5 Business Insights From the EDA

Exploratory Data Analysis (EDA) Report Summary:

This report presents key findings from the exploratory data analysis (EDA) performed on an eCommerce transactions dataset. The dataset includes information on 200 customers, 100 products, and 1000 transactions. The goal of the analysis is to uncover actionable insights to guide the company in refining its business strategy. The following insights were derived from the data:

1. Customer Distribution: The customer base is primarily concentrated in South America, where 59 of the 200 customers reside. This presents an opportunity for targeted marketing efforts in South America, as this region holds the largest share of the customer base. Tailored campaigns and regional promotions could effectively increase engagement and drive sales.

2. Product Pricing: The product pricing range spans from $16.08 to $497.76, with an average price of $267.55. A majority of products are priced between $147.77 and $397.09, suggesting a middle-range pricing strategy. Introducing more premium products priced above $400 could attract high-value customers and diversify the product offering, potentially increasing overall sales.

3. Top Customers: A small number of top customers make a significant impact on the company's revenue. The top five customers account for a major share of the sales, with the highest spender (C0141) contributing $10,673.87. This

highlights the importance of these key customers to the business's bottom line. The implementation of loyalty programs targeting these high-spending customers can foster customer retention and encourage repeat purchases, driving consistent revenue growth.

4. Top Products: The top five products, including P029, P079, P048, P020, and P062, generate the highest revenue, with P029 alone contributing $19,513.80. These products represent the most lucrative items in the product catalog and should be prioritized in inventory management. Stocking up on these products and offering targeted promotions could further boost revenue from these high-performing items.

5. Transaction Trends: The average transaction value stands at $689.99, with most transactions involving between 2 to 4 items. This indicates that customers are inclined to purchase multiple items in a single transaction, suggesting a strong potential for bundle deals. By offering bundled discounts or promotions, the company can encourage customers to increase their average transaction value, leading to higher overall sales.

Conclusion: The insights from the EDA present several opportunities for the business. A targeted focus on South American customers, premium product offerings, and high-value customers can fuel growth. Additionally, optimizing inventory for top-selling products and introducing bundle deals can further increase revenue. By implementing these strategies, the company can refine its marketing approach, improve customer retention, and maximize sales potential