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BRAND EQUITY IN THE DIGITAL AGE: THE IMPACT OF FAN ACTIVITY ON SOCIAL MEDIA ON THE VALUE OF NATIONAL TEAM

ABSTRACT

Social media enables sports brands to interact with fans, foster community participation, and shape brand perception. This study explores how digital fan engagement, guided by the COBRA model (consumption, contribution, creation), influences Consumer-Based Brand Equity (CBBE) dimensions: awareness, associations, perceived quality, and loyalty. Focusing on the Polish Men's National Volleyball Team (PM'sNVT), data were collected via an online survey of 566 fans following official team profiles. Structural Equation Modelling (SEM) assessed relationships between engagement types and CBBE components.

Findings show that content consumption strongly enhances all CBBE dimensions, with passive engagement (viewing and reading content) significantly improving awareness, associations, quality, and loyalty. Conversely, contribution and creation had no positive effects; contribution even correlated with reduced brand awareness.

The results emphasize the strategic value of high-quality, accessible content designed for passive consumption. Practical implications highlight guidance for sports associations, sponsors, and institutions promoting sport and national identity.

KEYWORDS: fan engagement, social media, brand equity, national team, sports marketing

1. INTRODUCTION

In today's digital landscape, social media is a key arena for interaction between sports brands and their audiences, enabling communication, co-creation, and communal participation. This is especially relevant for national teams, whose brands carry strong emotional and symbolic meanings (Heere & James, 2007). The Polish Men's National Volleyball Team (PM'sNVT), widely supported and culturally significant, offers a pertinent case for examining how online fan activity shapes brand equity.

Customer-Based Brand Equity (CBBE), as conceptualized by Aaker (1991) and Keller (1993), provides a framework for understanding how consumers' perceptions and experiences translate into brand value. In sport, brand equity encompasses awareness, associations, perceived quality, and loyalty (Bańbuła, 2024), all of which are increasingly influenced by digital environments where fans browse, interact with, and create content related to teams (Muntinga et al., 2011; Schivinski, 2021). The COBRA model (Consumers' Online Brand-Related

Activities) distinguishes between consumption (passive viewing), contribution (interaction and sharing), and creation (original content), each reflecting different intensities of engagement and potential impact on brand perceptions (Vale & Fernandes, 2018).

To explain how these behaviors relate to brand equity, this study draws on three complementary perspectives: Social Identity Theory (SIT) (Tajfel & Turner, 1979), highlighting how group identification fosters emotional bonds with the brand; Consumer Engagement Theory (CE) (Hollebeek, 2011), emphasizing the co-creative nature of brand relationships; and Theory of Planned Behaviour (TPB) (Ajzen, 1991), framing digital engagement as intentional behavior shaped by attitudes, norms, and perceived control.

While prior research has documented the role of social media in sports branding, less is known about how specific types of online fan activity affect individual CBBE components, particularly in the context of national teams. Few studies integrate behavioral typologies such as COBRA with frameworks like SIT or CE when examining digital fan interactions and brand value formation. Addressing this gap, the present study investigates how Polish fans' online engagement with PM'sNVT (consumption, contribution, creation) relates to brand awareness, associations, perceived quality, and loyalty. Using structural equation modeling (SEM), it tests whether these forms of engagement exert distinct effects on CBBE dimensions, offering insights relevant both for theory development and for practitioners in sports federations, sponsorship, and media strategy.

2. LITERATURE REVIEW

2.1. *THE COBRA MODEL – CLASSIFICATION OF FAN ACTIVITY ON SOCIAL MEDIA*

With the rise of new media, sports organizations have radically transformed their communication strategies. Social platforms empower users to create and share content, fostering grassroots engagement with brands (Piehler et al., 2019). The COBRA model (Muntinga et al., 2011) captures this by categorizing online fan behavior into three levels (Buzeta et al., 2024): Consumption: passive

behaviors like viewing posts or following brand profiles, which expand reach and recognition; Contribution: interactive actions such as commenting and sharing, which enhance visibility and community and Creation: producing original content (e.g., videos, memes), which shapes brand authenticity and narrative. This model not only reflects the diversity of digital behavior but also helps identify key audience segments critical for strategic communication (Castro-González et al., 2025).

