

Factors influencing fan token purchase intent in sports fandom

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Abstract

Purpose – Within the sports industry, fan tokens have appeared as an instrument for fostering fan engagement and empowering them to participate in club-related decision-making processes via voting mechanisms (e.g. voting rights in decisions like the design of the equipment or the bus, and the ability to win rewards such as VIP experiences with the players).

Design/methodology/approach – Drawing on the technology acceptance model and consumer behaviour theories, a conceptual model was established to analyse the relationship of perceived ease of use, usefulness, and financial value, brand love, brand engagement, trust, social influence and its influence on the intention to purchase fan tokens. This study also analyses the generation of positive electronic word-of-mouth (e-WOM) derived from the intention to purchase fan tokens. To achieve the proposed objective, a quantitative study was conducted, collecting data through an online survey from football fans with an interest in fan tokens. The conceptual model was analysed using partial least squares (PLS) structural equation modelling (SEM).

Findings – Results show that the financial perceived value was the dimension that most contributed to explaining the purchase intention. It was also found that perceived ease of use, trust in fan tokens and brand engagement positively influence the intention to buy fan tokens. Furthermore, findings demonstrate that purchase intention positively drives e-WOM, highlighting that fans' behavioural intentions extend beyond adoption to active digital advocacy.

Originality/value – Results offer effective insights for both researchers and sports practitioners, while also presenting an original conceptual model applicable to diverse sports contexts and crypto assets-related research.

Keywords Blockchain, Fan tokens, Sports management, TAM model, Perceived financial value, Social influence, Trust, Brand love, Brand engagement, Purchase intention, e-WOM

Paper type Research article

1. Introduction

Blockchain technology, cryptocurrencies and NFTs have gained significant interest from academia, businesses, investors and policymakers. These concepts are closely tied to Web3.0, which aims to restore data control to users through decentralization, bottom-up design, transparency, privacy and security (Glebova *et al.*, 2025).

Blockchain serves as the foundation of this new era, enabling peer-to-peer transactions of digital assets without intermediaries, facilitating faster, more open and transparent exchanges, thus opening up a wide range of new business opportunities (Ertz and Boily, 2019; Xie *et al.*, 2019). For instance, Berkani *et al.* (2024) provide a systematic review of blockchain use cases in the sports industry, identifying both opportunities (e.g. collectible traceability, data sharing,



fan engagement) and key technological challenges such as scalability and interoperability. Among blockchain applications are crypto tokens, which represent digital assets within the blockchain network, assigned to specific users. These tokens can be categorized into two main types: Non-fungible tokens (NFTs) and fungible tokens (Arcenegui *et al.*, 2021).

Fungible tokens are replaceable, identical items (such as fiat currencies and cryptocurrencies) used for transaction accounting, while NFTs are unique and irreplaceable, providing verification of ownership for both physical and digital assets (Arcenegui *et al.*, 2021; Baker *et al.*, 2022). Articles on NFTs cover business trends (Ripple, 2022), sports management opportunities (Baker *et al.*, 2022), pricing and product design (Hofstetter *et al.*, 2022), brand representation (Colicev, 2022) and strengthening fan relationships (Coombs and Osborne, 2022).

In the context of sports and entertainment, fan tokens represent a recent and innovative topic, though they still generate controversy and uncertainty (Basu, 2023). While the lack of regulation raises concerns about the extent to which clubs can protect their supporters, fan tokens have the potential to enhance fan identification, commitment and engagement (Santos *et al.*, 2019; Yadav *et al.*, 2023; Lee *et al.*, 2023). Fan tokens are utility tokens based on blockchain technology, granting access to a transparent ledger of voting and membership privileges (Demir *et al.*, 2022). They exhibit characteristics similar to collectible items due to their limited availability and strong emotional resonance with fans, making them “passion investments”. Token holders gain access to specific services, such as voting in team polls, exclusive promotions, match tickets and VIP experiences (Scharnowski *et al.*, 2021). Stegmann *et al.* (2023a) also discuss tokenization as a strategic engagement platform in sport marketing, highlighting its potential to strengthen fan–club relationships and enhance participatory mechanisms. More recently, Chen (2025) offers a critical perspective on fan tokens and NFTs, arguing that rather than passively embracing them as tools for enhanced fan experiences, supporters increasingly view the incursion of cryptocurrency companies into football as part of a broader struggle over the ownership, financial stability and commercialization of the sport. This critical lens situates fan tokens within ongoing debates about the commodification of fandom and the tension between engagement and resistance in contemporary football culture.

While the literature has begun to explore fan tokens from financial and technological perspectives, the behavioural dimension of this phenomenon remains underexplored. Understanding how consumers perceive, trust and emotionally connect with these digital assets is necessary, as such mechanisms underpin the success of blockchain-based engagement strategies and determine their long-term sustainability in sport. Given the social and technological nature of fan tokens (Ante *et al.*, 2024), understanding how peer dynamics, community norms and perceived social influence shape fans’ behavioural intentions is essential. This study draws on both technology acceptance and consumer behaviour perspectives to explain fan token adoption. While the technology acceptance model (TAM/TAM2) and the unified theory of acceptance and use of technology (UTAUT) provide the technological foundation, consumer-behaviour approaches namely trust theory, engagement and brand relationship frameworks, and value-based adoption logic capture the affective, relational and symbolic dimensions of fandom. To the best of the authors’ knowledge, no comprehensive research has yet been conducted on fan tokens, particularly regarding fan engagement with sports clubs and the consumer attributes influencing their intent to acquire fan tokens. Overall, examining sports consumer behaviour and fan tokens is vital for enhancing fan engagement, generating revenue and gaining a competitive edge in the sports industry.

This study intends to answer the following research questions:

- RQ1. What are the drivers of the intention to purchase fan tokens?
- RQ2. How does social influence affect the relationship between brand love, brand engagement and trust with the intention to buy fan tokens?

RQ3. How does the intention to buy fan tokens influence the generation of positive electronic word-of-mouth (e-WOM)?

