

DATA ANALYST PROFESSIONAL

PRACTICAL EXAM - PRODUCT SALES



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OVERVIEW & GOALS

New Product Sales Methods

Six weeks ago we launched a new line of office stationery. Despite the world becoming increasingly digital, there is still demand for notebooks, pens and sticky notes.

Our focus has been on selling products to enable our customers to be more creative, focused on tools for brainstorming. We have tested three different sales strategies for this, targeted email and phone calls, as well as combining the two.

Email: Customers in this group received an email when the product line was launched, and a further email three weeks later. This required very little work for the team.

Call: Customers in this group were called by a member of the sales team. On average members of the team were on the phone for around thirty minutes per customer.

Email and call: Customers in this group were first sent the product information email, then called a week later by the sales team to talk about their needs and how this new product may support their work. The email required little work from the team, the call was around ten minutes per customer.



DATA VALIDATION

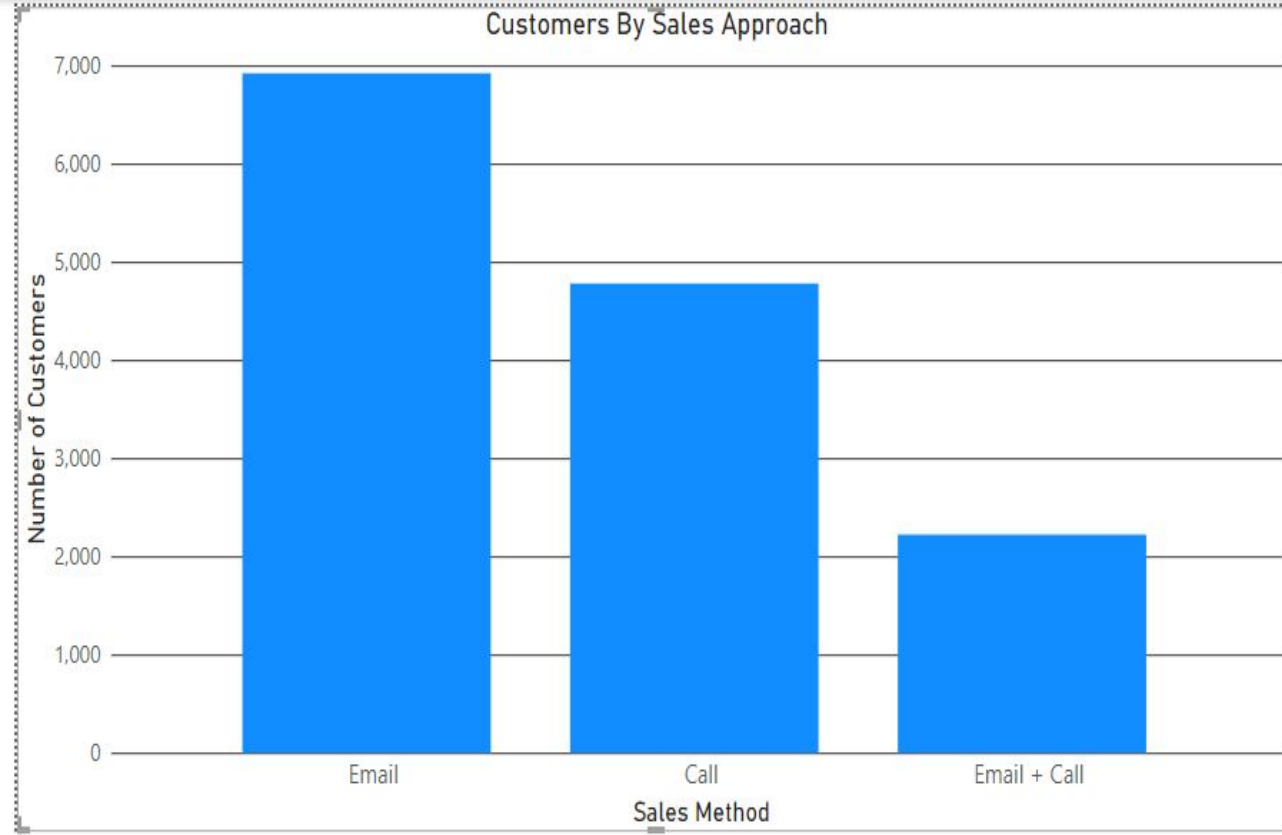
- **product_sales.csv**, **15000 rows, 8 columns** (before cleaning)
- **sales_method**: I changed “**em + call**” → “**Email + Call**” and “**email**” → “**Email**”
- **revenue**: I dropped **1074 rows** with missing values
- **years_as_customer**: I dropped **2 rows** with outliers
- **After cleaning**: **13924 rows, 8 columns**



