

Churn Analysis

Domain: Telecommunications
Function: Customer Retention
and Churn Analysis





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Problem Statement

Customer churn is a significant challenge for the telecommunications industry, directly impacting revenue and profitability.

Understanding the factors contributing to churn and identifying at-risk customers can help design effective retention strategies.





Objective

The objective is to analyze customer data to identify patterns and factors associated with churn. The goal is to develop actionable insights to reduce churn rates, enhance customer retention, and increase overall customer satisfaction and lifetime value.





Tools Used



Analytical and Visual

Microsoft Excel



Presentation

Microsoft Powerpoint





Dataset Overview

Data source: Internet

Time period: 2015-2018

Data size: dataset_telecom_customer_churn(7043, 43)

Key columns:

Actual Columns: Payment Method, Married, Gender, Contract, Number of Referrals, Total Revenue, Offer, Churn category, Churned

Dax/Calculated columns: churn%, age_range, senior_citizen, cltv



Analysis Workflow





Primary Insights



26.54%

Churn rate

\$2,853.93

Avg Customer
Life time value

13747

Total Referral

\$21.37M

Total Revenue

32.39

Avg tenure(Months)

\$13.8K

Total Refunds

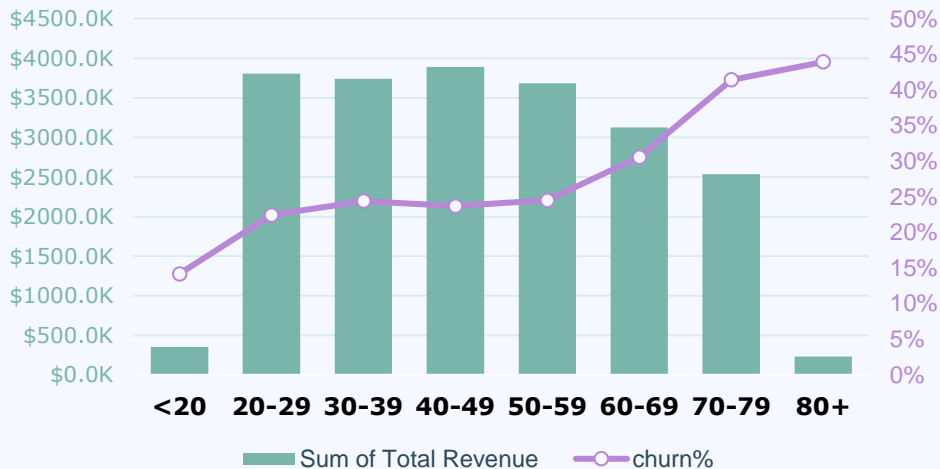
\$63.78

Avg monthly bill



Secondary Insights

Impact of Age on Sales and Churn Rate



Recommendation:

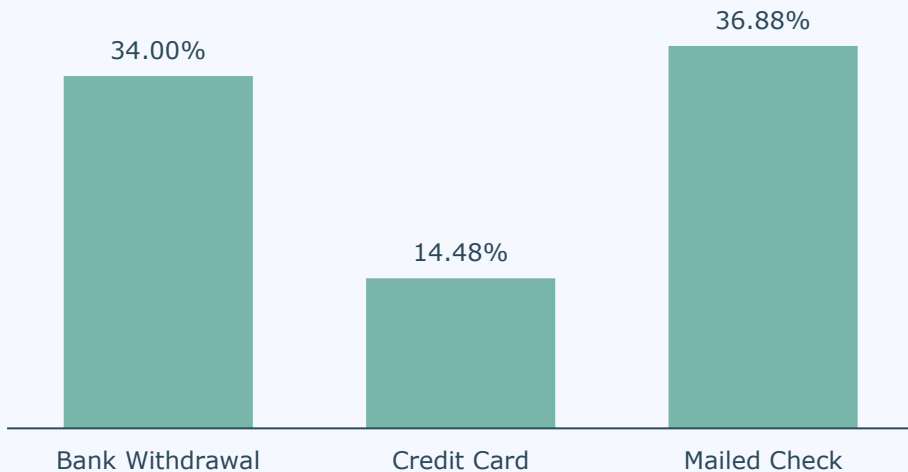
Implement simplified service plans, offer dedicated customer support, introduce loyalty programs, use targeted communication, and engage with community organizations to better retain customers in the 80+ age range.

