Reaching Revenue Target Through Data Insights

Outline

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01

Introduction

1. Introduction

1.1 First Look

1.2 Problem Statement

1.1 First Look

```
## Rows: 61,728
## Columns: 11
## $ customer_unique_id   <dbl> 1, 2, 3, 4, 5, 6, 7, 7, 8, 9, 10, 11, 12, 13, 14…
## $ order_id             <chr> "A000000001", "A000000002", "A000000003", "A0000…
## $ item_quantity        <dbl> 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, …
## $ created_day          <dttm> 2019-07-01, 2019-07-01, 2019-07-01, 2019-07-01,…
## $ onsite_original_price <dbl> 338000, 175000, 520000, 238000, 159000, 135000, …
## $ selling_price        <dbl> 259000, 139000, 359000, 185000, 129000, 105000, …
## $ shipping_fee         <dbl> 3000, 0, 14927, 29645, 14927, 0, 3000, 3000, 402…
## $ voucher_platform     <dbl> 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, …
## $ voucher_seller       <dbl> 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, …
## $ payment_method       <chr> "Airpay GIRO", "Cash on Delivery", "Cybersource"…
## $ order_status         <chr> "CANCELLED", "COMPLETED", "COMPLETED", "COMPLETE…
```

Sample_Customore_Order

# 1.1 First Look

```
## Rows: 198
## Columns: 10
## $ `Source / Medium`          <chr> "google / cpc", "youtube / social", "(dire…
## $ Users                      <dbl> 407950, 77785, 64653, 48721, 27718, 14373,…
## $ `New Users`                <dbl> 344502, 55537, 60181, 32781, 17774, 10110,…
## $ Sessions                   <dbl> 723208, 163447, 108534, 176662, 42464, 176…
## $ `Bounce Rate`              <dbl> 0.6219013, 0.7881148, 0.5532644, 0.8440015…
## $ `Pages / Session`          <dbl> 3.556041, 2.244324, 4.120340, 1.858996, 2.…
## $ `Avg. Session Duration`    <dbl> 176.02568, 89.94474, 200.42917, 73.20609, …
## $ `Ecommerce Conversion Rate` <dbl> 0.009078992, 0.005855109, 0.009655960, 0.0…
## $ Transactions               <dbl> 6566, 957, 1048, 500, 508, 127, 103, 43, 7…
## $ Revenue                    <dbl> 6656088123.8, 842907936.0, 1040851446.9, 5…
```
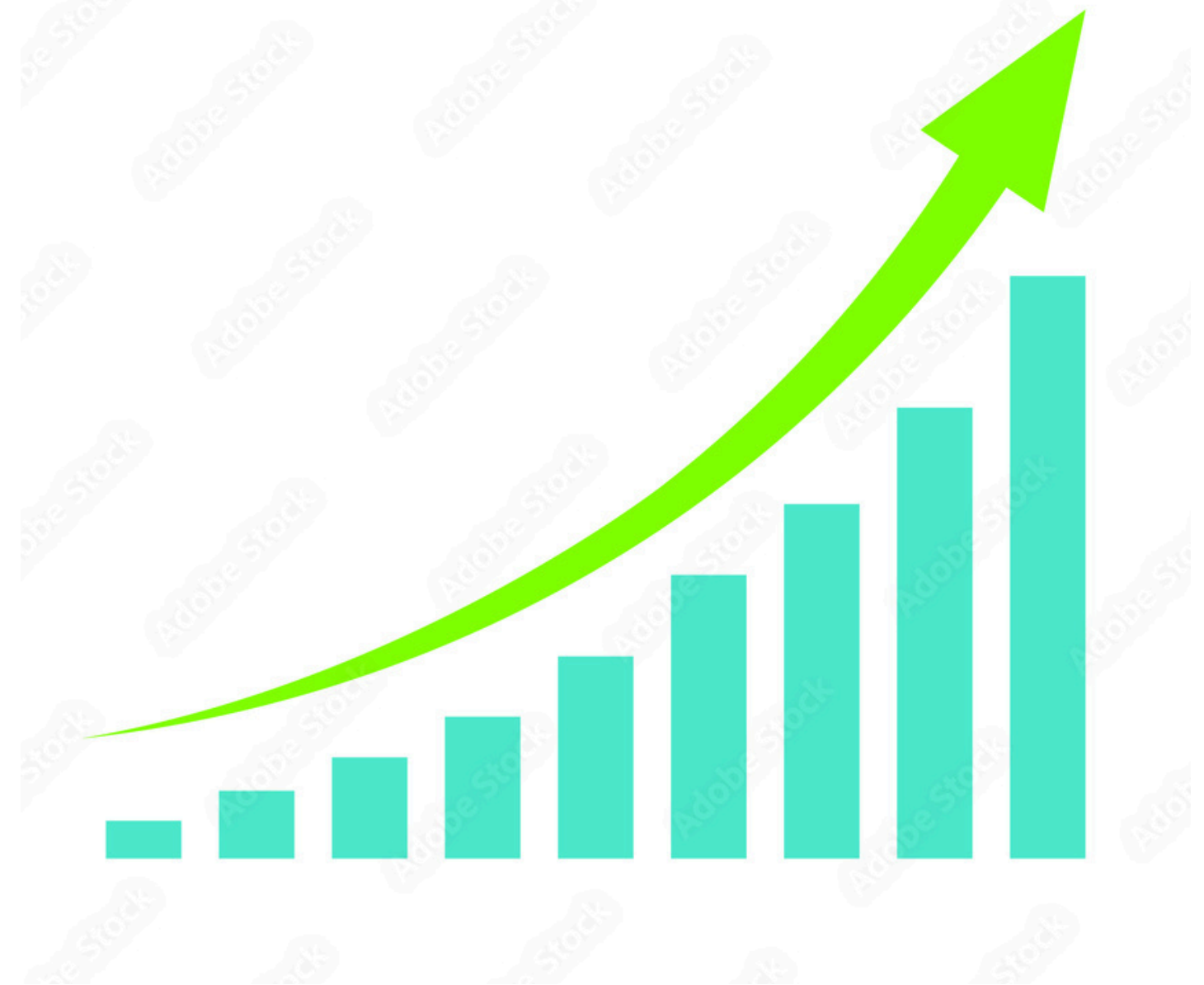
Sample_Customore_Traffic

