Heroes of Pymoli Purchasing Analysis

I. Overview

The data bootcamp 2021-week four's homework assignment from the University of Denver ("DU") was to analyze purchasing data for a new, fictitious game called "Heroes of Pymoli" ("Pymoli"). The game is free-to-play ("F2P") and, according to the homework's instructions, encourages players "to purchase optional items that enhance their playing experience."

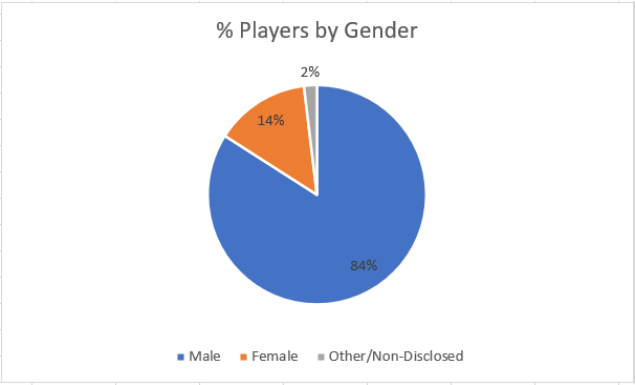
What are the most profitable and most popular items players purchased? Who is the game's audience? Who spends the most on items?

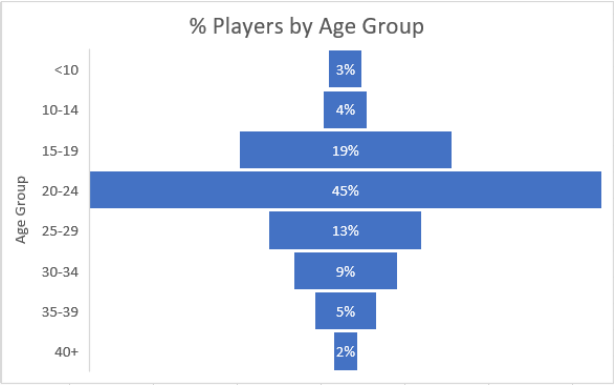
These questions and more will be answered in the following report.

II. Data and Results

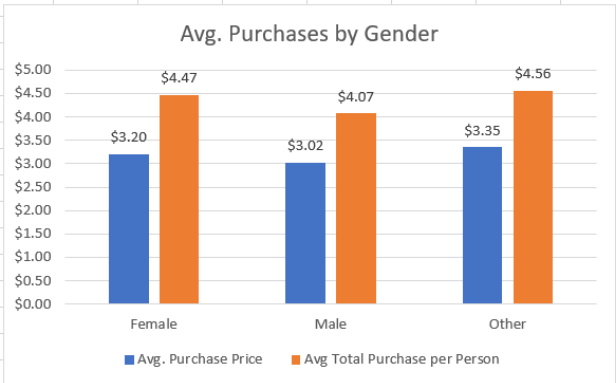
F2P have grown exponentially over the last decade. They are easy to access via a mobile device and most importantly "free" to the consumer. F2P games like Pymoli have no upfront cost to the consumer and breaks down any economic barriers which promotes a diverse player demographic. I want to take a look at Pymoli's purchasing power, who are players and what items are they are buying.

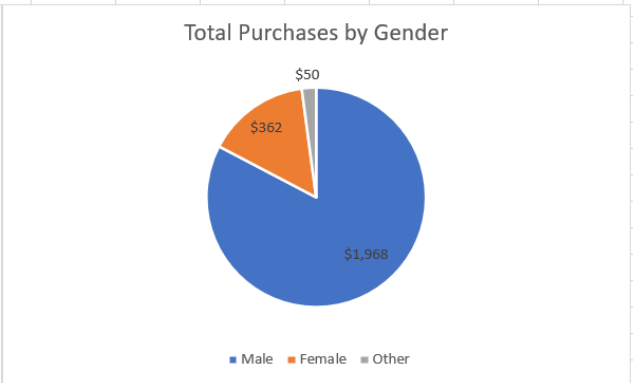
First, let us look at who the players are based on gender and age.