80+ age range exhibit the highest churn rate (43.94%) and the lowest total revenue (\$231.9K).



Secondary Insights

Churn rate by payment method



Recommendation:

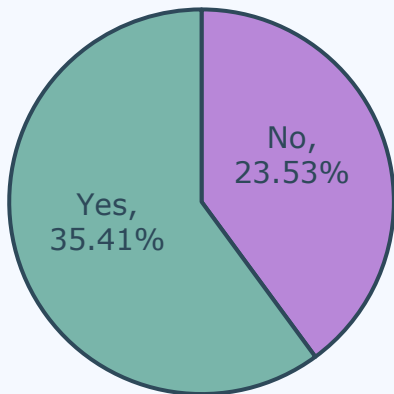
Promote the use of credit cards by offering incentives such as discounts or rewards for switching payment methods, and streamline the payment process for bank withdrawals and mailed checks to reduce churn.

Churn rate is higher for both
bank and mailed withdrawal.



Secondary Insights

Churn rate by senior citizen



Recommendation:

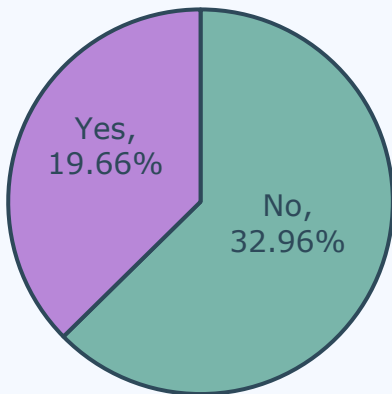
Enhance retention for senior citizens with tailored services, improved customer support, and targeted loyalty programs to reduce their churn rate.

Senior citizens have a higher churn rate compared to non-senior citizens.



Secondary Insights

Churn by marital status



Recommendation:

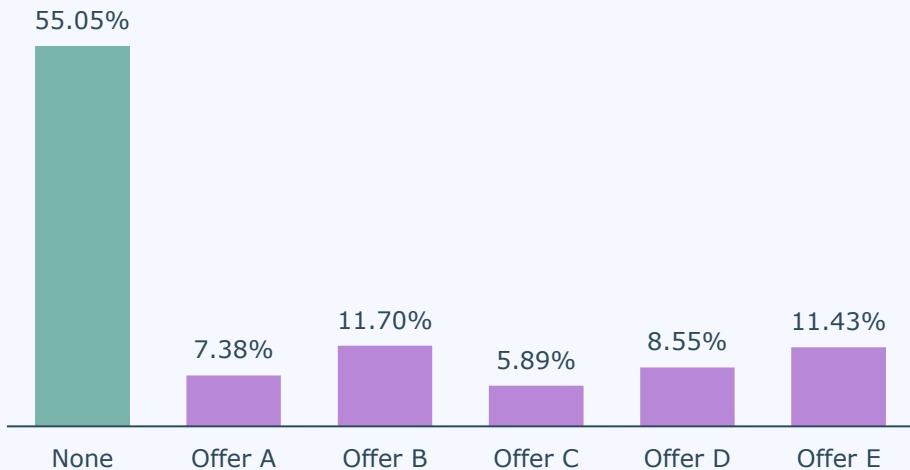
Implement targeted engagement strategies and personalized offers to reduce churn among non-married customers.

Non-married customers have a higher churn rate compared to married customers.



