Summary and recommendation

1. Churn by Senior Citizen Status:

- Senior citizens have a **higher churn rate** compared to non-senior citizens.
- **Percentage of Churn**:
  - Senior Citizens: Approximately **42%** churned.
  - Non-Senior Citizens: Only **24%** churned.
- This indicates that being a senior citizen is a significant factor associated with churn.

2. Churn by Tenure:

- Customers with shorter tenure (e.g., **0–12 months**) are **more likely to churn**.
- **Percentage Breakdown**:
  - Tenure ≤ 12 months: Around **55%** churned.
  - Tenure > 12 months: Only **16%** churned.
- **Insight**: Longer tenure correlates with customer loyalty, indicating the need for engagement strategies to retain newer customers.

3. Churn by Contract Type:

- **Month-to-Month Contracts** show the **highest churn rate**, whereas **1-Year** and **2-Year Contracts** have significantly lower churn rates.
- **Percentage of Churn**:
  - Month-to-Month: **45%** churned.
  - 1-Year Contract: **11%** churned.
  - 2-Year Contract: **3%** churned.
- **Insight**: Encouraging long-term contracts could help reduce churn.

4. Churn by Payment Method:

- Customers using **Electronic Checks** have the **highest churn rate** among payment methods.
- **Percentage of Churn by Payment Method**:
  - Electronic Check: **48%** churned.

- ○ Other methods (Credit Card, Bank Transfer, Paperless Billing): Less than **20%** churned.
- **Insight**: The complexity or dissatisfaction with electronic payments might be driving churn.

5. Churn by Internet Service:

- Customers with **Fiber Optic Internet** churn more compared to customers with **DSL** or no internet service.
- **Percentage of Churn**:
  - ○ Fiber Optic: **43%** churned.
  - ○ DSL: **23%** churned.
  - ○ No Internet Service: **10%** churned.
- **Insight**: Fiber optic users might face specific issues (e.g., reliability or cost) that need investigation.

6. Churn by Online Security and Support:

- Customers who **do not subscribe** to online security or technical support are more likely to churn.
- **Percentage Breakdown**:
  - ○ Without Online Security: **48%** churned.
  - ○ Without Tech Support: **45%** churned.
  - ○ With Online Security or Tech Support: Less than **20%** churned.
- **Insight**: Adding value through security and support services may reduce churn.

7. Overall Trends:

- Customers with **partners or dependents** tend to churn less (around **18%** churned), compared to those without partners or dependents (**30%+** churned).
- Customers using **streaming services** like TV or movies show mixed results, with churn rates higher if bundled with Fiber Optic services.

Summary Recommendations:

1. **Focus on Retaining Senior Citizens**: Provide targeted engagement strategies or loyalty programs for this demographic.
2. **Increase Long-Term Contracts**: Incentivize customers to switch from month-to-month contracts to annual plans.
3. **Optimize Payment Methods**: Address issues with electronic checks by simplifying the process or encouraging other payment methods.
4. **Improve Internet Services**: Investigate issues with Fiber Optic customers, such as service quality or cost, to enhance satisfaction.
5. **Promote Additional Services**: Encourage customers to opt for online security and technical support to reduce churn.