CHAPTER 19.

ESPORTS ONLINE VIEWERSHIP

THE INFLUENCE OF PUSH AND PULL FACTORS

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ABSTRACT

In light of a growing spectator market, the esports industry has committed considerable effort and resources to satisfy fans' increasing needs for esports media services and products. In the current study, we adopted the push and pull framework to explore and understand how distinct social, cultural, psychological, and environmental factors would impact esports online viewership. We surveyed a convenience sample of esports online viewers (N = 1,306). Results showed that both push and pull factors should be considered equally important and relevant in esports online viewership albeit they exerted different levels of influence on esports consumption behavior. The findings highlighted the necessity of considering pull factors that have not received much research attention. This study made initial efforts to help decipher the appeal of esports online viewership and provided critical insight into potential business opportunities.

Keywords: esports, online viewership, push and pull framework, new media

Introduction

Esports has undergone a profound transformation from a

participant-first activity into a popular spectator entertainment in the past few years, attracting more than 380 million people across the globe who watch esports on a regular basis (Steinkuehler, 2019). The rise of esports as a spectator phenomenon could be attributable to the enhanced access to professional competitions (Jenny, Manning, Keiper, & Olrich, 2017) and perhaps most importantly, the increasing availability of live internet broadcasts, also known as online streams (Sjöblom & Hamari, 2017).

Despite the growing research interest in esports online viewership, as reflected by an increasing number of studies that started to delve into this emerging topic (e.g., Hamari and Sjöblom, 2017; Sjöblom & Hamari, 2017; Qian, Zhang, et al., 2019), empirical work on why people tend to watch esports online, what unique characteristics of esports media services and products are essential to people's engagement in esports online viewership, and how different psychological, social, cultural, and environmental factors in esports online viewership could result in esports related consumption is still limited. Hence, in this study we attempted to identify and explore the influence of push and pull factors in esports online viewership through the lens of the push and pull framework (Dann, 1977). Data collected through a convenience sample (N = 1,306) were used for partial least squares structural equation modeling (PLS-SEM) analyses to investigate the impact of push and pull factors on esports consumption consequences.

Literature Review

The theoretical root of the push and pull framework could be traced back to the unconscious-thought theory (UTT) (Dijksterhuis & Nordgren, 2006). The UTT posits that the decision making, impression formation, and attitude formation of an individual may be realized through two distinct modes of thought: unconscious and conscious. The unconscious thought is

implicit, works aschematically, and takes a long time to form and change. Although unconscious thought is object or task-relevant, it occurs when one's attention is not focused on the object or task (Dijksterhuis & Nordgren, 2006, p. 99). The conscious thought, in contrast, is defined as explicit cognitive or affective thought processes towards an object or a task that occur while the object or task is the focus of one's conscious attention (Dijksterhuis & Nordgren, 2006, p. 96). Therefore, we argue that the idea of push and pull factors dovetails the concept of the UTT. Push factors in esports online viewership refer to the intrapersonal or interpersonal elements that people might not be consciously aware of, but might influence people's decision to consume esports, such as socialization, entertainment, competition, skill improvement, skill appreciation, and game knowledge (Brown, Billings, Murphy, & Puesan, 2018; Pizzo et al., 2018; Qian, Wang, Zhang, & Lu, 2019; Sjöblom & Hamari, 2017). Pull factors are defined as consumer demand factors related to features and attributes of event-based broadcasts and personality streams, such as player characteristics, event attractiveness, commentary features, stream quality, chat room, streamer traits, and virtual rewards that people consciously evaluate during their engagement in esports online viewership (Qian, Zhang, et al., 2019). As such, the push and pull framework provides two dynamics with which to decipher the influence of consumers' needs and wants, namely, innate motives, characteristics of esports competition, and provisions of streaming services, on esports consumption. Researchers in the field of tourism, hospitality, and sport management have found that push and pull factors were positively associated with consumer satisfaction, commitment, loyalty, supportive behaviors, visit intentions, WOM intentions, game attendance, and media consumption (Hsieh, Park, & Hitchcock, 2015; Leong, Yeh, Hsiao, & Huan, 2015; Wong, Musa, & Taha, 2017; Xu & Chan, 2016; Zhang & Byon, 2017).

