**Ayush Meher  
Data Scientist  
Experienced in analyzing eCommerce, marketing, CRM, and healthcare datasets.**

**Project:** We have 2 platforms we use to process orders: **Shopify** and **Checkout Champ** (abbreviated CoC).

* On the “Analysis” sheet, you will see all the metrics we would like to track.
* On the “Expenses” sheet you’ll find the expenses you’ll need to come up with these metrics.
* On each GREEN sheet you’ll find customer data, broken down by year and by platform.

**Objective:**

1. Use the raw data provided from each platform to generate the data below…

* Each of these metrics tracked by platform and by year:

A close-up of a table

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* Each of these metrics by year, combining data from both platforms:

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* Each of these metrics for all years, combining data from both platforms:

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**Approach:**

**Using Excel:**

**Assumption:** Since we got a combined budget for year 2022 for facebook ads and google ads. We will take ratio of year 2023 and 2024 to split these expenses between shopify and coc Since we got combined budget for the year 2022 for facebook ads and google ads. We will take ratio of year 2023 and 2024 to split these expenses between shopify and coc

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Facebook Ads** | | **Google Ads** | |
| Ad Spend Directed to --> | Shopify | CoC | Shopify | CoC |
| 2022 | $440,274.02 | | $101,263.05 | |
| 2023 | $278,635.14 | $1,362,406.20 | $214,277.17 | $62,311.53 |
| 2024 through 8/31/24 | $533,977.67 | $1,835,500.61 | $251,005.28 | $25,935.00 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Ad Spend Directed to --> | Shopify | CoC | Shopify | CoC |
| 2022 | $88,054.80 | $352,219.22 | $86,073.59 | $15,189.46 |

**Additional Calculation Requirements:**

Using Power Query Editor to find unique customers:

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**KPIs:**

1. **Order Count (Shopify and CoC)**

* **Formula**: Sum of orders processed per platform.
* **Purpose**: Determine the total sales volume on each platform separately, providing insights into platform-specific performance.

**2. Unique Customers (Shopify and CoC)**

* **Formula**: Count of distinct customer emails per platform.
* **Purpose**: Measure the unique customer reach on each platform to evaluate which platform attracts more new customers.

**3. Revenue (Shopify and CoC)**

* **Formula**: SUM(Total Sales - Refunds) for each platform.
* **Purpose**: Track revenue per platform after refunds to understand sales performance and refund impact.

**4. Average Order Value (AOV)**

* **Formula**: Revenue / Order Count (calculated separately for Shopify and CoC).
* **Purpose**: Provides insight into average customer spending per order on each platform. This is useful to compare customer purchasing behavior across platforms.

**5. Cost Per Sale (CPS) (Shopify and CoC)**

* **Formula**: Total Ad Spend / Order Count for each platform.
* **Purpose**: Assess the ad spend efficiency on each platform, allowing for platform-specific ROI analysis.

**6. Customer Cost by Year (Shopify and CoC)**

* **Formula**: Total Ad Spend / New Customers on each platform.
* **Purpose**: Measures the cost to acquire new customers, helping to evaluate marketing effectiveness on each platform separately.

**7. Customer Lifetime Value (LTV) by Year Acquired (Shopify and CoC)**

* **Formula**: AOV \* Avg # of Orders per Customer (calculated for each platform and then combined if needed).
* **Purpose**: Estimate long-term revenue per customer per platform, helping to understand customer value on Shopify vs. CoC.

**8. Return on Ad Spend (ROAS) (Shopify and CoC)**

* **Formula**: Revenue / Total Ad Spend (calculated for each platform).
* **Purpose**: Track revenue generated for each ad dollar spent, specific to each platform. This helps in assessing which platform drives better ad efficiency.

**9. Weighted Average Order Value (AOV Weighted) (Shopify and CoC)**

* **Formula**: (Shopify AOV \* Shopify Orders + CoC AOV \* CoC Orders) / (Shopify Orders + CoC Orders)
* **Purpose**: Calculate an overall AOV considering both platforms, weighted by the number of orders on each platform. This helps in forming an overall revenue view.

**10. Cost Per Acquisition (CPA) (Combined)**

* **Formula**: Total Ad Spend / Total Unique Customers (after accounting for shared customers across Shopify and CoC)
* **Purpose**: Measures the efficiency of acquiring customers across both platforms, giving a combined view of CPA by factoring in shared customer

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