To understand the psychological mechanisms behind these behaviors, three complementary theories are applied. First, SIT highlights how fans derive identity from group membership (Tajfel & Turner, 1979). For national teams, engagement, especially content creation, acts as an expression of collective identity and national belonging (Lock & Heere, 2017). Second, CE sees engagement as emotional, cognitive, and behavioral responses to brand interaction (Hollebeek, 2011). Each COBRA level reflects a different intensity of this relationship, influencing fan loyalty and identification (Kim & Manoli, 2022). Third, TPB explains engagement as intentional behavior shaped by attitudes, social norms, and perceived control (Ajzen, 1991). Passive consumption is driven by favorable attitudes and low barriers; contribution aligns with group norms; creation requires high motivation and self-efficacy (Biscaia et al., 2023).

2.2. CONSUMER-BASED BRAND EQUITY (CBBE) IN NATIONAL TEAM

Brand equity is crucial in the sports market, shaping audience engagement and long-term brand value (Bańbuła, 2024). For national teams, brand equity extends beyond commercial value, symbolizing collective identity, pride, and unity (Pifer et al., 2015). The CBBE model (Keller, 1993) evaluates brand value from the consumer's perspective across four dimensions: brand awareness, brand associations, perceived quality, and brand loyalty.

In the context of national teams, CBBE components take on distinct qualities, particularly when interpreted through SIT and CE. According to SIT (Tajfel & Turner, 1979), fans define themselves through group membership, and national teams become symbols of identity. This identification fosters

favorable associations, inflated quality perceptions, and persistent loyalty – even during poor performance (Trail et al., 2024).

From the CE perspective, engagement – from watching to co-creating – strengthens emotional bonds, trust, and long-term commitment (Kim & Manoli, 2022). Together, these theories contextualize national team brands as emotionally embedded, identity-driven constructs (Wear & Heere, 2020).

Brand awareness refers to a consumer's ability to recognize or recall a brand (Aaker, 1991; Keller, 1993). It includes both aided recognition (e.g., logo) and unaided recall. In national teams, awareness is strengthened by identification with the fan community, increasing attention to brand signals (Walsh et al., 2008). Awareness influences preferences and supports deeper brand associations, quality perceptions, and loyalty (Gladden & Funk, 2002). In the digital era, visibility in social media and content virality further boost recognition, making brand awareness a vital asset for teams like (Schivinski & Dabrowski, 2015).

Brand associations are mental connections to a brand's meaning, emotions, or values (Keller, 1993). In national teams, they reflect patriotism, perseverance, or unity (Kunkel et al., 2022). Strong, favorable, and unique associations increase brand value and influence loyalty. Social media plays a key role in co-creating and reinforcing these associations through interactive content (Parganas et al., 2017). From the SIT perspective, fans internalize brand traits as part of group identity, making these associations emotionally resilient (Kim & Manoli, 2022).

Perceived quality is a consumer's subjective evaluation of brand excellence (Aaker, 1991). In sport, it includes not only performance but also image, professionalism, and communication (Yoshida, 2017). High perceived quality enhances loyalty, trust, and brand preference (Biscaia et al., 2016). In digital contexts, fans form quality judgments through emotional and interactive experiences – such as responsiveness and authenticity on social media (Brodie et al., 2025).

Brand loyalty is the consumer's consistent preference for a brand, driven by emotional attachment and behavioral repetition (Aaker, 1991). In national teams, loyalty often reflects deep social identification and persists despite poor performance (Pifer et al., 2015). It supports long-term brand value through stable engagement and advocacy (Vance et al., 2023). CE theory links loyalty to sustained fan engagement, while SIT views it as an affirmation of national identity (Kim & Manoli, 2022).