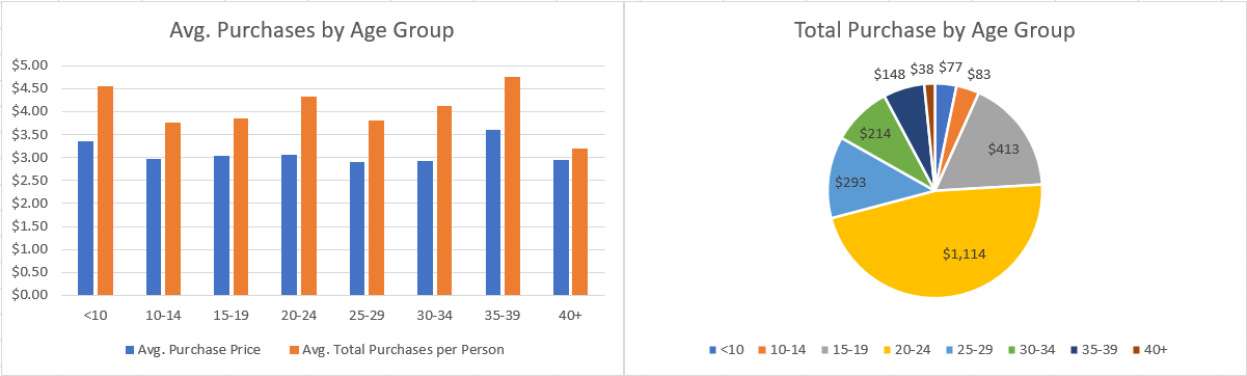




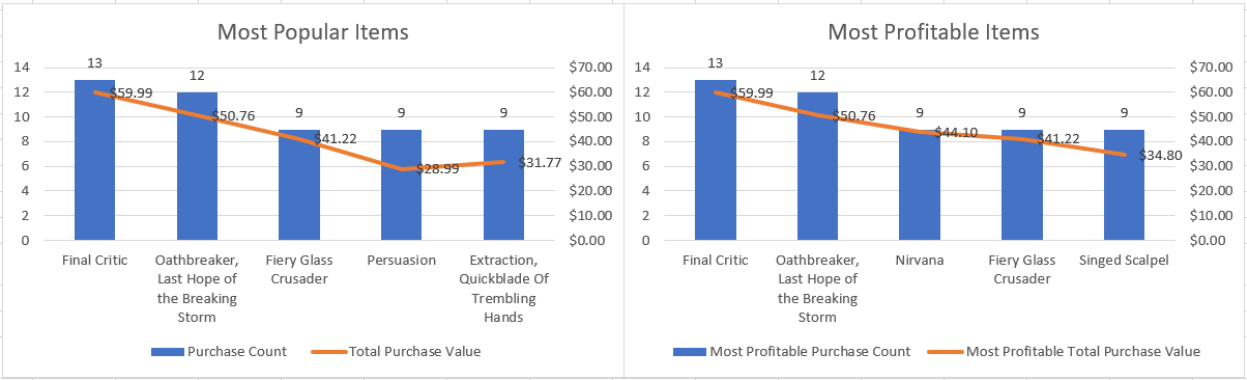
Next, let us look at the purchasing analysis by gender and age.







Finally, let us look at the most popular and most profitable items purchased.



III. Conclusion

Overall, Pymoli grossed $2,379.77 in item purchases with an average total purchase per person $4.37.

I broke down the data and made conclusions that help answer the earlier questions.

Q: “What are the most profitable and most popular items players purchased?”
A: The most popular and profitable item purchased by the players is the “Final Critic” item.

At first, I felt that the most popular and most profitable purchased items were going to be identical. After analyzing the data, I noticed the variances came from the item price and quantity. As expected, the top two most popular items were identical to the top two most profitable items based on purchase price and count quantities. But the bottom three on the most popular and most profitable were different even though the purchase count quantities were the same. This is because the bottom three on the most profitable item prices were more expensive, shown in the table below:

Item Name	Purchase Count	Item Price	Profitable/ Popular
Nirvana	9	$4.90	Profitable
Fiery Glass Crusader	9	$4.58	Profitable & Popular
Singed Scalpel	9	$4.35	Profitable
Persuasion	9	$3.22	Popular
Extraction, Quickblade Of Trembling Hands	9	$3.53	Popular

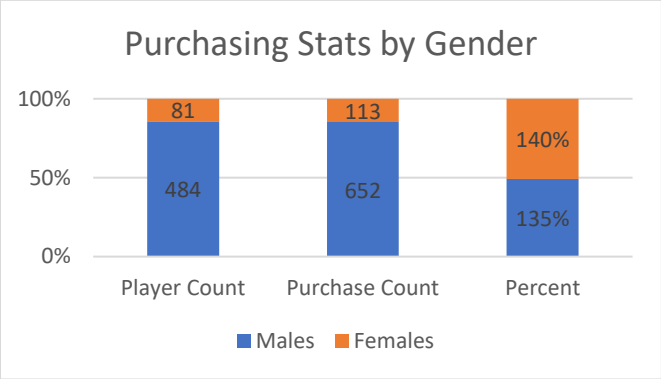
Q: “Who is the game’s audience?”
A: Males and people in the Age Group 20-24 have the highest player counts.

I did not find it at all surprising that majority of the players playing Pymoli are males (at 84%) or in the 20-24 age group (over 44%), which is consistent with national statistics. Specifically, according to Statista's webpage (https://www.statista.com/statistics) shows that 38% of gamers playing F2P games in the US in 2020 are 18-34 years old and 59% are males.

As a F2P gamer myself and in the 40+ age group, I found it interesting that group had the lowest player count. My conclusion is that Pymoli might be a role playing game ("RPG") and/or multiplayer game and according to AARP's webpage (https://www.aarp.org/research/topics/technology/info-2019/2020-gaming-trends-older-americans.html) over 40 year-olds are "most often drawn to classic puzzle, logic, card, and tile games."

Q: "Who spends the most on items?"
A: Females as well as people ages 35-39 tend to purchase more expensive items and have higher total purchase amounts per person.

It was interesting to see that even though there are significantly more males that play the game than females (84% males vs. 14% females), the females' total average purchases were slightly higher than that of the males, indicating that a female is likely to spend more than males. Furthermore, females purchase rate is 5% more than males as shown in the below table:



IV. Limitations

I found the following limitations with the data provided:

- A combined gender and ages analysis would have been good to pinpoint the audience. You could use this information for targeted advertisements in the game.
- The data did not include players who played but did not buy items. You could use this information in a marketing campaign to send discount codes to the players that have not purchased items.
- The data was missing timeframes to analyze the data year-over-year or quarter-over-quarter. Without a time reference we have no idea how old this data. We also don't know if our marketing campaigns are working if we don't have any reference of time.