

Business Analytics –Assignment 1

Saha Debanshee Gopal

U101113FCS074

AIM:

1. To analyse the data of the given telecommunication company and find the major factors leading to an increase in churn.
2. To device a suitable business plan based on the analysis to reduce the churn and in turn increase the profit of the company.

What is “Churn”?

In a general context, **churn** is a synonym for **agitation** or **turnover**. The term derives from a dairy procedure that results in butter (one agitates cream in a wooden container; churn is the word for both the container and the process), but is often used to refer to something that is turning over, either literally or figuratively. In a business context, it generally refers to customer or employee turnover, and especially attrition.

Churn, in a communications context, refers to the tendency of Internet and cell phone subscribers to switch providers. The most common reasons for churn are dissatisfaction with an existing provider, the lure of a lower price for equivalent service from a different provider, and the lure of better service for the same price from a different provider. Churn can also result from a change in the subscriber's geographic location, the desire for increased connection speed, or a need for different or enhanced cell-phone coverage.

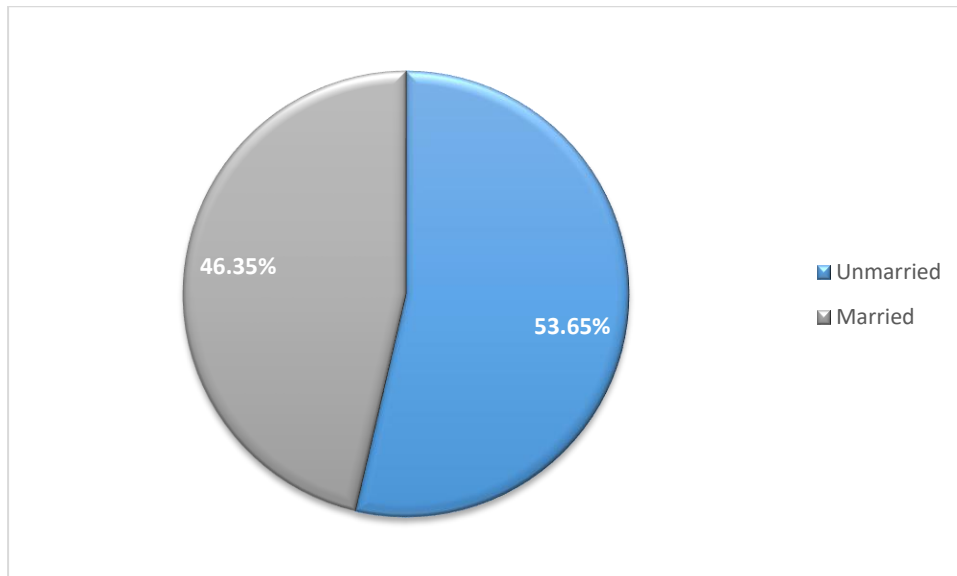
The primary goal of our analysis is to identify those customers that are most likely to discontinue using the given service. In today's dynamic financial industry, companies are progressively providing products and services with similar features. Amidst this ever growing competition, the cost of acquiring a new customer typically exceeds the cost of retaining a current customer. Existing customers are a valuable asset. Furthermore, given the nature of the financial services industry, where customers generally tend to stay with a company for a longer term, churning could lead to substantial revenue loss.

Thus, we need to analyse the data and ensure that the churn is reduced and in turn increase the profit of the company.

Explanatory Analysis:

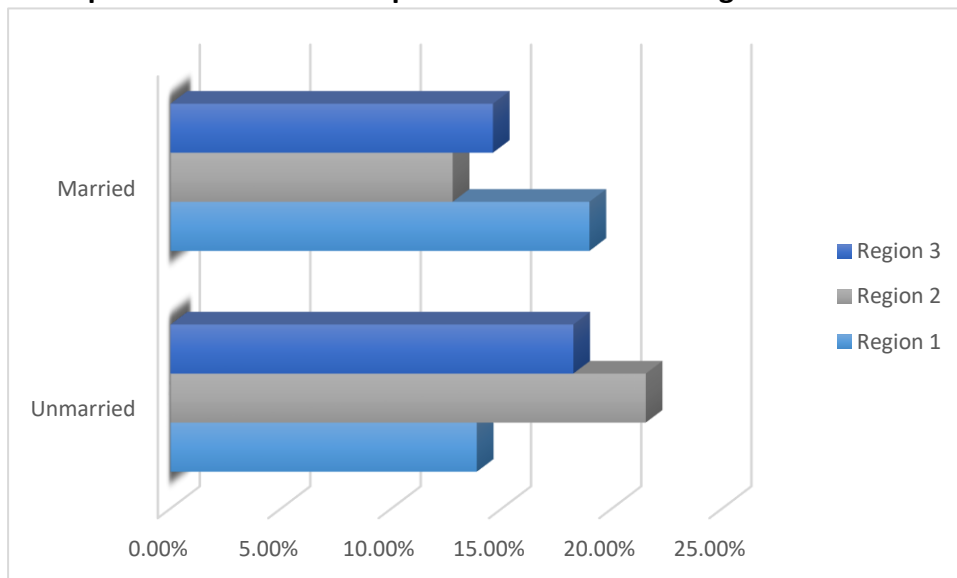
- 1) **Average churn Age: 36.51824818**

2) A. Proportion of Churners as per marital status:



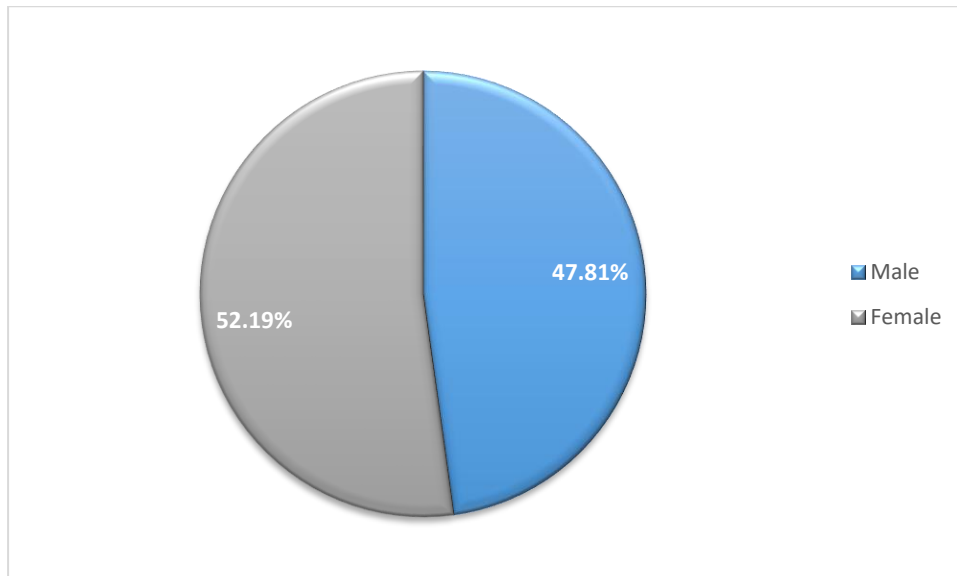
Marital Status	Percentage of churn
Unmarried	53.65%
Married	46.35%
Grand Total	100.00%

B. Proportion of Churners as per marital status and region:



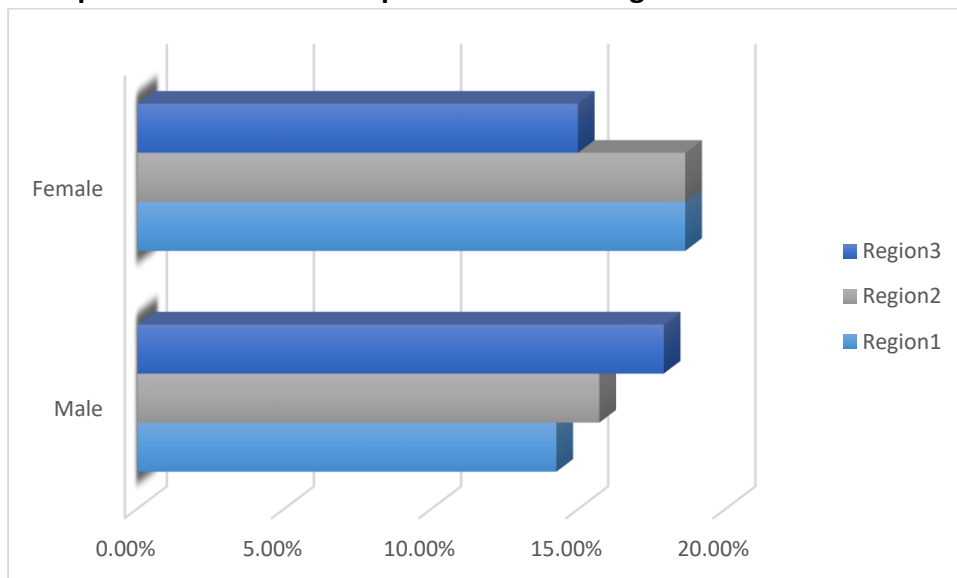
Percentage of Churn				
Marital Status	Region 1	Region 2	Region 3	Grand Total
Unmarried	13.87%	21.53%	18.25%	53.65%
Married	18.98%	12.77%	14.60%	46.35%
Grand Total	32.85%	34.31%	32.85%	100.00%

