

Report: Pens and Printers New Product Sales

Thank you for providing me with the dataset from Pens And Printers' new product sales methods. Here is my report and initial analysis:

Data Validation

I carefully went through the dataset to assess its quality. Several issues were encountered and the methods I used to mitigate these inconsistencies are as follows:

Missing Data

The 'revenue' column had 1074 missing fields, which I replaced with the median 'revenue'.

Inaccurate Data

2 fields in 'years_as_customer' are inaccurate: 63 and 47 are not possible if the company was founded in 1984, so I changed these fields to the median for 'years_as_customer'.

Inconsistent Data

There should only have been 3 options for 'sales_method', but I found 5:

Email, Call, Email + Call, em + call, email: I replaced the last 2 to match the first 3 options.

Recommendation: Enforce a drop-down list for the user entering the data rather than a free text field.

The other columns: week, customer_id, nb_sold, revenue, nb_sites_visits, state were consistent and accurate.

Exploratory Data Analysis

Pens and Printers launched a new line of office stationery 6 weeks ago. The dataset consists of the results from 3 different sales strategies that brought in 15000 customers, totalling just over \$1.4m in revenue.

Total Customers
15,000

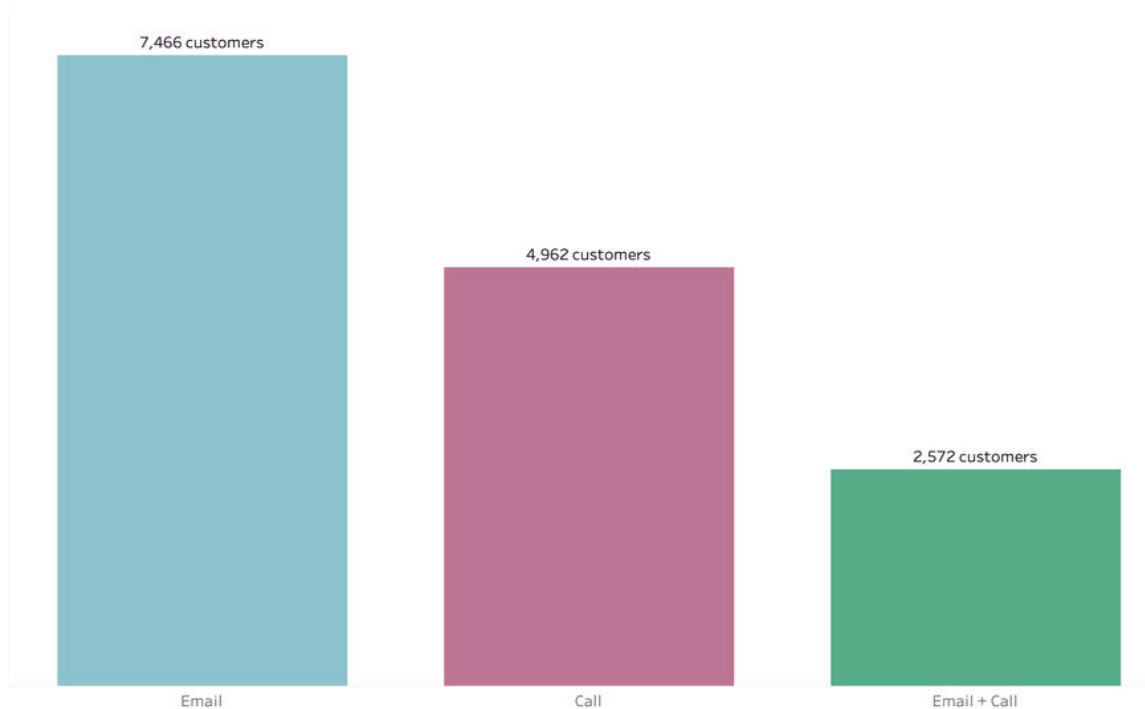
Total Revenue
\$1,404,261

How many customers were there for each approach?

