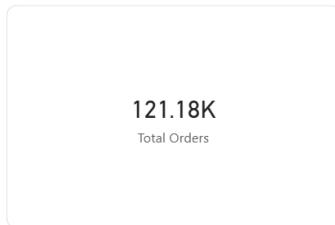


Fig.1.2 Total Number of Orders

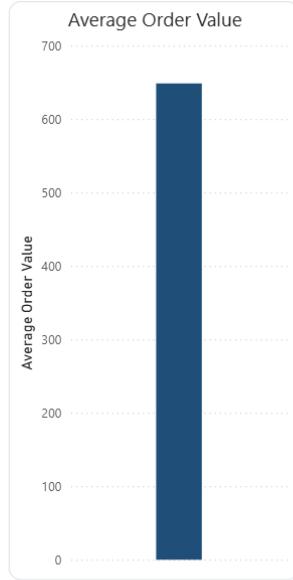


Fig 1.3 Average Order Value

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## 4. Product Analysis

### Category Performance

Analysis of product category reveals that:

- T-Shirts and Shirts are the most revenue bearing items.
- Blazers, Trousers, and Perfumes are types of products that make moderate contribution.
- Socks and Wallets have a relatively less contribution to revenue.

This means that few product categories bring a large percentage of total sales.

### Size Distribution:

- S, L, and XL are the leading in terms of quantity sold.
- Small sizes (XS, 3XL) are much less in demand.

### Insight:

The obvious result of this is the preference of standard sizes and the niche of apparel in the preferences of customers, which allows inventory planning and optimization of SKU.

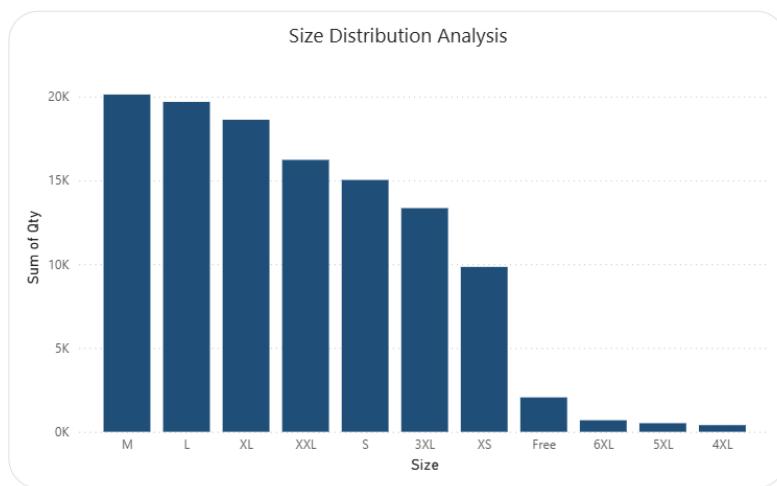


Fig 1.4: Size Distribution Analysis

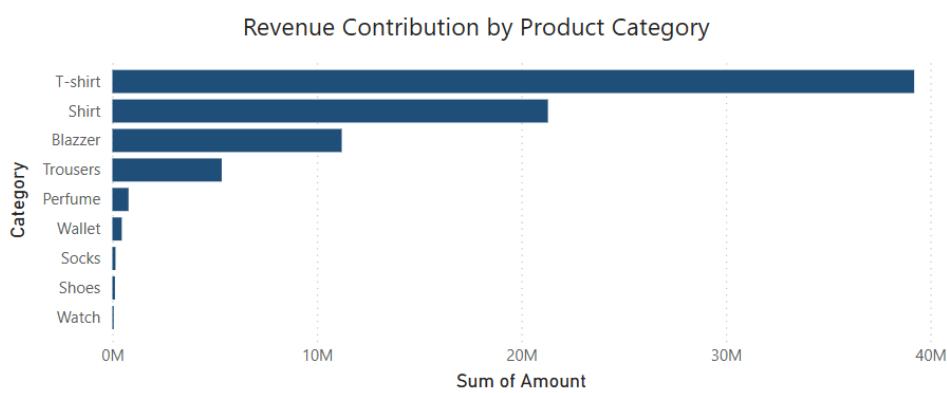


Fig 1.5: Revenue Distribution By Product Category

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## 5. Fulfillment Analysis

Fulfillment Method:

- Amazon fulfills 69.03% percent of orders.
- 30.97% are fulfilled by Merchant

Orders filled by Amazon take over the delivery process that is more reliable and quicker in delivery.

Courier Status:

- Most of the orders are delivered successfully.
- A smaller one is not shipped or in transit, which implies the possibility of logistics bottlenecks.

Insight:

Amazon fulfillment guarantees the efficiency and customer satisfaction of operations, whereas the third-party logistics need more optimization.

