

Pens & Printers

PREPARED BY MUAZ SAYYED

Project: Analysis of Sales Methods for New Office Stationery Product Line

Analysis Period: 6 Weeks Post-Launch

For Head of Analytics
September 4, 2025

SALES STRATEGY ANALYSIS

NEW PRODUCT LAUNCH SALES METHODS EVALUATION

EXECUTIVE SUMMARY

BUSINESS CONTEXT

Six weeks ago, Pens & Printers launched a new line of office stationery products targeting creative brainstorming tools. To optimize our sales approach for future product launches, we tested three different sales strategies: targeted Email, phone Calls, and a combined Email+Call method. This analysis evaluates the effectiveness of each approach to determine the most efficient resource allocation for maximum ROI.

METHODOLOGY OVERVIEW

This comprehensive analysis examined 15,000 customer transactions across 6 weeks, covering multiple US states and various customer tenure segments (0-41 years). The study incorporated multi-dimensional analysis including temporal trends, geographic performance patterns, and customer segmentation to provide strategic insights for sales method optimization.

KEY FINDINGS

- Email-only approach acquired 50% of customers and generated most revenue (\$724k).
- Email+Call method showed the highest revenue per-sale (median \$185) and strongest growth trajectory.
- Call-only method, despite acquiring 33% of customers, generated least revenue (\$233k).
- Geographic analysis reveals consistent performance patterns across states, with Vermont as a notable exception where Email+Call outperforms all methods.
- Customer segment analysis (spanning 0-41 years tenure) shows sales method effectiveness is independent of customer history.
- Temporal trends indicate Email dominance in early weeks (84% revenue share) before transitioning to Email+Call dominance by week 6 (70% revenue share).

RECOMMENDATIONS

Implement hybrid strategy: Lead with Email-only for rapid market penetration (in weeks 1-2), then shift focus to Email+Call for sustained growth and higher transaction values (from week 3). Prioritize Email+Call training for sales team given superior efficiency and revenue potential compared to resource-intensive Call-only approach.

DATA VALIDATION AND CLEANING

DATASET OVERVIEW

Total Records Analyzed	15,000 rows and 8 columns
Time Period	6 weeks post product launch
Geographic Coverage	Multiple US states
Revenue Range	\$32-\$238 per sale

COLUMN-BY-COLUMN VALIDATION

The raw dataset contained 15,000 rows and 8 columns. There were some missing values and inconsistent records which have been cleaned.

1. week (Temporal Data)

- Range: All values fall within expected range (1-6).
- Cleaning: No cleaning needed.

2. sales_method (Category)

- Initial state: 5 categories identified, of which 2 were inconsistencies.
- Cleaning: Corrected spelling mistakes to standardize three methods.
- Final state: Clean categorical data with 'Email', 'Call', 'Email+Call' as the only values.

3. customer_id (Identifier)

- Characters without missing values, same as the description.
- Cleaning: No cleaning is needed.

4. nb_sold (Transaction Volume)

- Range: 7 to 16 units per transaction.
- Cleaning: Does not contain missing values. No cleaning is needed.

5. revenue (Financial)

- Issue: 1,074 missing values identified.
- Cleaning: Filled the missing values with median revenue based on corresponding *sales_method*.
- Rationale: Method-specific median maintains realistic revenue patterns.

6. years_as_customer (Customer Tenure)

- Issue: Two invalid entries detected.
- Cleaning: Replaced invalid entries with the highest possible value (41).
- Rationale: Conservative approach maintains data integrity.

7. nb_site_visits (Digital Engagement)

- Range: 0 to 41 visits over 6-month period.
- Cleaning: No missing values, no cleaning is needed.

8. state (Geographic)

- Location data, consistent with description.
- Cleaning: Does not contain missing values. No cleaning is needed.

Final Dataset: 15,000 rows and 8 columns without inconsistencies, ready for analysis.

EXPLORATORY ANALYSIS

CUSTOMER ACQUISITION PATTERNS

SALES METHOD DISTRIBUTION

Email: Almost 50% of customers (highest acquisition volume).

Call: 33% of customers.

Email+Call: 17% of customers (lowest volume but strategic importance).

WEEKLY TRENDS

Week 1: Email dominated with 76% customers.

Week 6: Email declined to minimal contribution (16% of total customers).

Email+Call: Demonstrated 4x growth trajectory.

Call: 137% growth from week 1 through week 5, then declined sharply in week 6 to its lowest.

