Credit Card Financial Report: Power BI Project

This presentation summarizes a Power BI project. It covers credit card financial data analysis. The goal is to provide Interactive Dashboard and actionable insights.

GP by Gitanjali Pekamwar

Project Overview

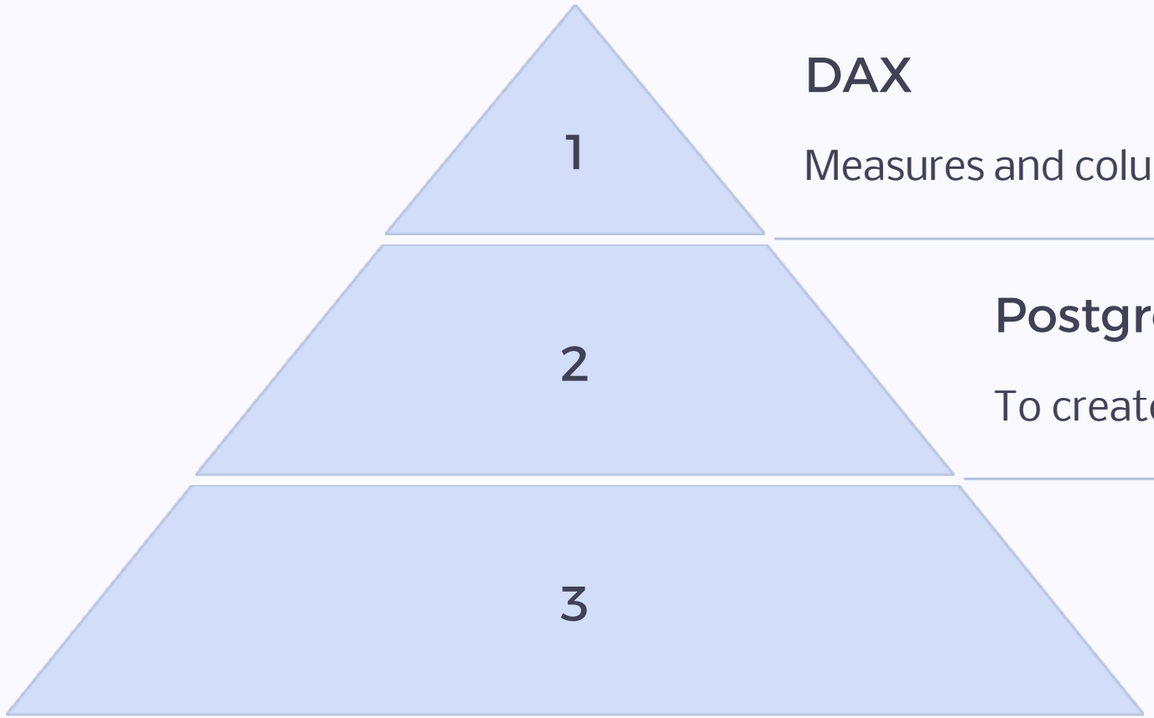
The project aims to analyze credit card transactions and customer spending patterns using Power BI dashboards. By evaluating financial metrics, customer demographics, and transactional trends, using vast functionality of power Bi and used DAX formulas for advanced analysis this analysis provides insights into revenue generation, expenditure behavior, and card category performance. By examining key financial metrics such as total revenue, transaction amounts, and interest earnings, the project seeks to identify trends in revenue generation and transaction stability across different quarters. Additionally, it evaluates the performance of various credit card categories.

The study further explores customer demographics, analyzing spending habits based on age, education level, income group, job type, and marital status. It also assesses how different transaction methods such as swipe, chip, and online payments—impact on overall revenue distribution and many more.

Overall, this analysis provides a data-driven approach to understanding credit card usage, enabling financial institutions to refine their marketing strategies, enhance customer satisfaction, and maximize revenue. The insights derived from this study can assist businesses in developing more tailored financial products, optimizing credit card usage, and improving customer retention strategies.

Technology used

This project used Power BI Desktop. Power BI Service was also used for collaboration and sharing. The reports use DAX for calculated columns and measures.



