

# Business Analysis Report

## Customer & Revenue Insights

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## 1. Introduction

The objective of this report is to analyze customer behavior and evaluate key business performance indicators. A range of analytical studies was conducted to assess **revenue generation, conversion, and retention trends, churn risk, and promotional effectiveness**. Each part is accompanied by actionable insights and strategic recommendations to guide data-driven decision-making.

## 2. Data Preparation Overview

Before proceeding with the analysis, critical data validation and preprocessing steps were performed to ensure the quality and integrity of the datasets. The following checks were completed:

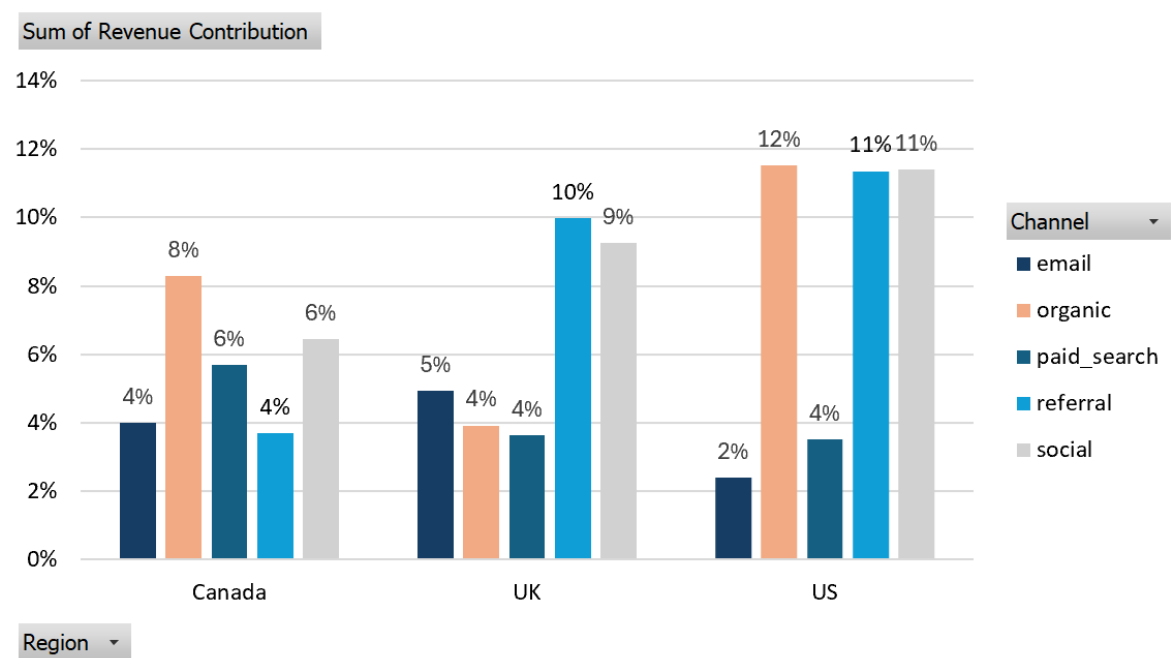
- ✓ Primary key uniqueness was verified across all tables.
- ✓ Revenue values were cleaned to ensure they are non-null and greater than zero.
- ✓ Channel and region fields were confirmed to be present and valid.
- ✓ Order timelines were validated to confirm that no order precedes its customer's signup date.

These preprocessing steps confirmed the datasets were reliable and ready for further analysis.

## 3. Core Business Metrics Exploration

### Revenue by Segment

This part focused on segmenting total revenue by acquisition channel and region. The following key insights were derived from the visualized results:



- **Organic search** generated the highest revenue share in the US (12%), suggesting strong intent-driven behavior. Expanding SEO efforts in this region is recommended.

- In the UK, **referral traffic** contributed the most (10%), surpassing organic and social, which may warrant deeper investigation into referral partnerships.
- **Social media** exhibited consistent performance across all three regions, with 6% in Canada, 9% in the UK, and 11% in the US. This stability suggests it is a dependable channel worth further investment.

#### Areas for further investigation:

- **Paid search** underperforms across all regions (~4%), raising questions about ad effectiveness and targeting.
- **Email** marketing revenue was notably low in the US (2%) despite higher performance in Canada (4%) and the UK (5%). This suggests a need to refine email campaigns regionally.

#### Signup-to-Order Conversion

This section examined the percentage of customers who placed their first order within 7 days of signing up, a key measure of early engagement and onboarding effectiveness.

- **30 customers** converted within the 7-day window, indicating strong short-term engagement.
- While this figure outperforms **industry benchmarks, nearly 70%** of new users did not convert within the same period.

#### Recommendations:

- Launch reminder campaigns at Days 3, 5, and 7
- Offer time-sensitive discounts
- Personalize post-signup messages based on signup source or behavior

#### Promo Usage & Retention

This analysis identified users who applied a promo code on their first order and never made a second purchase.

