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Does esports spectating influence game consumption?

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ABSTRACT

Contemporary digital technologies have facilitated practices related to games whereby users often produce and consume content for free. To date, research into consumer interactions has largely focused on in-game factors, however, the intention to both play the game and to make in-game purchases are influenced by outside factors, including game streams and game-centred communities. In particular, the growth of competitive gaming, known as esports, offers a new channel for consumer engagement. This research explores the potential for esports to be a significant factor in understanding both intentions to play and spend money on games. Our study draws from Motivations Scale of Sports Consumption to empirically investigate the relationship between esports spectating motivations and game consumption: Watching Intention, Gaming Intention, and Purchasing Intention. This survey uses structural equation modelling (SEM) to analyse data collected from a sample of video game players ($n = 194$). This research contributes empirical evidence of the relationship between esports spectating and game consumption, with the relationship between Watching Intention and Gaming Intention found to be particularly strong. Finally, while the MSSC is an adequate measure for esports spectating, additional aspects specific to esports require further investigation, consequently, there may be more optimal measures which can be developed.

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Esports; game consumption; purchase intention; watching intention; video games; free-to-play

1. Introduction

The video games industry has become one of the largest entertainment businesses and its significance continues to grow; in 2019 revenue was estimated to total \$152bn (Anderton 2019), while recent statistics show that up to 60% of Americans play video games daily (ESA 2018). As with other forms of media products, the development of the platform economy and of digital distribution (Kenney and Zysman 2016) has facilitated a shift away from the traditional retail business models towards service-based business models as a means of both prolonging the life of individual titles and securing sustained monetisation (Stenros and Sotamaa 2009; Hamari and Lehdonvirta 2010; Gopal and Kaushik 2017). No longer are players necessarily required to simply pay a single fee at the point of purchase, instead there is a drive to create an ongoing relationship between the game, game community, and the players that involves multiple customer-facing interfaces that attempt to promote player monetisation and ongoing engagement. Perhaps the most visible business model driving the Games as a Service paradigm is the Free-to-Play (F2P), or freemium (Hamari, Hanner, and Koivisto 2017b), business model and its combination with retail or subscription models

(Hamari et al. 2017a). These additional services and game items now generate over 80% of the revenue within the video game industry (Handrahan 2019). Therefore, game companies are constantly seeking new ways to strengthen player loyalty (Tseng, Huang, and Teng 2015; Teng 2018).

In the F2P model the game itself is free to download and start playing, with revenue being generated by in-app purchases known as microtransactions (Hamari and Lehdonvirta 2010). In F2P games, players can pay for in-game currency, virtual items, or to remove restrictions on play such as time limits. The success of this approach has been such that many games have now moved to the F2P model (Hern 2016; Masters 2018; Marshall 2019), while those that remain available for up-front purchase have incorporated elements of the F2P approach, typically the use of microtransactions in purchasing loot boxes and cosmetic in-game items such as skins (Macey and Hamari 2019a).

One of the primary new channels for player acquisition has been the emergence of video game streams and, consequently, competitive video gaming known as esports (Scholz 2012; Sjöblom and Hamari 2017; Hamari and Sjöblom 2017). Esports is a phenomenon which has

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grown rapidly in recent years and has now developed a vibrant ecosystem which includes international tournaments, sponsors, teams, coaches, and vibrant communities centred around specific game titles (Sjöblom et al. 2019b). Esports, therefore, is considered a valuable means of marketing individual game titles as it furthers consumer engagement with games, adding value by recasting game consumption in the mould of the experience economy (Borowy and Jin 2013; Seo 2013).

Despite the need to understand this fast-growing industry, research on continuous usage of games in relation to esports is highly limited, with prior research mostly considering motivations for consumption. In addition to the motivations behind watching esports, research has discussed the conceptualisation of esports as a sport (Hallmann and Giel 2017; Sjöblom and Hamari 2017), and the relationships between esports and participation in gambling activities (Gainsbury, Abarbanel, and Blaszczynski 2017; Macey and Hamari 2019b). Furthermore, instead of focusing on the environment outside the game, the majority of studies have focused on how to retain the players with the mechanics inside the game. For example, work has examined the implementation of social game mechanics, new business models, virtual items, consumer identities and coercive design (Hamari and Järvinen 2011; Lin and Sun 2011; Zagal, Björk, and Lewis 2013). This is a significant gap because the intention to play the game is also heavily influenced by factors outside the game, for example by a game trailer or social activities of spectators during game nights and get-togethers, which allows people to form new kind of social communities around the games. Similarly, spectating esports may work as an entry point for a specific video game. This is highlighted by the fact that people are nowadays consuming esports just like any traditional sports (Hamari and Sjöblom 2017). To this end, we argue that esports spectating could be an important factor to explain both gaming intentions and purchasing intentions.

The objective of this study, therefore, is to examine how esports spectating affects game consumption (watching, playing, and purchasing). Our study draws from Motivations Scale of Sports Consumption to understand esports spectating. Specifically, we examine the effect of the motivational factors on watching intention. Then, we address game the effects of the watching intention on two key aspects of game consumption, that is gaming intention and purchase intention. This survey study was conducted amongst people who both watch esports and play video games ($n = 194$). The analysis of the study utilises structural equation modelling (SEM).

The theoretical contributions of this article are as follows: first, our study extends the theoretical and empirical understanding of how esports spectating leads to

game consumption. Specifically, our findings demonstrate the relationship between esports spectating motivations, watching intentions and gaming and purchase intentions. The relationships between intention to spectate esports and intention to play games, and between intention to play games and intention to make game-related purchases are particularly strong. Second, using the Motivation Scale for Sports Consumption (MSSC: Trail and James 2001) as a theoretical lens provides a better understanding of the gamer motivations in the esports context, however, the results indicate that the MSSC may not be the optimal measure for assessing motivations to spectate esports. As such, this research proposes that the development of a measure specific to esports could constitute a fruitful avenue for future research. Despite the potential limitations of the MSSC, this research supports the theoretical perspective that experiential motivations are a driver of game play, and that esports as an experiential event in itself is associated with increased game play.

The practical contributions emphasise under-utilised out-of-game factors, in particular esports, as being productive channels for increasing consumer engagement with contemporary video games. This is especially pertinent in regard to freemium video games, as their success depends on attracting a large and active player base in order to ensure profitability of such games. In addition, several key motivational factors have been highlighted as fruitful avenues for games developers and publishers can seek to promote consumer engagement with their products. Motivations driving the intention to both spectate esports and to play games include the acquisition of knowledge and the importance of using games to consolidate existing relationships with friends and family.

The remainder of this work is structured as follows. Section 2 details the theoretical framework and reviews relevant literature related to the consumption of video games in light of contemporary business models, and the spectating of esports before describing the hypotheses and their development. Section 3 describes the means of data collection and the final data sample. Section 4 communicates the analysis of the data and the results obtained from the analysis, while section 5 includes a discussion of the theoretical and practical contributions of the work, and its limitations. The final section, 6, is the conclusion.