DAX

Measures and columns

PostgreSQL Database

To create tables in SQL

Power BI Desktop

Report creation

DAX

```
Current_Week_Revenue = CALCULATE(
    SUM('public cc_detail'[Revenue]),
    FILTER(
        ALL('public cc_detail'),
        'public cc_detail'[week_num2] = MAX('public
cc_detail'[week_num2])))
```

```
Previous_Week_Revenue = CALCULATE(
    SUM('public cc_detail'[Revenue]),
    FILTER(
        ALL('public cc_detail'),
        'public cc_detail'[week_num2] = MAX('public
cc_detail'[week_num2] ) - 1))
```

```
AgeGroup = SWITCH(TRUE(),'public
cust_detail'[customer_age]<30,"20-30",
'public cust_detail'[customer_age]>=30&&'public
cust_detail'[customer_age]<40,"30-40",
'public cust_detail'[customer_age]>=40&&'public
cust_detail'[customer_age]<50,"40-50",
'public cust_detail'[customer_age]>=50&&'public
cust_detail'[customer_age]<60,"50-60",
'public cust_detail'[customer_age] >= 60,"60+",
"unknown"
)
```

DAX

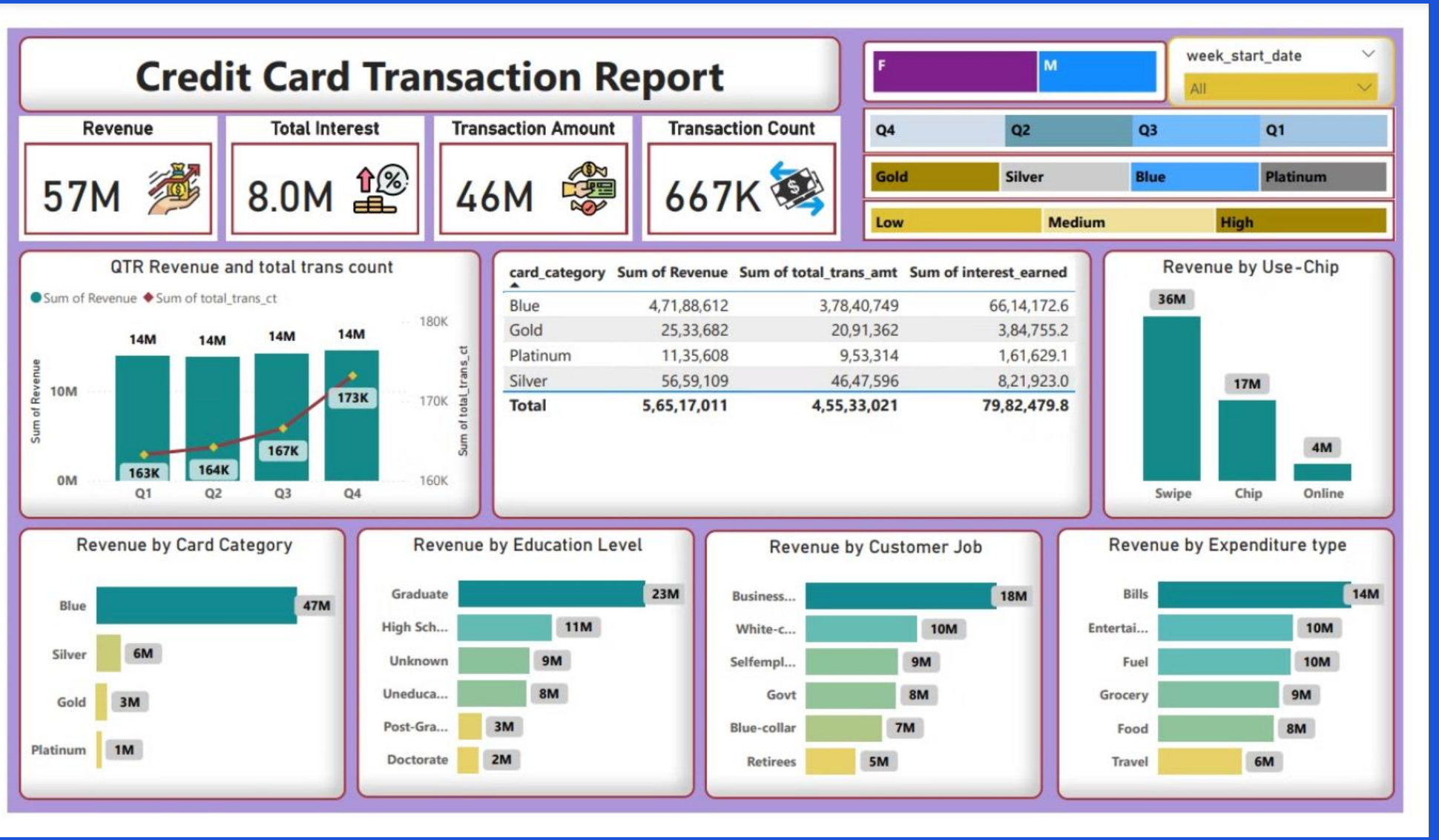
✓ WOW_Revenue = DIVIDE(([Current_Week_Revenue] - [Previous_Week_Revenue]),[Previous_Week_Revenue])