In the current study, we postulated a structural model based on the push and pull framework and examined the extent to which push and pull factors would influence the consumption outcomes associated with esports online viewership. In particular, we tested how push and pull factors would impact the selected attitudinal and cognate constructs (i.e., game commitment and WOM intentions), as well as two behavioral constructs (i.e., watching and playing). We hypothesized that push and pull factors would positively influence commitment to esports games (Hypotheses 1 and 2), WOM intentions (Hypotheses 3 and 4), and behavioral outcomes associated with watching (Hypotheses 5 and 6) and playing esports (Hypotheses 7 and 8).

Method

A cross-sectional, non-experimental survey design was employed. A total of 1,622 participants representing 21 most popular esports games under five major esports genres (MOBA, FPS, RTS, Fighting Games, and SVGs) (Qian, Zhang, et al., 2019) completed the online survey. Participants had to be at least 18 years old, knew what esports is, and watched esports at least once a month. The survey was distributed through reddit; of the participants, responses from 313 individuals were removed due to failure to meet the stated requirements, resulting in the final sample of 1,309.

Measures

Items assessing push and pull factors were measured on a 7-point Likert scale based on previous studies (Qian, Wang, et al., 2019; Qian, Zhang, et al., 2019). Specifically, push factors included 18 reflective items measuring Skill Improvement, Skill Appreciation, Competitive Nature, Entertaining Nature, Game Knowledge, and Socialization Opportunity. Pull factors incorporated 21 formative items assessing Chat Room, Stream Quality, Commentary Features, Player Characteristics, Event

Attractiveness, Streamer Traits, and Virtual Rewards. In addition, items measuring Game Commitment (reflective), WOM intentions (reflective), and Watching/Playing Behaviors (two formative items; watching/playing hours and spending on watching/playing) were directly adopted from Qian, Zhang, et al.'s (2019) work.

Analysis

We used a formative measurement model and a PLS-SEM approach to test the structural relationships between the constructs of interest (Diamantopoulos et al., 2008; Diamantopoulos & Winklhofer, 2001; Hair, Black, Babin, Anderson, & Tatham, 2010; Hair, Hult, Ringle, & Sarstedt, 2016; Jarvis et al., 2003; MacKenzie, Podsakoff, & Jarvis, 2005; MacKenzie, Podsakoff, & Podsakoff, 2011). Procedures in SmartPLS 3.0 were conducted to test the structural model and verify the proposed hypotheses.

Results

All reflective constructs were evaluated and confirmed through exploratory factor analysis (EFA) and then confirmatory factor analysis (CFA). We assessed the validity and reliability of measures by examining the loadings of items on their intended underlying constructs, Cronbach's alphas, average variances extracted (AVE) values, and inter-construct correlations. The results demonstrated good psychometric properties for the reflective constructs.

Formative constructs were assessed following Hair et al.'s (2016) three-step procedure: (a) assessing convergent validity, (b) evaluating indicators' collinearity, and (c) analyzing indicators' relative and absolute contributions, including their significance. We employed a redundancy analysis to test constructs' convergent validity (Chin, 1998). The path coefficients linking the proposed formative constructs and the single item reflective

constructs ranged from .75 to .86, exceeding the threshold value .70 and exhibiting good convergent validity (Hair et al., 2016). As to multi-collinearity, we checked the formative indicator's variance inflation factor (VIF), which should be less than 5.0 (Hair et al., 2016). Results showed that VIF scores were between 1.08 and 3.39. Lastly, we examined the significance and relevance of the formative indicators through nonparametric bootstrapping of 5,000 resamples (Hair et al., 2016). It was found that all of the formative indicators' outer weights and loadings were statistically significant ($p < .05$), indicating they had sufficient relative and absolute contributions to their respective latent constructs.

28.2% variance of esports game commitment, 30.0% of consumers' WOM intentions, 3.0% of viewership related behavior, and 4.0% of game-play related behavior were explained in the proposed structural model. There was a significant, positive relationship between push factors and commitment ($\beta = .244$, $p < .001$), and between pull factors and commitment ($\beta = .381$, $p < .001$). Hypotheses 1 and 2 were supported, respectively. The model revealed a significant, positive relationship between push factors and WOM intentions ($\beta = .233$, $p < .001$), supporting Hypothesis 3. However, pull factors did not exert a significant, positive effect on WOM intentions ($\beta = -.015$, $p = .657$), leading to the rejection of Hypothesis 4. Additionally, we did not find a significant, positive relationship between push and pull factors and watching behaviors ($\beta = .056$, $p = .160$; $\beta = -.069$, $p = .096$). Thus, Hypotheses 5 and 6 were rejected. While push factors did not significantly impact playing behaviors ($\beta = -.050$, $p = .159$), rejecting hypothesis 7, pull factors had a positive, significant effect on playing behaviors ($\beta = .089$, $p = .023$), supporting Hypothesis 8. Finally, although not hypothesized, we found a few interesting mediated effects in the model. In particular, commitment was found to be a pivotal construct that mediated the relationship between push and pull factors and WOM

intentions, watching behaviors, and playing behaviors. Most of the insignificant or negative direct effects were converted into significant, positive total effects with the addition of commitment.

