

“Data Analytics for Shopping Channels”

A PROJECT REPORT

Submitted by

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MASTER IN COMPUTER APPLICATIONS

BONAFIDE CERTIFICATE

Certified that this project report “Data Analytics for Shopping Channels” is the Bonafede work of “Rajat Chauhan, Devesh Chouhan” who carried out the project work under my/our supervision.

SIGNATURE

SIGNATURE

Ms. Nikita Singla

Submitted for the project viva-voce examination held on

INTERNAL EXAMINER EXTERNAL

EXAMINER

1. Introduction

In the rapidly evolving e-commerce landscape, understanding customer behavior is crucial for optimizing sales strategies. This report leverages data analytics to explore customer purchasing patterns across various shopping platforms. The analysis includes gender demographics, age group distributions, product preferences, and monthly sales data. Using Excel, we have created a comprehensive dashboard that visualizes these insights.

Dashboard-



2. Objectives

The primary objectives of this analysis are to:

- Analyze gender-based purchasing behavior.
- Examine age group distributions of customers.
- Identify top-selling product categories across different demographics.
- Visualize monthly purchase trends.
- Compare sales performance across major shopping channels.

3. Data Overview

The analysis incorporates several datasets:

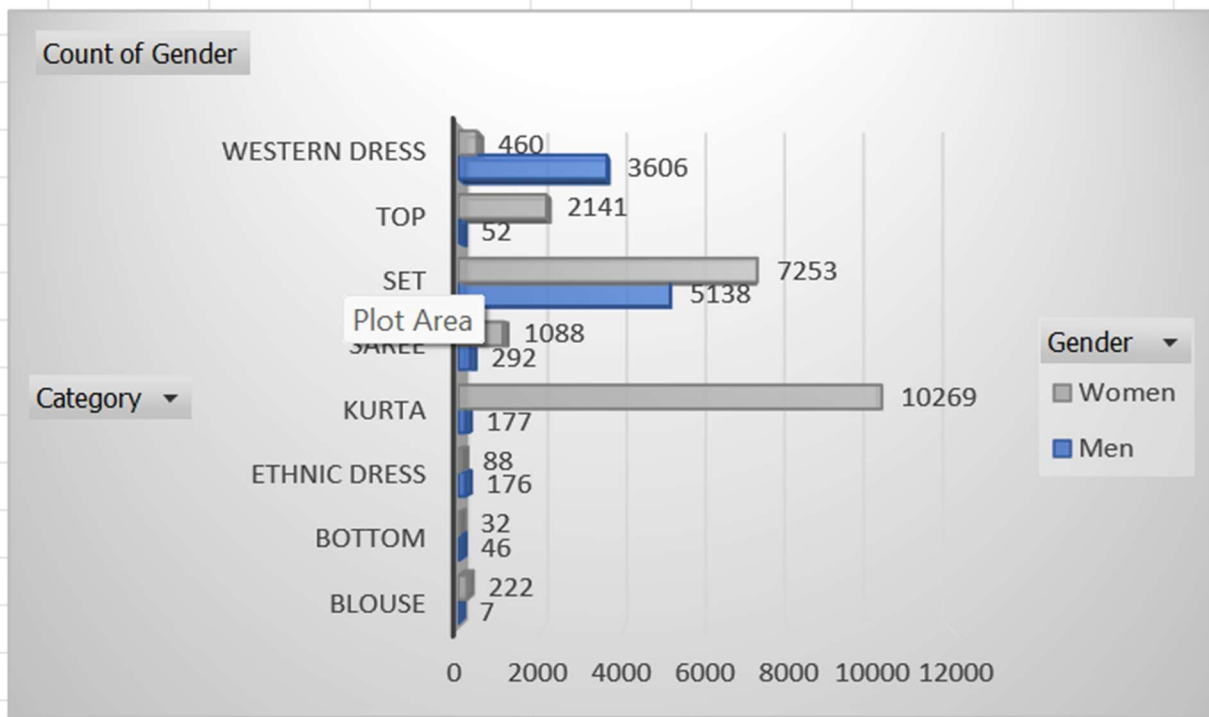
3.1 Summary of Purchases by Gender and Age Group

- **Total Purchases:** 2,617
- **Gender Distribution:**
 - Men: 737 purchases
 - Women: 1,880 purchases
 -
- **Age Group Distribution:**
 - Adults: 1,306 purchases
 - Seniors: 526 purchases
 - Teenagers: 785 purchases