2.3. SOCIAL MEDIA AS A TOOL FOR BUILDING NATIONAL BRAND CAPITAL

From a brand management perspective, Social Networking Services (SNS) play an important role in building CBBE, not only by increasing recognition but also by enhancing authenticity, emotional engagement, and the perceived value of content (Bańbuła, 2024). SNS allow real-time feedback, trend monitoring, and adaptive communication strategies (Santos et al., 2019).

For sports brands, a well-managed social media presence boosts both audience engagement and brand value – reputational and economic (Popp et al., 2016). Direct interaction, transparency, and fan co-creation strengthen perceptions of authenticity and emotional closeness (Bańbuła & Kasperek, 2020). According to CE theory, such interactions deepen brand attachment and foster loyalty (Holleback et al., 2011). SIT emphasizes the role of digital engagement in reinforcing group identity and national pride (Wear & Heere, 2020), while TPB highlights the influence of social norms and ease of action on participation (Ajzen, 1991).

In today's competitive and dynamic environment, SNS are indispensable for fostering sustainable brand equity through personalized messaging, community-building, and emotionally resonant narratives (Kunkel et al., 2022).

2.4. RESEARCH HYPOTHESES

Building on the COBRA model and the CBBE framework, this study examines whether different levels of social media engagement – consumption, contribution, and creation – influence brand awareness, associations, perceived quality, and loyalty toward a national team (Ahiabor et al., 2023). Applying CBBE to national teams underscores how emotional and symbolic meanings shape brand-building (Gladden & Funk, 2002). Social media provide a continuum of fan interactions, from passive following to co-creation, which can strengthen loyalty, enhance commercial potential, and foster long-term audience relationship (Kunkel et al., 2022). National teams that align digital engagement with on-field performance and cultural resonance are better positioned to build sustainable brand equity (Da Silva & Las Casas, 2017).

Despite growing interest in CBBE, little is known about how digital fan activity shapes national team branding. To address this gap, the study tests the following hypotheses:

H1: Fan engagement in COBRA activities positively influences brand awareness of the PM's NVT brand.

H2: Fan engagement in COBRA activities positively influences brand associations.

H3: Fan engagement in COBRA activities positively influences perceived quality.

H4: Fan engagement in COBRA activities positively influences brand loyalty.

3. MATERIAL AND METHODS

3.1. RESEARCH CONTEXT

This study focuses on the Polish Men's National Volleyball Team (PM's NVT), a leading sports brand in Poland, managed by the Polish Volleyball Federation (PZPS). The team has won multiple major titles, including the World Championships (2014, 2018) and the European Championship (2023), and currently ranks first in the FIVB world ranking (FIVB, 2025). It also maintains a strong digital presence, engaging over one million followers across Facebook, Instagram, X/Twitter, YouTube, and TikTok with promotional content, behind-the-scenes materials, and interactive fan campaigns. This combination of sporting success, cultural resonance, and intensive online activity makes PM's NVT an ideal case for analysing how digital fan engagement shapes CBBE in a national team context.

3.2. SAMPLE

The CAWI survey was conducted between September and December 2024 among followers of the PM's NVT's official social media channels. The final sample consisted of 566 respondents from Poland, including 452 women (79.9%) and 114 men (20.1%). Participants were recruited based on two inclusion criteria: active use of social media and following the team's official profiles.

Participation was voluntary and anonymous, with full confidentiality assured. Detailed socio-demographic and psychographic data are presented in Table 1.

Table 1. *Socio-demographic and psychographic characteristics of the PM's NVT fans (N=566)*

Variables	N	%
Gender		
Male	114	20.1
Female	452	79.9
Age (years)		
≤ 18	181	32.0
19-26	146	25.8
27-36	107	18.9
37-54	108	19.1
≥ 55	24	4.2
Education		
Primary	114	20.14
Vocational	22	3.89
Secondary	206	36.40
Higher	224	39.58
Professional status		
Student	271	47.9
Employed	271	47.9
Unemployed	24	4.2
Owned profile on SM		
Facebook	214	37.8
Instagram	163	28.7
Twitter	119	21.2
TikTok	20	3.5
YouTube	36	6.3
Other	14	2.4
Observed profile of the club on SM		
Facebook	264	30.3
Instagram	200	22.9
Twitter	7	.8
TikTok	0	00.0
YouTube	95	10.9
Frequency of visiting SM club		
Less frequently than 1 per month	215	38.0
Once a month	153	27.0
Once every 2-3 weeks	43	7.6
Once a week	15	2.7
Once every 2-3 days	83	14.7
At least once a day	57	10.1

Source: Own study.