EXPLORATORY ANALYSIS - Q1

How many customers were there for each approach?

Customers By Sales Approach

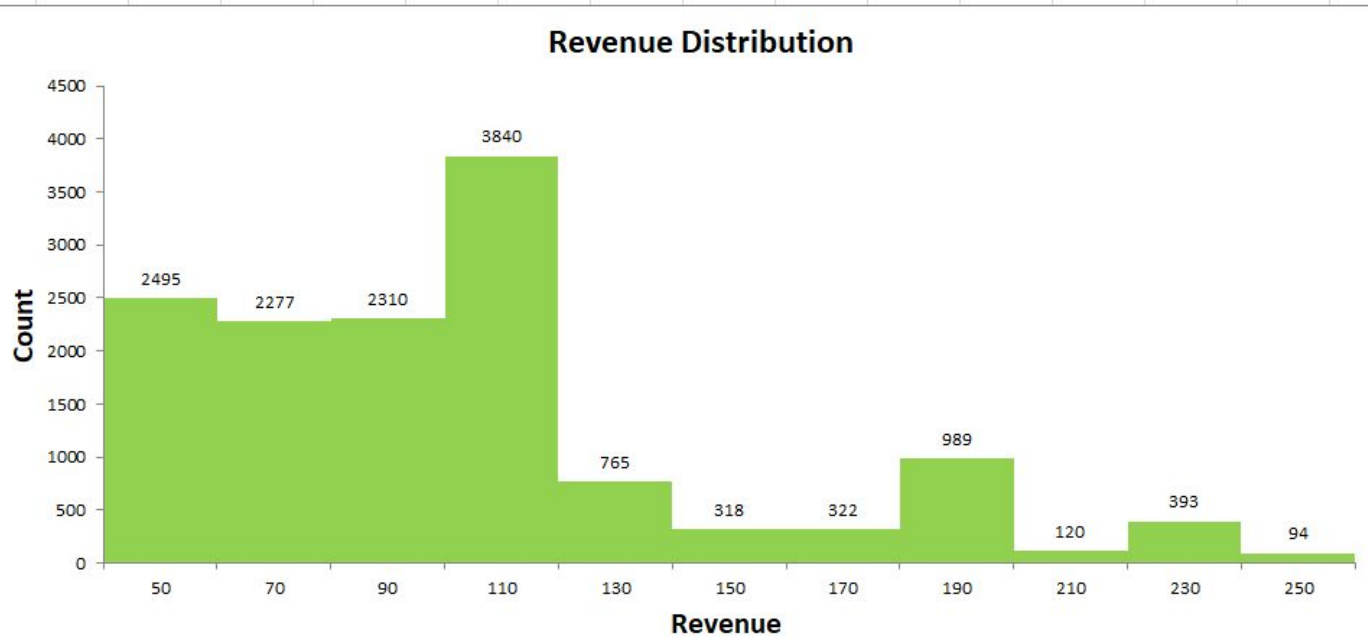


- **Email: 6921**
- **Call: 4780**
- **Email + Call: 2223**



EXPLORATORY ANALYSIS - Q2

What does the spread of the revenue look like overall?



