



A study of fan interaction with sports clubs via social media in the digital age

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ABSTRACT

This study examines the impact of social media engagement on fan interaction within sports clubs, incorporating the moderating role of team performance. Drawing upon Uses and Gratifications Theory and Social Identity Theory, the study proposes a comprehensive framework integrating user-generated content (UGC), firm-generated content (FGC), and social media advertising (SMA). A quantitative research design was employed, and data were collected from 503 sports fans in India. Structural Equation Modeling (SEM) was used to analyze the data. The findings reveal that all three dimensions of social media engagement significantly influence fan interaction. Additionally, team performance strengthens these relationships, indicating its critical moderating role. This study contributes to the sports marketing literature by developing an integrated model and provides managerial insights for enhancing fan engagement strategies in the digital era.

Keywords: Social Media Engagement, Fan Interaction, SEM, Sports Marketing, Team Performance

1. INTRODUCTION

The rapid growth of social media has transformed the landscape of sports marketing. Sports organizations increasingly rely on digital platforms to build relationships with fans, enhance engagement, and strengthen brand loyalty. Social media provides interactive channels where fans can actively participate, share experiences, and co-create value. Despite extensive research, there

remains a lack of comprehensive models integrating different types of social media content. Furthermore, the role of team performance in influencing fan interaction is underexplored. This study addresses these gaps by proposing an integrated framework that examines the combined effects of UGC, FGC, and SMA on fan interaction, with team performance as a moderator.

Sports fans have special bonds with their favorite teams, according to the literature on sports marketing [1]. The term "engage" has frequently been linked to these high levels of fandom, team identification, and emotional commitment to sports teams in the literature on sports marketing [2]. According to Ahearne et al., [3] and deRuyter and Wetzels, [4], highly engaged fans are likely to participate in non-transactional activities including good word-of-mouth, sports fandom displays, consumer-to-consumer contacts in fan groups, and reading team-related content. Sports fans actively participate in value co-creation [5]. They maintain a strong and unique connection with a team they view as their own, making them model loyal supporters of their clubs at both good and bad times. These and other distinct spectator sport behavioral patterns can be regarded as noteworthy indications of customer interaction behaviors, which are "customers' behavioral manifestations toward a brand or firm, beyond purchase, resulting from motivational drivers" [6].

Sports organizations are well-positioned to gain from social media as an engagement platform because of their current fan bases and their degree of sports fanaticism [7]. Social media has changed how sports fans communicate with teams, athletes, and other fans. According to Horbel et al., [8], the majority of sports enthusiasts are highly involved, and for many, sports are an integral part of their daily lives. Because social media is so popular, sports teams are spending more time and money to encourage online interaction by taking advantage of their fans' intense involvement [9]. Though many clubs keep struggling with the conflict of wanting to have control over their brand while simultaneously establishing an engaging presence with their empowered fan community, it appears that there is a lack of genuine effort to understand their fan base [7]. In actuality, most teams only gradually began interacting with supporters through significant social media engagement, despite the significant investments invested. Accordingly, fan engagement research has received little attention in the sport management literature [10], especially when it comes to social media [11] and from the viewpoint of the fan [12]. Although there has been research on the topic of sports consumers' engagement for almost 30 years, the majority of these studies have been conducted offline and have concentrated on transactional behaviors [13]. However, the few online studies that have been done are shallow theoretically and do not deliberate the whole spectrum of social media involvement behaviors and motives. To use public media effectively, clubs must follow the right guidelines for managing their online presence, which include learning more

about their supporters' motivations, habits, and interests. Social media engagement with fans is particularly important for sports teams, which are among the most valuable brands in the world and have a sizable following of devoted supporters [14]. Sports clubs may use social media material as a tool to interact with fan groups since online sports fans have a strong sense of group cohesiveness [10]. However, social media users' degree of involvement has not increased in line with the social media volume material posted by different companies, which has continuously grown at a rapid rate.

1.1 Research Gap or Problem Statement

The growing popularity of social media has changed how firms market their products and services to their customers, especially in sports. It affects organizational performance and other aspects of fan behavior such as satisfaction and loyalty [20][21], engagement with content on Instagram as well as Facebook [16][18], and community engagement and intent to purchase [15]. Additionally, the Uses and Gratification Theory (UGT), which emphasises social contact, cultural activities, and information seeking, has been used to investigate how fans interact with online content. However, most of the literature available lacks an all-encompassing framework addressing the various antecedents and consequences of fan involvement across platforms and situations. Individual factors such as consumer identification in sports club networks [19] or social media word-of-mouth [17] have been studied. There is still a significant knowledge vacuum on the precise reasons why sports fans participate in social media, even with the strong dependence on the Uses and Gratifications (U&G) Theory to clarify media consumption styles. Therefore, by identifying the impact of social media participation on fan connection in sports clubs, this study seeks to close that gap.

1.2 Research Objective and Research Question

The purpose of this paper is to examine social media engagement in sports and its influence on fan interaction in sports clubs. Additionally, investigates how team performance moderates the association between social media engagement and fans' sports club interaction. The following research questions have been developed in accordance with the research goals:

RQ1: What effects do social media marketing, generated by users' material, and firm-generated content have on interaction with fans in sports clubs?