1.2 Problem Statement

We have to analyze historical sales performance data and traffic source data from Google Analytics.
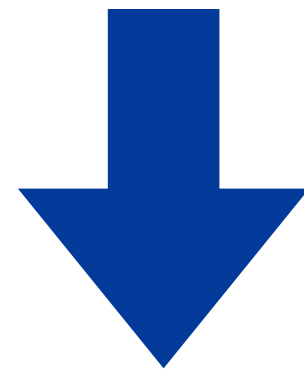
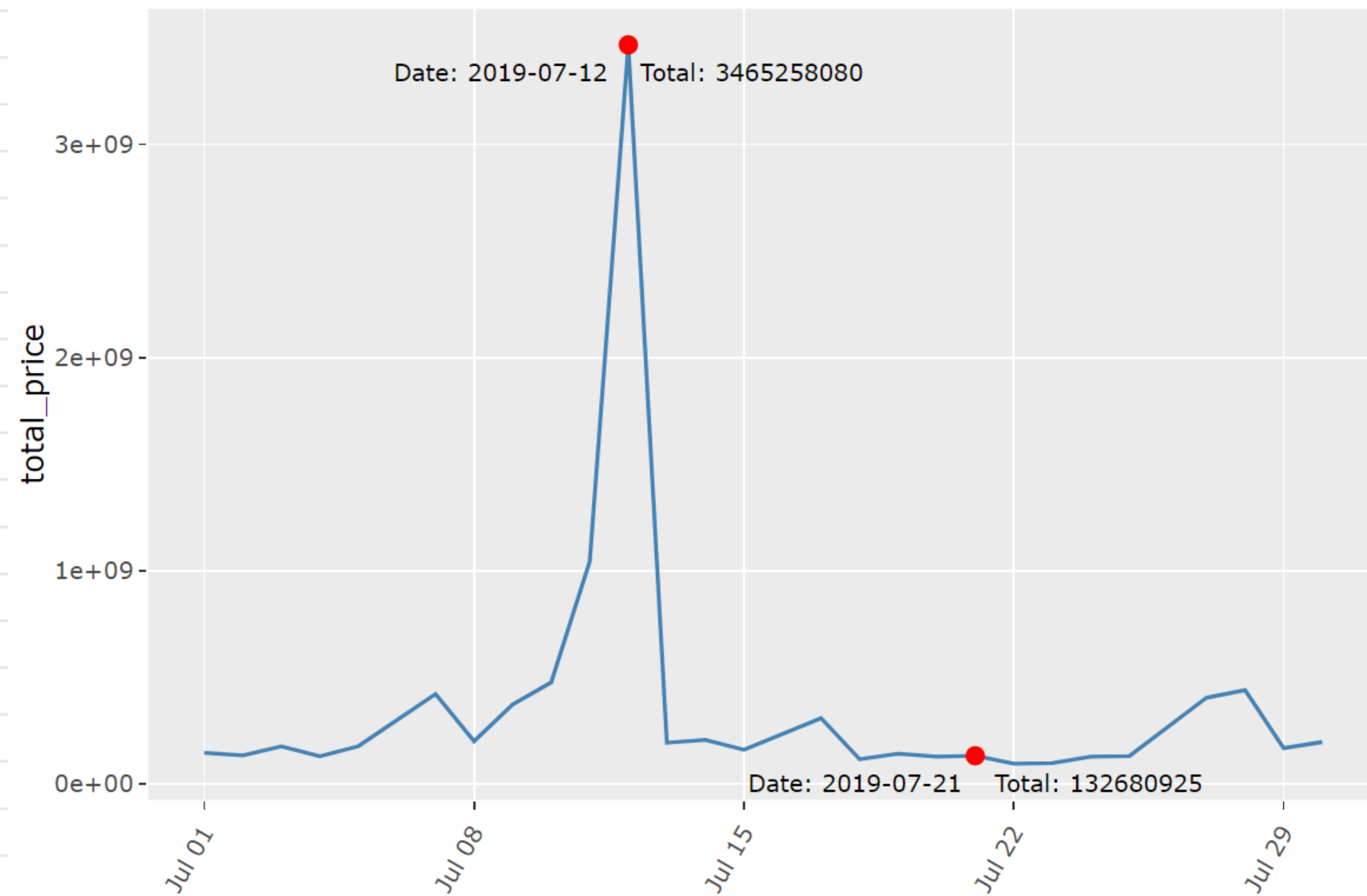Based on these insights, we develop a action plan for our customer to double their revenue

