Determinant Factors Affected Repurchase Intention of New Characters of Dead by Daylight

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Abstract

Thailand's gaming industry has THB 9 billion in sales volume in 2016. Game developer has successfully developed merchandise technique strategy to launch games to market. Online game namely “Dead by Daylight” is recently well-known among Thai's players, which has currently 350,000+ players. This study examines the factors affecting repurchase intention of the new character in Dead by Daylight. Multiple linear regression (MLR) analysis explored the significant relationship among Exploratory Orientation, Value to Money, Character Identification, Collection, Social Value, Subjective Norm, and Repurchase Intention. In addition, the SAS software was statistically applied to the outputs. The results reveal that factors that affect repurchase intention are different among the duration of hours that the players spend time in playing this game. The Collection is a major concerned among players which tends to decrease upon number of hours they spend. Exploratory Orientation
occurred when players who spend less than ten hours a week while Value to Money appeared on the players who spends more than thirty hours a week. According to the changes of globalization, higher educated and higher income among game players in Thailand are requiring more attention from others. They then repurchase new package to fulfill the discovery of new characters and new pleasure to this game. Game developers still have an opportunity to (re)design new characters in order to perk up its sales volume. This study determines whether or not the players who have purchased new characters namely “Halloween Chapters” of the Dead by Daylight will intend to repurchase.

**Keywords:** Dead by Daylight, Online Game, Game, Repurchase Intention, Thailand

1. Introduction

Kim et al. (2012) defined as an intention to repurchase products a consumer has previously bought. Also, repurchase intention is the repeated behavior in using products in the future, based on previous experiences and expectations for the future.

Liang (2012) defined repurchase intentions as an increase the likelihood of repurchase behavior, and thus worked as a leading indicator of future revenue from existing game players. Such repeated behavior has been proven through THB 9 billion in Thailand’s gaming industry for 2016 (Tangshi, 2017). Game developers had successfully designed merchandise technique strategy to attract (new or) existing customers to (re)purchase. That strategy is to continuously design (new) contents and (new) character(s).

This study applies online game namely “Dead by Daylight” to prove the factors affected repurchase intention. It is because there are approximately 350,000 or 11.24% of the total Thai game players playing this game. Thai players are the second highest, who play this game from Chinese (Galyonkin, 2017).

Dead by Daylight imitated the situation of horror homicide that players can choose to represent themselves as a character either the killer or one of four survivors (Behaviour & Starbreeze, 2017). As a result, the number of Thai players tends to continually grow. Based on the pilot study and literature review, this research has applied six affected factors comprising exploratory orientation, character identification, collection, value to money, subjective norm and social value to repurchase intention.

2. Literature Review

2.1 Exploratory Orientation

Exploratory Orientation refers to the obsessed exploration behavior of the new character in Halloween Chapter to gain new experience in playing the game namely “Dead by Daylight” such new experience can be gained through new character whose perks “skill” broadens to a greater extent e.g. increase speed movement, escaping the killer’s grasp etc. Originally, Exploratory Orientation had developed from “Challenges” which refers to the extent to which the technology mediated environment provides adequate opportunities for action (Hoffman & Novak, 1996).

Exploratory Orientation is defined based on the pilot study (as shown in Appendix A). This has transcribed and initiated the word “Exploratory Orientation” replacing the “Challenges” to use throughout this study.
2.2 Character Identification

Character Identification is identification with companies or products increases intent to repurchase products. Customers that identify with companies or products develop a sense of loyalty. In general, they do not turn to other companies or other products (Crosby & Taylor, 1983). This study refers to player identification with Michael Myers and Laurie Strode character in the Halloween Chapter of the game namely "Dead by Daylight" develop a sense of his or her identity in reality. Players assume themselves as such characters and enjoyed the missions of each character that has been occurring in the Halloween Chapter and they thrill to be a part of the situation in the game.

2.3 Collection

The intention of obtaining Michael Myers and Laurie Strode character as fulfillment perspective which player wants to acquire as a collection. According to the challenges and fascination, the player would pride to acquire the characters and perks in the Halloween Chapter, and it would be worthy to be collected. This variable applied from Commitment to Massively multiplayer online role-playing games (MMORPGs) which defined as a deep emotional attachment with and a pledging of support toward MMORPGs (Desai & Raju, 2007). Also, when players are committed to MMORPGs, they are more likely to continually engage with the game and seek out others, who share their interests in and passion for the game (Stratton & Northcote, 2014).

As a result of the pilot study, collection has been replaced the word “Commitment to MMORPGs” to use throughout this study (Desai & Raju, 2007; Stratton & Northcote, 2014).

