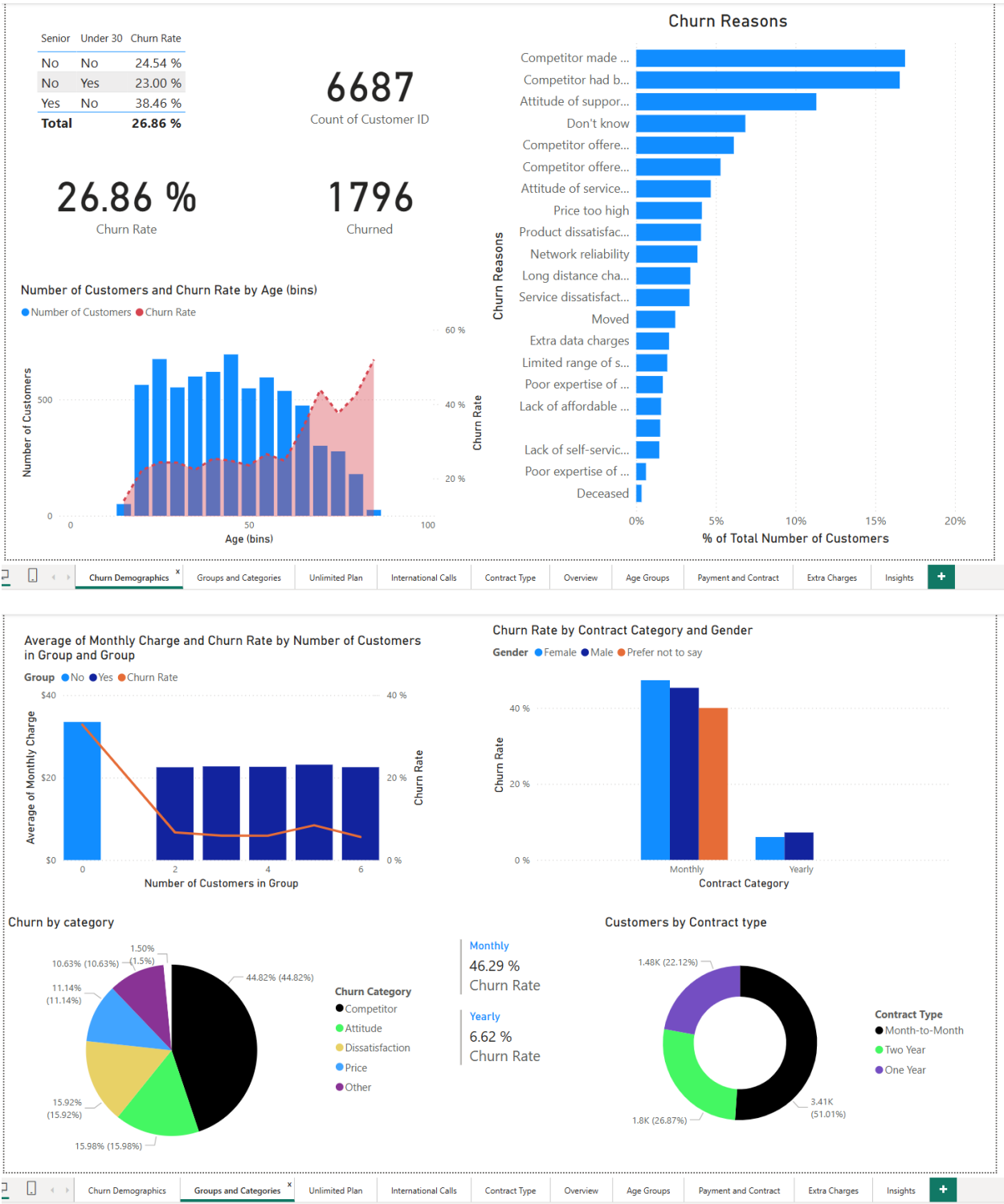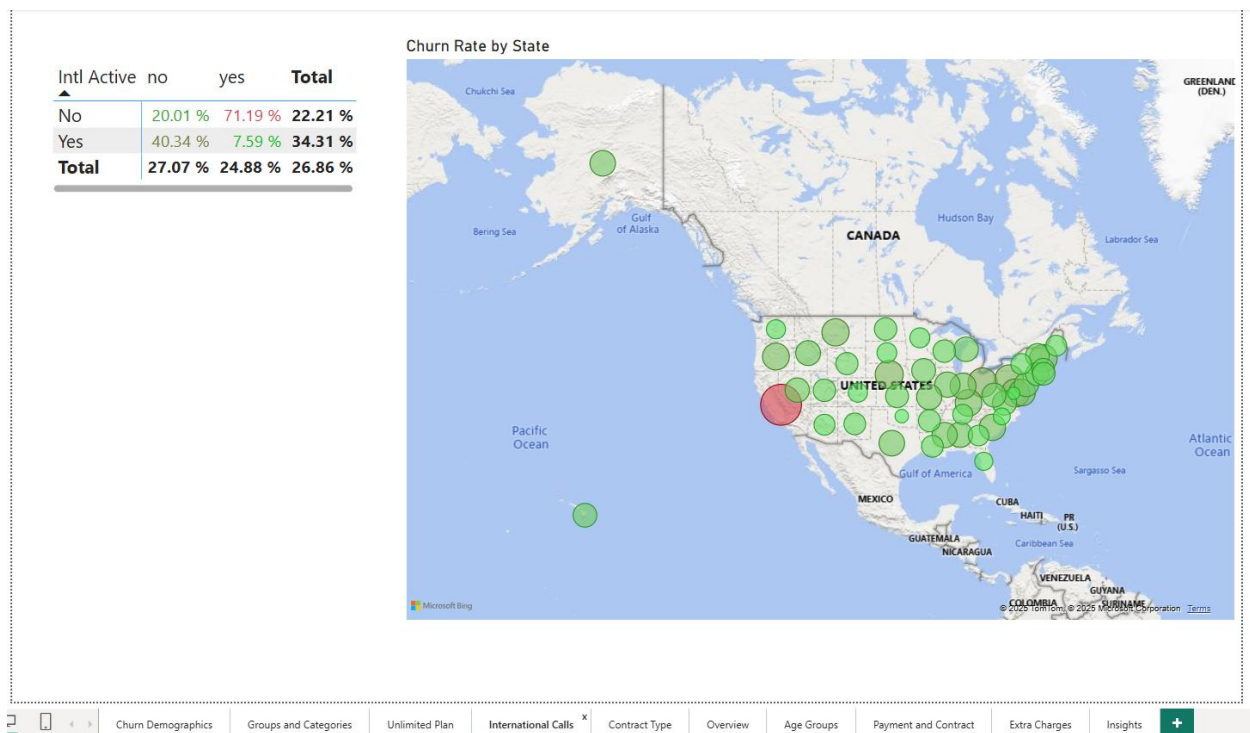