

1. Metric Calculation

We calculated several metrics using our dataset, the results of which were produced in [RStudio](#) (Version 1.4.1717) using 64-bit R version 4.0.5.

1.1. Total (net) revenue per year

| Year | Total Revenue |
|------|---------------|
| 2015 | 29,036,749 |
| 2016 | 25,730,944 |
| 2017 | 31,417,495 |

1.2. New Customer Revenue

Before calculating this metric, we created a variable referring to the customer status, which was based on whether a customer was present during the previous year (and not during the years before that). Regarding the year 2016, we considered customers who were active during that year but not during 2015 as new customers, while the rest were classified as old customers. Similarly, for year 2017 we considered the customers who were active during 2017 but not during 2016 as new ones and we classified the rest of them as old.

In the same sense, we indicated whether a customer was lost during each year by creating the corresponding variable. In particular, we distinguished the customers that were present during the previous year, but not during this year as lost customers and the rest of them as either new customers or old customers.

| Year | New Customer Revenue |
|------|----------------------|
| 2016 | 18,245,491 |
| 2017 | 28,776,235 |

1.3. Existing Customer Growth

| Year | Total Revenue | Customer Growth |
|------|---------------|-----------------|
| 2015 | 29,036,749 | - |
| 2016 | 25,730,944 | -3,305,806 |
| 2017 | 31,417,495 | 5,686,551 |

1.4. Revenue lost from attrition

The formula for revenue attrition (i.e. revenue churn rate) is beginning period reoccurring revenue minus end-of-period reoccurring revenue, divided by beginning period revenue. In the table below, this metric was presented as a percentage.

| Year | Total Revenue | Churn Rate |
|------|---------------|------------|
| 2015 | 29,036,749 | - |
| 2016 | 25,730,944 | 11.4% |
| 2017 | 31,417,495 | -22.1% |

1.5. Existing Customer Revenue Current Year

In the output below, we have calculated the revenue of existing customers that were onboarded per year.

| Year | Total Revenue |
|------|---------------|
| 2016 | 18,245,491 |
| 2017 | 28,776,235 |

1.6. Existing Customer Revenue Prior Year

In the output below, we have calculated the revenue of existing customers that were retained from last year.

| Year | Total Revenue |
|------|---------------|
| 2016 | 7,485,453 |
| 2017 | 2,641,260 |

1.7. Total Customers Current & Previous Year

| Year | Total Customers |
|------|-----------------|
| 2015 | 231,294 |
| 2016 | 204,646 |
| 2017 | 249,987 |

1.8. New Customers

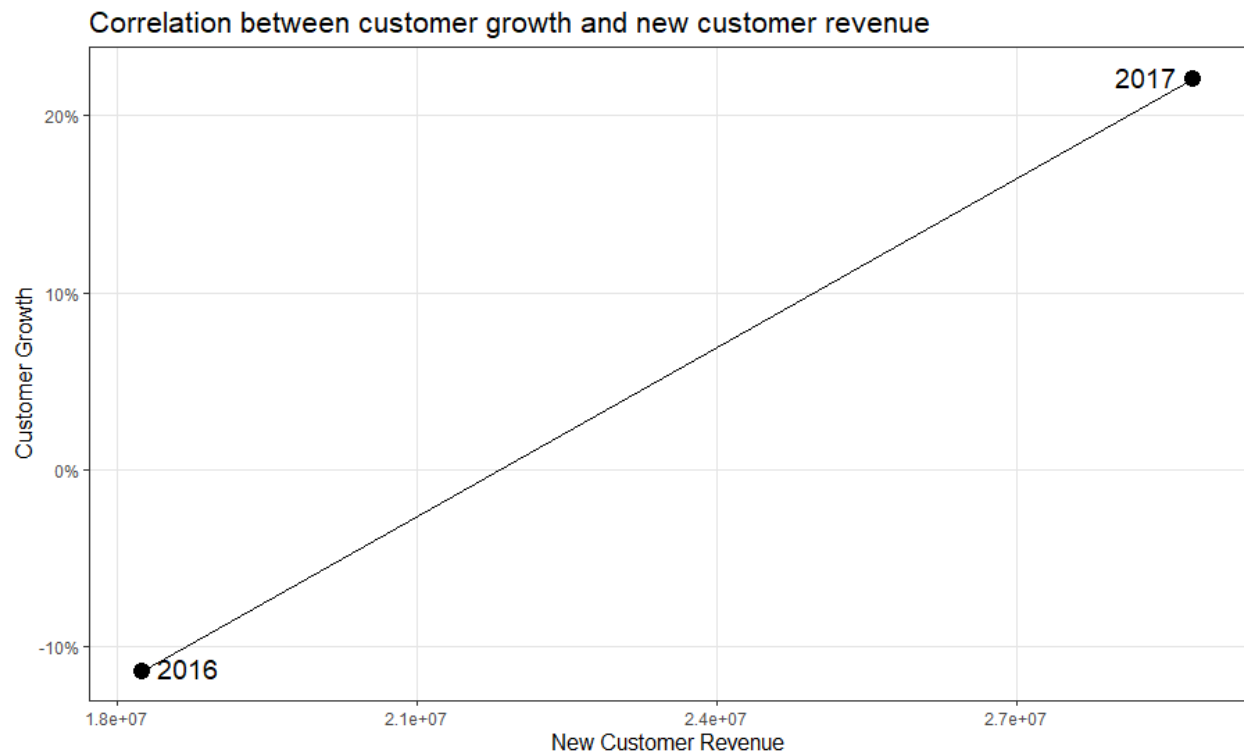
| Year | New Customers |
|------|---------------|
| 2016 | 145,062 |
| 2017 | 229,028 |

1.9. Lost Customers

| Year | Lost Customers |
|------|----------------|
| 2016 | 172,476 |
| 2017 | 237,109 |

2. Visualizations

At first, we decided to create a plot showcasing the customer growth against the new customer revenue. From there, we observed that an increase in the customer growth, such as the one that occurred from year 2016 to year 2017, would result in an increase on the new customer revenue. For example, in our case we noticed that a 33.5% increase on the customer growth (from year 2016 to 2017) resulted on an increase of over 10.5 million dollars of new customer revenue.



Furthermore, we decided to investigate the evolution of the company's customer base (in sheer numbers) through the years. From the figure below, we noticed that the number of new, lost and total customers were all on an upward trend from 2016 to 2017, although at a slightly different slope. In particular, we noticed that the new customer had increased at a higher than 57.8% rate, the lost customer increased by 37.5%, and the total have increased by 22.1%.

