Telecom Customer Churn Analysis

Identifying Revenue Risk & Strategic Retention Opportunities

Dataset Summary

This project is based on a fictional telecom dataset of **7,043 customers in California**, including details on demographics, services, billing, and churn status.

The goal: Analyze churn behavior, identify revenue risk, and recommend actionable retention strategies.

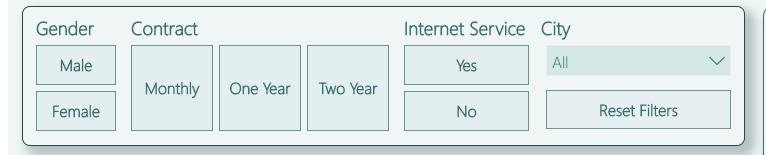
★ Tools: Power BI, DAX, Power Query

Created by: Pratiyush Kumar

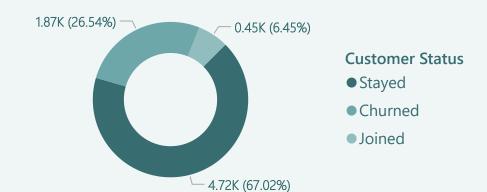
July 2025

Executive Summary – Churn & Revenue Snapshot

Churn Demographics \rightarrow







■ Total Customers

Total Revenue

Churn Rate %

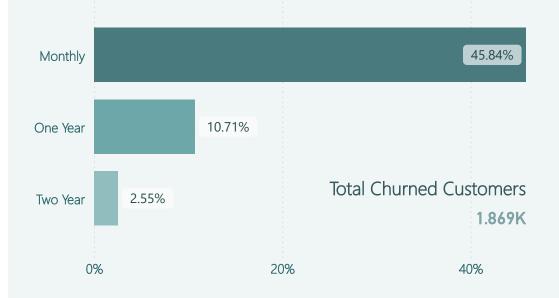
7K

\$21.37M 26.54%

\$3.68M

Revenue Lost to Churn

Which Contract Types Are Losing Customers?



As of Q2 2022, the churn rate stands at 26.5%, with over 3.6 million in revenue lost. Customers on monthly contracts and with short tenures are the most likely to churn.

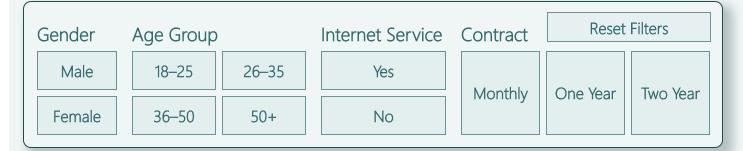
Churn Risk by Customer Tenure





Who's Churning? Demographic & Payment Patterns

Churn Drivers →



Highest Churn Age Group

Customer Status

Churned

Joined

Stayed

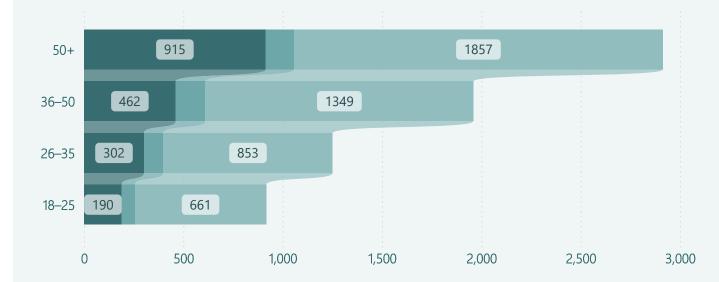
Avg Monthly Spend (Churned) Highest Churn Risk (Payment)

50+

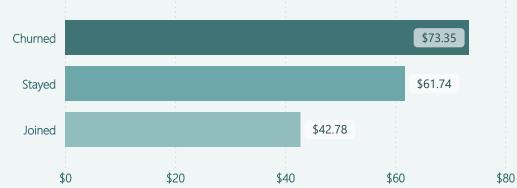
\$73.35

Mailed Check

Lesson Customer Age Demographics vs Churn



Monthly Spending Patterns by Customer Type



Insights: High-paying, older customers are churning at greater volume — especially those using manual payment methods like Mailed Check, signaling a need for digital billing incentives.

a Billing Method Breakdown & Churn Trends





What's Driving Churn? Services, Internet Plans & Offers

Revenue Risk →

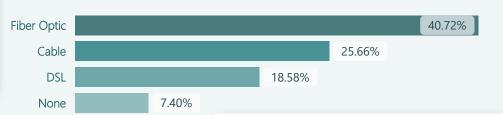


Customer Status

Churned

Stayed

Internet Plan Type vs Churn Rate



Churn Risk by Number of Services Subscribed



Primary Churn Triggers



Customers with fewer than 3 services or using Fiber Optic internet show the highest churn risk. Support-related add-ons like Security & Tech Support are underutilized by churned users. Competitor-driven exits dominate, while offers like A & B show promise in retention strategy.

