

Report: Telco Customer Churn Analysis

1. Project Overview

This project analyzes customer churn data for a telecommunications company to understand the key factors influencing customer retention and identify actionable strategies to reduce churn rates.

Tool used: Microsoft Excel

Skills applied: Data cleaning, visualization, and reporting in

2. Business Problem

Customer churn — when users stop using a company's service — directly affects profitability. The goal of this analysis was to:

- Identify major drivers of customer churn.
 - Analyze churn trends by demographics and service type.
 - Recommend data-driven retention strategies.
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3. Data Summary

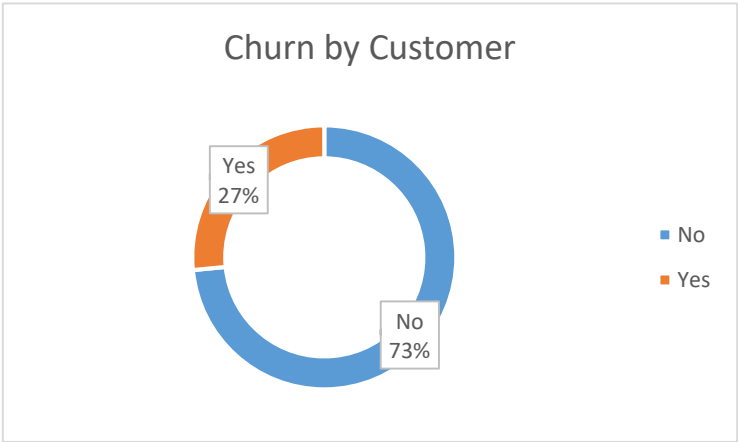
- **Total customers:** 7,043
 - **Churn rate:** 27%
 - **Key variables analyzed:**
 - Demographics.
 - Tenure (length of time as customer).
 - Contract type (Month-to-Month, One-Year, Two-Year).
 - Internet service type (DSL, Fiber optic, None).
 - Monthly charges.
 - Payment method.
 - Tech Support.
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4. Key Analysis Steps

Step	Description
Data Cleaning	Removed blanks, corrected data types of the columns.
Descriptive Statistics	Calculated churn rates.
Segmentation	Grouped customers by demographics, tenure, contract, tech support, service type, and churn reason.
Visualization	Created charts for churn by demographics, contract, tenure, tech support, churn reason, and monthly charges.