02

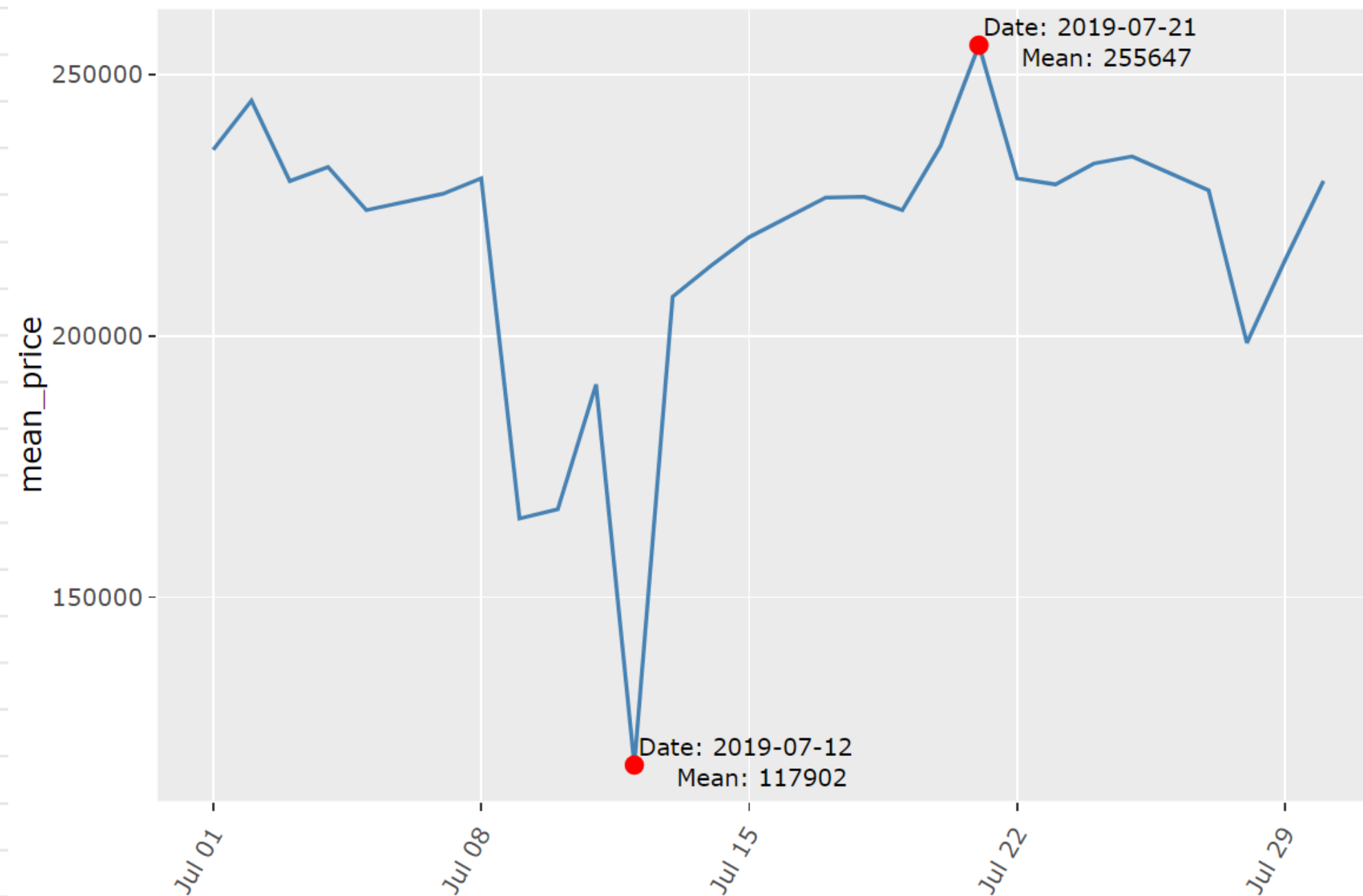# Data Exploration

2. Data Exploration

2.1 Order Data

2.2 Traffic Data

2.1 Order Data

Date: 2019-07-12   Total: 3465258080

Date: 2019-07-21   Total: 132680925

total_price

Jul 01   Jul 08   Jul 15   Jul 22   Jul 29
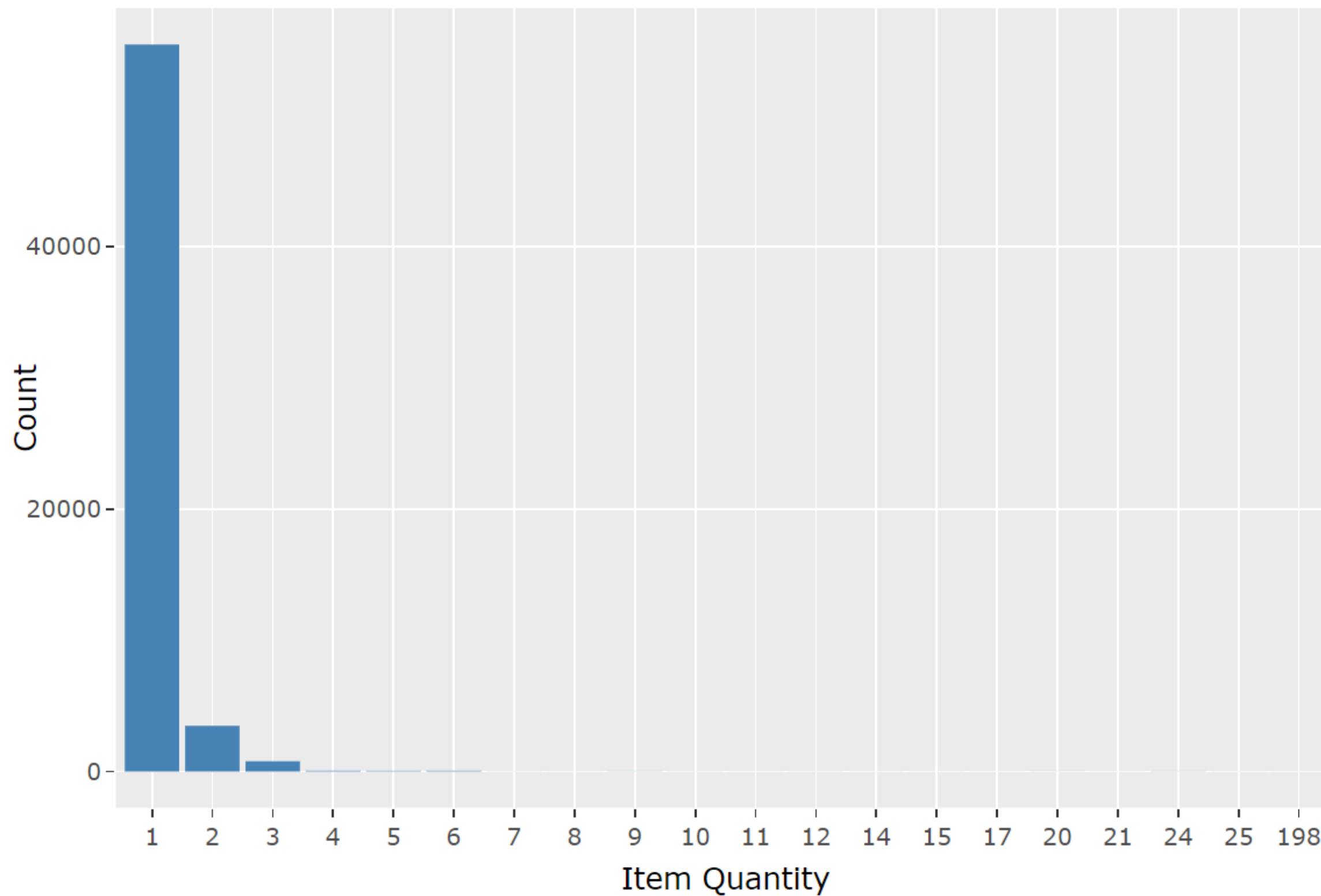
