

Warehousing Power BI Dashboard Report

Introduction

The Warehousing Power BI Dashboard provides key insights into sales performance, customer segmentation, and revenue generation. The second report within the dashboard offers a detailed breakdown of Prime versus Non-Prime members, their purchasing behavior, and the impact on total revenue. The insights derived from this analysis are crucial for understanding consumer behavior and optimizing marketing and sales strategies.

Data Sources:

Since Amazon sales data isn't publicly available, synthetic data has been generated and used.

Visualization tool: PowerBI

PowerBI was chosen as the tool to perform the analysis as it provides the most convenient UI design to aid in building an efficient and aesthetic dashboard that effectively portrays various KPI's.

Objective

The primary objective of this report is to analyze customer segmentation based on Prime and Non-Prime memberships, evaluating their contributions to overall revenue. By leveraging Power BI's visualization capabilities, this report identifies trends in customer spending patterns and highlights key revenue drivers.

Data Overview

The dataset used in this analysis consists of customer transactions categorized by membership type. The following key metrics are analyzed:

- **Total Revenue Contribution:** A comparison of revenue generated by Prime and Non-Prime members.
- **Purchase Volume Analysis:** A breakdown of the total number of purchases by membership type.
- **Sales Trends by Month:** A visualization of monthly revenue generation patterns.
- **State-wise Revenue Distribution:** Geographic segmentation of revenue generation.
- **Payment Method Preferences:** Analysis of the preferred payment methods of Prime and Non-Prime members.

Key Insights

1. Prime vs. Non-Prime Member Revenue Contribution

- Prime members account for **69.95%** of total revenue, contributing **\$87.73 million** in sales.
- Non-Prime members contribute **30.05%**, equating to **\$37.68 million**.
- The significantly higher revenue share of Prime members indicates that subscription-based customers are more engaged and spend more per transaction compared to Non-Prime members.

2. Purchase Volume Comparison

- Prime members not only contribute more to total revenue but also exhibit a **higher frequency of purchases**.
- Non-Prime members have fewer transactions, indicating a lower retention rate and engagement.

3. Monthly Sales Trends

- Revenue fluctuates across months, with notable peaks in Q4, aligning with holiday shopping trends.
- The highest revenue-generating month is **November**, suggesting strong engagement during Black Friday and Cyber Monday sales.
- Q1 and Q2 exhibit relatively steady sales patterns, while Q3 sees a gradual increase leading into the holiday season.

4. State-Wise Revenue Distribution

- The dashboard presents a breakdown of revenue contribution by state.
- States such as **California, Texas, and New York** emerge as the highest revenue contributors.
- Smaller states, including **Rhode Island and Vermont**, generate comparatively lower revenue, likely due to smaller population sizes and lower market penetration.

5. Payment Method Preferences

- **Credit Cards** dominate as the preferred payment method, contributing the highest share of revenue.

- **Amazon Pay and PayPal** are popular among Prime members, reinforcing the convenience-driven purchasing behavior.
- **Gift Cards** and **Debit Cards** exhibit moderate usage but remain less popular than other payment methods.

Business Implications

1. Strengthening Prime Membership Benefits

- The significantly higher spending pattern of Prime members indicates the success of the membership program.
- To further boost revenue, offering additional incentives such as exclusive discounts, faster shipping, and cashback rewards can increase membership adoption.

2. Targeting Non-Prime Members

- Since Non-Prime members contribute only 30% of revenue, targeted marketing campaigns with promotional offers could convert them into Prime members.
- Personalized discount strategies or first-time user incentives may encourage repeat purchases.

3. Optimizing Regional Sales Strategies

- High-revenue states such as California and Texas should receive focused marketing efforts, whereas low-revenue states may require localized promotions.
- Understanding regional preferences and tailoring marketing campaigns accordingly can drive increased engagement in underperforming states.

4. Enhancing Seasonal Sales Promotions

- Since November sees the highest revenue, leveraging seasonal sales through early marketing efforts and strategic discounting can maximize holiday sales.
- Offering bundled deals, limited-time offers, and loyalty rewards can further drive revenue during peak shopping periods.

5. Payment Method Expansion

- As credit cards dominate, partnering with more financial service providers to offer seamless payment experiences can increase conversions.
- Expanding flexible payment options such as Buy Now, Pay Later (BNPL) services can further appeal to cost-conscious customers.

Conclusion

The Prime vs. Non-Prime member analysis highlights the strong influence of subscription-based customers on total revenue. With Prime members contributing nearly 70% of revenue, businesses should continue enhancing their membership perks to retain and attract high-value customers. Additionally, targeted marketing strategies aimed at converting Non-Prime members and optimizing regional sales approaches can drive sustainable growth. By leveraging Power BI's capabilities, businesses can continuously monitor and refine their sales and marketing strategies to maximize profitability.