RQ2: Does team performance play a moderating role in the connection between fans' interactions with sports clubs on social media?

The paper is organised as follows. The first part of the literature review outlines the main conceptual and theoretical elements., with an importance on social media usage and how it relates to the Uses & Gratification Theory and fan connection in sports clubs. Second, the sample, instrument, research methodology, and data analysis are all covered in-depth, along with the methodological elements that direct the study's progress. Additionally, the

primary findings of the investigation are reported. Finally, the discussion section offers useful insights for researchers and practitioners alike by critically analyzing the consequences in light of the body of present research. The study's key findings and limitations are presented in the end.

2. LITERATURE REVIEW

Social media integration in business strategy has been a focus of recent studies, especially for sports organizations. Building on earlier research, this analysis investigates how social media engagement affects interactions between sports clubs and their fans.

2.1 Empirical Studies

In 2020 Trivedi et al., [15] recognized how social media communications contribute to a rise in online community participation and sports fan attraction, which in turn leads to increased game attendance and purchase intentions for sponsors' goods. Data from 444 respondents were gathered for this study using a descriptive research approach. The use of SEM was utilized to test the hypothesis. The outcomes presented that social broadcasting communications had a greater effect on increasing fans' participation in online communities, which in turn influences game attendance and sponsors' intentions to buy products.

In 2022 Doyle et al., [16] investigated the elements that affect Instagram athlete content's social media engagement (likes and comments). There were 289 male professional athletes and 1727 Instagram postings in all. The Athletic Performance content category drew greater rates of consumer interaction than other content kinds, according to the results of ANOVA and hierarchical regression tests. Engagement rates were positively impacted by posts with high-quality images and the athlete's teammates, whereas engagement was negatively impacted by posts with hashtags.

In 2020 Du et al., [17] investigated how social media word-of-mouth (WOM) communication influences attendees' satisfaction with the Summer Universiade in Taipei. They seek to comprehend how university students use social media, how social media is implemented, and how successful it is as a marketing tactic for sports organizations. A poll of 572 students from four colleges that sponsored Summer Universiade Games contests was used to validate the hypothesis. The two-way ANOVA analysis, Pearson's correlation analysis, and the t-test were used to evaluate the information. The decisions showed that WOM has influenced social media contentment and that WOM communication and general satisfaction had a substantial impact on the degree of comprehension of athletic events.

In 2021 Annamalai et al., [18] recognized how fan engagement is affected by the kind and vividness of Facebook material published by sports teams. The findings are derived from a netnography research that was carried out among six Indian Premier League cricket organizations on Facebook. Over three years

(2015–2017), The research endeavour tracked around 4000 club-generated material and more than 76 million views on the six sports teams' official fan web pages. Measures of fan involvement on Facebook fan pages include the quantity of feedback, shares, likes, and the tone of the posts. The result revealed that although compensation information received the least amount of donation, social content received the most.

In 2022 Marčinko Trkulja et al., [19] presented a theoretical and conceptual knowledge of consumer engagement, especially for sports teams that use interactive platforms to build relationships with their supporters. Furthermore, they examined customer identity as a combination of two distinct conceptions to improved understand the contact between brand and consumer. Customers who identify with a sports club's product are not the same as those who identify with its online community members. The results showed that customer participation and documentation with the athletic club's identity and users of social networks were positively correlated.

In 2023 Ahiabor et al., [20] examined the impact of satisfaction (personal, social, and tension-release pleasure) that satellite enthusiasts seek from social networking sites (SNS) on their consumer engagement behavior. Furthermore, they investigated how consumer involvement behavior—that is, utilizing, conducive, and generating actions affects the brand equity of sports teams. Data was supplied from 347 fans who trailed their favorite sports teams on social media platforms. To examine the empirical data, PLS-SEM was employed. The results exposed that football fans' SNS satisfaction demands affect how they interact with customers.

In 2023 Krzyżowski and Strzelecki, [21] investigated the elements influencing the development of a social media fan relationship with a football team. It also looked into how social interaction, entertainment, fandom, leisure, and information gathering affect the development of a relationship between football teams and their supporters on social media. Six hypotheses were examined, and the findings validated each one. The suggested methodology is tested using the PLS-SEM approach. They collected information from 202 Polish football enthusiasts via an online poll. The findings indicated that social engagement, followed by entertainment and information gathering, is the strongest indicator of forging a link with a club.

In 2024 Mohammadkazemi and Falahat [22] examined the contribution of social media to Danish professional football teams' business development. It specifically looked at the belongings of communal channels participation on fan size, loyalty, and overall business expansion. Data from a sample of 127 participants—who were gathered via questionnaires given to club administrators and supporters around Denmark—were analyzed using SEM. Corresponding the investigate, social media fan sites have a major impact on business expansion, and the furthestmost widespread social media stages are

essential. In particular, social media interaction increases fan numbers and loyalty, both of which have a direct effect on football teams' total financial growth.

The indicators used in the proposed and related simulations are shown in Table 1, which is based on a detailed review of the previously provided research.

Table 1: Determination of the important constructs.

