Engagement and consumption behavior of eSports gamers

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Abstract

Purpose – The purpose of this study is to present a conceptual model where consumer electronic sports (eSports) engagement (CeSE) acts a predictor for gamers' online engagement in eSports-related products/firm either through direct contribution (purchase intention) or indirect contribution (co-production, community engagement, word-of-mouth and recruitment).

Design/methodology/approach – Data from 262 eSports consumers aged 18–24 years were collected and analyzed through WarpPLS 8.0.

Findings – The findings of this study confirm that CeSE significantly influences all dimensions of the consumption behaviors (purchase intention, co-production, community engagement, word-of-mouth and recruitment).

Originality/value – This study provides empirical support for a conceptual framework developed through the social exchange theory and engagement theory. Besides, hierarchical component model approach is applied to estimate the composite model of CeSE.

Keywords Consumer eSports engagement, Purchase intention, Community engagement, Co-production, Recruitment, Word-of-mouth

Paper type Research paper

Compromiso y comportamiento de consumo de los jugadores de eSports

Resumen

Propósito – Este estudio contrasta un modelo conceptual en el que el compromiso del consumidor de eSports (CeSE) actúa como predictor del compromiso online de los jugadores con productos/firmas relacionados con los eSports, ya sea a través de la contribución directa (intención de compra) o indirecta (coproducción, compromiso con la comunidad, boca a boca y reclutamiento).

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Metodología – Se recogieron datos de 262 consumidores de eSports de entre 18 y 24 años y se analizaron mediante WarpPLS 8.0.

Resultados – Los resultados confirman que el CeSE influye significativamente en todas las dimensiones de los comportamientos de consumo (intención de compra, coproducción, compromiso con la comunidad, boca a boca y captación).

Originalidad – Esta investigación proporciona apoyo empírico a un marco conceptual desarrollado a través de la teoría del intercambio social y la teoría del compromiso. Además, se aplica el enfoque del modelo de componentes jerárquicos (HCM) para estimar el modelo compuesto de CeSE.

Palabras clave Consumer eSports engagement, Intención de compra, Community engagement, Coproducción, Captación y boca a boca

Tipo de artículo Trabajo de investigación

电子竞技游戏者的参与和消费行为

摘要

目的 – 本研究对比了一个概念模型，其中消费者电子竞技参与度（CeSE）通过直接贡献（购买意向）或间接贡献（合作生产、社区参与、口碑和招募），成为游戏玩家在线参与电子竞技相关产品/公司的预测因素。

方法 – 通过WarpPLS 8.0收集了262名18-24岁的电子竞技消费者的数据并进行分析。

研究结果 – 研究结果证实, CeSE对消费行为的所有维度（购买意向、共同生产、社区参与、口碑和招募）都有明显影响。

原创性 – 本研究为通过社会交换理论和参与理论建立的概念框架提供了实证支持。此外，层次构成模型方法（HCM）被用来估计CeSE的综合模型。

关键词 消费者电子竞技参与, 购买意向, 社区参与, 共同生产, 招聘, 和口碑。

文章类型 研究型论文

1. Introduction

The electronic sports (eSports) has rapidly gained considerable attention in the past couple of years (Macey *et al.*, 2022). It is an organized tournament played virtually in the video games forms (Xiao, 2020) on various devices including gaming platforms and personal computer systems. The internet has catalyzed the rapid growth and popularity of eSports. The number of worldwide spectators was 465.1 million in 2021, and global revenue generated through eSports is estimated around $1.0bn in 2021 and predicted to reach $1.6 by the end of year 2022 (Wijman, 2021). While eSports have attained acceptance as a legitimate competitive sport, it is not free of negative aspects. For instance, in some instances, it results in player exploitation, illegal betting and performance enhancement through the use of drugs, for example, Adderall (Wyllie, 2018). It also sometimes results in psychiatric issues (if engagement increased the excessive level), health issues and interpersonal problems such as family conflicts (Wattanapisit *et al.*, 2020; Yin *et al.*, 2020). Despite these issues, the eSports trend is continuously expanding in Asian countries, such as Pakistan and Malaysia (Hollebeek *et al.*, 2022a, 2022b, Abbasi *et al.*, 2020a, Abbasi *et al.*, 2023). The competitive video-gaming has started to gain momentum because of eSports tournaments, host events and broadcasts the video games.

In a short time, this industry has accomplished exceptional growth, surpassing both the music and movie industries in maximizing revenue during the past decade (Pannekeet, 2019). The trend of people engagement in eSport has gained momentum in the COVID-19 pandemic, as the physical sports events are no longer available because of prolonged lockdown. There is, however, increasing preference of eSport over outdoor sports because of time constraints associated with physical sports, in-house availability of eSports facilities,

virtual community engagement (VCE) and continuous innovation that is taking place in the eSport industry (Mastromartino *et al.*, 2020). Esports has been reported to help players release psychological stress, manage emotions (Villani *et al.*, 2018; Pizzo *et al.*, 2022) and engage in virtual community building, which in turn influence players' well-being. Given the importance of eSports gaming, this study aims to figure out the role of consumer eSports engagement (CeSE) to derive potential eSports-related consumption behaviors. Abbasi *et al.* (2020a) define CeSE as "a psychological state that triggers because of two-way interactions between the consumer and eSports video game product."

Considering eSports from the consumption behaviors perspective is rarely found in the past literature (Macey *et al.*, 2022; Badrinarayanan *et al.*, 2015; Abbasi *et al.*, 2020a) (Appendix). For instance, Badrinarayanan *et al.* (2015) were pioneers who investigated consumption behaviors (e.g. purchase intentions, co-production, recruitment, community engagement and word-of-mouth) through identification with massively multiplayer online role playing games' player community. Abbasi *et al.* (2020a) extended the earlier study via predicting the role of gamers' cognitive, affective and behavioral engagement on eSports-related consumption behaviors. In contrast, Macey *et al.* (2022) conceptualized game consumption comprising gaming intention and purchase intention, which are influenced by eSports watching intention. Few other scholars put their efforts in predicting eSport game behavior through using the unified theory of acceptance model theory (Jang and Byon, 2019), whereas few authors studied unified theory of acceptance model theory without considering the actual usage behavior (Jang and Byon, 2020). Recently, few authors conducted the literature review and highlighted the importance of studying how CeSE can derive gamers' engagement in online community with the eSports firm (Flegr and Schmidt, 2022; Pizzo *et al.*, 2022).

It is worthy to mention that gamers' engagement in online community with the eSports firm is different from CeSE, as it acts as a mechanism that adds value to the eSports products/firm either through direct (e.g. purchases) and indirect contribution (e.g. community engagement, recruitment, word-of-mouth and co-production; Pansari and Kumar, 2017). Collectively, Badrinarayanan *et al.* (2015) named direct and indirect contribution of gamers' engagement in online community as consumption behaviors. Considering the importance of CeSE in eSports studies, this research primarily intends to investigate how CeSE impacts on gamers' consumption behaviors comprising co-production, purchase intention, word-of-mouth, recruitment and community engagement. Understanding the relationship between CeSE and these five aspects of consumption behaviors regarding eSports players would help the developers of video games to design the games by the needs and wants of consumers for revenue maximization. Establishing the significance of this relationship may serve as a harbinger for the developers of video games to design games with added elements of CeSE that may positively affect their consumption behaviors.

Our study contributes to consumer engagement in several contexts. First, we study the role of consumer engagement in eSports environment, referred as CeSE to determine gamers' consumption behaviors (Lim *et al.*, 2021). Second, we extend the theoretical perspective of gamers' engagement in online community with eSports-related products/firm either through direct and indirect contribution initiated from CeSE (Lim *et al.*, 2021; Hollebeek *et al.*, 2022b). Third, we focus on male eSports consumers to generalize our findings on this segment, as it is an important gap to address (Wearing*et al.*, 2022). Finally, we apply hierarchical component model (HCM) technique to specify, estimate and validate CeSE as a composite model comprising reflective constructs at first/lower-order level and formative construct at second/higher-order level. In terms of practical and managerial

implications, this study provides developers with integral insight into game design that could enhance consumer engagement and, as a result, increase revenue. Next, we outline the conceptual model and hypotheses development.

2. Conceptual model and hypotheses development

To develop the conceptual model, we use the theoretical notion of CeSE and one of the important tenets of customer engagement theory (i.e. relationship marketing; Pansari and Kumar, 2017). It posits that once consumers are engaged with a focal brand/product, they will extend their relationships with a brand/firm. Given that we believe that once CeSE is established, gamers will develop their engagement in online community with eSports-related products/firm either by making direct (e.g. purchases) and indirect contribution involving community engagement, recruitment, word-of-mouth and co-production. Our study's model is also supported by social exchange theory (SET). SET describes a series of interactions that are perceived as interdependent and subject to the actions of another person (Blau, 1964; Rather, 2018). Cropanzano and Mitchell (2005) stated that SET gives much emphasis on interdependent transactions, which have the potential to produce high-quality relationships (e.g. with eSports-related products/firm or online community).

Applying SET in our study's context, we posit that once gamers get engaged in eSports gaming brand, they further transform/exchange their gaming knowledge to online community, share gaming experience via word-of-mouth to other players, encourage other players to play with them (e.g. player's recruitment), engage in eSports-related discussion with developers/firm to coproduce the gaming content that meets their expectations and also purchase eSports-related characters from the firm or other players who have a good gaming profile. Based on these grounds, we develop the conceptual and hypotheses as shown in Figure 1.

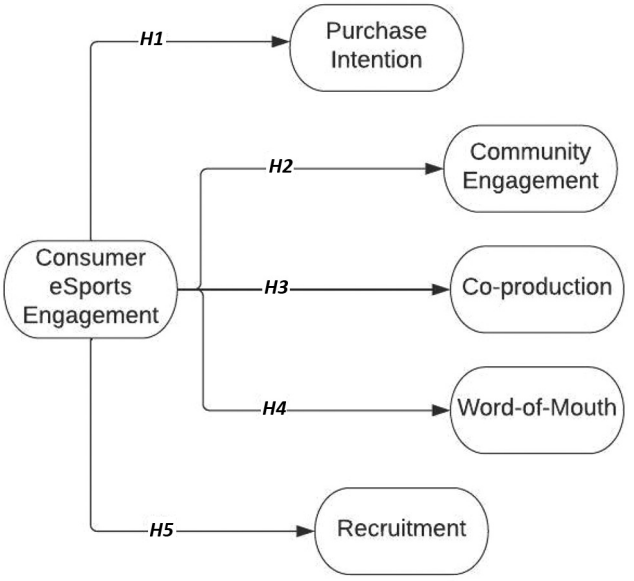

Figure 1.
The study conceptual model

Source: Author's own work

2.1 Purchase intention of eSports product

Purchase intention refers to the possibility of a consumer intending to make a purchase of one or more product(s) (Kaur *et al.*, 2020). Higher consumer willingness to buy a product leads to higher purchase intention, which is influenced by consumer interest in the product (Jin *et al.*, 2017; Khan *et al.*, 2022). A positive consumer attitude toward a product or brand positively influences their purchase intention and willingness to buy (Ghosh *et al.*, 2021). Moreover, strong consumer attitudinal disposition toward a particular brand leads to consumer engagement and loyalty with the brand, and it influences their intention to purchase the product (Kaynak *et al.*, 2008). The consumer engagement with online competitive video games influences their actual engagement in video games, which results in purchase intention (Shibuya *et al.*, 2019; Ghosh *et al.*, 2021). As the consumption of eSports is likely to provide continued satisfaction to the gamers, higher levels of CeSE are likely to increase players' intentions to purchase eSports product (Macey *et al.*, 2022). Thus, we hypothesis:

H1. Consumer eSports engagement positively influences consumers' intentions to purchase eSports product.

2.2 Virtual community engagement

VCE refers to an individual's continued interactions and participation with fellow members of the virtual community is referred (Badrinarayanan *et al.*, 2015). Emotional associations with an object influence engagement and behavior because consumers strive to improve and support the associated. VCE serves as an extension of the personal values of eSport players because they identify themselves as part of their eSports community. Therefore, brand community engagement results from the intrinsic motivation of consumers interact each other as part of a gaming community (Pizzo *et al.*, 2022). Consumers that experience higher engagement with an entity are more likely to partake in communities to increase their familiarity with the entity and its uses, get acquainted with other users and disseminate personal experiences and knowledge among the community members (Schau *et al.*, 2009). As a result, the association that a member of a particular community develops with an activity engenders community engagement (Pizzo *et al.*, 2022). In eSports, a person's need to integrate socially into a community is considered to be a source of extrinsic need gratification, much like the utility gained from social needs(Corredor, 2018). This helps develop the players' game play sills as well as facilitating the formation of new social bonds and maintain interactions with the community(Patzer *et al.*, 2020). Consequently, it is hypothesized that:

H2. Consumer eSports engagement positively influences players' virtual community.

2.3 Co-production

Co-production is the collaborative development of a product and/or value through the interaction of consumers, artists and the firm (Grönroos, 2012; Wetzel *et al.*, 2019). Contemporary research shows that the distinction of the function of sellers and buyers is gradually becoming blurred as consumers use cognitive effort to help generate ideas the creation of new products (Hoyer *et al.*, 2010; Witkowski and Manning, 2019).Through this, consumers play a role as partial employee of the firm (Dholakia *et al.*, 2009). The firms, eSports providers in this context, encourage close interactions with consumers, the players and get them involved in co-production of ideas for improvement in eSports experience

(Casidy *et al.*, 2022). In the present context, when eSports players take keen interest in the games and focus on gaining a better experience, their engagement with the games stimulates the co-production process. The players' engagement with competitive video-gaming motivates them to provide eSports game publishers with innovative ideas regarding product modification (Grönroos, 2012). Some eSports providers give consumers a forum through which they foster interactions, read the opinions of customers and allow contributions for improvement in products to create better experiences (Marchand and Hennig-Thurau, 2013; Abbasi *et al.*, 2020a). Therefore, the consumer engagement in co-production of ideas and experiences results in multiple advantages for both the consumers and the eSports firms. Hence, this study presents the following hypothesis:

H3. Consumer eSports engagement contributes positively to the consumers' co-production intentions.

2.4 Word-of-mouth

Consumer engagement leads to an impact beyond purchase activities, encompassing the use of word-of-mouth, recommendations, blogs and reviews to reach out to other members of the virtual community (Van Doorn *et al.*, 2010; Rather *et al.*, 2021). Hollebeek and Chen (2014) studied the relationship how brand engagement can lead to the dissemination of word-of-mouth by consumers. For the purpose of this paper, word-of-mouth refers to providing information regarding eSports to other individuals. A previous study posited that dedicated and satisfied consumers are effective propagators of positive word-of-mouth. In their study, De Matos and Rossi (2008) posited that consumers who engaged with brands are predisposed to advocate for the brand through the use of word-of-mouth. These findings from these studies contribute to hypothesis that player interactions can lead to the dissemination of positive word-of-mouth. Thus, the following hypothesis is proposed:

H4. Consumer eSports engagement positively influences of word-of-mouth.

2.5 Recruitment of other players in eSports

Recruitment, in this context, is the readiness of eSports players to invite other players to join the eSports gaming. The majority of eSports users and fan base of popular eSports tournaments is composed of players of the game, while spectators of these events are not necessarily gamers (Lee and Schoenstedt, 2011). The consumer engagement with eSports and its community results in the formation of friendships and introducing new players to the eSports community (Abbasi *et al.*, 2020a). The enjoyment of gamers is greatly influenced by their teams as well as spectators (Freeman and Wohn, 2017). With regard to motivation, a study conducted by Martončik (2015) posited that e Sports players may gain a sense of satisfaction and belonging through game engagement and player recruitment. Notably, the underlying reason for player motivation to recruit others is consumer engagement with the game (Abbasi *et al.*, 2020a). When players interact with other players in the eSports community, they influence each other's perception of recruitment, of their own accord through one-on-one interactions and via online blogging (Brodie *et al.*, 2013). Therefore, players are likely to recruit other players when they are engaged with the game and its environment. Thereby, it is hypothesized, see the study model in Figure 1:

H5. Consumer eSports engagement contributes positively to the recruitment drive of other players.

3. Methodology

As the trend of eSports among adults in Pakistan is increasing, we conducted this research on generation Z because of their high involvement in digital products located in twin cities, namely, Islamabad and Rawalpindi, aged 18–24years. In these two cities, a diverse range of players are heavily engaged in eSports which ensure the country proportional representation (Abbasi *et al.*, 2020b). We targeted male respondents, as they are more prone to visiting the gaming zones/cafes for gaming than female players (Abbasi *et al.*, 2020a). More importantly, males like playing the video game in a team using the computer networks/mobile-based networking (Abbasi *et al.*, 2020a). To determine the sample size, we used G*Power analysis by Faul *et al.* (2007), which led to a minimum sample size of 89. This was calculated using the input parameters (i.e. $f^2 = 0.15$, α err probability = 0.05, power = 0.95 and number of predictors 1), which is required to perform partial least squares structural equation modeling (PLS-SEM) analyses.

The cross-sectional approach was conducted through self-administered questionnaires. The questionnaire used in the study comprised two sections. The first section included the demographic details of the participants and their eSports consumption patterns such as gender, eSports games and frequency of video game playing, whereas the second section comprised the study variables (e.g. consumer eSports engagement is an exogenous variable and consumption behaviors are endogenous constructs) in which we want to explore the hypothesized relations between the different antecedents (Figure 1). The items measuring the CeSE were adapted from (Abbasi *et al.*, 2020a). The sample item of conscious attention (i.e. a first-order reflective dimension of CeSE) includes "I like knowing more about [esports gaming brand]." The scale items of consumption behaviors comprising purchase intention, co-production, WOM, community engagement and recruitment were based on the study by (Badrinarayanan *et al.*, 2015). The sample item of community engagement refers to "exchanging opinions with members of [esports gaming brand]-related communities is important to me."

This study mainly approached the gaming zones for data collection, particularly situated in Rawalpindi and Islamabad. Gaming zone is also known as cybercafé that is a kind of business activity, where dedicated computers are provided for playing games. While visiting the gaming zones, we asked what eSports games they offer. Upon getting feedback, we selected games such as Fortnite, Fifa, Medal of Honor, CS1.6, CS-GO, Dota 2, Call of Duty and Wrestling because of their popularity among gaming zones and users. We used the Google map and searched for gaming zones within the Rawalpindi and Islamabad region. We first made a list and visited each gaming zone. While visiting the gaming zone, we ensured that the management had approved the study. After gaining approval to conduct the survey, we collected the data from male eSports players who have finished their session or waiting for their turn. In total, we distributed and collected 292 surveys and found 262 as valid male respondents for further analyses (Table 1).

This study applied the PLS-SEM technique to test the model, as it has the capacity to handle a complex model with composite model comprising reflective and formative measurement models, which serves as an example of the current study's model (Hair *et al.*, 2019). PLS-SEM performs analysis in two main phases: measurement and structural model assessment. The former evaluates the study variables for validity and reliability of the data, whereas the structural model verifies the study hypotheses.

4. Results

Using the PLS-SEM approach, we first specified the study model (Figure 2). We framed CeSE as exogenous variable and consumption behaviors comprising purchase intention,

Variable	Cases (%)	Variable	Cases (%)
Gender		*eSports games (Coding via Multiple Response)*	
Male	262 (100)		
Age (years)			
18-20	67 (25.6)	*Dota2*	153 (58.6)
21–22	112 (42.7)	*Call of Duty*	142 (54.4)
23–24	83 (31.7)	*CS1.6*	128 (49.0)
		CSGO	125 (47.9)
		Medal of Honor	100 (38.3)
		Fifa Series	78 (29.9)
		Fortnite	90 (34.5)
		Wrestling	45 (17.2)
Highest education level		*eSports gaming frequency*	
Higher Secondary School Certificate	87 (33.2)	*Every day*	153 (58.4)
Undergraduate Level	132 (50.4)	*A few times a week*	80 (30.5)
Postgraduate Level	43 (16.4)	*Once a week*	29 (11.1)

Table 1.
Respondent profile

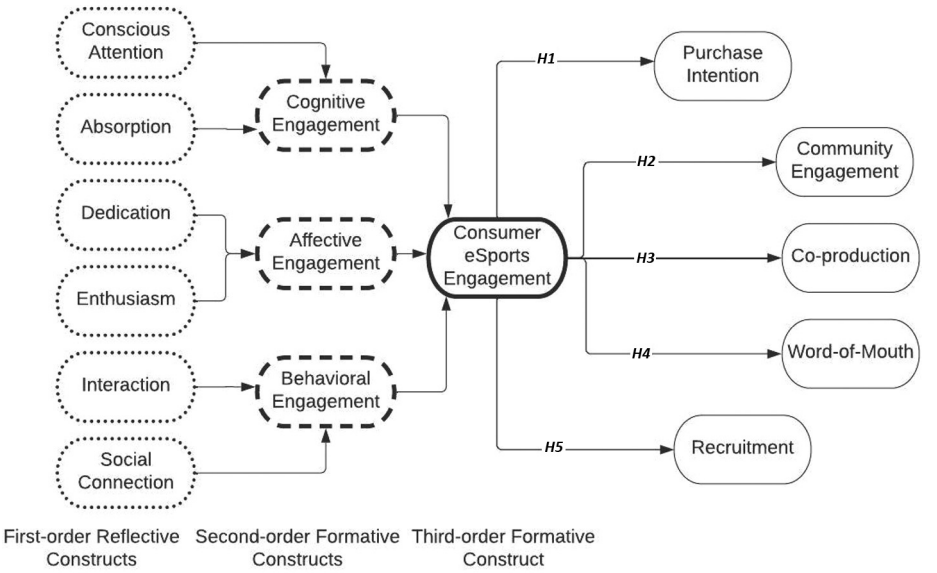

Figure 2.
The study model specification for PLS-SEM analyses

Source: Author's own work

WOM, community engagement, co-production and recruitment as exogenous or outcomes variables. As depicted in Figure 2, CeSE is considered as a third-order formative construct. It was developed through three second-order formative constructs containing cognitive, affective and behavioral engagement. Each engagement level further categorized into two sub-dimensions: conscious attention and absorption, refer to cognitive engagement; dedication and enthusiasm state the affective engagement; and social connection and

interaction explain behavioral engagement, which were specified as reflective measurement models at first-order level.

Following Figure 2, we first assessed the reflective measurement models at first-order level for reliability and validity checks. For being a reliable and sound reflective constructs, the outer loadings should be minimum 0.40 or greater, convergent validity, that is, AVE should surpass the value of 0.50, and reliabilities such as Cronbach's alpha and composite reliability should exceed the value of 0.70 (Hair *et al.*, 2017a; Hair *et al.*, 2019). The findings indicated that all reflective constructs have met the minimum criteria for being reliable and valid constructs. However, few items were deleted because of low indicator loadings such as CA6, AB5, EN4,DED 5, INT5 and REC1 (Table 2).

Additionally, we applied another criterion, that is, discriminant validity for assessing the validity of reflective constructs to examine if a construct is dissimilar to the others (Hair *et al.*, 2016). The discriminant can be assessed through cross-loadings, Fornell–Larcker and heterotrait-monotrait ratio (HTMT) (Hair *et al.*, 2016). In this study, we assessed the discriminant validity through HTMT as recommended by Henseler *et al.* (2015), as it is considered to be highly conservative. To attain the discriminant validity, the HTMT values should not surpass the value of 0.85 (Kline, 2015; Hair *et al.*, 2017b). Our results in Table 3 reported that all constructs have met the threshold value, that is, 0.85; hence, discriminant validity was not considered an issue.

After establishing the reliability and validity for the first-order reflective constructs, the study calculated the latent variable scores (LVs) of first-order reflective constructs. These scores were used to construct the second-order formative constructs, that is, cognitive, behavioral and affective behavioral engagement as illustrated in Figure 2. The two-stage approach used by Becker *et al.* (2012) was used to develop the second-order formative constructs in WarpPLS 8.0. The validity of the formative constructs was assessed on the basis of multicollinearity test, that is, variance inflation factor (VIF) and indicator weights and significance using the bootstrapping of 5,000 samples (Sarstedt *et al.*, 2017). The VIF value should be 5 (Hair *et al.*, 2019) or below 3.3, which is the most restricted assessment value (Kock and Lynn, 2012). Following the suggested criterions, we evaluated the second-order formative constructs for its reliability and validity. Our results showed that the VIF and FVIF values are within the limit, which represent that our data is free from the multicollinearity issue and associated indicator weights have met the significance level (Tables 2 and 4).

After getting the satisfactory results for three second-order formative constructs, the two-stage approach by Becker *et al.* (2012) was used to develop the third-order formative construct, that is, CeSE. Following the same procedure, we first calculated the LVs of the second-order formative constructs and used those scores to create the CeSE construct. To assess its validity and reliability, we evaluated the VIF values, indicator weights and significance of designated items used to construct the CeSE. The study findings in Table 4 indicated that CeSE is a valid and reliable third-order formative construct, as VIF values were below 3.3 and indicator weights were significant (Abbasi *et al.*, 2020b; Sarstedt *et al.*, 2019) (Table 4).

In the exploration of the hypotheses and structural model as per Figure 1, the study uses WarpPLS 8.0 for calculating the path coefficient significance along with the *t*-value, coefficient value of R^2 and the effect size for the endogenous construct. As seen below, Table 5 indicates the assessment of the structural model, presenting the results of hypothesized relationships. We can conclude from Table 5, that the CeSE leads to significant effect on the Purchase Intention with a *t*-values of 10.071 at a *p*-value of 0.00 and a path-coefficient of 0.564. Thus, *H1* is supported. We also find a positive significant contribution of CeSE on community engagement with a *t*-values of 9.105, *p*-value of 0.00 and a

Constructs, Items	Loadings
Conscious-Attention: Adapted from Abbasi *et al.* (2020a) $\alpha = 0.798$; *CR = 0.861; AVE = 0.554; and FVIF = 1.531*	
CA.1: I like knowing more about [esports gaming brand]	0.793
CA.2: I like learning more about [esports gaming brand]	0.706
CA.3: I notice information related to [esports gaming brand]	0.769
CA.4: I pay a lot of attention to anything about [esports gaming brand]	0.746
CA.5: I keep up with things related to [esports gaming brand]	0.704
Absorption: Adapted from Abbasi *et al.* (2020a) $\alpha = 0.698$; *CR = 0.816; AVE = 0.527; and FVIF = 1.436*	
AB.1: When I am playing [esports gaming brand], I forget everything else around me	0.731
AB.2: Time flies when I am playing [esports gaming brand]	0.766
AB.3: When I am playing [esports gaming brand], I get carried away	0.619
AB.4: When I am playing [esports gaming brand], I feel immersed	0.777
Dedication: Adapted from Abbasi *et al.* (2020a) $\alpha = 0.808$; *CR = 0.875; AVE = 0.636; and FVIF = 1.116*	
DE.1: [Esports gaming brand] inspires me	0.774
DE.2: I am enthusiastic about playing [esports gaming brand]	0.821
DE.3: I am proud to play [esports gaming brand]	0.840
DE.4: I find [esports gaming brand] to be full of meaning and purpose	0.75
Enthusiasm: Adapted from Abbasi *et al.* (2020a) $\alpha = 0.722$; *CR = 0.828; AVE = 0.550; and FVIF = 1.663*	
EN.1: I spend a lot of my discretionary time playing [esports gaming brand]	0.749
EN.2: I am heavily into playing [esports gaming brand]	0.613
EN.3: I am passionate about playing [esports gaming brand]	0.829
EN.5: I try to fit playing [esports gaming brand] into my schedule	0.758
Interaction: Adapted from Abbasi *et al.* (2020a) $\alpha = 0.755$; *CR = 0.845; AVE = 0.578; and FVIF = 1.952*	
INT.1: I enjoy playing [esports gaming brand] with like-minded other gamers	0.692
INT.2: I like actively participating in discussions about [esports gaming brand]	0.751
INT.3: In general, I enjoy exchanging ideas on [esports gaming brand] with other gamers	0.799
INT.4: I often participate in activities relating to [esports gaming brand]	0.793
Social-Connection: Adapted from Abbasi *et al.* (2020a) $\alpha = 0.712$; *CR = 0.840; AVE = 0.63; and FVIF = 1.681*	
SC.1: I love playing [esports gaming brand] with my friends	0.819
SC.2: I enjoy playing [esports gaming brand] when I am with others	0.703
SC.3: Playing [esports gaming brand] is more fun when other people around me play it too	0.865
Purchase-Intention: Adapted from Badrinarayanan *et al.* (2015) $\alpha = 0.715$; *CR = 0.841; AVE = 0.638; and FVIF = 1.572*	
PI.1: I intend to purchase [esports gaming brand]-associated items	0.791
PI.2: My willingness to buy [esports gaming brand]-associated items is high	0.749
PI.3: The likelihood of me purchasing [esports gaming brand]-associated items is high	0.854
Community-Exchange: Adapted from Badrinarayanan *et al.* (2015) $\alpha = 0.698$; *CR = 0.833; AVE = 0.624; and FVIF = 1.967*	
CYE.1: Exchanging opinions with members of [esports gaming brand]-related communities is important to me	0.823
CYE.2: I will participate in [esports gaming brand]-based community activities	0.732
CYE.3: I am an actively participating member of [esports gaming brand]-related communities	0.812
Co-production: Adapted from Badrinarayanan *et al.* (2015) $\alpha = 0.764$; *CR = 0.850; AVE = 0.586; and FVIF = 2.284*	
CP.1: I enjoy offering new ideas for [esports gaming brand]-related products, services and tournaments	0.691
CP.2: I like offering my opinion on [esports gaming brand]-related development	0.777
CP.3: I enjoy participating in research to develop or improve [esports gaming brand]-related products or services	0.791
CP.4: I like providing my opinion on issues related to the improvement of [esports gaming brand]-related products	0.799
Recruitment: Adapted from Badrinarayanan *et al.* (2015) $\alpha = 0.761$; *CR = 0.863; AVE = 0.678; and FVIF = 1.935*	
RC.2: I have invited my family or friends to play [esports gaming brand]	0.838
RC.3: I try to get people to play [esports gaming brand] for the first time	0.750
RC.4: I invite people to try [esports gaming brand]	0.877
Word-of-Mouth: Adapted from Badrinarayanan *et al.* (2015) $\alpha = 0.818$; *CR = 0.917; AVE = 0.846; and FVIF = 1.541*	
WOM.1: I share information about [esports gaming brand] with other people	0.920
WOM.2: I enjoy providing information on [esports gaming brand] to others	0.920

Source: Abbasi *et al.* (2020a); Badrinarayanan *et al.* (2015)

Table 2.
Reliability and validity – reflective constructs

	AB	CA	Ded	Ent	INT	SC	PI	CYE	CP	RC	WOM
AB											
CA	0.395										
Ded	0.231	0.299									
Ent	0.503	0.573	0.297								
INT	0.315	0.51	0.256	0.488							
SC	0.212	0.41	0.273	0.451	0.72						
PI	0.302	0.315	0.249	0.511	0.507	0.584					
CYE	0.219	0.589	0.296	0.479	0.645	0.463	0.704				
CP	0.194	0.496	0.256	0.503	0.674	0.464	0.409	0.788			
RC	0.319	0.446	0.191	0.654	0.387	0.554	0.481	0.514	0.607		
WOM	0.082	0.288	0.133	0.377	0.258	0.442	0.269	0.395	0.526	0.696	

Notes: AB = absorption; CA = conscious attention; Ded = dedication; Ent = enthusiasm; INT = interaction; SC = social connection; PI = purchase intention; CYE = community engagement; CP = co-production; RC = recruitment (new players); WOM = word-of-mouth

Table 3.
Discriminant validity (HTMT) analysis

Second-order formative constructs	Items	Item-weights	p-values	VIF
Cognitive engagement	ConsT → COGeng	0.624	0.000	1.088
	AB → COGeng	0.624	0.000	1.088
Affective engagement	Dedic → AFFeng	0.643	0.000	1.045
	EN → AFFeng	0.643	0.000	1.045
Behavioral engagement	INT → BEHeng	0.572	0.000	1.392
	SC → BEHeng	0.572	0.000	1.392
Third-order formative construct				
Consumer eSports Engagement	COGeng → CeSE	0.326	0.000	1.362
	AFFeng → CeSE	0.439	0.000	1.383
	BEHeng → CeSE	0.514	0.000	1.248

Notes: ConsT = conscious attention; AB = absorption; Dedic = dedication; EN = enthusiasm; INT = interaction; SC = social connection; COGen = cognitive engagement; AFFeng = affective engagement; BEHeng = behavioral engagement, COGen = cognitive engagement; AFFeng = affective engagement; BEHeng = behavioral engagement; CeSE = consumer eSports engagement; VIF = variance inflation factor

Table 4.
The assessment of formative constructs at second- and third-order level

Hypotheses	Path-coefficient	SD (STDEV)	*t*-statistics (Path-coefficient/STDEV)	*p*-values	F^2	R^2	Q^2
H1. CeSE → PI	0.564	0.056	10.071	<0.001	0.318	0.318	0.317
H2. CeSE → CYE	0.519	0.057	9.105	<0.001	0.269	0.269	0.270
H3. CeSE → CP	0.478	0.057	8.386	<0.001	0.228	0.228	0.230
H4. CeSE → WOM	0.401	0.056	7.161	<0.001	0.161	0.161	0.160
H5. CeSE → RC	0.572	0.058	9.862	<0.001	0.327	0.327	0.328

Notes: CeSE = consumer eSports engagement; PI = purchase intention; CYE = community engagement; CP = coproduction; WOM = word-of-mouth; RC = recruitment (new players)

Table 5.
The assessment of structural model

path-coefficient of 0.519, hence accepting the *H2*. CeSE proves to be significant predictor for various outcome variables such as co-production, recruitment of players and WOM with a *p*-value of 0.000, therefore accepting the hypotheses from *H3* to *H5* (Table 5 and Figure 3).

In addition to the assessment of the effect of CeSE on Consumption Behaviors of video gamers (i.e. purchase intention, community engagement, co-production, recruitment and word-of-mouth), Hair *et al.* (2017b) recommended calculating the effect size, as it provides the better picture of the relationships. It shows the extent to which an exogenous LV affects to the R^2 value of an endogenous LV. In addition to this, it also measures the strength of association between the constructs (Chin and Newsted, 1999). The reference values of f^2 of approximately 0.35 represent a large association, f^2 of approximately 0.15 medium association, while f^2 of approximately 0.02 indicates a smaller association between the variables (Hair *et al.*, 2019). Following the recommendation, we calculated the effect size and found that CeSE had strong association with player's recruitment (f^2 = 0.327) followed by purchase intention (f^2 = 0.318), community engagement (f^2 = 0.269), co-production (f^2 = 0.228) and WOM (0.161).

Moreover, the values of $R^2$and Q^2 on outcome variables were 0.318 and 0.317 for purchase intention, 0.269 and 0.270 for community engagement, 0.228 and 0.230 for co-production, 0.327 and 0.328 for recruitment and 0.161 and 0.160 for word-of-mouth. This shows that all five hypotheses are confirmed by the data analysis, proving a positive relationship between CeSE and the outlined dimensions of consumption behaviors. Besides, Kock (2022) suggested to assess the goodness of fit (GoF) index, termed as "Tenenhaus GoF" to determine the model's explanatory power. Using this criterion, the threshold values should range from small $\geq$ 0.1, medium $\geq$ 0.25 and large $\geq$ 0.36. Our results witnessed that the *Tenenhaus GoF* is 0.406, which qualified for having the large explanatory power of our study's model.

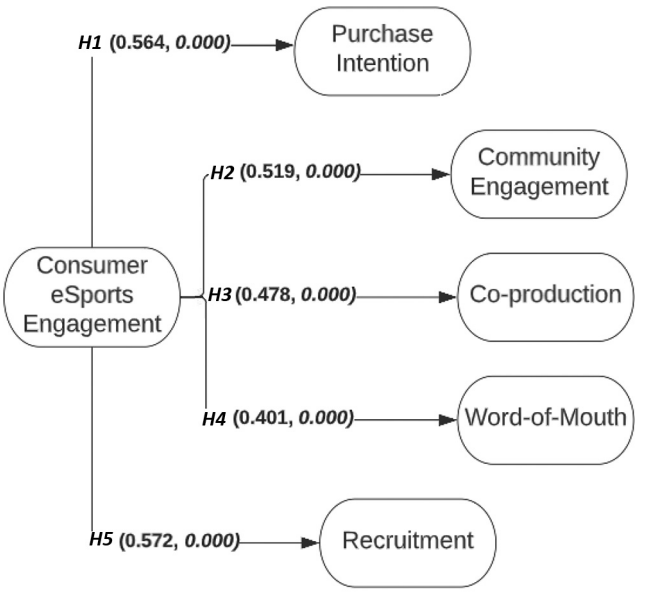

Figure 3.
Hypotheses testing

Source: Author's own work

5. Discussion

With the advent of digital era and latest technologies, the landscape of video-game industry has undergone significant changes. More individuals are in possession of eSports paraphernalia in addition to owning personal computers, tablets and smart phones. As a result, it is now becoming crucial for the overall strategy of businesses to have a team skilled in digital expertise to explore these emerging avenues. The key research question of this research examined the extent to which CeSE impact consumption behaviors (purchase intention, community engagement, co-production, recruitment and word-of-mouth) in eSports contexts. This research establishes the validity of the prediction model regarding the consumption behavior dimensions highlighted. The findings are in harmony with those carried out previously, which leads to valid and reliable data pertaining to the eSports industry focused in Pakistan. These findings also have practical implication, as they help us understand the experience of consumers better so that follow-up research can be carried out to improve consumer engagement, as well as the development of managerial approaches based on the information ascertained via this study and previous literature. On the basis of each dimension discussed through the conceptual framework of this study, the practical significance of the results is detailed in the following sections.

CeSE has a significant impact on the purchase intention of eSports product. This has been consistent with existing literature. For instance, Hansen (2003) found a similar relationship wherein engagement invoked intentions to purchase. It was posited by Malthouse *et al.* (2013) that consumer engagement with video games played on an online competitive platform produces positive behaviors in the players of game which leads to purchase intention. Kaynak *et al.* (2008) presented that the robust attitudinal disposition of consumers toward a particular brand leads to consumer engagement and loyalty with the brand. Subsequently, this has an effect on the consumer's intention to make a purchase. Therefore, CeSE is a strong indicator of players' intention to purchase eSports product because of a variety of reasons.

The CeSE is also found as a significant predictor of community engagement which is aligned with the findings of Martončik (2015). They posited that the engagement with other players leads to feelings of belongingness for individuals. Algesheimer *et al.* (2005) stated bonding that arises from communal relationships related to a brand or activity engenders community engagement. They posited that consumers experience intrinsic motivation to interact with other people belonging to the virtual community, which results in the brand community engagement. Jansz and Tanis (2007) posited that eSports consumers can develop skills and social relationships and maintain interactions with other players as well as their fans and spectators. Similarly, Gummerus *et al.* (2012) recognized the consumers' engagement as an important characteristic of community engagement, which is also proven by this study.

The positive interrelation between cognitive engagement and co-production has been proved by this study. It is explained by existing literature, as Prahalad and Ramaswamy (2004) posited that the consumer's engagement with a specific product, they get involved in the process of co-ideation, co-designing, co-creation and co-development concerning innovation of the product. Similarly, research has revealed that the functions of sellers and buyers are getting blurred, as consumers use cognitive effort to not only generate ideas for the creation of new products (Hoyer *et al.*, 2010) but also perform products and services promotion to other individuals (Libai *et al.*, 2010). This association is also corroborated by Guan-Lin *et al.* (2013) indicating that when consumers are engaged with a product or firm, their satisfaction level is raised and they are likely to contribute in terms of recommendations related to co-production.

This study established a positive relationship between the recruitment dimension of consumer behavior and eSports engagement. This relationship has been explained by Schau *et al.* (2009), who found that consumers who have higher engagement with a brand have a higher propensity to engage with members of the brand community to advocate the brand and the product; hence, they introduce the product to new users. Similarly, a significant positive impact of consumer video-game engagement on recruitment has been explored by Kuenzel and Vaux Halliday (2008), who posited that this relationship results in affinity and investment of resources toward the benefit of the community as they introduce new individuals in the gaming arenas. Moreover, Lampe *et al.* (2010) posited that the underlying reason pertaining to the motivation of players to recruit others is also their engagement with the game. Brodie *et al.* (2013) similarly posited that when consumers have the opportunity to interact with firms as well as with the brand community, they may influence the perceptions of other individuals toward recruitment of their own accord, across different mediums.

The findings of this study supported the hypothesis that established a positive effect of consumer engagement on the spread of positive WOM supporting the game. This relationship has been widely supported in existing literature (De Matos and Rossi, 2008). These researchers investigated that engagement of consumers with a product makes them active propagators of positive WOM. They posited that consumers who engaged with brands are predisposed to advocate for the brand through the use of word-of-mouth, which supports our hypothesis. Another study found that interactions between consumers impact the individual propensity to spread WOM that advocates positive feelings, affective commitment and loyalty toward the brand, which is consistent with our findings (Vivek *et al.*, 2012).

5.1 Theoretical implications

This study contributes to eSports-related studies in many directions. First, we expand earlier studies (Macey *et al.*, 2022; Badrinarayanan *et al.*, 2015; Abbasi *et al.*, 2020a), who studied gamers' consumption behaviors by studying CeSE as a higher-order level dimension predicting gamers' consumption behaviors comprising direct (e.g. purchases) and indirect contribution (e.g. community exchange, co-production, WOM and players' recruitment) toward the eSports-related products/firm. More importantly, unlike prior studies, we also expand the theoretical understanding of SET and its application in eSports context. In particular, we reveal that CeSE helps in developing gamers' engagement in online community with eSports-related products/firm or with other gamers. Prior studies considered both male and female segments in their investigations, and sometimes, their results are not generalizable because of having low sample on one segment. However, we primarily focus on male eSports gamers' segment to generalize our findings pertaining to gamers' consumption behaviors. Finally, we apply the HCM technique to estimate, specify and validate CeSE as a composite model comprising reflective and formative constructs and, hence, making a methodological advancement in eSports environment.

5.2 Managerial implications

Overall, this study demonstrates that marketers and developers of eSports must ensure that their games and player provide a conducive environment for the development of the consumer behaviors outlined. Consequently, the engagement of consumers with eSports can be used as an effective means for players' segmentation and development of customized strategies that can be applied to different segments exclusively. For instance, the results regarding the impact of consumers' video-game engagement on co-production intention can bring about innovation and new product development regarding video games. Developers

may explore more integrative developmental routes wherein consumer feedback is actively used. Therefore, eSports firms should pay attention to video-game engagement concerning their player base, particularly those individuals who participate actively in online game-related communities and nurture specific relationship development incentives and programs aimed at players exhibiting high levels of engagement with the games. This will lead to an amplified impact on all five levels of consumer behavior.

CeSE can be reinforced through innovative game designs and vibrant marketing activities. Developing games that provide adequate challenges, multiplayer collaboration and telepresence are tactics for facilitating players' engagement with video games, as well as with other players (Cowan and Ketron, 2019). Similarly, the storyline, graphics, design of activities and tasks of the video games can also be improved to augment players' engagement with the game and relationship with other players. This also opens up avenues of further research into consumer preferences games as compared to others, which will encourage consumption and engagement.

Similarly, this can lead to a managerial focus on developing user-friendly platforms, which will allow consumers ease in communicating with one another, including in-game channels for greater community engagement. They may choose to introduce products wherein players can more easily recruit other individuals, through automated invites and purchasing incentives, which allow discounted prices because of referrals. They can also capitalize through in-game purchases that will generate revenue as well as engagement, as the gameplay will improve through paid access.

Furthermore, multi-player gaming zones now facilitate the consumers' access to games, generating higher engagement and revenue for developers. Previously, players were required to make payment for gaining access to the game servers, whereas current developers have introduced a free-to-play model providing free access to some versions of games. The gaming zones also facilitate the option to players for extending their experience of gaming by purchasing game-related virtual items via micro-transactions within the game. Hence, intangible assets that are valued exclusively within the virtual environment are sold and purchased through transactions of real money (Ghazali *et al.*, 2022). In this regard, developers would benefit greatly from understanding how video-game engagement increase purchase intentions to buy items, in addition to other consumption behaviors of the players (Table 6), which summarizes the study's conclusions and implications.

6. Conclusions

As noted, the eSports has increasingly acquired extensive interest in the recent years (Hollebeek *et al.*, 2022a; Macey *et al.*, 2022; Abbasi *et al.*, 2023). CeSE is of a remarkable importance in developing an enduring relationship between the gamers/consumers and the eSports video games. In conclusion, this research sought to respond a key research question that relate to predicting the consequences of CeSE. Thus, we investigated CeSE as a key predictor for gamers' online engagement either through direct contribution (e.g. purchases) or indirect contributions (e.g. community engagement, co-production, word-of-mouth and recruitment) in eSports related products/firm. The findings attained were concluded into the differing stages as factors, which directly impact the gamers' consumption behaviors (i.e. purchase intention, community engagement, co-production, recruitment and word-of-mouth).

Our findings corroborate the centrality of consumers (gamers) perceptions of CeSE, which affects the gamers' consumption behaviors including purchase intention, community engagement, co-production, recruitment and word-of-mouth in eSports/video-gaming context. We also adopted HCM approach to specify/estimate/validate consumer CeSE as

Conclusions	Theoretical and managerial implications
• We investigated consumer eSports engagement as a key predictor of gamers' online-engagement, either directly (purchases) or indirectly (community-engagement and co-production)	• Consumer eSports engagement is conceptualized and validated as a higher-order reflective-formative model • Consumer eSports engagement predicted its outcomes using the notion of direct and indirect contributions toward the eSports firm
• We adopted HCM-approach to specify/estimate/validate consumer eSports engagement as a composite model incorporating reflective and formative constructs	• Esports companies should reward highly engaged gamers, especially those in online game communities, with relationship-building incentives

Table 6.
Conclusions and implications

a composite model encompassing both reflective as well as formative constructs and, thus, contributing a methodological development in eSports context. As such, this research contributes to eSports-related studies by providing a CeSE model that considers the phenomenon of gamers' eSports and their consumption behaviors. Based on aforesaid discussion and conclusions, we next outline important theoretical/managerial implications of our study.

6.1 Limitations and further research

While this study offered important contributions to research, as well as managerial implications, there are limitations to its application as well. Close-ended scales were used while surveying this study, which may not accurately represent the rationale behind consumer choices. However, further research may choose using qualitative methods to collect greater insight into eSports players, for example, interviews. Second, geographical limitations have also affected the study. Data for this investigation were collected from an emerging country (e.g. Pakistan), which has created a limited generalizability for developed economies. Future study may consider data collection from other developed nations and compare their findings. As outlined, because the study sample is good representation of the generation Z male in Pakistan, future research can test our modelled relationships by using female sample (Jamal, 2020). It is because nowadays gender equality is a key issue around the global, which may offer additional insights (AVEI, 2020). We also realized that our study did not include the effect of any control variable (e.g. experience, duration, age, etc.) on predicting gamers' consumption behaviors. Future studies within the domain of eSports should consider the importance of control variables whether it makes any significance role in determining gamers' consumption behaviors. This research is confined to the population of players of eSports. Hence, the future study may be carried out by encompassing different categories of players to examine effect of CE in predicting consumption behaviors. We determined the consequences of CeSE and ignored the important predictors of CeSE. Hence, future studies are required to explore the factors that determine CeSE and also study the mediating role of CeSE between antecedents and consequences of CeSE that do not directly explain the relationships.

References

Abbasi, A.Z., Nisar, S., Rehman, U. and Ting, D.H. (2020b), "Impact of HEXACO personality factors on consumer video game engagement: a study on eSports", *Frontiers in Psychology*, Vol. 11, p. 1831.

Abbasi, A.Z., Alqahtani, N., Tsiotsou, R.H., Rehman, U. and Ting, D.H. (2023), "ESports as playful consumption experiences: examining the antecedents and consequences of game engagement", *Telematics and Informatics*, Vol. 77, p. 101937.

Abbasi, A.Z., Asif, M., Hollebeek, L.D., Islam, J.U., Ting, D.H. and Rehman, U. (2020a), "The effects of consumer eSports videogame engagement on consumption behaviors", *Journal of Product and Brand Management*, Vol. 30 No. 8, pp. 1194-1211.

Algesheimer, R., Dholakia, U.M. and Herrmann, A. (2005), "The social influence of brand community: evidence from European car clubs", *Journal of Marketing*, Vol. 69 No. 3, pp. 19-34.

AVEI (2020), "Common position of the video game and esports industry", available at: www.aevi.org.es/esports/

Badrinarayanan, V.A., Sierra, J.J. and Martin, K.M. (2015), "A dual identification framework of online multiplayer video games: the case of massively multiplayer online role playing games (MMORPGs)", *Journal of Business Research*, Vol. 68 No. 5, pp. 1045-1052.

Becker, J.-M., Klein, K. and Wetzels, M. (2012), "Hierarchical latent variable models in PLS-SEM: guidelines for using reflective-formative type models", *Long Range Planning*, Vol. 45 Nos 5/6, pp. 359-394.

Blau, P.M. (1964), "Social exchange theory", *Retrieved September*, Vol. 3, p. 62.

Brodie, R.J., Ilic, A., Juric, B. and Hollebeek, L. (2013), "Consumer engagement in a virtual brand community: an exploratory analysis", *Journal of Business Research*, Vol. 66 No. 1, pp. 105-114.

Casidy, R., Leckie, C., Nyadzayo, M.W. and Johnson, L.W. (2022), "Customer brand engagement and co-production: an examination of key boundary conditions in the sharing economy", *European Journal of Marketing*, Vol. 56 No. 10.

Chin, W.W. and Newsted, P.R. (1999), "Structural equation modeling analysis with small samples using partial least squares", *Statistical Strategies for Small Sample Research*, Vol. 1 No. 1, pp. 307-341.

Corredor, J. (2018), "Fostering situated conversation through game play", *Simulation and Gaming*, Vol. 49 No. 6, pp. 718-734.

Cowan, K. and Ketron, S. (2019), "A dual model of product involvement for effective virtual reality: the roles of imagination, co-creation, telepresence, and interactivity", *Journal of Business Research*, Vol. 100, pp. 483-492.

Cropanzano, R. and Mitchell, M.S. (2005), "Social exchange theory: an interdisciplinary review", *Journal of Management*, Vol. 31 No. 6, pp. 874-900.

De Matos, C.A. and Rossi, C.A.V. (2008), "Word-of-mouth communications in marketing: a meta-analytic review of the antecedents and moderators", *Journal of the Academy of Marketing Science*, Vol. 36 No. 4, pp. 578-596.

Dholakia, U.M., Blazevic, V., Wiertz, C. and Algesheimer, R. (2009), "Communal service delivery: how customers benefit from participation in firm-hosted virtual P3 communities", *Journal of Service Research*, Vol. 12 No. 2, pp. 208-226.

Faul, F., Erdfelder, E., Lang, A.-G. and Buchner, A. (2007), "G* power 3: a flexible statistical power analysis program for the social, behavioral, and biomedical sciences", *Behavior Research Methods*, Vol. 39 No. 2, pp. 175-191.

Flegr, S. and Schmidt, S.L. (2022), "Strategic management in eSports–a systematic review of the literature", *Sport Management Review*, Vol. 25 No. 4, pp. 1-25.

Freeman, G. and Wohn, D.Y. (2017), "Social support in eSports: building emotional and esteem support from instrumental support interactions in a highly competitive environment", *Proceedings of the Annual Symposium on Computer-Human Interaction in Play*, pp. 435-447.

Ghazali, E.M., Al Halbusi, H., Fattah, F.A.M.A., Uzir, M.U.H., Mutum, D.S. and Tan, F.-L. (2022), "A study of player behavior and motivation to purchase dota 2 virtual in game items", *Kybernetes*.

Ghosh, T., Sreejesh, S. and Dwivedi, Y.K. (2021), "Examining the deferred effects of gaming platform and game speed of advergames on memory, attitude, and purchase intention", *Journal of Interactive Marketing*, Vol. 55, pp. 52-66.

Grönroos, C. (2012), "Conceptualising value co-creation: a journey to the 1970s and back to the future", *Journal of Marketing Management*, Vol. 28 Nos 13/14, pp. 1520-1534.

Guan-Lin, C., Shu-Chen, Y. and Shung-Ming, T. (2013), "Sense of virtual community and knowledge contribution in a P3 virtual community: motivation and experience", *Internet Research*, Vol. 23 No. 1, pp. 4-26.

Gummerus, J., Liljander, V., Weman, E. and Pihlström, M. (2012), "Customer engagement in a Facebook brand community", *Management Research Review*, Vol. 35 No. 9, pp. 857-877.

Hair, J.F., Jr, Hult, G.T.M., Ringle, C. and Sarstedt, M. (2016), *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*, Sage Publications, London.

Hair, J., Hollingsworth, C.L., Randolph, A.B. and Chong, A.Y.L. (2017a), "An updated and expanded assessment of PLS-SEM in information systems research", *Industrial Management and Data Systems*, Vol. 117 No. 3, pp. 442-458.

Hair, J., Hollingsworth, C.L., Randolph, A.B. and Chong, A.Y.L. (2017b), "An updated and expanded assessment of PLS-SEM in information systems research", *Industrial Management and Data Systems*, Vol. 117 No. 3, pp. 442-458.

Hair, J.F., Risher, J.J., Sarstedt, M. and Ringle, C.M. (2019), "When to use and how to report the results of PLS-SEM", *European Business Review*, Vol. 31 No. 1, pp. 2-24.

Hansen, T. (2003), "Consumer decision making: a research note", Institut for Afsætningsøkonomi, Handelshøjskolen i København.

Henseler, J., Ringle, C.M. and Sarstedt, M. (2015), "A new criterion for assessing discriminant validity in variance-based structural equation modeling", *Journal of the Academy of Marketing Science*, Vol. 43 No. 1, pp. 115-135.

Hollebeek, L. and Chen, T. (2014), "Exploring positively-versus negatively-valenced brand engagement: a conceptual model", *Journal of Product and Brand Management*, Vol. 23 No. 1, pp. 62-74.

Hollebeek, L.D., Abbasi, A.Z., Schultz, C.D., Ting, D.H. and Sigurdsson, V. (2022a), "Hedonic consumption experience in videogaming: a multidimensional perspective", *Journal of Retailing and Consumer Services*, Vol. 65, p. 102892.

Hollebeek, L.D., Sharma, T.G., Pandey, R., Sanyal, P. and Clark, M.K. (2022b), "Fifteen years of customer engagement research: a bibliometric and network analysis", *Journal of Product and Brand Management*, Vol. 31 No. 2, pp. 293-309.

Hoyer, W.D., Chandy, R., Dorotic, M., Krafft, M. and Singh, S.S. (2010), "Consumer cocreation in new product development", *Journal of Service Research*, Vol. 13 No. 3, pp. 283-296.

Jamal, A. (2020), "Generation Z in Pakistan: individualistic and collectivist in orientation", *The New Generation Z in Asia: Dynamics, Differences, Digitalisation*, Emerald Publishing, Bingley, pp. 105-117.

Jang, W.W. and Byon, K.K. (2019), "Antecedents and consequence associated with eSports gameplay", *International Journal of Sports Marketing and Sponsorship*, Vol. 21 No. 1, pp. 1-22.

Jang, W.W. and Byon, K.K. (2020), "Antecedents of esports gameplay intention: genre as a moderator", *Computers in Human Behavior*, Vol. 109, p. 106336.

Jansz, J. and Tanis, M. (2007), "Appeal of playing online first person shooter games", *CyberPsychology and Behavior*, Vol. 10 No. 1, pp. 133-136.

Jin, W., Sun, Y., Wang, N. and Zhang, X. (2017), "Why users purchase virtual products in MMORPG? An integrative perspective of social presence and user engagement", *Internet Research*, Vol. 27 No. 2, pp. 408-427.

Kaur, P., Dhir, A., Chen, S., Malibari, A. and Almotairi, M. (2020), "Why do people purchase virtual goods? A uses and gratification (U&G) theory perspective", *Telematics and Informatics*, Vol. 53, p. 101376.

Kaynak, E., Salman, G.G. and Tatoglu, E. (2008), "An integrative framework linking brand associations and brand loyalty in professional sports", *Journal of Brand Management*, Vol. 15 No. 5, pp. 336-357.

Khan, I., Hollebeek, L.D., Fatma, M., Islam, J.U., Rather, R., Shahid, S. and Sigurdsson, V. (2022), "Mobile app vs desktop browser platforms: the relationships among customer engagement, experience, relationship quality and loyalty intention", *Journal of Marketing Management, Forthcoming*, pp. 1-23.

Kline, R.B. (2015), *Principles and Practice of Structural Equation Modeling*, Guilford publications, New York, NY.

Kock, N. (2022), "WarpPLS user manual: Version 8.0", ScriptWarp Systems: Laredo, TX, USA.

Kock, N. and Lynn, G. (2012), "Lateral collinearity and misleading results in variance-based SEM: an illustration and recommendations", *Journal of the Association for Information Systems*, Vol. 13 No. 7.

Kuenzel, S. and Vaux Halliday, S. (2008), "Investigating antecedents and consequences of brand identification", *Journal of Product and Brand Management*, Vol. 17 No. 5, pp. 293-304.

Lampe, C., Wash, R., Velasquez, A. and Ozkaya, E. (2010), "Motivations to participate in online communities", in *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, pp. 1927-1936.

Lee, D. and Schoenstedt, L.J. (2011), "Comparison of eSports and traditional sports consumption motives", *ICHPER-SD Journal of Research*, Vol. 6 No. 2, pp. 39-44.

Libai, B., Bolton, R., Bügel, M.S., De Ruyter, K., Götz, O., Risselada, H. and Stephen, A.T. (2010), "Customer-to-customer interactions: broadening the scope of word of mouth research", *Journal of Service Research*, Vol. 13 No. 3, pp. 267-282.

Lim, W.M., Rasul, T., Kumar, S. and Ala, M. (2021), "Past, present, and future of customer engagement", *Journal of Business Research*, Vol. 140, pp. 439-458.

Macey, J., Tyrväinen, V., Pirkkalainen, H. and Hamari, J. (2022), "Does esports spectating influence game consumption?", *Behaviour and Information Technology*, Vol. 41 No. 1, pp. 181-197.

Malthouse, E.C., Vandenbosch, M. and Kim, S.J. (2013), "Social media engagement that drives purchase behavior", *Advances in Advertising Research*, Springer, Cham, Vol. 4, pp. 29-42.

Marchand, A. and Hennig-Thurau, T. (2013), "Value creation in the video game industry: industry economics, consumer benefits, and research opportunities", *Journal of Interactive Marketing*, Vol. 27 No. 3, pp. 141-157.

Martončik, M. (2015), "e-Sports: playing just for fun or playing to satisfy life goals?", *Computers in Human Behavior*, Vol. 48, pp. 208-211.

Mastromartino, B., Ross, W.J., Wear, H. and Naraine, M.L. (2020), "Thinking outside the 'box': a discussion of sports fans, teams, and the environment in the context of COVID-19", *Sport in Society*, Vol. 23 No. 11, pp. 1707-1723.

Pannekeet, J. (2019), "Newzoo: Global esports economy will top $1 billion for the first time in 2019", available at: https://newzoo.com/resources/blog/newzoo-global-esports-economy-will-top-1-billion-for-the-first-time-in-2019

Pansari, A. and Kumar, V. (2017), "Customer engagement: the construct, antecedents, and consequences", *Journal of the Academy of Marketing Science*, Vol. 45 No. 3, pp. 294-311.

Patzer, B., Chaparro, B. and Keebler, J.R. (2020), "Developing a model of video game play: motivations, satisfactions, and continuance intentions", *Simulation and Gaming*, p. 1046878120903352.

Pizzo, A.D., Su, Y., Scholz, T., Baker, B.J., Hamari, J. and Ndanga, L. (2022), "Esports scholarship review: synthesis, contributions, and future research", *Journal of Sport Management*, Vol. 1, pp. 1-12.

Prahalad, C.K. and Ramaswamy, V. (2004), "Co-creating unique value with customers", *Strategy and Leadership*, Vol. 32 No. 3, pp. 4-9.

Rather, R. (2018), "Consequences of consumer engagement in service marketing: an empirical exploration", *Journal of Global Marketing*, Vol. 32 No. 2, pp. 116-135.

Rather, R., Hollebeek, L.D. and Rasoolimanesh, S.M. (2021), "First-time versus repeat tourism customer engagement, experience, and value cocreation: an empirical investigation", *Journal of Travel Research*, Vol. 61 No. 3, pp. 549-564.

Rehman, U., Shah, M.U., Abbasi, A.Z., Hlavacs, H. and Iftikhar, R. (2022), "Investigating male gamers' behavioral intention to play PUBG: insights from playful-consumption experiences", *Frontiers in Psychology*, Vol. 13.

Sarstedt, M., Hair, J.F., Jr, Cheah, J.-H., Becker, J.-M. and Ringle, C.M. (2019), "How to specify, estimate, and validate higher-order constructs in PLS-SEM", *Australasian Marketing Journal (AMJ)*, Vol. 27 No. 3, pp. 197-211.

Sarstedt, M., Ringle, C.M. and Hair, J.F. (2017), "Partial least squares structural equation modeling", *Handbook of Market Research*, Vol. 26, pp. 1-40.

Schau, H.J., Muñiz, A.M., Jr. and Arnould, E.J. (2009), "How brand community practices create value", *Journal of Marketing*, Vol. 73 No. 5, pp. 30-51.

Shibuya, A., Teramoto, M., Shoun, A. and Akiyama, K. (2019), "Long-term effects of in-game purchases and event game mechanics on young mobile social game players in Japan", *Simulation and Gaming*, Vol. 50 No. 1, pp. 76-92.

Van Doorn, J., Lemon, K.N., Mittal, V., Nass, S., Pick, D., Pirner, P. and Verhoef, P.C. (2010), "Customer engagement behavior: theoretical foundations and research directions", *Journal of Service Research*, Vol. 13 No. 3, pp. 253-266.

Villani, D., Carissoli, C., Triberti, S., Marchetti, A., Gilli, G. and Riva, G. (2018), "Videogames for emotion regulation: a systematic review", *Games for Health Journal*, Vol. 7 No. 2, pp. 85-99.

Vivek, S.D., Beatty, S.E. and Morgan, R.M. (2012), "Customer engagement: exploring customer relationships beyond purchase", *Journal of Marketing Theory and Practice*, Vol. 20 No. 2, pp. 122-146.

Wattanapisit, A., Wattanapisit, S. and Wongsiri, S. (2020), "Public health perspectives on eSports", *Public Health Reports*, Vol. 135 No. 3, pp. 295-298.

Wearing, S.L., Porter, D., Wearing, J. and McDonald, M. (2022), "Exploring adolescent computer gaming as leisure experience and consumption: some insights on deviance and resistance", *Leisure Studies*, Vol. 41 No. 1, pp. 28-41.

Wetzel, R., Bachour, K. and Flintham, M. (2019), "Tensions within the ministry of provenance: reflections on co-creating a research game together with artists", *Simulation and Gaming*, Vol. 50 No. 3, pp. 329-358.

Wijman, T. (2021), "2021 Esports market highlights", available at: https://newzoo.com/resources/blog/the-games-market-in-2021-the-year-in-numbers-esports-cloud-gaming

Witkowski, E. and Manning, J. (2019), "Player power: networked careers in eSports and high-performance game livestreaming practices", *Convergence: The International Journal of Research into New Media Technologies*, Vol. 25 Nos 5/6, pp. 953-969.

Wyllie, A. (2018), "eSports: the downside to competitive gaming".

Xiao, M. (2020), "Factors influencing eSports viewership: an approach based on the theory of reasoned action", *Communication and Sport*, Vol. 8 No. 1, pp. 92-122.

Yin, K., Zi, Y., Zhuang, W., Gao, Y., Tong, Y., Song, L. and Liu, Y. (2020), "Linking eSports to health risks and benefits: current knowledge and future research needs", *Journal of Sport and Health Science*, Vol. 9 No. 6, p. 485.

Appendix

Authors	Antecedents	Outcomes/mediators/moderators	Context
Badrinarayanan *et al.* (2015)	• Identification (MMORPG) • Identification (Players)	• Purchase • Community engagement • Coproduction • Recruitment • WOM	MMORPG games
Jang and Byon (2019) and Jang and Byon (2020)	• Effort expectancy • Social influence • Hedonic motivation • Price value • Habit • Flow	• eSports gameplay intention • eSports gameplay behavior • Media consumption of eSports events • Mediators (eSports gameplay Intention and eSports gameplay behavior) • Genre as moderating variable	eSports gaming
Abbasi *et al.* (2020a)	• Consumer eSports engagement States (cognitive, affective, and behavioral)	• Purchase • Community engagement • Coproduction • Recruitment • WOM	eSports gaming
Abbasi *et al.* (2020b)	• Personality factors • Honesty-Humility • Emotionality • Extraversion • Agreeableness • Conscientiousness • Openness to experience	• Consumer video game engagement	eSports gaming
Macey *et al.* (2022)	• Motivational Factors • Achievement • Knowledge • Aesthetics • Drama • Escape • Family and Friends • Physical attraction • Gamer's skills • Social Interaction	• Watching Intention • Game Intention • Purchase Intention	eSports (Spectator's perspective)

(*continued*)

Table A1. Main eSports empirical studies

Authors	Antecedents	Outcomes/mediators/moderators	Context
Hollebeek *et al.* (2022a, 2022b) *and* Rehman *et al.* (2022)	• Escapism • Fantasy • Role projection • Enjoyment • Arousal • Emotional Involvement • Sensory Experience	• Theory of Planned Behavior • Attitude toward video game • Subjective norms • Perceived Behavioral Control • Videogaming Intent • Videogaming Behavior	PUBG game
Present Study	• Consumer eSports Engagement	• Direct and Indirect Contributions toward the firm • Purchase • Community engagement • Coproduction • Recruitment • WOM	eSports Gaming and Targeting Male Respondents Aged 18–24

Table A1.

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