✓ week_num2 = WEEKNUM('public cc_detail'[week_start_date])

✓ Revenue = 'public cc_detail'[annual_fees] + 'public cc_detail'[total_trans_amt] + 'public cc_detail'[interest_earned]

✓ IncomeGroup = SWITCH(
TRUE(),
'public cust_detail'[income] < 35000, "Low",
'public cust_detail'[income] >= 35000 && 'public cust_detail'[income] < 70000, "Medium",
'public cust_detail'[income] >= 70000, "High",
"unknown"
)

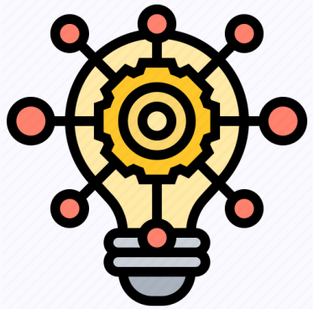
Dashboard : 1



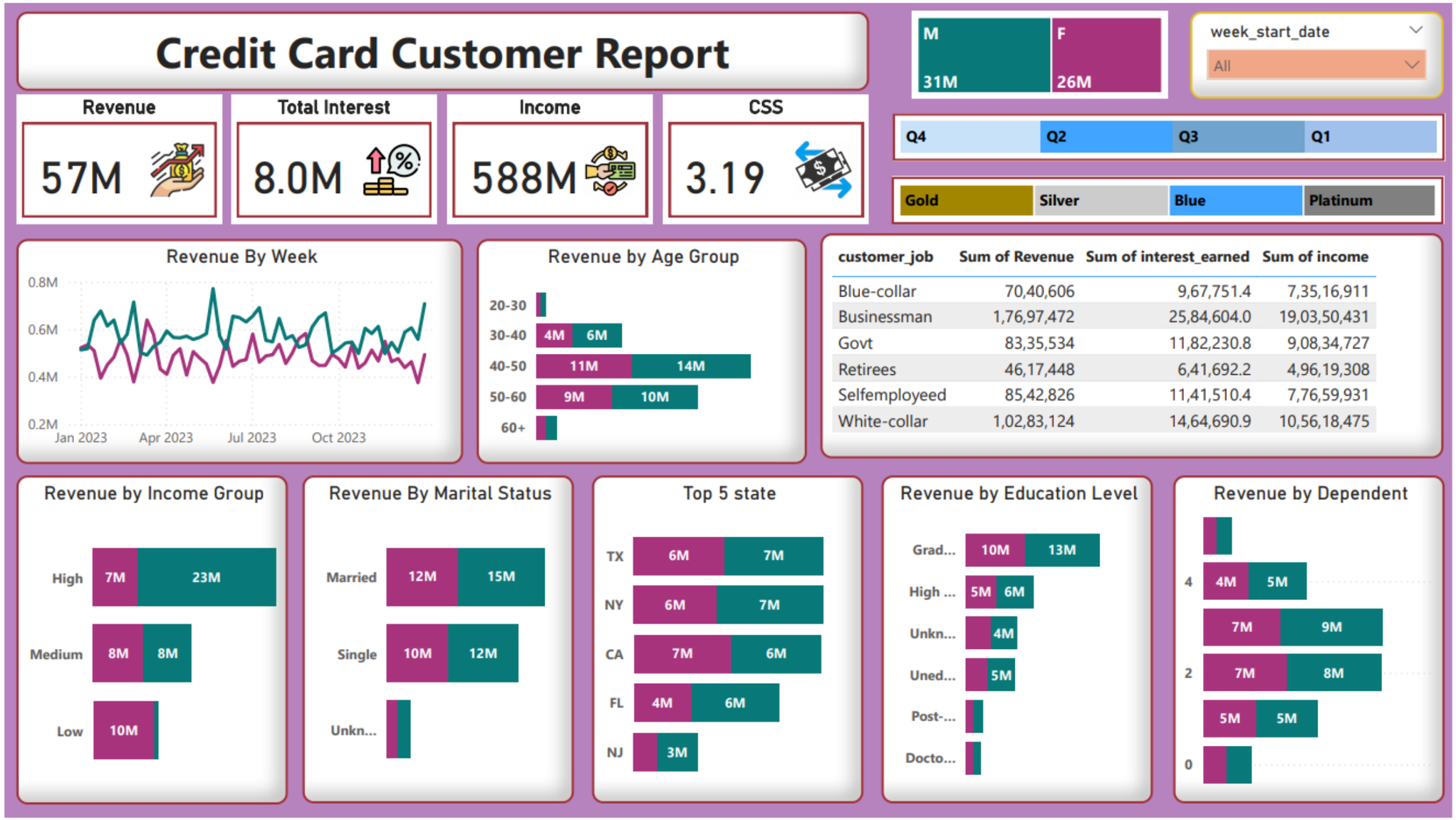
card_category	Sum of Revenue	Sum of total_trans_amt	Sum of interest_earned
Blue	4,71,88,612	3,78,40,749	66,14,172.6
Gold	25,33,682	20,91,362	3,84,755.2
Platinum	11,35,608	9,53,314	1,61,629.1
Silver	56,59,109	46,47,596	8,21,923.0
Total	**5,65,17,011**	**4,55,33,021**	**79,82,479.8**