Total Selling Price By Date

2.1 Order Data
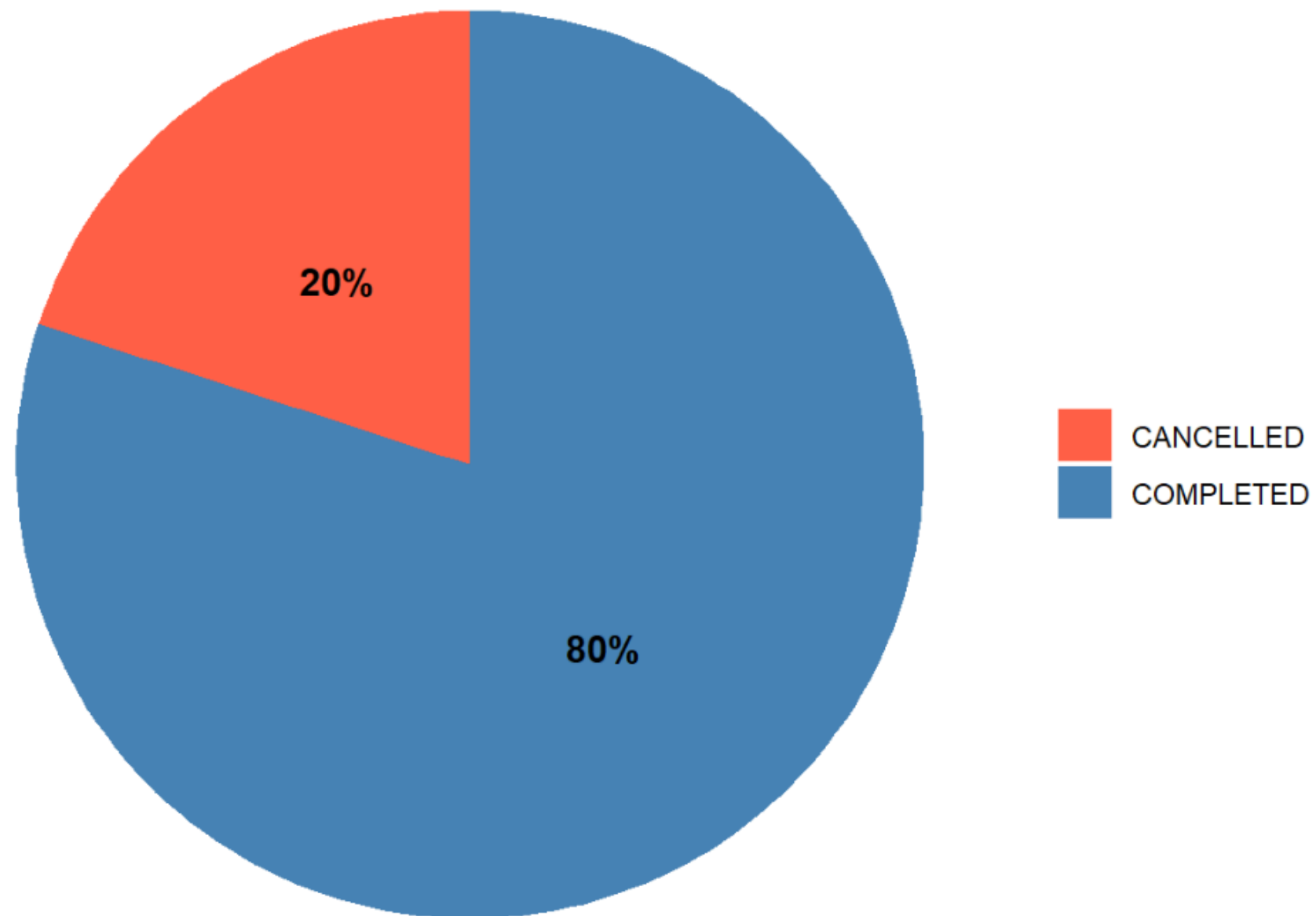

Mean Selling Price By Date

2.1 Order Data

Count of Item Quantity

2.1 Order Data

Ratio of Completed to Canceled Orders

CANCELLED
COMPLETED

What affects the cancellation rate?