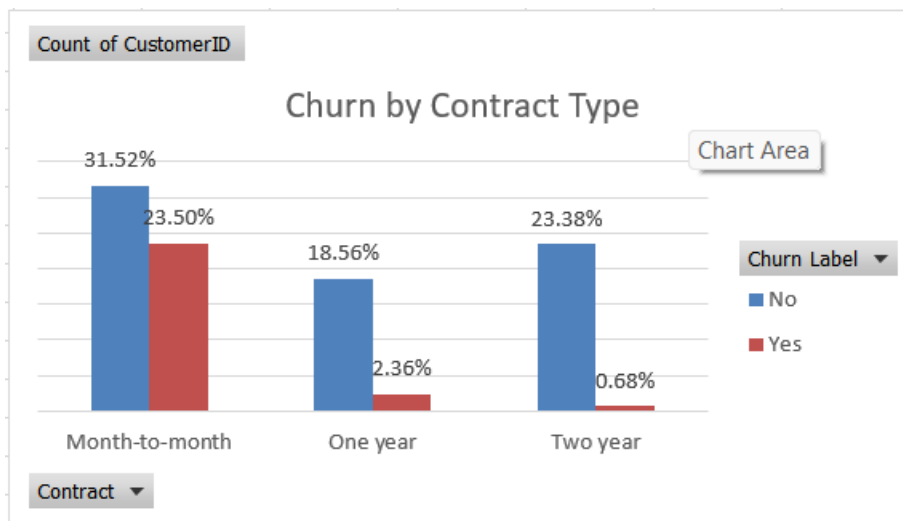
5. Insights & Findings

1. Overall Churn Rate:



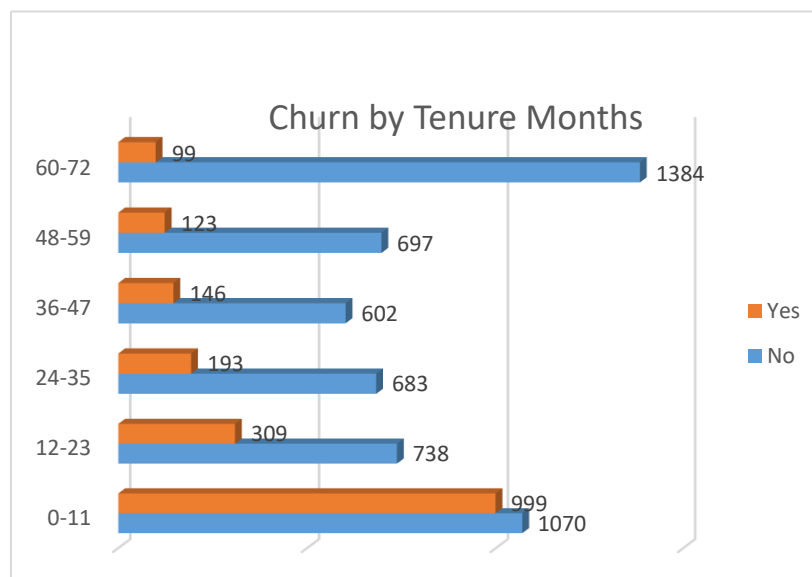
- **Insight:** 26.54% of customers have churned.

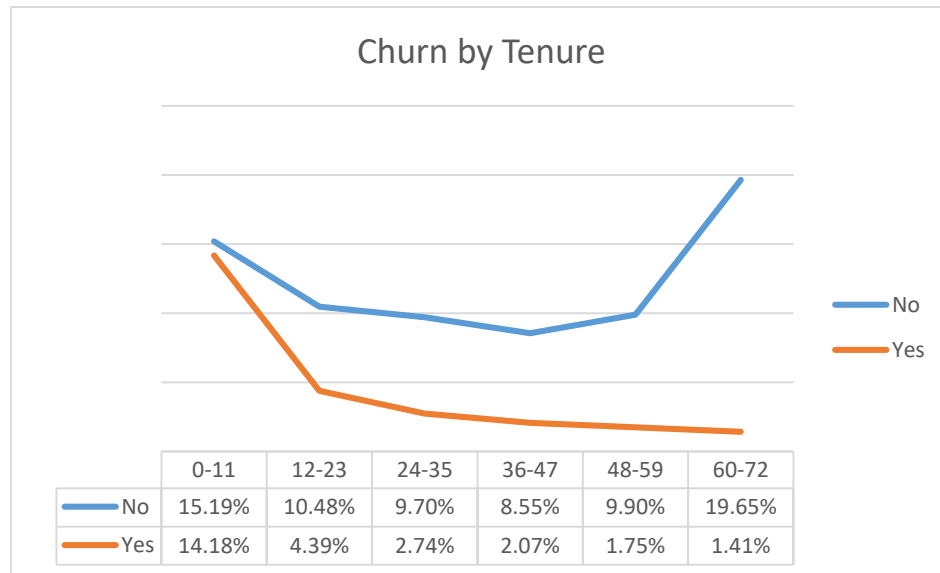
2. Contract Type:



- **Insight:** Month-to-month customers had the highest customer churn of 1655 (23.38%), Two-year contract customers had the lowest customer churn of 48 (0.68%), also customers with one – year contact also have low customer churn of 166 (2.36%). This can be due to customers testing the service, therefore they require it for short period.

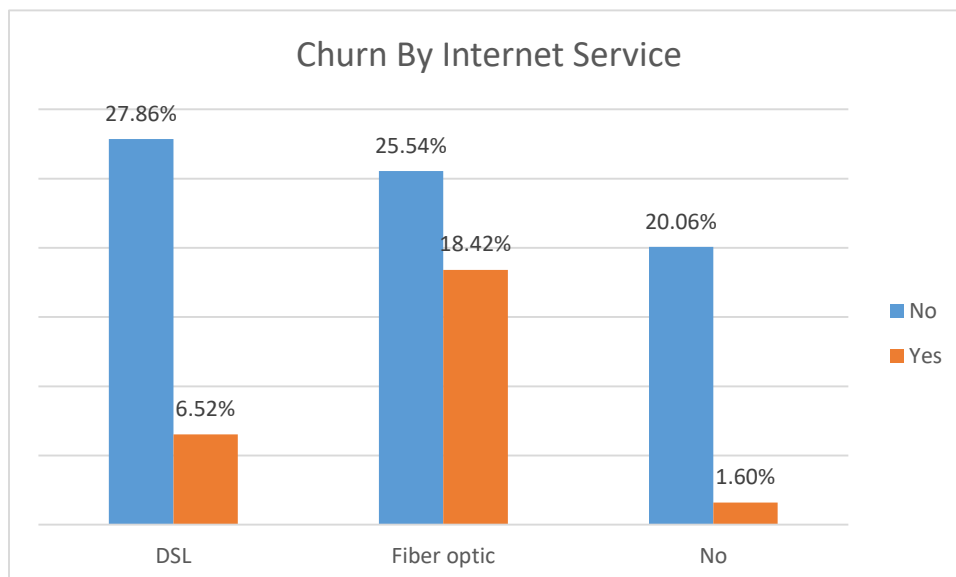
3. Tenure:





- **Insight:** Tenure represents the number of months a customer stays with the company, from the charts above the highest churn are from 1 – 11 months at 14.18% the churn drops drastically from 12 to 24 months to 4.39% and keeps dropping. This shows that customers with long months' tenure tend to not churn.

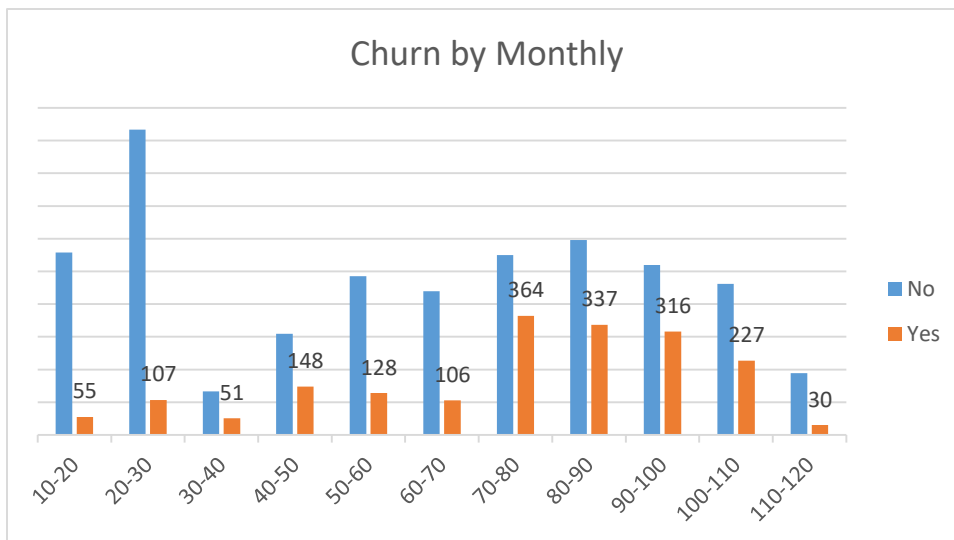
4. Churn by Internet with Service Type:



- **Insight:** The chart shows that internet services significantly affects customer churn rate. Customers with Fiber optic internet had the highest churn rate of

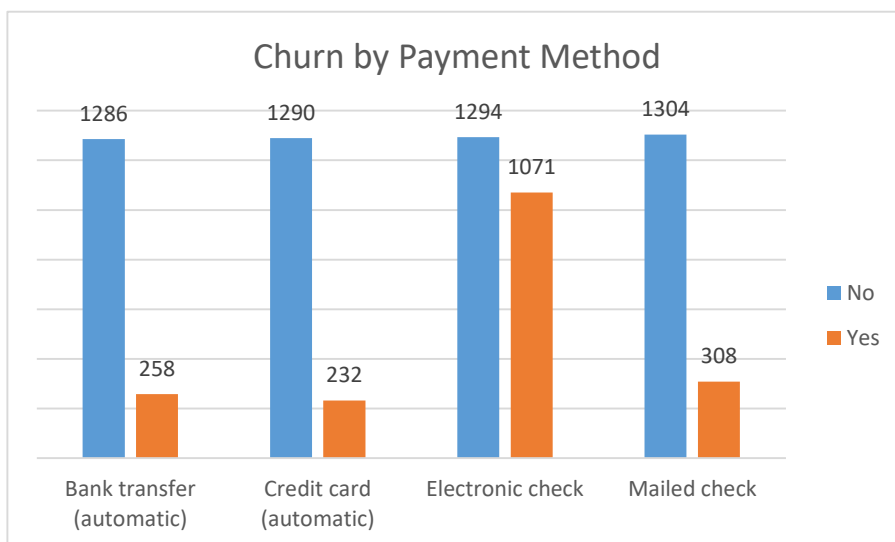
18.42% (1,297) and customers with no internet have the lowest churn rate, either due to higher costs, technical issue or service quality issues.