182

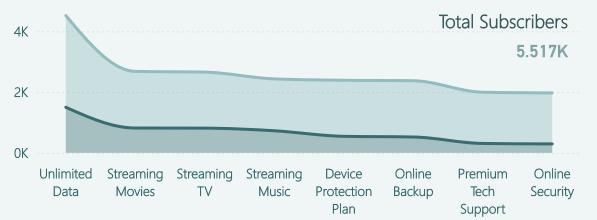
Other

211

Price









314

Attitude



High-Value Churn: Revenue Impact & Strategic Risk

Key Findings →

Q Key Insight:

Although just 25% of customers contribute the majority of revenue, they account for **over 50% of total churn revenue**. Many of these high-spending churners were **loyal long-term customers** (60+ months) with **One- or Two-Year contracts** — a clear signal that churn isn't just a short-tenure issue.

Risk Pattern:

The **highest churn rates** are seen in customers generating **less than \$1K in total revenue**, but the **real financial impact** comes from the **top revenue tier (\$8K+)**, where even a small churn rate leads to significant losses.

High-Value Churn Impact

Total Churn Revenue

Percent of Churn Revenue from Top 25% Spenders

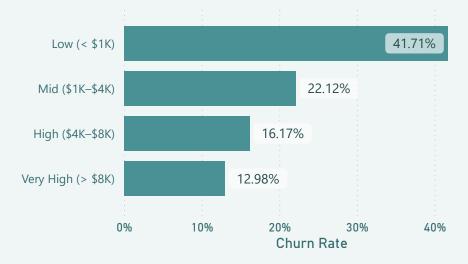
\$3.68M

50.22%



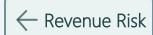


III Which Revenue Segments Are Most at Risk?



Top 10 High-Revenue Churned Customers

Customer ID	Total Revenue ▼	Monthly Charge	Tenure (in Months)	Contract Type
2889-FPWRM	\$11,195.44	\$117.80	72	One Year
3259-FDWOY	\$11,084.84	\$106.00	71	Two Year
2834-JRTUA	\$11,040.97	\$108.05	71	Two Year
1984-FCOWB	\$10,756.15	\$109.50	70	One Year
5287-QWLKY	\$10,718.96	\$105.10	71	Monthly
9835-ZIITK	\$10,717.17	\$110.85	66	One Year
5440-FLBQG	\$10,690.92	\$108.40	69	Two Year
9090-SGQXL	\$10,507.21	\$105.30	68	Monthly
0979-PHULV	\$10,374.80	\$99.45	69	Monthly
3886-CERTZ	\$10,351.16	\$109.25	72	One Year



Key Findings & Retention Strategy

Key Insights

- Customer churn sits at 26.5%, with over \$3.6M in revenue lost, heavily driven by short-tenure, monthly contract users.
- Over 50% of lost revenue comes from just 25% of customers many of them long-tenured, high spenders, proving churn is not just an early lifecycle issue.
- Competitors are the leading churn trigger, cited more than all other reasons combined mainly for better pricing, download speed, or data offers.
- Customers with **fewer than 3 services**, or those using **fiber optic plans**, exhibit significantly **higher churn risk**.
- Add-ons like Security, Tech Support, and Protection Plans are underutilized by churned users, pointing to missed retention opportunities.

Dataset Source: IBM Cognos Analytics

Structure: 39 fields | 2 tables | CSV | Public domain

Want to explore the data? [Dataset link]

Recommended Actions

- **© Launch retention offers** for high-value, long-tenure users especially those on month-to-month plans.
- **Promote add-on services** (support, protection) as loyalty perks during early tenure phases.
- Incentivize digital billing adoption to reduce churn from manual payers.
- Audit fiber optic segment to explore service quality or pricing issues.
- **Personalize outreach** to older customers with simplified plans or concierge support.

This dashboard was built to support proactive retention strategies and reduce revenue leakage in the telecom space by identifying who's at risk — and what we can do about it.

Made with ♥ by Pratiyush

Let's Connect

GitHub: @Pratiyushhh LinkedIn: @pratiyushh