3) A. Proportion of Churners as per Gender:



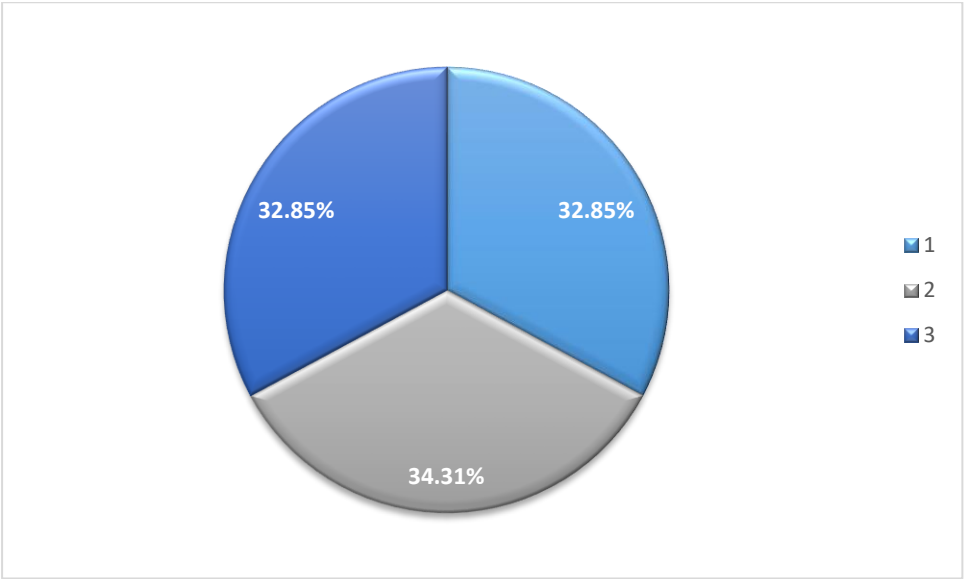
Gender	Percentage of churn
Male	47.81%
Female	52.19%
Grand Total	100.00%

B. Proportion of Churners as per Gender and Region:



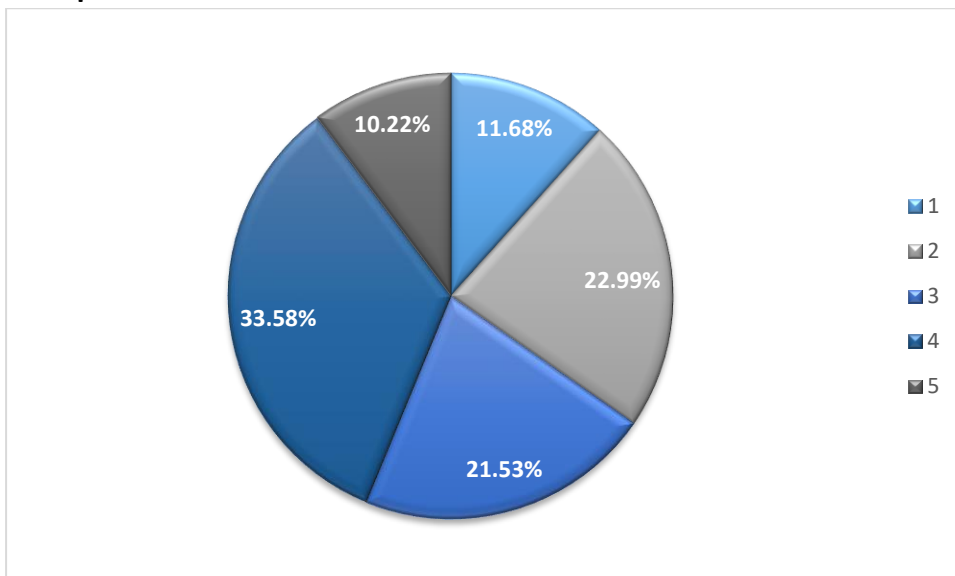
Percentage of Churn	Regions			Grand Total
	Region1	Region2	Region3	
Male	14.23%	15.69%	17.88%	47.81%
Female	18.61%	18.61%	14.96%	52.19%
Grand Total	32.85%	34.31%	32.85%	100.00%