Indication	Social Media Engagement	Fan Interaction	User-Generated Content	Social Media Advertising (SMAds)	Firm-Generated Content (FGC)	Team Performance (Moderation)
Trivedi et al., [15]	✓	✓	✓	✓		
Doyle et al., [16]	✓	✓	✓		✓	
Du et al., [17]	✓	✓	✓	✓	✓	✓
Annamalai et al., [18]	✓	✓	✓		✓	
Marčinko Trkulja et al., [19]	✓	✓	✓		✓	
Ahiabor et al., [20]	✓	✓	✓		✓	
Krzyżowski and Strzelecki, [21]	✓	✓	✓		✓	✓
Mohammadkazemi and Falahat, [22]	✓	✓	✓		✓	

2.2 Theoretical underpinnings and hypotheses

Research on social media allows sports clubs to create interactive fan experiences for loyalty and engagement using the Uses and Gratifications Theory, thus facilitating an understanding of why sports fans would actively participate on social media for information, social, and entertainment gratification testing. This study adopts UGT to explore how engaging in social media affects fans' interaction and commitment to sports clubs.

2.2.1 Uses and Gratification Theory (UGT)

According to Pellet et al. [23], the Uses and Gratification Theory is one of the most pertinent theories of mass communication that aids academics and professionals in comprehending why consumers like and use particular media. Because different people may utilize the same media sources for various goals, U&G theory focuses on consumer usage and motivation. The idea facilitates the identification of consumer motivations for consuming behaviors to achieve pleasure by acknowledging the innate impulses that draw consumers to a

certain medium [20]. Putting U&G theory aside, determining the reasons also helps to differentiate them from the effects of media behavior. According to Cabiles [24], the former is also referred to as "gratifications sought" from utilizing social networking sites in such a scenario. The research is based on the U&G theory, which has been practical to investigate why people utilize social networking sites. When analyzing why consumers use social media platforms, U&G theory has been essential [15]. The goal of a brand's community media presence is to involve clients by providing them with value and satisfaction through its gratifying, which is essential for ongoing customer engagement and value generation.

U&G theory was additionally applied to utilise social media in the field of sport management. There are several reasons why fans interact with the material that sports clubs provide on social media. These goals include socialization, entertainment, compensation, and information collecting [20][25]. The present study uses U&G theory to investigate how fans interact with social media content.

Building on the body of previous research, these hypotheses seek to close knowledge gaps on the precise processes by which social media engagement affects sports teams' fan interactions (see Figure 1).

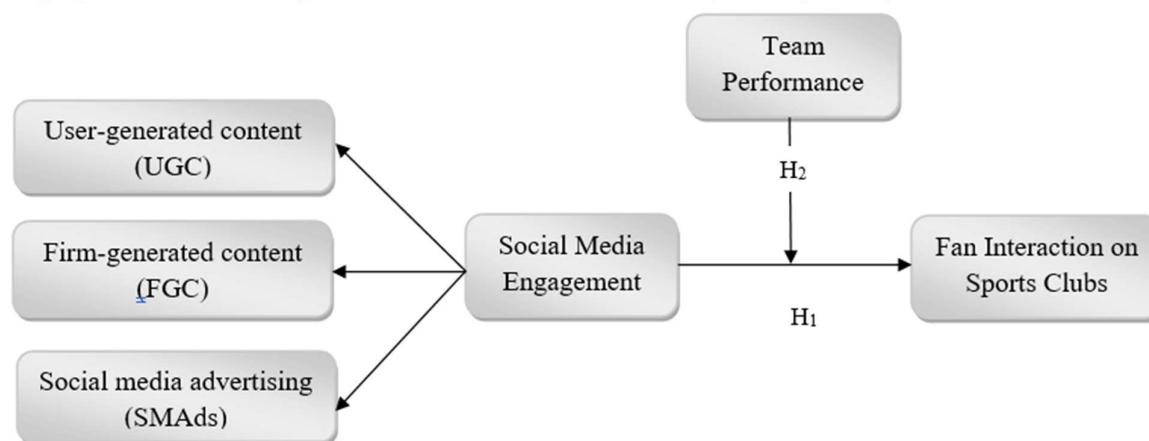


Figure 1: Conceptual model

2.2.2 Fan interaction and social media engagement

The incentives that affect people's decisions regarding media are known as media use motivations. Due to the unique interactive nature of social networking sites (SNS), which link consumers and businesses while simultaneously broadcasting these interactions to the brand's network and admirers, these digital spaces are expected to satisfy a wider range of expectations. One widely utilised approach in the literature to address the causes of various forms of media consumption is the U&G theory [26]. Online platforms known as networks of people give users the chance to create a profile and communicate with others, forming an association of connected

individuals. User-generated content (UGC), firm-generated content (FGC), and social media advertising (SMAds) are the three components of social media communications [27].