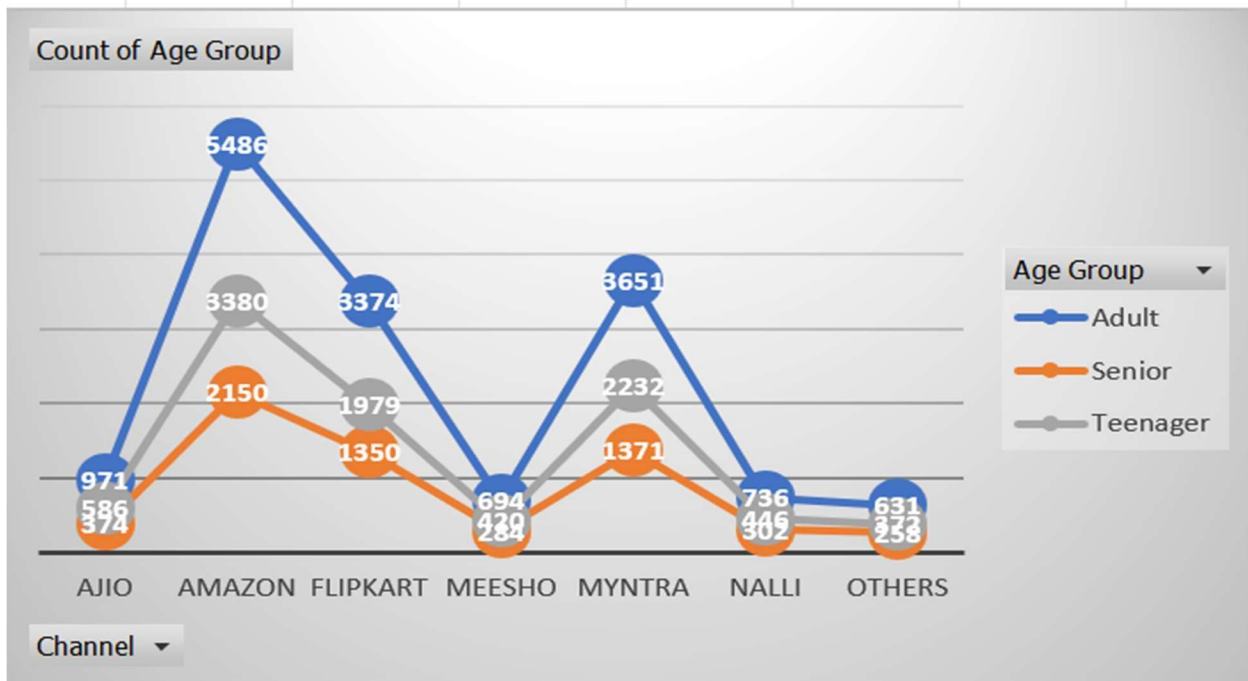
3.2 Monthly Sales Data



3.3 Product Category Purchases by Gender



3.4 Shopping Channels by Age Group



4. Data Analysis

4.1 Gender-Based Analysis

- **Total Purchases:** Women dominate the shopping landscape with **1,880 purchases**, representing **72%** of total transactions. In contrast, men account for only **28%** with **737 purchases**.
- **Implications:** This suggests a strong market presence for women-centric products, and marketing efforts should focus more on women to drive sales further.

4.2 Age Group Analysis

- **Adult Purchases:** The adult demographic is the largest group, accounting for **1,306 purchases (50%)**.
- **Teenagers:** Comprise **785 purchases (30%)**.
- **Seniors:** The smallest group with **526 purchases (20%)**.
- **Implications:** The data suggests that marketing strategies should cater to adults while also engaging teenagers, potentially through social media campaigns.