5. Churn by Monthly Charges:



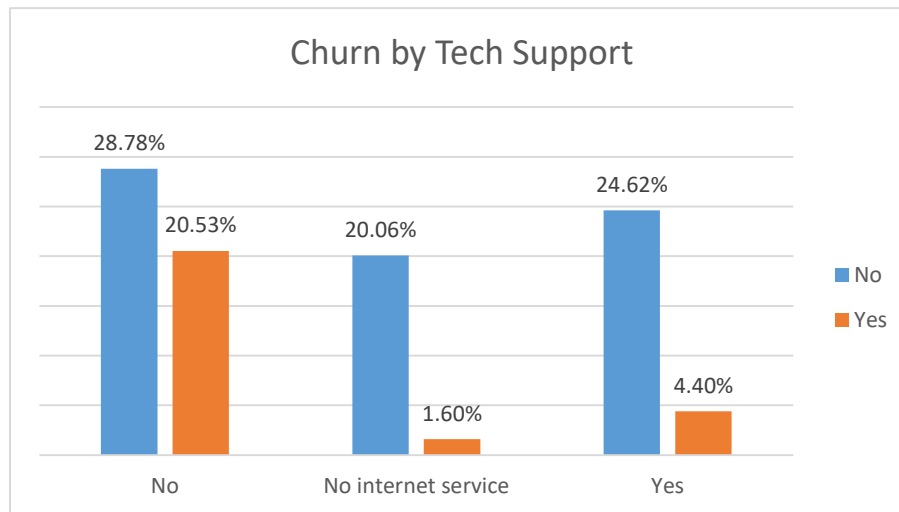
- Churn increases sharply and is highest for customers paying above \$70 - \$80 a month to 364, followed by those paying \$80 - \$90 a month to 337, then the churn rate decreases significantly for those paying \$110 - \$120 a month to 30.
- With churn rate being lowest among those paying \$110 - \$120, followed by those customers paying \$30 - \$40, as well as customers paying \$10 - \$20.

6. Payment Method Insight:



- Customers using electronic checks had a higher churn rate than those using credit cards, bank transfers or mailed check.

7. Churn by Tech Support:



- Customers without tech support had a higher churn rate of 20.53% out of a total customer churn of 26.54% than those with tech support.

6. Key Insights

1. Month-to-month customers have the highest churn rate, contributing (23.50%) of the (26.54%) total churn rate.
2. Customers with no tech support churn 3x more likely to churn than customers with tech support.
3. Fiber optic has the highest churn rate of (18.42%) compared to other internet types.
4. Tenure <12 months are more likely to churn as they have the highest churn.
5. Electronic check payment users churn the most compared to other payment users.
6. Customers with no tech support churn more.
7. Customers with high monthly charges churn more.

7. Supporting Insights

1. **Churn by gender:** The Churn rate was almost on the same level for both male and female customers.

2. **Churn by Dependents:** Customers without dependents have a higher churn rate of 25.03% than those with dependents.
 3. **Churn by senior citizens:** 6.76% of senior citizens churned.
 4. **Churn by partner:** Customers with no partner churned more than customers with partners.
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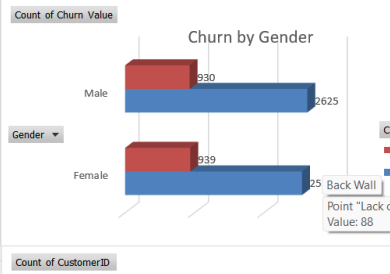
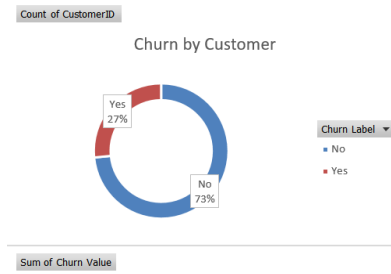
8. Recommendations

