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Cardholder Behavior Analysis

✳ SEGMENTATION, USAGE PATTERNS, AND RISK

Presented by :

PUTRI KHUSNUL KHOTIMAH

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Objective

Analysis Objective

The objective of this analysis is to understand cardholder behavior based on demographic, card, and transaction data. Through this, we aim to identify key user segments, usage patterns, and potential risks such as late payments or unusual transaction behavior.

Key Insight

Based on the data analysis, we identified several key findings:
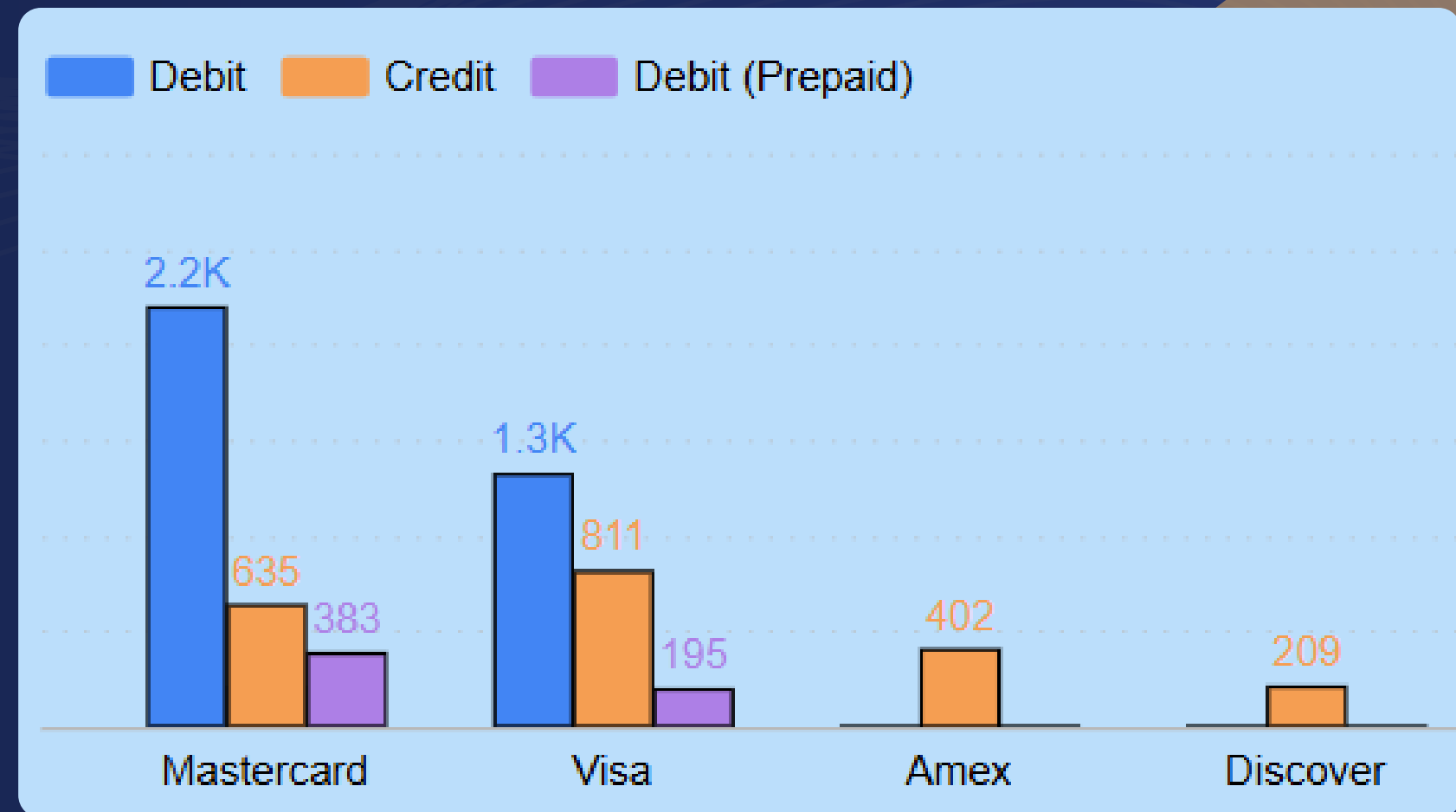
THE MAIN USER SEGMENT IS AGED 25-35, MOSTLY WORKING PROFESSIONALS.

USAGE PATTERNS INDICATE THAT ONLINE TRANSACTIONS PEAK DURING WEEKENDS.

CERTAIN USER SEGMENTS SHOW A HIGHER RISK OF LATE PAYMENTS, WHICH SHOULD BE ADDRESSED THROUGH RISK MITIGATION STRATEGIES.

