

OTT Platform Revenue Analysis

Author: Mohd Saiful Islam

1. Introduction

This report provides an in-depth analysis of the OTT platform's revenue data. The primary objectives are to understand revenue trends, identify key revenue drivers, analyze customer purchase behavior through cohort and segment analysis, and propose actionable strategies to increase revenue. The analysis utilizes data from multiple Google Sheets, which were loaded as CSV files.

2. Data Overview

The analysis is based on data from five sources:

- **Revenue Data:** Contains transaction-level details including order ID, transaction ID, payment date, amount, plan ID, payment method, and coupon code.
- **Plan Data:** Provides details about different subscription plans, including plan name and ID.
- **Countries Data:** Contains country names and their corresponding IDs.
- **Subscription Data:** Links orders to customers and plans.
- **Customers Data:** Includes customer information such as ID, email, name, and country ID.

These data sources were merged into a single, consolidated dataframe (`df_merged`) for comprehensive analysis.

3. Data Quality Checks

Initial data quality checks were performed on the raw dataframes:

- **Missing Values:** Missing values were identified primarily in the `coupon_code` column of the revenue data (filled with 'No Coupon') and the `email` column of the customers data (one missing value found).
- **Duplicates:** Duplicates were found in the revenue data (10913 exact duplicates and 18947 duplicate transaction IDs), which were kept as they represent individual transaction events. No duplicates were found in the other dataframes based on their primary keys.
- **Data Types:** The `payment_date` column in the revenue data had mixed formats and was converted to datetime objects. The `amount` column was initially an object type and was converted to numeric.

4. Data Cleaning & Preparation

The following data cleaning and preparation steps were performed:

- Column names were standardized to lowercase with underscores.
- Missing values in `coupon_code` were filled with 'No Coupon'.
- The `payment_date` column was converted to a datetime format, handling mixed date strings.
- The `amount` column was converted to a numeric data type, coercing errors and filling resulting missing values with 0.
- The five dataframes were merged using left joins on relevant key columns (`order_id`, `plan_id`, `customer_id`, `country_id`) to create a consolidated `df_merged` dataframe. Redundant ID columns resulting from merges were dropped.
- The `plan_id` and `subscription_plan_id` columns were confirmed to be identical after merging and one was dropped.

5. Cohort Analysis Metrics

Customer cohorts were defined based on their first purchase:

- **Non-Offer First Joiners (Cohort A):** Customers whose first purchase did not use a promotion coupon.
- **Offer First Joiners (Cohort B):** Customers whose first purchase used a promotion coupon.

The following metrics were calculated for each country and cohort:

- Total unique customers in the cohort.
- Total revenue from first purchases.
- Number of repeat buyers (customers who made at least one additional purchase).
- Total revenue from repeat purchases.
- Repeat Buyer Rate (calculated as Number of Repeat Buyers / Total Unique Customers).
- Average Revenue First Purchase.
- Average Revenue Repeat Purchase.
- Lifetime Value (LTV) per Customer.
- Repeat Revenue Share.

Additionally, customers were segmented based on their repeat buyer rate and LTV into four potential groups: 'High Loyalty & High Value', 'Low Loyalty & High Value', 'High Loyalty & Low Value', and 'Low Loyalty & Low Value'.

6. Key Insights

Based on the data analysis, the following key insights were identified:

- **Revenue Trend:** Analysis of monthly and quarterly revenue trends revealed a general downward trend after the first quarter of 2025. This indicates a challenge in maintaining revenue growth and underscores the importance of improving customer retention and increasing revenue per customer.
- **Revenue Drivers:**
 - **Payment Methods:** Credit card, bank transfer, and Google Pay are the top revenue-generating payment methods.
 - **Plan Types:** The 12-Month and 6-Month plans contribute significantly more to total revenue than the Monthly and 3-Month plans.
 - **Countries:** Countries like Martinique, Timor-Leste, and Qatar are the top revenue contributors.
- **Customer Behavior and Segmentation:**
 - **Overall Low Repeat Buyer Rate:** A critical finding is that the repeat buyer rate is consistently below 0.5 across all countries and both cohorts. This means that based on our segmentation thresholds, no country/cohort combination falls into the "High Loyalty" categories. This highlights a universal opportunity to improve customer retention.
 - **Dominant Segments:** Only two segments are present in the data: 'Low Loyalty & Low Value' and 'Low Loyalty & High Value'.
 - **'Low Loyalty & High Value' Opportunity:** The 'Low Loyalty & High Value' segment, despite having a low repeat buyer rate, exhibits a higher average LTV compared to the 'Low Loyalty & Low Value' segment. This group represents a significant opportunity to increase repeat revenue if their purchase frequency can be improved.
 - **Cohort Performance Variation:** The comparison between "Offer First Joiners" and "Non-Offer First Joiners" by country shows variations in repeat buyer rates and LTV, suggesting that the effectiveness of initial offers in driving long-term value differs by region.

7. Recommendations

Based on the identified opportunities and insights, the following actionable proposals are recommended to increase revenue:

1. **Prioritize Customer Retention:** Develop and implement a comprehensive customer retention strategy focused on increasing repeat purchase rates across all countries and cohorts, as the overall repeat buyer rate is low.
2. **Target the 'Low Loyalty & High Value' Segment:** Create targeted retention programs, personalized offers, and re-engagement campaigns specifically for

customers in this segment to increase their repeat purchase frequency and capitalize on their higher average LTV.

3. **Investigate Reasons for Low Repeat Purchases:** Conduct in-depth research (e.g., customer surveys, feedback analysis, product usage) to understand the root causes of the consistently low repeat buyer rate and address them.
4. **Optimize Top Payment Methods:** Ensure a seamless and efficient checkout experience for credit card, bank transfer, and Google Pay users to reduce friction and increase conversion rates.
5. **Promote High-Value Plans:** Intensify marketing and sales efforts to highlight the benefits and value of the 12-Month and 6-Month plans to encourage new sign-ups and upgrades.
6. **Implement a Tiered Loyalty Program:** Introduce a loyalty program with increasing benefits for repeat customers to incentivize continued engagement and higher spending.
7. **Geo-Target Acquisition Strategies:** Analyze country-specific cohort performance (repeat buyer rate, LTV) to tailor initial acquisition offers and marketing messages in each region to attract customers with higher potential for repeat business and LTV.
8. **Enhance Email Re-engagement Campaigns:** Develop sophisticated email marketing sequences to re-engage customers who have made a first purchase but haven't returned, offering personalized incentives or highlighting new features.
9. **Offer Incentives for Longer Terms to Low Loyalty Segments:** For customers in the 'Low Loyalty & Low Value' segment, consider offering compelling discounts or benefits to encourage them to subscribe to longer-term plans (12-Month, 6-Month) to increase their immediate and potential long-term value.
10. **Conduct A/B Testing on Offers:** Continuously A/B test different initial offer strategies (discounts, bundles, free trials) to identify which approaches attract customers with the highest repeat buyer rates and LTV in various markets.

8. Conclusion

The analysis reveals that while certain countries, payment methods, and plan types are significant revenue drivers, the primary challenge lies in the consistently low repeat buyer rate across all customer segments. By focusing on improving customer retention through targeted strategies for different customer segments (especially the 'Low Loyalty & High Value' group) and leveraging country-specific insights, the organization can work towards increasing repeat purchase revenue and achieving sustainable growth. Implementing the recommended proposals will be crucial for converting low-loyalty customers into more engaged and valuable assets.