Customer ID - Customers who used promo code on first order and churned	
21, 78, 57, 43, 40, 71, 46	
Total customers who used promo on first order	81
Total churned after promo: 7	7
Churn Rate: 8.64%	8.64%

- Out of **81** customers who used a promo on their first purchase, only **7** did not return — a churn rate of **8.64%**.
- This is considerably lower than industry benchmarks, **where churn after promo usage can exceed 30%** (source: [https://kodytechnolab.com/blog/predictive-churn-modeling-in-ecommerce/?utm\\_source=chatgpt.com](https://kodytechnolab.com/blog/predictive-churn-modeling-in-ecommerce/?utm_source=chatgpt.com)).

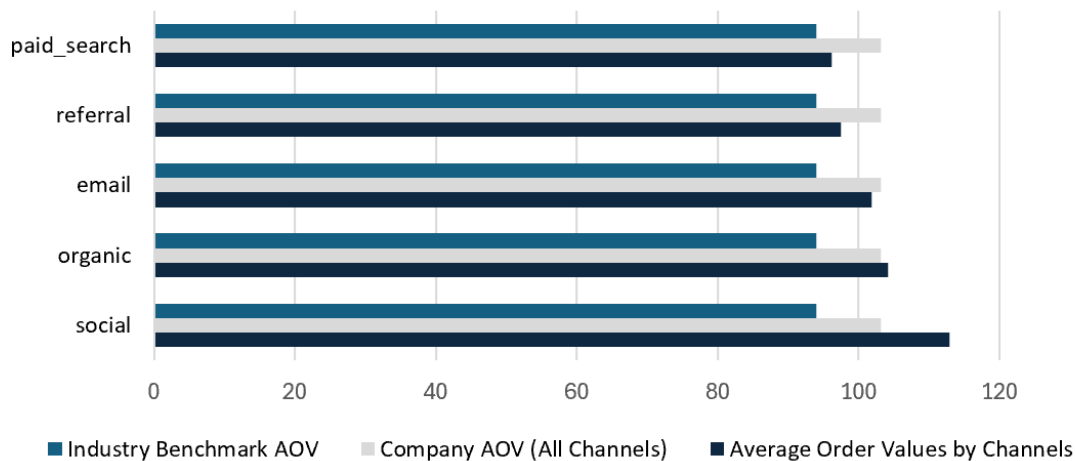
#### Conclusion:

The promo strategy appears effective at driving repeat engagement.

#### Average Order Value (AOV)

This section evaluated the average order value by acquisition channel, comparing performance against industry benchmarks.

### Average Order Values by Channels & Benchmarks

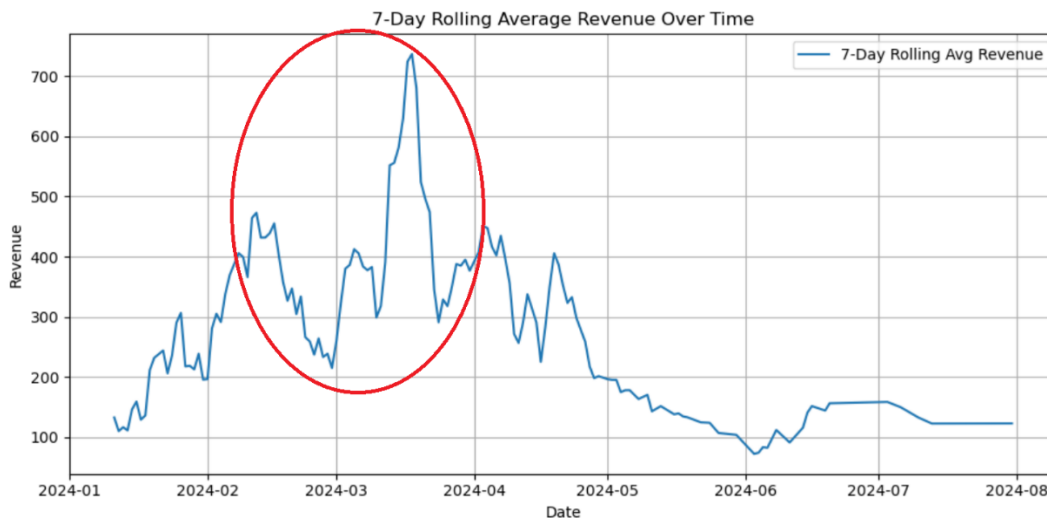


- The overall AOV was **\$103.20**, higher than the industry average of **\$94** (source: [https://ecommercedb.com/benchmarks/ww/all?utm\\_source=chatgpt.com](https://ecommercedb.com/benchmarks/ww/all?utm_source=chatgpt.com)).
- **Social** was the strongest performer with an AOV near **\$113**.
- **Paid Search** and **Referral** channels showed lower AOVs, suggesting either smaller basket sizes or interest in lower-margin products.