Each research question is subsequently translated into a corresponding set of hypotheses, ensuring conceptual consistency and empirical alignment with the proposed model.

2. Theoretical background

2.1 Drivers for the purchase of fan tokens

Sports organizations are increasingly leveraging technology to enhance revenue, improve fan satisfaction and expand their fan base (Glebova *et al.*, 2025). In a digital world, these organizations are striving to adapt to emerging technologies (Stegmann *et al.*, 2021). The rise of social networks has accelerated the adoption of strategies, enabling sports organizations to make significant advancements. New Web3-related tools, such as blockchain, the Metaverse and virtual reality, are now being explored in sports marketing (Stegmann *et al.*, 2023a, b). Strategies include the sale of digital collectibles, NFT-based ticket offerings and club ownership shares through NFTs (Baker *et al.*, 2022). Notably, these tokens can be fungible, meaning they are divisible and replaceable (Arcenegui *et al.*, 2021). Ownership of these tokens empowers fans to engage in club decision-making processes, establishing a direct connection between fans and clubs and potentially strengthening their relationship. These tokens are commonly referred to as fan tokens.

Beyond investment, which motivates financial gains (Demir *et al.*, 2022; Scharnowski *et al.*, 2021), several other factors influence consumer behaviour regarding fan tokens. These include the acceptance of blockchain technology and its applications (Albayati *et al.*, 2020; Mendoza-Tello *et al.*, 2019). Additionally, the relationship fans maintain with sports organizations plays a key role in shaping their intent to purchase fan tokens. As noted by Jowdy and McDonald (2003), engaged sports fans actively participate in relationship-building and invest in long-term connections with their preferred clubs. Fan tokens bridge the gap between fans and clubs, granting fans influence over club decisions and can significantly shape the intention to purchase them. This dynamic illustrates how the fan–club relationship drives consumer decisions in the acquisition of fan tokens.

2.1.1 Technology acceptance. Numerous studies have explored the acceptance of technology by consumers and businesses (Lai, 2017). One of the most widely adopted frameworks is the TAM, which predicts technology adoption based on individual attitudes influenced by perceived ease of use and perceived usefulness (Rahman *et al.*, 2017; Venkatesh *et al.*, 2012; Davis, 1989). TAM has been refined and extended to enhance its predictive power across various contexts (Al-Qaysi *et al.*, 2020). For blockchain, Albayati *et al.* (2020) argue that TAM should incorporate additional constructs, which Gil-Cordero *et al.* (2020) and Mendoza-Tello *et al.* (2019) have applied to cryptocurrency adoption, focusing on “ease of use” and “perceived usefulness” as key factors influencing adoption intentions.

Perceived ease of use refers to the perception that a technology is easy to learn and use (Davis, 1989). This concept is well-established in technology acceptance research and has been applied to various innovations, including social networks for financial transactions and online banking, where ease of use significantly enhances adoption intentions (Al-Gahtani, 2016; Hansen *et al.*, 2018; Shaikh *et al.*, 2020). Fan tokens, based on blockchain, share characteristics with cryptocurrencies, which can influence their perceived ease of use. Key factors affecting this perception include digital literacy, familiarity with blockchain and the connection of fan tokens to the cryptocurrency CHZ.

In addition to perceived ease of use, perceived usefulness is a crucial determinant of technology adoption. Perceived usefulness is defined as the extent to which a user believes a system will enhance their task performance (Davis, 1985). For cryptocurrencies, Mendoza-Tello *et al.* (2018) found that perceived usefulness increases adoption intentions, a finding supported by Gil-Cordero *et al.* (2020), who used performance expectancy as a related

construct. In the context of sports fandom, adopting fan tokens involves not only understanding a new digital technology but also perceiving how this innovation enhances the overall fan experience (Ante *et al.*, 2024). For fans, ease of use refers to the perceived simplicity of acquiring, managing and using fan tokens to access exclusive club-related benefits and experiences. Usefulness, in turn, reflects the extent to which fan tokens are perceived as valuable tools to increase interaction, strengthen team identification and participate more actively in the club's ecosystem. In line with TAM perceived ease of use and perceived usefulness are conceptualised as primary cognitive determinants of behavioural intention, providing the technological basis of this study and linking sport consumer adoption to established technology acceptance theory. Therefore, applying TAM to this context enables a more precise understanding of how technological and experiential factors jointly shape fan engagement with blockchain-based platforms (Ante *et al.*, 2024; Stegmann *et al.*, 2023b). Accordingly, the following hypotheses are proposed:

H1. Perceived ease of use positively influences the intention to purchase fan tokens.

H2. Perceived usefulness positively influences the intention to purchase fan tokens.

2.1.2 Financial perceived value. Similar to cryptocurrencies, fan tokens, along with other blockchain applications, are gaining popularity as investment instruments (Sukumaran *et al.*, 2022). Recent studies highlight that investing in fan tokens carries a higher risk, even more than stocks or cryptocurrencies (Demir *et al.*, 2022; Mazur and Vega, 2022; Scharnowski *et al.*, 2021). In the metaverse, brands are exploring new opportunities for crypto marketing and commerce, such as creating branded non-fungible tokens (BNFTs). Lee *et al.* (2023) explored how BNFT attributes like scarcity, financial value, prestige, uniqueness and originality foster positive brand attitudes, enhancing brand commitment, purchase intentions and engagement with BNFTs.