Credit Card Transaction Dashboard Insights

- **Revenue & Transaction Trends:** The total revenue generated is **$57M**, with a transaction count of **667K** and total interest earned at **$8M**. Revenue remains stable across quarters ($14M each).
- **Card Category Performance:** The **Blue card** dominates with **$47M revenue**, while Gold, Silver, and Platinum contribute significantly less.
- **Transaction Methods:** The most preferred method is **swiping transactions ($36M revenue)**, followed by **chip ($17M)** and **online transactions ($4M).**
- **Expenditure Type:** The highest revenue-generating categories are **bills ($14M)**, followed by **entertainment, fuel, groceries, food, and travel**.
- **Customer Demographics:** Graduates and business owners are the top revenue contributors.

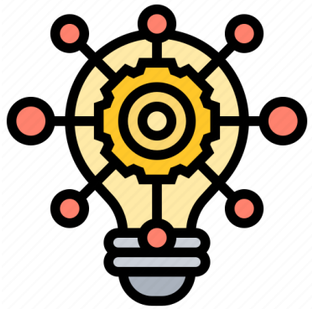


Dashboard : 2



Credit Card Customer Dashboard Insights

- **Income & Customer Segmentation:** Total income stands at **$588M**, with a Credit Satisfaction Score (CSS) of **3.19**.
- **Age Group & Spending Trends:** Customers aged **40-50 and 50-60 contribute the highest revenue**.
- **Marital & Dependent Analysis:** Married individuals generate more revenue compared to single individuals. Customers with **2 or more dependents** have higher spending.
- **Top Revenue-Generating States: Texas, New York, California, Florida, and New Jersey** lead in credit card revenue.
- **Education & Job-Based Analysis:** Graduates and high school-educated individuals contribute the most revenue. **Businessmen and white-collar professionals** are the highest revenue-generating customer segments.



Visual Insights: Combining Transaction & Customer Data

Combining transaction and customer data for a richer picture. This will enhance decision-making.

1

Data Integration

Combine data sources.

2

Visualization Design

Create informative charts.

3

Insight Extraction

Identify key correlations.