Secondary Insights

Churn rate by offer



Recommendation:

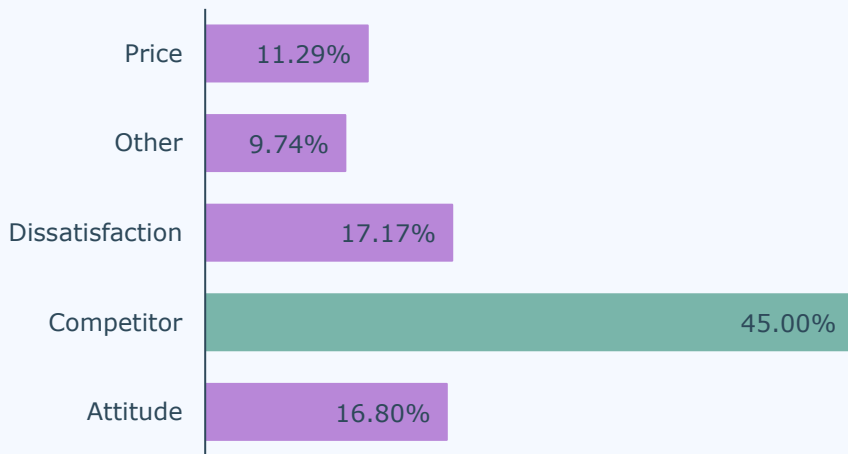
Increase customer retention by promoting and providing attractive offers to customers who are currently not receiving any offers.

Customer with **no offer** have significantly higher churn rate.



Secondary Insights

Churn rate by category



Recommendation:

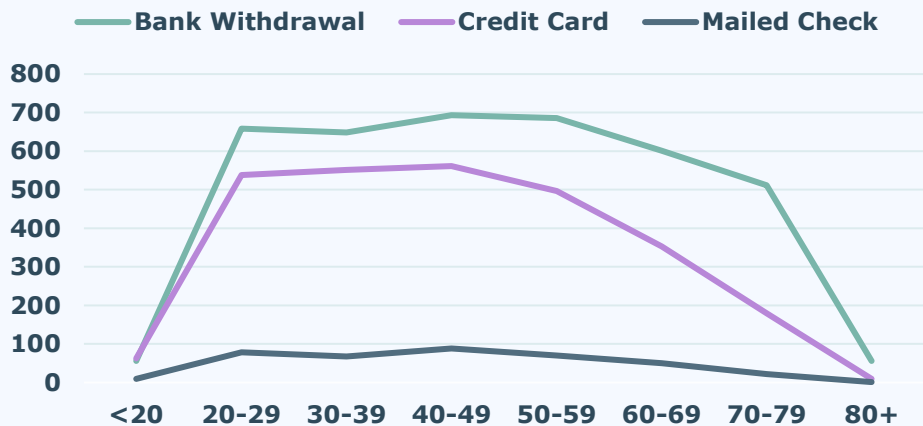
Enhance competitive positioning by offering better value, unique features, and competitive pricing to reduce churn due to competitors.

Competitor related churn is causing nearly half of the customer losses.



Secondary Insights

Customer by age & payment method



Bank Withdrawal is the most common payment method across all age groups, especially among customers aged 40 and above.

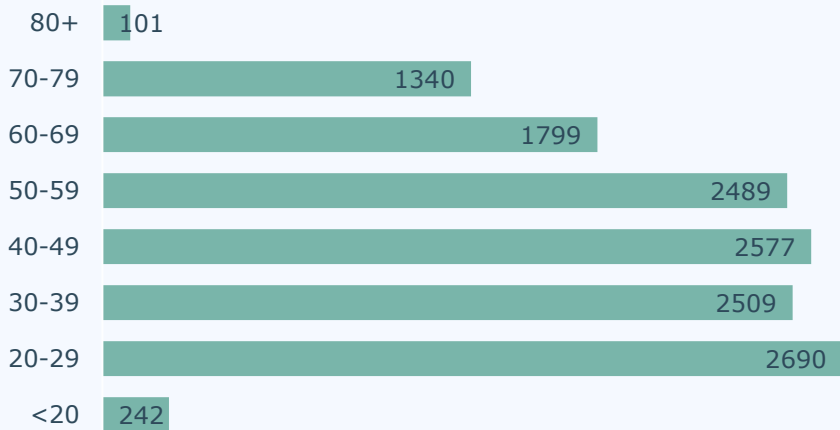
Recommendation:

Promote alternative payment methods like Credit Card among older customers by offering incentives and educational resources. Also utilize current payment method by giving offers.



