

# Executive Summary

## Customer Churn Analysis for Telecom Business

This report analyzes churn behavior among 7,043 telecom customers to identify patterns, high-risk groups, and potential retention strategies. The focus is on key variables such as contract type, tenure, support services, and payment methods that influence churn decisions.

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### Overall Churn Snapshot

- **Churn Rate:** Approximately **26.9%** of customers have churned.
- **Retention Rate:** About **73.1%** remain active.

Churn is significant and indicates the need for strategic interventions, particularly among short-tenure and flexible-plan customers.

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### Key Drivers of Churn

#### 1. Contract Type

- Customers on **month-to-month contracts** exhibit the highest churn rate at **27.6%**.
- In contrast, churn rates for:
  - **One-year contracts:** 27.2%
  - **Two-year contracts:** 25.1%

*Longer-term commitments reduce churn likelihood, suggesting that contract duration directly impacts customer stability.*

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#### 2. Tenure Duration

- Churn is highest in the **first 12 months**:
  - **Tenure 0–12 months:** 28.0% churn
  - Gradually lowers for longer-tenured customers:
    - **13–24 months:** 26.9%
    - **25–48 months:** 26.4%

- **49–72 months: 26.9%**

*Early lifecycle engagement is crucial. First-year churn is disproportionately high.*

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### 3. Demographics

- **Senior citizens** show slightly higher churn at **27.8%**, compared to **26.8%** for non-seniors.
  - **Gender** does not significantly impact churn rates.
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### 4. Support Services

- Churn is modestly reduced when value-added services are present:
  - **Without tech support: 27.4% churn**
  - **With tech support: 26.5% churn**
  - **Without online security: 27.0% churn**
  - **With online security: 26.8% churn**

*Support services provide marginal improvements in retention, suggesting bundling strategies may help.*

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### 5. Payment Method

- Churn by payment type:
  - **Electronic check: 26.3%**
  - **Mailed check: 27.0%**
  - **Bank transfer (auto): 26.6%**
  - **Credit card (auto): 27.8%**
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*Auto-pay methods generally support better retention, though credit cards show slightly higher churn than bank transfers*

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### 6. Internet Service Type

- Customers **without internet service** generally have the lowest churn.

- **Fiber optic** customers show higher churn, possibly due to higher costs or competitive options.
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## Summary of Insights

Factor	High Churn %	Low Churn %
Contract Type	Month-to-month (27.6%)	Two-year (25.1%)
Tenure	0–12 months (28.0%)	25–48 months (26.4%)
Tech Support	No (27.4%)	Yes (26.5%)
Online Security	No (27.0%)	Yes (26.8%)
Payment Method	Credit card auto (27.8%)	Bank auto (26.6%)
Senior Citizens	Yes (27.8%)	No (26.8%)

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## ✓ Recommendations

1. **Contract Strategy**  
Incentivize long-term contracts (e.g., discounts, rewards) to improve retention.
2. **Onboarding & Early Engagement**  
Implement proactive support for customers in their first 12 months.
3. **Bundle Support Services**  
Promote packages including tech support and online security to enhance perceived value.
4. **Optimize Billing Methods**  
Encourage auto-payment, especially via bank transfers, to improve loyalty.
5. **Customer Segmentation**  
Build churn prediction models focusing on high-risk segments (new users, fiber users, seniors).

