Credit Card Weekly Status Report

Project Overview

The objective of this project was to analyse customer demographics and credit card transaction data to build two interactive Power BI dashboards:

- Customer Report Dashboard
- Transaction Report Dashboard

The dashboards provide actionable insights into customer behaviour, spending patterns, and weekly revenue trends, with dynamic filtering by gender, age group, income group, week number, and spending category.

The project focuses on transforming raw data into meaningful business intelligence to support decision – making.

Dataset Description

Two datasets were used:

Dataset 1 - CreditCard

Columns-

Client_Num

Card_Category

Annual_ Fees

Activation_30_days

Customer_Acq_Cost

Week_Start_Date

Week_Num

Qtr

current_year

Credit_Limit

Total_Revolving_Bal

Total_Trans_Amt

Total_Trans_Vol

Avg_Utilization_Ratio

Use Chip

Exp Type

Interest_Earned

Delinquent_Acc

Dataset 2 - Customer

Columns-

Client_Num

Customer_Age

Gender

Dependent_Count

Education_Level

Martial_Status

state_cd

Zipcode

Car_Owner

House_Owner

Personal_loan

contact

Customer_Job

Income

Cust_Satisfaction_Score

A one to many relationship was created between Customer and CreditCard tables using Client_Num.

Data Modelling & Transformations

The following transformations and calculated fields were implemented using DAX:

Derived Columns

- **Age Column** (18-25, 26-35, 36-45, 46-55,55+)
- **Income Group** (Low, Medium, High)
- **Week _Number** (numeric conversion from text WEEK format for trend analysis)

Measures Created

- Total Revenue
- Total Transactions
- Current Week Revenue
- Previous Week Revenue

Text-based week values were converted to numeric format to enable week-over-week calculations and proper trend visualization.

Dashboard Design

Dashboard 1: Customer Report

Key visuals

- Total Customers KPI
- Average Satisfaction Score
- Customers by Gender
- Customers by Age Group
- Customers by Income Group
- Customers by State (Map)
- Ownership Analysis (Car & House Owners)

Slicers

- Gender
- Age Group
- Income Group

Purpose

To understand customer distribution, demographics, and ownership patterns.

Dashboard 2: Transactions Report

Key visuals

- Total Revenue
- Total Transactions
- Current Week Revenue
- Previous Week Revenue
- Revenue by Spending Category
- Weekly Revenue Trend
- Credit Limit vs Utilization (Scatter Plot)

Slicers

- Gender
- Week Number
- Expense Type

Purpose

To analyse spending behaviour, revenue trends, and credit utilization.

Key Insights

- Bills and Entertainment categories contribute the highest share of revenue, indicating consistent recurring spending behavior.
- Weekly revenue shows noticeable fluctuations, highlighting periods of higher customer activity.

- Higher credit limits do not always correspond to higher utilization, indicating diverse customer credit behaviour.
- Income group and age group segmentation reveal different spending patterns across customer demographics.
- Ownership(car/house) correlates withy higher average credit limits.

Challenges Faced

- Week values were stored as text (e.g., “Week-1”), requiring string cleaning and numeric conversion for trend analysis.
- Circular dependency issues during week sorting were resolved by introducing a separate numeric Week column.
- Scatter chart aggregation initially displayed only one point, which was resolved by disaggregating data using Legend fields
- Ensuring all slicers dynamically interacted with visuals required careful configuration.

These challenges were addressed through DAX transformations, proper data modelling, and visual interaction settings.

Conclusion

This project demonstrates the complete Power BI workflow.

- Data modelling
- DAX calculations
- Interactive dashboard design
- Business insight generation

Business Impact

This dashboard can help financial institutions monitor revenue trends, identify high-value customer segments, optimize credit allocation strategies, and improve customer satisfaction through data-driven decision-making.