Email - 7466 customers

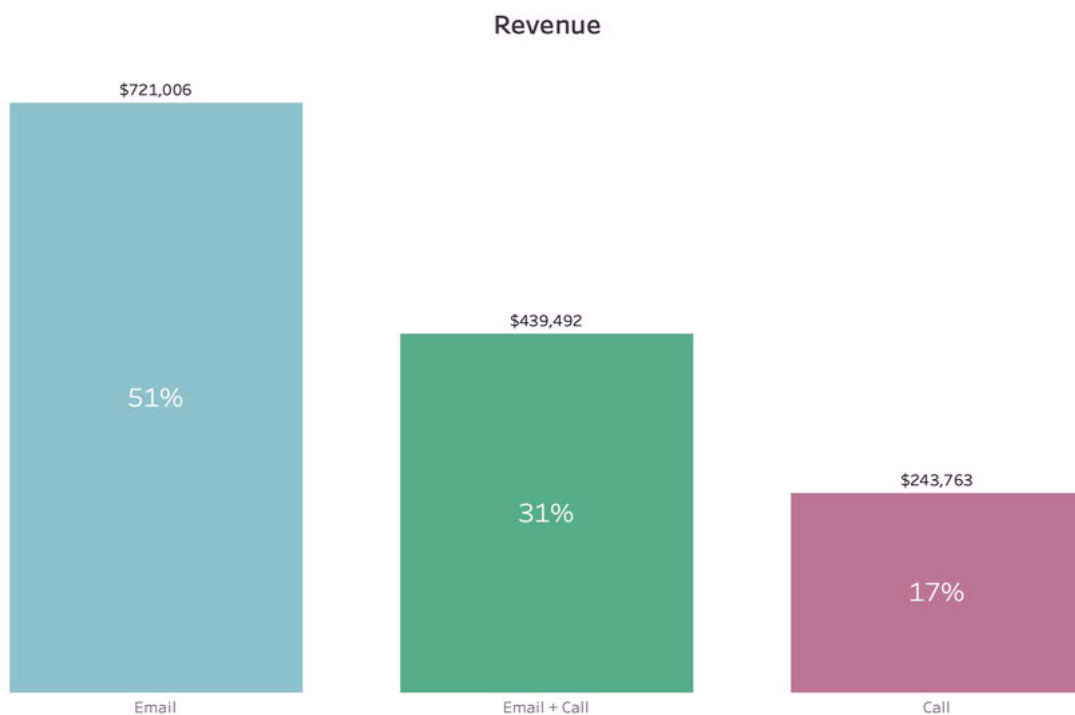
Call - 4962 customers

Email + Call - 2572 customers



What does the spread of the revenue look like overall? And for each method?

