Research on the Impact of Game Users’ Perceived Value on Satisfaction and Loyalty - Based on the Perspectives of Hedonic Value and Utilitarian Value

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Research on the Impact of Game Users’ Perceived Value on Satisfaction and Loyalty - Based on the Perspectives of Hedonic Value and Utilitarian Value

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Abstract: As Chinese game market growing mature, cultivating loyal game users has become the new goals for game companies. Based on the theory of game users experience, this paper constructs the structural model of customer with the variables of perceived value, customer satisfaction and customer loyalty and studies the relationship between the game users’ hedonic/utilitarian value and customer satisfaction/customer loyalty from the perspective of the game user utilitarian value and hedonic value. The study finds that the game users’ perceived value has a positive effect on customer satisfaction and customer loyalty; while hedonic value has a more significant effect on customer satisfaction than utilitarian value, the latter one has a greater significant effect on customer loyalty than the former one; customer satisfaction has a positive effect on customer loyalty; hedonic value and utilitarian value interact and influence with each other. Implication and recommendation of this research is that enhancing the hedonic and utilitarian value of game users by game companies which is one of the effective ways to improve game users’ satisfaction and loyalty.

Keywords: Game User, Hedonic Value, Utilitarian value, Customer Satisfaction, Customer Loyalty

1. INTRODUCTION

According to CNNIC’s 37th Statistics Report on China Internet Development, as of December 2015, China’s game users reached 570 million[1]. The Chinese game market sales revenue reached 140.7 billion yuan. The Chinese game market has gradually become mature, most of the game coming into the stick stage, access to core users and establish a brand new target. So the game user’s satisfaction, loyalty development is conducive to the good development of the game industry.

Research game users’ satisfaction, loyalty cannot be separated from the game user’s experience research, and game users’ experience is divided into hedonic consumer value and utilitarian consumption value[2]. At the same time, the game user’s experience quality is measured according to the perceived value of the user, and customer perceived value is typically divided into hedonic value and utilitarian value[3][5][4][6]. Perceived value of the game user will form the evaluation of the game product and indicates the next purchase or use of behavior, affect the game user’s satisfaction and loyalty. Meanwhile, it can increase customer spending to form the customer’s spending habits, which can create efficiency and become a competitive advantage. It is of great significance to study the relationship between game users’ perceived value, customer satisfaction and loyalty.

At present, scholars recognized the customer perceived value and satisfaction has a positive effect on customer loyalty[8][9][10][11]. Perceived value is the best predictive value dimensions about the customer satisfaction and customer loyalty. But there are different views about the influence of perceived value on customer satisfaction and customer loyalty[12][13]. The focus of the question is whether perceived value has a direct impact on customer satisfaction or loyalty[14][15] or whether it has both direct and indirect effects[16][17][18][19][20]. Based on the analysis of 345 valid questionnaires, this paper makes an empirical study on the relationship between hedonic value, utilitarian value, customer satisfaction and loyalty based on the utilitarian value and
hedonic value. To provide help for game companies to obtain core users.

2. LITERATURE REVIEW AND HYPOTHESIS

Since Copeland put forward customer loyalty in 1923, customer loyalty has been the focus of marketing research and the key to enterprise management. Because scholars have different understanding of loyalty, there are some differences in the definition of loyalty. The understanding of customer loyalty is dominated by the initial attitude or behavior, and gradually develops into a kind of customer status. Zhang et al. (2014) in response to the attitudinal and behavioral loyalty approaches developed in the literature. Jacoby (1971) loyalty is a kind of preference purchasing process, which is driven by a kind of psychological process. It is widely accepted by scholars that Oliver is the definition of customer loyalty. Customer loyalty is defined as: a deeply held commitment to rebuy or repatronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behavior. Customer loyalty is one of the most important predictors of customer loyalty. Based on previous research, this study studies customer loyalty from the perspective of perceived value.

Most scholars recognize the perceived value of enterprise marketing is inherent in a key value measure. Perceptions of value in the various branches of marketing research are discussed extensively. Value is the value of the consumer on the service and evaluation of the effectiveness of the services received. Customer perceived value refers to all evaluations of product performance which based on customer experience. The increase of customer perceived value mainly includes two dimensions of thinking and feeling, and the thinking and feeling dimension are consistent with the utilitarian value and hedonic value of consumption. Since the hedonic value and utilitarian value throughout the consumption process has been put forward. They are used as the basic measure of customer experience. Game users as a special consumer groups, these two indicators also apply.