Mazur and Vega (2022) found that fan tokens can yield significant returns, with an average gain of 150% on the first trading day, highlighting the high price volatility and the potential for substantial profits. Beyond their financial potential, fan tokens also generate added value through enhanced fan–club interaction and symbolic ownership. They allow supporters to participate in decision-making processes, access exclusive experiences and strengthen their identification with the team, thus combining economic and emotional dimensions of fandom (Scharnowski *et al.*, 2021; Stegmann *et al.*, 2023a). The pricing of these assets is often driven by speculation, with external factors like match outcomes or player transfers impacting token prices (Demir *et al.*, 2022). Despite the risks, fan tokens can serve as a market diversification strategy (Vidal-Tomás, 2023). Evidence suggests that fan tokens show limited correlation with club stocks (Ersan *et al.*, 2022) and other cryptocurrencies (Vidal-Tomás, 2023). These tokens, actively traded, offer opportunities for capital gains and portfolio diversification, making the anticipation of future returns a key motivator for acquiring fan tokens. Considering sports fandom, the notion of financial perceived value transcends profit-oriented motives. For fans, acquiring fan tokens represents both a financial opportunity and an expression of emotional affiliation and participation in the club's ecosystem. This hybrid perception, integrating economic and identity-based motivations, captures how financial value in this setting also reflects symbolic meanings such as legitimacy, pride and empowerment derived from engaging in the club's digital economy (Ante *et al.*, 2024; Stegmann *et al.*, 2023a, b). This hypothesis is grounded in value-based adoption theory, which posits that consumers' adoption intentions are driven by the perceived balance between the benefits and costs of a technology. In the context of sport fandom, financial perceived value reflects both tangible (economic) and intangible (symbolic) rewards, thereby extending traditional adoption models to incorporate fans' hybrid motivations for participation in digital economies. Based on this premise, the following hypothesis is proposed:

H3. Perceived financial value positively influences the intention to purchase fan tokens.

2.1.3 Trust. Trust can be defined as “a mental state comprising: (1) expectancy – the trustor expects a specific behaviour from the trustee (such as providing valid information or effectively performing cooperative actions); (2) belief – the trustor believes that the expected behaviour occurs, based on the evidence of the trustee’s competence, integrity, and goodwill; (3) willingness to take risk – the trustor is willing to take risk for that belief” (Huang and Nicol, 2013, p. 2). In essence, it involves willingly placing oneself in a vulnerable position, relinquishing control over the situation, predicated on the anticipation that the other party will conduct themselves in a manner aligning with one’s expectations, interests or values. It also implies an acknowledgment that the trusting individual lacks direct control over the actions of the other party (Harrison McKnight and Chervany, 2001; Huang and Nicol, 2013). Findings from a meta-analysis conducted by Wu *et al.* (2011) showed that there was a significant influence of trust on the intention to purchase online. Applying this concept to the digital world, trust has been recognized as a key success factor to predict the willingness to continuously use a website, given the lack of physical interaction (Bilgihan, 2016).

The same technology that powers cryptocurrencies, Blockchain, is used to develop and exchange fan tokens. According to Arli *et al.* (2021), blockchain technology enables users to manage all transactions in a shared digital ledger, keeping all transactions known and deserving of trust, assuming transparency. Therefore, the technology behind fan tokens can help to ensure trust, since there is not a third authority responsible for that. However, there are some risks associated with NFTs that may influence users’ trust. Some examples include the lack of regulation, the association with fraud, information asymmetry and the counterfeiting of NFTs (Zarifis and Cheng, 2022). Based on trust theory and its relationship within digital technology adoption models, it is proposed that individuals’ intention to adopt fan tokens depends on their confidence in the system’s reliability, transparency and integrity. In sport fandom contexts where transactions and identity expressions converge trust reduces perceived uncertainty and risk, reinforcing the acceptance of fan tokens as legitimate and credible extensions of the fan–club relationship. Thus, the following hypothesis is proposed:

H4. Trust in fan tokens positively influences the intention to purchase them.

2.1.4 Brand engagement. Brodie *et al.* (2011, p. 258) defined customer engagement as a “psychological state” resulting from interactive, co-creative customer experiences with a focal agent in service relationships. This process is dynamic and multidimensional, influenced by cognitive, emotional and behavioural factors. Hollebeek *et al.* (2014, p. 154) later conceptualized customer brand engagement as “the consumer’s positively-valenced brand-related cognitive, emotional, and behavioural activity” during consumer/brand interactions.

In sports marketing, research shows that football fans demonstrate high engagement levels, fostering unique relationships with their clubs. These fans develop strong emotional connections, characterized by team identification, emotional investment and loyalty (Yoshida *et al.*, 2014). Sports enthusiasts follow their teams with a desire to create lasting bonds and engage in activities that deepen their connection with the club (Jowdy and McDonald, 2003). This deep engagement often leads to an increased interest in purchasing products related to the club, such as fan tokens, which can further enhance this bond and help establish long-term relationships.

Fan tokens share several features that strengthen the fan–club relationship, such as participation in team polls, customization of team products, exclusive interactions with players and involvement in fan-driven competitions (Vale and Fernandes, 2018). These attributes align with recommendations for enhancing fan loyalty and connection with the team. According to Vivek *et al.* (2014), brand engagement extends beyond mere purchase, representing a deeper emotional and behavioural connection between fans and the club. Based on this understanding, the following hypothesis is proposed:

H5. Brand engagement has a positive effect on the purchase of fan tokens.

2.1.5 Brand love. Brand love is typically defined as “the degree of passionate emotional attachment a satisfied customer holds for a specific trade name” (Carroll and Ahuvia, 2006, p. 81). Recent research, however, broadens this definition, proposing that brand love extends beyond brand attachment and self-brand connections. It is now seen as a higher-order construct encompassing customer knowledge, emotions and behaviours related to any brand-associated item (Batra *et al.*, 2012). This perspective views brand love as a deeper, more complex phenomenon that reflects the richness of the customer’s connection to the brand. Customers invest time and financial resources to foster this relationship, often spending more to acquire brand-related products, as the emotional cost of losing a beloved brand is high (Thomson *et al.*, 2005).