User-generated subject is designated as "content that is made outside of professional routines and practices and is publicly available over the internet reflecting a certain amount of creative input." Customers engage in content production because they want to amuse themselves, promote themselves, and change the opinions of their peers [28]. According to reports, consumers have more faith in online stages than in more predictable means of communication. From a advertising position, social media users' relevant is mostly focused on brands and goods, highlighting a company's position as the sole major information source. According to recent research, characteristics encountered when utilising a certain medium might activate demands [29][30]. Therefore, rather than focussing on what the press does to people, U&G has been used to examine how and why people utilise information, and what they do with it. Several academics have used the U&G technique to social media in recent years. Since U&G believes that people use networking actively rather than simply and that online communication necessitates user involvement and a high level of interactive features, it might be expanded to look at CEB in the internet. Thus, it can be regarded as a "cutting-edge approach" to comprehending why people use media.

The term "a fusion between traditional advertising and consumer word of mouth, characterised as firm initiated but consumer implemented" refers to firm generated content (FGC). Marketers benefit from a more precise audience, increased reach, and cost effectiveness with this type of communication, which increases the effectiveness of marketing messaging [27]. The primary distinction between FGC and UGC is that the former is not under the company's control.

Social media platform advertising is a common marketing tactic. Customers may easily utilise social media advertising (SMAds), which gives marketers a way to spread brand-related content [31]. SMAds have a major impact on customer attitudes and intentions, according to several research [27]. Advertising value has been defined in the literature as the sum of its credibility, entertainment value, and informativeness [32]. Research has shown that social media communications result in increased brand awareness, brand loyalty, and brand attitude [27]. Few studies, nonetheless, have made an effort to experimentally examine how social media communications affect sports fan behaviour from the standpoint of sports marketing [6]. Marketers specifically seek to increase fans' participation in sports and online engagement with new sports leagues [26]. Therefore, this study hypothesise:

H1a: User-generated content positively influences the fans' sports club interactions.

H1b: Firm-generated content (FGC) positively influences the fans' sports club interactions.

H1c: Social media advertising (SMAds) positively influences the fans' sports club interactions.

2.2.3 Team Performance as Moderate

Product factors in sports include team play and success among other factors [34], and team performance, based on team play and success, motivates fans to participate because they believe they can influence the results through their participation [34]. Contextual factors, such as different playoff seasons, have been observed to have a varying effect on social media content [34], yet the study does not observe the period during which the sport is not played by the teams. The offseason is also important because of the continuous engagement exhibited by the devoted and fanatical type of fans [35]. According to the survey, a sizable section of the fan base are transitory supporters who only become involved when the team wins and disengage otherwise. Therefore, depending on the club's success and the yearly element, it is reasonable to expect that all types of supporters interact with a functioning team during peak season, although this is not the case elsewhere. Both of these factors have an impact on the relationship between items and fan engagement habits.

When their team wins, fans react more favourably because they want their favourite team to win [36]. According to theory, supporters often use different coping mechanisms in response to their team's victories and defeats, soaking up reflected glory, severing mirrored failure, soaking up reflected achievement, or any combination of these. The coping strategy is also seen in the social media activity of the fans [34] and is anticipated to have an impact on the connection between fan involvement and the material that sports clubs post. Therefore, this study hypothesise:

H2a: The association between user-generated content and fan interactions is moderated by team performance.

H2b: The association between firm-generated content and fan interactions is moderated by team performance.

H2c: The implication between social media advertising and fan interactions is moderated by team performance.

3. Research Methodology

This analysis goals to examine how social media engagement in sports affects fan interaction within sports teams. Additionally, investigates how team performance moderates the suggestion between digital communities' engagement and fans' sports club interaction. This will be accomplished by examining fan loyalty and the quantity of fans who interact with the teams on Facebook, Insta, YouTube, Twitter, and other social media sites. This study is regarded as applied research due to its practical applicability in the situation of involvement of fan in football, basketball, and handball clubs. Descriptive and

quantitative research approaches are operated. With a statistical sample chosen using the Cochran Formula, the inquiry's statistical population consists of Indian football, basketball, and handball team fans.

3.1 Collection of Data

Data for this study was collected via an online survey directed at Indian followers of handball, basketball, and football clubs. By employing an online survey to reach a geographically dispersed and diverse sample, we made sure that the fan base was widely represented. The survey was distributed through a number of channels, such as social media platforms like Facebook, Instagram, and Twitter, official club websites, and email newsletters. A representative sample and higher engagement were guaranteed by this multi-channel approach. To establish the validity of the measurement tools, a select panel of academic and athletic specialists first assessed the questionnaire. The filled-out questionnaire was then made public and tested. Random sampling, a type of probability sampling, was utilized in this investigation. Each member of the population has an equal chance of being selected. 64 of the 567 replies were incomplete or just partially completed. Therefore, 503 replies were used for the final analysis. Furthermore, a comparable sample size has been employed in recent sports marketing research [37][38]. Therefore, it was determined that the present quantity of responses was appropriate.

Criteria for inclusion and termination

The experiment's inclusion requirements were as follows: (1) participants had to be active supporters of the football, basketball, and handball teams that were part of the study; (2) they had to have an active social media account and follow the team on at least one platform; and (3) they had to be between the ages of 18 and 55 to guarantee a wide illustration of the fan basis.