### Revenue Trends & Retention Analysis

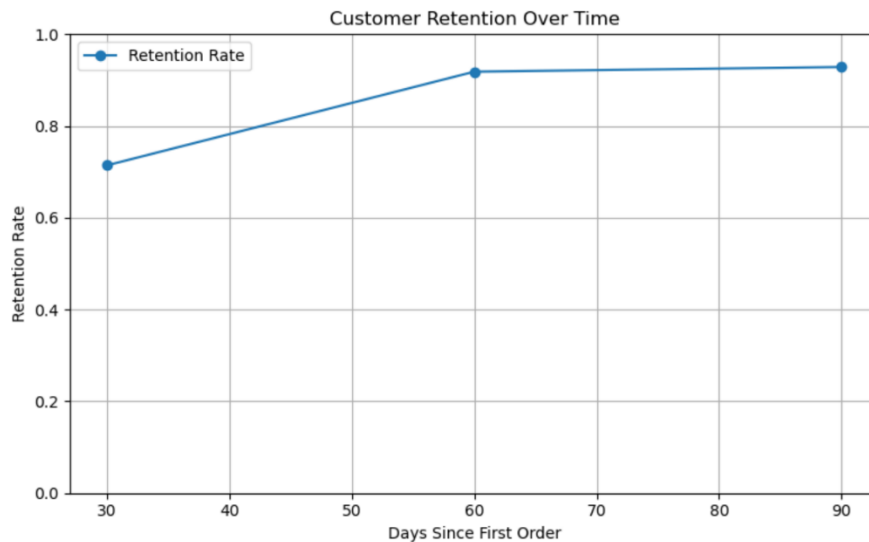
#### a) Rolling Revenue Trends

The 7-day rolling average revealed a peak in March followed by a sharp decline. This spike likely reflects a successful marketing or seasonal trend.



#### b) Customer Retention

- ✓ **30-day retention:** 71%
- ✓ **60-day retention:** 92%
- ✓ **90-day retention:** 93%



#### Key Takeaways:

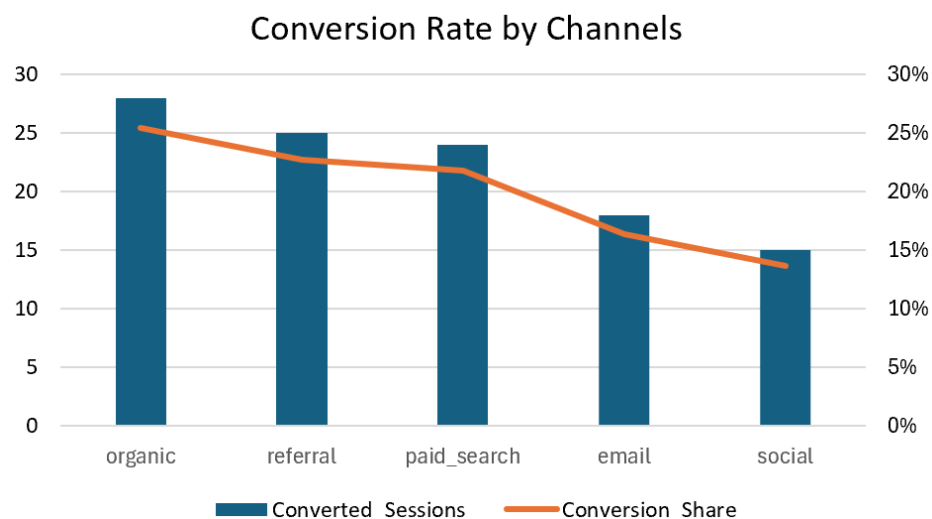
- Excellent short-term loyalty, with most reorders occurring in the first 30 days.
- Little change after 60 days suggests that reactivation efforts should concentrate on the first month.
- Consider reminder emails or incentives at Days 10, 20, and 30.

#### 4. Additional Insights & Analysis

##### a. Customer Gaps

**Two customers** signed up but never placed an order, an opportunity to review onboarding friction.

##### b. Conversion Rate by Channel



- **Organic search** led in both session volume and conversion efficiency (~25%).
- **Referral** and **Paid Search** performed moderately well (~22–23%).
- **Email** and **Social** underperformed with lower conversion rates.

##### c. Pareto Insight

**59 customers contributed 80%** of the revenue, suggesting a relatively balanced customer base, deviating from the typical 80/20 rule.

## 5. Additional Business Que

a. **Why might total orders exceed customers?**

One customer can place multiple orders (1-to-many relationship between customers and orders).

b. **Are there any customers with unusually high-frequency buyers?**

On average, customers placed over 4 orders. Most customers placed 1–8 orders. While no extreme outliers exist, some customers can be evaluated for VIP programs or potential promo abuse.

This distribution indicates a moderate repeat purchase pattern.

c. **Are any promo codes overused or misused?**

Yes, 85 cases where the same customer reused the same promo code. Customer\_id 12, who is the biggest buyer, purchased 6 out of their 8 items using the promo code.

d. **What might explain long gaps between sign-up and first-order?**

Likely causes include poor onboarding, lack of urgency, or pricing concerns.

**Recommendation:** Conduct gap analysis and value stream mapping analysis.