In football, an industry with intense emotional engagement, the bond between fans (consumers) and clubs (brands) is notably strong (Sutton *et al.*, 1997). Fans are defined by their passion and fanaticism, supporting their teams through both successes and challenges (Westerbeek and Smith, 2002). Martín *et al.* (2020) found that brand love for football clubs correlates with loyalty, investment and word-of-mouth communication. Fan tokens, which resonate with fans, offer a meaningful way for them to feel heard and increase their influence within the club. The desire to enhance this connection can drive fans to acquire fan tokens, guided by their love for the brand (club). Recent studies have further emphasized the emotional and relational nature of brand love in both digital and sport contexts. Kumar *et al.* (2023a, b) demonstrated that emotional attachment and experiential satisfaction are key mechanisms in creating brand love for digital platforms, while Küster-Boluda *et al.* (2025) extended this concept to the football context, showing how affective intensity and symbolic identification reinforce long-term fan–brand relationships. These findings strengthen the relevance of brand love as a driver of behavioural intention and engagement in fandom. According to the evidence above, the following hypothesis is proposed:

H6. Brand love has a positive effect in the purchase of fan tokens.

2.1.6 The moderating effect of social influence. Social influence is delineated as the degree to which an individual perceives external pressures, arising from the convictions of others, urging them to embrace a particular technology (Arias-Oliva *et al.*, 2019; Venkatesh *et al.*, 2003). When applying the concept of social influence to the realm of blockchain technology, particularly in the context of cryptocurrencies, a certain level of controversy arises concerning the direct impact of this variable on the acceptance of such technology. The intricacies of how social influence operates within the domain of blockchain and cryptocurrencies are subject to debate (Arias-Oliva *et al.*, 2019; Shahzad *et al.*, 2018), with divergent perspectives on the extent to which external factors shape the reception and adoption of these technological innovations. The study carried out by Machado *et al.* (2020) provides additional support for the relevance of social influence in sport fan engagement. Their study on motivations to engage with sports brands on social media demonstrates that social influence, together with entertainment and rewards, plays a central role in shaping fan interactions and participation on official club pages such as Facebook and Instagram.

In line with the extended TAM2 and the UTAUT (Venkatesh and Davis, 2000; Venkatesh *et al.*, 2003), social influence is conceptualized in this study as a contextual factor that strengthens the relationships between attitudinal constructs and behavioural intentions. Within the sports fandom environment, peer norms and community expectations can amplify the impact of emotional and relational factors, such as brand love, trust and brand engagement, on fans’ willingness to adopt and use fan tokens. Thus, the following hypotheses are proposed:

H7. Social influence has a positive moderating effect on the relationship between trust and the intention to purchase fan tokens.

H8. Social influence has a positive moderating effect on the relationship between brand engagement and the intention to purchase fan tokens.

H9. Social influence has a positive moderating effect on the relationship between brand love and the intention to purchase fan tokens.

2.1.7 *Electronic word-of-mouth (e-WOM)*. Hennig-Thurau *et al.* (2004, p. 39) define *e-WOM* as “any positive or negative statement made by potential, actual, or former customers about a product or company, made available to a multitude of people via the Internet.” Ferreira and Barbosa (2017) suggest that consumers can share and engage with brand-generated content, increasing visibility within their network through these consumer-driven actions. Thus, customers have evolved from passive information recipients to active participants in interactive processes, including building networks and generating word-of-mouth (Brodie *et al.*, 2013). The inclusion of *e-WOM* is grounded both in the TAM and in broader consumer behaviour research. In line with TAM (Davis, 1989; Venkatesh and Davis, 2000), behavioural intention represents the immediate antecedent of actual behaviour, such as information sharing or recommendation. From a consumer behaviour perspective, previous studies have shown that higher purchase intention and satisfaction towards digital products increase the likelihood of positive *e-WOM*, as consumers seek to validate their choices and influence peers (Hennig-Thurau *et al.*, 2004). Accordingly, *e-WOM* reflects a behavioural manifestation of fan engagement and serves as a relevant post-adoption response in the context of fan tokens. Current studies have further emphasized the role of *e-WOM* in shaping fan behaviour and brand advocacy. Wakefield and Bennett (2018) showed that *e-WOM* generated through ephemeral social media enhances fan experiences and fosters emotional connection with sports brands. Similarly, Cho *et al.* (2025) found that NFTs can serve as effective promotional tools that strengthen brand love and brand respect, thereby amplifying *e-WOM* and engagement within digital fandom environments.

In sports, research (de Ruyter and Wetzels, 2000; Swanson *et al.*, 2003; Dietz-Uhler and Murrell, 1999) shows that highly engaged fans are likely to focus on tasks benefiting their teams, such as positive *e-WOM*, in addition to personal tasks like attending games and purchasing products. Fan tokens, which empower users to directly influence clubs and engage in value co-creation (e.g. voting on team decisions or designing equipment), can incentivize fans to acquire them. This involvement may encourage fans to engage in *e-WOM*, sharing the benefits of fan tokens with fellow supporters (Lou *et al.*, 2021). This leads to the following research hypothesis:

H10. The intention to purchase fan tokens has a positive effect on *e-WOM*.

Figure 1 summarizes the research model and underlying hypotheses.