Representativeness of the sample

The exactness of the group of respondents was ensured by comparing the demographics of the responders with the total number of supporters of the teams in question. To make sure they fit the demographic profile of the clubs' fan base, as is displayed in Table 2, Gender, age, and academic achievement were among the demographic data collected and analysed. By verifying that the sample was indicative of the broader fan society this validation provided reassurance that the findings could be extended to the entire fan population.

The survey of 503 sports enthusiasts revealed a diverse age distribution, where 35-44 years had the highest representation at 23.3%. The gender distribution was skewed towards males at 65.8%. Education varied, with 27.6% having completed a Master's degree and 21.5% a Doctorate. Income levels are considered more or less balanced, with higher earners slightly higher at 34.2%. In terms of preferred sports, basketball stood first with 36.2% followed closely by handball and football.

Table 2: Demographic Profile

Demographic Traits	Frequency	Percentage
Age	18-24	104
	25-34	102
	35-44	117
	45-54	90
	55 and above	90
Gender	Male	331
	Female	172
	Total	503
Education Level	High School	143
	Master's	139
	Bachelor's	113
	Doctorate	108
Monthly Income	Low	162
	Medium	169
	High	172
Preferred Sport	Football	148
	Basketball	182
	Handball	173
	Total	503

3.2 Measures, statistical software, and face validity

For all but sports involvement, five-point Likert scales, ranging from "strongly disagree" to "strongly agree," were adapted from previous studies. The current scales were modified to make them suitable for the study's setting. SCFI was calculated using a five-point semantic difference scale. Every poll question was modified from earlier research. The social media engagement measure, for example, was modified by Trivedi and Rozia [27]. The fan engagement metric was modified from research by Vale and Fernandes [6]. The team performance scale was modified from Yun et al. [14].

To assess face validity, the initial version of the questionnaire was distributed to two sports marketing specialists and three academic specialists. The final means included 21 parts, including the demographics and three filter questions, and the data analysis was done with SPSS, AMOS, and Microsoft Excel. Based on their comments, a few minor changes were made to the survey responses to make them easier to grasp.

3.3 Data analysis

The data was analysed using AMOS and SPSS software. When the sample size is small and the inter-variable interaction is complicated, structural equation modelling is appropriate [39]. As illustrated in Figure 1, all three of the variables gauging social media engagement were considered formative measures. To fully capture the significance of social media participation, UGC, FGC, and SMAds are all distinct variables. As a result, these variables are

considered causal indicators [40][41]. Cronbach's alpha in SPSS was used to pilot evaluate an assessment instrument's consistency. With SPSS, the Hayes process macro was set up to do moderation analysis.

4. ANALYSIS AND RESULT

4.1 Descriptive Statistics

One can conduct a quantitative analysis of descriptive statistics tests, such as skew, kurtosis, mean, and average. A 5-point Likert scale, with 1 representing strongly disagree and 5 representing strongly agree, was used to rate each attribute in the framework. Table 3 displays the mean score, which ranges from 2.5109 to 3.3479. Each component's standard deviation ranges from 1.17656 to 1.38809. Hair et al. [39] state that data is considered normal if its skewness is between -2 and +2 and its kurtosis is between -7 and +7. The typical distribution of the scores supports the skewness and kurtosis results, which suggest that the parameters may be thought of as having a distribution that is normal.

Table 3: Descriptive Statistics

Items	Std. Deviation	Kurtosis	Skewness	Mean
UGC1	1.27187	-0.871	-0.465	3.3022
UGC2	1.30108	-1.018	-0.280	3.2326
UGC3	1.31470	-1.106	-0.250	3.1909
UGC4	1.31754	-1.056	-0.314	3.2545
FGC1	1.27504	-0.835	-0.511	3.3479
FGC2	1.34728	-1.113	-0.327	3.3300
FGC3	1.34328	-1.040	-0.397	3.3459
FGC4	1.31129	-0.974	-0.374	3.3419
SMA1	1.29143	-0.943	-0.408	3.2704
SMA2	1.29451	-1.033	-0.319	3.2704
SMA3	1.28374	-1.083	-0.203	3.1710
SMA4	1.38809	-1.248	-0.221	3.2306
SCFI1	1.17656	-0.488	0.576	2.5408
SCFI2	1.22841	-0.751	0.470	2.5666
SCFI3	1.26460	-0.756	0.497	2.5765
SCFI4	1.26153	-0.753	0.532	2.5408
SCFI5	1.22693	-0.733	0.517	2.5109
SCFI6	1.21230	-0.845	0.382	2.5626
TP1	1.29143	-0.999	-0.393	3.3082
TP2	1.31305	-1.024	-0.368	3.3439
TP3	1.33365	-1.098	-0.357	3.3400
TP4	1.33773	-1.131	-0.275	3.2843
TP5	1.31070	-1.086	-0.300	3.2584

4.2 Measurement Model

A number of confirmatory factor analyses (CFAs) were used to examine convergent and discriminant validity [42]. When assessing the accuracy of the measurement model, it is important to keep to the four procedures of internal consistency, composite accuracy, indicator validity, convergent validity, and validity based on discrimination. Composite reliability scores for internal consistency exceeded the minimal requirement of 0.70, with values greater than 0.80 demonstrating internal consistency [39]. Every item was kept since its loadings exceeded the cutoff value. Convergent validity was assessed by looking at each component's average variance extracted (AVE) with a threshold value of 0.50 [42]. Convergent validity was maintained by the study's findings since, as Table 4 illustrates, the range falls inside the threshold.

