**Contribution of user-generated contents towards brand equity: An empirical study of online gaming**

ABSTRACT

The proliferation of social media has overwhelmingly influenced people to freely share their own views and opinions about products and brands, resulting the user-generated contents. Companies are leveraging these user-generated contents as one of their promotional tools. Unfortunately, little is known about the impact of user-generated content on Brand Equity in online gaming. This study aims to examine the impact of user-generated content on Brand Equity in the online gaming domain. This study was guided by Ducoffe’s (1995) Brand Equity model. The data analysis of this study was done through multiple regression. This study reveals that Informativeness, Entertainment and Credibility of the contents influenced people’s perception of the value of the contents, which contributes to Brand Equity. Interestingly, it found that the Irritation of the content does not impact the consumer’s perception. This research contributes to an understanding of consumer’s perception of user-generated content and helps develop a theoretical foundation of the Brand Equity of online gaming companies.

Keywords: User-generated content, Brand Equity, Perceived Value, Online gaming

INTRODUCTION

User-generated content (UGC) is regular people’s posting on discussion boards, forums, online reviews, blogs, or any social media outlets that share their comments, experiences, opinions, and advice about products and brands. Studies on the credibility of UGC show that information posted by regular consumers is more trusted by other consumers than information generated by firms (Cheong & Morrison, 2008; Liu et al., 2017). Thus, UGC that mentioned a brand (either positive or negative) is generally considered to be of high value to the concerned brand due to its perceived credibility and authenticity (Sabate et al., 2014). Because of the higher value of acceptability compared to company-generated messages, it would be an excellent opportunity for companies to promote their brands through UGC. One of the pillars of a strong brand is the Brand Equity. Brand Equity is customers' knowledge, behavior, and perception of a brand. Such brand evaluation allows customers to distinguish it from other brands based on its strength (Atilgan et al., 2005; Kim et al., 2008). Strong Brand Equity allows a company to present its products with a premium price by creating higher demand (Tiwari, 2010). Thus, companies attempt to build strong Brand Equity through all possible means. It is imperative for researchers to gain a better understanding of the impact of UGC on Brand Equity.

Very few UGC-related studies (Daugherty, et al., 2008; Pasi, 2011; Kim, 2012; Fu, 2021; Lei, et al., 2021) have been conducted, unfortunately the impact of UGC on Brand Equity in the online gaming industry has been missing. To fill out this research gap, this study attempts to examine the impact of UGC on developing Brand Equity in the context of online gaming. The online gaming industry continued to flourish in last several years, energized by the contentious technological advancements. The online gaming market generated 21.1 billion dollars worldwide in revenues in 2021, which was 21.9 percent higher than the previous year (Statista, 2022). According to Statista (2022), there are one billion online gamers worldwide and this number is expected to reach 1.3 billion by 2025. Because of the countrywide lockdowns for COVID-19 pandemic, online gaming attracted more new visitors. It is estimated that there are 600 million gaming blogs with 31.7 million active bloggers who publish more than three billion blog posts every year in the US (GrowthBadger, 2022). The contents constantly created by these bloggers and other active participants are valuable assets for company’s promotional strategies. Previous research studies demonstrate some inspiring results about UGC, such as, 57% of marketers plan to increase their use of blogging in the future (Content Marketing Institute, 2018), 55% of marketers say blogging is their most important inbound marketing channel (Hubspot, 2022), and 60% of business-to-consumer (B2C) marketers and 56% of business-to-business (B2B) marketers say their company is extremely committed to content marketing (Content Marketing Institute, 2018).

LITERATURE REVIEW AND CONCEPTUAL MODEL

Ducoffe’s (1995) Brand Equity model

1. To measure consumer perceptions about the effectiveness of advertisements, Ducoffe (1995) developed a theoretical framework. Ducoffe’s (1995) framework reveals that Entertainment, Informativeness, and Irritation are the main factors associated with a consumer's perception of advertising value, which can influence their attitude. Along with Ducoffe’s (1995) three factors, Brackett and Carr (2001) incorporated a new construct “credibility” in their study of measuring the value of advertising. This study adopted Informativeness, Entertainment, Irritation and credibility to measure the value of online gaming-related UGC.