Utility value mainly refers to the more rational factors such as functionality and economy, while hedonic value mainly refers to social, emotional, normative and other factors. The customer is the perceived subject of hedonic value and utilitarian value. Customers make brand choices based on these value dimensions. And different levels of customer perceived value of quality will form a different customer satisfaction.

Customer perceived value and customer satisfaction are closely related. Satisfaction is the buyer purchase the products or the cost which is services expected compared with customer actual purchase and use of results, as well as the judgment of the consumer future consumption. Utilitarian and hedonic value influence consumer satisfaction, and studies have found that game users' high hedonic experiences lead to high level of satisfaction. Accordingly, this article also believes that utilitarian value and hedonic value of customer satisfaction have a positive impact. In the formation of perceived value, the two are closely linked, and hedonic value has a higher contribution to the formation of customer satisfaction. Accordingly, this paper proposes hypotheses H1, H2:

H1: In the process of perceived value formation, utilitarian value is closely related to hedonic value, and hedonic value has a higher contribution for the formation of customer satisfaction

H2a: Utilitarian value has a positive effect on customer satisfaction

H2b: Hedonic value has a positive effect on customer satisfaction

Customer perceived value is not only a prerequisite for the formation of customer satisfaction, customer loyalty also is the premise. Customer loyalty refers to the degree of repeat purchase commitment of the customer or the degree of customer preference for the product or service. Therefore, the repeat purchase of a certain product or a series of products under the brand is not affected by the specific event or the marketing
environment. It has been recognized that the perceived value of customers has a positive impact on customer loyalty. But the question focus on direct or indirect effects or both. This paper argues that perceived value has a direct impact on customer loyalty, and indirect effects are mediated by satisfaction. At the same time, this paper divides perceptual value into utilitarian value and hedonic value according to the typical dichotomy. These two values have distinctly different effects on the customer's behavioral intentions. Then the behavioral intention of customer brand loyalty should also have a different impact. Mehran Nejati Parnia Parakhodi Moghaddam (2012) argues that hedonic value has a greater influence on the behavioral intentions of customer loyalty. Accordingly, this paper assumes that H3, H4.

H3a: Utilitarian value has a positive impact on customer loyalty
H3b: Hedonic value has a positive impact on customer loyalty
H4: Hedonic value has a more positive effect on customer loyalty than utilitarian value

The study found that customer perceived value has a positive effect on customer satisfaction and loyalty. Customer satisfaction and customer loyalty are also closely related. As many studies have shown, satisfaction is an obvious determinant of loyalty, and a satisfied customer will have a higher brand or level of product use, which will also bring Loyalty enhancement. Most of the previous studies have analyzed the impact of customer satisfaction factors on customer loyalty, and found that high satisfaction for the enterprise, will form a high degree of loyalty. In contrast, other studies have found that customer satisfaction is not always associated with customer loyalty. This paper believes that game user's satisfaction directly affects their loyalty. Accordingly, the paper proposes the hypotheses H5.

H5: Customer satisfaction has a direct impact on customer loyalty

3. EMPIRICAL ANALYSIS
3.1 Questionnaire Design and Sample Composition

On the basis of domestic and foreign maturation scale, this paper develops measurement scale about utilitarian value, hedonic value, purchase satisfaction and purchase loyalty. Questionnaire using Likert seven-point system, 1 on behalf of very disagree, 4 on behalf of no preference, 7 on behalf of very much agree. The questionnaire is divided into two parts. The first part is the study of scale design. Designed for the utilitarian value of six issues (UTV1-UTV6). Hedonic value design 7 questions (HDV1-HDV7). Customer Satisfaction and Loyalty Research is more mature, select the mature three scales (CS1-CS3 and CL1-CL3). The second part is the survey of personal information. Specific scale as shown in Table 1. In order to improve the degree of seriousness of respondents’ responses to the questionnaire, the respondents were encouraged to take random red envelopes.