Discussion

This study adopted the push and pull framework originated from the UTT (Dijksterhuis & Nordgren, 2006) and addressed a call to encompass both unconscious thought and conscious thought processes to systematically examine the interconcept relations and effects (Zhang, 2015). In this study, we operationalized push factors as the composite of socio-psychological motives (e.g., skill improvement) and demonstrated that push factors had a direct impact on commitment and WOM intentions. Findings related to Hypotheses 1 and 3 support the influence of push factors on esports consumption outcomes.

Pull factors were conceptualized as an amalgamation of demand factors associated with features and characteristics of esports event broadcasts and personality streams (e.g., chat room). Findings related to Hypotheses 2 and 8 suggest that pull factors have distinct influence on esports consumption outcomes, specifically, positive effects on commitment and playing behaviors. While most existing studies primary focus on push factors (Funk, Filo, Beaton, & Pritchard, 2009; Funk, Mahony, Nakazawa, & Hirakawa, 2001; Lee, Seo, & Green, 2013; Pease & Zhang, 2001; Suh, Lim, Kwak, & Pedersen, 2010; Wang, Zhang, & Tsuji, 2011; Wann, 1995; Zhang et al., 2001), findings of our study introduce the concept of pull factors in the esports online viewership setting. Further, our study supports and extends recent research (Cianfrone, Zhang, Pitts, & Byon, 2015; Qian, Zhang, et al., 2019; Zhang & Byon, 2017) that indicates pull factors are equally important as push factors and have a complementary role in explaining consumer consumption behaviors. In the light of Zhang's (2015) inclusive approach to

capture consumers' needs and wants to the greatest extent, this study highlights the necessity to investigate not only those unconscious, intangible, and hedonic concepts, but also those conscious, tangible, and utilitarian constructs.

An examination of total effects also reveals interesting findings as push and pull factors appear to exert differing effects on watching and playing behaviors. The findings extend research by Sjöblom and Hamari (2017), Hamari and Sjöblom (2017), Qian, Wang, et al. (2019), and Qian, Zhang, et al. (2019) through the UTT processes, and propose a viable future research direction, i.e., the investigation of the core and peripheral features of esports online viewership.

Managerial Implications

Contrary to traditional TV viewership, esports online viewership is the exemplary embodiment of participatory online media. Online platforms such as Twitch have converted media producers and passive viewers alike into content creators (Cha, Kwak, Rodriguez, Ahn, & Moon, 2007). Learning from Fortnite's enduring popularity and the elevation of Tyler 'Ninja' Blevin as a mainstream celebrity, we argue that high-profile influencers are potential liaisons for brands to facilitate businesses' outreach to the esports community that might be otherwise reached through traditional promotion methods. Similarly, traditional sports leagues could utilize the emerging online platform to promote their products to the younger generation (e.g., cord cutters and cord nevers) by working with popular esports influencers, for instance, through co-streaming traditional sports games (Byrne, 2019).

Limitations and Future Research

Survey data were collected from English-speaking participants. Hence, the results might not be reflective of non-English speaking markets. Future research should cross validate the push

and pull model in other major esports communities, e.g., Asia (China, South Korea), Eastern Europe (Russia, Ukraine), and South America (Brazil, Chile), in order to provide a holistic understanding of esports online viewership. Furthermore, the current study did not examine the potential moderation effects of esports background variables on the relationship between the push and pull factors and dependent variables. Moving forward, it would be ample research opportunity for understanding esports online spectatorship given the different game preferences, watching and playing patterns, and spending intentions among spectators. For example, future study could delve into the potential differences in push and pull factors between casual viewers vs. die-hard viewers, casual players vs. avid players, and new esports fans vs. veteran esports fans. In traditional sport event attendance studies, spectators can be classified into die-hard and fair-weather fans as they demonstrate distinct socio-psychological motives and consumption patterns (Wann & Branscombe, 1990). In a similar vein, esports online viewers could be also categorized into different groups based on their fandom and examined accordingly as to how push and pull factors would have different impact on outcome variables.

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