3.3 DATA COLLECTION

Data collection was carried out by distributing a link to a self-administered online survey (via Microsoft Forms) in closed social media groups dedicated to volleyball fans. The standardized questionnaire included 27 items grouped into four thematic sections: (1) patterns of social media use, (2) engagement behavior measured using the Polish version of the COBRA scale (Schivinski & Łukasik, 2017), originally developed by Shao (2009) and Muntinga et al.

(2011), with responses rated on a 5-point frequency scale (from 1 *Never* to 5 *Always*), (3) brand equity dimensions proposed by Aaker (1991) and Keller (1993) assessed on a 5-point agreement scale (from 1 *Strongly disagree* to 5 *Strongly agree*), and (4) socio-demographic characteristics.

3.4. STATISTICAL ANALYSIS

Statistical analyses were conducted in IBM® SPSS® 29 and JASP 0.19.3. First, descriptive statistics (frequencies, percentages, means, standard deviations) were computed for all variables. Next, confirmatory factor analysis (CFA) was used to assess the measurement model, examining internal consistency (Cronbach's α), convergent validity (standardized factor loadings, average variance extracted, AVE) and discriminant validity. Values of $\alpha > 0.70$, loadings (λ) > 0.50 and AVE > 0.50 were considered acceptable. Model fit was evaluated using maximum likelihood estimation and the following indices: χ^2/df , CFI, TLI, RMSEA, SRMR, with cut-off criteria $\chi^2/\text{df} < 3.0$, CFI/TLI ≥ 0.90 , RMSEA ≤ 0.06 , SRMR ≤ 0.08 (Hair et al., 2019). Finally, structural equation modelling (SEM) was applied to test the hypothesised relationships between social media engagement dimensions and brand equity components.

4. RESULTS

4.1. DESCRIPTIVE STATISTICS

As far as social media use patterns are concerned, most respondents reported having profiles on Facebook (37.8%), Instagram (28.7%) and X/Twitter (21.2%), with far fewer on YouTube, TikTok or other platforms (Table 1). Club-related engagement was concentrated on Facebook (30.3%) and Instagram (22.9%), while X/Twitter and TikTok were hardly used. Overall activity was relatively infrequent: 38.0% visited the club's social media less than once a month and 27.0% monthly, whereas only 10.1% did so daily. Passive consumption behaviours toward PM's NVT dominated, with the highest mean scores for watching graphics/pictures ($M=3.93$), following the team

($M=3.86$) and reading posts ($M=3.80$), confirming that content consumption is the primary form of engagement (Table 2).

Table 2. *Measurement dimensions and psychometric properties of the constructs used in the study*