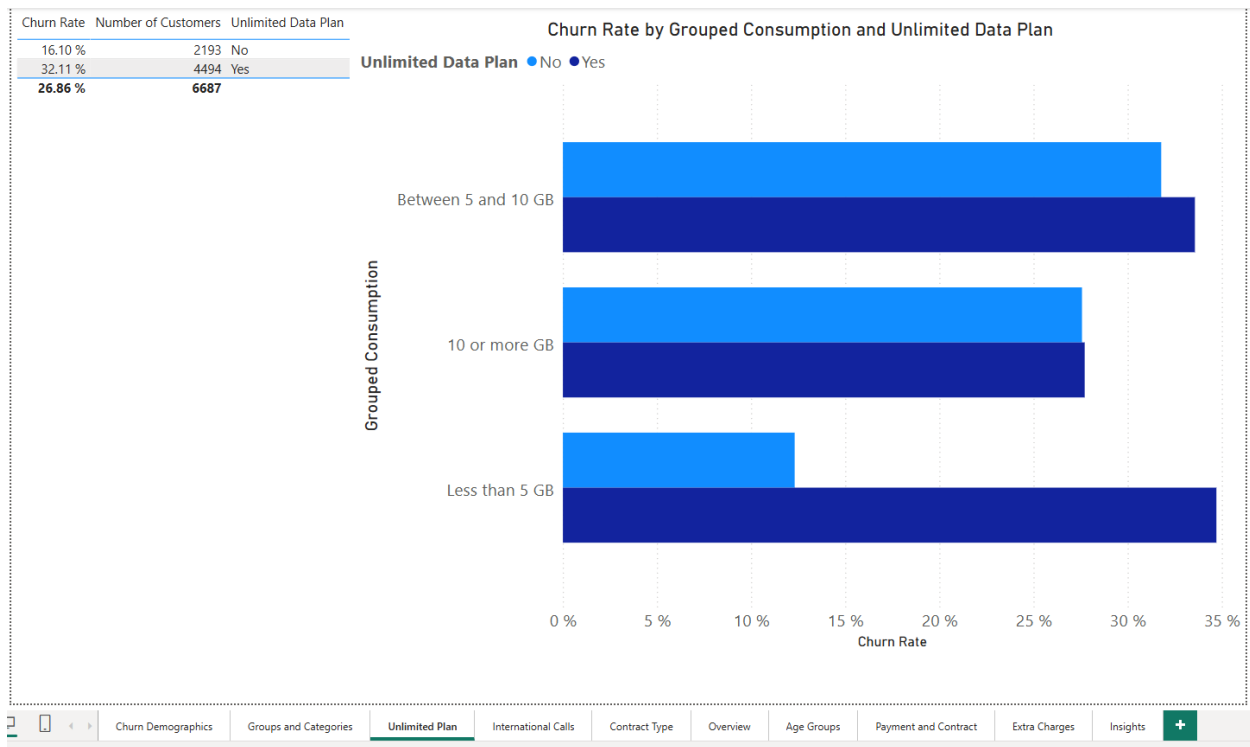**Analyzing Customer Churn**

