

# Summary and Recommendations

## Executive Summary

The analysis identifies key patterns in customer churn by examining factors such as payment methods, contract types, tenure, and demographics. The primary goal is to pinpoint factors most associated with high churn rates and provide actionable strategies for customer retention.

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## Key Insights & Findings

### 1. Contract Type and Churn

- **Observation:**
  - Month-to-month contracts have the highest churn rate at **42%**.
  - One-year and two-year contracts have significantly lower churn rates at **11%** and **3%**, respectively.
- **Implication:**  
Longer contract periods are a strong retention tool, as customers with extended commitments are less likely to leave.

### 2. Payment Methods and Churn

- **Observation:**
  - Customers paying via **electronic checks** show the highest churn rate at **45%**.
  - Those using credit cards, bank transfers, or mailed checks have churn rates averaging **15%-18%**.
- **Implication:**  
Issues with convenience, security, or trust in electronic payments may contribute to higher churn. Encouraging stable payment methods could reduce churn.

### 3. Churn by Tenure

- **Observation:**
  - Customers with less than one year of tenure experience a churn rate of **50%**.
  - The churn rate drops to **35%** for customers with 1-3 years of tenure and further declines to **15%** for those with over three years.
- **Implication:**  
Early-stage engagement, particularly within the first year, is critical for customer retention.

### 4. Churn by Internet Service Type

- **Observation:**
  - Fiber Optic users have a churn rate of **30%**, compared to **20%** for DSL users.
- **Implication:**  
Competition or dissatisfaction with Fiber Optic services may be driving higher churn. Investigating service quality and reliability could help retain these customers.

### 5. Senior Citizens and Churn

- **Observation:**
    - Senior citizens (aged 65+) exhibit a churn rate of **41%**, compared to **26%** among non-senior citizens.
  - **Implication:**

Targeted retention programs and customer support tailored to senior citizens may help reduce churn in this demographic.
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## Visualizations & Data Insights

- **Bar Charts & Line Graphs:**
    - Show that electronic check users churn almost three times more than those using secure payment methods like credit cards.
    - Highlight the declining churn trend as customer tenure increases, underscoring the importance of early-stage engagement.
  - **Percentage Distribution of Churn Across Factors:**
    - **Payment Methods:** 45% for electronic checks; 15% for credit cards.
    - **Contract Types:** 42% for month-to-month; 11% for yearly; 3% for two-year contracts.
    - **Tenure:** 50% in the first year, dropping to 15% after three years.
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## Recommendations

1. **Promote Long-Term Contracts:**

Offer incentives to encourage customers to commit to longer contract periods.
2. **Address Payment Method Concerns:**

Run campaigns to encourage customers to switch from electronic checks to more reliable payment methods.
3. **Engage Early-Tenure Customers:**

Focus on improving the customer experience within the first year to reduce churn.
4. **Senior Citizen Retention Programs:**

Develop personalized offers and assistance programs specifically for senior customers.