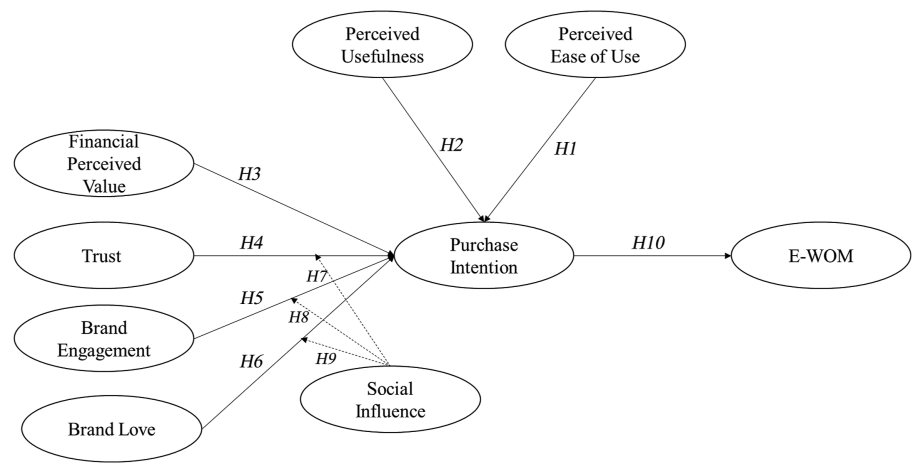


Figure 1. Conceptual model developed for this study. Source: Authors’ own work

3. Methodology

3.1 Data collection and sampling

Data were gathered via a survey administered on Google Forms, between April to May of 2023, targeting football fans and investors interested in purchasing fan tokens. A convenience sampling method was used by distributing the survey randomly and online across universities and social networks. The survey link was disseminated directly by the authors to ensure control over participant eligibility and data integrity. Participation was voluntary and anonymous, and all respondents provided informed consent prior to completing the questionnaire. The study protocol followed the ethical research standards of the authors affiliated institutions, which does not require additional IRB approval for anonymous, non-invasive surveys. The questionnaire was drafted in two languages, Portuguese and English, and backtranslation was employed by two independent bilingual translators to ensure that both questionnaires had the same content and information (Sekaran, 1983).

The questionnaire was tested by a panel consisting of 10 experts, scholars and marketing executives. Additionally, during a pre-test phase, the questionnaire was distributed to a cohort of 20 individuals encompassing diverse academic backgrounds and age groups. This phase aimed to assess their understanding of the questions and the variability of their responses. The questionnaire comprises four sections. The first section focused on informed consent and data processing. Only respondents who agreed to the terms of the study were included. The second section incorporated questions related to the intention to purchase fan tokens. Respondents who were already familiar with fan tokens and their characteristics were asked about their future purchase intentions. Conversely, participants who were unfamiliar with fan tokens were provided with an explanation of the concept and properties, and then indicated their interest or lack of it in buying fan tokens based on that description. The third section comprised the dimensional scales of the constructs outlined in the conceptual model. The last section covered the respondents' sociodemographic characteristics.

The survey garnered responses from a total of 414 participants. However, only 233 responses were valid and included in the study's sample. This exclusion was based on the criteria of respondents expressing a genuine interest in purchasing fan tokens. Table 1 illustrates the details of the sample. The ages of the respondents ranged from 18 to 58, with the majority falling between 22 and 25 years old, accounting for 55% of the participants; 61% were university students. Finally, most of the participants reported no annual gross income (24%), followed by those who earn between 6,001€–15,000€ (22%) and between 15,001€–30,000€ (18%).

3.2 Measures

The constructs of the research model were assessed using seven-point Likert type scales adopted from previous studies, ranging from 1 (Strongly Disagree) to 7 (Strongly Agree). Purchase intention was assessed using three items adopted from Bagozzi *et al.* (2016). Perceived ease of use was assessed using four items scale developed by Venkatesh *et al.* (2003). Perceived usefulness was assessed by four items adopted from Venkatesh and Davis (2000) scale. To assess the financial perceived value, this study adopted three items from the construct performance expectancy from Venkatesh *et al.* (2012). Trust was assessed with six items adopted from Gefen *et al.* (2003) scale. Brand engagement was measured by 14 items adapted from Vivek *et al.* (2014). To assess brand love, this study adapted eight items from Carroll and Ahuvia (2006) scale. The moderating effect of social influence was evaluated using six items adopted from the scales of Venkatesh *et al.* (2012) and Azadvar and Canossa (2018). Concerning the generation of positive e-WOM, this construct was measured by six items adopted from Goyette *et al.* (2010) scale.

Table 1. Sample profile

Variable	Frequency	Percentage	Variable	Frequency	Percentage
<i>Age</i>			<i>Income</i>		
18–21	35	15.0	No income	56	22.3
22–25	127	54.5	<6,000€	40	17.2
26–30	45	19.3	6,001€ – 15,000€	52	22.3
31–40	15	6.4	15,001€ – 30,000€	42	18.0
>40	10	4.3	30,001€ – 60,000€	20	8.6
			60,001€ – 90,000€	3	1.3
<i>Gender</i>			>90,000€	3	1.3
Male	127	55	Prefer not to answer	17	7.3
Female	103	44			
Prefer not to answer	3	1	<i>Occupation</i>		
<i>Education</i>			Student	82	35.2
High School	30	12.9	Working Student	54	23.2
Bachelor's degree	124	53.2	Dependent worker	65	27.9
Master's Degree	72	30.9	Self-employed	18	7.7
Doctorate	6	2.6	Unemployed	1	0.4
Prefer not to answer	1	0.4	Prefer not to answer	13	5.6
<i>Favourite Club</i>					
AC Milan	7	3.0			
Arsenal FC	17	7.3			
Atlético de Madrid	3	1.3			
Borussia Dortmund	1	0.4			
Chelsea	1	0.4			
FC Barcelona	42	18.0			
FC Porto	55	23.6			
Inter Milan	3	1.3			
Juventus FC	5	2.1			
Lazio	1	0.4			
Liverpool	1	0.4			
Manchester City	32	13.7			
Napoli	1	0.4			
Nottingham forest	1	0.4			
Paris Saint-Germain FC	18	7.7			
Portugal	1	0.4			
Real Madrid	1	0.4			
SL Benfica	37	15.9			
Sporting CP	1	0.4			
Vitoria SC	5	2.1			
Source(s): Authors' own work					

3.3 Data analysis techniques

The hypotheses were examined through partial least squares (PLS) structural equation modelling (SEM) with the assistance of SmartPLS 4 software (Sarstedt et al., 2020, 2021). PLS-SEM was selected for this study due to its suitability for exploratory models, provision of predictive tools for model evaluation and validation, capacity to handle a wide range of items, ability to accommodate non-normal data and flexibility with respect to sample sizes (Hair et al., 2017). The PLS method was implemented in two stages. Initially, the reliability and validity of the measurement model were assessed. Subsequently, the structural model underwent evaluation via a bootstrapping procedure involving 5,000 subsamples, aimed at elucidating the relationships among the latent factors (Chin, 2010). This methodological approach ensured that the validity and reliability of the scales were confirmed prior to testing the main hypotheses.