This Power BI project is a case study in data analysis, aimed at discovering why customers from a fictitious Telecom provider are churning.
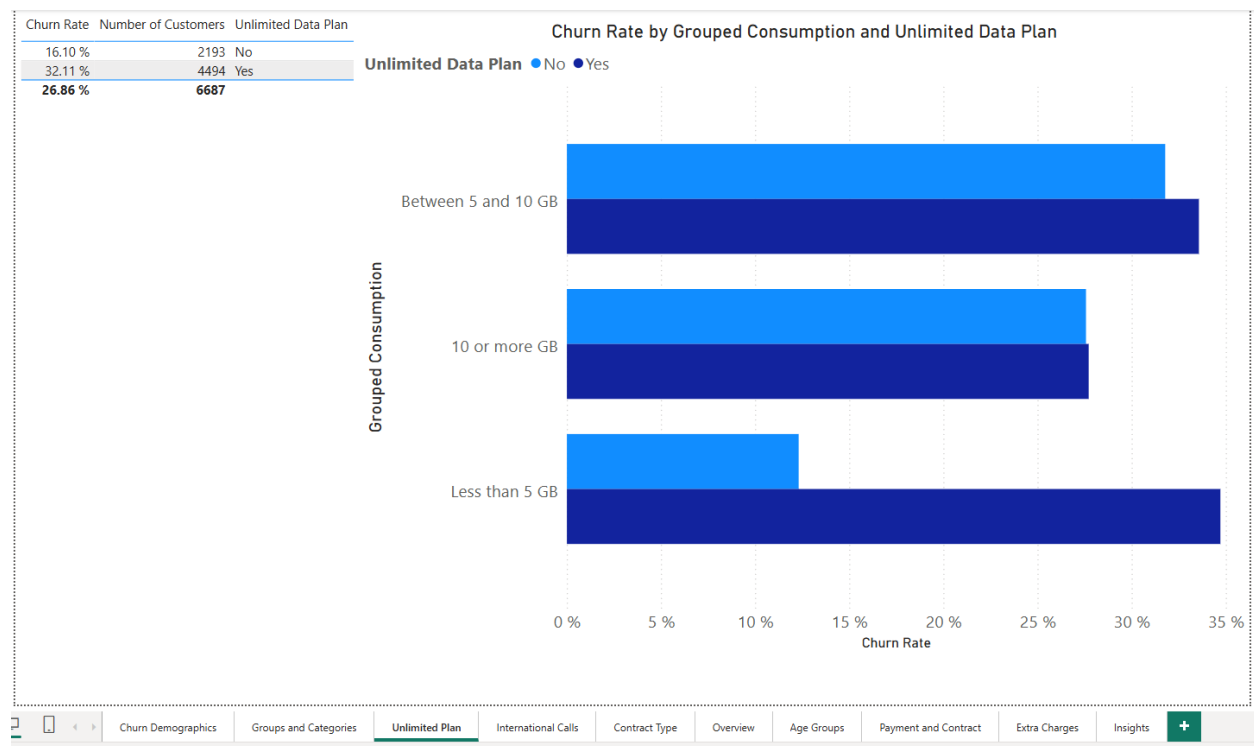
The churn rate is the rate at which customers stop doing business with a company.