Table 4: Reliability and Validity

Items	Factors loadings	Cronbach α	Composite reliability	AVE
UGC1	0.936	0.921	0.926	0.759
UGC2	0.831			
UGC3	0.853			
UGC4	0.859			
FGC1	0.932	0.918	0.923	0.751
FGC2	0.838			
FGC3	0.864			
FGC4	0.840			
SMA1	0.933	0.929	0.934	0.781
SMA2	0.853			
SMA3	0.868			
SMA4	0.837			
SCFI1	0.888	0.934	0.937	0.715
SCFI2	0.812			
SCFI3	0.800			
SCFI4	0.773			
SCFI5	0.773			
SCFI6	0.739			
TP1	0.951	0.931	0.934	0.740
TP2	0.849			
TP3	0.846			
TP4	0.843			
TP5	0.822			

Discriminant validity was evaluated using the Heterotrait-Monotrait (HTMT) ratio and the Fornell-Larcker criterion [43]. The validity of the classification (FLC) is adequate as the ratio of AVE from each construct is greater than the square of the coefficient showing its interaction with other constructs. Every

statistic in this investigation had AVE square root ratings greater than the mean correlation coefficient across structures, demonstrating its uniqueness and the adequate discriminant validity of every parameter (Table 5).

Table 5: Discriminant Validity

	UGC	FGC	SMA	SCFI	TP
UGC	0.871				
FGC	0.175***	0.867			
SMA	0.217***	0.222***	0.884		
SCFI	-0.417***	-0.401***	-0.474***	0.845	
TP	0.171***	0.239***	0.173***	-0.372***	0.860
Diagonal portions (in bold) are the corresponding square root of AVE. The correlations between components are represented by elements below the diagonal.					

4.3 Multicollinearity and common method bias

This study conducted a comprehensive collinearity test [44] and concurrently analysed collinearity [45] using the SPSS program. All of the tolerance values in Table 6 are larger than 0.10 and all of the VIF values are less than 3.3, indicating that they fall within the acceptable range. It seems that the entire collinearity test procedure is effective in detecting common method bias (CMV). In addition, the Harman single-factor test is presently the most used method for analysing CMV. The results of this investigation show that the traits root of the shared characteristic with the best explanatory power, when factor rotation is not present, is 8.501, which explains 36.962 proportion of the discrepancy. Most of the covariance between both dependent and independent variables cannot be explained by a single factor. It indicates that there is no substantial CMV in this study [46].

Table 6: Multicollinearity

Constructs	Tolerance	VIF
UGC	0.908	1.101
FGC	0.940	1.064
SMA	0.907	1.103

4.4 Hypothesis Testing

Using SEM, the hypotheses were examined. Hair et al. [42] proposed a bootstrapping method using 5,000 sub-samples to analyse the structural model using the path coefficient (β) and values of p. Furthermore, in response to recent criticisms that only using p values to test hypotheses is inadequate, this study used p values together with effect sizes and confidence ranges as further criterion [47]. Consequently, as shown in Table 7 and Figure 2, appropriate and trustworthy criteria were created to evaluate the hypotheses.

Table 7: Hypothesis Testing

Assumption		Estimation	S.E.	C.R.	P	Label
H1a	UGC → SCFI	-0.296	0.025	-11.648	***	Supported
H1b	FGC → SCFI	-0.332	0.028	-11.878	***	Supported
H1c	SMA → SCFI	-0.374	0.028	-13.406	***	Supported

All three hypotheses have one set of *** p-values (the standard criteria of $p < 0.001$); hence, the relationships are considered significant. Next is the explanation for each hypothesis on this significance:

H1a: User-Generated Content (UGC) → Sports Club Fans' Interactions (SCFI)

UGC has a statistically significant beneficial effect on sports club supporters' interactions, as evidenced by a p-value < 0.001 . This means that any perceived influence of UGC on fan interactions is likely to be determined by chance, thus supporting H1a.

H1b: Firm-Generated Content (FGC) → Sports Club Fans' Interactions (SCFI)

The favourable correlation between company-generated content and fan interaction is statistically significant too ($p < 0.001$). This result confirms that the effect of FGC in the enhancement of fan engagement is meaningful, thus supporting H1b.

H1c: Social Media Advertising (SMA) → Sports Club Fans' Interactions (SCFI)

The SMA p-value of less than 0.001 proves that the positive impact on fans' interactions created by social media advertising is highly significant. In other words, this is strong evidence showing that social media ads have contributed to increased engagement, thus supporting H1c.