COBRA construct	Item	Statement	M	SD	λ	AVE	α
Consumption (Cons)	Cons1	I read posts related to 'PM'sNVT' on social media	3.795	0.973	0.826	0.719	0.884
	Cons3	I watch pictures/graphics related to 'PM'sNVT'	3.926	1.003	0.866		
	Cons5	I follow 'PM'sNVT' on social networking sites	3.858	1.092	0.909		
Contribution (Cont)	Cont1	I comment on videos related to 'PM'sNVT'	1.894	1.098	0.956	0.888	0.958
	Cont2	I comment on posts related to 'PM'sNVT'	1.922	1.084	1.050		
	Cont3	I comment on pictures/graphics related to 'PM'sNVT'	1.942	1.112	1.089		
Creation	Cr1	I initiate posts related to 'PM'sNVT' on blogs	1.692	1.037	0.877	0.623	0.904
	Cr2	I initiate posts related to 'PM'sNVT' on social networking sites	1.754	1.017	0.881		
	Cr3	I post pictures/graphics related to 'PM'sNVT'	2.081	1.143	0.922		
	Cr4	I post videos that show 'PM'sNVT'	1.860	1.106	0.874		
	Cr5	I write posts related to 'PM'sNVT' on forums	1.483	0.906	0.621		
	Cr6	I write reviews related to 'PM'sNVT'	1.623	1.046	0.727		
CBBE							
Brand Awareness (BA)	BA1	I have heard of 'PM'sNVT'	4.940	0.342	0.419	0.724	0.831
	BA2	I am quite familiar with 'PM'sNVT'	4.855	0.549	0.466		
	BA3	I can recognize 'PM'sNVT' among other sports brands	4.860	0.542	0.500		
Brand Association and Perceived Quality	BAS1	'PM'sNVT' has strong associations	4.765	0.610	0.412	0.590	0.889
	BAS2	'PM'sNVT' has favorable associations	4.912	0.399	0.495		
	BAS3	It is clear what 'PM'sNVT' stands for	4.667	0.638	0.494		
	PQ1	'PM'sNVT' is good quality	4.811	0.496	0.415		
	PQ2	'PM'sNVT' has excellent features	4.749	0.565	0.472		
	PQ3	Compared to other brands in its category, 'PM'sNVT' is of very high quality	4.743	0.561	0.417		
Brand Loyalty	BLY1	I feel loyal to 'PM'sNVT'	4.821	0.496	0.477	0.557	0.786
	BLY2	'PM'sNVT' is my first choice	4.807	0.559	0.472		
	BLY3	I am committed to 'PM'sNVT'	4.766	0.579	0.465		

Note: 'PM'sNVT' – Poland men's national volleyball team; M – means; SD – standard deviations; λ – factor loading; AVE – Average Variance Extracted; α – Cronbach's alpha.

Source: Own study.

Contribution behaviors – interactive but low-effort actions such as commenting – were generally rare. Respondents infrequently commented on videos ($M=1.89$), posts ($M=1.92$) or pictures ($M=1.94$), indicating limited participation in public discussion. Creation behaviors showed the lowest engagement: writing reviews ($M=1.62$), creating forum posts ($M=1.48$) and initiating posts or videos ($M=1.69$) were reported sporadically, suggesting that only a small share of users actively generate content about the team.

In contrast, brand equity indicators were high. Brand Awareness reached the strongest agreement (e.g., *I have heard of PM's NVT*, $M=4.94$; *I am familiar with PM's NVT*, $M=4.86$), confirming widespread recognition. Respondents also reported favorable brand associations ($M=4.91$), perceived high quality ($M=4.81$) and clear positioning ($M=4.67$). Brand Loyalty was similarly strong, with high scores for loyalty ($M=4.82$), first-choice preference ($M=4.81$) and commitment ($M=4.77$), indicating that PM's NVT occupies a deeply embedded place in supporters' attitudes.

4.2. MEASUREMENT MODEL

A confirmatory factor analysis (CFA) was conducted using the Maximum Likelihood Estimation (MLE) method to assess the validity and reliability of the measurement model. To improve model fit and strengthen the psychometric properties of the measurement model, several modifications were implemented following both statistical criteria and theoretical reasoning. First, indicators with low explanatory power ($R^2 < 0.50$) and weak factor loadings were removed. Specifically, *Cons2* (I read fan page(s) related to 'PM'sNVT' on social networking sites) and *Cons4* (I follow blogs related to 'PM'sNVT'), *Cont4* (I share 'PM'sNVT's related posts), *Cont5* (I 'Like' pictures/graphics related to 'PM'sNVT'), and *Cont6* (I 'Like' posts related to 'PM'sNVT'), were excluded from the model. Their presence negatively affected model fit and construct validity.

Second, latent constructs with excessively high inter-correlations were restructured to reduce redundancy. Due to a particularly strong correlation between Brand Association and Perceived Quality ($r=0.96$), these constructs were merged into a single factor labeled Brand Association and Perceived Quality (BASPQ). These changes were theoretically grounded in the Customer-Based Brand Equity framework and supported by empirical evidence.