Secondary Insights

Referral by age



Recommendation:

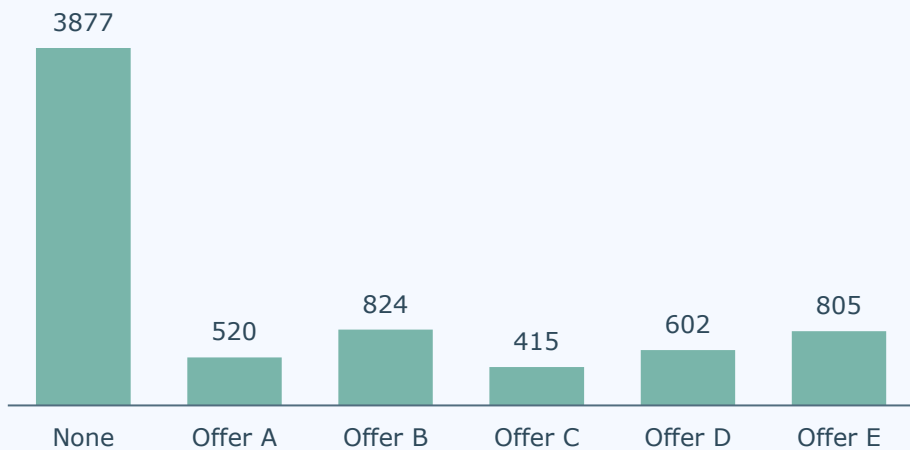
Leverage this demographic by implementing targeted referral programs and incentives to further encourage and reward referrals among customers aged 20-59.

Customers aged 20-59 are the most active in making referrals.



Secondary Insights

customer by offer



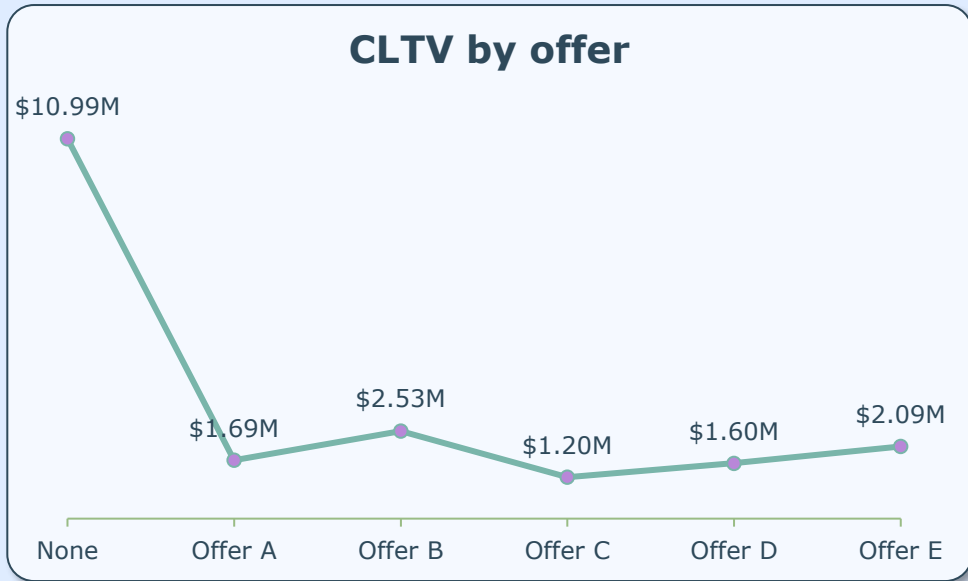
The majority of customers (3877) do not receive any offers.

