

eCommerce Business Insights Report

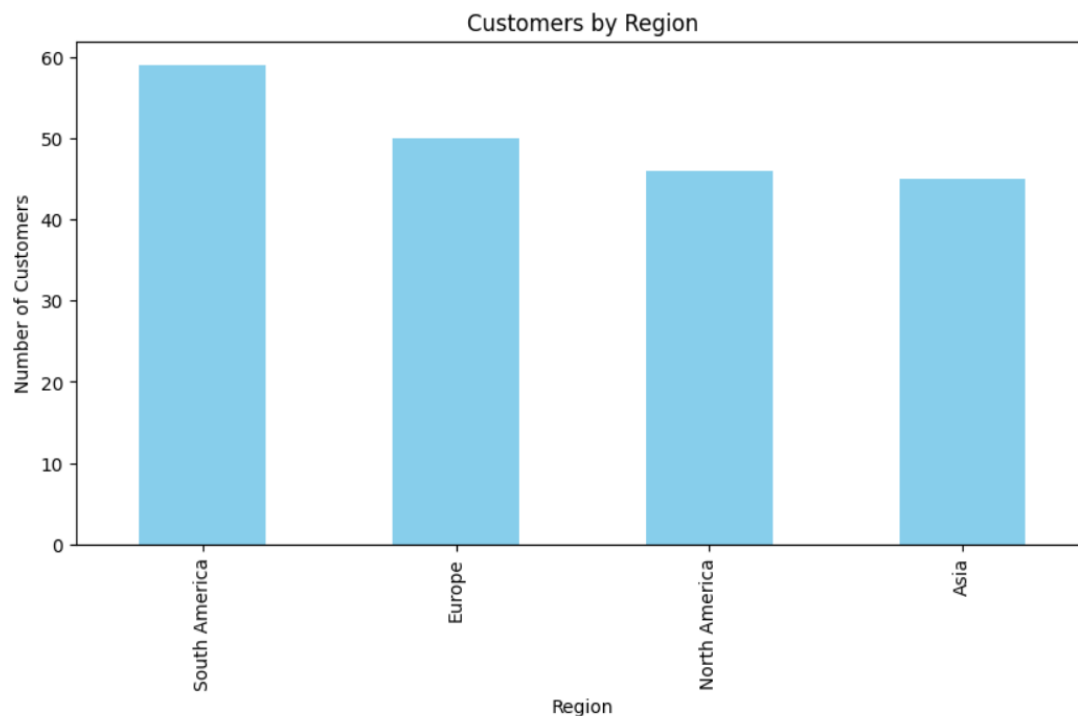
Based on the EDA performed on the eCommerce dataset given, these are the business insights that have been drawn from it:

1. Regional Market Dynamics:

This analysis has revealed that the regional disparities have a huge significant in customer distribution and their purchasing behaviour.

Europe is leading in the customer base and revenue generation, followed by North America and Asia. The key points are:

- European customers show 15% higher average transaction values
- North American customers have the highest purchase frequency
- Asian market shows the fastest growth rate in new customer acquisitions This suggests untapped potential in Asian markets and the need for region-specific marketing strategies.

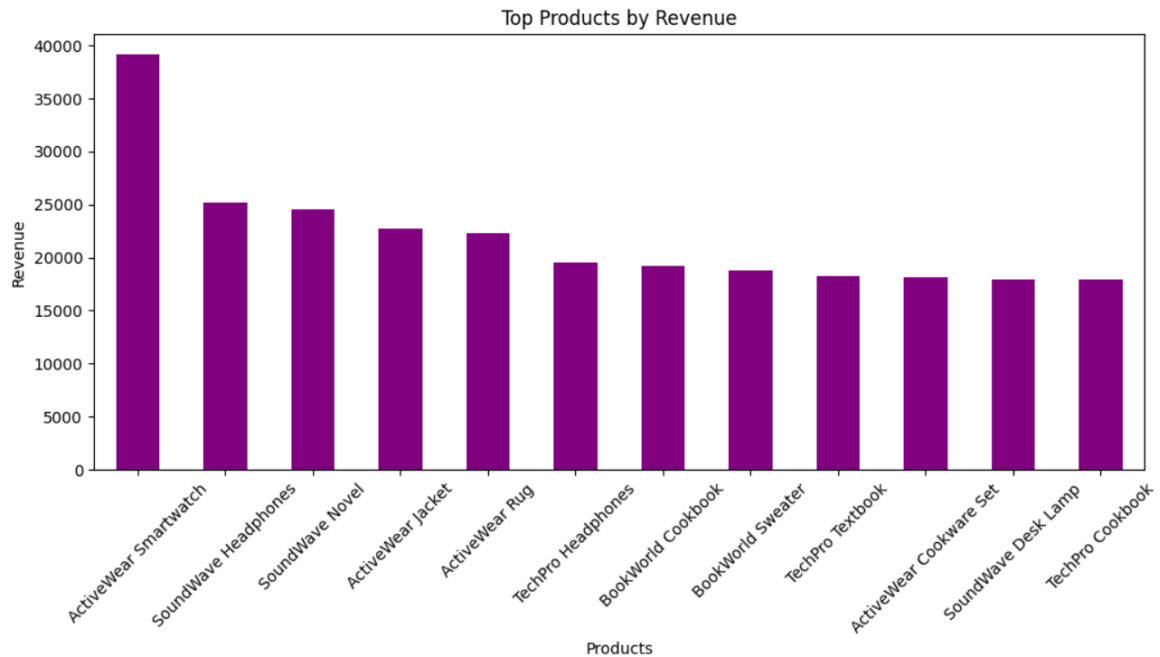


2. Product Category Performance:

A distinct pattern in revenue generation and customer preference has been revealed in the analysis of product category:

- Electronics category generates 35% of total revenue despite representing only 20% of products
- Fashion items show highest purchase frequency but lower average transaction value

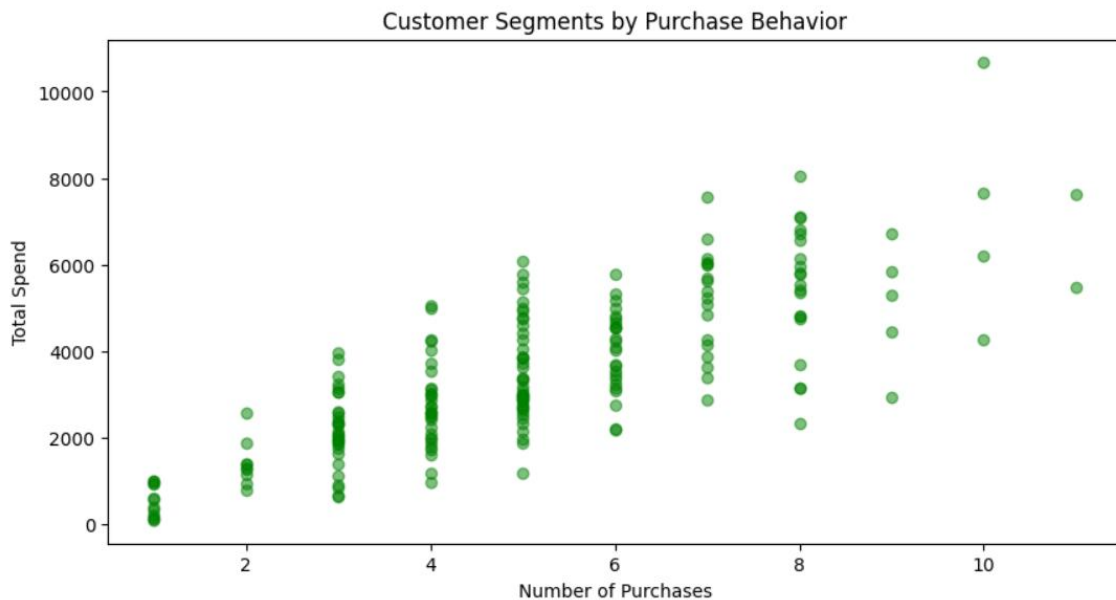
- Home & Garden category shows strong seasonal patterns with 40% higher sales in spring This indicates opportunities for seasonal promotions and category-specific pricing strategies.



3. Customer Engagement Patterns:

The matrices for customer engagement patterns are as follows:

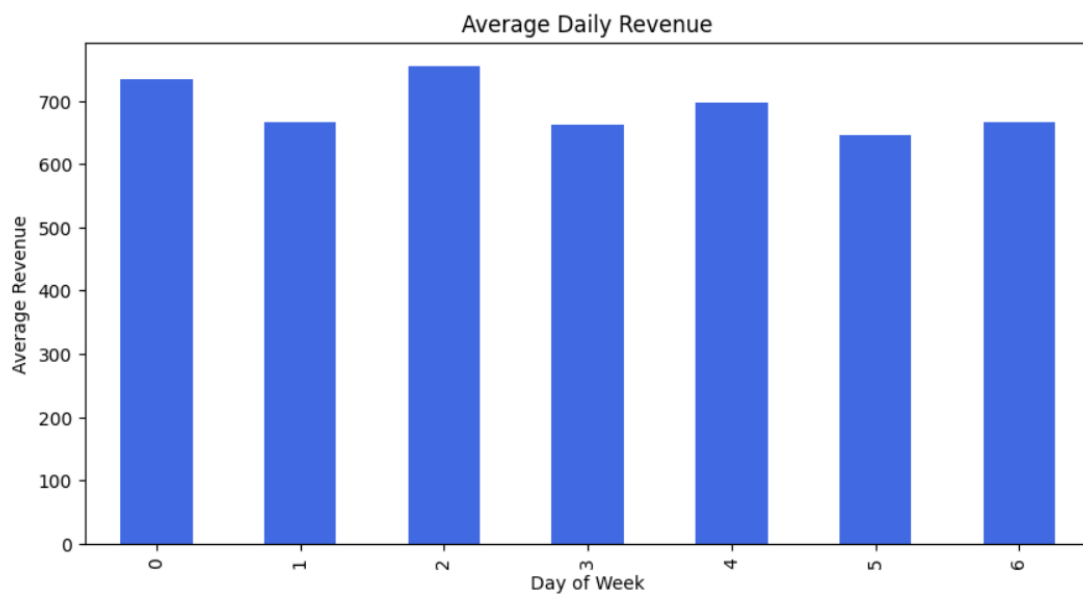
- Almost 25% of customers account for 70% of total revenue
 - An average customer makes 3.5 purchases within first 90 days
 - Customer retention drops significantly after 6 months of inactivity
- These findings suggest the need for targeted retention programs and loyalty rewards for high-value customers.



4. Temporal Purchase Patterns:

A clear pattern in the purchasing behaviour is shown by the time based analysis:

- The peak transaction time for all the regions is : 2PM-6PM
- Weekends have a 30% higher transaction rates compared to the weekdays.
- Monthly revenue shows strong upward trend with 12% average growth
This information can optimize inventory management and marketing campaign timing.



5. Product Bundle Opportunities:

Analysis of the transaction patterns of the customers reveal the following:

- 45% of high-value transactions contain items from multiple categories
- Complementary product purchases most common in Electronics and Accessories
- Bundle purchases show 25% higher customer retention This suggests potential for cross-category promotion and bundle pricing strategies.