Email represented 51% of the revenue share, Email + Call 31%, and Call 17%



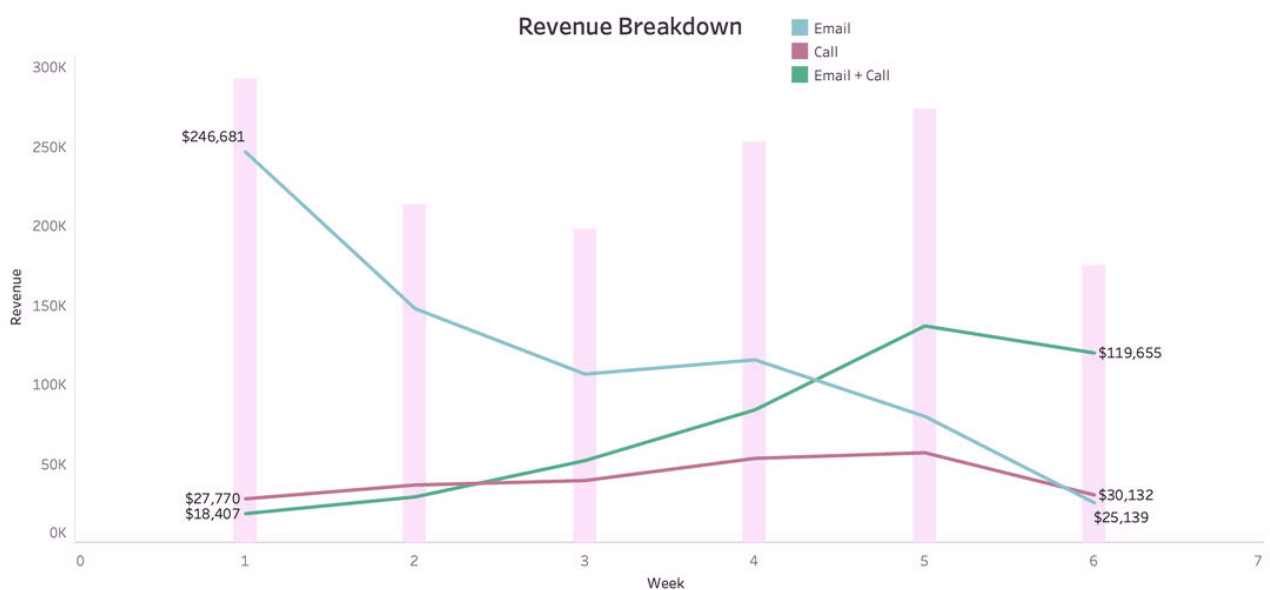
Was there any difference in revenue over time for each of the methods?

Total revenue decreased throughout the 6 weeks of this campaign from almost 293K in Week 1 to just under 175K in Week 6.



If we drill down into the data we can see that compared to total revenue (represented by the pink bars)

Email dropped almost 90%, while Email + Call and Call both increased with Email + Call climbing significantly from 18K to 119K.

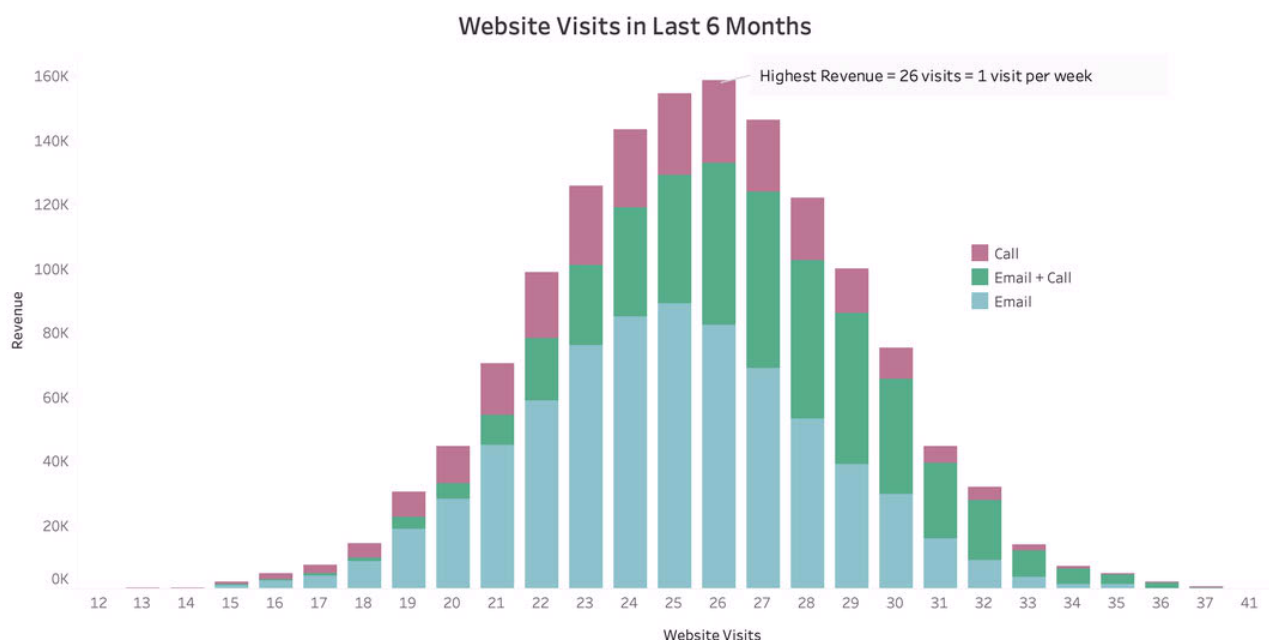


Metrics To Monitor

Based on the data, which method would you recommend we continue to use?