4. Results

4.1 Measurement model

The first step was to assess the measurement model by examining the indicator loadings and internal consistency reliability, each construct measure's convergent validity and the discriminant validity. Results obtained show that the factor loadings of the items were between 0.743 and 0.970, indicating good reliability. This suggests that a substantial portion of the variance in the observed variables is explained by the latent constructs they are intended to measure. Furthermore, all Cronbach's alpha values surpass the threshold of 0.70 (see Table 2). The individual reliability of constructs was also assessed utilizing composite reliability (CR) and Dijkstra–Henseler's rho (ρ_A) (Dijkstra and Henseler, 2015). For each variable, CR exceeds 0.7, and ρ_A surpasses 0.7, affirming the scales' reliability (Hair *et al.*, 2019). Moreover, convergent validity was measured based on average variance extracted (AVE) values, all of which are above 0.50, signifying that each construct elucidates more than half of its indicators' variance (Fornell and Larcker, 1981).

Two criteria were used to verify the discriminant validity: the Fornell–Larcker criterion and the heterotrait–monotrait ratio (HTMT) criterion (see Table 3). The Fornell–Larcker criterion, which states that the square root of the AVE of a construct should be greater than the correlation between the construct and any other construct (Fornell and Larcker, 1981), was verified. HTMT, defined as the average of item correlations across constructs relative to the geometric mean of monotrait–heteromethod correlations (Dijkstra and Henseler, 2015), was assessed. The HTMT criterion was satisfied as the shared variance between constructs fell below the cutoff values of 0.90, affirming the distinctiveness of the model's constructs.

4.2 Hypothesis testing

The research hypotheses were assessed using SEM and a bootstrapping procedure in SmartPLS with 5,000 subsamples. This method highlighted the coefficients and statistical significance of each path. To assess the structural model, its explanatory capacity is evaluated using the coefficient of determination R -squared (R^2) which indicates the explained variance of the dependent constructs (Hair *et al.*, 2019). The model presents a good level of predictive power, explaining 51.9% of the intention to purchase fan tokens and 43.6% of the positive e WOM. Regarding the criteria of predictive accuracy, in addition to evaluating the magnitude of the R^2 we also examine Q^2 predict value (Sarstedt *et al.*, 2021). The analysis of Q^2 predict value indicated the strong predictive relevance of this study, for both purchase intention (0.487) and e-WOM (0.543), since both values are above 0 (Chin, 2009). Table 4 shows the results of the hypotheses in the research model (Figure 1).

Table 2. Internal consistency reliability

	Cronbach's alpha (α)	Dijkstra Henseler's rho (ρ_A)	CR (AVE)
Brand Engagement	0.975	0.977	0.978 (0.745)
Brand Love	0.968	0.983	0.973 (0.816)
E-WOM	0.971	0.971	0.976 (0.873)
Financial Perceived Value	0.954	0.954	0.970 (0.915)
Perceived Ease of Use	0.912	0.922	0.938 (0.790)
Perceived Usefulness	0.926	0.978	0.946 (0.815)
Purchase Intention	0.756	0.789	0.857 (0.668)
Trust	0.946	0.946	0.958 (0.791)

Source(s): Authors' own work

Table 3. Discriminant validity

	Fornell–Larcker criterion								Heterotrait–monotrait ratio (HTMT)							
	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
1. Brand Engagement	<i>0.863</i>															
2. Brand Love	0.792	<i>0.903</i>							0.808							
3. E-WOM	0.464	0.345	<i>0.934</i>						0.474	0.349						
4. Financial Perceived Value	0.334	0.219	0.605	<i>0.957</i>					0.341	0.216	0.628					
5. Perceived Ease of Use	0.448	0.382	0.584	0.317	<i>0.889</i>				0.476	0.404	0.611	0.339				
6. Perceived Usefulness	0.444	0.392	0.665	0.421	0.587	<i>0.903</i>			0.463	0.425	0.682	0.416	0.626			
7. Purchase Intention	0.385	0.240	0.660	0.604	0.487	0.479	<i>0.817</i>		0.425	0.253	0.744	0.71	0.551	0.516		
8. Trust	0.449	0.388	0.777	0.507	0.615	0.675	0.607	<i>0.889</i>	0.466	0.402	0.810	0.528	0.661	0.702	0.687	

Note(s): Fornell–Larcker criterion – diagonal elements in italic are square roots of variance shared between constructs and their measures; discriminant validity: diagonal elements should be greater than off-diagonal elements. Abbreviations: E-WOM, electronic word-of-mouth

Source(s): Authors' own work

Table 4. Hypothesis testing

Hypotheses	Path coefficient (β)	T statistics	p-value	Confidence interval (95%)	Supported
H1. Perceived Ease of Use $\rightarrow$ PI	0.163	2.538	0.011	[0.038-0.290]	Yes
H2. Perceived Usefulness $\rightarrow$ PI	0.014	0.197	0.844	[-0.131-0.144]	No
H3. Financial Perceived Value $\rightarrow$ PI	0.375	7.585	0.000	[0.272-0.468]	Yes
H4. Trust $\rightarrow$ PI	0.291	3.615	0.000	[0.127-0.444]	Yes
H5. Brand Engagement $\rightarrow$ PI	0.181	2.352	0.019	[0.029-0.331]	Yes
H6. Brand Love $\rightarrow$ PI	-0.166	2.056	0.040	[-0.328-(-0.012)]	No
H10. PI $\rightarrow$ E-WOM	0.660	21.869	0.000	[0.593-0.712]	Yes
<i>Moderation effect</i>					
H7. SI $\times$ Trust $\rightarrow$ PI	0.171	2.959	0.003	[0.047-0.274]	Yes
H8. SI $\times$ Brand Engagement $\rightarrow$ PI	0.038	0.384	0.701	[-0.170-0.217]	No
H9. SI $\times$ Brand Love $\rightarrow$ PI	-0.040	0.403	0.687	[-0.239-0.150]	No

Note(s): PI = purchase intention; SI = social influence
Source(s): Authors' own work

5. Discussion

This study had as its primary objectives to analyse the antecedents that drive the purchase intention of fan tokens, to understand the role of social influence as a moderator, and lastly, to investigate possible outcomes of the purchase intention of fan tokens, specifically the creation of positive e-WOM. The results of the assessment model provide valuable insights into the factors influencing the intention to purchase fan tokens.