Credit Card Transaction Report

Revenue	Total Interest	Transaction Amount	Transaction Count
57M	8.0M	46M	667K

F | M

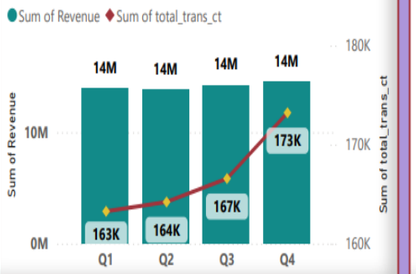
week_start_date: All

Q4 | Q2 | Q3 | Q1

Gold | Silver | Blue | Platinum

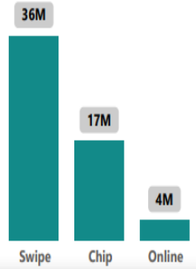
Low | Medium | High

QTR Revenue and total trans count

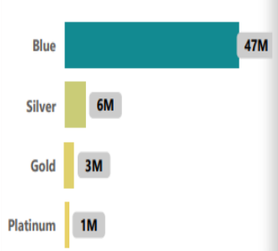


card_category	Sum of Revenue	Sum of total_trans_amt	Sum of interest_earned
Blue	4,71,88,612	3,78,40,749	66,14,172.6
Gold	25,33,682	20,91,362	3,84,755.2
Platinum	11,35,608	9,53,314	1,61,629.1
Silver	56,59,109	46,47,596	8,21,923.0
Total	**5,65,17,011**	**4,55,33,021**	**79,82,479.8**

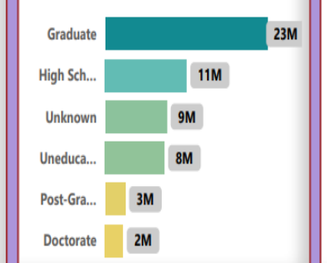
Revenue by Use-Chip



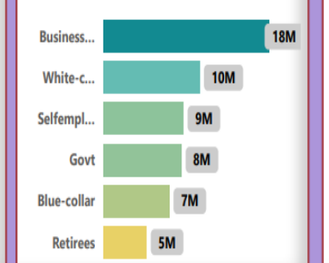
Revenue by Card Category



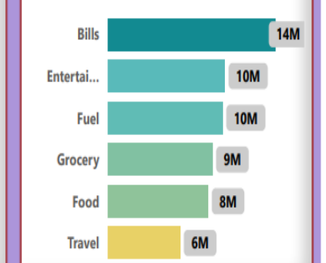
Revenue by Education Level



Revenue by Customer Job



Revenue by Expenditure type



Credit Card Customer Report

Revenue	Total Interest	Income	CSS
57M	8.0M	588M	3.19

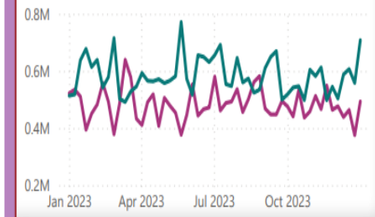
M 31M | F 26M

week_start_date: All

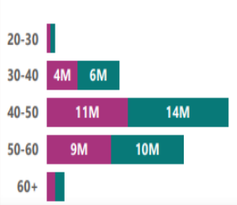
Q4 | Q2 | Q3 | Q1

Gold | Silver | Blue | Platinum

Revenue By Week

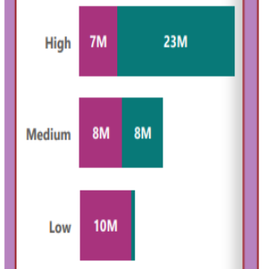


Revenue by Age Group

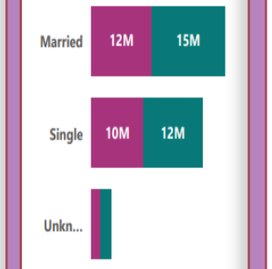


customer_job	Sum of Revenue	Sum of interest_earned	Sum of income
Blue-collar	70,40,606	9,67,751.4	7,35,16,911
Businessman	1,76,97,472	25,84,604.0	19,03,50,431
Govt	83,35,534	11,82,230.8	9,08,34,727
Retirees	46,17,448	6,41,692.2	4,96,19,308
Selfemployeed	85,42,826	11,41,510.4	7,76,59,931
White-collar	1,02,83,124	14,64,690.9	10,56,18,475