2.1 Order Data

Does the shipping fee of an order influence whether a customer accepts or cancels it?

A

Order with higher shipping fee

B

Order with lower shipping fee

2.1 Order Data

Mean Shipping Fee by Order Status (for a selected group of customer)

*The group consists of customers who meet both of the following conditions: they have canceled at least one order and have completed at least one order.
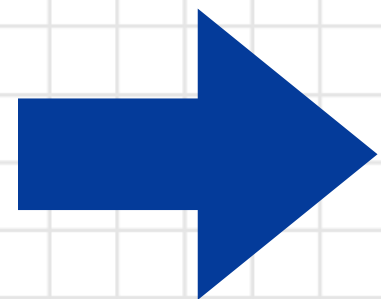
2.1 Order Data

$$\begin{cases} H_0 : \mu_1 = \mu_0 \\ H_1 : \mu_1 < \mu_0 \end{cases}$$

Where μ_0 is the average shipping fee of canceled orders, and μ_1 is the average shipping fee of completed orders.
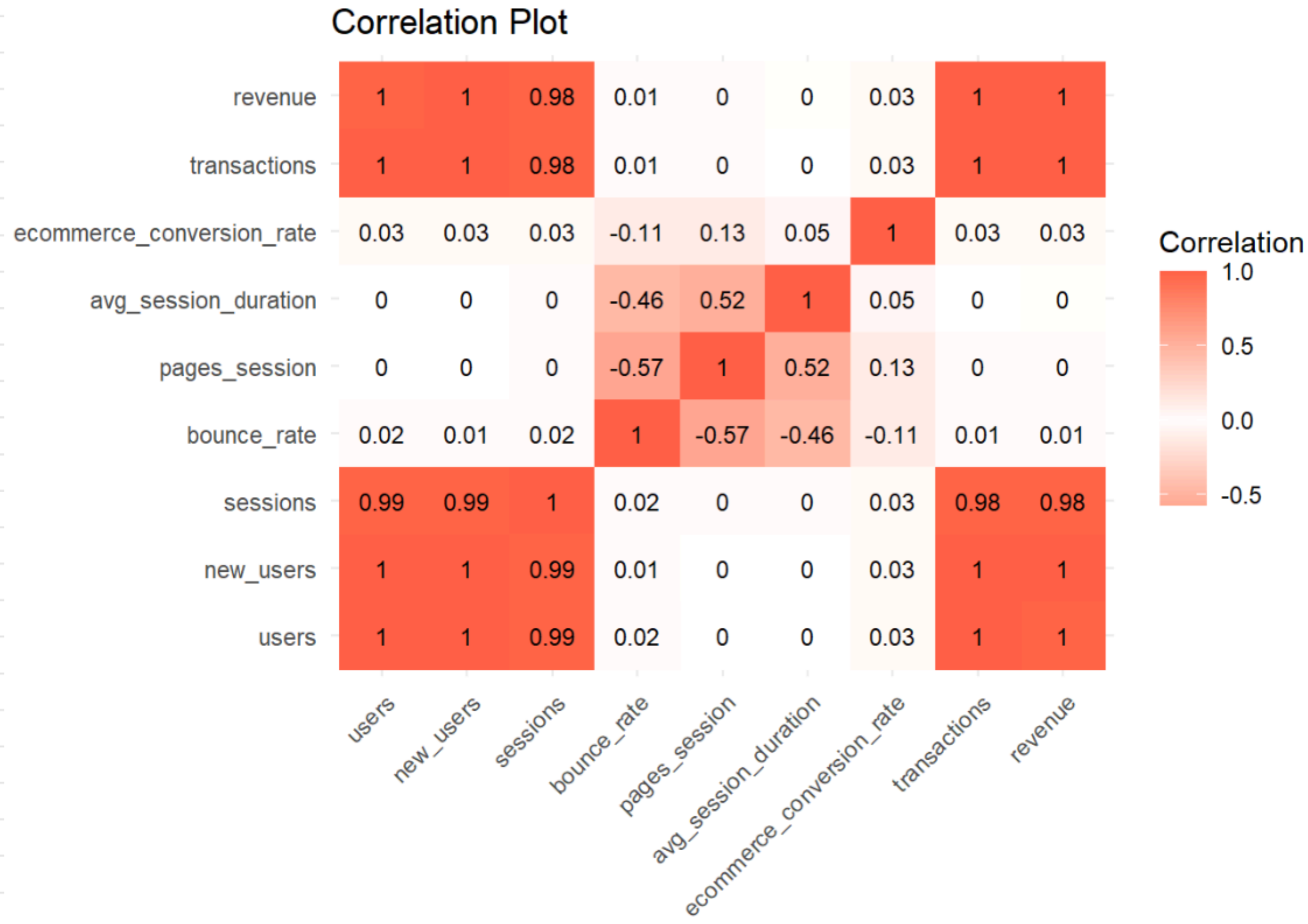
$$\begin{cases} p - value = 0 \\ alpha = 0.05 \end{cases}$$