Payment Trends Across Major Card Providers

Debit ■ **Credit** ■ **Debit (Prepaid)**

	Debit	Credit	Debit (Prepaid)
Mastercard	2.2K	635	383
Visa	1.3K	811	195
Amex		402	
Discover		209	

The chart shows that Mastercard and Visa dominate overall transactions, with Mastercard leading in debit usage (2.2K) while Visa records the highest credit transactions (811). Debit prepaid usage remains relatively low for both providers, indicating limited adoption. Meanwhile, Amex (402) and Discover (209) are used exclusively for credit, but their transaction volumes are much smaller compared to Mastercard and Visa, suggesting they serve more niche markets. Overall, debit is primarily driven by Mastercard, credit by Visa, and prepaid remains an underutilized segment with growth potential.
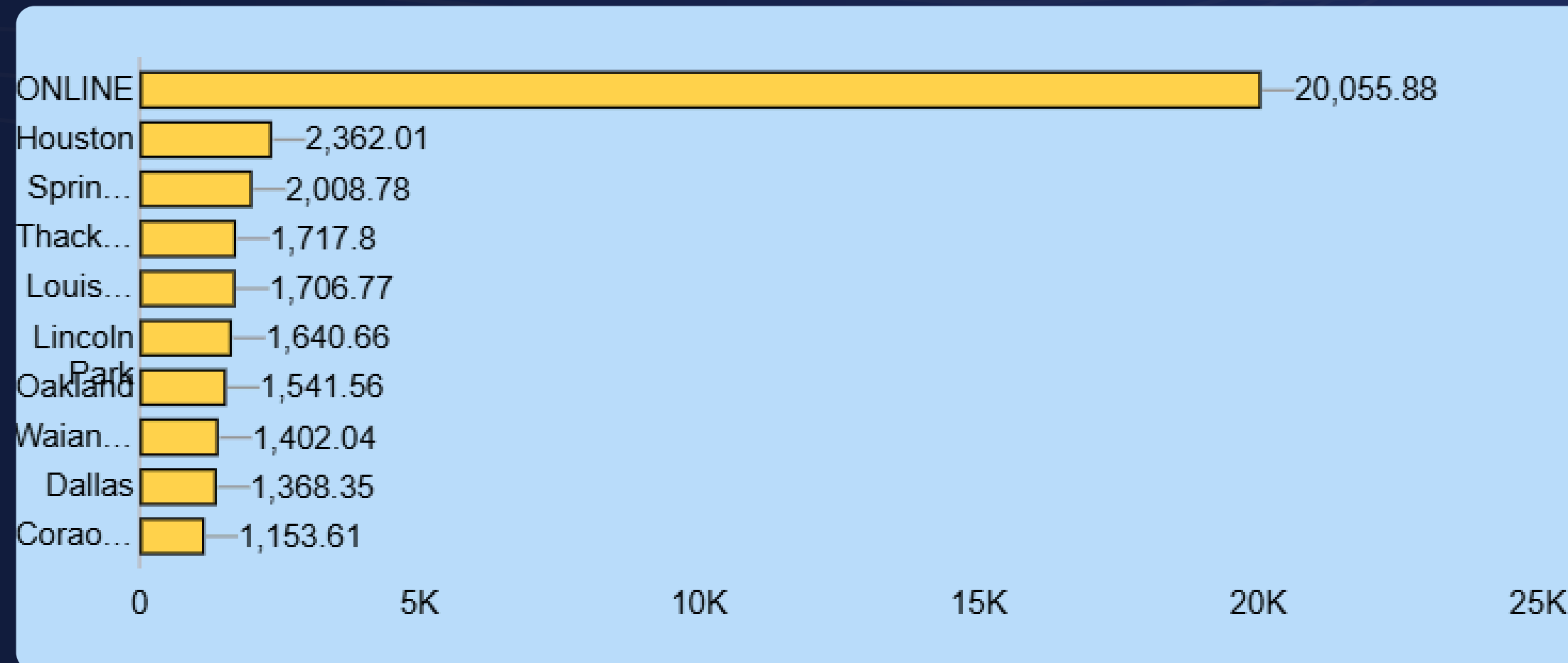
Top Merchant Categories

