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USER SATISFACTION ON SOCIAL MEDIA PROFILE OF E-SPORTS ORGANIZATION

Abstract. *E-sport is one of the most rapidly growing branches of modern entertainment. Many factors influence this rapid progress such as easy access to the broadcast of matches, free e-sport games, or enjoying the favourite match are just a few of them. Moreover, the regularly growing number of tournaments organized (both online and hosted in the largest sports halls in the world) makes more and more older people interested in this phenomenon. Apart from the pure entertainment aspect, electronic sports offer great business opportunities. Proper use of social media allows generating high financial results for investors. The paper is dedicated to the user's satisfaction from using social media profiles of e-sport organizations, teams, and players. The research covers the basic information about e-sport, social media, and e-marketing forms on social media for e-sport organizations. This work aims to assess the factors influencing the feeling of satisfaction with the use of the social media profile. The purpose of this study is to investigate the influence of Perceived Profile Usefulness, Perceived Entertainment, Identification with Organization and Players, and satisfaction on users' Intention to Follow and Recommend social media profile of e-sport organization. The study tested and used the model in the context of social media profiles. The partial least square method of structural equation modelling is employed to test the proposed research model. The study utilizes an online survey to obtain data from 209 Polish e-sport enthusiasts (both players and spectators). The data set was analyzed using SmartPLS 3 software. The obtained results showed that the best predictor of users' Satisfaction is Integration with Organization and Players, followed by Perceived Entertainment. Satisfaction predicts users' Intention to Follow and Recommend the social media profile of e-sport organization. The findings improve understanding regarding the marketing actions in e-sport's social media profiles, and this work is therefore of particular interest to e-sport organizations, e-sport teams, and e-sport players.*

Keywords: e-sport, social media profile, satisfaction, computer games, social media marketing.

Introduction. The concepts of physical activity, sport, and competition have accompanied man for thousands of years. Going through history, one could observe a regular decrease and increase in people's interest in sports culture over time. The development of technology has led to the appearance of new solutions in many aspects of human life – including sport. Upgraded equipment, a completely different approach to training, or a different view of dietary management for athletes, is only a small percentage of the changes taking place. A real revolution could be considered as activities treated by the community as new sports disciplines. An example of such a phenomenon is e-sport. One of the definitions is that it is «a form of sport in which basic activities are mediated by electronic systems» (Hamari and Sjöblom, 2017). Another one is about e-sport as a phenomenon in which «electronic athletes operate in digitally represented sporting worlds» (Hemphill, 2005). However, to put it in a more realistic view, sport is «a form of competition (both professional and amateur) in video games. Mostly it is coordinated by special leagues, lists and tables and tournaments in which players play in teams (or individually) or other organizations sponsored by specific operators» (Hamari and Sjöblom, 2017). The last definition gives the most current view of what-sport is today.

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Literature review. An event that could be dated as the official birth of e-sport is the «Spacewar!» game tournament played in 1972 at Stanford University in the USA. The competition was called Intergalactic Spacewar Olympics, and the prize for the winner was a one-year subscription to Rolling Stone magazine (Stroh, 2017). In the eighties and nineties, arcade games and simulators began to be slowly replaced by Nintendo consoles and desktops (PCs). At the end of the 1990s, legendary games such as Doom, Quake, Starcraft, and Counter-Strike appeared on the market. As it later turned out – extremely important for the emerging e-sport market. At the beginning of the 21st century, the first big tournaments are organized, creating trends in the industry. However, the real revolution in e-commerce has taken place in South Korea. Korea has become a place where broadband Internet services have developed quickly enough to enable the rapid evolution of Internet business, including online games (Jin, 2010). Korean players dominated most tournaments for years, leaving the West far behind. An example of Korean dominance in one of the most crucial e-sport games – League of Legends – is the team of SK Telecom T1, which in 2013-2016 won the most important tournament of the year – World Championship three times. The development of e-sport is undeniable. It is one of the fastest-growing branches of the electronic entertainment market. Although e-sport itself is a very young, and research on it is still in its early stages (Pizzo et al., 2018), its reach is global. In 2019, global revenues from e-sport exceeded \$1 billion for the first time, of which almost half (\$409 million) was generated by the United States and \$210 million by China (Newzoo, 2020). There is also a significant increase in the number of viewers of e-sport games. Year after year, the audience expands with new enthusiasts of electronic sports. In 2019, 454 million unique viewers watched the broadcast of the e-sport tournament, an increase of 15% on the previous year (Newzoo, 2020). It is predicted that in 2022 the audience will reach 645 million viewers. Such increases are caused, i.e., by streaming platforms, among which twitch.tv dominates. Twitch is the fourth largest Internet traffic site in the United States (Burroughs and Rama, 2015). The key to success is not only the ability to watch broadcasts of the most significant e-sport events but also to share activities with the audience. The problem of treating e-sport as a real sports discipline has been raised for a very long time. It is necessary to define the sport, and then specific features categorizing traditional sport and electronic sport (Jenny et al., 2017). Sport is defined by physical preparation, competition, specific rules of the game, and organizational and sponsorship stability (Pizzo et al., 2018). The analysis of each aspect confirms that everything except physicality is present in e-sport. The rivalry between individual players or teams is the fundamental factor defining electronic game tournaments. Each e-sport game has its own rules and a specific goal to achieve to win the game. E-sport is a very intensively sponsored industry. Approximately 82% of the total revenue from e-sport in 2019 (\$897 million) comes from sponsorship, advertising, and media rights (Newzoo, 2020). Importantly, sponsoring generates the most, as much as 456 million, which is a 34% increase compared to 2018 (Newzoo, 2020). The biggest tournaments in the world tempt players with a high prize pool.

An example is the annual tournament «The International» in the second most popular MOBA game, Dota 2. In 2016 the prize pool of the event exceeded 20 million dollars, and from year to year, this value is consistently growing (Hallmann and Giel, 2018). The amount of money invested in the market confirms that the area of electronic sports could no longer be seen as a hobby for a small group of fans, but an industry on a global scale, which proves its importance in the global economic market (Stroh, 2017). Moreover, a correct understanding of whether e-sport could be regarded as a sport allows for the adoption and application of marketing techniques similar to those of the real world into the digital world (Pizzo et al., 2018). For example, the approach to marketing in e-sport on the same or similar basis as in «classical» sport, i.e., football or basketball. Therefore, if the aspect of physical preparation, which for years has been described as the primary difference between traditional and electronic sport, is omitted, it should be stated that e-sport is a sport (McCutcheon et al., 2018).

E. Witkowski (2012) has a different approach to the topic, which has just delved into the physical and

mental preparation of players. She states that «a balanced player's body is a representation of the physicality that is required to play at a high level (...). The correct breathing during the game, the composure and body stability, which determine the outcome of each game session, are required». By spending 8-10 hours a day training in front of a computer or console, players are putting their health at risk. To maintain balance and protect the players' bodies, sports organizations have changed their approach over the last few years and have focused on employing dieticians, personal trainers, and psychologists. During the day, players go to the gym, pool, and learn how to lead a healthy lifestyle except training. The help of psychologists is vital, as e-competitors have to face not only their opponent in the game but also their psyche during matches. Keeping calm at key moments usually decides about victory or defeat (Zagala and Strzelecki, 2019). Many people are still unable to accept sitting in front of a computer and playing games as a paid job, or even consider as a sport. However, e-sport seems to break down the mental barrier in society and reject the stereotypes of games that are common among the older generation (Skubida, 2016). Nowadays, the Internet has become a place where people could freely communicate with each other, express opinions, and carry out various interpersonal activities. An increase in people's interest in social media took place a dozen or so years ago, and this continuous progress is still visible today. The basic definition says that these are «websites which are online meeting places for people looking for new friendships, where participants exchange all information based on their profiles, using a special interface» (Pawliczek, 2015). Nowadays, the scope of social media use has expanded considerably and no longer serves only to maintain contact with friends or check the daily news. Social media have become so important that nowadays, almost every company uses them for marketing, service, and promotion purposes (Nadda et al., 2015). The possibilities of creating personalized advertisements and directing specific content to specific groups of recipients create significant opportunities for people specializing in social media marketing.

Over the years, in the area of social media, there have been a few services that are trendsetters for the whole environment. Facebook is one of the three leaders of social media. It started in 2004 when Mark Zuckerberg and four of his friends founded his site, which was initially intended to serve as a centre for communication between students at Harvard (Brugger, 2015). Marketing using Facebook, from the vendor's or company's point of view, is based on the correct providing of social profile. Given the fact that nowadays, customers spend more and more time using media, investing in online marketing becomes more profitable than in any other (Ramsaran-Fowdar, 2013). Another platform is Instagram, founded in 2010, which is gaining an increasingly strong position on the market. The photo and video hosting service are winning the hearts of users with its simplicity of use and, at the same time, the ability to share and edit their works in high quality. The idea to prioritize visual objects rather than text creates a unique environment where users could write their lives through photos and videos (Lee et al., 2015). The last popular platform described is Twitter, a blogging service established in 2006. The mechanism of operation of the platform is based on publishing tweets, short posts on the board. Twitter users could watch each other (however, this is not required), not to miss any news and retweet posts to share someone's thoughts on their profile (Kwak et al., 2010).

The primary purpose of social media marketing is to capture the customer's attention and to create general interest. Currently, the time spent by Internet users on browsing social media applications (compared to traditional communication media) is quite long. Showing their company also on Facebook, Instagram, Twitter, or Youtube has become a necessity for those who want to achieve success in the online environment (Vinerean et al., 2013). The number of Facebook users at the end of the third quarter of 2019 amounts to as many as 2.4 billion active users (Richter, 2019). Taking appropriate marketing actions allows for full advantage of the opportunities offered by a broad audience gathered in one place. One of them is brand loyalty. Through the company's thoughtful actions on social profiles, a sense of connection between the client and the brand is created. Organizations are switching from a pure desire to

sell a product to a customer relationship (Erdogmus and Cicek, 2012). Loyalty is being returned to the organization through increased fansite, and sales reach (Erdogmus and Cicek, 2012). Today, it is popular to have a social medium that could share images, mainly video. Sharing pictures is most often done through a profile on Instagram or YouTube channel. A social network is also used, which consists of grouping people with the same interests to integrate and exchange information and insights so that the organization could then get valuable information about its activities or make possible changes (Ramsaran-Fowdar and Forvard, 2013). Another popular function is the personalization of advertisements. These are most often targeted based on gender, age, or liked and observed profiles.

In addition to the universal techniques of online marketing, e-sport organizations need to use specific to their field ways of attracting their target audience. One of the basic marketing actions is to engage someone who could shape the thinking of the audience, i.e., an influencer. An influencer is a character who makes content available through a channel or several social media channels, and with these content reaches a significant number of fans for a given market (Freberg et al., 2011). Examples of influential influencers on a global scale are Ninja, America's Twitch streamer, or Shroud, a former professional Counter-Strike player for Cloud9, and now also the streamer. E-sport influencers are now becoming the faces of advertising for the biggest brands in the world. An example is the Gillette campaign of 2017. Enrique Cedeno Martínez, known in the world of the League of Legends as xPeke, a retired player of the European team Fnatic (Cooke, 2017), stood together with the greatest stars of traditional sports such as golfer Tiger Woods or footballer Thierry Henry.

Another exciting way of acting in social media by e-sports organizations and players themselves is trash-talking; pinch comments about the opponent before the upcoming match (Kniffin and Palacio, 2018). Trash-talk could be used for text-based posts only, as well as memes that catch up with the opposing organization or players. Trash-talk is a prevalent form of promoting yourself on social network sites. It is very catchy, and it is designed to build tension before a match. A well-known example of good trash-talk is Red Bull Gaming's response to the Monster Gaming tweet. Both organizations focus on sponsoring the largest tournaments in the world of e-sport. In the struggle for public opinion, the companies outdo each other in marketing ideas and have a biting exchange of views in the race to the top. A very effective way to catch the attention of the crowd is to organize competitions with prizes on social network profiles. In the e-sport world, a popular form of an engaging audience in such actions is giveaways. They have recently become very popular in the media as a way to encourage recipients to be active online (Smith, 2014). Giveaways are called «giving away» material prizes (often-sports accessories) or game codes in exchange for minimal user activity on a social profile. Usually, this event operates based on a lottery, in which take part people who observe a given profile, leave a comment, or share a contest post. Even such a small, effortless people's action causes the expected increase in social media coverage for the organizers. Therefore, organizations, having signed sponsorship contracts with gaming equipment producers, could afford to distribute valuable prizes. The return on investment is generally expected in a short time.

Methodology and research methods. The SEM methodology has become a popular tool in recent years. SEM (Structural Equation Modeling) is a collection of statistical methods that allow to verify and check the relationship between variables (Ullman, 2006). The reason for such widespread use of SEM in many scientific areas is the fact that it provides the researcher with a possibility to theory testing (Raykov and Marcoulides, 2012). Users search and track specific profiles according to the information they need at a given moment. The practical aspect of social media is one of the key elements for which stakeholders themselves use social platforms. The concept of usefulness refers to the acquisition of useful information that increases the quality of future activities or decisions (Basak and Calisir, 2015). E-sport organizations' profiles are full of information. The scope of this content is vast, from basic information about the company's operations and entries concerning the daily activities of the team, through advertisements of

sponsored products, to discussions on topics entirely unrelated for e-sport. Some organizations also provide various types of infographics on their profiles with game tips, especially for spectators. The result of downloading such content is a feeling of satisfaction, which in turn creates a desire to follow such a profile. Hypothesis about the usefulness of the profile is:

H1. The perceived profile usefulness will have a positive and significant impact on the overall satisfaction of visiting the profile.

Entertainment is one of the main motives for spending time browsing social media. Feeling the pleasure of reading, commenting on, or watching the posted content is the reason for observing the profile. In the case of e-profiles, the leading entertainment elements are often shortcuts from the best action of the team's matches, gaming house vlogs, situational memes, or trash talk. People on social network sites want to fill up their free time, get away from reality or just have fun (Shi et al., 2010). Studies confirm that in addition to keeping friends and spending time – entertainment is a crucial factor in using Facebook (Special and Li-Barber, 2012) It could also be assumed to be true for other social network sites. The second hypothesis is:

H2. Perceived entertainment will have a positive and significant impact on the overall satisfaction of visiting the profile.

Team identification is defined as the psychological connection between a fan and his/her favourite team (Kim and Kim, 2009). Identification occurs in traditional sports but is no different in e-sport. Fans who are most strongly associated with an organization experience its match results as if they were their successes or failures. Organizations build their fan groups in different ways; fan rallies, Q&A sessions, or the creation of particular groups in social media are only a part of the marketing actions. The most influential organizations in the industry also have gadgets dedicated to fans in their store offers. Selling both small accessories as well as T-shirts and hoodies with players' autographs not only improves the company's budget but also allows fans to feel the bond with the team. The hypothesis of identification with the organization and players is:

H3. Identification with the organization and players will have a positive and significant impact on overall satisfaction from visiting the profile.

Satisfaction is the consumer's response to meeting their expectations in a given area (Oliver, 2014). Satisfaction is influenced by the benefits that the user receives from using the service. Hypothesis concerning general satisfaction from visiting a profile is:

H4. Overall satisfaction from the profile visits will have a positive and significant impact on the intention to observe and recommend the profile.

Increasing coverage is a fundamental objective of any social profile, including e-sport organizations. The intention to follow and recommend a profile to others is strongly linked to the feeling of satisfaction from using a social networking site (Curras-Perez et al., 2013). A. Bhattacharjee states that the real success of the information platform is its regular and continuous use. It is a state in which «visits to a website are already a routine» (Bhattacharjee, 2001). The website must regularly keep its fans, and must also make sure that fans share this profile with others. Hypothesis about the intention to follow and recommend the profile is:

H5. Overall satisfaction from the profile visits will have a positive and significant impact on the intention to follow and recommend the profile.

The SEM procedure consists of several steps. The first step is based on checking whether the variables are of a reflective or formative type. Then the estimated model parameters are verified. If the measurement results of subsequent coefficients confirm its sufficient quality, it is possible to move on to the next step involving structural modelling (Sarstedt et al., 2017). It is a focus on the relationship between the constructions of the model and the verification of the hypotheses (Sarstedt et al., 2017). In the case of reflective constructs, the study begins with the confirmation of load indicators for each variable (Sarstedt

et al., 2017). If the load indicates a value above 0.7, it is assumed that the design explains more than 50% of the indicator variance, which is a sufficiently satisfactory degree of reliability (Hair et al., 2017).

An assessment of internal consistency reliability follows it. The SEM uses a composite reliability of ρ_c . Approaches to the minimum acceptable value vary. In general, a value of 0.7 is taken as a minimum, although there are sources where 0.6 or 0.5 is acceptable. Values above 0.95 are problematic because they are almost identical, and this is also the acceptable upper limit (Sarstedt et al., 2017). Another measure of reliability is Cronbach's Alpha, which assumes identical thresholds as the composite reliability. An alternative is to use the reliability factor ρ_A , which returns the difference between the two previously mentioned measures (Dijkstra and Henseler, 2015). The next step is to assess the importance; the extent to which the structure converges (Sarstedt et al., 2017). The acceptable average variance extracted (AVE) threshold is a minimum of 0.5 (which means that, on average, the construct explains more than half of the variations of its elements). The last is the assessment of the discriminant validity. In PLS-SEM, it is the analysis of HTMT (heterotrait-monotrait ratio). It allows verifying whether the variables of the tested model are sufficiently different from each other (Henseler et al., 2015). The fixed threshold value is 0.9. In case of a higher coefficient, it means that the model includes conceptually similar constructs. If the model has met the assumptions of the previous stage, it could be estimated. Estimating a structural model is based on learning about the predictive capabilities of the model. The prediction capabilities are verified by determination factor R^2 , cross-confirmed redundancy Q^2 and path coefficients (Sarstedt et al., 2017). R^2 shows how much is explained by the model; it could take values from 0 to 1. The higher the value of R^2 , the better-suited model. It means greater accuracy in the predictions made based on the scheme. As a rule, a factor of 0.75 and higher is assumed to be a very good match, about 0.5 is moderately good, and 0.25 and lower is poor. In practice, it is infrequent to achieve high R^2 scores since the cross-section data is usually very varied. A case-by-case approach should always be taken in the context of accepting a specific R^2 value as an acceptable limit (Sarstedt et al., 2017). The coefficient f^2 values below 0.02 confirm that there is no effect of a given phenomenon in the model. A coefficient f^2 of up to 0.15 confirms a small effect, up to 0.35 – medium and each higher describes a large effect. Another way to assess the effectiveness of the model in terms of prediction is the Q^2 coefficient. This procedure is based on blindfolding, omitting single points in the data matrix, assigning omitted elements, and estimating model parameters. The smaller the difference between the original model and the predicted one, the bigger Q^2 is, which reveals better accuracy of the values. If the Q^2 coefficient is above zero, it means that the prediction is relevant for the specific construction (Sarstedt et al., 2017). The last step is the path indicators. Their strength and meaning are determined. It is recommended to assess the coefficients on initial loading errors, precisely their confidence intervals. The path factor is significant, with 95% confidence when the confidence interval does not contain zero. Path coefficients values are in the range -1 to 1—the closer to any of the limits, the stronger the relationship, negative or positive. The model shown in Figure 1 was proposed. The model verifies factors affecting satisfaction and whether there is a relationship between the intention to follow and recommend profile and satisfaction. Every user visits social media profiles in search of different content. There are people for whom the most important thing is fun and entertainment, while the merit is second. Fans of e-sport teams, identifying themselves with their favourite team, want to keep up to date with their daily life and sports results.

Figure 1 shows a model with hypothesized relationships. Table 1 shows the list of questions based on which the questionnaire was created, and then the SEM process was conducted from the collected answers.

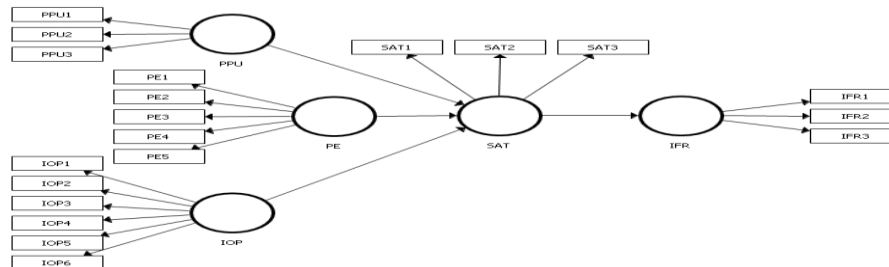


Figure 1. The theoretical model of the relationship between factors describing user satisfaction on e-sports organization's social media profile.

Sources: developed by the authors.

Table 1. Items in the survey

Latent variable	Items
Perceived profile usefulness (PPU)	<ol style="list-style-type: none"> 1. PPU1: I visit profiles of organizations/teams to get information and curiosities about their daily life, training, and performances in tournaments (vlogs, photos, entries). 2. PPU2: I review the social profiles of organizations/teams to broaden my knowledge about e-sport and related areas (technologies, games, advertising of sponsored products). 3. PPU3: I view profiles of organizations/teams that contain materials (such as tutorials, infographics, etc.) that improve my skills in e-sport games.
Perceived entertainment (PE)	<ol style="list-style-type: none"> 1. PE1: Satisfaction and fun with watching the posted content (vlogs, photos, and posts) are important to me. 2. PE2: Viewing the profile of the organization/team has a relaxing effect on me. 3. PE3: I mainly visit profiles of organizations/teams, where I could take part in various competitions with prizes. 4. PE4: I like the organization/team to conduct "live broadcasts" where I could talk to a company representative or player(s) and ask them about things that interest me. 5. PE5: Browsing the profiles of my organization/team is fun and entertaining for me.
Identification with organization and players (IOP)	<ol style="list-style-type: none"> 1. IOP1: I follow the profile of the team/organization when I consider myself a "real" team fan. 2. IOP2: I follow the profile of a team/organization when I feel sympathy for the organization as an institution/group/organization. 3. IOP3: I follow the profile of a team/organization when I feel sympathy for specific players in an organization. 4. IOP4: Gadgets, accessories, and team clothing stores are a good way to create a bond with the fans. 5. IOP5: Tracking profile posts is a daily, important activity for me as I identify with the team. 6. IOP6: It would be a loss for me not to be able to track the posts of the organization/team.
Satisfaction (SAT)	<ol style="list-style-type: none"> 1. SAT1: If the profile is satisfactory, I decide to follow it (like (FB), watch (IG, Twitter), etc.). 2. SAT2: If the profile is satisfactory, I will be observing the profiles of this organization/team also on other social network sites (besides the one currently viewed). 3. SAT3: I have experienced noticeable benefits (advantages) from viewing a social profile that satisfies me (e.g., improved humour, gaining new knowledge, etc.).
Intention to follow and recommend (IFR)	<ol style="list-style-type: none"> 1. IFR1: In the future, I will follow the posts on the profile I have liked and actively participate in (likes, comments, sharing, joining a group, etc.). 2. IFR2: I will recommend to my friends (interested in e-sport) a profile I liked 3. IFR3: I'll recommend to my friends who don't know what an e-sport is, the profile I liked

Sources: developed by the authors.

Results. The SmartPLS3 software was used for SEM estimation (Ringle et al., 2015). The following parameters were set for PLS algorithm calculations; weighing scheme – centroidal; a maximum number of iterations – 300; stop criterion (10^{-X}) – 7. The blindfolding process was carried out without distance at the level of 7. Bootstrapping with correction of deviation and acceleration (BCa) in bilateral distribution was calculated for 5000 subsamples. The last step of the study was to perform multi-group analysis (MGA), designing study groups by gender. The items are placed in the Google Forms survey. Next, the survey was shared on several groups associating fans of e-sport on Facebook. It was designed to people who know the environment of electronic games at least to a minimum extent and who follow the social profiles of e-sport organizations. The answers collection began on 12 February 2020 and was completed on 19 March 2020. In total, 209 responses were collected.

The vast majority of the respondents, as could be expected even before the answers collection, are males (85.2%). Only 31 women responded in the questionnaire (14.8% of the total). However, over the last few years, the population of women in the e-sport environment has been growing rapidly, and it is no longer an area associated only with teenagers and men. Most answers were collected from people aged 18-24, as it was 63.2%. It is the largest group that follows e-sport games and all other issues related to them. Then, about 21% are people aged 25-34, and 13.9% are people under 18. Interestingly, there was not a single response from a person over 44 years of age, which confirms that electronic sports attract mainly the younger part of society. The professional status question also confirms it. 59.3% of the respondents answered that they are still in the school or students. 29.7% of the respondents described themselves as full-time employed.

There was one additional question about the most frequently used social media by the respondent when the object of interest is e-sport. In this question, more than one answer could be marked. Almost everyone (96.2%) answered Facebook. Fewer people confirmed the use of Instagram (76.1%), YouTube (75.6%) and Twitch (51.7%). An interesting fact is that Twitter, which is the leading social environment for e-sport organizations in the West, was only ranked 5th in this survey (48.3%). It could be stated that in Poland, Twitter has still not reached comparable popularity as in the USA, for example. The full results of the metric are presented in Table 2.

Table 2. Respondents' Details

	n	Percentage		n	Percentage
Gender			Place		
Woman	31	14,8%	The village	24	11,5%
Male	178	85,2%	City up to 50k	14	6,7%
Age			City up to 100k	33	15,8%
<18	29	13,9%	City up to 250k	91	43,5%
18-24	132	63,2%	City > 250k	47	22,5%
25-34	44	21,1%	Social media		
35-44	4	1,9%	Facebook	201	96,2%
Education			Instagram	159	76,1%
Basic	30	14,4%	Twitter	101	48,3%
Secondary	120	57,4%	YouTube	158	75,6%
Higher	59	28,2%	Twitch	108	51,7%
Professional status			Reddit	66	31,6%
Student	124	59,3%	Snapchat	13	6,2%
Employed full-time	62	29,7%	Other	8	3,8%
Employed part-time	12	5,7%			
Not employed	11	5,3%			

Sources: developed by the authors.

All variables in the model are reflective. The first stage of verification is to check the loading for the items. It turns out that items PE4 (0.562), IOP2 (0.439), and IOP3 (0.327) do not meet the prerequisite factor values >0.7 , so they were removed from the model. After recalculating the model, it was necessary to remove the item PE3 as well, due to too low loading (0.685). The quality criteria of the calculated model are presented in Table 3.

Table 3. Criteria for evaluating the reflective model

Latent variable	Cronbach's Alpha	ρA	Composite reliability ρc	AVE
	0.7 – 0.95	>0.7	0.7 – 0.95	>0.5
PPU	0.659	0.683	0.812	0.591
PE	0.804	0.806	0.885	0.719
IOP	0.801	0.805	0.870	0.627
SAT	0.771	0.776	0.867	0.686
IFR	0.749	0.803	0.850	0.655

Sources: developed by the authors.

The reliability of the model was measured based on the value of the composite reliability coefficient. All constructs are within the range, which proves the reliability of the variables. Cronbach's alpha and ρA values meet the requirements in four out of five constructs. The only exception is the PPU, which calculated coefficients reach values below the limits. These are alternative ways of verifying reliability, which has already been confirmed by ρc , so it was decided to leave the variables in the model unchanged. These values are close enough to 0.7 that they are acceptable for testing and will not affect the final calculations. The AVE in each construct reaches the required minimum value, which indicates that more than half of the variance is explained in each case. The last step in the verification of the reflective model is to check the discriminant validity. Table 4 shows the values calculated by SmartPLS3. All results are below the 0.9 limit, which means that the constructs of the tested model differ significantly from each other to perform a reliable analysis.

Table 4. HMTT values

	IOP	SAT	PE	PPU	IFR
IOP					
SAT	0.770				
PE	0.849	0.769			
PPU	0.850	0.714	0.861		
IFR	0.811	0.755	0.768	0.761	

Sources: developed by the authors.

After removing insignificant items and checking the correctness of all variables, a final version of the model was obtained. Figure 4 shows the PLS-SEM results.

From figure 2, it could be read that the strongest connection is between overall satisfaction from visiting the profile and the intention to follow and recommend. The least important path was the perceived profile usefulness and overall satisfaction. The variables PE and IOP indicate a similar result. Proceeding the verification of the hypotheses demands to analyze the results presented in Table 5.

The not supported hypothesis is H1; the positive and significant impact of perceived profile usefulness on the satisfaction. While the path coefficient is positive, the value of T statistics is below the minimum limit (>1.96), does not confirm its significant impact. A similar is observed with the BCa confidence interval, which contains a zero value.

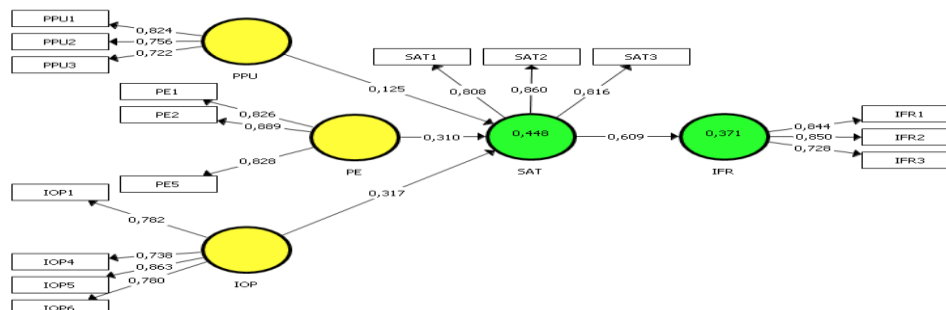


Figure 2. Final model with PLS-SEM results

Sources: developed by the authors.

Table 5. Values of path coefficient, f^2 , T Statistics and P Values

Path	Path coefficient	BCa [2.5;97.5]%	T Statistics	f^2	p-value <0.05	Supported
PPU→SAT	0.125	[-0.124;0.350]	1.045	0.015	No	No
PE→SAT	0.310	[0.093;0.530]	2.766	0.081	Yes	Yes
IOP→SAT	0.317	[0.100;0.488]	3.200	0.084	Yes	Yes
SAT→IFR	0.609	[0.465;0.698]	10.527	0.590	Yes	Yes

Sources: developed by the authors.

The other paths show values for the calculated coefficients. The hypotheses H2-H4 are confirmed. Table 6 shows the values of R^2 for the constructs, which are sufficient for the tested model. Overall satisfaction (0.448) could be assessed as above average good in the context of this particular analysis. The entries in column Q^2 are positive, which indicates the relevance of the predictions for the constructs mentioned.

Table 6. Values R^2 and Q^2 of constructs

Latent variable	R^2	Q^2
SAT	0.448	0.280
IFR	0.371	0.214

Sources: developed by the authors.

Multi-Group Analysis is a procedure to verify whether there are significant differences in the estimation of parameters for defined groups (Matthews, 2017). The testing is based on modelling structural equations using the partial least squares method (i.e., PLS-SEM). Using MGA makes it possible to examine differences between groups using an identical model, which makes this method often used in the area of global research on intercultural issues (Matthews, 2017). The division into groups could be made freely, for example, by gender or nationality. In this analysis, the collected answers are divided into two groups by gender. The study aimed to verify and find possible differences between females and males in terms of the strength and significance of the impact of certain factors on the satisfaction of using a social profile.

Tables 7 and 8 show the results of the calculations for each group after calculating MGA. The most crucial difference that could be observed is that the PE→SAT path is irrelevant for females and relevant for males. It is also interesting to note that the females IOP→SAT (0.897) is more than three times higher than males (0.256). Low standard deviation is characterized in both groups by the impact of satisfaction

on intention to follow and recommend. It illustrates a similar and consistent approach, both males and females.

Table 7. MGA Results for females

Path	Path coefficient	Standard deviation	T statistics	p-value	Significant?
PPU→SAT	0.087	0.180	0.484	0.629	No
PE→SAT	-0.327	0.343	0.952	0.341	No
IOP→SAT	0.897	0.291	3.078	0.002	Yes
SAT→IFR	0.671	0.102	6.615	<0.001	Yes

Sources: developed by the authors.

Table 8. MGA Results for males

Path	Path coefficient	Standard deviation	T statistics	p-value	Significant?
PPU→SAT	0.144	0.131	1.094	0.274	No
PE→SAT	0.375	0.120	3.120	0.002	Yes
IOP→SAT	0.256	0.104	2.452	0.014	Yes
SAT→IFR	0.594	0.065	9.103	<0.001	Yes

Sources: developed by the authors.

To summarize the MGA, table 9 was created, which recalculates the difference between the male and female path coefficients, respectively, and presents the p-values. The difference in PE→ SAT is not statistically significant. The only significant gender difference in the analysis is that of identification with organization and players and satisfaction—the difference between the IOP→SAT for females and males was confirmed.

Table 9. MGA Gender difference table

Path	Difference between path coefficients (F – M)	p-value (F vs. M)	Significant?
PPU→SAT	0,057	0,599	No
PE→SAT	0,701	0,980	No
IOP→SAT	0,641	0,019	Yes
SAT→IFR	0,077	0,236	No

Sources: developed by the authors.

The research process started with the model and plan for calculations and analysis of the results. The survey questions were proposed for five groups: perceived profile usefulness, perceived entertainment, identification with organization and players, satisfaction, and intention to follow and recommend. These groups have become variables in the research model. The survey, for over a month, was made available to e-sport and related enthusiasts. More than two hundred responses were collected, which served as input for SEM processing. Then, after formulating the hypotheses, an initial model was created, and the verification of data correctness began. Four items that did not meet the quality requirements were removed. Finally, after recalculating, creating and verifying the table of quality criteria, the model was accepted as correct and satisfactory. It allowed to analyze the influence of variables on each other and to test the hypotheses.

For the final calculation, items that were found to be irrelevant for the study had to be deleted. PE3 and PE4, which were respectively related to prize competitions and live broadcasts, were removed. The answers showed that for social media users, profiles that organize contests and live broadcasts are not

the most important ones. In the context of enjoying a fansite visit, much more important is content, such as photos, vlogs, and posts. IOP items were also removed: IOP2 and IOP3. The correlation about following the profile of the organization when we sympathize more strongly with the players does not reach the minimum value, as does the next one concerning the sympathy for the organization as a brand.

The strongest relation proved to be between the satisfaction of using the profile and the intention to follow and recommend the profile. A natural human reaction to the feeling of pleasure and satisfaction from doing something, or, as in this case, from visiting and using the social profile of an e-sports organization, is to express the willingness to enjoy this pleasure again. Furthermore, we are happy to share the content with friends and share it further. The results have confirmed this dependence. The PE→SAT and IOP→SAT paths were positive and of moderate strength. It could be said that for fans of the e-sport team, it is essential to have fun while visiting the profile, which may indicate that entertaining and humorous content will bring benefits in terms of coverage and traffic. The results also confirmed that it is essential to identify with a followed team. Gadget shops are an excellent way to create a bond, and not being able to track posts would be a waste.

A multi-group analysis was also conducted, taking into account the gender of the respondent. An important difference between males and females turned out to be the aspect of the sense of bond with the team and organization. The females' ratio is more than three times higher than males', which may indicate that females are more emotionally attached to the life of the team and events related to it. Besides, the PE→SAT path is important for males and not for females. All hypotheses except H1 have been supported. It was proved that the perceived profile usefulness does not have a significant impact on the satisfaction of using the social network site of an e-sport organization. It could be concluded that the merit of the profile is not so significant. At the same time, entertainment, and a sense of identification, unity with the team are more important for the users. Users very often decide to continue following and observing websites that they like. Moreover, they share interesting profiles with friends, feeling the need to share satisfactory content with others.

E-sport is entering culture more freely, and it is difficult to disagree with this fact. The theoretical presentation of electronic sports is a step in building people's awareness of this phenomenon in Poland. The use of the SEM methodology distinguishes this work from others. The method allows testing different hypotheses using the same set of questions, which makes it a useful tool in the context of research that addresses the feelings of the audience concerning specific motives (in this case, the factors influencing satisfaction with using a social profile). The questions were asked from e-sport social media marketing, which required a unique approach to the formulation of subsequent items of the survey. The questions dealing with the area of identification with the team are closely related to the model presented in this work.

The results obtained from the study could be used in the e-sport industry in terms of the way an organization maintains its social profile. First, using data from the survey, it is possible to specify the profile of an average user visiting e-sport fans. It turns out that these are mainly men around 20 years old or just after graduation. To better determine the audience of the profile, it is worth surveying a particular site, as the average audience may differ, even if it depends on the games in which the organization has its teams. The audience information could be used by marketers to create a concept for the content provided on a profile that will attract new fans and keep current ones. What is more, the answers to the last question from the metric (concerning the most frequently used social media channels) allow verifying whether the organization actually has and actively maintains profiles, most popular among the surveyed group of people. Even a minimal modification of the approach in this aspect may bring significant benefits, knowing what the audience expects and where it will be most.

Secondly, organizations find out what is most important to people in their social profile. The recruitment departments, knowing what they like and what the audience expects, could hire the right people (e.g.,

influencers) and focus their funds on creating the content that will be most profitable for the company. The result will be an increase in the organization's reach and material resources.

This study has several limitations. First, the answers were probably collected only among the inhabitants of Poland. The survey was placed on a few groups of fans and enthusiasts of e-sport on Facebook. Although the study was anonymous and there was no question about nationality on the label, it could be expected that Poles provided all the answers. Making the survey available on global websites could bring different results, changing the current conclusions. Secondly, a similar conclusion could be drawn on the assumption that only people in a specific age range or linked to a particular e-sports game would be asked to answer. The results could prove to be more precise and, consequently, the practical application of the knowledge gained would translate into more effective solutions.

Thirdly, the number of responses collected could be considered a limitation. Two hundred nine people decided to respond. It is a sufficient number to conduct the calculations and to interpret the results correctly. It was assumed that the minimum number of answers would be 10 per item in the survey, which is 200 minimum answers. A few answers appeared, which were classified as «inappropriate» and were removed from the pool. The data screening process is a demanding step, as it is sometimes difficult to qualify an answer as unreliable. Each record requires an analysis of whether someone deliberately tried to spoil the test with a false answer. It is worth remembering that a larger number of samples always puts the test in a better light because examining a larger number will still generate results that better reflect the reality.

Conclusions. This work aimed to assess the factors influencing the feeling of satisfaction by using a social profile on the example of an e-sport organization and then to formulate conclusions from the results of the study. Based on the obtained results, the appropriate conclusions were drawn. The research has shown that users' satisfaction with using a fansite is ensured by posts aimed at entertainment and relaxation and a sense of identification with the e-sport team. Of the four hypotheses, one was not positively verified in the study. Based on the data obtained from the surveyed group, it could be concluded that the substantive values posted on the social profile have no significant impact on the feeling of satisfaction. E-sport and Internet marketing is still in its development phase so that this work could be treated as an introduction and inspiration to the vast possibilities of research in this area in the future.

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Задоволеність користувачів профілем організації кіберспорту в соціальних мережах

У статті висвітлено особливості розвитку кіберспорту, як однієї з найбільш прогресивних галузей сучасних розваг. Авторами зазначено, що низка факторів сприяє стрімкому розвитку кіберспорту, серед яких: легкий доступ до трансляцій матчів, безкоштовні кіберспортивні ігри, задоволення від перегляду улюблених матчів тощо. Зростаюча кількість турнірів (організованих як онлайн, так і в найбільших спортивних залах світу) зумовлює зростання інтересу до даного виду спорту серед осіб похилого віку. Авторами відмічено, що на ряду із розважальними аспектами, кіберспорт відкриває значні можливості для бізнесу. Так, ефективне використання соціальних мереж дозволяє інвесторам повертати свої вкладення у короткостроковій перспективі. У статті проаналізовано рівень задоволеності користувачів профілями кіберспортивних організацій, команд та гравців у соціальних мережах. У ході дослідження висвітлено основні аспекти кіберспорту, соціальних мереж та ведення соціального медіа маркетингу кіберспортивними організаціями. Головною метою статті є визначення сили впливу сприйняття інформативності профілю, розважальних аспектів, ідентифікації з організацією та гравцями, а також рівня задоволеності на готовність користувачів слідувати та рекомендувати профіль кіберспортивної організації в соціальних мережах. Для досягнення поставленої мети побудовано модель на основі згенерованих даних про профілі обраних компаній у соціальних мережах. Оцінювання параметрів моделі здійснено за допомогою методу найменших квадратів. Підґрунтям дослідження стали результати онлайн-опитування 209 любителів кіберспорту в Польщі (як гравці, так і глядачі). Для аналізу панельних даних використано програмне забезпечення SmartPLS 3. Результати дослідження свідчать про те, що найбільший вплив на рівень задоволеності користувачів має інтеграція з організацією та гравцями, рівень сприйняття інформації про розважальні аспекти профілю. При цьому рівень задоволеності впливає на бажання користувачів слідувати та рекомендувати профіль кіберспортивної організації у соціальних мережах. Авторами наголошено, що отримані результати сприяють кращому розумінню маркетингової діяльності в соціальних мережах щодо ведення профілів кіберспортивних організацій. Таким чином, результати дослідження мають практичне значення і можуть бути прийняті до впровадження організаціями, командами та гравцями кіберспорту.

Ключові слова: кіберспорт, профіль соціальної мережі, задоволення, комп'ютерні ігри, соціальний медіа маркетинг

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