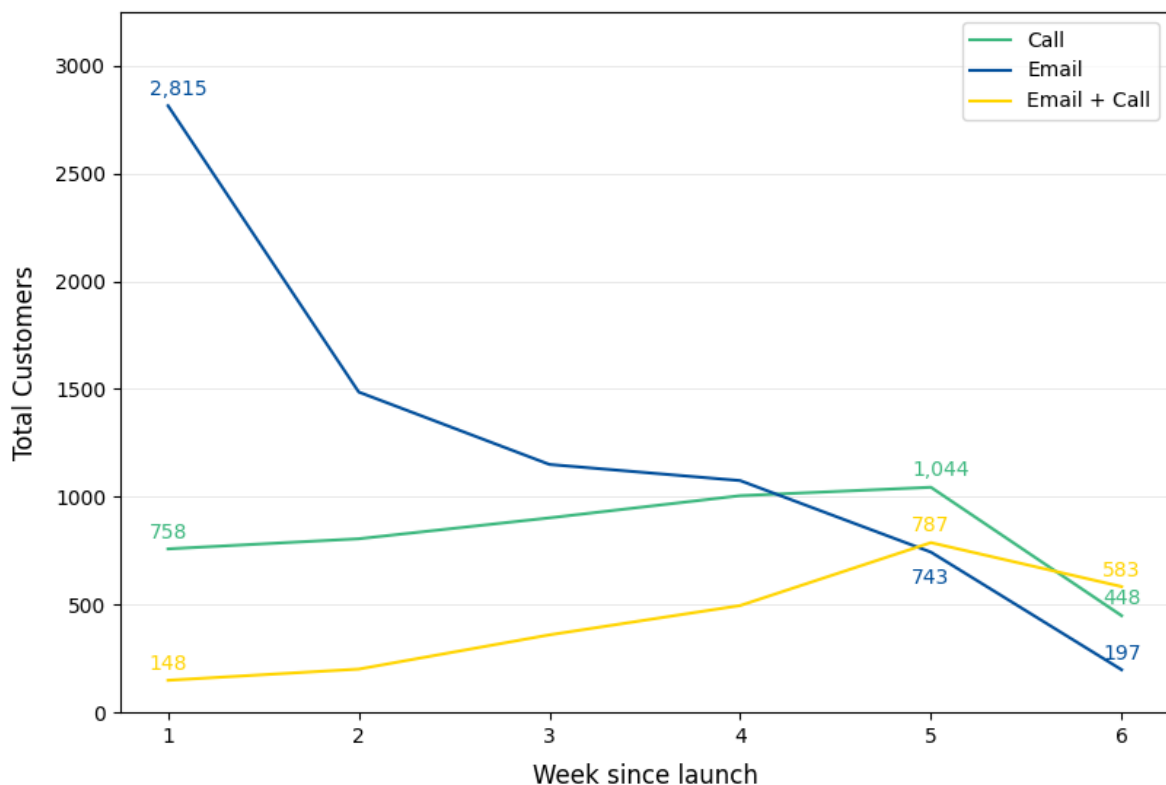


Figure: Customer acquisition by sales method over time

PERFORMANCE ACROSS CUSTOMER SEGMENTS

The majority of customers have been with the company for 0 to 5 years, with the highest concentration in 1-2 year range. Customer numbers decline as tenure increases, though some customers have remained with the company since its early days.

Based on this distribution, customers were segmented into following tenure categories:

- New Customers (0-2 years)
- Established Customers (2-5 years)
- Long-term Customers (5-10 years)
- Old Customers (10-15 years)
- Legacy Customers (15+ years)

Analysis of sales method effectiveness across these customer tenure segments reveals consistent patterns with overall findings.

Email continues to derive most customers, followed by Call. The Email+Call method has lowest customer acquisition across all segments.

GEOGRAPHIC PERFORMANCE

Email dominates across all states for customer acquisition, acquiring 40-60% customers in each state, followed by Call.

Email+Call method acquires the least number of customers in all states.