Recommendation:

Increase customer engagement and retention by expanding the reach of promotional offers. Consider introducing new offers or enhancing existing ones to target a larger portion of the customer base.



Secondary Insights



Customer Lifetime Value (CLV) is highest for customers without any offers, and most customers do not receive offers.

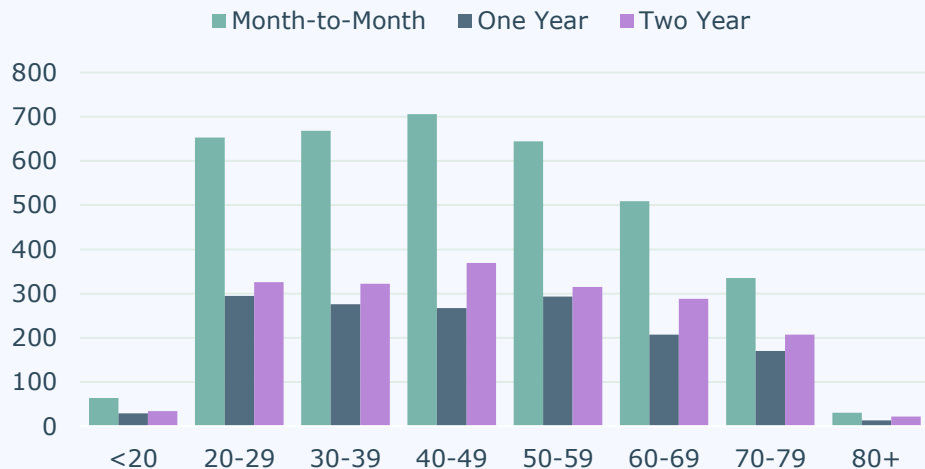
Recommendation:

Analyze why customers without offers have higher CLV and apply successful elements to offer-based strategies. Additionally, expand and optimize offers to boost CLV across a broader customer segment.



Secondary Insights

Customer by age and contract



Month-to-Month contracts are preferred by customers across all age groups.

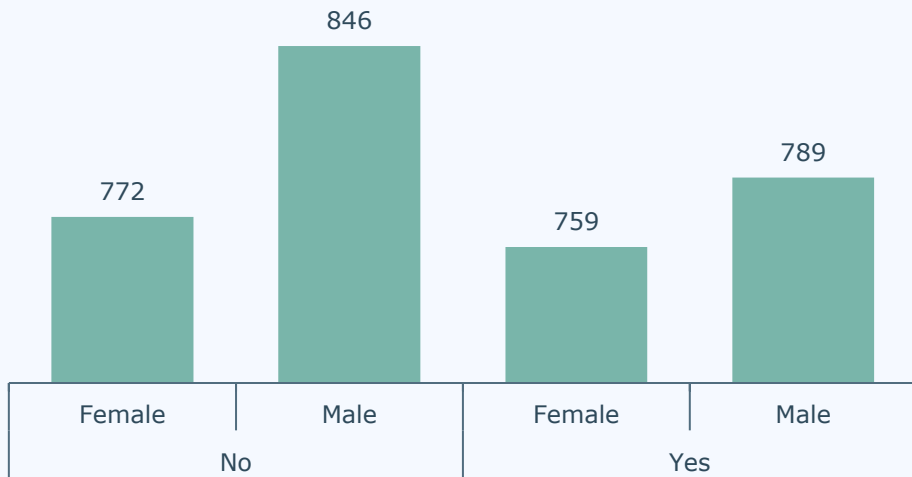
Recommendation:

Promote the benefits of longer-term contracts to customers currently on Month-to-Month plans, such as offering discounts or added features, to encourage greater commitment and reduce churn.



Secondary Insights

Offer by married and gender



Married females receive fewer offers compared to other groups.