Informativeness

Informativeness refers to the ability of advertisers to effectively convey and pass information to the targeted consumers (Ducoffe, 1996). Previous studies found that informativeness of an advertisement was one of the most important determinants of advertising value and attitude toward ads (Haghirian et al., 2005; Petrovici et al., 2007). Thus, in the context of online gaming, this study proposes the following hypothesis:

*H1: Informativeness of the UGC has a positive impact on the Perceived Value of UGC.*

Entertainment

The entertainment value of any content involves the hedonic pleasure consumers experience when exposed to an advertisement (Wang and Sun, 2010). Ducoffe (1996) revealed a positive correlation between entertainment and advertising value. Wang et al (2009) also found that this factor brings pleasure and enjoyment that affect consumer’s Perceived Value. Similarly, this study proposes the following hypothesis for online gaming:

*H2: Entertainment of the UGC has positive impact on the Perceived Value of UGC.*

Irritation

A piece of content can be considered irritating when it generates annoyance, discontent, and even brief intolerance (Aaker et.al, 1985). Thus, whenever any advertising employs techniques that end up annoying, offending, insulting or are overly manipulative, consumers are likely to perceive it as unwanted and irritating (Ducoffe, 1996). Previous studies (Logan et al., 2012; Hayes & King, 2014; Shareef et al., 2015) revealed a negative relationship between Irritation caused by the advertising and perceptions of advertising. Thus, this study proposes the following hypothesis for online gaming:

*H3: Irritation of the UGC has negative impact on the Perceived Value of UGC.*

Credibility

Credibility refers to consumers’ perceptions of the truthfulness, reliability, trustworthiness and believability of contents (MacKenzie et al., (1989). Credibility is an extension of the Ducoffe (1995) model, suggested by Brackett and Carr (2001). Previous research (Ducoffe, 1996; Brackett & Carr, 2001) assert that credibility is an important source for customers while evaluating web contents and formulating attitudes towards them. Therefore, this study proposes the following hypothesis for online gaming UGC:

*H4: Credibility of the UGC has positive impact on the Perceived Value of UGC.*

Perceived value

Ducoffe (1995) defined Perceived Value as “a subjective evaluation of the relative worth or utility of advertising to consumers”. Ducoffe’s (1995) model suggested that if consumers attach a higher value to the advertisement, they will gain a favorable attitude towards the advertisement. Previous studies (Kim and Ko, 2012; Logan et al., 2012; Hayes and King, 2014; Schulze et al., 2014) have asserted that a high Perceived Value of an advertisement can positively influence customer satisfaction, consumer attitude, purchase intention, and customer loyalty. In a study on sponsored advertisement, Galib and Paymaei (2022) also found that high Perceived Value positively contributes to strong Brand Equity. Thus, this study argues that when customers have a high Perceived Value about UGC, that will contribute to building strong Brand Equity. Therefore, in the context of online gaming, this study proposes the following hypothesis:

*H5: Perceived Value of UGC has positive impact on Brand Equity.*

METHODOLOGY

A conceptual research model (Figure 1) was developed to test the five hypotheses adopted in this study. An online survey questionnaire was developed where all items were measured on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Ducoffe’s (1996) scale was adopted for Informativeness, Entertainment, Irritation, and Perceived Value constructs. The scales for Credibility and Brand Equity were adopted from Backett and Carr (2001) and Yoo and Donthu’s (2001) respectively. The questionnaire consisted of 24 questions including demographic questions.

A total of 363 complete surveys were collected through Amazon Mechanical Turk. People who participated in this study were adults (at least 18-year-old) who regularly post their comments and opinions about online games on discussion boards, forums, online reviews, blogs, or any social media platform.