2.4 Value to Money

Value-for-money was a functional value dimension that encapsulated the utility derived from the product due to the reduction of its perceived short-term and longer-term costs (Yoo, 2015). Pilot study results that value to money is a major concerned factor. Players have to pay for the new content. As the comparison between the price of the standard game (THB 369) and the price of the Halloween Chapter (THB 169) (Valve Corporation, 2017), it is value to money.

2.5 Subjective Norm

“Subjective Norm” referred to the person’s perception that most people, who are important to him, think that he should or should not perform the behavior in question. In other words, an individual’s behavior and thinking are influenced by friends, family or colleagues (Fishbein and Ajzen, 1980). The author defined as ideal of players that influenced by other players for taking an extra content of the game. Players expect that the Halloween Chapter is a magnificent chapter and every player should have it, so they want to acquire it as the way the other players do.

2.6 Social Value

Social value of game items can be interpreted as increasing users’ status or showing off in a social context, when players have items. So, the social value of items is positively related to purchase of items (Yoo, 2015). Pilot study also confirmed the social value as another variable. The ideal of the players of the game “Dead by Daylight” as a common view that player who has the Halloween Chapter is the outstanding player. A player seems to be proud to have the Halloween Chapter because they feel they are accepted by other players if they got the Halloween Chapter as everyone else.
3. Research Hypotheses

Figure 1 shows six hypotheses classified by duration of hours.

![Conceptual Framework Diagram]

Figure 1 – Conceptual Framework

Based on the previous information, the following hypotheses are developed:

$H_{1-4}$: Examine that significant relationship among Exploratory Orientation, Character Identification, Collection, Value to Money, Subjective Norm, and Social Value with Repurchase Intention

$H_5$: There are significant difference of the six relationships classified by duration of playing hours

4. Methodology

This research uses exploratory design mixed method. It focuses on Thai's players who play “Dead by Daylight” and also purchased the “Halloween Chapter” which consist of two phases. The total game player of Dead by Daylight are approximately 1,800,000. However, such number has a limited access to only game player who play Dead by Daylight. (Galynkin, 2017).

Phase I: Pilot Study is conducted with three in-depth interviews using the snowball technique. The selection criteria were players, who are playing the game more than 30 hours a week (heavy user). These results were used to develop a questionnaire in Phase II.

Phase II: Questionnaire consisted of three sections. Section 1: contain of player behavior. This section aims to categorize the duration time of users spent in playing this game. Section 2: consist of 23 Likert-scale questions, ranging from (1) strongly disagree to (4) strongly agree. Section 3 involves the general information, which is gender, age, education and monthly income.

The result was 221 respondents throughout “Dead by Daylight” in Thailand, which is closed group on Facebook in the period of January - February 2017.

5. Findings & Discussions

Table 1 shows the reliability of total factor analysis based on Cronbach’s Alpha. The acceptable values of alpha, ranging from 0.70 to 0.95 (Tavakol & Dennick, 2011). After retest on a sample of 221, the Social Value is increased by 0.055.

<table>
<thead>
<tr>
<th>Variable</th>
<th>No. of Items</th>
<th>Cronbach’s Alpha (n=30)</th>
<th>Cronbach’s Alpha (n=221)</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exploratory Orientation</td>
<td>4</td>
<td>0.793</td>
<td>0.866</td>
<td>-0.007</td>
</tr>
<tr>
<td>Character Identification</td>
<td>4</td>
<td>0.873</td>
<td>0.867</td>
<td>-0.006</td>
</tr>
<tr>
<td>Collection</td>
<td>3</td>
<td>0.840</td>
<td>0.812</td>
<td>-0.028</td>
</tr>
<tr>
<td>Value to Money</td>
<td>3</td>
<td>0.905</td>
<td>0.893</td>
<td>-0.012</td>
</tr>
<tr>
<td>Subjective Norm</td>
<td>3</td>
<td>0.840</td>
<td>0.807</td>
<td>-0.033</td>
</tr>
<tr>
<td>Social Value</td>
<td>3</td>
<td>0.792</td>
<td>0.847</td>
<td>0.055</td>
</tr>
<tr>
<td>Repurchase Intention</td>
<td>3</td>
<td>0.913</td>
<td>0.871</td>
<td>-0.042</td>
</tr>
<tr>
<td>All Variables</td>
<td>23</td>
<td>0.932</td>
<td>0.929</td>
<td>-0.003</td>
</tr>
</tbody>
</table>

Table 1 – Reliability Test

Table 2 demonstrates the Coefficient analysis using Multiple Linear Regression (M.L.R) for overall players, the equation is presented as the following:

\[ y_1 = 1.15 - 0.12X_1 + 0.51X_2 + 0.37X_3 - 0.12X_4 \]  

Where; \( y_1 \) = Overall players \( (1) \), \( X_1 \) = Character Identification; \( X_2 \) = Collection; \( X_3 \) = Value to money; \( X_4 \) = Subjective Norm

\( R^2 \) of 0.4118 shows the proportion of variance in repurchase intention, which can be
predicted from four independent variables. As a result, the lowest parameter is character identification and subjective norm leads to minimize the value of repurchase intention while the highest parameter is collection imply the maximum value of repurchase intention.

