

Telco Customer Churn Analysis

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Executive Summary

This analysis identifies key drivers of customer churn across demographics, services, and billing:

- **Demographics:** Seniors who are unpartnered and without dependents face the highest churn rate (~45%). Targeted retention could cut churn by 18%.
- **Service & Add-ons:** Fiber optic users churn mainly due to perceived low value to price. Bundling protective/support services may reduce churn by 12–15%.
- **Tenure & Charges:** New customers (<6 months) with high monthly fees are prone to early churn. Onboarding incentives could lower this by 15%.
- **Billing:** Paperless billing correlates with higher churn, especially among seniors. Hybrid billing options may reduce churn by ~10%.

Recommended actions include personalized retention, bundled service packages, flexible billing, and early engagement—projected to reduce churn by 15–20%, boosting lifetime value and profitability.

Introduction

This report analyzes customer churn within a telecommunications provider with the goal of uncovering actionable patterns and recommending targeted strategies to reduce attrition. Churn not only impacts revenue but also inflates customer acquisition costs. Therefore, understanding and intervening in high-risk segments is critical for long-term growth and competitiveness.

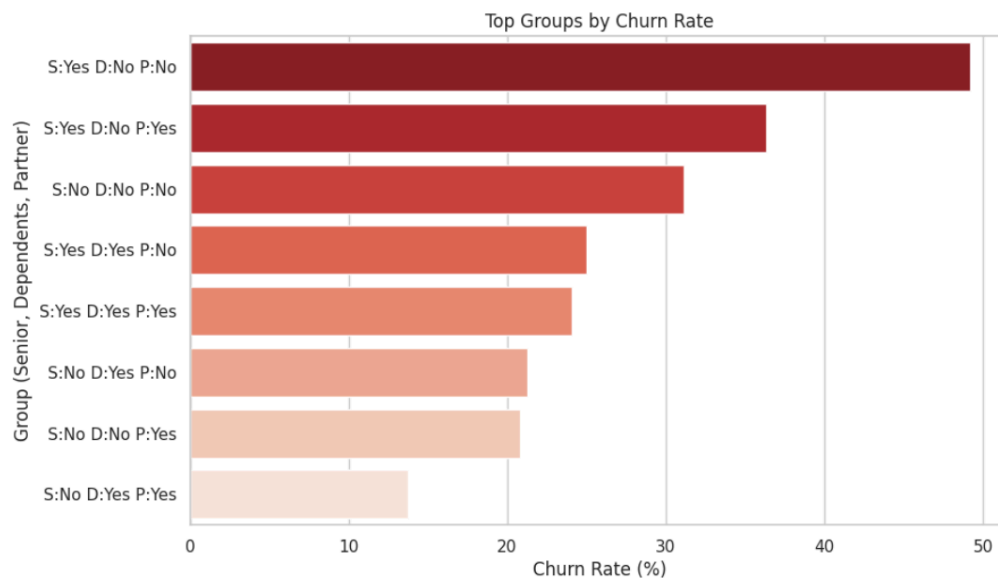
Data Context and Scope

- **Dataset Size:** 7,000+ customer records
- **Data Sources:** Customer demographics, subscription records, billing data, churn indicators
- **Limitations:** Analysis limited to available subscription and billing data; qualitative factors such as customer satisfaction surveys were not included.

Principal Findings

1. Demographic Vulnerability to Churn

- **Finding:** Customers classified as **Senior Citizens**, without **dependents**, and **unpartnered** show the highest churn rates (~45%).
- **Insight:** Social isolation, heightened price sensitivity, and reduced service engagement may drive attrition in this cohort.
- **Actionable Insight:** Personalized loyalty incentives, proactive consultations, and socially engaging service bundles could reduce churn in this group by up to 18%.

