

Executive Summary – Telecom Customer Churn Analysis

Objective

The objective of this analysis is to identify key factors driving customer churn and to understand customer behavior patterns using data visualization and exploratory analysis. The insights derived from this study aim to support data-driven decision-making for improving customer retention.

Overall Churn Situation

From the churn distribution analysis (pie chart):

- **26.54% of customers have churned**
- **73.46% of customers have been retained**

This means **more than one-fourth of the total customer base is being lost**, which represents a significant business risk and revenue impact.

Key Insights from the Analysis

1. Tenure vs Churn

- Customers with **very low tenure (1–2 months)** show the **highest churn tendency**.
- As tenure increases, churn rate **declines sharply**, indicating stronger customer loyalty over time.
- Long-term customers contribute **the largest share of non-churn (retained) customers**.

Insight:

The **initial onboarding period is the most critical phase**. Failure to build early trust and value results in early churn.

2. Senior Citizen Impact

- A **comparatively higher percentage of senior citizens churn** than non-senior customers.
- Even though senior citizens form a smaller portion of the total customer base, their **churn proportion is significantly higher**.

 **Insight:**

This indicates a possible **gap in service usability, pricing, or support experience** for senior customers.

3. Contract Type Analysis

- Customers with **month-to-month contracts are far more likely to churn**.
- Customers on **1-year and 2-year contracts show much lower churn levels** and dominate the retained customer group.

 **Insight:**

Long-term contracts act as a **strong retention mechanism** and reduce customer uncertainty.

4. Services & Feature Usage

Analysis of service-based charts shows:

- Customers who **do not use services** such as:
 - Online Security
 - Tech Support
 - Online Backup
 - Device Protection
- contribute to the **largest share of churn**.
- Customers with **multiple active services** form the **majority of the non-churn (retained) group**.
- **Fiber optic users** represent a **large portion of churned customers** compared to DSL users.

 **Insight:**

Value-added services and support features **significantly reduce churn**, while lack of engagement increases churn risk.

5. Payment Method Behavior

- Customers using **Electronic Check** as a payment method show a **higher likelihood of churn** compared to other payment options.

- Customers using **credit cards, bank transfers, or auto-payments** are more stable and retained.

 **Insight:**

Payment method is a strong **behavioral indicator of churn**, possibly linked to convenience, trust, or billing issues.

Business Impact & Recommendations

Key Risk Areas

- Early-tenure customers
- Month-to-month contracts
- Senior citizens
- Customers with fewer subscribed services
- Electronic check users

Strategic Recommendations

- Improve **first-90-day customer engagement programs**
 - Promote **long-term contracts** with incentives
 - Design **senior-friendly plans and support**
 - Bundle **value-added services** to increase stickiness
 - Encourage **auto-payment and digital payment adoption**
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Conclusion

This analysis clearly shows that customer churn is not random—it is strongly influenced by **tenure, contract type, service usage, and payment behavior**. With **26.54% churn**, targeted retention strategies focusing on early engagement, service bundling, and contract optimization can substantially reduce customer loss and improve long-term profitability.