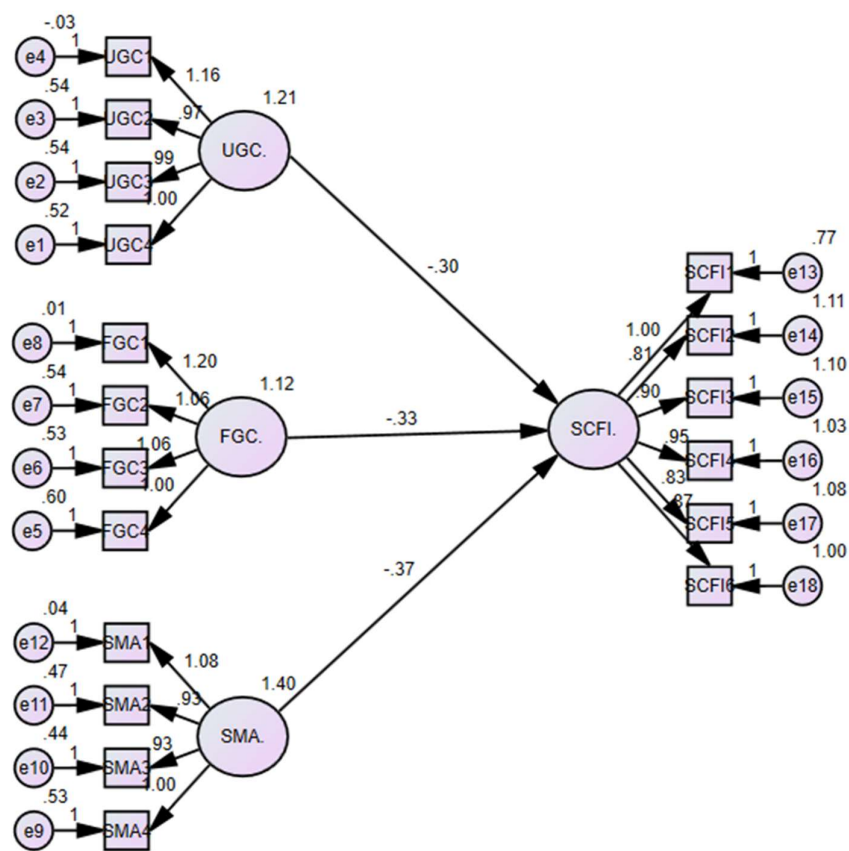


Figure 2: Structural Equation Modelling

4.5 Moderating Analysis

The SPSS PROCESS macro [48] was used to perform the moderation analyses shown in Table 8 and Figure 3. It shows whether the moderator (Team performance - TP) significantly changes the effect of the focal predictor (social media engagement - SME) on the outcome (sports club fans' interactions - SCFI). The link term has a coefficient of 0.080, a test statistic of 2.300, and a Pearson p-value of .022, which is important at the 5% level. This suggests that there is an of statistical significance moderating impact. Thus hypothesis (H2) is supported.

Table 8: Moderation tests (indirect effects)

Hypothesis		Estimate	P	LLCI	ULCI	Decision
H2	SME * TP → SCFI	0.080	0.022	0.012	0.148	Supported

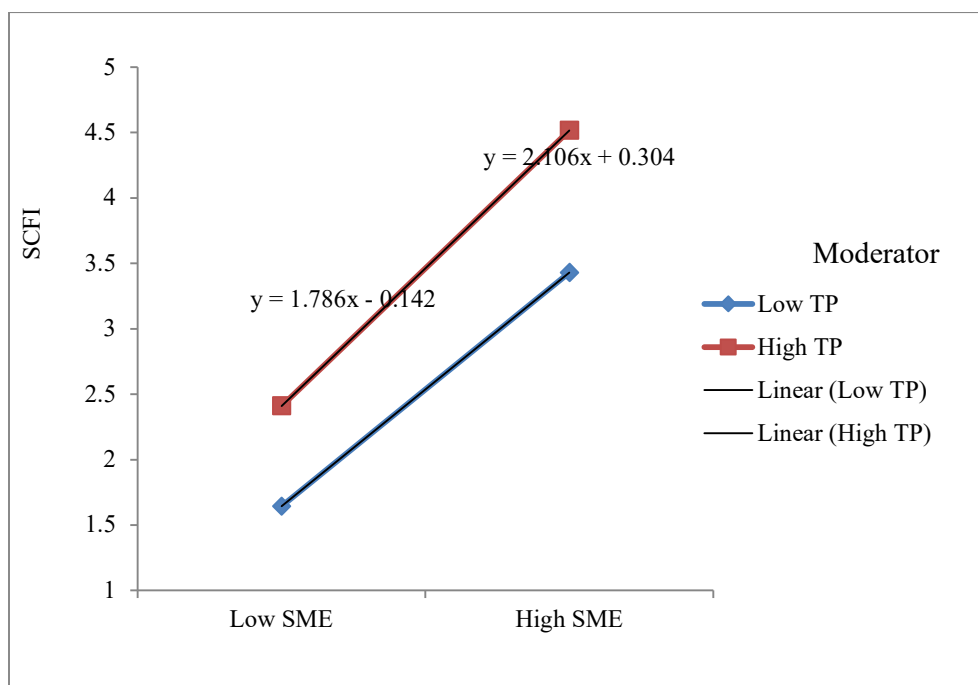


Figure 3: Moderation tests (indirect effects)

5. DISCUSSION AND CONCLUSION

The analysis's conclusion focus the significance of team performance (TP) and social media engagement (SME) in strengthening relationships between sports clubs and their fans. Consistent with prior research, team performance has been shown to drive fan loyalty and engagement, as success on the field strengthens fans' emotional connections with their teams. This makes them fulfill this bond by creating a platform through which fans can celebrate their victory and get in touch with other fans while keeping abreast with matters going on with their teams. This positive feedback loop hence nurtures a more inclined force for better long-term fan loyalty and interaction.