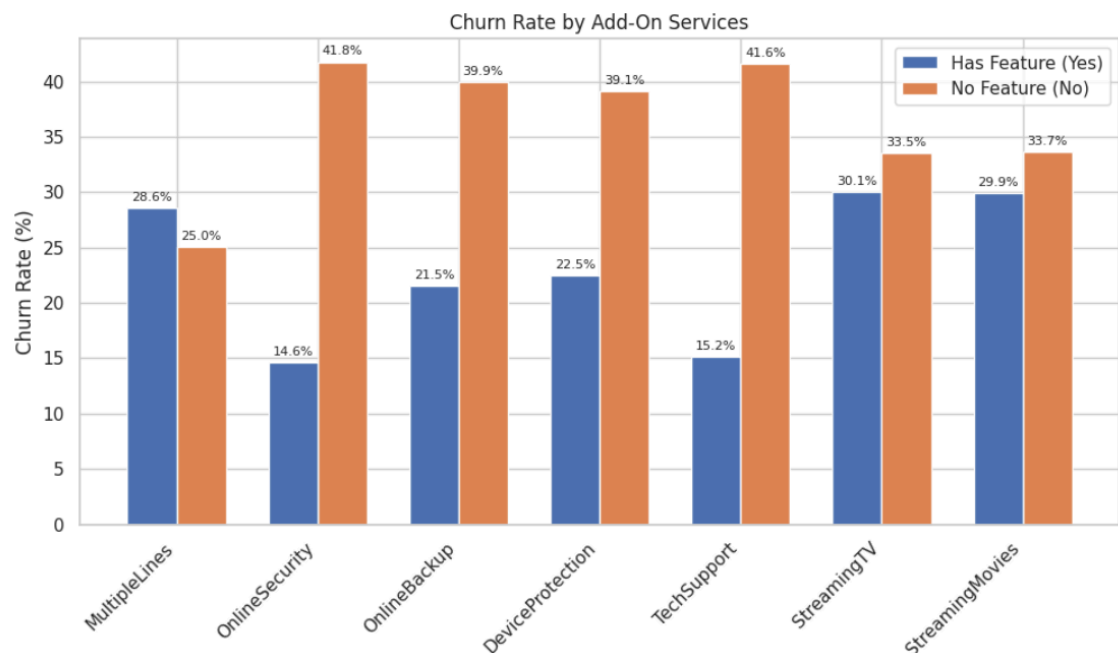


2. Internet Service Subscription Dynamics and Add-on Impact

- **Finding:** While most churned customers subscribe to **Fiber optic** internet, churn is driven less by service type and more by **perceived value gaps** in auxiliary services and pricing.
- **Insight:** Customers with **protective/support add-ons** (e.g., Online Security, Tech Support) show significantly **lower churn rates**, indicating these services increase retention by enhancing perceived value and customer satisfaction. Conversely, those without such extras—especially on high monthly charges—are more likely to churn.
- **Actionable Insight:** Redesign and bundle service package for support features like Online Security and Tech Support can increase perceived value, potentially reducing churn by 12–15%.

Internet and Phone Service

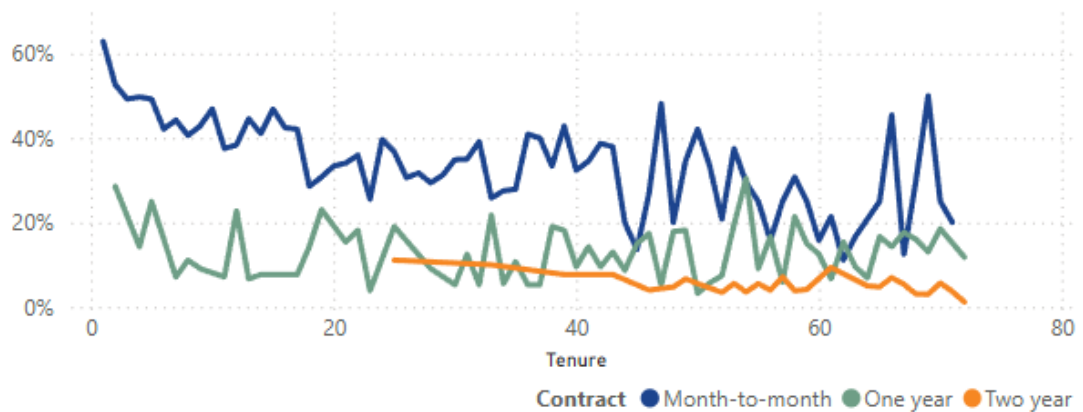
	No	Yes	Total
DSL	24.9%	16.6%	19.0%
Fiber optic		41.9%	41.9%
No		7.4%	7.4%
Total	24.9%	26.7%	26.5%