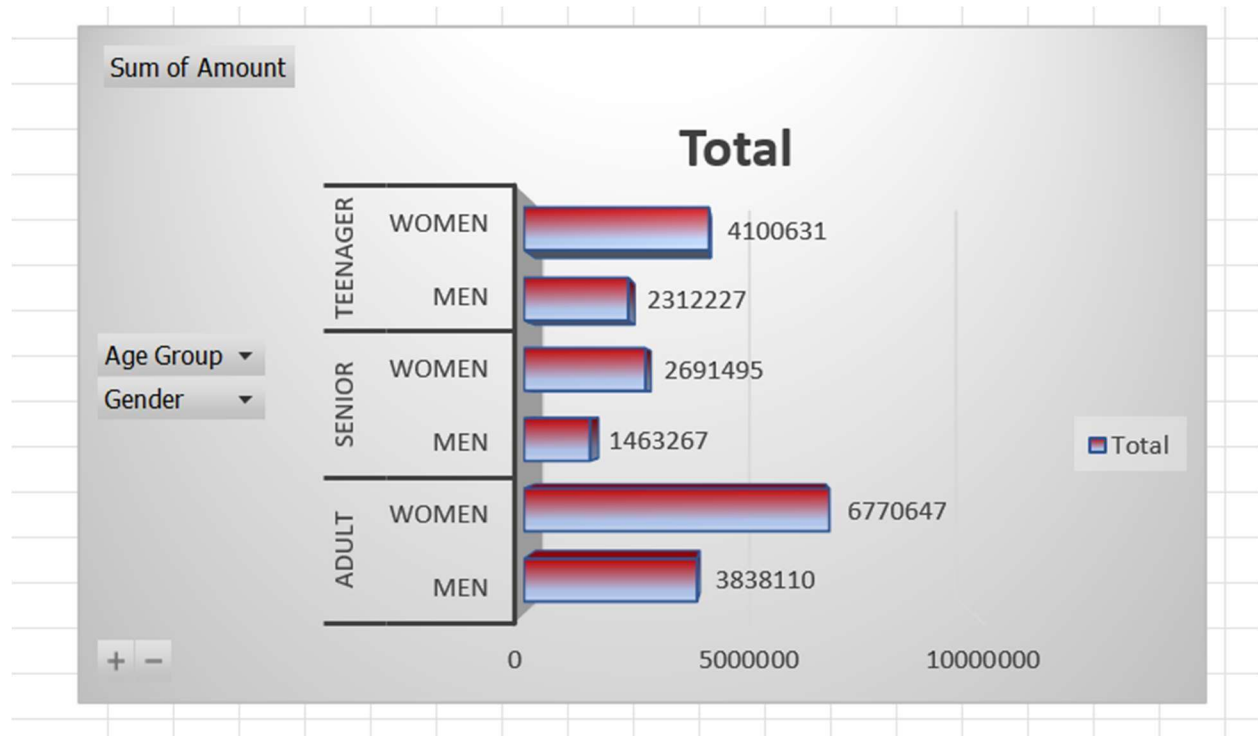
4.3 Product Category Preferences

- **Popular Products:**
 - **Sets** (1,109 purchases) and **Kurtas** (896 purchases) are the most purchased items, particularly among women.
 - **Men's purchases** are relatively low in comparison, indicating an opportunity to enhance product offerings in categories like **Western Dresses** and **Sets**.
- **Implications:** Retailers should focus on expanding inventory in these top-selling categories and consider introducing more male-centric products to attract a larger male audience.

4.4 Monthly Purchase Trends

- The **total quantity sold in May** is **2,641 items**, indicating a consistent buying behavior during this month.
- **Implications:** Monitoring monthly trends can help identify peak shopping periods and inform inventory planning and promotional strategies.

Total sales-



4.5 Shopping Channel Preferences

- **Amazon** leads with **959 purchases**, followed by **Myntra** (599) and **Flipkart** (521).
- **Channel Engagement:** Adults show a preference for Amazon, while teenagers engage significantly with Myntra.
- **Implications:** Businesses should prioritize partnerships with high-performing platforms like Amazon for promotions and consider targeted marketing on Myntra for the teenage demographic.

5. Excel Dashboard Visualization

The dashboard in Excel provides an interactive and comprehensive view of the data. Here's how to set it up:

5.1 Suggested Arrangement of Visualizations

1. Gender and Age Group Distribution Chart

- **Type:** Stacked Bar Chart
- **Position:** Top left corner
- **Purpose:** To visualize the breakdown of purchases by gender and age groups.

2. Product Category Breakdown by Gender Chart

- **Type:** Pie Chart
- **Position:** Top right corner
- **Purpose:** To illustrate product preferences among different genders.

3. Monthly Purchases Chart

- **Type:** Line Graph
- **Position:** Center section
- **Purpose:** To track total monthly sales and identify trends.

Shopping Channels by Age Group Chart

- **Type:** Bar Chart
- **Position:** Bottom left corner
- **Purpose:** To compare customer distributions across shopping channels.

Grand Total Summary Box

- **Type:** Summary Table
- **Position:** Bottom center
- **Purpose:** To provide a quick overview of total purchases by gender, age group, and overall.

5.2 Dashboard Features

- **Interactive Elements:** Use filters or slicers to enable users to segment data by gender, age group, or product category.
- **Dynamic Updates:** Ensure that charts update dynamically as data changes, providing real-time insights.

6. Conclusion and Recommendations

6.1 Conclusion

The data analysis indicates strong female participation in e-commerce, especially in categories like **Kurtas** and **Sets**. Understanding the age distribution highlights opportunities to tailor marketing strategies effectively. The dashboard provides a valuable tool for ongoing analysis and decision-making.

6.2 Recommendations

1. **Targeted Marketing Campaigns:** Focus on women's products while developing strategies to engage men.
2. **Product Diversification:** Introduce more variety in categories popular among women and explore options for men's products.
3. **Channel-Specific Strategies:** Enhance partnerships with high-performing channels like Amazon and Myntra to maximize reach and engagement.
4. **Regular Data Analysis:** Continuously analyze monthly trends to optimize inventory management and marketing efforts.

This report provides a thorough overview of shopping channel analytics, offering insights that can inform business decisions and strategies for improved sales performance. The Excel dashboard will facilitate ongoing analysis, enabling quick responses to market changes.