It is important for companies to retain their customers and keeping them is usually cheaper than getting new ones.

The Dashboard

Senior	Under 30	Churn Rate
No	No	24.54 %
No	Yes	23.00 %
Yes	No	38.46 %
Total		**26.86 %**

6687
Count of Customer ID

26.86 %
Churn Rate

1796
Churned

Churn Reasons

Number of Customers and Churn Rate by Age (bins)
● Number of Customers ● Churn Rate

Average of Monthly Charge and Churn Rate by Number of Customers in Group and Group

Group ● No ● Yes ● Churn Rate

Churn Rate by Contract Category and Gender

Gender ● Female ● Male ● Prefer not to say

Churn by category

10.63% (10.63%)
1.50% (1.5%)
11.14% (11.14%)
44.82% (44.82%)
15.92% (15.92%)
15.98% (15.98%)

Churn Category
● Competitor
● Attitude
● Dissatisfaction
● Price
● Other

Customers by Contract type

Monthly
46.29 %
Churn Rate

Yearly
6.62 %
Churn Rate

1.48K (22.12%)
3.41K (51.01%)
1.8K (26.87%)

Contract Type
● Month-to-Month
● Two Year
● One Year

Churn Rate	Number of Customers	Unlimited Data Plan
16.10 %	2193	No
32.11 %	4494	Yes
26.86 %	**6687**	

Churn Rate by Grouped Consumption and Unlimited Data Plan

Unlimited Data Plan ● No ● Yes

Grouped Consumption (vertical axis): Between 5 and 10 GB, 10 or more GB, Less than 5 GB

Churn Rate (horizontal axis): 0 % 5 % 10 % 15 % 20 % 25 % 30 % 35 %

Churn Rate by State

Intl Active	no	yes	**Total**
No	20.01 %	71.19 %	**22.21 %**
Yes	40.34 %	7.59 %	**34.31 %**
Total	**27.07 %**	**24.88 %**	**26.86 %**

Churn Rate by Account Length (in months)

Number of Customers and Churn Rate by Payment Method

Payment Method
- Direct Debit
- Credit Card
- Paper Check

0K (5.55%)
3K (39.09%)
4K (55.36%)

Churn Rate by Account Length (in months) and Contract Type

Contract Type ● Month-to-Month ● One Year ● Two Year

Churn Rate	Number of Customers	Unlimited Data Plan
16.10 %	2193	No
32.11 %	4494	Yes
26.86 %	**6687**	

Churn Rate by Grouped Consumption and Unlimited Data Plan

Unlimited Data Plan ● No ● Yes

26.86 %
Churn Rate

6687
Count of Customer ID

1796
Churned

Churn Reasons

Churn Reasons (bar chart, % of Total Number of Customers):
- Competitor made ...
- Competitor had b...
- Attitude of suppor...
- Don't know
- Competitor offere...
- Competitor offere...
- Attitude of service...
- Price too high
- Product dissatisfac...
- Network reliability
- Long distance cha...
- Service dissatisfact...
- Moved
- Extra data charges
- Limited range of s...
- Poor expertise of ...
- Lack of affordable ...
- Lack of self-servic...
- Poor expertise of ...
- Deceased