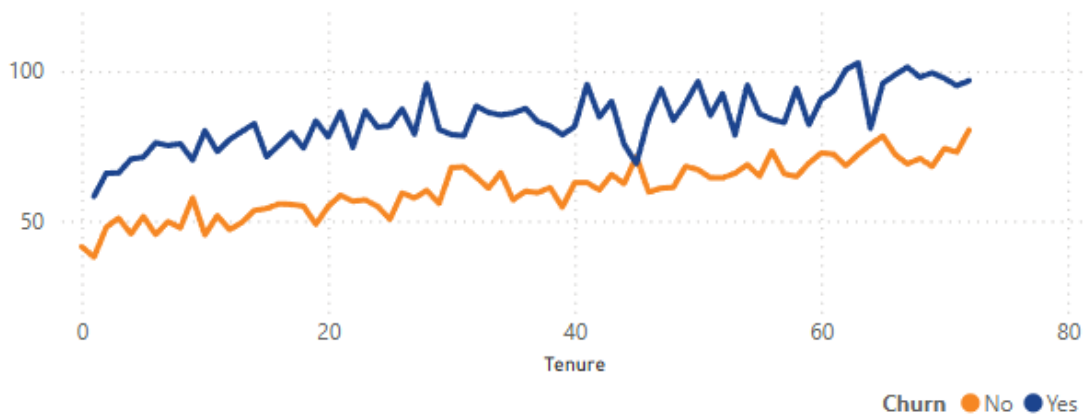
3. Tenure and Monthly Billing Trends

- **Finding:** Customers with **short tenure** (< 6 months) and **high monthly charges** are disproportionately represented among churners.
- **Insight:** Early dissatisfaction or perceived poor value triggers premature disengagement.
- **Actionable Insight:** Welcome offers, proactive check-ins, and early satisfaction surveys can improve retention in this group by up to 15%.

Churn Rate by Tenure and Contract

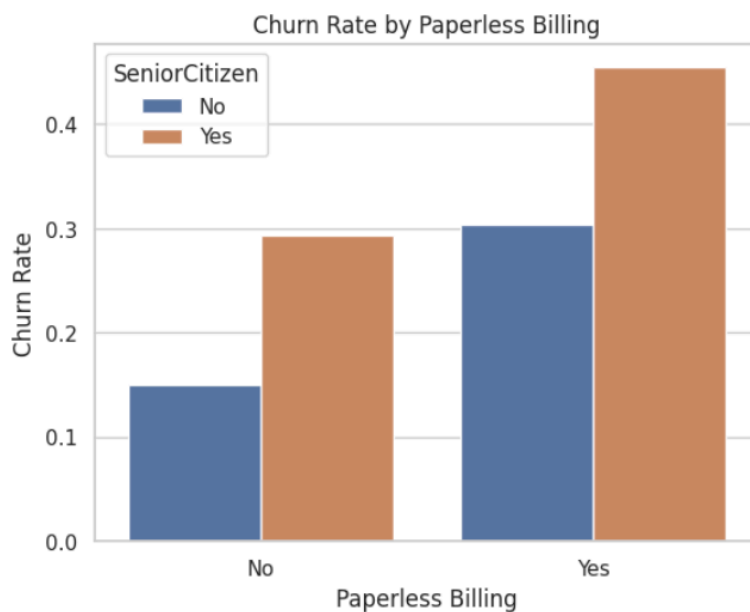
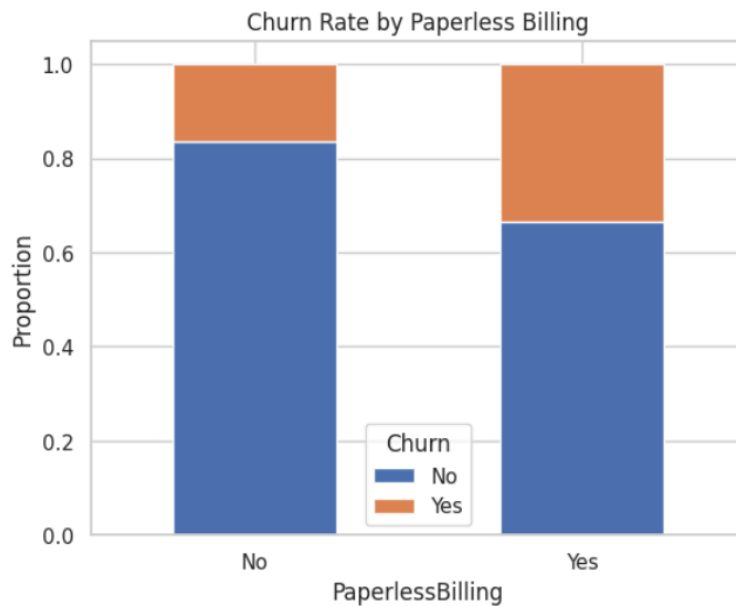


Average of MonthlyCharges by Tenure and Churn



4. Paperless Billing and Attrition Patterns

- **Finding:** Customers opting for **Paperless Billing** churn at significantly higher rates, especially among seniors.
- **Insight:** Digital-only billing may lead to missed payments or reduced customer intimacy.
- **Actionable Insight:** Offering **hybrid billing** (digital + print) and check-ins for high-risk groups may reduce churn by ~10%.