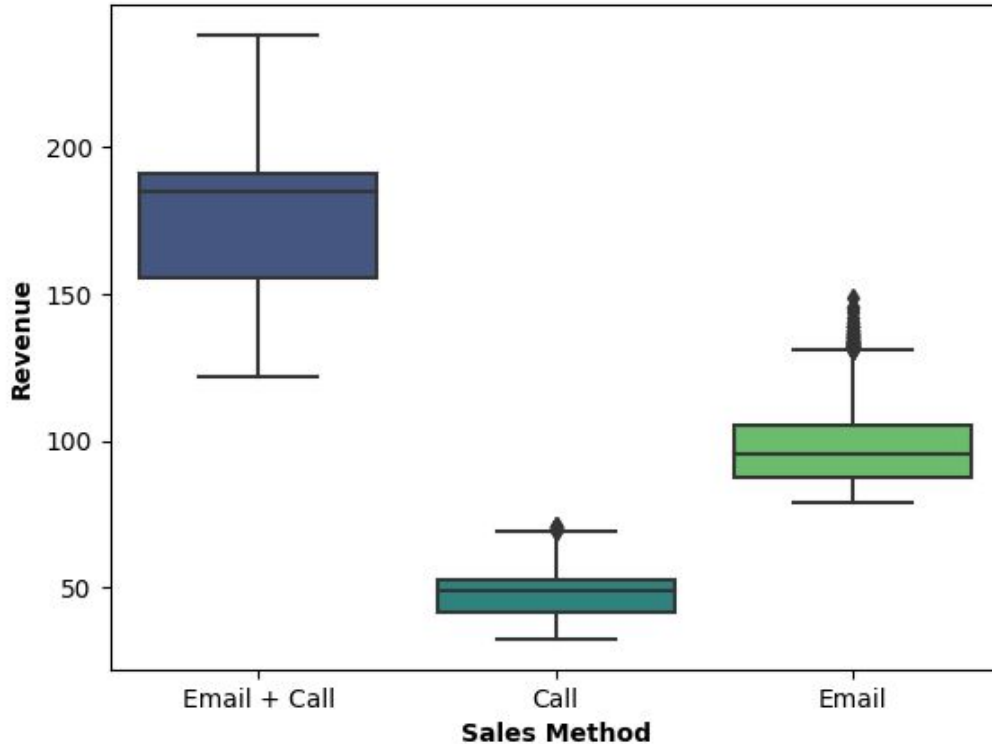
- Most of the revenue between **30 and 120**
- **Asymmetrical** distribution



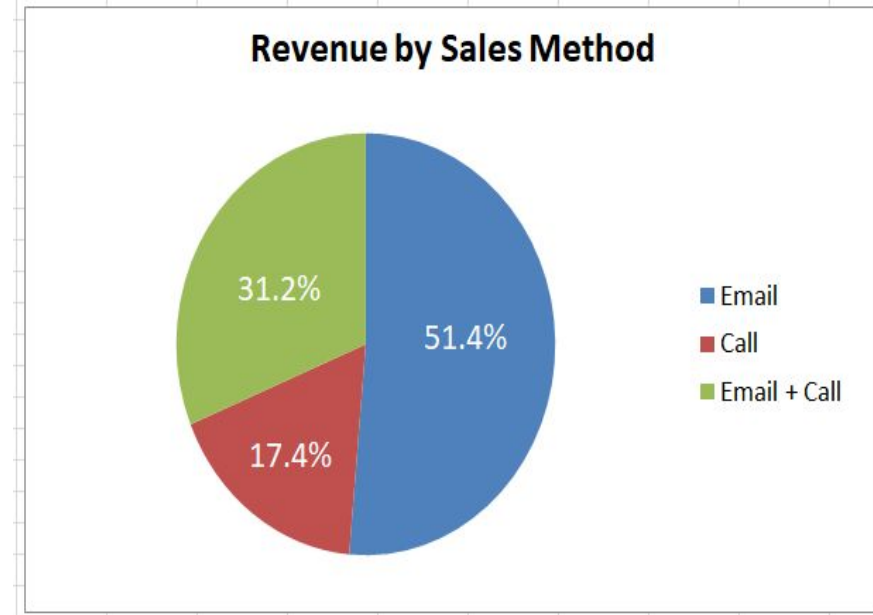
EXPLORATORY ANALYSIS - Q2 (cont)

What does the revenue look like for each method?