1. Offer discounts or loyalty points for annual renewals.
 2. Improve onboarding, streamlining the onboarding process, simplify the onboarding process, also the company should offer digital self – service.
 3. Ensure hassle – free installation.
 4. Create flexible plans for those paying above \$80/month with.
 5. Company should promote automated payments to reduce customer churn rates.
 6. Ensure billings are user – friendly and transparent to reduce confusion and disputes.
 7. Tech support should be improved on to reduce customer churn.
 8. Taking care of technical issues related to churn will reduce churn rate.
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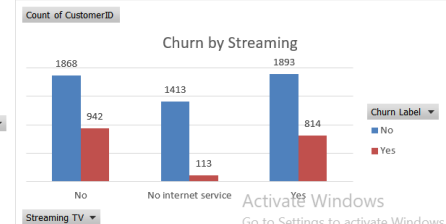
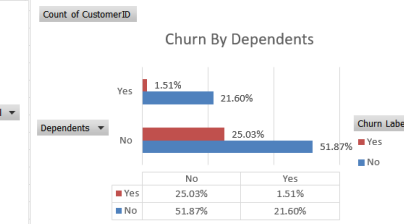
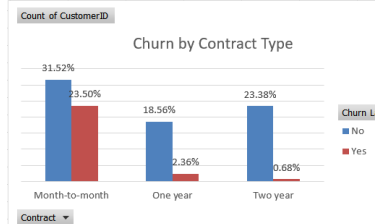
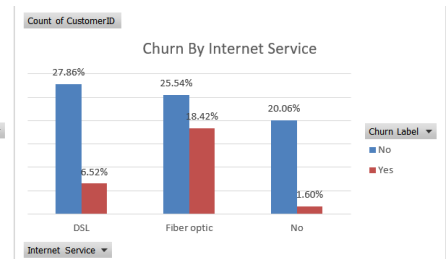
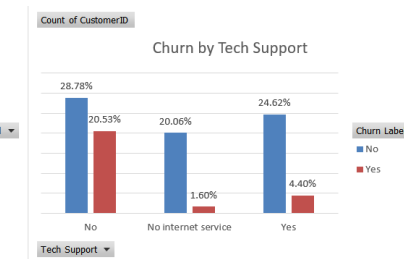
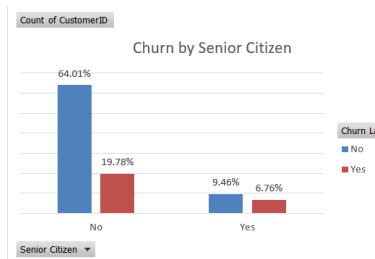
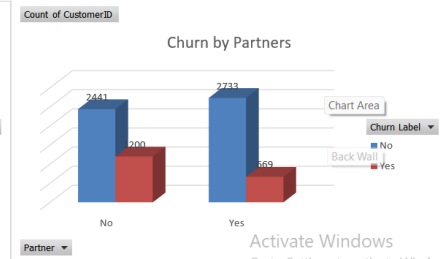
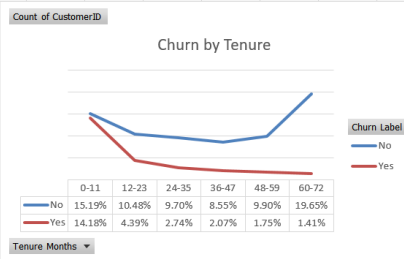
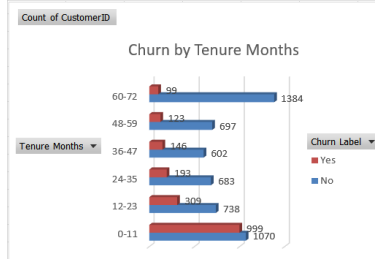
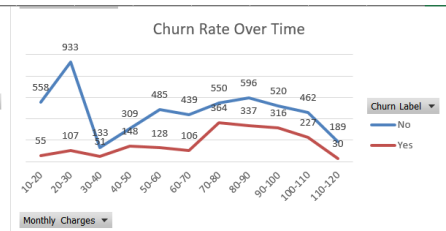
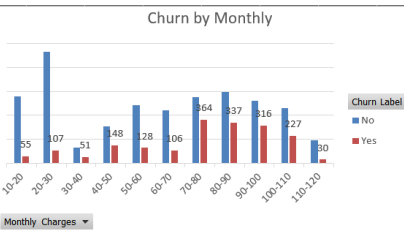
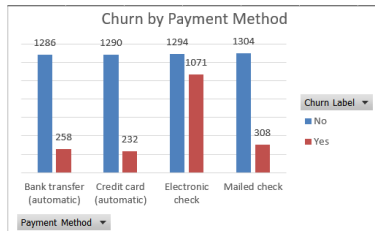
9. Visualization Summary