Studies that have delved into examining the effects team performance has on fans' behaviors and perceptions include for example that of Annamalai et al., [18] who showed how successful teams correlate with increased identification with the team on the part of followers, which means that they hold a higher level of engagement and support due to its influence, especially at the latter part of the hypothesis. Trivedi et al., [15] mention the following items under which team performance was described as significantly impacting: fan attendance, merchandise usage, and participation.

Similarly, social media engagement keeps the fans engaged, unfortunately, even at times when the team's performance is not stellar. This type of engagement finds its roots in the work by Ahiabor et al., [20] about how social media influences consumer engagement. The point here is that sports clubs will keep finding themselves engaged by fans if they post compelling content and reward their support by creating a sense of community. Such forms of social

media allow fans to engage with their preferred teams quite literally in real-time, thus creating a space of belonging beyond a stadium.

The interaction between team performance and social media engagement shows how clubs can optimize fans in digital communication strategies, which would bring on-field success. During these high-performance periods, clubs can even use social media to congratulate the top youngsters of the club and the players for having made achievements, thus feeding even more pride and enthusiasm to the fans. During these low points, social media can serve as a platform where the fan base can be made stronger through hardship. This reinforces some of the prior work Mohammadkazemi and Falahat, [22] on how social media works as an important channel for building and maintaining long-term relationships with fans regardless of positive or negative performance outcomes.

This indicates that a combination of strong team performance and social media engagement will ensure that sports club-fan relations will continue to enhance dimensions. By celebrating successes, involving the fans, and connecting them as a community, the clubs are also able to create a fan base that is loyal and passionate about the club, regardless of whether a victory or loss happens. These findings complement existing literature by showing the synergistic combination of team performance and social media engagement towards such fan relationships, thus giving an important understanding perspective to sports clubs on fan relationships in an increasingly digital world.

5.1 Implication

The outcomes of this analysis have a variety of significant suggestions for sports club organization, especially when it comes to using social media engagement to advance business.

To interact with supporters, sports teams need make significant investments in social media techniques. Social media platforms such as Twitter, YouTube, Facebook, and Instagram offer unique opportunities for real-time communication, sharing original content, and community building. Fan loyalty may be greatly increased by frequent interactions, interesting material, and insider knowledge.

These results imply that higher ticket sales, retail income, and new sponsorship agreements can result from active participation on social media platforms. Social media analytics may be used by clubs to monitor engagement numbers, learn about fan preferences, and adjust their marketing strategies.

By concentrating on growing their fan base through focused social media marketing, teams may draw in new supporters while keeping hold of their current following. Fan surveys, virtual events, and interactive articles are a few tactics that can assist expand the fan base and sustain high levels of involvement. In addition to increasing game attendance, a greater fan base also opens up new markets for club products and other sources of income.

To increase the club's reach, work with brand ambassadors and influencers that have a sizable social media following. Through these partnerships, the club may reach new audiences, increasing brand awareness and drawing in new supporters. Through giveaways, live events, and behind-the-scenes material, influencers may also increase engagement and build stronger relations with admirers.

Due to the constantly changing nature of social channels, plans must be continuously monitored and adjusted. Clubs should assess the success of their digital media initiatives on a regular basis and be quick to adapt their strategies in response to engagement statistics and fan feedback. For example, clubs may improve their content strategy to better satisfy fan expectations by examining the kinds of postings that receive the greatest interaction.

Through the implementation of these tactics, sports teams can optimise the advantages of social media interaction, resulting in increased fan loyalty, a larger fan base, and overall business expansion. In the competitive sports sector, social media strategy not only produces quick financial results but also rests a compact basis for long-standing success.

5.2 Future Research Scope and Limitations

Although this study provided a useful perspective, it had drawbacks. First, the sample consisted of fans from only three sports namely football, basketball, and handball. Because of this, it is challenging to extrapolate the results to other sports and the larger fan base. Subsequent studies may broaden their selection of settings and their sports, thus gaining a more holistic view on fan interactions and social media engagement.

The study has also collected data through an Internet survey which might have been subjected to self-selection bias because social media users are more likely to respond. This probably explains the lack of representativeness in the sample. Future studies might adopt mixed-methods designs that will include interviews and offline survey methods to ensure a more comprehensive array of viewpoints.

Further, the engagement with social media and interpersonal relationships between fans were measured only at a particular timeframe within this study. Change over time would not reflect well in this research. Longitudinal studies would present better findings of the changing relationship in instances of changes in the performance of treated teams.

Lastly, the main emphasis in this study would be team performance as a primary moderating variable. There might be other variables in the affiliation between social networking media engagements and fan relationships such as loyalty, emotional attachment to fandom, and the ever-present cultural differences. Further study could enhance this knowledge with the inclusion of these elements.

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