

## **Comprehensive Executive Summary**

This expanded report offers a granular analysis of customer churn rates across various factors, backed by a series of insightful data visualizations, including bar charts, pie charts, and stacked plots. Each aspect of the analysis presents actionable insights into customer behavior and service impact on retention.

### **Key Insights:**

#### **1. Overall Churn Rate:**

- **26.54%** of the total customers analyzed have churned, which highlights a significant challenge in customer retention strategies.

### **Demographic Impact:**

- **Senior Citizens** show a churn rate of **41.7%**, significantly higher than non-senior citizens at **23.6%**. This indicates a potential need for enhanced support and retention programs tailored to older customers.

### **Service-Specific Insights:**

- **Phone Service:** Customers who have phone service are more likely to churn compared to those without it. Those without **multiple lines** also exhibit a slightly lower churn rate compared to customers with multiple lines.
- **Internet Service:** Fiber-optic users display a higher churn rate compared to DSL users, or those without internet service, suggesting quality or cost issues may be driving fiber-optic churn.
- **Streaming Services:** Interestingly, **Streaming TV** and **Streaming Movies** subscribers show marginally higher churn rates compared to non-subscribers, indicating a need to reassess the value or content of these offerings.

### **Contract Type:**

- Customers with **month-to-month contracts** exhibit the highest churn rates, while those with **one-year or two-year contracts** tend to stay longer. Offering incentives for long-term contracts may encourage more stable customer retention.

### **Payment Method:**

- The data indicates that customers using **electronic checks** experience the highest churn rate, while automatic payments, such as credit cards or bank transfers, correlate with lower churn.

### **Add-on Services:**

- Lack of additional services such as **online security**, **backup services**, and **device protection** correlates with significantly higher churn rates.
- Customers without **tech support** are also more likely to leave, emphasizing the importance of offering these add-ons to improve retention.

## Recommendations:

1. **Targeted Senior Citizen Programs:** The higher churn among older customers suggests a need for tailored retention strategies such as personalized offers or enhanced support services.
2. **Promote Long-Term Contracts:** To reduce the high churn associated with month-to-month contracts, businesses should consider offering attractive incentives or discounts to encourage customers to switch to one or two-year contracts.
3. **Upgrade Payment Options:** Promote the use of automatic payments (bank transfer, credit card) over electronic checks, as customers on automatic payment plans show better retention.
4. **Enhance Service Offerings:** Encourage customers to adopt optional services like **online security**, **backup**, **device protection**, and **tech support** to increase customer loyalty and reduce churn.
5. **Service Quality Focus for Fiber-Optic Users:** Investigate the reasons behind the higher churn rate among fiber-optic users, whether related to service quality or cost, and make necessary improvements to enhance customer satisfaction.
6. **Reevaluate Streaming Services:** Assess customer satisfaction and value perception of **Streaming TV** and **Streaming Movies**, as subscribers to these services exhibit slightly higher churn rates.

## Conclusion:

The data presented in this report provides a comprehensive view of the factors influencing customer churn. Addressing these aspects with targeted retention strategies—especially for senior citizens, month-to-month contract holders, and users of fiber-optic services—will significantly improve customer retention and loyalty. Offering incentives for long-term contracts and optional add-on services, along with improving service quality, are the most actionable strategies for mitigating churn.