Churn by category

Churn Category:
- Competitor 44.82% (44.82%)
- Attitude 15.98% (15.98%)
- Dissatisfaction 15.92% (15.92%)
- Price 11.14% (11.14%)
- Other 10.63% (10.63%)
- 1.50% (1.5%)

Customers by Contract type

Contract Type:
- Month-to-Month 3.41K (51.01%)
- Two Year 1.8K (26.87%)
- One Year 1.48K (22.12%)

Churn Rate by State

Number of Customers and Churn Rate by Age (bins)
- Number of Customers
- Churn Rate

Churn Rate by Account Length (in months)

Average of Monthly Charge and Churn Rate by Number of Customers in Group and Group
Group: No | Yes | Churn Rate

Account Length (in months)
1   12

Average of Account Length (in months) and Churn Rate by Payment Method and Contract Category

6123
Customer Service Calls

0.92
Avg Customer Service Calls

Contract Category ● Monthly ● Yearly

Churn Rate (y-axis): 0 % – 60 %
Average of Account Length (in months) (x-axis): 10 – 50

Contract Category, Payment Method

- ⌄ ☐ Monthly
  - ☐ Credit Card
  - ☐ Direct Debit
  - ☐ Paper Check
- ⌄ ☐ Yearly
  - ☐ Credit Card
  - ☐ Direct Debit
  - ☐ Paper Check

Churn Rate by Grouped Consumption and Unlimited Data Plan

Unlimited Data Plan ● No ● Yes

Grouped Consumption (y-axis):
- Between 5 and 10 GB
- 10 or more GB
- Less than 5 GB

Churn Rate (x-axis): 0 % – 35 %

3.37
Avg Extra Data Charges

33.64
Avg Extra International Charges

6123

Customer Service Calls

3.37

Avg Extra Data Charges

0.92

Avg Customer Service Calls

33.64

Avg Extra International Charges

Churn Rate by State

© 2025 TomTom, © 2025 Microsoft Corporation, © OpenStreetMap Terms

Avg Customer Service Calls by State and Churn Label

Churn Label ● No ● Yes

State

| Churn Demographics | Groups and Categories | Unlimited Plan | International Calls | Contract Type | Overview | Age Groups | Payment and Contract | Extra Charges | **Insights** |
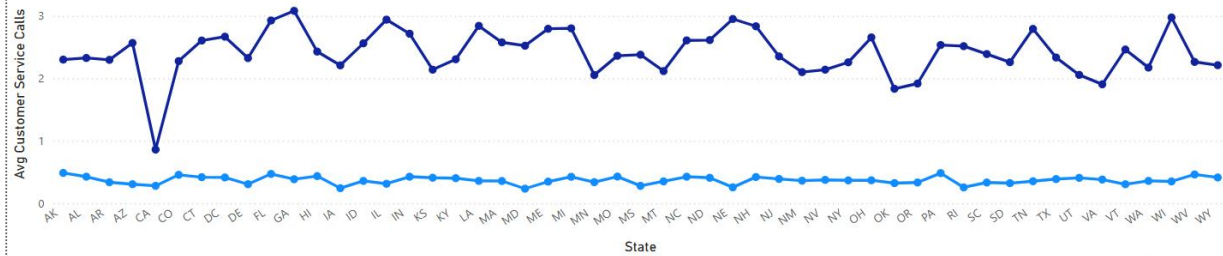
Most Relevant Findings

1. The churn rate for this Telecom company is ~27%.

2. Over 44% of the reasons why customers churn is related to competitors.

3. The churn rate in California is abnormally high (above 63%) but not related to customer services (lowest volume of service calls in the country).

4. The churn rate is higher for new accounts (~62%), dropping to half after 18 months

5. Customers of a Month-to-Month contract type have significantly higher churn rates than those committed in one year or two years contracts.

Actionable Insights

• 44% of churn is driven by competitors offers. To remain competitive, the company should proactively launch new services and benefits to attract and retain customers. Special attention should be given to high-churn segments, such as customers in California and those over 50.
• Promote exclusive product discounts to customers on month-to-month contracts to encourage conversion to long-term commitments.