

Bank Customer Data Analysis for the launch of new line of Credit Card

Overview:

A bank named Mitron Bank (imaginary) is a legacy financial institution. They want to introduce a new line of credit cards, aiming to broaden its product offerings and reach in the financial market. They provided a sample dataset of 4000 customers across five cities on their online spend and other details. This analysis is expected to guide them in tailoring the credit cards to customer needs and market trends.

Dataset Overview:

1. dim_customers:

- a. age_group: Customers are categorized based on age group.
- b. avg_income: Contains average income for each customer.
- c. city: The city names from where each customer belongs.
- d. customer_id: Unique ID for each customer.
- e. gender: Gender of customer.
- f. marital_status: Marital status of customers.
- g. occupation: Occupation of customers.

2. fact_spends:

- a. category: Area of spending money.
- b. customer_id: Unique ID for each customer (repeated value but representing each customer)
- c. month: Month name.
- d. payment_type: Payment method for payment.
- e. spend: Amount spent by customers.

We have taken few steps to clean and transform the data before analysis

- Checked and cleaned duplicates and tackled null values accordingly.
- Created a new column in dim_customers table named '**income_category**' to further segregate customers based on there income which includes 'low', 'medium' and 'high' these 3 categories.
- Created a new column in fact_spends table named '**month_number**' to sort the month column based on month number of the year.
- Adjusted and corrected the data types of the columns.

We have created few measures for the important calculations of analysis.

- Average Spending per customer: This measure is to calculate how much of money does each customer spend on an average throughout the entire time. (total spending/total number of customers)
- Avg spending per month: This measure is to calculate how much of money does each customer spend on an average in each month. (Average Spending per customer/total number of months).
- Avg income utilization: How much of the total income is spent by each customer on an average. (Avg spending per month/average of income).
- Female % Count: To count the percentage of female customers.
- Male % Count: To count the percentage of male customers.
- Married % Count: To count the percentage of married customers.
- Single % Count: To count the percentage of single customers.

Important Insights:

❖ Demographics Insights:

- Out of 4000 customers majority is Male (65%).
- 78% of customers are married.
- Almost 70% customers are aged between 25-45 years. (Where 25-34 years are 37.45% and 34-45 years are 31.83%).
- Mumbai comprises 27% of total customers, the highest among the 5 cities.
- Most of the customers (42.73%) are from low-income category having income below 45000 rupees per month.
- Eldest customers (45+ age group) are having highest average income (more than 61000 rupees per month).
- Business owners are having highest average income (70k per month).

❖ Spending Behaviour Insights:

- Highest amount of spending is done in September.
- On an average most money is spent on paying bills and buying groceries overall.
- The customers who are beyond the age group of 21-24, mostly spend the money to pay the bills. Where the customers in age group of 21-24 years spend most money on entertainment.
- IT employees spend the most amount of money per month compared to others.
- The customers of age group of 35-45 years are highest spenders.
- Credit card is mostly used as payment method (40.74%) for money transaction of Mitron Bank.
- Only the youngest customers (age group 21-24 years) use UPI more over credit card as payment method.

- Customers from Mumbai spend more money per month on an average.
- The average spending per month of male customers is slightly higher than that of the female customers, same is for married customers also than that of single customers.
- Female customers spend most of the money for Health and Wellness, where male customers spend the most in bills.
- Married customers spend most money on paying bills whereas the single customers spend most money on electronics.

❖ **Income Utilization Insights:**

- Overall average income utilization percentage is 42.82%.
- The income utilization of male customers is approx. 4.5% higher than that of female customers.
- Income utilization is negligibly higher for single customers than married customers.
- Income utilization percentage is highest in September (56.11%) and lowest in May (33% approx.)
- Income is utilized at a highest rate in Mumbai (51.43%). Whereas the rate is lowest in Chennai (31.10%).
- Salaried IT employees are the front runners in terms of income utilization (approx. 51%) whereas govt. employees utilize at lowest rate (approx. 29%).
- Customers who fall under the age group of 35-45 years utilize the income at highest rate.

Few Recommendations:

- We observed that youngest customers prefer UPI over credit card. Educating about the benefits of using credit cards and providing exciting rewards / cashbacks for transactions due to entertainment, electronics and for purchasing apparel is recommended.
- Tailor the credit card to provide enhanced convenience and rewards for health insurance purchase.
- Enhanced cashback or rewards for bill payments, grocery purchase through credit cards is recommended.
- Partnering with online brand of electronics, clothing and sponsor their sale for exclusive rewards for credit cards can be beneficial.
- Most of the customers are married, and income utilization is highest among the customers of age group of 35-45 years, therefore giving bonus convenience for family-oriented insurance plans and travel plans is beneficial.

- Considering the fact that most of the customers are from low-income category it is recommended to keep the annual charges minimal or remit the charges as per convenience (if possible) and adjust the interest rates accordingly so that it suits the financial ability of the customers.
- September is the month close to festivals and average spending is also high so festive related offers and discounts on credit card exclusively is beneficial.

Conclusion:

We did thorough analysis after cleaning and preprocessing the data and produced some important insights and also produced some recommendations based on those insights. We hope the bank will be able to make their new line of credit cards successful and achieve targets through leveraging the given recommendations.