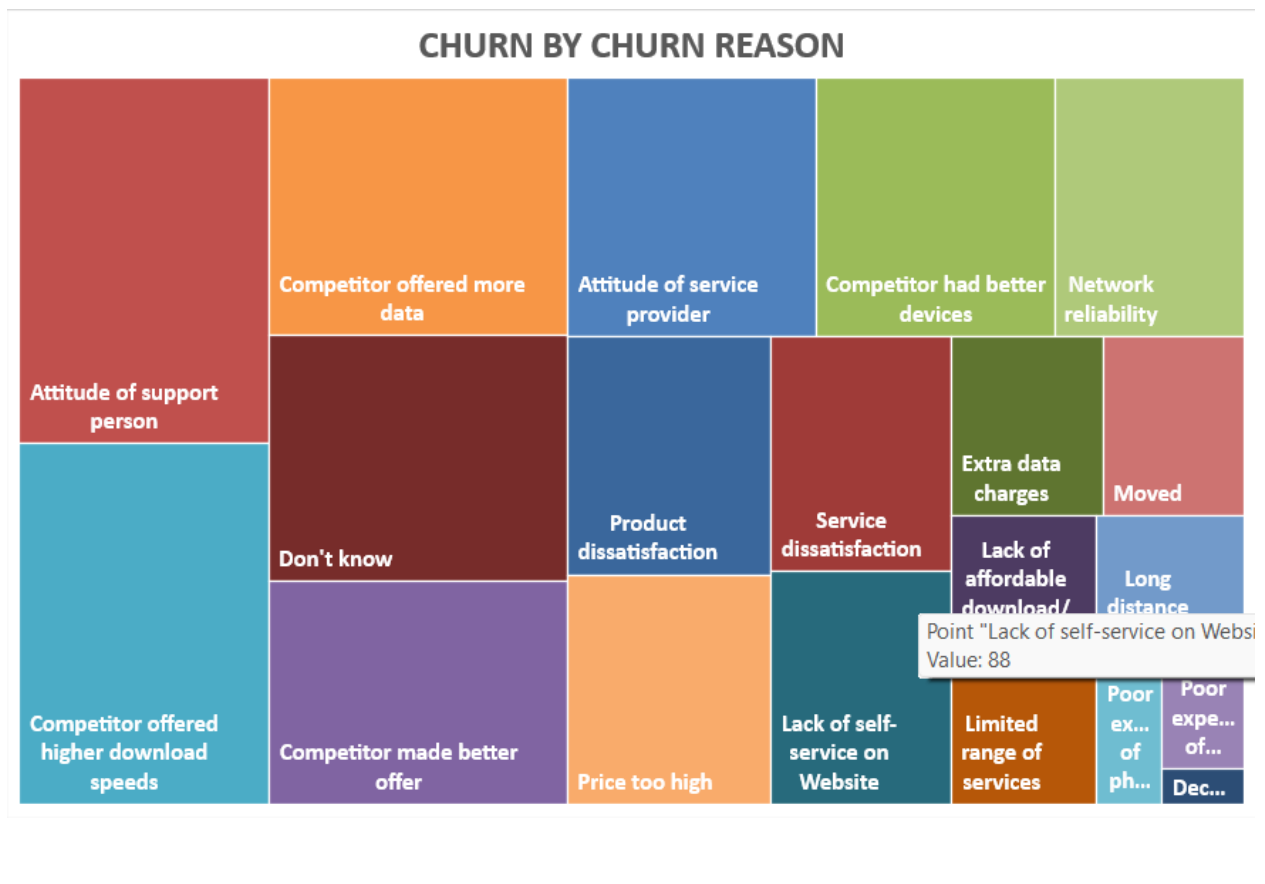
TELCO CUSTOMER CHURN - ANALYSIS

Total customers	Total churned	Retained Customers	Average Tenure
7043	1869	5174	36 months



TOTAL CUSTOMERS
7043
TOTAL CHURNED
1869 (27%)
RETAINED CUSTOMERS
5174 (73%)
AVERAGE TENURE
36 MONTHS





10. Conclusion

This analysis identified the main churn drivers — short-term contracts, high monthly charges, internet service type, and payment method preferences.

Implementing retention strategies focused on **contract renewal incentives**, **promoting low churn payment methods**, **addressing customer technical issues**, and **customer engagement** could significantly reduce churn and increase lifetime value.