In response to the first research question “What are the drivers of the intention to purchase fan tokens?” the results of our study show that perceived ease of use (H1) ($\beta = 0.163$; $p < 0.05$), perceived financial value (H3) ($\beta = 0.375$; $p < 0.001$), trust (H4) ($\beta = 0.291$; $p < 0.001$), and brand engagement (H5) ($\beta = 0.181$; $p < 0.05$) are important drivers of consumer’s intention to purchase fan tokens supporting H1, H3, H4 and H5, respectively.

Although both perceived usefulness (H2) and brand love (H6) were not supported, these results provide theoretically meaningful insights into fan token adoption behaviour. The absence of a significant effect of perceived usefulness suggests that, in the context of sports fandom, technological utility is secondary to affective, financial and trust-based motivations. Fan tokens are not adopted primarily for instrumental efficiency or performance enhancement but as symbolic, hedonic and community-oriented assets. This reinforces the idea that, unlike traditional technologies studied within the TAM, fan tokens embody experiential rather than utilitarian value. Similarly, the non-significant effect of brand love indicates that emotional attachment to the club does not necessarily translate into a willingness to invest in blockchain-based products. This may result from fans perceiving fan tokens as speculative or commercial tools detached from the authenticity of their emotional connection with the club. The observed negative coefficient further suggests a possible cognitive dissonance between genuine fandom and financialized engagement, a tension also identified by Chen (2025) in discussions of crypto-capitalism in sport.

Regarding the effect of perceived ease of use on the intention to buy fan tokens, our results corroborate the findings of previous studies of Albayati *et al.* (2020) and Mendoza-Tello *et al.* (2019) showing that this driver has been widely used as an antecedent of the intention to use technology (Davis, 1985), and recent studies have been applying it to the adoption of blockchain technology through cryptocurrencies. Findings of the research developed by Mendoza-Tello *et al.* (2019) showed that perceived ease of use had a significant impact on the intention to adopt cryptocurrencies.

Perceived financial value is the driver that most contributes to explaining consumer's intention to buy fan tokens. This evidence shows that people who intend to buy fan tokens have financial gain as their main motivation. This result corroborates the findings of [Böhme et al. \(2015\)](#) and [Glaser et al., \(2014\)](#) in their studies about the motivations to purchase cryptocurrencies. This finding further supports the conclusions of [Lee et al. \(2023\)](#), who demonstrated a positive relationship between the financial value of BNFTs and brand attitude. One possible justification for this result concerns the inherent investment advantages of fan tokens like those seen in cryptocurrencies, such as 24/7 access and high-price volatility leading to potentially large gains ([Mazur and Vega, 2022](#)).

Trust in fan tokens also plays an important role as a driver of consumer's intention to buy it. This evidence supports previous research namely the studies carried out by [Arli et al. \(2021\)](#), [Gil-Cordero et al. \(2020\)](#) and [Wu et al. \(2011\)](#). First, [Wu et al. \(2011\)](#) concluded that trust plays an important role in purchase intention. Fan tokens, as an application of blockchain, rely heavily on the trust consumers place in the underlying technology. This trust stems from the properties of blockchain, including transparency, irreversibility and security, which eliminate the need for a third party ([Arli et al., 2021](#)). The results of the present study also support those found by [Gil-Cordero et al. \(2020\)](#) in their research on cryptocurrency adoption. Findings demonstrated that trust had a significant impact on consumer's intention to purchase cryptocurrencies.

A substantial and positive influence of brand engagement on the consumer's intention to purchase fan tokens has been confirmed, extending the evidence already well-explored in the literature ([Hollebeek et al., 2014](#)) to the specific context of fan tokens. This finding indicates that individuals intending to buy fan tokens of football clubs are influenced by their interactions with the clubs. They perceive fan tokens as an opportunity to enhance their engagement with their favourite club and strengthen their relationship with the fan community.

Considering the second question of this study, "How does social influence affect the relationship between brand love, brand engagement, and trust with the intention to buy fan tokens?", we found that social influence only moderates the relationship between trust in fan tokens and the intention to buy them, supporting [H7](#) ($\beta = 0.171$; $p < 0.01$). Consequently, hypotheses [H8](#) and [H9](#) were not verified. Based on these results, the influence of family, friends and online communities enhances the impact of trust on the intention to buy fan tokens. Consistent with the findings from the study conducted by [Sedera et al. \(2017\)](#), our results demonstrate that individuals express interest in buying fan tokens due to their trust in the tokens and their associated characteristics. Furthermore, their willingness to purchase is heightened when in a friendly social context – where the opinions of the surrounding community are supportive.

Lastly, concerning the third question of this study "How does the intention to buy fan tokens influence the generation of positive *e-WOM*?", findings supported [H10](#) ($\beta = 0.660$; $p < 0.001$). Although the literature has been focusing on the inverse relationship ([Cheng et al., 2022](#); [Kumar et al., 2023a, b](#)) – specifically, the impact of *e-WOM* on purchase intention – our study reveals a noteworthy trend. Individuals expressing interest in purchasing fan tokens not only tend to disseminate their opinions but actively share positive characteristics of fan tokens through digital channels like social media. This finding is intriguing as it suggests that fan tokens are perceived not only as a means of bringing fans closer to their favourite clubs but also as a vehicle for fostering digital connections among fans themselves.

