**Comprehensive Analysis Report**

1. Executive Summary:

Purpose of the Report:

This report was created as a data analyst intern task at Innobyte Services to analyze sales data and provide actionable insights to optimize sales strategies and improve overall business performance.

Key Objectives:

1. Sales Overview: Understand the overall sales performance, trends, and patterns over time.

2. Product Analysis: Analyze the distribution of product categories, sizes, and quantities sold to identify popular products.

3. Fulfillment Analysis: Investigate the fulfillment methods used and their effectiveness in delivering orders.

4. Customer Segmentation: Segment customers based on their buying behavior, location, and other relevant factors.

5. Geographical Analysis: Explore the geographical distribution of sales, focusing on states and cities.

6. Business Insights: Provide actionable insights and recommendations based on the analysis to optimize sales strategies, improve customer satisfaction, and enhance overall business performance.

Main Findings:

1. The most selling category is t-shirts with 50,292 orders, making up 38.83% of the total quantity ordered, and total sales of over 39 million. The second most selling category is shirts with 49,877 orders, making up 38.62% of the total quantity ordered, and total sales of over 21 million. All remaining categories have 28,807 orders with an average product cost of 627.9 and total sales of 11 million.

2. Sales are falling month to month at a rate of 9.84%.

3. Total shipped orders are 84.9%, unshipped orders are 5.1%, and canceled orders are 5%. The most canceled state is Maharashtra with total orders of 22,000, 949 canceled, and 1,169 unshipped.

4. Amazon primarily uses expedited shipping, while merchants only use standard shipping.

5. The top state with the most orders is Maharashtra, and the top city is Bengaluru.

6. Weekend sales account for 30% of the overall sales.

Recommendations:

- Focus on marketing and promotional strategies for t-shirts and shirts as they are the top-selling categories.

- Investigate the reasons behind the declining sales trend and implement measures to stabilize and boost sales.

- Optimize inventory management for t-shirts and shirts to ensure availability and meet customer demand.

- Improve fulfillment processes to reduce the number of unshipped and canceled orders, especially in Maharashtra.

- Consider expanding expedited shipping options for merchants to enhance customer satisfaction.

- Leverage weekend sales trends by planning special promotions and discounts for weekends.

2. Introduction:

Data Source:

The data was provided by Innobyte Services and consists of Amazon sales data for 3 months.

Scope of the Analysis:

The analysis focuses on overall sales performance, product distribution, fulfillment methods, customer segmentation, and geographical distribution.

Methodology:

The analysis was conducted using Power BI for visualization and various statistical methods. The tools and techniques used include DAX (Data Analysis Expressions) and other analytical methods to derive insights and trends from the data.

#### 3. Sales Overview:

Overall Sales Performance:

- Total Sales Volume: Total orders are 129k with sales amounting to 79 million rupees.

- Trends: Sales are declining by an average of 9.84% compared to the previous month. Additionally, weekend sales account for 30% of the overall sales.

Key Metrics:

- Total Sales: 79 million rupees

- Average Sales per Order: 609.34 rupees

- Growth Rate: -10.68%

Visualizations:

- Line Charts: To illustrate sales trends over time.

- Bar Charts: To compare sales by different categories or segments.

- Pie Charts and Donut Charts: To show the distribution of sales across different product categories.

- Cards and Metrics: To highlight key performance indicators (KPIs) such as total sales, average sales per order, and growth rate.

4. Product Analysis:

Distribution of Product Categories:

- Categories: T-shirts, shirts, blazers, perfumes, shoes, socks, trousers, wallets, watches.

Popular Products:

- T-shirts and shirts are the most popular products.

Visualizations:

- Line Charts: To show trends in product sales over time.

- Bar Charts: To compare sales volume across different product categories.

- Pie Charts and Donut Charts: To illustrate the proportion of sales for each product category.

- Cards and Metrics: To display key statistics such as total sales, average sales per category, and the share of popular products.