2. Background

2.1. Theoretical framing of the study

Traditional attempts to understand consumer behaviour through economic sciences have been couched in terms

of a strictly rationalised decision-making process, characterised by models such as the Theory of Planned Behaviour (Ajzen 1985) and its precursor, the Theory of Reasoned Action (Ajzen and Fishbein 1980). The turn of the century, however, saw a shift in perspective, individual consumer judgements within a wider frame of societal and cultural practices. That is, that the act of consuming is not, in itself, a discrete point, but rather a ‘moment in almost every practice’ (Warde 2005, 137). This work adopts a practice-oriented perspective; that watching esports and playing games are two distinct, but closely connected practices which, together, inform consumer behaviour within the specific context of the contemporary environment. Indeed, the practice-oriented perspective has previously been applied to the consumption of esports, most notably in an examination of the social roles and agency of actors within the esports environment (Seo and Jung 2016). This environment is one which, in addition to the consumable products of esports and video games themselves, both informs and is informed by the practices associated with game streams and the business models employed by game developers and publishers which drive consumer engagement. With that in mind, this research does not attempt to apply or validate a specific rigid extant theory to investigate these inter-relations, instead it is an exploratory study which aims to understand the motivations or gratifications that viewers derive from esports spectating as a potential predictor of their own game consumption (i.e. playing and purchasing games). While longitudinal studies are able to measure actual behaviours as performed, the cross-sectional nature of this study requires behavioural intentions to be employed as proxies, a common approach validated across many fields (Casper 2007; Wright and MacRae 2007; Dodd and Supa 2011; Ashraf, Ismawati Jaafar, and Sulaiman 2019).

The Uses and Gratifications perspective offers a broad theoretical lens through which motivations or gratifications related to media consumption can be understood to act as predictors of media use (Katz 1987; Rubin 1994). So too, in the present study, we investigate motivations to watch esports as predictors of spectating esports, but more importantly, how they together predict the use of connected products, i.e. consuming games themselves. Uses and Gratifications has been also previously used to understand engagement with esports (Lee and Schoenstedt 2011; Bányai et al. 2019). In addition, U and G has also been shown to provide a viable means of understanding video game play (Wu, Wang, and Tsai 2010), while Motivation Theory proposes that both purchase decisions and actual purchase behaviour are influenced by both cognitive and affective motivational drivers (McGuire 1976; Dharmesti et al.

2019). Experiential factors, including intrinsic and affective motivations (Koo 2009) and attitude (Hsu and Lu 2017) have also been found to be important drivers of game play. Therefore, this research employs the Motivation Scale for Sports Consumption (MSSC; Trail and James 2001), adapted for esports, in order to understand the gratifications that watching esports affords individual consumers, an approach consistent with previous research in the field (Hamari and Sjöblom 2017; Pizzo et al. 2018; Macey, Abarbanel, and Hamari 2020).

2.2. Game consumption

The internet and associated digital technologies have enabled the birth of new business models, where users often produce and consume content on the internet for free (Reime 2011; Hamari et al. 2017a). This situation is particularly meaningful in the context of esports, both in regard to the way in which online video content is consumed, and the games which constitute the most popular esports titles. Esports broadcasts are primarily consumed via online video streaming platforms, such as Twitch.tv, where access to content is free and individual streamers derive revenue from their community, for example via subscriptions and donations, from advertising and sponsorship, or other commercial activities (Törhönen et al. 2019). Of the top ten most popular esports titles, by hours viewed, on Twitch (Ipsos.com 2019) seven employ the F2P model, and a further two games offer limited access via F2P. As such, fans of esports can both play and watch esports games without having to make any financial commitment if they so wish, although there are multiple opportunities to make game-related purchases, predominantly in the form of in-game microtransactions.

The parallel development of digital platform service providers and the Games as a Service paradigm (Gopal and Kaushik 2017) has created a situation in which the revenue streams of contemporary digital games are increasingly, if not completely, dependent on the purchases of DLC packaged, virtual goods and other value-added services (Hamari et al. 2017a). In order to attract paying players video game companies have created gameplay mechanics which make players more likely to purchase items (Hamari and Lehdonvirta 2010; Hamari and Järvinen 2011; Zagal, Björk, and Lewis 2013). However, these strategies are not without risk, if the company focuses too heavily on monetisation over enjoyment, it is likely that players will not continue to play the game (Robinson 2017), the likelihood of the player’s intention to keep playing the game also increases the potential to spend money on the game (Hamari et al. 2017a; Voigt and Hinz 2016).

2.3 Understanding esports through sports spectating

Electronic sports, commonly referred as esports, has grown rapidly during recent years, between 2016 and 2018 total viewers grew from 281 million to 380 million (Newzoo 2019). The wide viewership also attracts business in many ways, which has resulted in esports generating over \$1.1bn revenue during the year 2018, with expected revenues of \$1.8bn by the year 2022 (Newzoo 2019).

Although esports is a rapidly growing business area, its theoretical understanding is still limited. One possibility to understand the motivations for esports spectating is through traditional sports (Lee and Schoenstedt 2011; Hamari and Sjöblom 2017). Research into sports spectating has focused mostly on explaining motivations and constraints affecting consumption (Trail and Kim 2011). This includes analysing the reasons for attending sports events and which factors are related to the overall sports experience, for example: talking about past events with social contacts, or listening to the results via news or radio (Melnick and Wann 2010). Furthermore, watching sports is tied to a range of social relationships, and an individual's sports viewing habits also influence behaviour in other aspects of their life (Appelbaum et al. 2012).

Trail and James (2001) focused their research on the motivational reasons underlying sports spectating by developing the MSSC. Such an approach differs from demand-based research, which contributes to understanding short-term variable factors, for example, pleasant weather, that influence decisions to attend sports events (Trail and James 2001). In order to be able to distinguish between those who merely enjoy watching sports and those who think of it as an important part of their life, it is necessary to understand the psychological motivations behind using resources for spectating sports. A range of motivational drivers have been identified, e.g. drama, escapism, and social interaction (Appelbaum et al. 2012; Trail and James 2001), see Table 1, below, for the complete list of MSSC constructs. These factors range from empathising with the achievements of the players to socialising with other spectators. Prior research by Hamari and Sjöblom (2017) provides theoretical support that these motivational factors can be used to explain esports spectating behaviour. However, their influence on game consumption has not yet been investigated.

2.4. Hypothesis building

Current technologies have enabled video game companies to efficiently analyse in-game data gathered from players. However, assessing out-of-game factors, such

Table 1. Motivational factors for sports consumption (Trail and James 2001).

Factor	Explanation
Achievement (Ach)	Empathising and co-living with the achievements of the teams and players
Acquisition of knowledge (Kno)	Degree of consumption enabling an acquisition of knowledge
Aesthetics (Aes)	Elements of beauty or gracefulness which are inherent in the sport
Drama/eustress (Dra)	The enjoyment of uncertainty and dramatic turns of events
Escape (Esc)	Escape from day-to-day routines and distraction from daily activities.
Family (FaF)	Degree of family being involved in.
Physical attractiveness of participants (Phy)	How attractive the esports players are seen by the spectators.
The quality of the physical skill of the participants (PS)	Degree of appreciating the skills of the players.
Social interaction (Soc)	Socialising with other spectators.

as esports, is still an under-utilised area, especially from an academic research perspective. This section presents several hypotheses to explain the relationship between esports spectating and game consumption.