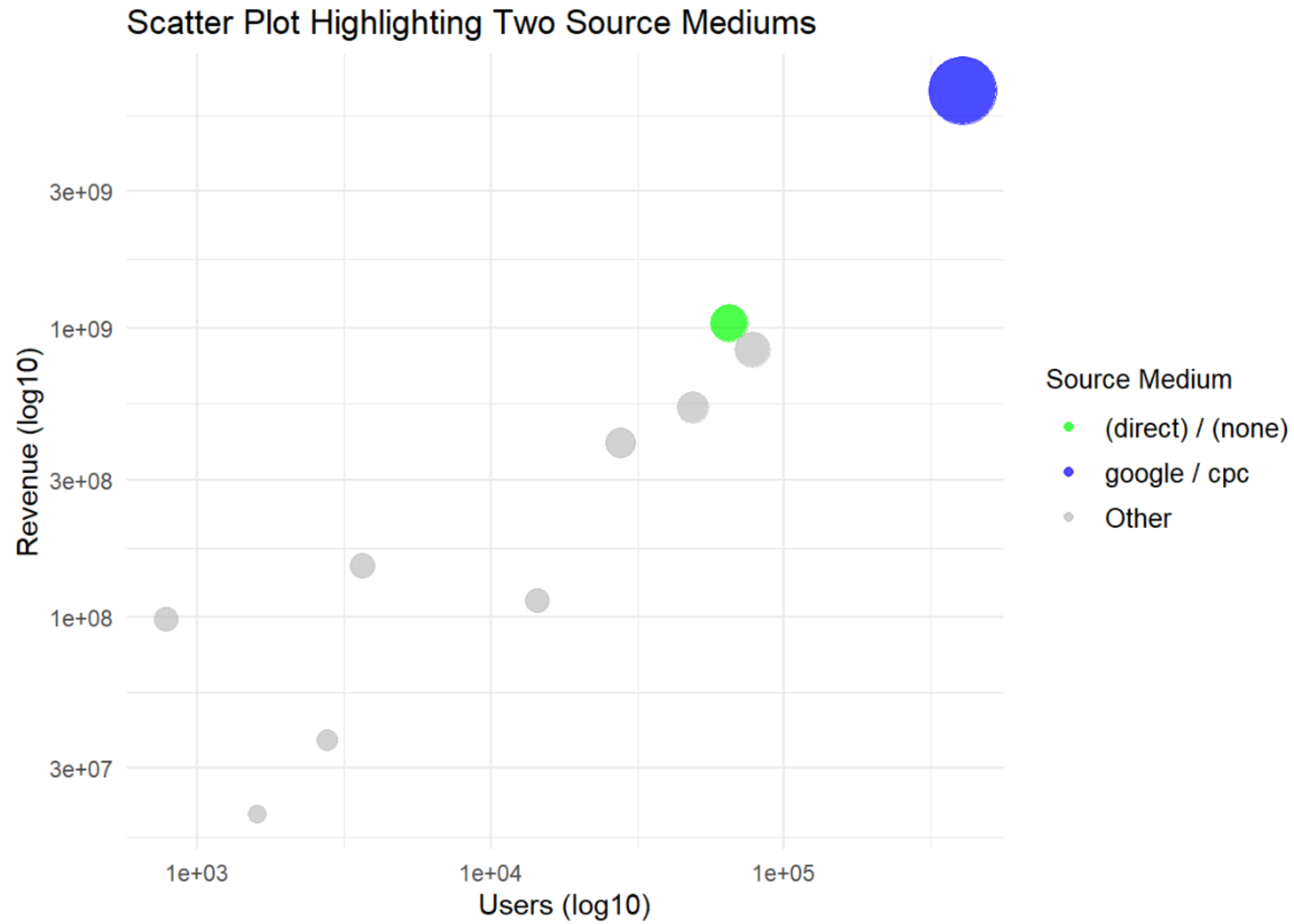Since the p-value = 0 is smaller than significance levels of 0.05, we reject the null hypothesis.

Given the statistical significance, it suggests that higher shipping fees are indeed associated with a higher likelihood of order cancellation.
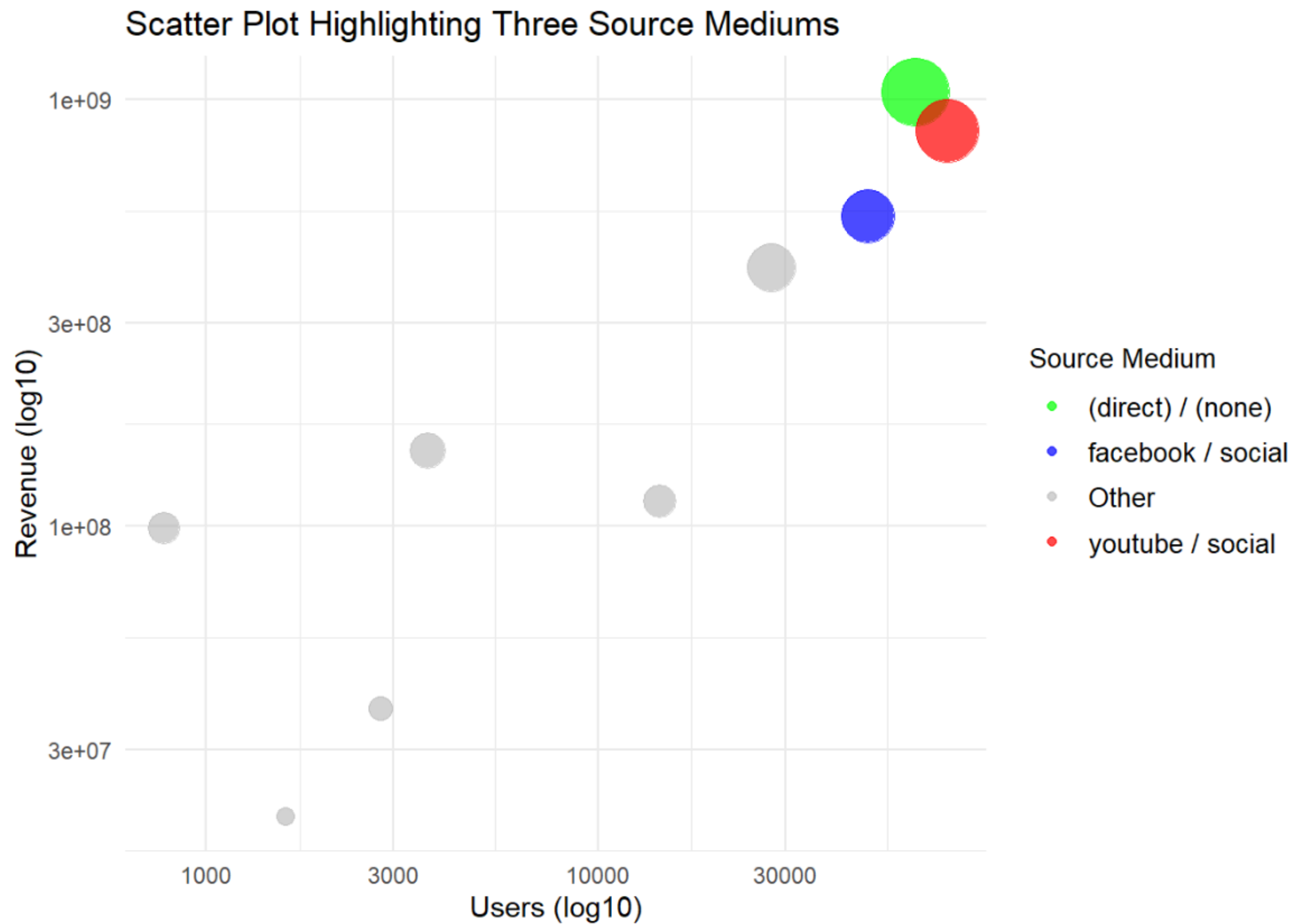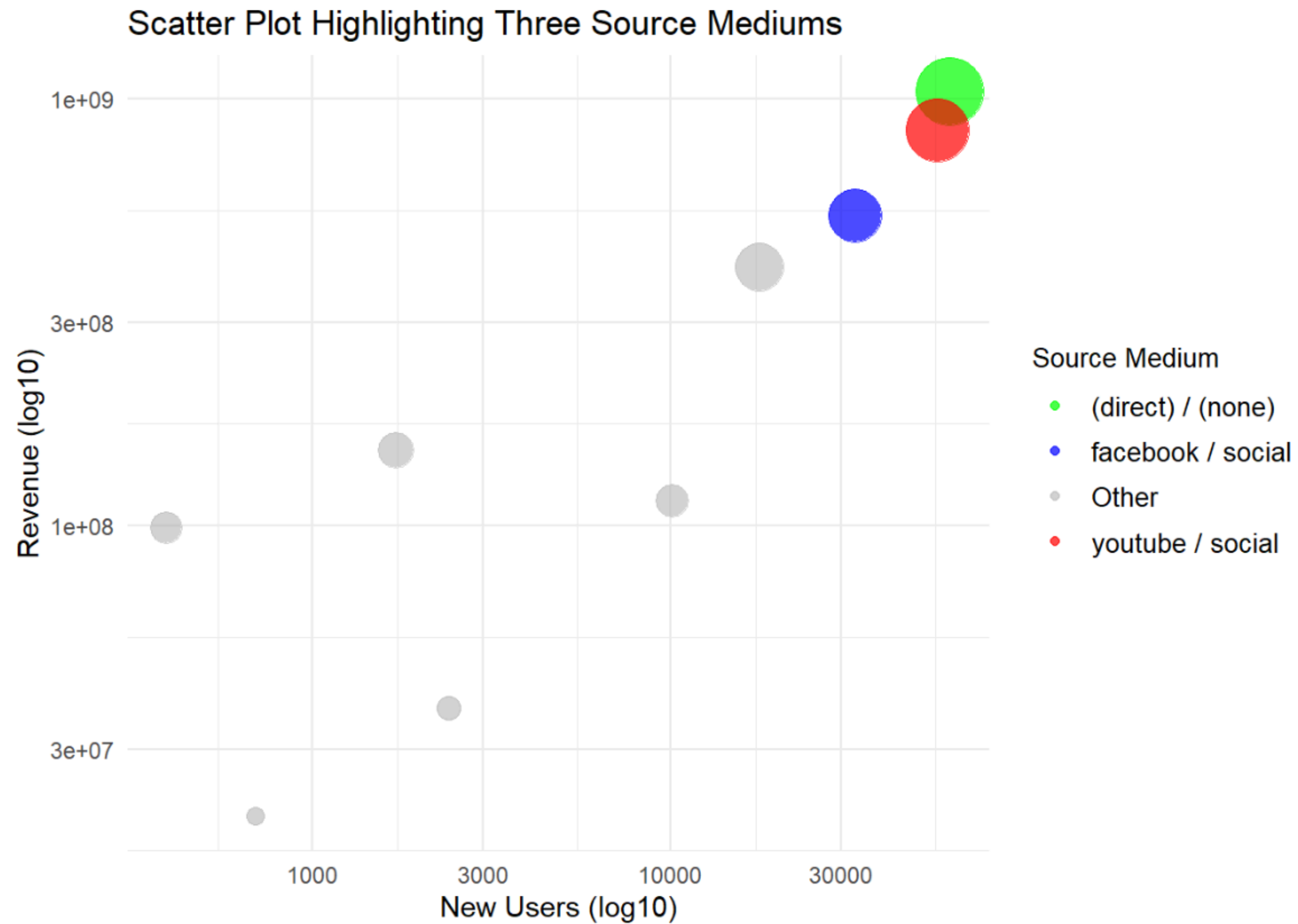
2.2 Traffic Data