6. Conclusions

The findings of this study provide integrated insights into how technological, emotional and social factors jointly shape fans' behavioural intentions towards fan tokens. Rather than simply confirming the TAM within the sports context, the results extend its explanatory scope by including financial perceived value, trust and social influence, dimensions that capture both rational and affective aspects of fandom. The significant influence of ease of use reaffirms the importance of technological acceptance, while the effects of trust and brand engagement

highlight the emotional drivers of fan tokens adoption. Furthermore, the moderating role of social influence underscores that fan decisions are collectively shaped by peer norms and group identification. Collectively, these findings enrich the understanding of digital fandom by bridging technology adoption models and contemporary fan behaviour research.

6.1 Theoretical contributions

This study advances the existing body of knowledge by extending the TAM through the integration of emotional and relational constructs, specifically, brand love, brand engagement and social influence. In doing so, it situates technology adoption within the socioemotional dynamics of sports fandom. Furthermore, it conceptualizes financial perceived value as a multidimensional construct that encapsulates both economic and symbolic motivations, deepening understanding of consumer value formation in digital consumption contexts. Finally, by examining the moderating role of social influence, this study elucidates how collective norms and peer validation intensify the relationship between attitudinal factors and behavioural intention. This provides a more refined theoretical perspective on fan engagement within blockchain-based fan engagement contexts.

Given the novelty of the fan tokens topic and the scarcity of marketing-focused studies in this area, our aim was to establish a connection between existing evidence from related fields and the specific context of fan tokens. Consequently, this research contributes to the marketing exploration of crypto assets, specifically fan tokens and enhances sports management theory by advancing knowledge in sport consumer behaviour and digital fan engagement. It bridges technology acceptance and consumer–brand relationship frameworks to explain how technological, emotional and social mechanisms jointly drive fan participation in blockchain-mediated sport contexts.

This study can serve as an informative theoretical foundation for future marketing research on crypto assets, particularly fan tokens. Given the novelty and innovation associated with this theme, current studies on fan tokens are limited, primarily focusing on the performance of fan token prices in the financial market. Therefore, this research lays the groundwork for future investigations into the broader marketing aspects of fan tokens. Furthermore, this study contributes to the literature by inverting the traditional causal direction between *e-WOM* and behavioural intention. While most prior research conceptualizes *e-WOM* as a driver of purchase decisions, our findings suggest that the intention to purchase fan tokens itself can generate positive *e-WOM* behaviours. This indicates that intention can act as a relational catalyst within fan communities, transforming pre-purchase commitment into advocacy and brand communication. Such a perspective enriches the theoretical understanding of fandom behaviour by framing intention as both a cognitive and social construct that drives digital engagement beyond transactional boundaries.

6.2 Practical contributions

Based on the results obtained, football club managers and practitioners in this sector can make more informed decisions regarding the use of fan tokens. This research reveals that potential buyers of fan tokens perceive them as potentially more valuable due to the financial gains arising from price fluctuations, rather than for their ability to strengthen the connection between fans and football clubs. This phenomenon may stem from the novelty of these tokens, the limited activities offered for fan–club interaction or the superficial nature of these activities. To enhance the relationship between clubs and fans through fan tokens and address the predominant focus on financial gains, football club managers should adopt a consistent strategy. This strategy should effectively empower fan token holders to distinguish themselves from others and derive greater benefits from their ownership. To achieve this, benefits such as the opportunity to meet players and win VIP tickets for the team's matches should be more frequent. Additionally, value co-creation activities, such as voting for equipment design, can enhance the overall fan token experience.

The positive impact of brand engagement on the intention to buy fan tokens may also be crucial in another aspect. Major football clubs boast legions of fans worldwide who lack the opportunity to be directly associated with the club or engage physically, such as attending matches in the stadium. Fan tokens serve as a tool enabling daily interaction with the club, and the associated benefits can motivate higher physical presence among these fans. For instance, offering a flight ticket or a stadium game ticket can strongly motivate individuals to attend matches, reinforcing their relationship with the club. The study highlights the importance of trust in fan tokens and perceived ease of use in consumers' decisions to purchase these tokens. Clubs' managers and entrepreneurs can adopt strategies to build consumer trust by developing supportive and protective measures for fan token buyers. Sharing reliable information about token functionality, acquisition and guaranteed usefulness can increase fans' knowledge and enhance perceived ease of use. Lastly, policymakers and regulatory entities also play a significant role in this matter. As fan tokens are a recent phenomenon, comprehensive regulations are currently lacking. There is ample room for the development of rules and measures to provide stakeholders with more certainty, protection and trust.

6.3 Limitations and future research

First, the sample collected was a convenience sample, primarily focusing on young Portuguese adults. As a result, the sample comprised highly educated individuals who might exhibit a bias towards greater willingness to adopt new technologies. Future research could address this limitation by collecting data from countries where crypto products like fan tokens are more widespread among the population, and where more clubs offer fan tokens. For instance, countries like Italy and the UK have a notable number of clubs that have embraced these digital assets.

Second, not every club offers fan tokens. Consequently, football fans with a favourite club that does not provide fan tokens were included in this study. While participants were asked to consider their preferred club among those offering fan tokens when responding to the survey, it's essential to acknowledge that participants may not feel the same level of love for that particular club. This factor might have influenced the obtained results, particularly the observed negative effect of brand love on the intention to purchase fan tokens. Future research could address this limitation by focusing solely on participants whose favourite club is one of those providing fan tokens.

Third, this study did not consider several variables that could have interesting impacts on consumers' fan token purchase intentions. Potential variables for future analysis could include sports performance, the influence of teams with star players, perceived risks associated with purchasing fan tokens, technological and financial literacy, and gambling motivations, among others. Additionally, future research might delve into assessing the investment profile of fan token consumers, considering the dual appeal of fan tokens for both investors and fans.

Finally, future research could enrich the study by examining the impact of these variables on the actual purchase of fan tokens, moving beyond intentions to explore real purchase behaviour. This extension would enable the study of outcomes such as how the purchase of fan tokens influences brand loyalty, brand equity and value co-creation.

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