Finally, a revised CFA was conducted. The new model demonstrated a substantial improvement in fit indices. The results demonstrated an acceptable model fit: χ^2 ($df=237$)= 1053.203 , $p<.001$; still considered acceptable (Kline, 2016). CFI= 0.921 ; TLI= 0.908 ; NFI= 0.901 ; RMSEA= 0.078 [90% CI: $0.073-0.083$]; and SRMR= 0.045 . These values met the commonly recommended thresholds

(CFI and TLI $\geq$ 0.90, RMSEA $\leq$ 0.06, and SRMR $\leq$ 0.08), indicating a satisfactory level of model fit (Kline, 2016).

To assess internal consistency and convergent validity, the average variance extracted (AVE) was calculated for each latent construct. AVE values ranged from 0.557 to 0.888, surpassing the minimum acceptable threshold of 0.50 (Hair et al., 2019). All factor loadings were statistically significant ($p < .001$) and exceeded 0.40, confirming adequate indicator reliability (Table 2).

Based on both empirical results and theoretical reasoning, one modification was implemented to improve the model: the constructs Perceived Quality (PQ) and Brand Association (BAS) were combined into a single latent factor. This decision was supported by high empirical correlations between the two constructs and theoretical literature suggesting their conceptual overlap as dimensions of consumer-based brand equity (Keller, 1993; Rather, 2021). The resulting six-factor model demonstrated improved fit and parsimony.

The final measurement model exhibited strong psychometric properties, with satisfactory levels of reliability, convergent validity, and construct clarity, justifying its use in subsequent structural analyses.

4.3. STRUCTURAL MODEL

To examine the hypothesized relationships between social media engagement behaviors and brand equity dimensions, a structural equation model (SEM) was estimated using the maximum likelihood (ML) method. The model was developed in accordance with the COBRA framework, in which Consumption (*Cons*), Contribution (*Cont*), and Creation (*Cr*) functioned as exogenous latent variables, while Brand Awareness (BA), Brand Association and Perceived Quality (BASPQ), and Brand Loyalty (BLY) were modeled as endogenous constructs representing key components of brand equity.

The overall model fit was deemed acceptable, as evidenced by the following indices: $\chi^2(237)=1053.203$, $\chi^2/df=4.44$, $p < .001$; Comparative Fit Index (CFI)=0.921, Tucker–Lewis Index (TLI)=0.908, Root Mean Square Error of Approximation (RMSEA)=0.078 with a 90% confidence interval of [0.073, 0.083], and Standardized Root Mean Square Residual (SRMR)=0.046. Although the χ^2/df ratio slightly exceeded the commonly recommended

threshold of 3.0, all other fit indices met or approached conventional cutoffs (Kline, 2016), indicating an overall adequate fit of the model to the data.

As shown in Table 3, the structural path analysis revealed that Consumption had a consistent and statistically significant positive effect on all three brand equity dimensions: $\rightarrow$ BA ($\beta=0.585$, $p<.001$), $\rightarrow$ BASPQ ($\beta=0.485$, $p<.001$), and $\rightarrow$ BLY ($\beta=0.568$, $p<.001$). This suggests that passive engagement with brand-related content (e.g., viewing, reading, or watching) strongly supports the development of brand awareness, positive perceptions, and loyalty.

Table 3. *Direct effects between COBRA and CBBE constructs*

	β	SE	p
Cons $\rightarrow$ BA	0.585	0.043	<.001
Cons $\rightarrow$ BASPQ	0.485	0.046	<.001
Cons $\rightarrow$ BLY	0.568	0.046	<.001
Cont $\rightarrow$ BLY	-0.066	0.063	0.292
Cont $\rightarrow$ BA	-0.151	0.059	0.010
Cont $\rightarrow$ BASPQ	-0.044	0.061	0.466
Cr $\rightarrow$ BASPQ	-0.040	0.060	0.505
Cr $\rightarrow$ BA	-0.016	0.058	0.783
Cr $\rightarrow$ BLY	-0.003	0.062	0.961

Note: β – standardized beta regression weight; SE – standard error.