Distribution of Revenue for each Method



Revenue by Sales Method

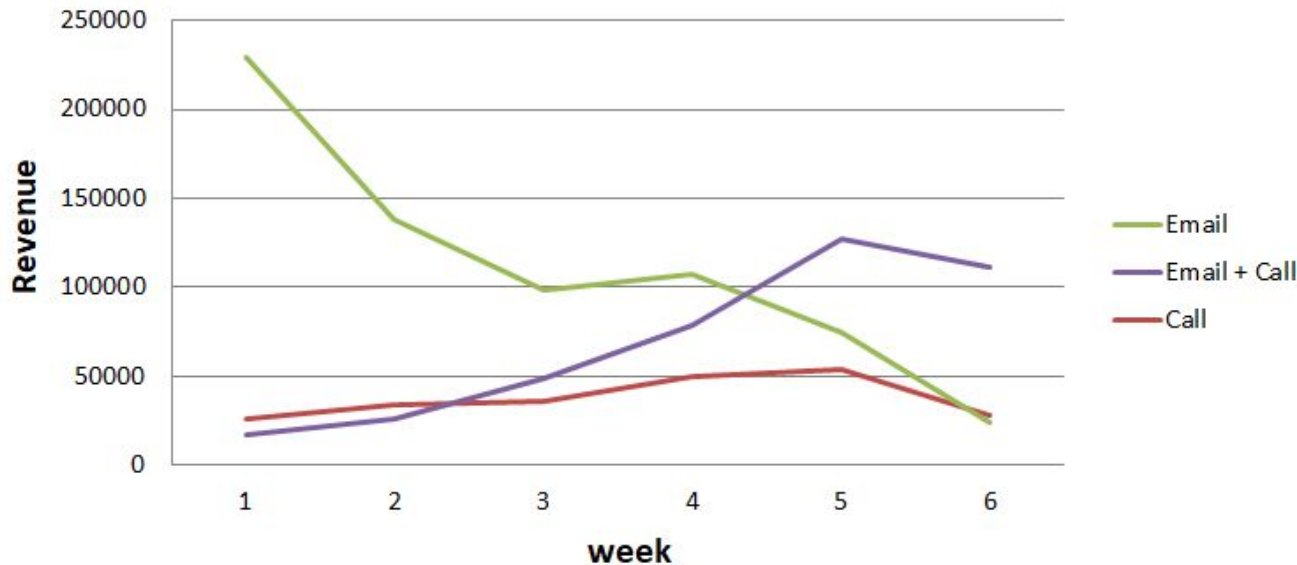




EXPLORATORY ANALYSIS - Q3

Was there any difference in revenue over time for each method?

Revenue of Each Method over time



- **Email:** highest on W1, decreased over time
- **Email + Call:** started lower, ended on top (most successful)



EXPLORATORY ANALYSIS - Q4

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

- **“Email + Call”** worked **really well** → **recommend to use**
- **“Email”** was **acceptable** → **can continue**
- **“Call”** turned out to be **inefficient** → **decrease effort**



METRIC DEFINITION

- **Metric: average weekly revenue** generated from each method
- **Initial values** of metric for the recommend approach (**Email + Call**):

Week 1: 128.89

Week 4: 180.82

Week 2: 154.24

Week 5: 187.58

Week 3: 150.42

Week 6: 227.77



SUMMARY & RECOMMENDATIONS

- **Summary:** This company should use a multi-channel approach to reach their sales goals. 'Email + Call' method should be used more.
- **Recommendations:**
 - Too many missing values → **pay attention to data collection**
 - Email method is also good → **should also be considered**
 - Metric is suitable → **focus on the metric**



THANK YOU
FOR LISTENING