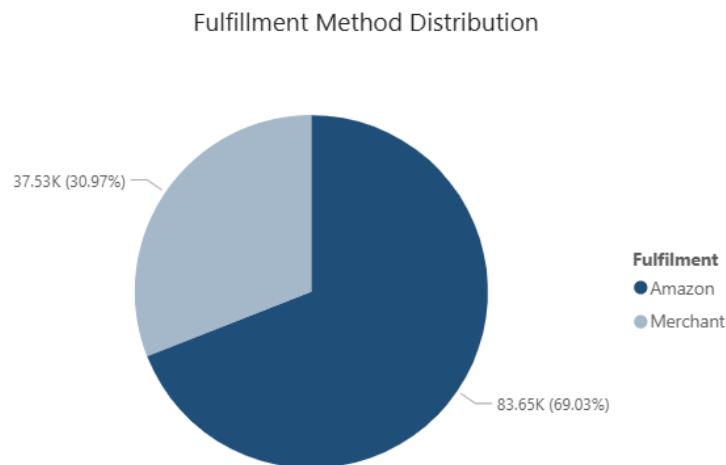


Fig 1.6: Fulfillment Method Distribution

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## 6. Customer Segmentation

B2B and B2C classification Customer segmentation reveals:

- 99.3% B2C customers
- 0.7% B2B customers

It is a clear indication that it is a retail-based marketplace and the customer base is that of B2C consumers.

Insight:

Whereas B2C prevails in terms of order volume, B2B customers offer potential of better-than-average bulk sales.

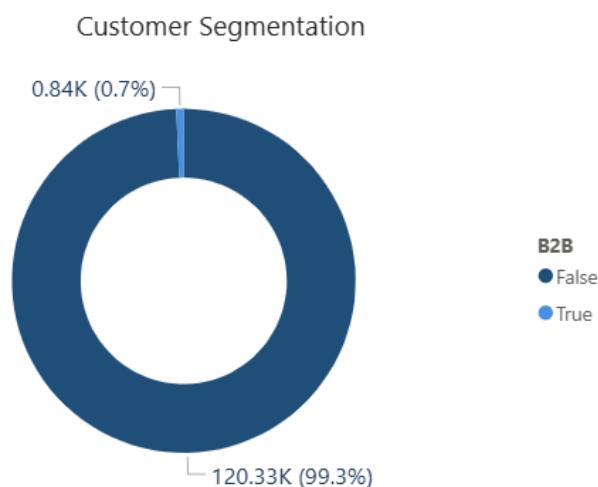


Fig 1.7: Customer Segmentation

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## 7. Geographical Analysis

### State-Level Performance:

States that perform well in terms of revenues include:

- Maharashtra
- Karnataka
- Telangana
- Tamil Nadu
- Delhi

### City-Level Performance

Top cities by order volume:

- Bengaluru
- Hyderabad
- Mumbai
- New Delhi
- Chennai

The greatest concentration of sales is in metro cities and state urban areas, and some demand in Tier-2 cities.

#### Insight:

Most of the revenues are obtained by urban markets, yet by extending the reach to new emerging markets, new opportunities are available.