Existing literature which addresses the relationship between esports spectating and game consumption is currently lacking, however, a range of experiential motivations have been proposed to drive game play (Choi and Kim 2004; Hsu and Lu 2004; Chou and Ting 2003; Wan and Chiou 2006; Yee 2006; Koo 2009; Wu, Wang, and Tsai 2010). As such, it is likely that the affective experiences associated with watching esports are likely to have a positive effect not only on gaming intention. For example, watching an attractive or exciting gaming session can raise the expectation of gameplay as the player might want to advance faster in the game and gain hedonic gratifications from all key mechanisms within the game (Evans 2015). What little research exists in the field has demonstrated significant, positive associations between watching esports and amount of time spent playing games (Törhönen et al. 2020). Therefore, we hypothesise that:

Hypothesis 1 (H1): The esports watching intention is positively associated with the gaming intention for video games.

Similarly, little research exists which examines the specific relationships between watching esports and purchase intention for games, however, the limited body of existing work has shown a positive association between the two (Fernandes 2018; Törhönen et al. 2020). As with the previous hypothesis, it is likely that increased spectating of esports will make players more likely to make in-game purchases very early on, even before they have actually played the game, as they are exposed to content featuring more advanced players and game play. Likewise, it is possible that resultant continuous

esports playing has a positive effect in making purchases in the video game, either as a means of progressing within the game, or for demonstrating individual achievements and game capital, such as via cosmetic items (Cai, Wohn, and Freeman 2019). Therefore, we hypothesise that:

Hypothesis 2 (H2): The esports watching intention is positively associated with the purchase intention for video games.

The financial successes of F2P have resulted in the mass adoption of the business model across the video game industry, while particular monetisation techniques such as in-game currencies and items have been incorporated into many retail titles (Macey and Kinnunen 2020). Prior empirical research has indicated a relationship between gaming intention and purchase intention (Hamari 2015) with this finding being reinforced through the significant positive associations between time spent playing games and money spent on game-related purchases (Törhönen et al. 2020). Both cognitive and affective motivations contribute to the practices of consumption (McGuire 1976; Rohm and Swaminathan 2004), with gameplay-related factors such as social interaction, unobstructed play, economic rationale (Hamari et al. 2017a), and cosmetic appearance (Cai, Wohn, and Freeman 2019) strongly associated with in-game purchases. As such, we hypothesise that:

Hypothesis 3 (H3): The gaming intention is positively associated with the purchase intention for video games.

Achievement refers to the degree the spectators associate with people and characters in media content (Trail, Anderson, and Fink 2000). In the esports context this refers to how the spectator feels about the achievements of teams and players (Trail and James 2001). Usually, experiencing achievement along with the team or player is easier if the content being followed is easily approachable and if the spectators are more easily able to identify with a team or player (Funk and James 2006). Hamari and Sjöblom (2017) note that esports athletes can be more easily approachable than their counterparts in traditional sports because they have more interaction with their fan base. For example, many of the most popular esports stars are active streamers and use their social media accounts very actively, indeed there is a wide range of interconnected social practices within esports which transcend traditional roles and interactions (Seo and Jung 2016). This is an effective way to interact between fans and the athletes and to create more opportunities for followers to co-live the life of their idols. Therefore:

Hypothesis 4 (H4): Achievement is positively associated with the esports watching intention

The acquisition of knowledge refers to the way in which media consumption enables acquisition of knowledge about the media being consumed (Trail, Anderson, and Fink 2000). Traditional sport has two cognitive motivations for spectating: learning from teams and players, and gathering information to be shared in conversations (Hamari and Sjöblom 2017). Whereas in an ice-hockey match, one watches how the professional player skates or shoots, in esports one watches how the player executes a skill combo for a character or how the player rotates around the game map to optimise their impact during the game. According to Hamilton, Garretson, and Kerne (2014) knowledge acquisition has been proved to be an important factor within video game streaming. Based on these prior findings, we hypothesise that:

Hypothesis 5 (H5): Acquisition of knowledge is positively associated with the esports watching intention

Aesthetics refers to the elements of beauty which are inherent in the sport (Kuntz 1974; Trail and James 2001). For traditional sports visual elements have been proven to be important factors for the motivation to spectate (Wann and Wilson 1999), indeed, affective motions have also been shown to have an effect on the consumption of video game streams (Hamilton, Garretson, and Kerne 2014). Despite the impact of aesthetic factors, one could claim that the impact is not at the same level as that of traditional sports. This is because the actual players are not so highly featured in esports as compared to traditional sports. From an alternative perspective, however, the actual game events (such as team fights and chained skill combos) could be aesthetic elements in the same way as an aesthetically pleasing free kick in football. In this way the aesthetic qualities of esports are only available to 'insiders' (Ferrari 2013). Furthermore, the whole gameplay session might, for some spectators, be an aesthetic event where the spectator is able to live their fantasy in the video game world. Therefore, this study hypothesises that:

Hypothesis 6 (H6): Aesthetics is positively associated with the esports watching intention

Drama has been shown to be an important factor of sports viewing in general (Peterson and Raney 2008). Drama in this context refers to the uncertainty and dramatic turns in the outcomes of the media content, such as sports. In the esports context, some of the video game companies are intentionally increasing the potential for drama by adding randomness and asymmetry into the game (Cheung and Huang 2011). In practice this means usually increasing RNG (random number generator) situations, where an event has a

fixed chance to occur or not. When the random event occurs, surprises might happen and even the underdog has a chance to win. Furthermore, the role of technology in creating dramatic situations in mediated sports has long been established (Morris and Nydahl 1985; Gantz et al. 2006). Based on the findings, this study hypothesises that:

Hypothesis 7 (H7): Drama is positively associated with the esports watching intention

One of the most well-established motivations for watching any media content, including sports, is the possibility to experience a sense of escape (Katz and Foulkes 1962). In this context escape means both the potential to get away from everyday routines and have a positive distraction from them (Kim and Ross 2006; Wann, Schrader, and Wilson 1999). According to Kim and Ross's (2006) research, escapism was the second most important factor for playing and watching video games. Compared to traditional sports, esports offers even better potential for escape, due to the fact that esports are broadcast live every day and currently, all the broadcasts are free for spectators to watch. Furthermore, the global nature of esports is complemented by the fact that the primary means of consumption is via the internet, meaning that a wealth of content is available at almost any time of the day or night, irrespective of the consumer's physical circumstances. As such, esports offers a readily available means of gratifying escapist motivations, therefore, we hypothesise that:

Hypothesis 8 (H8): Escape is positively associated with the esports watching intention

Family refers to those media content factors related to the immediate and close individuals. For example, in traditional sports these factors refer to activities such as going out to watch game with the people close to you, talking about games before and after and so forth. The degree of interaction between friends and family as part of spectating sports may significantly affect the intention to use media content (Trail, Anderson, and Fink 2000; Wann et al. 2003). If one's parents have been taking them to the local team's games since they were young, there is a much greater likelihood that one will consume sport compared to a person whose parents did not. Indeed, an individual's father has been found to be the single most influential social agent when it comes to influencing sports consumption (Melnick and Wann 2010). However, because of the nature of esports, and the relatively novelty of the phenomenon, most parents have not really experienced esports themselves. This is likely a reason why for

example Hamari and Sjöblom (2017) have excluded the family factor and include only the social interaction factor, because it better describes how the social factor around the esports context works. However, considering that players often experience gameplay with other individuals they are close with, such as friends (Wann et al. 2003; Melnick and Wann 2010), this study retains this motivational factor and hypothesises that:

Hypothesis 9 (H9): Family and friends are positively associated with the esports watching intention

Physical attractiveness in the video gaming context means the degree to which the spectators who are viewing the players involved in the game, find them physically attractive (Hamari and Sjöblom 2017). Hamari and Sjöblom (2017) note that one could assume that the players' appearance would not be important, because most of the events show the actual players to a fairly limited degree with attention instead focused on gameplay. However, there are also events where the players are well-presented, such as pre- and post-match interviews and social media content, which exposes players to the audience. Additionally, esports organisations nowadays have personal trainers for their players so that they live a healthy life style so that they can perform better. Indeed, the stereotypes on unfit and untidy players are in the past (Hamari and Sjöblom 2017). Finally, attendance at live events in particular has been shown to be significantly associated with appreciation of physical attractiveness (Sjöblom, Macey, and Hamari 2019a). Considering the amount that players are shown on broadcasts in esports compared to traditional sports, this study hypothesises that:

Hypothesis 10 (H10): Physical attractiveness is positively associated with the esports watching intention

In traditional sports the professional players possess a skill level far beyond the average hobbyist and these skills have been found to be a significant motivator for the consumption of sports (Trail and James 2001; Wann, Schrader, and Wilson 1999; Won and Kitamura 2006). Hence, many sports followers admire their skills and dream about similar skill levels. Esports is no different; in order to be a professional, players must put in countless hours of practice in order to develop skills that enable them to compete at a high level. This has been supported by previous research which has found that the majority of esports spectators appreciate and admire the skills of the professional esports players (Hamari and Sjöblom 2017). Given that many esports consumers also play the same games that they spectate (Seo and Jung 2016), they

are more fully able to appreciate the level of skill demonstrated by professional players. Consequently, based on existing research, we hypothesise that:

Hypothesis 11 (H11): Player's skills are positively associated with the esports watching intention

Social interaction incorporates the gratifications related to socialising with other media consumers (Hamari and Sjöblom 2017). Socialising has been shown to have a great impact in both traditional sports and esports (Hamilton, Garretson, and Kerne 2014; Wenner and Gantz 1998; Lee and Schoenstedt 2011). According to Hamari and Sjöblom (2017) esports spectating is usually linked to a stream's own chat that can be used to comment on the events occurring in the game and cheer for teams and players. The computer mediated structure of the esports means that it is quite logical to form social connections through the same channels. Indeed, the strong sense of community is a notable factor of the development of esports from a niche hobby into a mainstream phenomenon (Taylor, 2012; Seo and Jung 2016). The other point of note is the popularity of Voice-over-Internet-Protocol (VOIP) and other similar services among esports followers in particular, and video gamers in general. The majority of major esports organisations and companies have,

for example, their own Discord (popular VOIP service) servers, where esports fans can meet, greet and talk about esports events. Hamilton, Garretson, and Kerne (2014) highlight two key reasons to watch streams: unique content of a particular stream and interacting with and participating in a stream's community. Additionally, a stream's community is an important factor in spectating (Sjöblom and Hamari 2017) as is the wider use of social media in general (Sjöblom et al. 2018). We posit that:

Hypothesis 12 (H12): Social interaction is positively associated with the esports watching intention

The research model is presented below in Figure 1.

3. Methods and data

3.1 Data collection

The data to test our model was collected using a survey. We distributed it via social media (Facebook, Twitter) and video game forums. The focus of the research was on individuals who both play F2P video games and watch esports. Respondents were asked how frequently they watch and play video games. Initially, we received 220 responses. 26 responses were removed

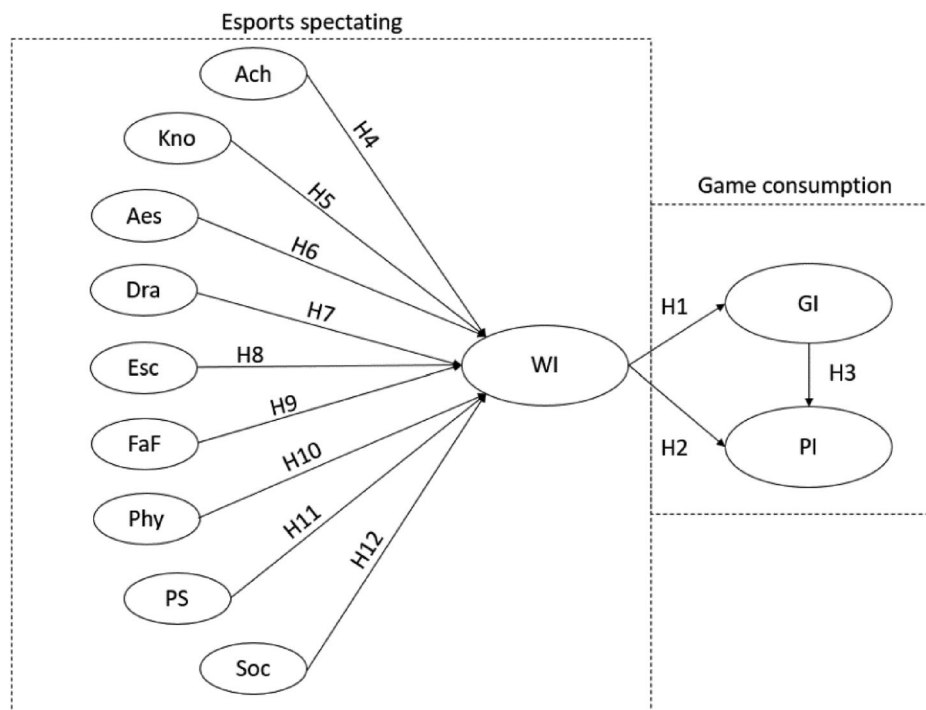


Figure 1. Research model.

Legend: Ach = Achievement, Kno = Acquisition of Knowledge, Aes = Aesthetic Appreciation, Dra = Drama, Esc = Escape, FaF = Friends and Family, Phy = Physical Attraction, PS = Players' Skills, Soc = Social Interaction, WI = Watching Intention, GI = Gaming Intention, PI = Purchase Intention. Legend: Ach = Achievement, Kno = Acquisition of Knowledge, Aes = Aesthetic Appreciation, Dra = Drama, Esc = Escape, FaF = Friends and Family, Phy = Physical Attraction, PS = Players' Skills, Soc = Social Interaction, WI = Watching Intention, GI = Gaming Intention, PI = Purchase Intention.

from data, because the respondents did not meet the predetermined criteria of both watching esports and playing F2P video games. The final data set, therefore, constituted 194 valid responses. Sample demographics are presented in Table 2. This research was conducted wholly within Finland and, as such, it conforms to the guidelines of ‘Ethical Principles of Research in the Humanities and Social and Behavioural Sciences’ of The Finnish Advisory Board on Research Integrity (TENK).

3.2 Measurement

This study applied previously validated scales. The items measuring the motivation for spectating esports were adapted from the Motivation Scale for Sport Consumption (MSSC; Trail and James 2001) which focuses on spectator’s motivations to watch traditional sports. This consists of 27 individual items, comprising nine motivational factors, each rated on a 7-point Likert scale. We adapted the ‘family’ construct to incorporate both ‘family and friends’, as esports are primarily popular with young adults, meaning that the current generation of parents are unlikely to be familiar with esports, compared to the familiarity level with traditional sports. The *Watching Intention* scale was adapted from previously validated use intention scales by Bhattacharjee (2001) and Venkatesh and Davis (2000). The scales for *Gaming Intention* and *Purchasing Intention* were adapted from Hamari et al. (2017a). See appendix A for the full list of model items.

Table 2. Sample characteristics.

Variable	Category	Frequency
Gender	Female	14 (7%)
	Male	177 (91%)
	Prefer not to say	2 (1%)
	Other	1 (1%)
Age	15–19	16 (8%)
	20–24	69 (36%)
	25–29	66 (34%)
	30–34	30 (15%)
	35–39	11 (6%)
	40+	2 (1%)
Employment	Full time	80 (41%)
	Part time	15 (8%)
	Student	92 (47%)
	Unemployed	3 (2%)
	Other	4 (2%)
Education	No education	3 (2%)
	Basic education	6 (3%)
	Secondary education	72 (37%)
	Higher education	113 (58%)
Income	< 9 999 €	62 (32%)
	10 000 €–19 999 €	35 (18%)
	20 000 €–29 999 €	14 (7%)
	30 000 €–39 999 €	24 (12%)
	40 000 €–49 999 €	23 (12%)
	50 000 € -	36 (19%)

4. Data analysis and results

4.1 Analysis

Partial Least Squares Structural Equation Modelling (PLS-SEM) was employed to test the research model (Figure 2) as it is best suited to predictive studies (Chin, Marcolin, and Newsted 2003) utilising psychometric constructs and those featuring latent, formative and reflective constructs (Hair et al. 2016). In addition, PLS-SEM is the form of multiple linear regression which is recommended when employing a self-selected data sample (Chin and Newsted 1999). We detected no Common Method Bias issues as variance inflation factors (VIF) of latent variables were below the threshold of 3.3 (Kock 2015).

Validity and reliability were tested by examining Composite Reliability (CR), Average Variance Extracted (AVE) and the square root of AVE. The accepted threshold values for CR and AVE are .7 and .5, respectively, which all the constructs exceeded. In order to establish Discriminant Validity, the square root of AVE must be greater than any correlation with other constructs in the model, once again all constructs were found to conform to this rule. Finally, construct validity was established as all item loadings were found to be high at > .5 (Hair et al. 2010; Kline 2010; Schumacker and Lomax 2012). Detailed information on construct reliabilities and validities are presented in Tables 3–5.

4.2 Results

The aim of the research was to examine the relationship between motivational factors of spectating esports (MSSC), the intention to watch esports (WI), the intention to play video games (GI), and purchasing intention (PI). The results are presented with standardised effects and their statistical significance in Figure 2. Furthermore, a summary of the results is provided in Table 6.

The model was found to explain 25% of the overall variance in *Gaming Intention* and more than 16% of *Purchasing Intention*, while it explains 40% of *Watching Intention*. The model shows strong support for game consumption with the effects of *Watching intention* on *Gaming Intention* and, furthermore, of *Gaming intention* on *Purchasing Intention*.

Finally, the model shows that the relationship between watching intention and purchasing intention to be mediated by gaming intention for, while the direct effect is not statistically significant, both the indirect and total effects are: $\beta = .189, p < .001$ and $\beta = .281, p = .001$, respectively.

5. Discussion

The objective of the study was to empirically investigate the relationship between esports spectating motivations

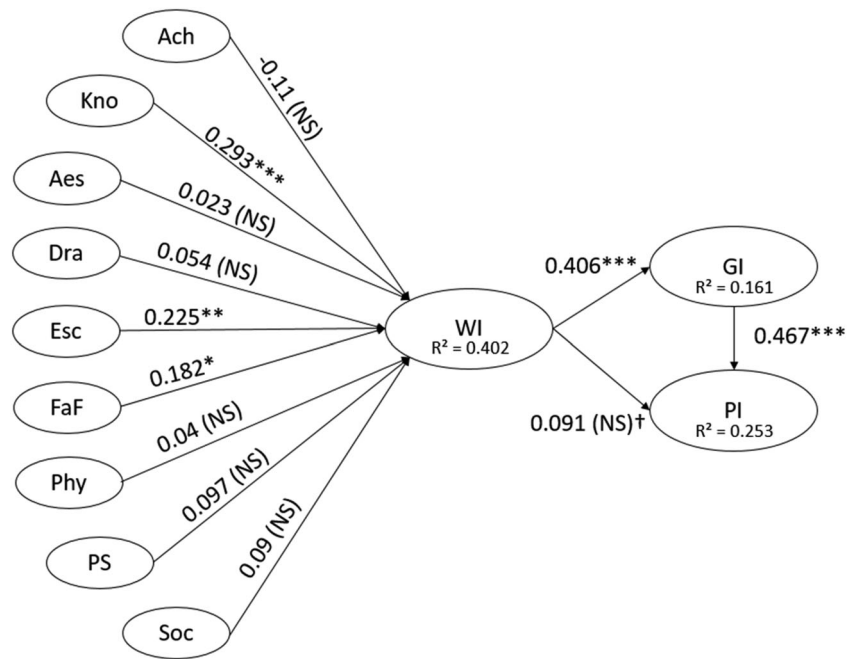


Figure 2. Research model with results.

Note: † For Indirect and Total Effects, see Table 6. Legend: Ach = Achievement, Kno = Acquisition of Knowledge, Aes = Aesthetic Appreciation, Dra = Drama, Esc = Escape, FaF = Friends and Family, Phy = Physical Attraction, PS = Players' Skills, Soc = Social Interaction, WI = Watching Intention, GI = Gaming Intention, PI = Purchase Intention.

and factors on game consumption, that is, the effects of watching intention on gaming and purchasing intentions. The key findings are discussed in combination with the key implications of the study for both research and practice.

This study validated the relationship between motivations and intention to spectate esports and further, the relationship between intention to spectate esports, intention to play and pay; the relationship between the intention to watch esports and the intention to play video games was found to be particularly strong.

The key relationships (Hypothesis 1–3) were found to be statistically significant, at the level of $p < .001$. However, it is important to note that *watching intention* had no statistically significant direct relationship with *purchase intention*, instead we can see that the relationship is fully mediated by *gaming intention*. This can be explained by the fact that the unrestricted availability of esports content means no financial outlay is required to consume content, it is not necessary to own a game in order to watch it. If, on the other hand, watching esports engenders a desire to play the game, an individual is more likely to invest in the relevant game. Indeed, the relationship between *gaming intention* and *purchase intention* is the strongest present in the model with a path coefficient of .467.

This work validated the use of MSSC in esports context; specifically, three motivational factors were found to

demonstrate a significant relationship with the intention to watch esports: *Acquisition of knowledge* (H5); *Family and Friends* (H9); and *Escape* (H8). In regard to (H5), one would expect that if the player is willing to use extra resources for gathering information related to a game, it is likely that the player also has a strong intention to watch the games. The finding that *Family and Friends* (H9) demonstrated statistically significant effects in regard to *Watching Intention* is especially noteworthy when considering the fact that *Social Interaction* was not found to have a statistically significant relationship. This research, therefore, suggests that reinforcing existing social connections, with family and friends, is more important than forging new social interactions, thereby supporting previous research in traditional sports consumption (Melnick and Wann 2010). Finally, *Escape* was found to demonstrate statistically significant effects in regard to *Watching Intention*, but have no indirect effect on purchasing intention, unlike *Acquisition of knowledge* and *Family and Friends*. This reflects the ready availability of free content online, even among major esports titles, meaning that financial outlay is not necessarily required in order to play contemporary games.

Interestingly, other than the three factors mentioned above, none of the other factors of the MSSC were found to have statistically significant relationships with *Watching Intention*, despite the MSSC explaining 43%

Table 3. Discriminant validity.

	Ach	Aes	Dra	Esc	FaF	Gl	Kno	PI	PS	Phy	Soc	WI
Ach	0.913											
Aes	0.216	0.900										
Dra	0.141	0.295	0.807									
Esc	0.333	0.353	0.357	0.708								
FaF	0.336	0.316	0.278	0.406	0.781							
Gl	0.027	0.207	0.167	0.339	0.298	0.852						
Kno	0.333	0.319	0.222	0.497	0.358	0.049	0.919					
PI	0.095	0.215	0.221	0.281	0.276	0.503	0.072	0.851				
PS	0.292	0.348	0.454	0.389	0.344	0.360	0.246	0.249	0.869			
Phy	0.191	0.204	0.085	0.065	0.176	0.031	0.089	0.069	0.110	0.800		
Soc	0.322	0.331	0.164	0.375	0.585	0.213	0.438	0.133	0.283	0.190	0.829	
WI	0.202	0.318	0.303	0.510	0.457	0.406	0.520	0.279	0.350	0.129	0.426	0.876

Ach = Achievement, Kno = Acquisition of Knowledge, Aes = Aesthetic Appreciation, Dra = Drama, Esc = Escape, FaF = Friends and Family, Phy = Physical Attraction, PS = Players' Skills, Soc = Social Interaction, WI = Watching Intention, Gl = Gaming Intention, PI = Purchase Intention.

of its variance. With this in mind, although MSSC has proven to be an adequate measure for understanding motivations to consume esports, further investigation is warranted and it may be that an improved measure can be developed.

The *Achievement* construct was expected to have substantial positive effect on WI (H4), yet this was not supported. One could claim that without the geographical or community-based links present in traditional sports, fan identity is more fluid and forming a bond with a specific team is more difficult, unlike in many traditional sports (Heere and James 2007). However, the situation is likely to change in the future as teams become strongly associated with a certain country, region, or other location.

The *Aesthetic Appreciation* construct was also found to have close to no effect at all, meaning H6 was not supported. The reason for this may be that video games in general, and especially those popular within the esports scene, tend to have multi-dimensional aspects and they require a certain level of both knowledge and concentration to be followed comprehensively (Ferrari 2013). Therefore, for some spectators it may not be possible to enjoy the aesthetic aspects of the game while, at the same time, trying to follow the game itself.

Table 4. Construct validity and reliability.

	Cronbach's α	rho_A	CR	AVE
Ach	0.901	0.916	0.938	0.834
Aes	0.884	0.893	0.928	0.811
Dra	0.729	0.744	0.848	0.651
Esc	0.66	1.235	0.737	0.502
FaF	0.67	0.717	0.821	0.61
Gl	0.808	0.829	0.888	0.726
Kno	0.908	0.909	0.942	0.845
PI	0.807	0.841	0.886	0.724
PS	0.839	0.877	0.902	0.756
Phy	0.784	0.874	0.841	0.64
Soc	0.773	0.814	0.868	0.688
WI	0.848	0.849	0.908	0.767

Ach = Achievement, Kno = Acquisition of Knowledge, Aes = Aesthetic Appreciation, Dra = Drama, Esc = Escape, FaF = Friends and Family, Phy = Physical Attraction, PS = Players' Skills, Soc = Social Interaction, WI = Watching Intention, Gl = Gaming Intention, PI = Purchase Intention.

The fact that no statistically significant relationship was found to exist between *Drama* and *Watching Intention*, was a further contrast to the situation within traditional sports, where drama is one of the biggest motivators for consumption (Trail and James 2001). However, the result is not surprising, given similar findings in prior work (Hamari and Sjöblom 2017).

Table 5. Item loadings.

Item ← Construct	Loading
ACH1 ← Ach	0.914
ACH2 ← Ach	0.932
ACH3 ← Ach	0.894
AES1 ← Aes	0.879
AES2 ← Aes	0.917
AES3 ← Aes	0.904
DRA1 ← Dra	0.887
DRA2 ← Dra	0.768
DRA3 ← Dra	0.760
ESC1 ← Esc	0.599
ESC2 ← Esc	0.505
ESC3 ← Esc	0.944
FAF1 ← FaF	0.831
FAF2 ← FaF	0.876
FAF3 ← FaF	0.609
GI1 ← Gl	0.888
GI2 ← Gl	0.913
GI3 ← Gl	0.746
KNO1 ← Kno	0.904
KNO2 ← Kno	0.902
KNO3 ← Kno	0.950
PHY1 ← Phy	0.896
PHY2 ← Phy	0.796
PHY3 ← Phy	0.696
PI1 ← PI	0.902
PI2 ← PI	0.908
PI3 ← PI	0.729
PS1 ← PS	0.780
PS2 ← PS	0.915
PS3 ← PS	0.907
SOC1 ← Soc	0.740
SOC2 ← Soc	0.839
SOC3 ← Soc	0.901
WI1 ← WI	0.866
WI2 ← WI	0.903
WI3 ← WI	0.859

Legend: Ach = Achievement, Kno = Acquisition of Knowledge, Aes = Aesthetic Appreciation, Dra = Drama, Esc = Escape, FaF = Friends and Family, Phy = Physical Attraction, PS = Players' Skills, Soc = Social Interaction, WI = Watching Intention, Gl = Gaming Intention, PI = Purchase Intention.

Table 6. Indirect and Direct Effects.

	Indirect			Direct			Hypothesis
	β	<i>T</i>	<i>sig.</i>	β	<i>T</i>	<i>sig.</i>	
WI → GI	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	0.406	4.503	0.000***	H1: Supported
WI → PI	0.189	3.635	0.000***	0.091	1.082	0.279	H2: Not Supported†
GI → PI	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	0.467	6.125	0.000***	H3: Supported
<i>Ach → GI</i>	-0.045	1.544	0.123	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	-
<i>Ach → PI</i>	-0.031	1.449	0.147	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	-
<i>Ach → WI</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	-0.11	1.692	0.091	H4: Not Supported
<i>Kno → GI</i>	0.119	3.571	0.000***	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	
<i>Kno → PI</i>	0.082	2.822	0.005**	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	
<i>Kno → WI</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	0.293	4.84	0.000***	H5: Supported
<i>Aes → GI</i>	0.01	0.334	0.739	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	
<i>Aes → PI</i>	0.007	0.322	0.748	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	
<i>Aes → WI</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	0.023	0.34	0.734	H6: Not supported
<i>Dra → GI</i>	0.022	0.798	0.425	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	
<i>Dra → PI</i>	0.015	0.767	0.443	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	
<i>Dra → WI</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	0.054	0.825	0.409	H7: Not Supported
<i>Esc → GI</i>	0.091	2.342	0.019*	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	
<i>Esc → PI</i>	0.063	1.873	0.061	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	
<i>Esc → WI</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	0.225	2.926	0.003**	H8: Supported
<i>FaF → GI</i>	0.074	2.03	0.042*	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	
<i>FaF → PI</i>	0.051	1.97	0.049*	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	
<i>FaF → WI</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	0.182	2.263	0.024*	H9: Supported
<i>Phy → GI</i>	0.016	0.597	0.55	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	
<i>Phy → PI</i>	0.011	0.578	0.564	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	
<i>Phy → WI</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	0.04	0.596	0.551	H10: Not Supported
<i>PS → GI</i>	0.039	1.13	0.259	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	
<i>PS → PI</i>	0.027	1.052	0.293	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	
<i>PS → WI</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	0.097	1.278	0.201	H11: Not Supported
<i>Soc → GI</i>	0.037	1.105	0.269	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	
<i>Soc → PI</i>	0.025	1.087	0.277	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	
<i>Soc → WI</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	0.09	1.163	0.245	H12: Not Supported
<i>Construct</i>	<i>R2</i>	<i>adj R2</i>					
WI	0.43	0.402					
PI	0.26	0.253					
GI	0.165	0.161					

Legend: * $p = .05$, ** $p = .01$, *** $p = < .001$; bold text shows supported hypotheses. † H2 hypothesised a direct effect between WI and PI, which was not observed, however, a statistically significant indirect effect was present between WI and PI.

The potential reasons why *Physical Attraction* (H10) and *Players' Skills* (H11) were not found to have a statistically significant relationship to *Watching Intention* are likely explained by the same reasons. First, although players are responsible for the outcome of a game, they are often not the focus of broadcast content. Second, the esports players are not demonstrating physical progress in the same way as in traditional sports, meaning that there is less opportunity for appreciation of either physical appearance or skills. Spectators, therefore, can appreciate the outcome without observing how it was achieved. It is worth noting that the significance of *Physical Attraction* has been shown to vary according to the differing contexts of consumption, online versus attendance at live events (Sjöblom et al. 2019b). As such, the fact that esports is primarily consumed via online broadcast is likely to have affected this result.

Another factor that has been proven to be very important in previous research is social interaction (Cheung and Huang 2011; Georgieva et al. 2015; Hamilton, Garretson, and Kerne 2014; Sjöblom and Hamari 2017). However, as discussed previously, this was not found to be the case in

this research, meaning that H12 was not supported. It is likely that the historical development of esports, combined with the fact that esports consumption predominantly takes place online has resulted in social practices which are distinct from traditional sports (Seo and Jung 2016).

5.1 Theoretical Implications

The key contribution of the research is the theoretical and empirical evidence to the relationship between esports spectating and game consumption. Here, the relationship between *Watching Intention* and *Gaming Intention* is critical: in traditional sports many of the fans only watch the sport but, depending on game title, between 74% and 86% of esports spectators both watch and play (Pannekeet 2019). As such, this work lends support to both the proposed theoretical perspective that experiential motivations drive game play (Choi and Kim 2004; Hsu and Lu 2004; Chou and Ting 2003; Wan and Chiou 2006; Yee 2006; Koo 2009; Wu, Wang, and Tsai 2010), and, specifically, that spectating esports is associated with increased game play (Törhönen et al. 2020).

Esports is potentially one of the most important entry channels for the actual video game, this is especially so in regard to freemium video games, as their success depends on attracting a vast number of players in order that the proportion of paying players is large enough for the company to be profitable (Hamari et al. 2017a). Indeed, our findings show that purchase intention is explained both by the watching intentions and gaming intentions, thereby demonstrating how esports spectating leads to game consumption. This result highlights the theoretical perspective in which esports is conceptualised not simply as a reframing of traditional sports, but as a consumable event in the mould of the experience economy (Borowy and Jin 2013). Furthermore, in addition to constituting a product in, and of, itself, esports also has value as a vehicle for prolonging customer engagement in video games (Fletcher 2015).

Indeed, this suggests a further theoretical contribution in that the U&G approach is one which has typically been employed as a means of understanding discrete behaviours, this research however, demonstrates that it can also contribute to understanding those practices which are distinct, but closely associated with the primary area of interest. For example, the results presented in this work show that motivational drivers for esports spectating also apply to gaming, but that only some of these motivations influence purchase intention, despite the fact that no such effects were hypothesised. As such, we can see that although the practices of watching, playing, and purchasing video games are highly connected, they differ in meaningful ways.

Finally, the unsupported hypotheses suggest that while the MSSC is proven to be an adequate measure on sports spectating, additional aspects specific to esports require further identification and investigation. And that there may be more optimal measures which can be developed. In particular, this research suggests that the issue of social connections is particularly complex, with existing connections of family and friends being more important than forging new social connections. Another area of notable difference is the lack of statistically significant results between the construct of *Drama* and intention to watch esports, particularly considering that earlier research has stated that a dramatic turn of events during the stream increases viewership (Karhulahti 2016) it may be that the measures need to be adjusted to investigate specific types of in-game drama. Finally, it is worth noting that although *Physical Attraction* was not found to be a significant motivator here, it has been shown to vary according to the differing contexts of consumption, online versus attendance at live events, (Sjöblom et al. 2019b). As such, this research further demonstrates the need for theoretical models of esports consumption to

be developed. Therefore, the motivations for watching esports may be more reflective of gaming motivations in general. A fruitful avenue for future research would be an examination of the similarities and differences between motivations for watching others play games, and the motivations driving participation in gaming.

5.2 Practical implications

In regard to practical issues, actors working in the esports scene may be required to acknowledge that the field cannot be developed with the same patterns as traditional sports. This provides an opportunity to develop new models or approaches to determine the actual reasons behind watching esports and their implications.

For example, the importance of knowledge acquisition means that it is critical to develop channels where fans can gather information related to the games and players, or link to those channels which are heavily utilised by consumers. Knowledge acquisition is a continuous process, by providing and continuously developing tools for consumers, companies within the esports industry are improving their chances for encouraging continued consumer engagement and consumption.

The results of this research also revealed that friends are, to some extent, an important factor for spectating esports as they provide a substantial part of the social experience for spectators. In practice, this means that spectators need more tools to search for, and to share, videos of previous games and highlights, in order that conversation between friends can also occur between games. Friends have been proven to be a significant influence on intention to continue playing the video game and, therefore, the same may also be the case with esports spectating.

In regard to the freemium model, the importance of continuous usage and, consequently, willingness to use money for the video game is vitally important (Robinson 2014, 2017). However, it is possible that there are under-utilised out-of-game factors, like the esports scene, which further increase the possibility of successful customer journey to consume a video game. While video game companies have been able to use in-game data to improve player engagement, there remains significant potential to further enhance player engagement through of out-of-game factors. The video games industry must work to identify additional factors because they could significantly influence the player's behaviours to both play and make in-game purchases. We can see that esports is potentially one of the most important entry channels for the actual video game; there is no better advertisement than footage showing the best players playing the game and engaged esports spectators are positively associated with increased purchase intentions.

5.3 Limitations and future research

There are some limitations to this study that must be considered. Generally, studies using online surveys have two typical limitations: the data is self-reported, and the participants are self-selected. Self-reported data is dependent on the fact that users are actively engaged in the behaviour in question, in this case watching esports and playing games, and willing to participate in actions related to it, such as participating in a study. Without high enough engagement, the data quality may suffer due to non-conscious responding. We tried to overcome this issue by selecting participants who fit the sample as well as possible.

A particular feature of this sample is the fact that 91% of respondents reported being male, as such the findings are not generalisable to the wider public. However, the demographic characteristics of the sample are consistent with both market research (Statista 2017) and those employed in numerous other academic studies investigating similar populations, i.e. engaged esports consumers and video game players (Jansz and Martens 2005; Sjöblom et al. 2017; Macey and Hamari 2019b).

As described previously, the sample consisted of those who played F2P games, and the questionnaire used to collect data was framed in those terms. However, the items on purchase intention (Appendix A) do not include explicit reference to in-game spending, as such it is possible that some respondents may have interpreted these items to refer to wider forms of game-related purchases. Despite this possible limitation, we are confident that the framing of the questionnaire will have mitigated any such responses. Furthermore, the hypothesised relationship that gaming intention predicts in-game purchase intention (H3), and the results of this research, are supported by existing research in the field (Hamari 2015; Hamari and Keronen 2017; Hamari et al. 2017a; Cai, Wohn, and Freeman 2019; Törhönen et al. 2020).

The MSSC may be a potential limitation in regard to the study of esports, even if scale has been proved to work well within scope of traditional sports. It is likely that the norms of esports differ to traditional sports, making it challenging to shed light on the true motivations. Therefore, in practice, this could mean that the motivational scale employed in this research does not include the entire motivational spectrum of esports. As playing behaviour is a multifaceted phenomenon, it is likely that within the esports context, consumer motivations are more complicated; as observed in this study, the relationship between social interaction and intention to watch was non-significant, and counterintuitive.

Finally, an alternative explanation for the observed relationships is that the motivations for watching esports

may be correlate with the motivations for gaming, however, these were not tested in this model. As such, this would be a fruitful avenue for future research.

6. Conclusion

In summary, this work highlights the significance of the relationship between *watching intention* and *gaming intention*, as shown by the fact that the relationship between *watching intention* and *purchase intention* is fully mediated by *gaming intention*. This work also demonstrates that the MSSC is an appropriate measure for esports spectating, but it is likely that it can be improved upon in order to fully explain motivations for watching esports content. Indeed, there may be significant correlation between motivations to watch esports and motivations to play games in general. We also urge researchers to study which factors increase the gratification of esports spectating experience. For example, with social interaction, it may be that there is no motivational reason to watch the actual games, but it may increase the experience quality overall if one can have conversation about the game and events instead of spectating them alone. Similarly, greater understanding is needed of the ways in which drama is perceived within the often fast-paced context of esports matches. Related theoretical models could contribute to overall measures of the motivations to watching esports, and further, on game consumption. This study takes first steps towards this direction and provides a timely attempt to shed light on a topic of increasing importance.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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Appendix A

Survey items.

Achievement (ACH)

- ACH1. I feel like I have won, when the team wins
- ACH2. I feel personal sense of achievement when the team does well
- ACH3. I feel proud when the team plays well

Knowledge (KNO)

- KNO1. I regularly check the statistics of specific players or teams
- KNO2. I usually know the team's match history
- KNO3. I read the scores and team statistics regularly

Aesthetics (AES)

- AES1. I appreciate the beauty inherent in the game
- AES2. There is certain natural beauty to the game
- AES3. I enjoy the gracefulness associated with the game

Drama (DRA)

- DRA1. I prefer a 'close' game rather than a 'one-sided' game
- DRA2. A game is more enjoyable to me when the outcome is not decided until the very end
- DRA3. I enjoy the drama of the final round or team fight in the game

Escape (ESC)

- ESC1. Video games represent an escape for me from my day-to-day activities
- ESC2. Video games are a great change of pace from what I regularly do
- ESC3. I look forward to upcoming leagues and tournaments because they are something different to do

Family and Friends (FaF)

- FAF1. I like watching games with my friends
- FAF2. I like watching games with others interested in eSports
- FAF3. I like watching games with my family

Physical attraction (PHY)

- PHY1. I enjoy watching players who are physically attractive
- PHY2. The main reason I watch is that the players are attractive
- PHY3. Individual player's 'sex appeal' is a big reason I watch

Player skills (PS)

- PS1. The personal skills of the players are something I appreciate
- PS2. Watching a well-executed play performance is something I enjoy
- PS3. I enjoy a skillful performance by the team

Social interaction (SOC)

- SOC1. Interacting with other fans is an important part of watching eSports
- SOC2. I like to talk to other people when watching the games
- SOC3. eSports broadcasts are great way to socialise with other people

Watching intention (WI)

- WI1. I predict that I will keep watching esports streams in the future at least as much as I have watched lately
- WI2. I intend to watch esports streams at least as often within the next month as I have previously watched
- WI3. I plan to watch esports streams during the next month

Gaming intention (GI)

- GI1. I predict that I will keep playing video game(s) in the future at least as much as I have played lately
- GI2. I intend to play video game(s) at least as often within the next month as I have previously played
- GI3. I plan to play video game(s) during the next month

Purchase intention (PI)

- PI1. I predict that I will use money on video game(s) in the future at least as much as I have used lately
 - PI2. I intend to use money on video game(s) at least as much within the next month as I have previously used
 - PI3. I plan to use money on video game(s) during the next month
-