<table>
<thead>
<tr>
<th>F Value</th>
<th>Pr &gt; F</th>
<th>r²</th>
<th>Durbin Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>37.8</td>
<td>&lt;.0001</td>
<td>0.4118</td>
<td>1.827</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parameter Estimate</th>
<th>Standard Error</th>
<th>t Value</th>
<th>Pr &gt;</th>
<th>Tolerance</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>1.15</td>
<td>0.21</td>
<td>5.56</td>
<td>&lt;.0001</td>
<td>1.0</td>
</tr>
<tr>
<td>Character Identification</td>
<td>-0.12</td>
<td>0.06</td>
<td>-2.11</td>
<td>0.0392</td>
<td>1.88</td>
</tr>
<tr>
<td>Collection</td>
<td>0.51</td>
<td>0.07</td>
<td>7.16</td>
<td>&lt;.0001</td>
<td>1.05</td>
</tr>
<tr>
<td>Value to Money</td>
<td>0.37</td>
<td>0.07</td>
<td>5.14</td>
<td>&lt;.0001</td>
<td>1.145</td>
</tr>
<tr>
<td>Subjective Norm</td>
<td>-0.12</td>
<td>0.06</td>
<td>-2.07</td>
<td>0.0392</td>
<td>1.57</td>
</tr>
</tbody>
</table>

Table 2 – MLR Results

However, there is the difference among duration of hours that the users spent time in playing this game, the equation is presented as the following:

\[ y_2 = 3.01 - 0.32X_1 - 0.24X_2 + 0.79X_3 - 0.25X_4 \]  \hspace{1cm} (2)

\[ y_3 = 1.29 + 0.65X_3 \]  \hspace{1cm} (3)

\[ y_4 = -1.03 + 0.81X_3 \]  \hspace{1cm} (4)

\[ y_5 = 0.72 + 0.25X_3 - 0.23X_4 + 0.60X_5 \]  \hspace{1cm} (5)

Where; \( y_2 \) = players who spends less than 10 hours a week (2); \( y_3 \) = players who spends 10 – 20 hours a week (3); \( y_4 \) = players who spends 21 – 30 hours a week (4); \( y_5 \) = players who spends more than 30 hours a week (5); \( X_1 \) = Exploratory Orientation; \( X_2 \) = Character Identification; \( X_3 \) = Collection; \( X_4 \) = Subjective Norm; \( X_5 \) = Value to Money

The result shows that collection is a major concerned with all group of players, which tends to decrease when players spend more hours on the game. Exploratory orientation occurred when players who spends less than 10 hours a week while Value to Money appeared on the players who spends more than 30 hours a week.

6. Conclusions and Recommendations

This research discovers that repurchase intention among duration of hours that the users spend time in playing are different. Heavy players who spend more than thirty hours a week, had impacted upon repurchase intention by collection, subjective norm and value to money. Medium players who spend between ten to thirty hours are concerned on collection. On the contrary, light players who spend less than ten hours a week has impacted upon repurchase intention by exploratory orientation, character identification, collection and subjective norm.

The results of this study recommends to game vendor (Starbreeze Studios) and game developer (Behaviour Digital Incorporated). The game vendor should focus on three variables comprising exploratory orientation by conducting a game tournament, value to money by stimulating sale volume with new promotion, and subjective norm by promoting the characters. Parallelly, the game developer should focus on four variables which are character identification by improving function of the characters, collection by adding new missions in game, social value by adding special features to the characters and repurchase intention by coming up with new characters.

Two limitations are shown. Firstly, the period between January - February 2017 are strict in this study. Secondly, the respondents are “Dead by Daylight” players. They have to purchase the Halloween Chapter”.

7. References

7.1 Journal


7.2 Websites


8. Appendix

<table>
<thead>
<tr>
<th>Variable</th>
<th>Heavy Player</th>
<th>Medium Player</th>
<th>Light Player</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exploratory Orientation</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>- New way to play</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>- New experience</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>- Prevent boredom</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Character Identification</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>- Feel like my other-self</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Collecton</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>- Need to acquire everythings provided by game developer</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Value to Money</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>- The price is reasonable</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Subjective Norm</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>- Friend already obtained it, so I must buy it</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Social Value</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>- Feel superior than other</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Remark:
Heavy Player: spend more than 30 hours a week
Medium Player: spend 10-30 hours a week
Light Player: spend less than 10 hours a week

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