Recommendation:

Address the disparity by increasing the number of targeted offers for married females to boost engagement and satisfaction within this demographic.



Key findings



This analysis provides a comprehensive overview of customer churn, revenue, and retention metrics across various demographic and behavioral segments. The key insights reveal a churn rate of 26.54%, an average customer lifetime value of \$2,853.93, 13,747 total referrals, and a revenue of \$21.37M. The average tenure for customers is 32.39 months, with an average monthly bill of \$63.78.

Key findings include:

1. Customers aged 80+ and those using bank withdrawal or mailed check payment methods exhibit the highest churn rates.
2. Senior citizens and non-married customers also experience higher churn rates compared to their counterparts.
3. Customers without any offers have a significantly higher churn rate of 55.05%.
4. Competitor-related churn accounts for nearly half of customer losses.
5. Older age groups predominantly use bank withdrawal, while younger demographics are more active in making referrals.
6. The majority of customers do not receive any offers, yet those without offers have higher lifetime values.
7. Month-to-month contracts are preferred across all age groups, and married females receive fewer offers compared to other groups.



Recommendations



- Enhance retention strategies for high-churn segments, such as senior citizens, older age groups, and non-married customers, through simplified service plans, dedicated support, loyalty programs, and targeted communication.
- Promote the adoption of more secure and convenient payment methods, like credit cards, among older customers by offering incentives and assistance.
- Expand the reach of promotional offers and introduce new offers to engage a broader customer base, increasing retention and lifetime value.
- Analyze the success factors of customers without offers and apply those insights to optimize offer-based strategies for the rest of the customer base.
- Encourage longer-term contract commitments by promoting the benefits and offering discounts or added features to customers on month-to-month plans.
- Address the disparity in offers for married females by increasing targeted promotions and personalized engagement strategies for this demographic.
- Enhance competitive positioning by offering better value, unique features, and competitive pricing to reduce churn due to competitors.
- Leverage the active referral demographic (ages 20-59) by implementing targeted referral programs and incentives to drive further customer acquisition.



Dashboard



Customer Churn Dashboard

26.54%
Churn rate

\$2,853.93
Avg Customer Life time value

\$63.78
Avg monthly bill

32.39
Avg tenure(Months)

\$21.37M
Total Revenue

\$13.8K
Total Refunds

13747
Total Referral

Offer
Offer E

City
Accra
Adenta
Akwera Hills

Gender
Female
Male

senior citizen
No
Yes

Married
No
Yes

Churn Category
Attitude
Competitor
Dissatisfaction
Other
Price

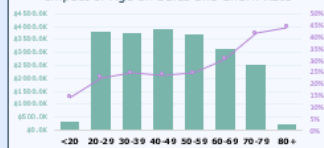
Customer Status
Churned
Joined
Stayed

Payment Method
Bank Withdrawal
Credit Card
Mailed Check

Age Range
<20
20-29
30-39
40-49
50-59

Contract
Month-to-Month
One Year
Two Year

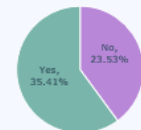
Impact of Age on Sales and Churn Rate



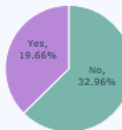
Churn rate by payment method



Churn rate by senior citizen



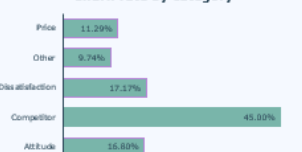
Churn by marital status



Churn rate by offer



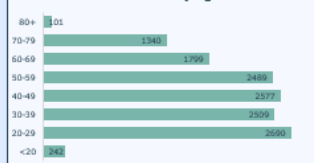
Churn rate by category



Customer by age & payment method



Referral by age



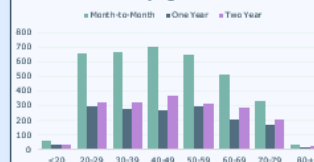
customer by offer



CLTV by offer



Customer by age and contract



Offer by married and gender





Thanks!

-Amanat Mahmud



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