CUSTOMER CHURN ANALYSIS

By: Rian Qadir

Contents

1. Customer Churn

Customer Churn Rate will be used to measure Customer Churn.

Churn Rate = (Lost Customers / Total number of customers) * 100

2. About Dataset

We sourced this dataset from Datacamp for analysis.

- The following are the data attributes:
  - Customer ID
  - Churn Label
  - Churned
  - Account Length (in months)
  - Local Calls
  - Local Mins
  - Intl Calls
  - Intl Mins
  - Intl Active
  - Intl Plan
  - Extra International Charges
  - Customer Service Calls
  - Avg Monthly GB Download
  - GB Download Distribution
  - Unlimited Data Plan
  - Extra Data Charges
  - State
  - Phone Number
  - Gender
  - Age
  - Under 30
  - Senior
  - Group
  - Number of Customers in Group
  - Device Protection & Online Backup
  - Contract Type
  - Payment Method
  - Monthly Charges Bins
  - Monthly Charge
  - Total Charges
  - Churn Category
  - Churn Reason

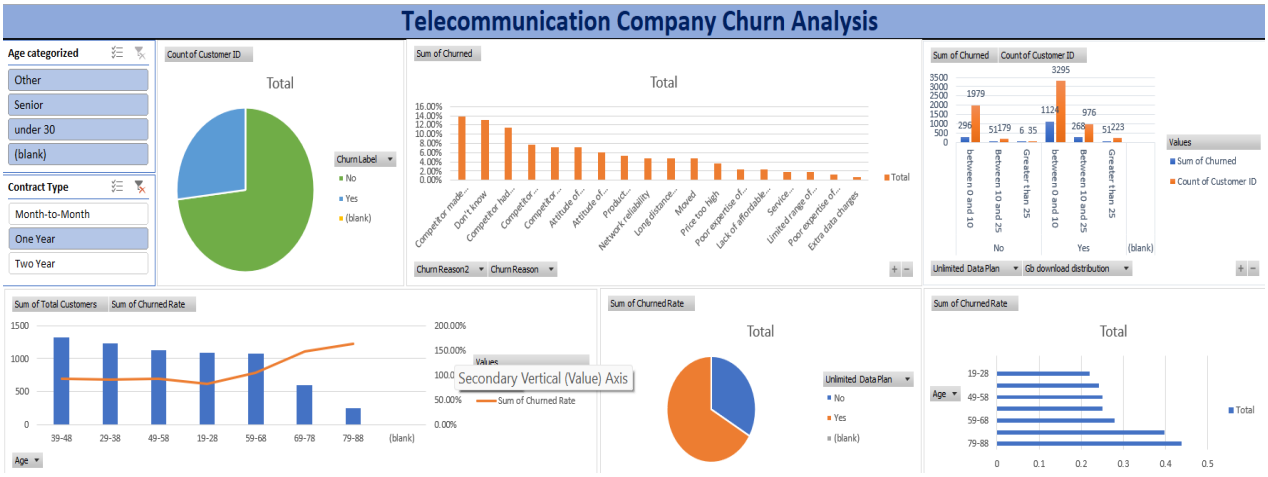
3. Questions

1. How does having an international plan affect the average monthly charges? Is there a significant difference in spending?
2. Which payment method is associated with the highest average monthly charges? Is there a correlation between payment method and churn rate?
3. Do customers with higher customer service call counts have a higher average monthly charge? How does this correlate with churn?
4. How do total charges compare across different contract types (Month-to-Month, One Year)? Are longer contracts associated with higher or lower total charges?
5. Which state has the highest churn rate? How does churn distribution vary across different states?
6. Is there a relationship between the number of international calls/minutes and the churn rate? Are customers who use international services more or less likely to churn?
7. How does having device protection and online backup impact churn? Is there a difference in churn rates between customers with and without these services?
8. Segment customers by their monthly charges (e.g., low, medium, high) and compare churn rates across these segments. Are customers with higher charges more or less likely to churn?
9. Calculate the average customer lifetime value for churned vs. non-churned customers. How does churn impact overall customer value?
10. Analyze the GB download patterns across different contract types. Do customers on longer contracts use more or less data? How does this relate to their churn behavior?

4. Findings

1. Customers who do not subscribe to international plans generally incur higher monthly charges.
2. Among payment methods, debit card users have the highest average monthly charges, amounting to 35.10.
3. Customers who contact customer service typically face an average monthly charge of 36.55.
4. The highest total charges, amounting to 3,056,047, are linked to the two-year contract type.
5. West Virginia records the highest churn rate, standing at 31.7%.
6. The lowest monthly charge group (0-100) exhibits the highest churn rate, suggesting that customers with lower bills are more prone to churn.
7. Customers lacking device protection and online backup experience a much higher churn rate (70.60%) compared to those with these services (29.40%).
8. The segment with medium monthly charges has the highest churn rate, at 49.39%, indicating a greater likelihood of churn in this group.
9. Non-churned customers have a notably higher average customer lifetime value (CLV) compared to churned customers, highlighting their greater long-term contribution.
10. Month-to-month contract holders display the highest churn rate at 87.92% and also the largest average monthly GB download at 24,404.

5. Dashboard 1



6. Dashboard 2