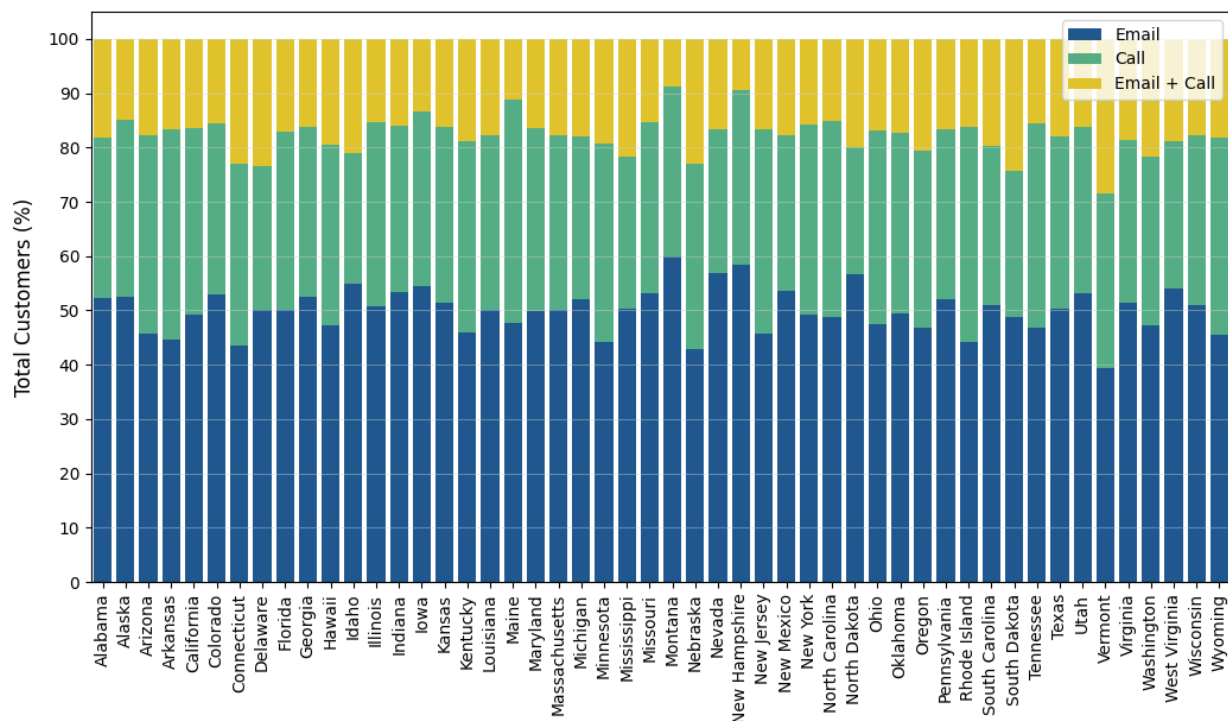


Figure: Customer acquisition through different sales methods across states

REVENUE PERFORMANCE ANALYSIS

REVENUE DISTRIBUTION

Overall revenue: \$1.43 million over 6 weeks.

Primary transaction clusters: \$40-60 and \$80-110 ranges.

High-value segment: \$180-190 range.

TOTAL REVENUE GENERATED THROUGH EACH SALES METHOD

Email: \$724k (51% of total revenue).

Email+Call: \$473k (33% of total revenue).

Call: \$233k (17% of total revenue).

WEEKLY TRENDS

The total weekly revenue shows a fluctuating pattern, decreasing from the peak of \$295k in the first week to \$200k in week 3, before rebounding in weeks 4 and 5. It again decreased in week 6, reaching its lowest at \$183k.

Email dominated week 1 with \$248k in revenue (84% share), but declined to minimal contribution with just \$25k in total revenue (14% share) by week 6.

Email+Call demonstrated more than 6x growth, generating from \$20k in week 1 to \$129k by week 6. Call-only method also demonstrated 2x growth through the first five weeks (growing from \$27k in week 1 to \$55k by week 5). However, it declined sharply in week 6 to nearly week 1 levels.

Week	1	2	3	4	5	6
Sales Method						
Call	\$27k	\$35k	\$38k	\$52k	\$55k	\$29k
Email	\$248k	\$148k	\$107k	\$116k	\$80k	\$25k
Email + Call	\$20k	\$32k	\$55k	\$90k	\$147k	\$129k
Total Weekly Revenue	\$295k	\$215k	\$200k	\$257k	\$283k	\$183k

Figure: Total revenue generated through different sales methods over time

REVENUE PER-SALE PERFORMANCE OF DIFFERENT SALES METHODS

Email+Call demonstrates the highest revenue potential with median of \$185 per transaction. Email shows moderate potential with \$95 median, while Call has the least potential \$50 median.