Figure 1**.** Research model

DATA ANALYSIS AND RESULT

The sample was composed of 208 (57%) male and 155 (43%) female (Appendix A). The largest (41%) group of participants is in the 21-31 age range, followed by the group of 31-41 age range (24%). A small portion (8%) of the participants do not have any income, while 31% makes between $40,000 and $60,000, and 23% of the participants make between $60,001 and $80,000. A significant portion (46%) of the participants is Caucasian followed by Asian (17%), and African-American (15%) participants. Almost half of the participants have bachelor’s degree and 30% of the participants has only high school degree. Even though the largest (21%) group uses blogs, other platforms including social media sites (20%), online review sites (17%), discussion boards (16%), and online forums (14%) are also popular.

Before initiating the data analysis, the tests of normality, reliability and validity were completed. As shown in Table 1, the skewness values were within ±1 and kurtosis values less than .7 confirmed the normality of the data. The Cronbach alpha of all variables ranged from .79 to .91 confirming the reliability of the constructs (Table 2). The tolerance values are between .65 and .80 and the variance inflation factor (VIF) values are between 1.14 and 1.74, which are within the acceptable limits. This result demonstrates that the sample data do not have the presence of high multicollinearity. Pearson correlation was calculated to examine the correlation between variables. The correlation coefficients ranged from .29 to .51 (Table 4). As these values are below .7, it can be concluded that the multicollinearity problem does not exist. Average variance extracted (AVE) was measured to test the convergent validity. The AVE values of all variables are above the minimum value of .5, confirming the convergent validity.

A standard linear regression was performed to test the five hypotheses. The regression analysis demonstrates that the impact of Informativeness on Perceived Value is significant (*β = .24, t = 8.13, p ≤ .05*), supporting hypothesis *H1*. Similarly, Entertainment was able to impact Perceived Value significantly, supporting hypothesis *H2*. Irritation does not have any significant influence on Perceived Value (*β = .05, t = -0.69, p > .10*). Thus, hypothesis *H3* was rejected. The impact of Credibility on Perceived Value was also significant (*β = .46, t = 9.24, p ≤ .05*), supporting hypothesis *H4*. Among the four variables, Credibility has the strongest impact on Perceived Value, while Entertainment has the weakest impact. A significant regression equation was found between Perceived Value and Brand Equity (*F = 146.23, p = .000, R2* = .684). Thus, hypothesis *H5* is supported. This indicates that 68.4% of the Brand Equity can be predicted by Perceived Value of the UGC. Table 3 illustrates the coefficients of all paths and Table 5 summarizes the results of test of hypotheses.

Table 1. *Descriptive Statistics*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Construct | Mean | Standard Deviation | Skewness | Kurtosis |
| Informativeness | 3.64 | 1.771.892.651.421.231.31 | 0.710.750.510.590.830.69 | 0.360.31-0.390.450.420.33 |
| Entertainment | 3.57 |
| Irritation | 2.84 |
| Credibility | 3.96 |
| Perceived Value | 4.12 |
| Brand Equity | 4.25 |

Table 2. *Reliability coefficients and collinearity statistics*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Construct | Cronbach’s Alpha | AVE | CR | Tolerance | VIF |
| Informativeness | .88.81.79.85.83.91 | .57.59.61.58.63.53 | .87.73.71.81.86.89 | .75.68.65.71.80 | 1.511.351.141.621.74 |
| Entertainment |
| Irritation |
| Credibility |
| Perceived Value |
| Brand Equity |

Table 3. *Coefficients*

|  |  |  |  |
| --- | --- | --- | --- |
| Path | *β* | *t* | *P* |
| Informativeness 🡪 Perceived Value | .24.21.05.46.51 | 8.137.41-0.699.2410.68 | .03.02.17.00.01 |
| Entertainment 🡪 Perceived Value |
| Irritation 🡪 Perceived Value |
| Credibility 🡪 Perceived Value |
| Perceived value 🡪 Brand Equity |