A formal questionnaire survey was conducted after conducting a pilot study. A total of 360 questionnaires were distributed and 343 valid questionnaires were returned. The sex structure of the questionnaire was 50.73% for male and 49.27% for female. The age structure was 80.76% for 18-25 years old, 10.50% for 26-30 years old and 4.24% for the rest of the age group. The educational background structure: 52.19% of the undergraduates, 23.03% of the master's degree and above, 15.16% of the specialties and 9.62% of the other educational background. Source of the sample distribution of Liaoning, Beijing, Henan, Shaanxi, Shanxi, Hunan, Anhui, Jiangxi, Guangxi, Guangdong, Jiangsu, Zhejiang, Shandong. Recovery of the questionnaire involving the League of Heroes, happy eliminate music, happy Landlords and other games.
Table 1 Questionnaire variables, reference source and validity analysis

<table>
<thead>
<tr>
<th>Questionnaire variables</th>
<th>reference source</th>
<th>Cronbach's Alpha</th>
<th>KMO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utilitarian value</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>UTV1</td>
<td>Nina K Prebensen Sara, 2016; Sweeney, J.C., Soutar, G.N., 2001; Kisang Ryu, Heesup Han, Soocheong (Shawn), 2010; Jang 2010;</td>
<td>0.849</td>
<td>0.886</td>
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<tr>
<td>UTV2</td>
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<td>UTV3</td>
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<td>UTV4</td>
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<td>UTV5</td>
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<td>UTV6</td>
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<tr>
<td>Hedonic value</td>
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<td></td>
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<tr>
<td>HDV1</td>
<td>Nina K Prebensen Sara, 2016; Rosengren , (2016)Kisang Ryu, Heesup Han, Soocheong (Shawn), Jang 2010; CHEN Jie, WANG Fang - hua 2012;</td>
<td>0.793</td>
<td>0.822</td>
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<tr>
<td>HDV2</td>
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<td>HDV3</td>
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<tr>
<td>HDV4</td>
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<tr>
<td>HDV5</td>
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<td>HDV6</td>
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<tr>
<td>HDV7</td>
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<td></td>
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<tr>
<td>Customer satisfaction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS1</td>
<td>Spreng et al.1996; Mohammed Ismail El-Adly, Riyad Eid 2016; Oliver; 1988; Mohammed Ismail El-Adly, Riyad Eid 2016; Sweeney, Oliver 1988; Garbarino, E. and Johnson, M.S. 1999</td>
<td>0.843</td>
<td>0.722</td>
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<td>CS2</td>
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<td>CS3</td>
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<td>CL1</td>
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<td>CL2</td>
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<td>CL3</td>
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<td></td>
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<tr>
<td>Customer loyalty</td>
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<td>CL1</td>
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<td>CL2</td>
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<td>CL3</td>
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</table>

The overall reliability of the questionnaire | 0.950 | 0.947 |

3.2 Reliability and validity of the scale test

In this paper, SPSS22.0 was used to analyze the validity and reliability of the questionnaire. There were 26 valid entries. As shown in Table 1, The reliability of each part was greater than the minimum critical value of 0.7. The overall reliability of the questionnaire was 0.950 for Cronbach's Alpha and 0.917 for Cronbach's Alpha, indicating that the internal consistency of the scale was higher, with a certain degree of stability, with good reliability. At the same time, confirmatory factor analysis was performed on the scale. It was found that the standard load of hedonic value, utilitarian value, customer satisfaction and loyalty variable were all above 0.5, as shown in Fig.1, and the variances were not negative. Using SPSS for exploratory factor analysis, all KMO statistics were greater than the standard value of 0.7, Bartlett's spherical test at the significance level of 0.001 by testing, indicating that the variables had a good factor analysis suitability. Above that scale reliability was good. Questionnaire reference domestic and international mature scale, selection design in line with the study of the item, had a good content validity.
3.3 Model fitting degree test

According to the sample data, AMOS21.0 was used to test the structural equation model of customer satisfaction and customer loyalty under different hedonic value and utilitarian value. As shown in Table 2, the model fitting degree index, chi-square ratio 1.869 less than 3 standard, absolute fit index GFI 0.924, AGFI 0.901, RMSEA 0.05; value-fit index CFI 0.957, NFI 0.913. An IFI of 0.958 and a TLI of 0.950. All the indicators met the standard, indicating that the theoretical model of this study and the data fit the situation better, the theoretical model could be accepted.

<table>
<thead>
<tr>
<th>Table 2 model fitting degree indicators</th>
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<tr>
<td>Index</td>
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<tr>
<td>Model parameters</td>
</tr>
</tbody>
</table>

The AMOS21.0 test was used to obtain the path graph of the structural equation model. As shown in Figure 1, the results of confirmatory factor analysis showed that the normalized factor loadings of all observed variables were more than 0.55, which accorded with the standard of factor load factor greater than 0.4, which indicated that each factor had strong explanatory power to the measurement model.