5. Fulfillment Analysis:

Fulfillment Methods:

- Expedited and Standard Shipping

Effectiveness:

- Shipped Orders: 84.9%

- Unshipped Orders: 5.1%

- Canceled Orders: 5%

- Amazon primarily uses expedited shipping, while merchants only use standard shipping.

Visualizations:

- Bar Charts: To compare the effectiveness of different fulfillment methods.

- Cards and Metrics: To highlight key performance indicators related to fulfillment, such as shipped, unshipped, and canceled orders.

#### 6. Customer Segmentation and Geographical Analysis:

Customer Segmentation:

- Segmentation Criteria: Location and other relevant factors like orders and sales.

- Key Segments: Characteristics of key customer segments are based on total sales per state and city.

Visualizations:

- Bar Charts: To display the sales distribution by key customer segments and locations.

Geographical Analysis:

- Geographical Distribution: Sales distribution by state and city.

- Top-Performing Regions: Maharashtra (state) and Bengaluru (city).

Visualizations:

- Geographical Maps: To show sales distribution and performance across different states and cities.

8. Business Insights:

Actionable Insights:

1. Sales Trends: The overall sales trend is declining by an average of 9.84% month-to-month. This suggests a need to investigate the causes of this decline and implement strategies to reverse the trend.

2. Product Popularity: T-shirts and shirts are the top-selling categories, contributing significantly to total sales. This indicates a strong market preference for these products.

3. Fulfillment Effectiveness: The fulfillment process is generally effective with 84.9% of orders shipped. However, there is a notable percentage of unshipped and canceled orders, particularly in Maharashtra.

4. Weekend Sales: Weekend sales account for 30% of total sales, highlighting a potential opportunity for targeted promotions and discounts during weekends.

5. Geographical Insights: Maharashtra and Bengaluru are key regions for sales, suggesting that tailored marketing and logistics strategies for these areas could drive further growth.

Recommendations:

1. Optimize Sales Strategies:

- Promotional Campaigns: Launch targeted marketing campaigns for t-shirts and shirts to capitalize on their popularity. Consider bundling these items with other products to boost sales.

- Seasonal Promotions: Utilize the weekend sales trend by scheduling special promotions and discounts on weekends to increase overall sales volume.

2. Improve Customer Satisfaction:

- Enhance Fulfillment Processes: Address the issues leading to unshipped and canceled orders, especially in Maharashtra. Streamline the order processing and fulfillment systems to reduce cancellations and improve delivery reliability.

- Shipping Options: Consider offering expedited shipping options for all merchants to match the convenience provided by Amazon’s expedited services. This could enhance customer satisfaction and reduce the number of canceled orders.

3. Enhance Business Performance:

- Inventory Management: Ensure adequate inventory levels for top-selling categories like t-shirts and shirts. Implement a dynamic inventory management system to respond to changing demand patterns.

- Geographical Focus: Develop targeted marketing strategies for Maharashtra and Bengaluru, focusing on localized promotions and enhanced customer engagement in these high-performing regions.

Implementation Steps:

1. Data Analysis: Regularly monitor sales data to identify emerging trends and adjust strategies accordingly.

2. Customer Feedback: Collect and analyze customer feedback to identify areas for improvement in the fulfillment process and overall customer experience.

3. Performance Metrics: Establish performance metrics to measure the effectiveness of implemented strategies and make data-driven adjustments as needed.

Conclusion:

Recap:

This report provides a comprehensive analysis of Amazon sales data over a three-month period, focusing on sales performance, product distribution, fulfillment methods, customer segmentation, and geographical distribution. Key findings highlight the dominance of t-shirts and shirts in sales, a declining sales trend, fulfillment effectiveness, and the significance of weekend sales. Geographical insights point to Maharashtra and Bengaluru as key regions.

Importance:

The findings and recommendations are crucial for optimizing sales strategies, improving customer satisfaction, and enhancing overall business performance. By addressing the identified challenges and leveraging opportunities, Innobyte Services can drive growth and better align their operations with market demands. Implementing these strategies will not only address current issues but also position the company for sustained success in a competitive market.