Correlation Plot

2.2 Traffic Data

Scatter Plot Highlighting Two Source Mediums

Revenue (log10)
- 3e+09
- 1e+09
- 3e+08
- 1e+08
- 3e+07

Users (log10)
- 1e+03
- 1e+04
- 1e+05

Source Medium
- (direct) / (none)
- google / cpc
- Other

2.2 Traffic Data

Scatter Plot Highlighting Three Source Mediums

Source Medium
- (direct) / (none)
- facebook / social
- Other
- youtube / social

Scatter Plot Highlighting Three Source Mediums
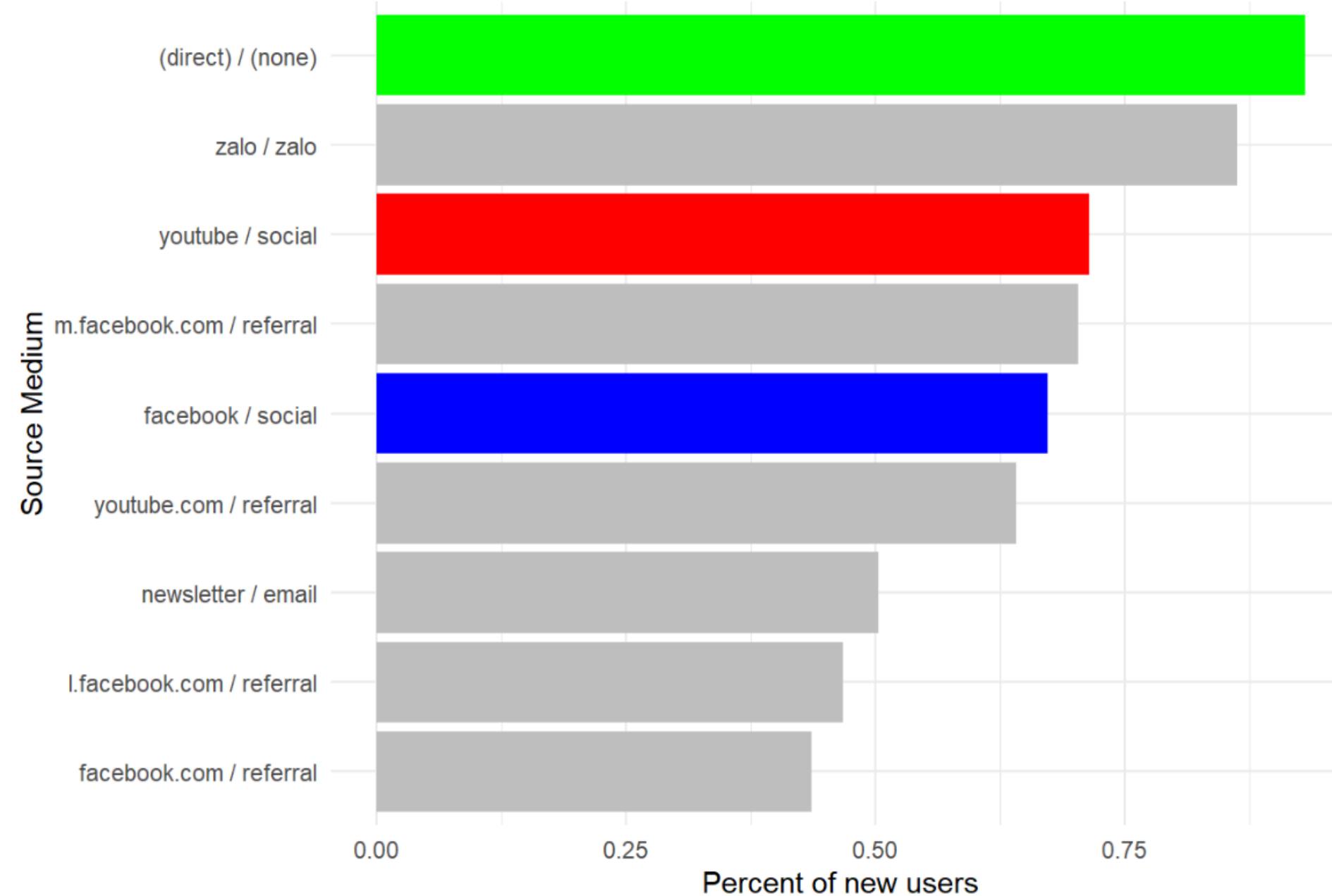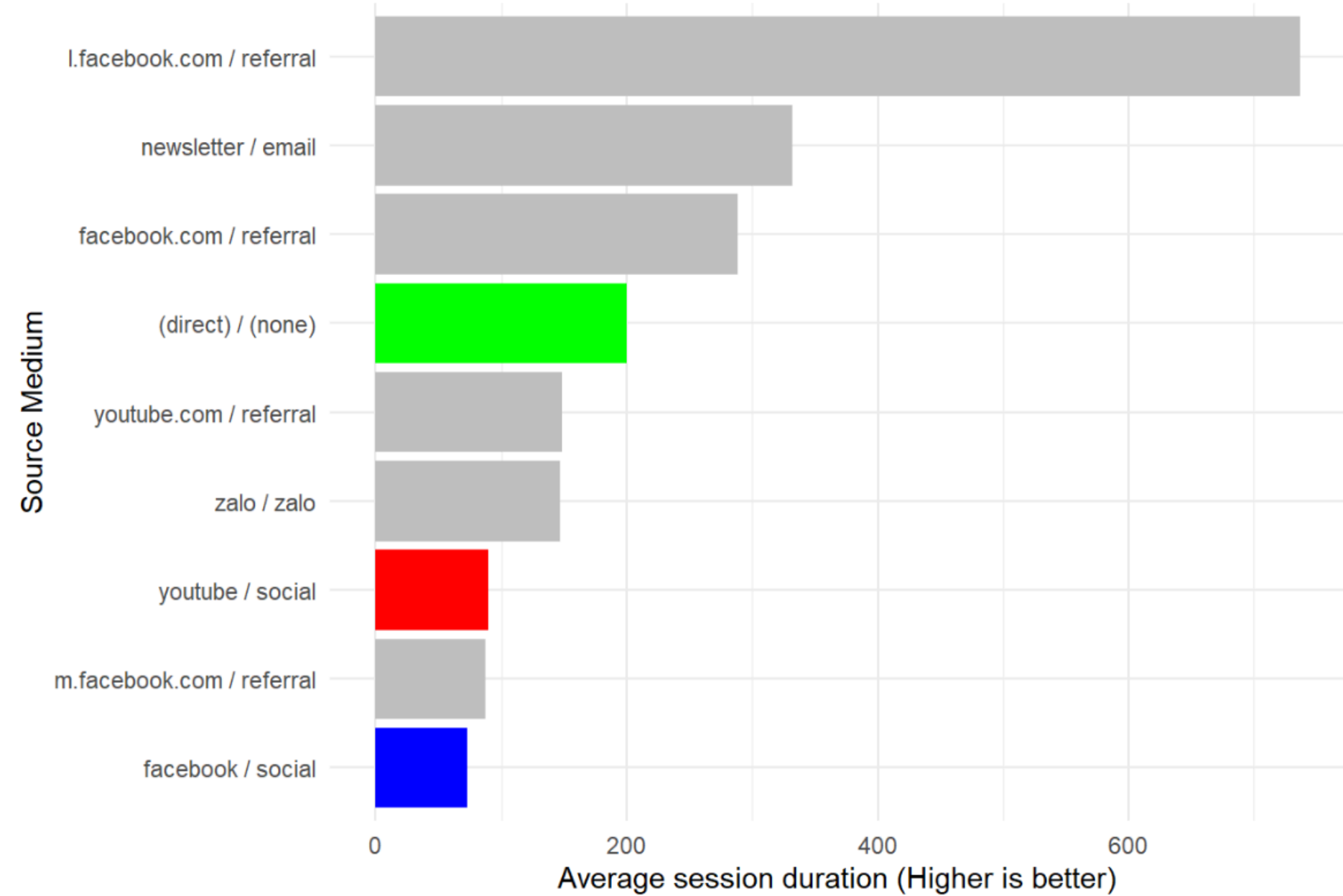
2.2 Traffic Data

Percent of new users by Source Medium
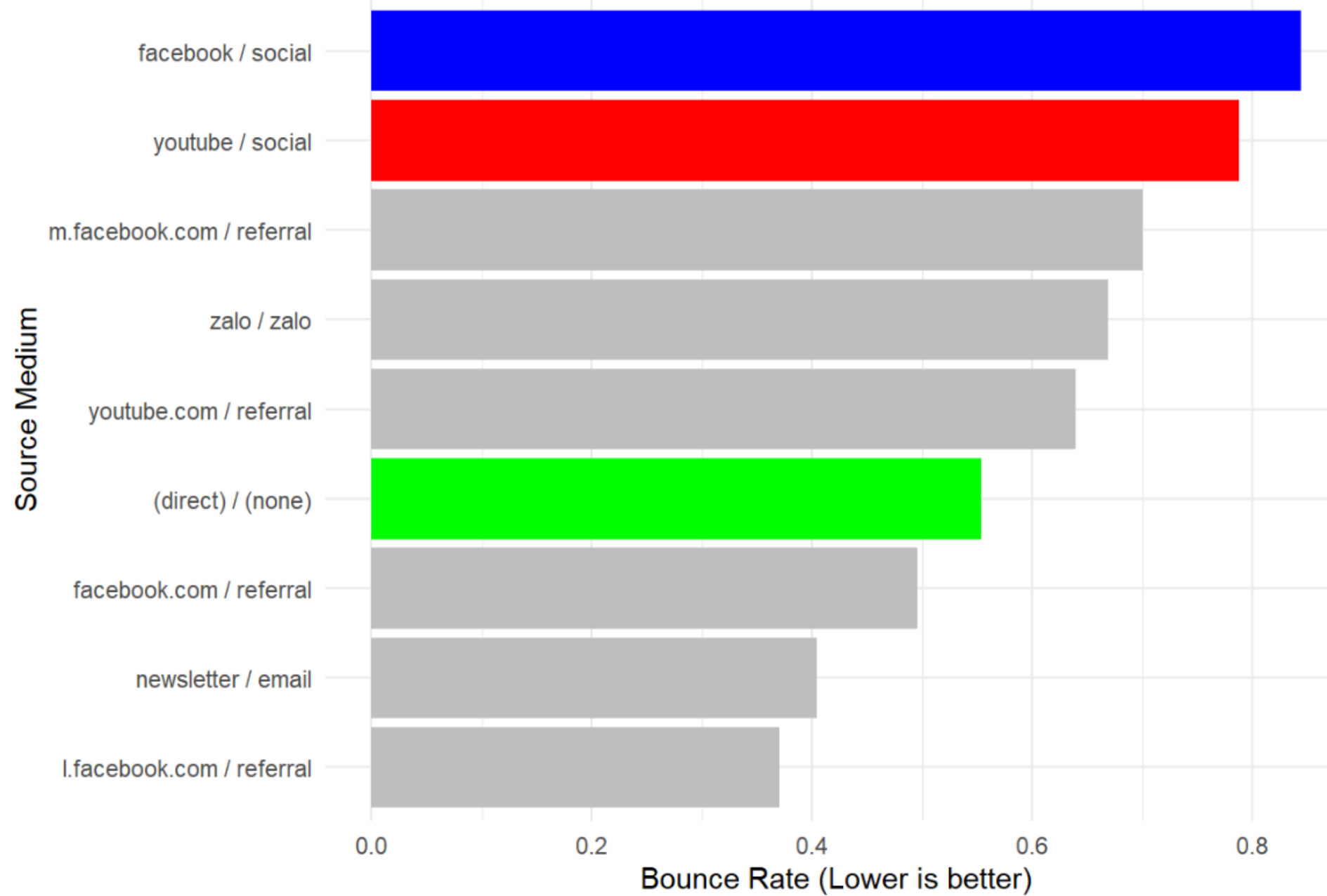
Average session duration by Source Medium

