Introduction

The online community KyngaCell has been introduced for a few months, during which the company has believed the new feature has positively influenced user revenue and retention but without quantifying the effect. As the company hasn’t looked into the revenue data, there are many unknowns. Frist of all, it is unknown whether the user revenue has actually increased. Furthermore, it is also unclear about to what scale the user revenue has changed and if there is any other factor playing a role. Thus, we are not sure about the impact of the online community launch.

In the sense that business should be backed up by numbers, the new Chief Financial Officer(CFO) would like to quantify the impact of a new online community launch on the user revenue and retention. We were provided data on individual users about their community participation, churn, source and revenue spend. This report would analyze whether the online community has increased user revenue, retention and CLV, and further explore whether the customer source played a role.

Data Characteristics

The team is provided with three data sets. The first one has four components, customer ID, whether they joined the community(joined) and their monthly spend before and after the online community launch. The second one has five components, which besides customer ID and joined, customer age at the community launch, 90-day churn(churn), and average spend for these 90 day were added. The third one combined the previous two datasets with one new variable ‘Campaign/Organic’ records(user source) how the user joined the game. Among the variables, Joined, churn and user source are binary data.

Introduction

Online gaming company KyngaCell has launched a new community in the game for a few months, during which the company has followed the belief that user revenue and retention have increased within the game. However, without quantifying the impact, we are not sure about the real effects of the community introduction. In the sense that business progress should be backed up by numbers, we are delegated by new Chief Financial Officer(CFO) to provide the customer analysis. Customer data given include basic information of individual users, their community participation, revenue spend, churn and source to the game. This report would analyze whether the community launch has increased user revenue, retention and CLV, with the magnitude of changes, and further explore the effect of the customer source.

Data Characteristics

There are three datasets provided, including information of 200 users in the game. The first dataset has four components, customer ID, whether the users joined the community(*joined*), and their monthly spend before and after the community launch. The second one has five components, which besides customer ID and *joined*, contain customer age at the community launch, 90-day churn(*churn*), and average spend for these 90 day. The third one combined the previous two datasets with one new variable ‘Campaign/Organic’ records(*user source*), how the user joined the game. Among the variables, *Joined, churn* and *user source* are binary data.

#### Executive Summary

This report is about customer analysis of the mobile gaming powerhouse KyngaCell. We aim to quantify the impact of the community introduction. Three datasets, including information of 200 users, are provided to find out the short-term user expenditure change and long-term effects on user retention/churn and customer lifetime value (CLV). Meanwhile user source to the game is also offered for further analysis.

Under the assumption that each user is independent individual, we collect some findings after analysis. From the first dataset, the belief that the community has increased the individual user revenue for the first month is verified both by graph trend and statistical regression. Overall, KyngaCell’s total revenue on the first month is estimated to have increased by 11% for the community launch. However, unexpectedly revealed in the second and third dataset, the introduction of community has negatively affected both user retention and CLV. In further analysis adding user source as customer segmentation attribute, we discovered that customers from organic source had lower churn rate compared with those from campaign source.

According to these findings, we have several recommendations for user value and retention. First of all, it is urgent to retain user engagement in the community for the overall churn increase from the community launch. For short-term user value, we can attract more organic users to join the community for foreseeable monthly $29 increase by each user. On the other hand, in order to ensure customer value and retention in the long run, to facilitate in-depth customer analysis, finding the key for change and differentiating services to customers, is always the optimal choice.

**Data Characteristics**

The dataset has three subsets with information of 200 individual users. [Plot 0]The first dataset shows 41% of customer joined the community, with overall one-month spend generally normally distributed with mean increase from $78 to $121 after the community launch. The second one reveals more than half of the users are new customers with averagely 3-month spend also normally distributed. Also shown in second dataset is the churn rate up to 59% after the community launch. The third one combined the previous two datasets and added the user source, showing 62% of the users are from campaign, marketing or promotions.

#### Previous version

The dataset has three subsets with information of 200 individual users. The first dataset has four variables: customer ID (*Customer ID*), user participation in the online community (*Joined*), and their spending one month before (*Month Before*) and one month after (*Month After*) the community launch. The second one has five components: *Customer ID*, *Joined*, *Customer Age with Firm at time of joining the online community*, 90-day churn (*Churn*), and *Average Spend Last 3 months of Life with the firm*. The third one combined the previous two datasets and added the user source, users naturally joined or from campaign, *Campaign/Organic*. Among the variables, binary data[Plot 0] *Joined, Churn* and *Campaign/Organic* , while user spendings are generally normally distributed, including monthly spend before and after community launch and 3-month spend of user life at the launch time.