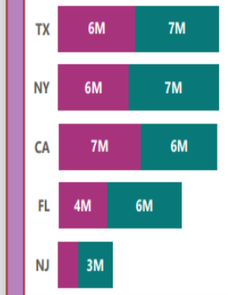
Revenue by Income Group



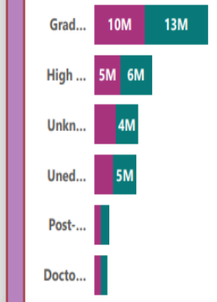
Revenue By Marital Status



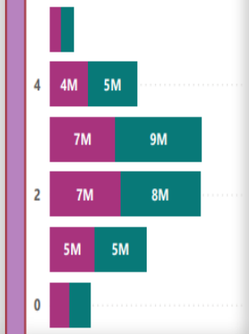
Top 5 state



Revenue by Education Level



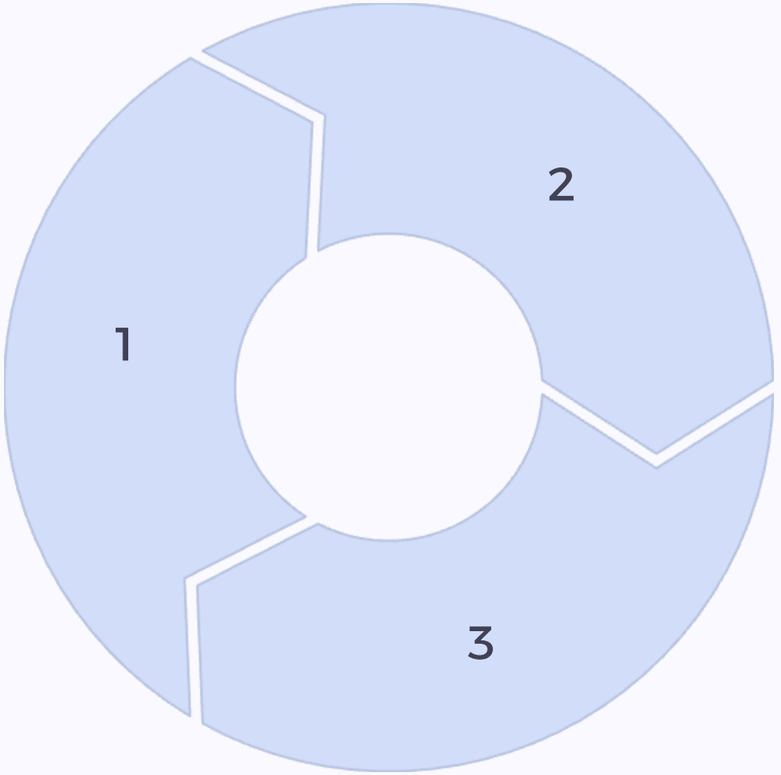
Revenue by Dependent



Conclusion: Leveraging Power BI for Credit Card Insights

Power BI enables actionable credit card insights. It will lead to enhanced security and better customer engagement. We need to focus on continuous improvement.

Data-Driven Decisions



Security Enhancements

Customer Engagement

Summary

This project involved an in-depth analysis of credit card transaction data using Power BI dashboards to uncover key financial insights.
Through this project, I gained valuable hands-on experience in **data analysis using Power BI**, including **data visualization, dashboard interpretation, and financial reporting**. I learned how to analyze **transactional data to identify revenue patterns, customer behaviors, and market trends**.

Additionally, I developed a deeper understanding of **financial metrics**, such as revenue distribution, interest earnings, and expenditure analysis, which are critical for business decision-making in the banking and financial sector.
Overall, this project strengthened my analytical skills It improved my skills in **data storytelling and business intelligence reporting**, which are essential for presenting insights effectively to stakeholders, and provided a comprehensive understanding of **how data-driven decision-making can enhance financial performance and customer engagement in the credit card industry**.

Thank You

Thank you for your attention. We welcome any questions and feedback ☺

--- BY Gitanjali Pekamwar