Table 4. *Correlation matrix*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Construct | INFM | ENTN | IRTN | CRDB | PRCV | EQTY |
| Informativeness (INFM) | 1.00 |
| Entertainment (ENTN) | .49 | 1.00 |
| Irritation (IRTN) | -.36 | -.51 | 1.00 |
| Credibility (CRDB) | .38 | .49 | -.31 | 1.00 |
| Perceived Value (PRCV) | .41 | .46 | -.42 | .45 | 1.00 |  |
| Brand Equity (EQTY) | .42 | .39 | -.39 | .29 | .36 | 1.00 |

Table 5. *Summary of hypothesis testing*

|  |  |  |  |
| --- | --- | --- | --- |
| No. | Hypothesis | Result | Summary Result |
| *H1* | *Informativeness of the UGC has a positive impact on the Perceived Value of UGC.* | √ | Supported |
| *H2* | *Entertainment of the UGC has positive impact on the Perceived Value of UGC.* | √ | Supported |
| *H3* | *Irritation of the UGC has negative impact on the Perceived Value of UGC.* | X | Not Supported |
| *H4* | *Credibility of the UGC has positive impact on the Perceived Value of UGC.* | √ | Supported |
| *H5* | *Perceived Value of UGC has positive impact on Brand Equity.* | √ | Supported |

DISCUSSION

* + - 1. This study shows that if the online gaming-related UGC is informative, entertaining and credible, it can give a good impression about its value. Many earlier studies, such as Pollay and Mittal (1993), Ducoffe (1995) and Wolin et al. (2002) supported this outcome. However, the finding of this study does not agree with Haida and Rahim's (2015) study, which claimed entertaining contents have a negative influence on social media users. Even though the finding of this study related to the Irritation was surprising because the conventional wisdom tells that irritation of any UGC lowers the perception about that content, but this study reveals different result in the online gaming context. The current research reveals that even if online gaming-related UGC irritates user, the perception of that user towards the value of the UGC does not change. Interestingly, the result of this study aligns with that of Murillo et al. (2016). A plausible explanation of this finding is as long as the users find the contents informative, credible, and entertaining, they perceive high value of that contents, even some elements of the contents may irritate them because the overall benefit of the contents compels them to ignore the negative aspect of the contents.

This paper extends the existing academic knowledge by showing the relationship between four antecedents of Perceived Value of UGC and Brand Equity in the relatively new domain of online gaming. Additionally, this study allows managers of the online gaming companies to learn how UGC can create a positive impression to customers through producing informative, credible and entertaining UGC.

CONCLUSIONS

This study demonstrates the power of the UGC in enhancing Brand Equity. This study reinforces the substantial role of UGC in augmenting the value of Brand Equity of the online gaming companies. Marketing managers of online gaming companies can utilize UGC to support their brand to succeed in enhancing their Brand Equity. Through the UGC, users will be able to know more about the online games and brand, which will create a positive perception about the brand that will eventually lead them to recommend the brand to others. This study suggests that marketing managers of the online gaming companies should promote and facilitate more high quality UGC whenever they are intending to improve their Brand Equity.

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APPENDIX A: DEMOGRAPHIC DISTRIBUTION

|  |  |  |  |
| --- | --- | --- | --- |
| Factor | Value | Frequency | Percentage |
| Gender | FemaleMale | 2081557614986319122951113853911351663662165321910917953815 | 57%43%21%41%24%9%2%3%8%14%31%23%11%3%10%46%10%17%4%15%6%2%30%49%15%2%4% |
| Age | 18-2021-3031-4041-50Over 50Undisclosed |
| Income | No incomeLess than $40,000$40,001-$60,000$60,001-$80,000$80,001-$100,000Above $100,00Undisclosed |
| Ethnicity | CaucasianHispanicAsianNative AmericanAfrican AmericanMulti-RacialUndisclosed |
| Education | High SchoolBachelorMaster’sPh.D.Undisclosed |
| Posting sites | Company websitesDiscussion boardsOnline forumsOnline review sitesBlogsSocial media sitesOther | 31575061757118 | 9%16%14%17%21%20%5% |