![Fig.1 Path coefficient of the study](image)

3.4 Hypothesis verification

As shown in Table 3 and Fig. 1, Utilitarian value and hedonic value had a positive impact on game users’ satisfaction and loyalty, and therefore accept the hypothesis H2a, H2b, H3a and H3b. Path coefficient 0.67> 0.25,
indicating that for the satisfaction of game users, hedonic value had a greater impact than utilitarian value, so accept the hypothesis H1. Customer satisfaction had a positive impact on loyalty, so accept the hypothesis H5. But the path coefficient of 0.36> 0.29, indicating that hedonic value of the game user loyalty contribution without higher utility value, it rejected the assumption H4.

<table>
<thead>
<tr>
<th>Table 3 Model path coefficient output results</th>
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<tr>
<td>Regression Weights</td>
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<td>Estimate</td>
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<tr>
<td>F1—F3</td>
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<td>F2—F3</td>
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<td>F1—F4</td>
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<tr>
<td>F2—F4</td>
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<td>F3—F4</td>
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</tbody>
</table>

Note: *** indicates significant at the 0.001 level

4. CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusion
This paper studies the relationship between game users’ perceived value, satisfaction and loyalty through structural equation. The results show that game users’ perceived value is positively related to satisfaction and loyalty, while utilitarian value and hedonic value have significant positive effects on game users’ satisfaction and loyalty. The degree of influence is different. The hedonic value has a more positive effect on customer satisfaction. The utilitarian value has a more positive effect on customer loyalty, which is related to the study of using games as objects. The game itself is a hedonic product, utilitarian has less influence on brand satisfaction. But for game users, the utilitarian value is the key to the formation of loyalty, hedonic value for game users’ satisfaction has a higher impact. In addition, as the perceived value of the two dimensions, namely, utilitarian value and hedonic value. These two dimensions are interdependent.

4.2 Theoretical contribution
Martina G. Gallarza et al. (2016) was used to construct the model of perceived value satisfaction loyalty\(^{(50)}\), but there was no subdivision of perceived value. Chin-Lung Hsu, Hsi-Peng Lu (2004) study found that perceived usefulness and ease of use have a positive impact on the loyalty of the game players, but mainly focus on the utilitarian aspects of perceived value\(^{(51)}\). This paper is a comprehensive study on the loyalty of game users through the perceived value dimensions of utilitarian value and hedonic value. This study constructs a perceived value customer loyalty model. This study not only finds the positive impact of utilitarian value on customer loyalty, but also finds that utilitarian value has a more positive impact on customer loyalty than hedonic value. It is also found that hedonic value has a more positive impact on customer satisfaction. It is found that hedonic value and utilitarian value have a certain impact on customer satisfaction and loyalty. This will further enrich the game industry user loyalty theory.

4.3 Managerial implication
First of all, the game developers should increase the hedonic factors of game products, enhance the interaction among players in the game, improve the game user’s idea of space, enrich the fun of the game, giving the game a higher symbolic value, increase hedonic factors, such as: development and design of screen content, increase the entertainment interaction among game users, the game is easy to appropriate advanced, so that users have a sense of accomplishment. Second, the game designers focus on utilitarian factors, in order to improve game users’ utilitarian value. Such as the game operation with ease of use, the link of the rationality, download the cheap, the voluntary consumption and so on. Finally, we should combine utilitarian factors and hedonic
factors, construct the coherence and consistency between these two factors, and construct the overall experience of perceived value. With these measures to improve game user satisfaction and loyalty, develop viscous customer base, take the core user and the formation of brand, and thus the formation of the competitiveness of enterprise development.

This article also has some limitations. The number of samples in this paper is small. The educational background of the survey mainly concentrated in the high-quality personnel, other educational background involving less certain restrictions. From the perceived value of customer satisfaction and loyalty, but not on the game user segmentation. Future research can refine the type of game product, because different types of customers may use different perceived value, which will result in different customer satisfaction and customer loyalty. Future research can also be used to differentiate the perceived value of the different criteria, and further subdivide the impact of customer satisfaction and customer loyalty impact of the composition, in order to facilitate more accurate marketing business.

REFERENCE