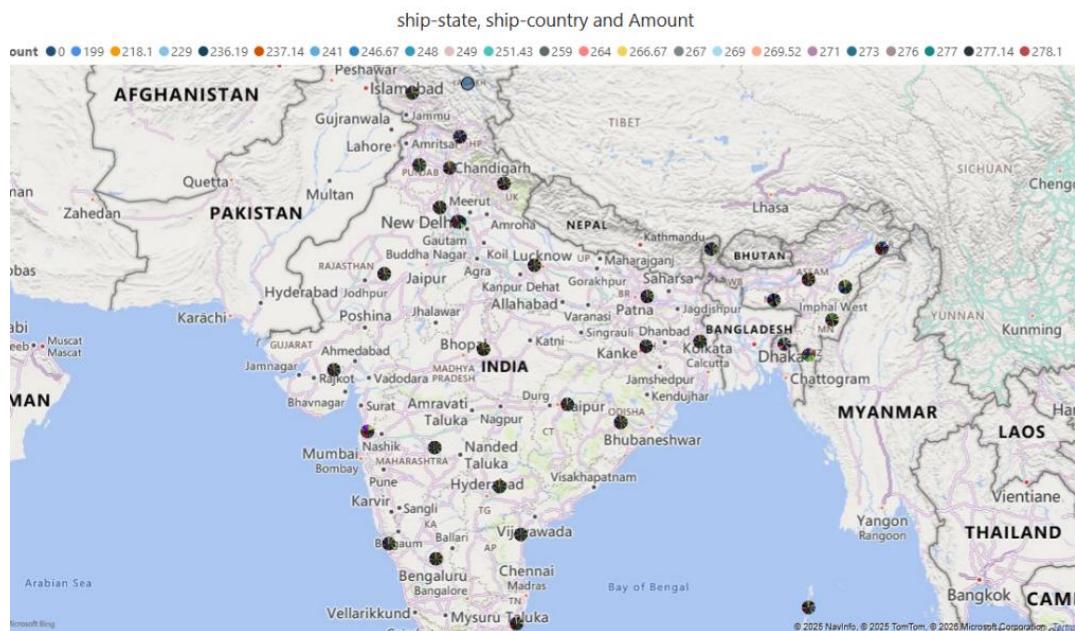


Fig 1.8: Map view of ship state and sales

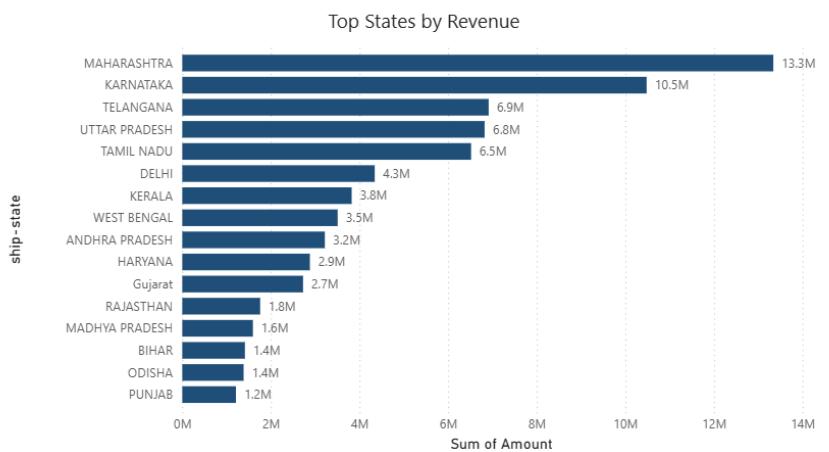


Fig 1.8: Top States by Revenue

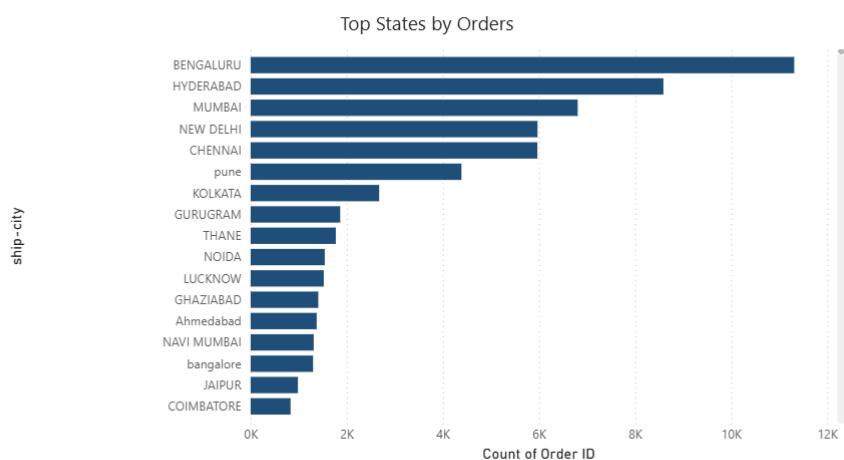


Fig 1.9: Top States by order

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## **8. Business Advice and Suggestions**

### Sales Strategy:

- Plan marketing activities with the best sales periods to maximise the sales.
- Monitor monthly performance to agree on the trends of growth or setback.

### Inventory Management:

- Increase inventories of best selling departments and sizes.
- Minimize holding costs by reducing overstocking of slow moving products.
- Improve inventory turnover using demand forecasting.

### Fulfillment & Logistics:

- Enhance reliance on Amazon delivery services to have a faster and more dependable delivery.
- Track courier performance and enhance service-level agreements with non-performers.

### Customer Experience:

- Establish loyalty programs to recurrent B2C.
- Offer discounts and special services to B2B.
- Enhance delivery transparency in order to satisfy customers.

### Geographic Expansion

- Devote attention to promotions and expansion of logistics in states and cities with high performance.
  - Introduce intensive campaigns in Tier-2 cities to seize the increasing demands.
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## **9. Conclusion**

This analysis manages to reveal major clues about the performance of Amazon in sales, product demand, customer behavior, efficiency of fulfilment, and distribution across regions. Through the suggested strategies, the business will be able to optimize inventory levels, maximize their logistics, increase customer satisfaction, and generate a sustainable growth of revenue. The Power BI dashboard allows maintaining lifelong monitoring and making informed and decision-driven decisions.

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## 10. Deliverables Summary

\*Detailed analysis report with ideas and suggestions.

KPI and visualizations on interactive Power BI dashboard.

The insights of products, customers and geo location.

\*Sale recommendations, inventory and customer service.

## 11. SnapShot of Power BI Dashboard