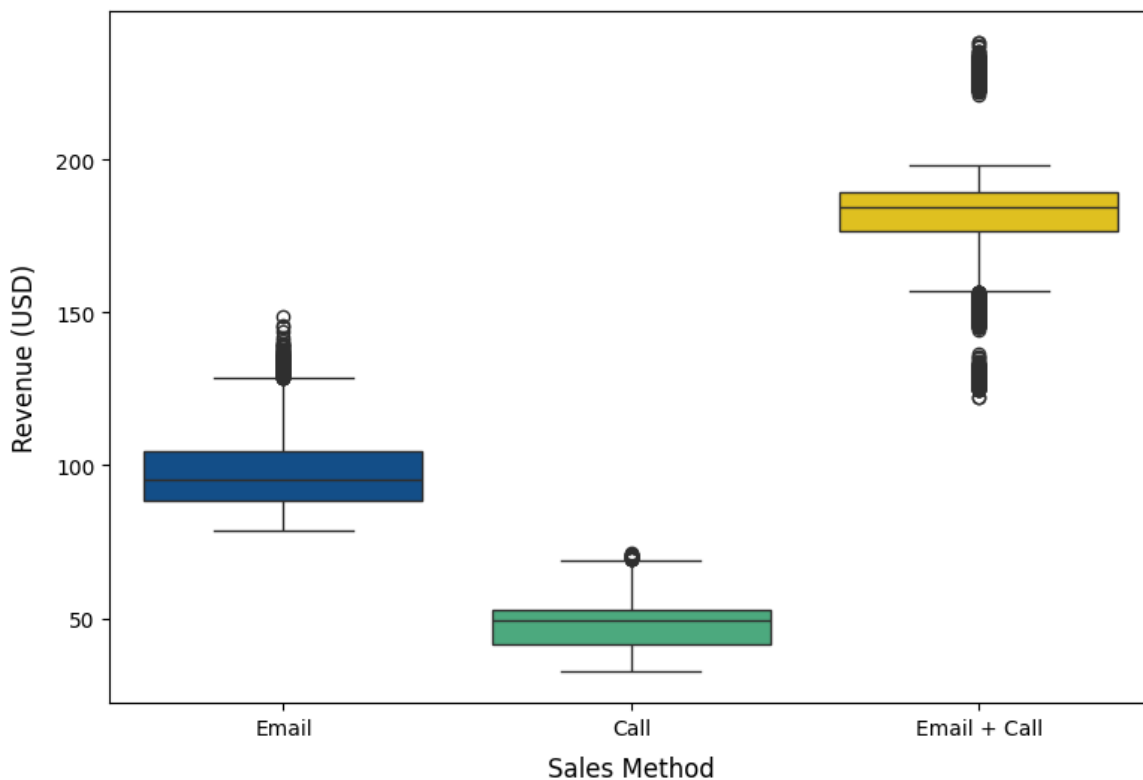


Figure: Revenue per-sale distribution of different sales methods

On analyzing further, it is observed that the difference in revenue spread is due to the higher price of products sold through these sales methods, as seen in the table below. This suggests that the Email+Call strategy generates more revenue than Call-only method due to higher revenue potential per-transaction, despite having fewer customers.

Sales Method	Avg Order Size	Avg Product Price
Call	10	\$5
Email	10	\$10
Email + Call	12	\$15

REVENUE ACROSS CUSTOMER SEGMENTS

Email generated the most revenue, followed by the Email+Call approach.

The Call-only method generated least revenue over all customer segments.

This pattern is also consistent with the overall findings, indicating that the sales strategy is independent of customer history with the company.

GEOGRAPHIC PERFORMANCE OF SALES METHODS

Email also dominates revenue generation across all states, generating 40-65% revenue in each state. The Email+Call method shows consistent secondary performance across all regions, while Call-only approach has lowest revenue share.

Vermont is a notable exception where Email+Call has superior performance to Email, generating more than 50% revenue. This is because Email+Call has a higher share of customers in this state when compared with its share in other states.