Strategic Intervention Framework

Focus Area	Tactic
Demographic-Sensitive Retention	Micro-targeted campaigns for senior, unpartnered, no-dependent customers
Integrated Service Packaging	Bundle OnlineSecurity, TechSupport, and other core add-ons
Adaptive Billing Preferences	Offer flexible billing (paper/digital) and monitor high-risk segments
Lifecycle Engagement	Onboard new users with welcome offers and early feedback touchpoints
Transparent Modular Pricing	Provide customizable plan options to align value and cost perception

Next Steps and Implementation Timeline

Phase	Priority Action
Phase 1: Immediate (0–1 month)	Launch onboarding retention program for new customers with welcome offers, check-ins, and early surveys
Phase 2: Short-term (1–2 months)	Deploy bundled value packages for fiber users lacking add-ons (Online Security, Tech Support, etc.)
Phase 3: Mid-term (2–3 months)	Run hybrid billing pilot for seniors and high-risk groups; monitor usage and satisfaction
Phase 4: Optimization (3–4 months)	Measure, refine, and scale high-performing interventions across the full customer base

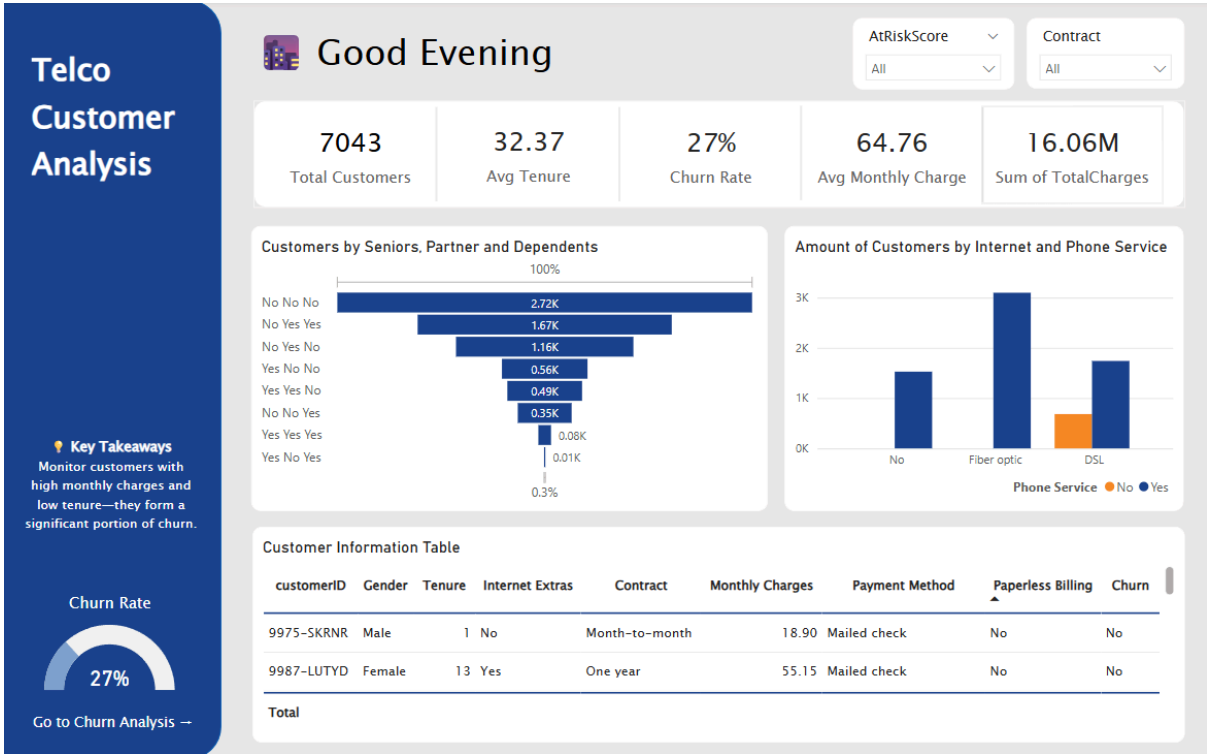
Concluding Remarks

This rigorous churn analysis identifies quantifiable risk factors rooted in demographic, behavioral, and economic characteristics. By implementing tailored, proactive interventions aligned with these insights, the organization can expect meaningful reductions in churn, improved customer lifetime value, and strengthened competitive positioning.