Despite the fact revenue from Email decreased over the 6 weeks it still returned the most revenue, so I would recommend continuing with this method, especially because it is both cost effective and time effective.

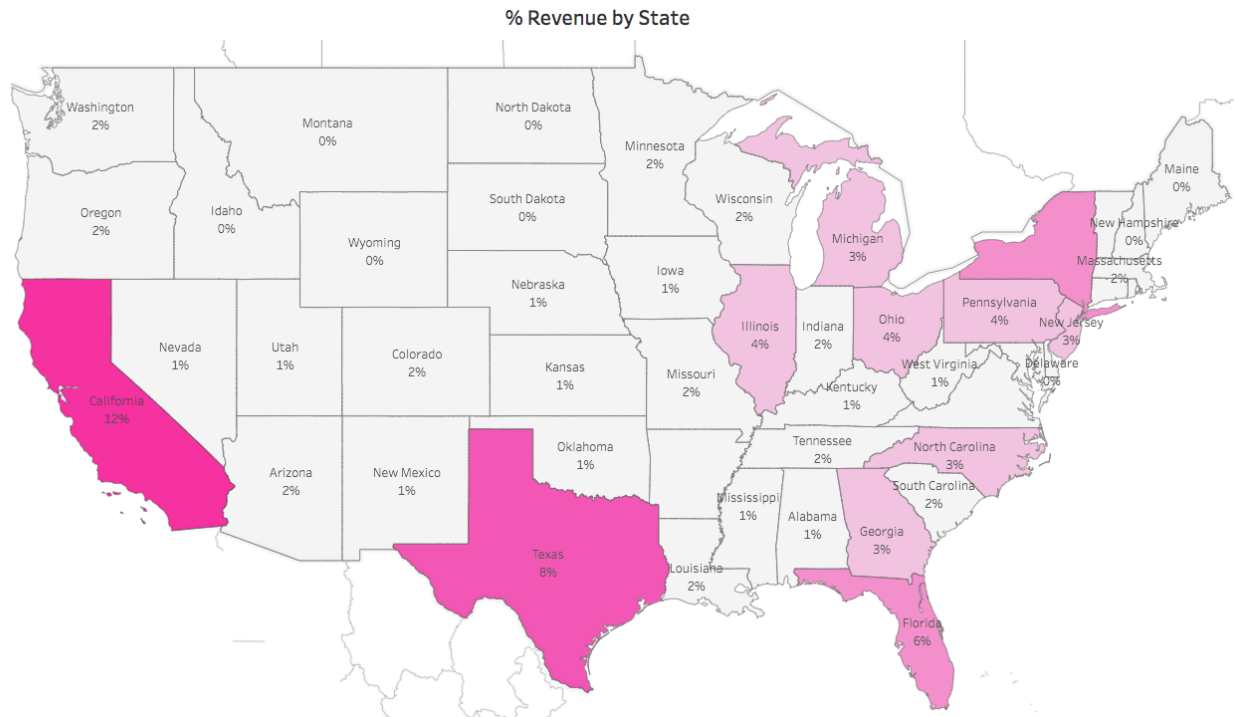
For this campaign customers received an email when the product line was launched, and a further email three weeks later. I would recommend emailing customers with a strong call to action on a more regular basis, perhaps once per week as this seems to be the 'sweet spot' for maximum revenue from traffic, as highlighted below:



Customer Profile

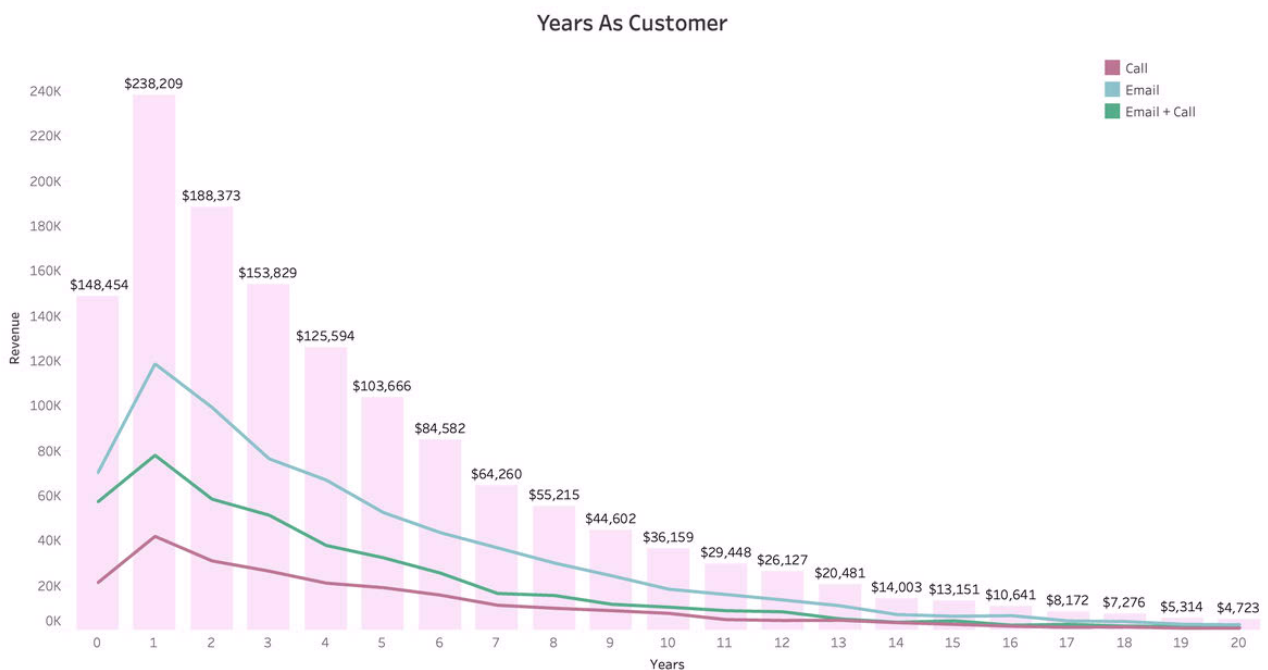
Geographic (US state)

Our top 10 states from this campaign were California, Texas, New York, Florida, Illinois, Pennsylvania, Ohio, Michigan, Georgia and North Carolina. But as we can see from the map there are many states bringing in 2% or less. I would suggest crafting email content that is relevant to these states, with language that resonates with people living there, and maybe include location-specific offers or discounts.



Customer Loyalty

Customers who had been with the company for 1 year made up the greatest share of the revenue. By segmenting our email list and targeting this particular group of relatively new customers with a loyalty email campaign we should see increased revenue.



Final Summary

The launch of this new line of stationery proves there is still a big demand for notebooks, pens and sticky notes with 15000 customers turning over 1.4m revenue in 6 weeks.

Email was the most effective of the 3 sales strategies, bringing in 51% of the revenue.

Recommendations

Weekly Emails

- Target email campaigns to customers who have been with the company for 1 year
- focus on appreciating and rewarding their loyalty

Target Low Revenue States

- Many states returned less than 2% revenue
- Craft email campaigns that are relevant to these states, with location-specific language and discounts

Rewarding Customer Loyalty

- Target emails to customers who have been with the company for 1 year
- Focus on appreciating and rewarding their loyalty