2.2 Traffic Data

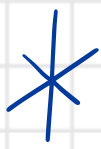## Bounce Rate by Source Medium

Source Medium (top to bottom):
- facebook / social
- youtube / social
- m.facebook.com / referral
- zalo / zalo
- youtube.com / referral
- (direct) / (none)
- facebook.com / referral
- newsletter / email
- l.facebook.com / referral

X-axis: Bounce Rate (Lower is better) — 0.0, 0.2, 0.4, 0.6, 0.8

Ecommerce Conversion Rate by Source Medium

Source Medium (top to bottom):
- newsletter / email
- l.facebook.com / referral
- youtube.com / referral
- facebook.com / referral
- zalo / zalo
- (direct) / (none)
- m.facebook.com / referral
- youtube / social
- facebook / social

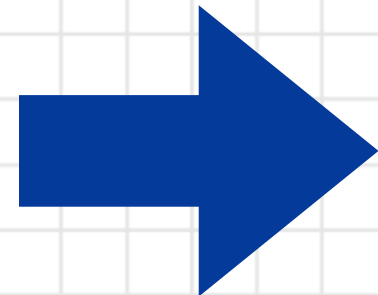X-axis: Ecommerce Conversion Rate (Higher is better) — 0.00, 0.01, 0.02
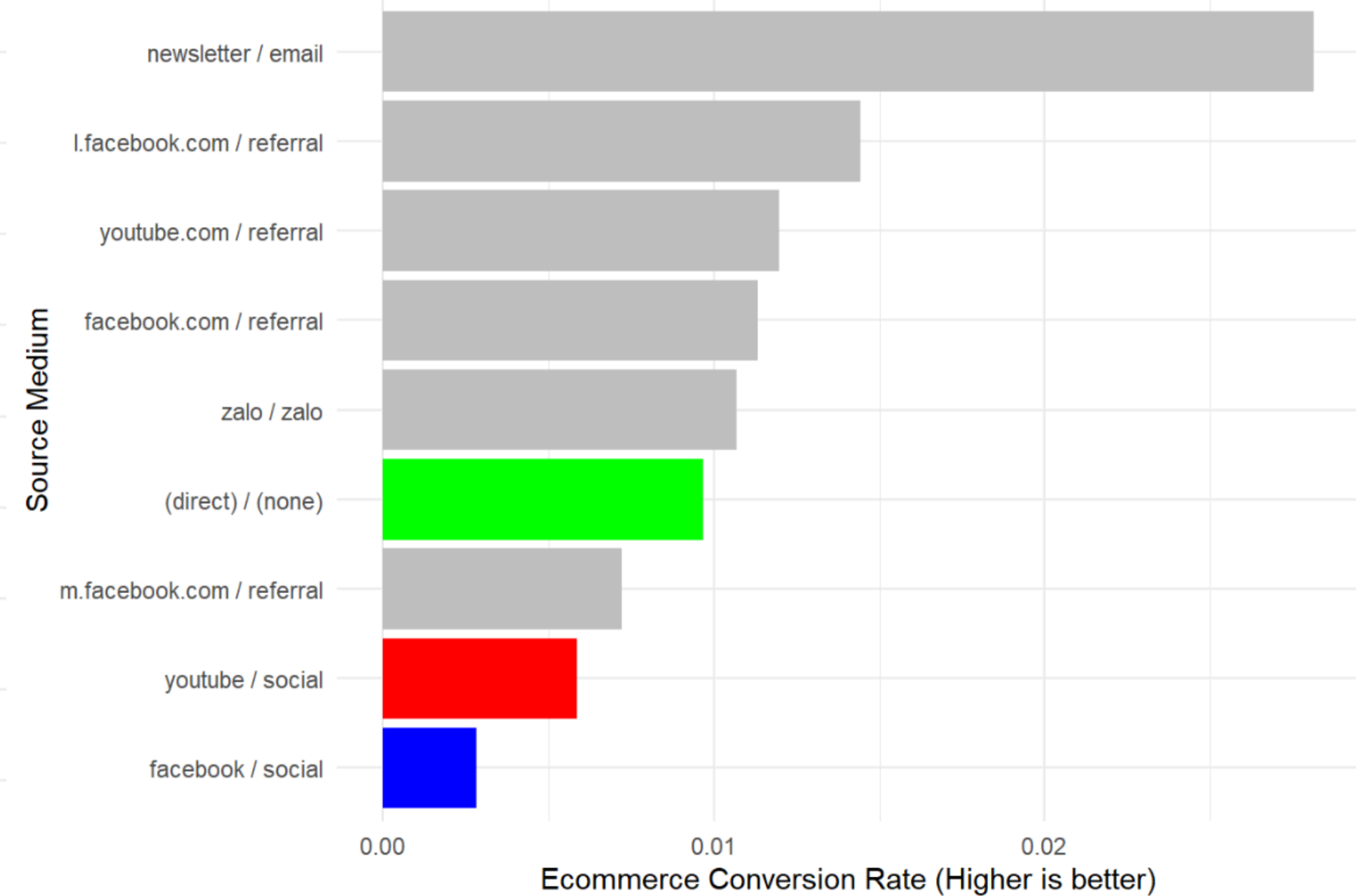
03

Strategy

3 Strategy

**Lower the overall price (including shipping fee)**

Offer Bundled Discounts: Encourage customers to purchase multiple items by offering bundled pricing or free shipping for orders above a certain value

Optimize Fulfillment Centers: Reduce shipping costs by utilizing multiple warehouses or fulfillment centers closer to key customer locations
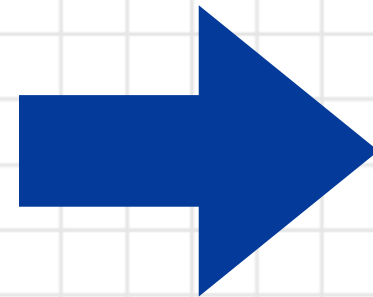
Economy Shipping: Offer slower, economy shipping options as a default, while charging a premium for faster shipping.

Promotional Free Shipping: Use promotions like free shipping for a limited time to boost order volumes.
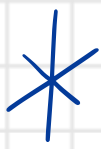
3 Strategy

Improving Marketing Campaign

→

Optimize on viral content: Tap into current trends, memes, or viral challenges.

A/B Testing: Experiment with different versions of your campaign elements (emails, ads, landing pages) to determine which performs best.

Optimize Landing Pages: Ensure that landing pages are user-friendly, relevant to the campaign, and designed to drive conversions. Include clear calls to action and minimize distractions.

Enhance Content Relevance: Make sure your content matches the expectations set by your headlines, meta descriptions, and ads.

THANKS FOR LISTENING