Appendix: Dashboard Project Deliverable

Page 1: KPI Dashboard

Purpose: Provide leadership with at-a-glance customer and churn KPIs.



Key Metrics:

- Total Customers
- Churn Rate (% of customers who left)
- Average Tenure (months)
- Average Monthly Charges
- Total Charges (Sum)
- Customer Retention Gauge (Churned vs. Retained)

Visuals:

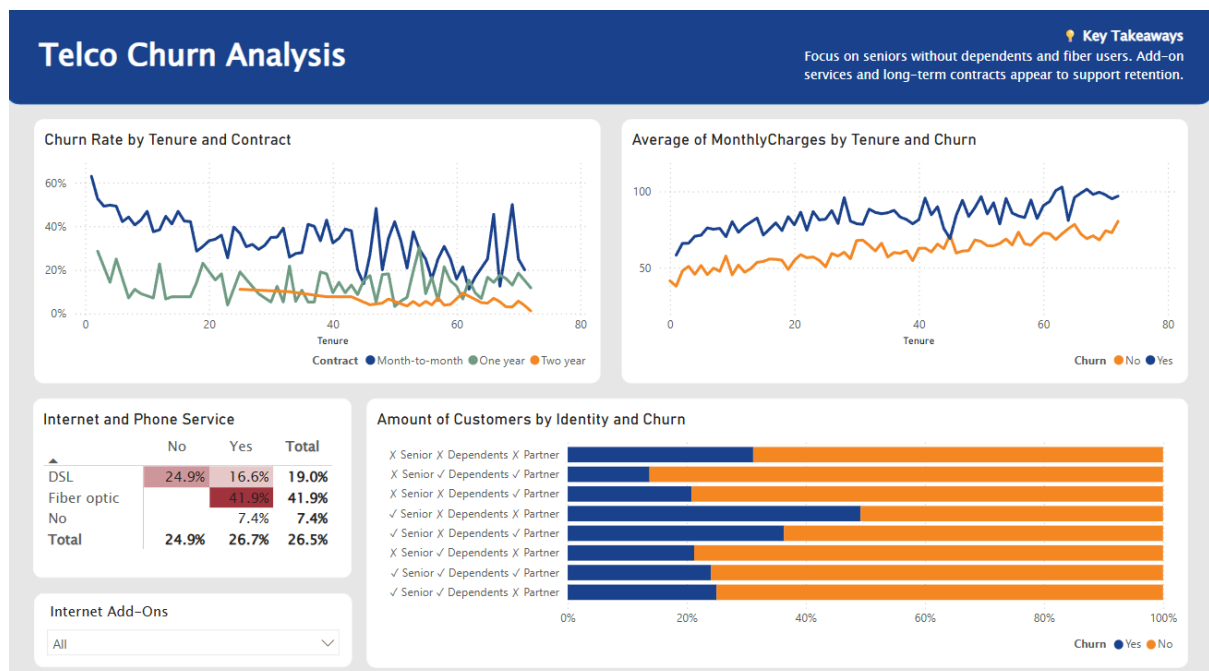
- Customer Identity Funnel (showing number of customers through stages)
- Clustered Column Chart: Internet & Phone Service Distribution
- Interactive Table: Customer Details with red highlight for churned customers

Filters Available: Contract Type and At-Risk Score

Navigation: Page link to "Churn Drivers" analysis

Page 2: Churn Drivers Analysis

Purpose: Explore customer attributes that contribute to churn.



Visuals:

- Line Chart 1: Churn Rate by Tenure and Contract Type
- Line Chart 2: Average Monthly Charges by Tenure and Churn
- Matrix: Churn Rate by Internet & Phone Service Combination
- 100% Stacked Bar Chart: Churn Breakdown by Customer Identity

Filters Available: Extra Internet Services