The chart highlights that online transactions overwhelmingly dominate merchant categories, reaching over 20K, far surpassing physical locations such as Houston (2.3K) and Springfield (2.0K). Other cities like Thackerville, Louisville, and Lincoln fall below 2K, showing significantly lower spending compared to online channels. This indicates a strong consumer preference for digital commerce, suggesting that e-commerce is the primary driver of transaction volume, while physical merchant categories remain secondary contributors.
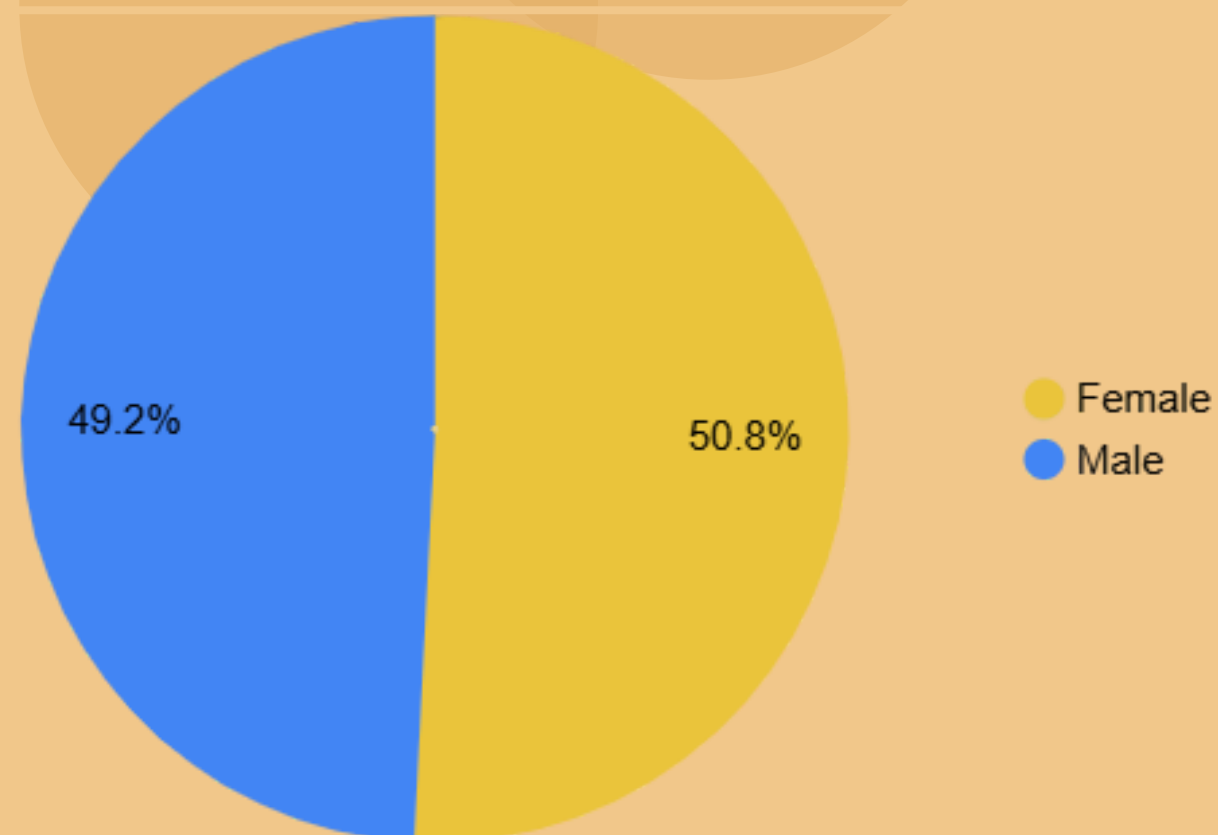
User Demographics

client_id

The user demographics reveal that the largest group of clients holds the highest credit score of 850, with around 35K users, followed by other ranges such as 689, 684, and 683, each with approximately 22K–25K users. This suggests a concentration of users with strong creditworthiness, although there is still a significant distribution across lower credit scores. In terms of gender, the population is nearly balanced, with 50.8% female and 49.2% male, indicating no major gender dominance in the user base.

Transaction Summary Overview

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client_id
938

Total User

amount
149.4K

Total Trasaction Value

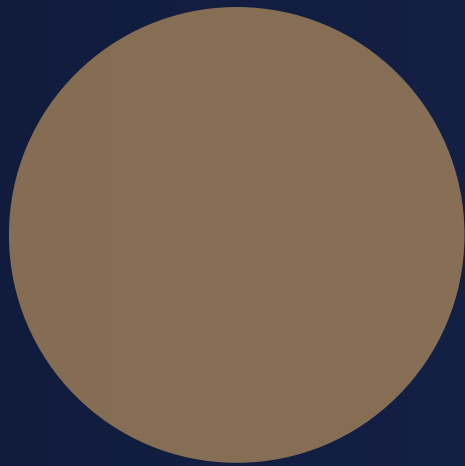| tx_id |
|:---:|
| 3.0K |

Total Transactions

amount
49.81

Average Transaction …

The dataset consists of 938 users who generated approximately 3,000 transactions, with a total transaction value of 149.4K. On average, each transaction amounts to 49.81, indicating relatively moderate spending per transaction. This overview suggests that while the user base is under 1,000, transaction activity is consistent, and the average ticket size reflects mid-level consumer spending behavior.

Reccomendations

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1. **Debit & Credit Strategy** - Focus on Mastercard for daily debit incentives and Visa for credit benefits like installments or travel rewards.
2. **Promote Prepaid Cards** – Encourage prepaid adoption for budgeting, youth, or gifting through targeted campaigns.
3. **Leverage High Credit Scores** – Offer premium services or loyalty perks to high-score users to increase retention and spending.
4. **Balanced Marketing** – Keep campaigns inclusive, as gender distribution is nearly equal.
5. **Expand User Base** – Grow beyond 938 users through referral programs, promotions, or partnerships to boost overall transaction volume.