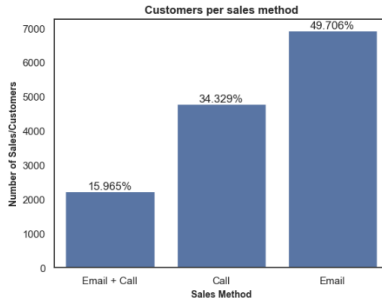


Data Analyst Professional Exam Submission: Product Sales Analysis

Business Goals

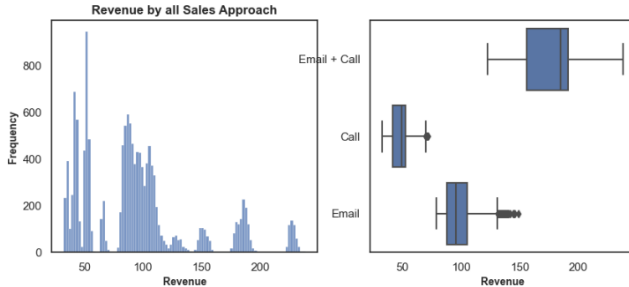
- 1 How many customers were there for each approach?
- 2 What does the spread of revenue look like overall? And for each method?
- 3 Was there any difference in revenue over time for each of the methods?
- 4 Based on the data, which method would you recommend we continue to use?

How many customers were there for each approach



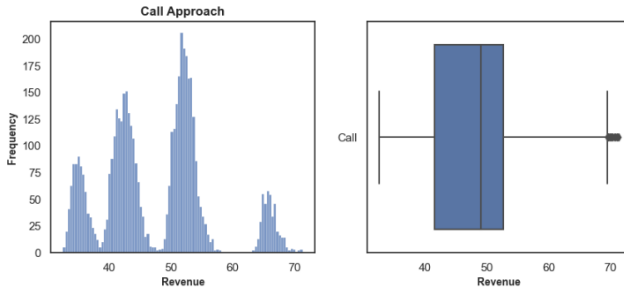
Segmenting the customers according to sales approach, the **Email** approach had **49.706%** of the total customers, followed by the **Call** and **Email + Call** methods with **34.329%** and **15.965%** respectively.

What does the spread of revenue look like overall?



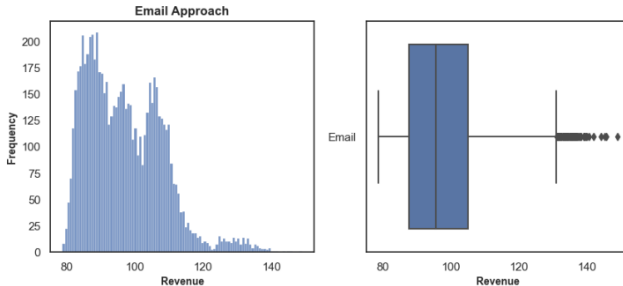
There appears to be a pattern relating to the sales approach used and the revenue generated, with Call taking the least revenue and Email + Call the most.

Revenue spread: Call approach



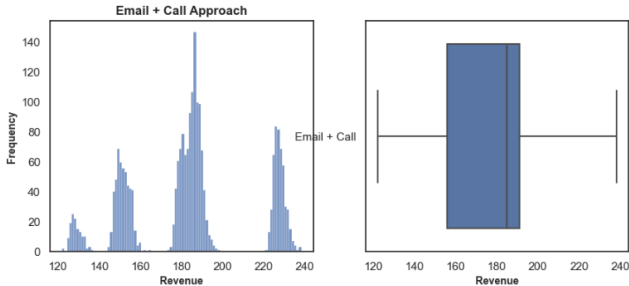
Low-end revenues were primarily generated from calls. This can be observed on the Call chart above, with a revenue range between 0 to 70, with a mean value of about 50.

Revenue spread: Email approach



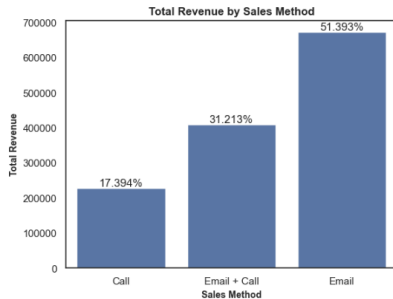
The Email approach generated revenues in the mid-range between 80 to 120, with huge values trickling in from 130 to 150, with a mean value of about 95.

Revenue spread: Email + Call approach



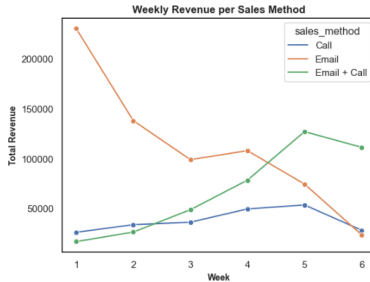
A combination of both approaches (Email + Call) yielded higher revenues ranging from 120 to 240 as observed from the histogram and boxplot for Email + call, with a mean value of about 185.

Total Revenue per Approach



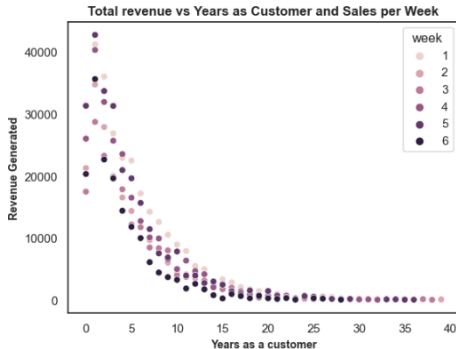
The Call approach, though having a high number of customers, generated the least revenue, this is followed by Email + Call and then the Email approach.

Was there any difference in revenue over time for each of the methods?



From the graph, the Email approach has a strong negative trend, and the Email + Call approach has a strong positive revenue trend more than the Call approach.

Was there any difference in revenue over time for customers' years?



Recommendations

from the analysis performed using the data provided, the following are recommended:

- Use key metrics to monitor whether there is a change in the sales approach.
- The Email method should be used frequently to communicate new products to customers, then a follow up call in the second and third week to talk about their needs and how the new product will support their work. This recommendation is based on the result obtained from 3 above.
- The Call method should be used less often, and if possible not at all. This is because it takes more time to make sales via this means and in the end it generates the least revenue, even with a high number of sales.
- The sales team should focus more on the Email and Email + Call approaches. As evident in 3 above, Email sales approach generate the most revenues within the first three weeks, though with a decline as the week progresses. This should be followed up with a call from the second or third week to further boost sales, and hence further generate more revenue.
- Expand their customer segment by improving marketing means and conversion rate based on the website visits. This is evident in 4 above, the longer the customer stays, the less revenue generated from the particular customer. Thus to mitigate this, new customers should be on-boarded and a retention means developed for existing customers to increase sales.
- Accurate data collation to enable in-depth analysis, especially in the revenue, which had lots of missing values.

Recommendations

A situation where the Call approach can still be used will be permitted only when the customer does not have an email address.