Exploratory Data Analysis (EDA) and Business Insights

1. Distribution of Customers by regions:
   Analysis of the distribution of customers depending on their geographical distribution highlights customers in a specific region. For example, if one region accounts for the largest percentage of customers, followed by another. This assumption suggests that these areas have significant potential for sales . So, focus of marketing and regional operations in this region to increase revenues and customer engagement.

2. Top Contributors for Revenue:
   The revenue analysis shows that X, Y, and Z products are the largest contributors to the company's total revenue. And this product continues to outperform other products in many areas. Prioritizing these products in promotions, maintaining adequate inventory, and bundling them with additional products can increase additional sales. Additionally, identifying consumer preferences for these products can improve marketing strategies.

3. Monthly Revenue Trend:
   Seasonal trends in revenue show significant peaks during (month X-Y). This indicates that customer traffic is increasing during this period, possibly due to holidays, sales, or seasonal demand. To take advantage of this, companies should plan promotional campaigns, special promotions, and volume sales during these high-demand months to increase sales.

4. Category Level Revenue Analysis:
   In terms of revenue by product category, for example if A generates the highest revenue, followed by B. In contrast the third category C represents lower performance, i.e., inconsistent with customer expectations or poor performance. To optimize the overall product portfolio, it is recommended to monitor and change the strategies of the underperforming teams and focus on expanding and supporting the better performing teams.

5. The Effect of Days Since Registration on Transactions:
   When a relationship is established between customer registration date and transaction frequency, it appears that customers tend to make the most transactions in the first X days after registration. This pattern suggests that early engagement strategies such as welcome or promotional campaigns are important to encourage early adoption. Strengthening these efforts can improve long-term customer service and provide lifetime benefits.