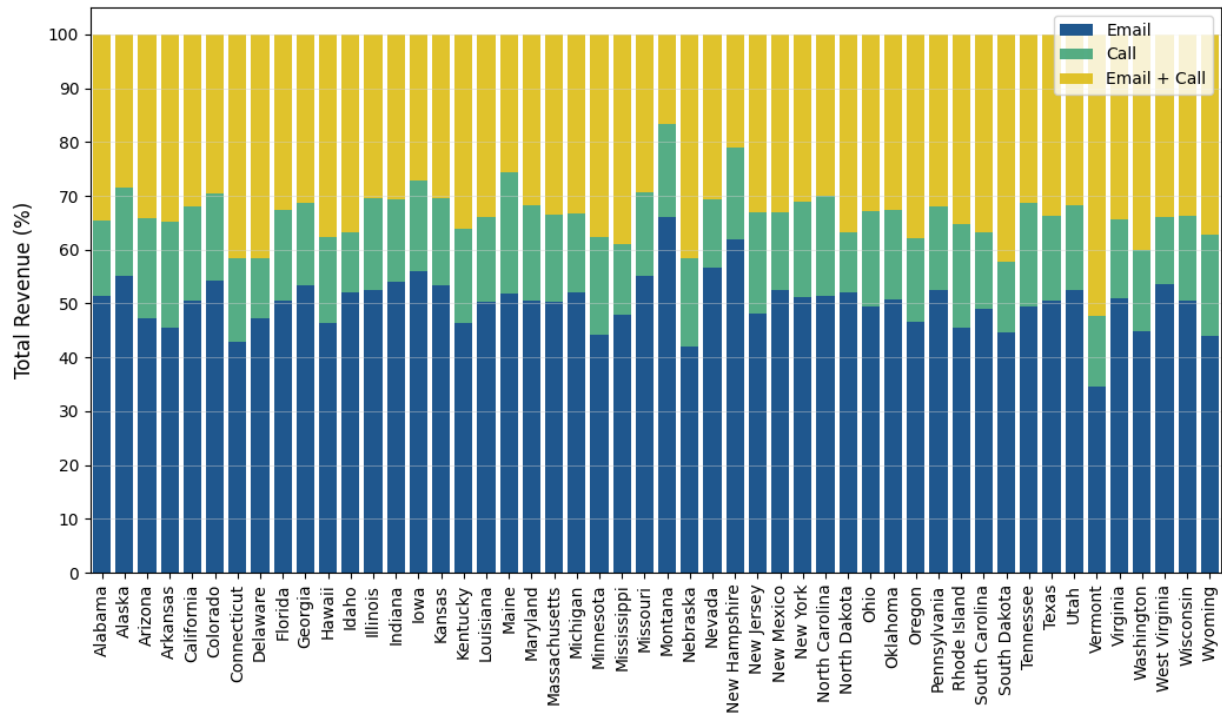


Figure: Revenue share of different sales methods across states

BUSINESS METRICS

KEY PERFORMANCE INDICATOR

METRIC: WEEKLY REVENUE SHARE BY SALES METHOD (%)

Calculation: $(\text{Weekly revenue per method} / \text{Total weekly revenue}) \times 100$

Purpose: Measures financial impact and method effectiveness over time.

Target: Identify methods showing consistent or improving performance.

CURRENT BASELINE VALUES (WEEK 6):

Email: 14% revenue share (declining trend).

Call: 16% revenue share (moderate performance).

Email+Call: 70% revenue share (trending upwards).

SECONDARY PERFORMANCE METRIC

CUSTOMER ACQUISITION RATE BY METHOD

Calculation: $\text{Weekly new customers per method} / \text{Total weekly acquisitions}$.

Purpose: Track acquisition efficiency and volume capacity.

RECOMMENDATIONS

IMMEDIATE ACTIONS (NEXT PRODUCT LAUNCH)

1. Hybrid Strategy Implementation

- Phase 1 (Weeks 1-2): Lead with Email-only approach for rapid market penetration.
- Phase 2 (Weeks 3-6): Shift focus to Email+Call for sustained growth and higher transaction values.

2. Resource Allocation Optimization

- Prioritize Email+Call training for sales team (10-minute calls vs 30-minute Call-only).
- Maintain Email-only capacity for volume-based initial market entry.
- Re-evaluate Call-only strategy effectiveness given resource intensity vs returns.

LONG-TERM STRATEGIC CONSIDERATIONS

1. Sales Method Evolution

- Monitor Email+Call performance beyond week 6 to confirm sustainability.
- Consider testing different variations in Email+Call timing and content.
- Evaluate potential for Call-only method improvements or elimination.

2. Performance Monitoring Framework

- Implement weekly dashboard tracking recommended metrics.
- Establish performance thresholds for method continuation decisions.
- Create alert systems for significant trend deviations.

3. Scalability Planning

- Assess team capacity for increased Email+Call implementation.
- Develop training protocols for optimal 10-minute call effectiveness.
- Plan resource requirements for hybrid strategy scaling.

EXPECTED BUSINESS IMPACT

Implementation of the recommended hybrid strategy is projected to improve overall revenue performance while optimizing resource efficiency. The Email+Call method's growth trajectory and highest per-transaction revenue positions it as the primary driver for sustainable revenue growth in future product launches. The strategy's independence from customer tenure segments enables standardized implementation across all customer relationships, simplifying training and execution processes.