4) Proportion of Churner Region wise:



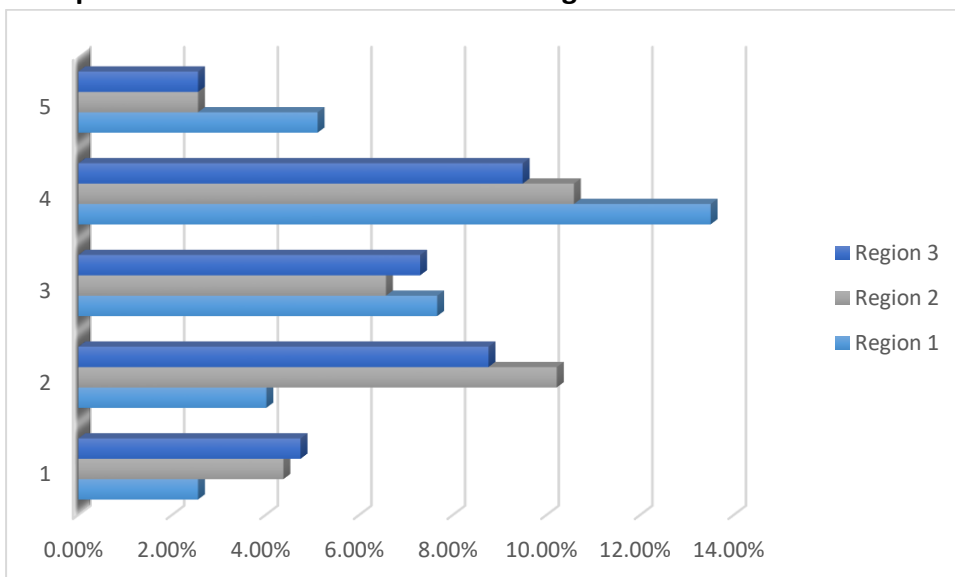
Region	Percentage of churn
1	32.85%
2	34.31%
3	32.85%
Grand Total	100.00%

5) A. Proportion of Churner Education wise:



Level of Education	Percentage of churn
1	11.68%
2	22.99%
3	21.53%
4	33.58%
5	10.22%
Grand Total	100.00%

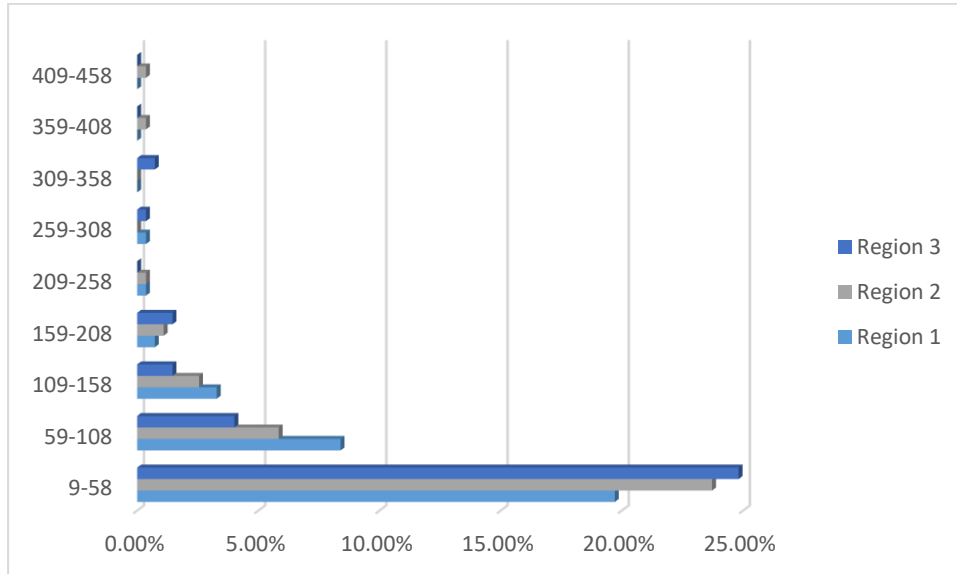
B. Proportion of Churner Education and Region wise:



Percentage of Churn Education Level	Regions			Grand Total
	Region 1	Region 2	Region 3	
1	2.55%	4.38%	4.74%	11.68%
2	4.01%	10.22%	8.76%	22.99%

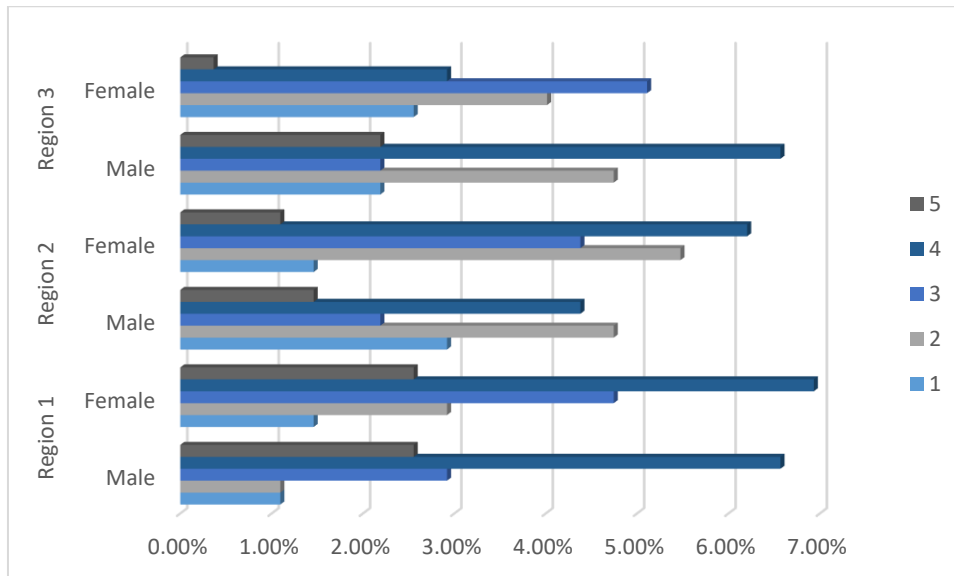
3	7.66%	6.57%	7.30%	21.53%
4	13.50%	10.58%	9.49%	33.58%
5	5.11%	2.55%	2.55%	10.22%
Grand Total	32.85%	34.31%	32.85%	100.00%

6) Proportion of Churner in the high-income group region wise:



Percentage of Churn Income Groups	Regions			Grand Total
	Region 1	Region 2	Region 3	
9-58	19.71%	23.72%	24.82%	68.25%
59-108	8.39%	5.84%	4.01%	18.25%
109-158	3.28%	2.55%	1.46%	7.30%
159-208	0.73%	1.09%	1.46%	3.28%
209-258	0.36%	0.36%	0.00%	0.73%
259-308	0.36%	0.00%	0.36%	0.73%
309-358	0.00%	0.00%	0.73%	0.73%
359-408	0.00%	0.36%	0.00%	0.36%
409-458	0.00%	0.36%	0.00%	0.36%
Grand Total	32.85%	34.31%	32.85%	100.00%

7) Proportion of churners gender, Education status and region-wise:



Percentage of Churn		Education Level				
Gender		1	2	3	4	5
Region 1		2.55%	4.01%	7.66%	13.50%	5.11%
Male		1.09%	1.09%	2.92%	6.57%	2.55%
Female		1.46%	2.92%	4.74%	6.93%	2.55%
Region 2		4.38%	10.22%	6.57%	10.58%	2.55%
Male		2.92%	4.74%	2.19%	4.38%	1.46%
Female		1.46%	5.47%	4.38%	6.20%	1.09%
Region 3		4.74%	8.76%	7.30%	9.49%	2.55%
Male		2.19%	4.74%	2.19%	6.57%	2.19%
Female		2.55%	4.01%	5.11%	2.92%	0.36%
Grand Total		11.68%	22.99%	21.53%	33.58%	10.22%

Report:

The given data and the graph/analysis done on the given data lead us to the following conclusion: