Erciyes Üniversitesi
İktisadi ve İdari Bilimler Fakültesi Dergisi
ISSN: 1301-3688/e-ISSN: 2630-6409

Araştırma Makalesi | Research Article
Yayın Tarihi: 30 Nisan 2024 | Published: April 30, 2024
doi: 10.18070/erciyesiibd.1356895

MAPPING OF E-SPORTS SPONSORSHIPS ON PURCHASING DECISION

ÜZEYİR FİDAN[1*] & MURAT FATİH TUNA[2] & MEHMET ALİ DEVECİ[3]

[1]Öğr.Gör., Uşak Üniversitesi, Uzaktan Eğitim Meslek Yüksekokulu, Bilgisayar Teknolojileri Bölümü, uzeyir.fidan@usak.edu.tr, https://orcid.org/0000-0003-3451-4344.[2]Dr.Öğr.Üyesi, Sivas Cumhuriyet Üniversitesi, İktisadi ve İdari Bilimler Fakültesi, Yönetim Bilişim Sistemleri Bölümü, mftuna@cumhuriyet.edu.tr, https://orcid.org/0000-0002-8634-8643.[3]Arş.Gör., Sivas Cumhuriyet Üniversitesi, İktisadi ve İdari Bilimler Fakültesi, Yönetim Bilişim Sistemleri Bölümü, madeveci@cumhuriyet.edu.tr, https://orcid.org/0009-0006-8604-0135.

Etik Kurul Onayı: Sivas Cumhuriyet Üniversitesi Etik Kurulu, 24.02.2022 tarih ve E-60263016-050.06.04-136477 sayılı karar

ABSTRACT

The communication between companies and their target customer groups holds a significant position within modern marketing approaches. These companies employ various channels such as advertisements, mobile applications, websites, and sponsorship activities to reach their intended customer groups. This, in turn, helps in establishing and reinforcing the brand's position in the minds of the group. Thus, the purpose of this study is to analyze the impact of sponsorship activities carried out by e-sports companies on consumers' purchasing tendencies. To model consumer perceptions, the study considers variables such as purchase intention and word of mouth and employs two decision trees to map the effects of e-sports sponsorships on consumer decisions and behaviors. The results indicate a negative relationship between consumers' purchase intention and a negative sponsor image. Furthermore, the decision tree model developed for word-of-mouth communication reveals that an increase in consumers' perception of the sponsor company's sincerity positively influences their inclination to recommend the brand to others. By utilizing the decision tree algorithm, this analysis of consumer behavior in the context of sponsorship activities fills a significant gap in the literature and provides valuable insights for future endeavors.

Keywords: Sponsorship, E-sports, Decision Trees, Word-of-Mouth, Purchase Intention.

Editör / Editor:
Leyla LEBLEBİCİ KOÇER,
Erciyes Üniversitesi, Türkiye

****Sorumlu Yazar/ Corresponding Author:***
Üzeyir FİDAN,
uzeyir.fidan@usak.edu.tr

JEL:
M16, M31, M37, D91

Geliş: *7 Eylül 2023*
Received: *September 7, 2023*
Kabul: *22 Aralık 2023*
Accepted: *December 22, 2023*
Yayın: *30 Nisan 2024*
Published: *April 30, 2024*

Atıf / Cited as (APA):
Fidan, Ü. & Tuna, M. F. & Deveci, M. A. (2024), Mapping of E-Sports Sponsorships on Purchasing Decision, Erciyes Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi, 67,105-112, doi: 10.18070/erciyesiibd.1356895

SATIN ALMA KARARINDA E-SPOR SPONSORLUKLARININ HARITALANDIRILMASI

ÖZ

Modern pazarlama anlayışında firmaların hedef müşteri gruplarıyla iletişimi önemli bir yer tutmaktadır. Söz konusu firmalar hedef müşteri gruplarına ulaşmak için reklamlar, mobil uygulamalar, internet siteleri vb. yolları kullandıkları gibi sponsorluk faaliyetlerini de tercih etmektedir. Bir firma olarak spor takımları da sponsorluk faaliyetleri ile hedef müşteri grubu niteliğindeki taraftarlarına ulaşmakta ve grubun zihninde markanın konumlandırılmasına katkıda bulunmaktadır. Bu çalışmanın amacı, e-spor firmalarının yürüttüğü sponsorluk faaliyetlerinin tüketicilerin satın alma eğilimleri üzerindeki etkilerini haritalamaktır. Tüketici davranışlarının karar ağacı algoritmasıyla analizi, sponsorluk faaliyetlerinde bir yol haritası ortaya çıkarması yönüyle literatürdeki önemli bir boşluğu doldurmaktadır. Tüketici algılarını modellemek için satın alma niyeti ve ağızdan ağıza iletişim değişkenleri esas alınmış ve e-spor sponsorluklarının tüketici kararları ve davranışları üzerindeki etkisi iki karar ağacıyla haritalanmıştır. Sonuçlara bakıldığında, tüketicinin satın alma niyetinin olumsuz sponsor imajıyla negatif ilişkili olduğu görülmektedir. Ayrıca, ağızdan ağıza iletişim için oluşturulan karar modelinde ise tüketicinin sponsor firmaya dair samimiyet algısındaki artışın markayı çevresine tavsiye etme eğilimini olumlu yönde etkilediği tespit edilmiştir.

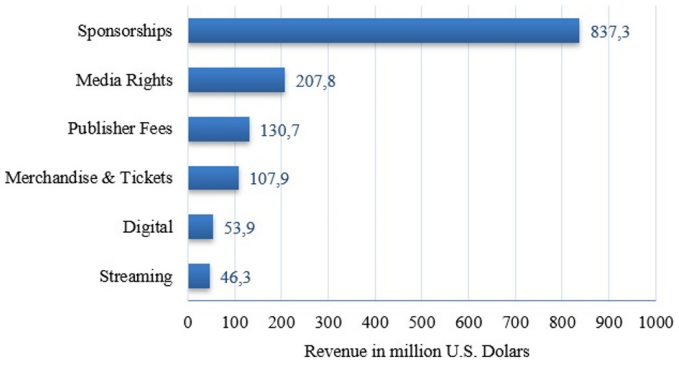
Anahtar Kelimeler: Sponsorluk, E-spor, Karar Ağaçları, Ağızdan Ağıza İletişim, Satın Alma Niyeti.

INTRODUCTION

Sponsorship is widely recognized as an effective marketing tool for companies to provide financial support to sports organizations. This practice, known as sports sponsorship (Copeland et al., 1996), is considered a fundamental strategy that sports organizations should incorporate (Doherty & Murray, 2007). Consequently, it has garnered significant attention in academic research, with numerous studies exploring its impact on marketing (Buser et al., 2022; Cornwell & Kwon, 2020; Johnston & Spais, 2015; Walraven et al., 2012).

Upon reviewing the existing literature, it has been established that sports sponsorship has an impact on consumers' purchasing behavior of licensed products (Deitz et al., 2012). This influence is determined by the alignment between the sponsor and the manufacturer (Coppetti et al., 2009). According to (Thomas et al. 2022), establishing this alignment enhances the brand image of sports products in the eyes of consumers. Similarly, (Cuesta-Valiño et al. 2022) argue that an improved brand image generates value for the stakeholders of e-sports teams. Consequently, sponsoring companies experience enhanced sustainable competitive advantage and increased probability of survival (Jensen et al., 2016), as well as an increase in the value of their stocks and financial assets (Eshghi, 2022).

FIGURE 1 | E-Sports Estimated Market Revenue by Segment



Source: https://www.statista.com/statistics/490358/esports-revenue-worldwide-by-segment/

According to a study conducted by (Cuesta-Valiño et al. 2022), esports games are driving the advancement of the sports industry, and sponsorship emerges as the most effective approach to engage consumers in this new form of sports. This viewpoint is further supported by global statistics on the esports market, revealing significant growth and popularity. As of 2022, the monthly average viewership had reached an impressive 29.6 million. Moreover, the overall market size of the esports industry surpassed 1.4 billion dollars in the same year, with projections indicating a substantial increase to 5.48 billion dollars by 2029, signifying an annual market revenue growth rate of approximately 21%. The revenue generated in this industry is distributed across various segments, as illustrated in Figure 1, representing the income sources as of 2022.

Upon analyzing Figure 1, it becomes evident that sponsorship accounts for the largest portion of e-sports related revenues, amounting to $837.3 million.

Regularly, statistics are maintained to keep track of sponsors, organizers, organizations, and viewers in the realm of e-Sports, aiming to keep the interest in e-Sports organizations up to date. Esports Charts, one of the largest databases established for this purpose, recently published a report providing valuable insights. According to the report, there were a total of 33,633 tournaments, 180,399 matches, and 34,392 active teams involved in these tournaments.

Furthermore, when examining the investment amounts in e-sports companies, it becomes evident that numerous gaming companies have secured investments ranging from $700,000 to $205 million as of 2021. These investments demonstrate the significant financial backing and growing interest in the e-sports industry.

Several studies have explored the influence of sponsorship activities on consumers' purchasing behavior (Deitz et al., 2012; Koronios, Ntasis, et al., 2021; Koronios et al., 2016; Madrigal, 2000; Tsordia et al., 2018). Furthermore, (Hebbel-Seeger 2012) has demonstrated the applicability of certain aspects of physical and tangible sports to digital sports through digital adoption. Other research has examined how sports sponsorship impacts consumption from various stakeholders' perspectives (Koronios et al., 2021) and the relationships among these stakeholders (Katz et al., 2019). Interestingly, while there is existing literature on the image of sponsorship in e-sports (Cuesta-Valiño et al., 2022), there is a notable gap in understanding the modeling of fandom[1] perceptions in e-sports sponsorship. Given the changing sports landscape due to digitalization and the growing interest in e-sports, it becomes crucial to investigate e-sports sponsorship and its impact on consumer perception, which holds significant importance for all stakeholders. Therefore, the objective of this study is to examine the influence of e-sports sponsorships on consumers' purchasing behavior.

1. CONCEPTUAL FRAMEWORK AND PREVIOUS STUDIES

A. E-SPORTS

The concept of e-sports, first mentioned during a competition held on October 19, 1972, at Stanford University (Baker, 2016), has gained immense popularity over the years due to the continuous advancement of technological infrastructure (Biscaia et al., 2013). E-sports are defined as competitive sports events that occur exclusively online (Ayar, 2018), distinguishing them from traditional sports as players engage in intense competition without much physical movement (Segal, 2014).

The concept of e-sports, which has gained prominence in today's world, demonstrates a strong correlation with the advancement of network technologies that facilitate multiplayer experiences in an online environment (Ayar, 2018). This technological framework has paved the way for the emergence of a new economy based on peer interactions. As pointed out by (Samur 2018), it has also fostered the development of a market that demands various goods and services.

The integration of individual computer usage, game consumption, and the network technologies has significantly reshaped the landscape of e-sports. A notable milestone in this progression was the establishment of the Online Players Association in 1999. This pivotal moment marked the transition of e-sports tournaments from modest digital gatherings to large-scale competitions with global participation. Consequently, participating teams have achieved remarkable milestones, such as securing multi-million-dollar sponsorship agreements and earning prestigious accolades (Cuesta-Valiño et al., 2022).

The publication of e-sports competitions is widely recognized as a crucial aspect of the e-sports industry (Hamari & Sjöblom, 2017) (Rietz & Hallmann, 2022). Despite the global reach and popularity of e-sports competitions, there remains a certain resistance in acknowledging e-sports as a legitimate sport (Hamari & Sjöblom, 2017). However, e-sports has garnered increasing attention in the literature, capturing the interest of a growing audience. Hebbel-Segger argues that this phenomenon can be attributed to the advancements in technology and their integration into traditional sports. Nevertheless, it is worth noting that the existing literature on esports is relatively limited compared to that of traditional sports and video games. (Ayar, 2018; Cristòfol et al., 2020; Cuesta-Valiño et al., 2022; Dirgantara et al., 2023; Egliston, 2018; Hamari & Sjöblom, 2017; Klose & Schöber, 2023; Kronreif, 2023; Thongves et al., 2023).

Despite the restricted range of games in the literature, e-sports in Turkey has had substantial advancement and has become home to numerous successful teams and athletes in recent years. Simultaneously, prominent sports clubs in the country, such Fenerbahçe and Beşiktaş, have begun participating in e-sports. Furthermore, teams such as Super Massive, Dark Passage, and Royal Youth have effectively showcased Turkey's prowess in both domestic and global e-sports competitions. E-sports in Turkey has garnered significant societal acknowledgment, particularly due to renowned titles such as League of Legends, FIFA, and

[1] Devotion, a fervent state of admiration or support for an individual or entity, signifies both the personal sentiment of being a passionate enthusiast and the collective zeal shared by an ardent group of followers.

Counter-Strike. These games are considered the dominant disciplines in Turkey's e-sports sector. Turkey's notable accomplishments in the realm of e-sports are underscored by the meticulous organization of these high-profile competitions and the widespread enthusiasm they generate among enormous audiences.

As studies on e-sports are conducted worldwide, some studies are also conducted in Turkish literature. These studies generally focus on players' behavioral, personal, and psychographic characteristics. In one of these studies, Tiring and Güloğlu (2023) examined the psychological reactions of e-sports players and the factors predicting these reactions. The convenience sampling method and relational survey model, which received responses from 136 e-sports players, were preferred in the study. In the study where multiple regression analysis was selected as a method, it was detected that 20.6% of esports players had depression, 14.7% anxiety, and 18.4% stress symptoms. Moreover, relational self-construal was significant and negative, positive future expectation was significant and negative, and negative perfectionism was significant and positively predicted depression.

In another study, Can and Tekkurşun Demir (2020) Demir investigated e-sports players' digital game addiction and their level of awareness about this addiction. As a result of the study in which Pearson Spearman Correlation, Mann-Whitney U Test, and Kruskal-Wallis Test were used to analyze the data collected through the questionnaire, it was determined that the digital game addiction score showed a significant difference in favor of male e-sports players. In addition, a positive moderate-level relationship was found between the age of the athletes and their game addiction, and a negative moderate-level relationship was found between the awareness score of digital game addiction.

In the Turkish literature, there are studies investigating the psychographic aspects of e-sports players and the communication behaviors of players. In one of these studies, Sarı and Hayta (2019) researched the e-sports behaviors of high school and university students and the awareness of the Twitch platform. As a result of the analysis of the data collected through an online survey reaching 560 people and a random sampling method, it was seen that most of the participants spent a lot of time on the internet daily and connected to the internet, mostly with mobile devices.

Recent studies have focused on various aspects of e-sports, such as its global development (Ayar, 2018; Dirgantara et al., 2023), the transition from niche interest to a mainstream phenomenon (Kronreif, 2023), its relationship with sponsorship as a burgeoning industry (Cristòfol et al., 2020), factors influencing fan engagement (Hamari & Sjöblom, 2017), the image cultivated among its fanbase (Thongves et al., 2023), audience's technological and technical awareness (Egliston, 2018), the perceived value created through sponsorships (Cuesta-Valiño et al., 2022), and the marketing elements that position e-sports as a marketable commodity (Klose & Schöber, 2023, p. 27).

However, the present study aims to contribute to the existing literature by examining the impact of e-sports sponsorship, a distinct dimension in the field, on consumer purchasing decisions. By exploring this aspect, the study seeks to shed light on a previously unexplored area of e-sports research.

B. FANDOM

Fandom refers to the state in which fans develop a deep emotional connection with a specific sports team, distinguishing them from mere spectators (Wann & James, 2018). This emotional attachment makes fans an appealing target market (Schlesinger & Güngerich, 2011). In fact, supporting a sports team is regarded as an entertainment activity that demands both time and financial investment from fans (Murrell & Dietz, 1992). Furthermore, (Novak, 1976) emphasizes that being a supporter entails an individual's integration with the team and a strong internal attachment. Thus, fandom is driven by more intricate motivations beyond a simple inclination to support a team. (Han et al., 2016) categorize these motivations into two main groups: social and psychological.

Social motivations are community pride (Funk et al., 2002), family feelings for the team (Bilyeu & Wann, 2002), attachment to players (Kim & Trail, 2010), team attachment (James & Ross, 2004), and group interaction (Armstrong, 2002). These social motivations can cause fans to transfer income to their teams directly or indirectly.

Fandoms, within the realm of psychological motivations, refer to individuals who establish a deep emotional connection with the sports team they support. These individuals dedicate their time, energy, and financial resources to their chosen team due to this strong connection (Norris et al., 2015). According to (Wann, 2006), this connection is rooted in the individual's construction of team-based identity and their unwavering commitment to the team as a collective entity. The concept of shared identity, proposed by (Murrell & Dietz, 1992), aligns with this notion of fandom and serves as a psychological motivation for supporters, as highlighted by (Han et al., 2016).

As a result of this motivation, fans tend to associate their personal characteristics with the team they support, perceiving the team's successes as their own achievements (Dalakas et al., 2004). Consequently, fans play a fundamental role in ensuring the longevity and sustainability of sports teams, as emphasized by (Norris et al., 2015), who attribute teams' efforts to maximize their fan base.

In this context, teams strive to establish a sense of shared value with their fans, while fans actively contribute to the creation of this value (Kolyperas et al., 2019).

Previous studies on sports fandom have explored various aspects of fan behavior. For instance, (Rietz & Hallmann, 2022) focused on why fans watch sports events, while (Schlesinger & Güngerich, 2011) examined the factors influencing fan motivation. (Han et al., 2016) delved into the impact of demographic and cultural characteristics on team loyalty behaviors. Additionally, (Smith et al., 2008) proposed a correlation between supporting a team and the intention to purchase team-related products, supporting the perspective of (James et al., 2002) that a fan's allegiance to a team influences their consumption behavior. Yurtsızoglu and Gul highlighted that fans who consume sports team products also strongly associate themselves with the team (Yurtsızoglu & Gul, 2022). Furthermore, (Pizzo et al., 2018) argued that e-sports, like traditional sports, represents a significant market, suggesting that marketing strategies applicable to traditional sports fans can be adapted to the e-sports medium as well.

C. SPONSORSHIP

Sponsorship is a marketing promotion activity that can have an impact on brand equity across various sports, artistic endeavors, and other contexts (Lin & Bruning, 2020). Specifically, sports sponsorship refers to acquiring the rights to receive benefits associated with a direct connection to a sporting product or event (Mullin et al., 2014, p. 231). According to (Buser et al., 2022), sponsorships play a crucial role in bridging the gap between customers and companies, which lies at the core of marketing efforts, particularly in sports teams.

Sponsorship activities that align with the team's spirit have the ability to ignite fans' passion, leading to an increased intention to purchase fan-related products (Smith et al., 2008). Moreover, as noted by (Lin & Bruning, 2020), fans often develop a strong sense of attachment to the team's home venue and consider the team playing there as the "host," which further influences their intention to purchase sponsor products. This aligns with (Olson, 2010)'s argument that fans' purchase intentions are shaped by the teams they support.

Hence, in the relationship between sponsorship and purchase intention highlighted by (Smith et al., 2008), the association between the sponsor company and the specific sports branch in which the sponsored team operates plays a crucial role in influencing consumer behavior.

Sports sponsorships establish exchange relationships among sports organizers, companies, and intermediaries (Copeland et al., 1996). These sponsorships have a significant impact on enhancing the image of the involved institutions (Bibby, 2009). The extent to which the sponsor firm's products align with the sport genre, known as relatedness, determines the degree of image improvement (Biscaia et al., 2013). Therefore, in the context of the relationship between sponsorship and purchase intention, as emphasized by (Smith et al., 2008), the connection between the sponsor company and the sports branch in which the sponsored team is active becomes crucial. Additionally, (Rodgers, 2003) highlights those positive attitudes and behaviors towards the sponsored institution on the internet transfer to the sponsoring firm. Considering e-sports teams, it is reasonable to assume that fans supporting these

teams might also exhibit a favorable attitude and potential purchase intention towards the products of e-sports sponsors.

D. MARKETING AND SPONSORSHIP RELATIONSHIP, WORD OF MOUTH MARKETING

According to (Marin et al., 2018), the intensifying competitive landscape resulting from industry convergence underscores the significance for businesses to discover novel approaches to influence their customers. Consequently, companies are increasingly undertaking more formidable endeavors beyond conventional advertisements, and sponsorship activities have emerged as one such avenue (Koronios et al., 2022). This scenario has prompted a heightened interest within the field of marketing science, with a particular emphasis on understanding the factors contributing to successful sponsorship decisions (Polonsky & Speed, 2001).

Upon reviewing the literature, it becomes evident that successful sponsorship activities aiming to establish a strong sponsor image and elicit a positive attitude from the target audience heavily rely on the word-of-mouth (WOM) strategy (Boerman et al., 2017; Jhawar et al., 2023; Park et al., 2019; Tsiotsou & Alexandris, 2009). WOM, characterized as a form of verbal communication, is considered one of the most influential factors in consumer behavior studies. Both online and offline forms of WOM exist, with the online variant referred to as e-WOM (Koronios, Vrontis, et al., 2021). It is widely acknowledged that brand communication through WOM has a greater impact on purchasing behavior compared to various types of advertisements (Kamath et al., 2020). This is attributed to potential customers seeking to mitigate post-purchase risks based on the experiences of previous customers who have chosen the brand (Nassis et al., 2014).

In the realm of marketing, the relationship between WOM and sports sponsorship is recognized as a significant area of research (Koronios et al., 2022; Tsordia et al., 2018; Wakefield & Bennett, 2018). According to (Tsiotsou & Alexandris, 2009), the effectiveness of a sponsorship strategy is determined, in part, by the sponsor brand's image. (Gunawan & Tamburian, 2022) assert that e-sports sponsorship plays a pivotal role in brand awareness, while (Huang, 2022) found that brand image, coupled with perceived value, influences WOM outcomes. (Yoo et al., 2013) discovered that the widespread online visibility of WOM outputs impacts consumers' purchasing behavior and loyalty. (Chuenban et al., 2021) identified brand value and quality as factors influencing consumer loyalty. Additionally, (Tsordia et al., 2021) demonstrated the connection between WOM, brand-related sponsorship outputs, and the perceived quality of the brand. In a similar vein, (Seo et al., 2020) revealed that e-WOM, disseminated through social media, affects brand awareness and image through the lens of trust. (Wakefield & Bennett, 2018) highlight the significance of fans who hold positive opinions about a team sharing their views with large audiences, thereby influencing WOM outcomes.

Therefore, in the context of the relationship between sponsorship and purchase intention emphasized by (Smith et al., 2008), it is believed that the brand image and awareness of both the sports team and the sponsor companies' impact WOM outputs, ultimately influencing loyalty towards the companies and trust in the brand. (Nosi et al., 2021) substantiated that brand trust engenders purchase intention for both online and offline brands.

2. METHODOLOGY

In this part of the study, data collection tool, method and evaluation metrics are explained.

A. DESIGN AND PROCEDURE

The study was carried out with the approval of the ethics committee with the decision of Sivas Cumhuriyet University Scientific Research and Publication Ethics Social and Human Sciences Board dated 10.02.2022 and numbered 2022-01-61.

The data was collected using a standardized questionnaire that included demographic questions and the Strategic Sport Sponsorship Management Scale (Koronios et al., 2021).

The Strategic Sports Sponsorship model was created with 11 factors (Sport involvement (attraction), Sport involvement (centrality), Team attachment, Awareness of sponsors, Beliefs about sponsorship, Attitude toward sponsor, Purchase intention, Sponsor image, Sincerity, Team performance, Word of mouth) from the data collected through a 38-item standard questionnaire (Figure 2).

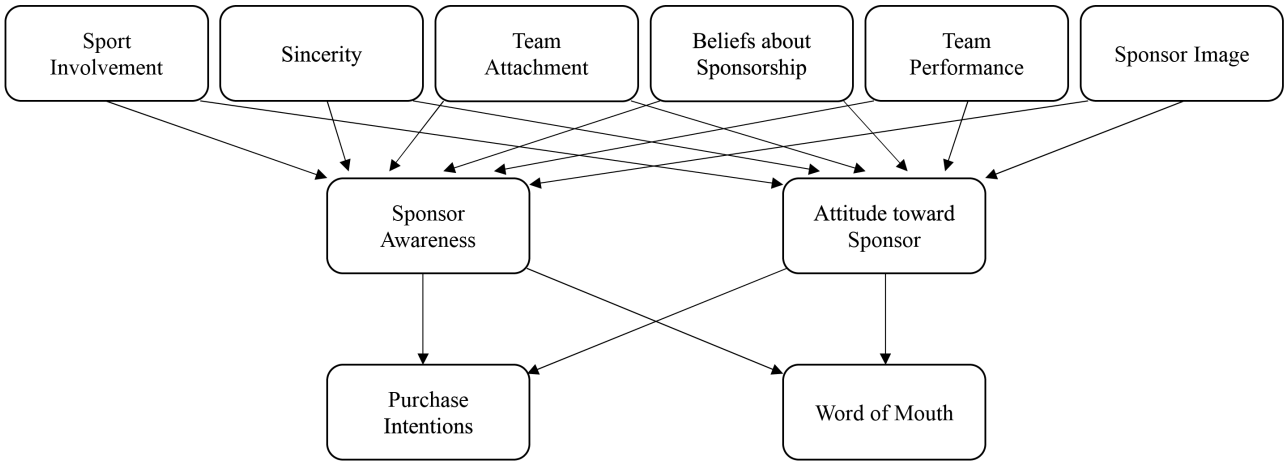
B. MEASURE AND ANALYSIS

Identifying a consumer profile revolves around obtaining meaningful information rather than simply gathering raw data (Hildebrandt, 2016:548). By eliminating noise, processing data accurately, and employing targeted modeling, it becomes possible to transform data stacks into valuable insights. Creating a consumer profile serves as a crucial tool in various domains, ranging from market segmentation (Jaiswal et al., 2021) to analyzing energy consumption patterns (Figueiredo et al., 2005). By utilizing personalized techniques, businesses can enhance sales by effectively identifying potential customers. Generally, data mining methods such as classification (Gok & Fidan, 2019; Sari et al., 2016; Park & Chang, 2009), clustering (Fang & Liu, 2021), and estimation (Das, 2015) are preferred for determining consumer profiles. In this study, the consumer classification was performed in accordance with the sponsor's perception, with the decision tree algorithm employed to model purchasing decisions.

C. DECISION TREES

Decision trees are a method used to derive rules by constructing nodes from a given dataset using explanatory variables, and subsequently

FIGURE 2 | The strategic sport sponsorship model



Source: Koronios et al. (2021).

classifying the data (Adomavicius & Tuzhilin, 2001). Once the initial node is created, it assigns leaf nodes to populations that can be traced back to the dependent variable. If a direct inference for the dependent variable cannot be made, the tree structure is expanded by generating additional nodes. The decision tree is considered complete when it can classify the entire population. The primary challenge in this process lies in determining which attribute should serve as the first node, as well as the subsequent nodes (Kitayama et al., 2002). This decision is based on calculating the entropy using the information gain approach. Entropy, which measures the amount of information obtained from observing disordered systems, can be represented by Eq. 1 (Yuncu & Fidan, 2020; Maszczyk & Duch, 2008).

$$S = -\sum_{i=1}^{n} p_i \log_2 p_i \tag{1}$$

In Equation 1, also known as Shannon Entropy, the value S represents entropy, and p_i denotes the probability of a specific observation occurring. Shannon entropy is a decreasing function of the distribution of the random variable, and it reaches its maximum value when all outcomes are equally probable (Maszczyk & Duch, 2008). Consequently, the first node in a decision tree is determined by selecting the attribute that yields the highest information gain, which corresponds to the attribute with the lowest calculated entropy value. This process is repeated to create all the rules until the entire dataset is incorporated into the tree. Occasionally, there may be numerous branches that do not generalize well, depending on the features in the dataset. To address this issue, pruning techniques are employed. By doing so, the tree is refined to include rules with the fewest branches necessary for generalization, while still representing a significant portion of the dataset population.

D. EVALUATION OF RESULTS

Precision, recall (Sadikin & Alfiandi, 2018), F metrics (Mehdiyev et al., 2016) metrics were used to evaluate the obtained model.

$$precision = \frac{TP}{TP + FP} \tag{2}$$

$$recall = \frac{TP}{TP + FP} \tag{3}$$

$$F\ Metrics = 2 \cdot \frac{precision \cdot recall}{precision + recall} \tag{4}$$

TP: True Positive, FP: False Positive and FN: False Negative used in Eq. 2-4 represent classification.

3. RESULTS

The dataset comprises data collected from a total of 348 participants, with 189 (54.3%) female and 159 (45.7%) males. These participants fall within the age range of 18 to 25. For a detailed overview of the demographic characteristics, please refer to Table 1.

TABLE 1 | Demographic characteristics of the participants

Gender		n	%	Education Level		n	%
	Female	189	54,3		High School	207	59,5
	Male	159	45,7		Associate Degree	62	17,8
Age					Bachelor's Degree	79	22,7
	18-20	141	40,5	**Working Status**			
	21-23	127	36,5		Unemployed	179	51,4
	24-25	80	23		Part time	154	44,3
Income Status (₺)					Full time	15	4,3
	Up to 5500	58	16,7	**Marital Status**			
	5501-7000	46	13,2		Single/Living alone	155	44,5
	7001-8500	106	30,5		Single/Living with family	174	50
	8501-10000	48	13,8		Married/In a relationship	19	5,5
	10001 and above	90	25,9				

Based on the findings presented in Table 1, it is evident that there is a concentration of individuals within the income range of 7001₺-8500₺, which represents the median value in the income status variable (calculated based on an average exchange rate of $1=18.6₺ at the time of the study). Additionally, the minimum value in the education level variable corresponds to individuals with a high school education. Conversely, a smaller proportion of the sample belongs to the full-time working group in the working status variable and the married/relationship group in the marital status variable, when compared to the other groups. Overall, when considering the demographic characteristics, the sample exhibits a relatively balanced distribution.

Table 2 presents a summary of the data obtained from the participants regarding the nodes used in the Decision Tree model. These nodes include sport involvement (SI), team attachment (TA), beliefs about sponsorship (BS), attitude toward sponsor (AS), sponsor image (IM), sincerity (SN), and decision variables such as purchase intention (PI) and word of mouth (WOM).

TABLE 2 | Nodes and Leaves summary

	NODES							LEAVES	
	SI	TA	BS	AS	IM	SN		PI	WOM
min	1,000	1,000	1,000	1,000	1,000	1,000	Negative	86	72
Q_1	2,714	3,000	2,000	2,333	2,667	2,333	Neutral	84	148
median	3,143	3,889	3,000	3,000	3,000	3,000	Positive	178	128
Q_3	3,857	4,556	4,000	4,000	4,000	4,000	Total	348	348
max	5,000	5,000	5,000	5,000	5,000	5,000			

As can be seen in Table 2, a balanced distribution of decision variables is very important for the performance of the decision trees to be evaluated with an objective attitude. Decision trees created for the PI and WOM decision variables are presented in Figure 3 and Figure 4.

FIGURE 3 | Decision tree - Purchase Intention

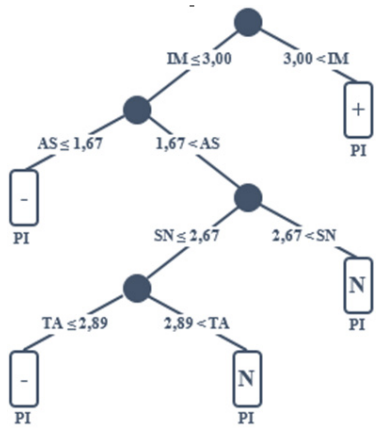


FIGURE 4 | Decision tree - Word of Mouth

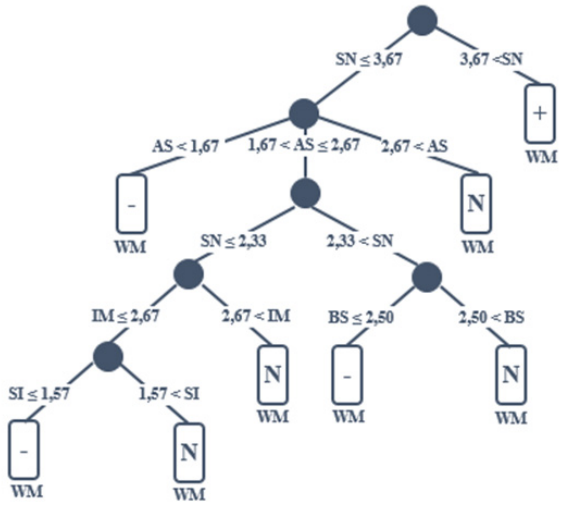


TABLE 3 | Evaluation metrics

	Class	Precision	Recall	F-Measure		Class	Precision	Recall	F-Measure
Purchase Intention -PI-	Negative	0,628	0,818	0,711	Word of Mouth -WOM-	Negative	0,571	0,500	0,533
	Neutral	0,700	0,500	0,583		Neutral	0,659	0,784	0,716
	Positive	0,836	0,807	0,821		Positive	0,853	0,727	0,785
	Average	0,746	0,737	0,734		Average	0,712	0,704	0,704

In Figure 3, it is evident that participants' positive IM perceptions correspond to positive purchase intentions. Furthermore, when IM perceptions are not positive, negative purchase intentions occur only when AS, SN, and TA perceptions are also negative.

In Figure 4, it is apparent that participants' SN perceptions significantly influence the outcome, as positive SN leads to positive word-of-mouth recommendations by consumers.

The evaluation metrics for the decision trees obtained are presented in Table3.

DISCUSSION AND CONCLUSION

A. DISCUSSION

The aim of this study is to assess the influence of sponsorship activities, which have been examined through various paradigms in existing literature, on consumers' purchasing tendencies within the realm of e-sports sponsorship. By addressing this issue, the article effectively addresses a notable gap in the current body of knowledge and offers valuable insights for both industry practitioners and researchers. To model consumer perceptions, the study employed the decision trees algorithm for two key variables: Purchase Intention (PI) and Word of Mouth (WOM). As a result, the research successfully illustrates the impact of e-sports sponsorships on consumer decision-making and behaviors through the utilization of two decision trees: one for purchase intention and another for word of mouth.

In the PI model, the influence of the sponsor's image on purchase intention has been established. (Cuesta-Valiño et al., 2022) conducted a study on consumer loyalty determinants and found that image is just as crucial as customer satisfaction and happiness in enhancing overall customer satisfaction. According to the PI model, if the sponsor's image creates a negative perception among consumers, it can adversely affect their purchase intention. Supporting this notion, (Bibby, 2009) conducted a study emphasizing the impact of image on purchase intention, specifically in the context of sports sponsorship. The findings demonstrated that sports sponsorship significantly enhances the image of institutions.

In the WOM model, it has been found that an increase in the consumer's perception of sincerity has a positive impact on their tendency to recommend the brand to others. Additionally, previous studies have highlighted the effectiveness of word-of-mouth communication strategies in enhancing successful sponsorship activities and fostering a positive attitude that influences consumers (Boerman et al., 2017; Jhawar et al., 2023; Park et al., 2019).

B. MANAGERIAL IMPLICATIONS

Utilizing rules to describe consumer behavior offers several intuitive and explanatory advantages (Adomavicius & Tuzhilin, 2001). This study places significant emphasis on the managerial implications of uncovering the rules that elucidate the impact of sponsorship on consumer purchase decisions, employing the decision tree algorithm. The findings present compelling evidence that the sponsor's image holds significant influence over the purchasing behaviors of young consumers aged 18-25, particularly those who display a keen interest in e-sports.

Sponsorships play a crucial role in the e-sports industry, enabling companies to gain a competitive edge and maintain their marketing initiatives over time. The sponsorship activities implemented by e-sports companies have demonstrated a remarkable ability to effectively shape consumers' brand perceptions in their everyday lives. Consequently, it is imperative for e-sports companies to make strategic decisions that foster meaningful consumer-sponsor relationships throughout the marketing process.

The study also identifies the perception of sincerity as another crucial factor. The study revealed a positive correlation between an increase in the consumer's perception of the sponsor company's sincerity and their inclination to recommend the brand to others in their social circle. This finding underscores the significance for e-sports companies to actively cultivate a perception of sincerity among consumers and utilize it as a powerful tool in their marketing endeavors. Hence, regarding sponsorship activities as a fundamental marketing component can be seen as a strategic competitive advantage for e-sports companies. Consequently, e-sports sponsorships represent a crucial strategy for effective marketing communication with consumers.

Sincerity, which stands out as a relatively under-studied concept in marketing, can be used as an argument that will create a practical purchase intention on the customers of both e-sports players and the companies sponsoring e-sports players. At the same time, sincerity, shown in the literature as a way to eliminate bad company reputation (Yoon et al., 2006), can be shown as a complementary marketing effort that can increase its effect when combined with specific marketing strategies. WOM is one of these strategies. It is a well-known phenomenon in the literature that companies that establish sincerity-oriented relationships with their customers and receive positive reviews create value for potential consumers. In contrast, unreliable and potentially fake reviews distort the effect of the original recommendation (Reimer & Benkenstein, 2016). Therefore, consumers avoid companies that are not sincere and allow fake reviews. This is also supported by the findings of (Tuk et al., 2009), who attribute a strong long-term WOM strategy and sales growth to long-term sincerity rather than consumer rewards.

Sincerity is also a sub-dimension of brand personality and the most emphasized brand personality component after enthusiasm (Paschen et al., 2017). This component not only affects the intention to participate in online brand communities (Kumar, 2022) but also strengthens the brand's online communication and brand-fan interaction (Hsu, 2019). In addition, Yoon et al. (2006) refer to perceived sincerity as a factor that deepens the effects of CSR (corporate social responsibility) activities, while Ragas & Roberts (2009) consider sincerity as a concept under the brand as brand sincerity. Puzakova et al. (2015) point to regional accent as a way to demonstrate a glocal (global+local) and ethnic approach to brand sincerity in international marketing, while Knight et al. (2015) consider sincerity as a vital feature of the language used in companies' and brands' apologies to consumers.

C. LIMITATIONS AND FUTURE RESEARCH

The findings of the decision tree model developed in this article make significant contributions to the existing literature by assessing the impact of sponsorship activities on consumers' purchasing tendencies within the realm of e-sports sponsorships. Nonetheless, we acknowledge certain limitations that serve as motivation for future research endeavors. One primary limitation stem from the use of cross-sectional data in this study, which restricts the ability to establish causal relationships and generalizability of the findings beyond the specific sampled region. Obtaining comparable results in studies conducted with the same scales in a different geographical context presents a significant challenge. Another limitation of the study is the inclusion of individuals within a specific age range who exhibit a high level of interest in e-sports. The comparison of results obtained from repeating the study across different age ranges or generations can provide valuable insights. The interest of various age groups in e-sports can have diverse effects on the outcomes. While the methodology employed in this study is comprehensible within the scope of mapping consumer behavior and

aids in the decision-making process, incorporating different models in future research could offer additional insights for a more profound interpretation of the findings.

Funding Information: This study did not receive support from any organization such as government, commercial or non-profit organizations.

Conflict of Interest: The authors have no conflicts of interest to declare.

Ethical Approval: All procedures performed in studies involving human participants comply with the ethical standards of the institutional and/or national research committee and the 1964 Declaration of Helsinki and its subsequent amendments or comparable ethical standards.

For this study, Ethics Committee Approval was obtained from Sivas Cumhuriyet University Scientific Research and Publication Ethics Social and Human Sciences Board with decision number 60 dated 10.02.2022.

Informed Consent Form: Informed consent forms were obtained from all individual participants who participated in the study.

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