Source: Own study.

In contrast, Contribution demonstrated a significant but negative effect on BA ($\beta=-0.151$, $p=.010$), and no significant effects on either BASPQ ($\beta=-0.044$, $p=.466$) or BLY ($\beta=-0.066$, $p=.292$). Creation did not significantly predict any of the brand equity constructs: $\rightarrow$ BA ($\beta=-0.016$, $p=.783$), $\rightarrow$ BASPQ ($\beta=-0.040$, $p=.505$), and $\rightarrow$ BLY ($\beta=-0.003$, $p=.961$). These findings imply that while consumption is a key driver of brand equity, user-generated contributions or content creation may not uniformly enhance brand-related outcomes – and in the case of contribution, may even diminish brand awareness.

The model explained a moderate proportion of variance across the three brand equity constructs. Specifically, it accounted for 27.8% of the variance in BA, 20.6% in BASPQ, and 29.1% in BLY. These R^2 values indicate a meaningful level of explanatory power, particularly in the case of brand loyalty, where nearly one-third of the variance was captured.

Regarding the study hypotheses, the results provided only partial support for the proposed relationships. Hypothesis 1, which assumed that fan engagement in COBRA activities positively influences brand awareness, was only partially supported. While consumption had a significant positive effect on brand awareness, contribution had a significant negative effect and creation was non-significant. Similarly, Hypothesis 2 was partially supported, as only consumption positively influenced brand association and perceived quality (BASPQ), whereas contribution and creation showed no significant effects. Hypothesis 3 was also partially supported because consumption positively affected BASPQ, while the remaining COBRA dimensions were not significant predictors. Finally, Hypothesis 4 received partial support, as consumption positively influenced brand loyalty, whereas contribution and creation did not demonstrate significant effects.

In summary, the SEM analysis confirmed that among the forms of engagement outlined in the COBRA model, consumption exerts the strongest and most consistent influence on brand equity outcomes, underscoring the critical role of passive engagement in shaping brand perceptions and loyalty in digital environments.

Table 4. *Results of hypothesis verification for the relationships between COBRA engagement dimensions and brand equity constructs*

Hypothesis	Result	Explanation
H1	Partially supported	Consumption positively affected BA, whereas contribution had a negative effect and creation was non-significant.
H2	Partially supported	Only consumption positively affected BASPQ.
H3	Partially supported	Only consumption positively affected BASPQ.
H4	Partially supported	Only consumption positively affected BLY.

All hypotheses received partial support, as positive effects were observed only for the consumption dimension of the COBRA model, while contribution and creation showed either non-significant or negative effects (Table 4).

5. DISCUSSION

This study examined how different levels of fan engagement on social media, defined by the COBRA model as consumption, contribution, and creation, relate to the core dimensions of CBBE: brand awareness, brand associations and perceived quality, and brand loyalty. The findings provide several insights

into how digital engagement shapes the perceived value of national sports teams. Overall, the findings indicate that all four hypotheses received only partial support. Across all dimensions of brand equity, consumption emerged as the only consistent positive predictor, whereas contribution and creation either demonstrated non-significant relationships or, in the case of brand awareness, a negative effect.

First, the results confirm the central role of content consumption in enhancing all components of brand equity. This is consistent with the CBBE framework (Keller, 1993) and CE theory (Hollebeek, 2011) which suggest that even low-effort, repetitive exposure to brand content can foster strong cognitive and emotional ties. In the case of a national team, such patterns of engagement appear to anchor the brand in fans' consciousness and reinforce emotional affiliation. From a TPB perspective (Ajzen, 1991), consumption activities are easy to undertake and thus readily become habitual, while SIT (Tajfel & Turner, 1979) helps explain how repeated exposure strengthens group identification and national pride. Similar mechanisms have been observed by Zailskaite-Jakste and Minelgaite (2021) and Ahiabor et al. (2023), who identify consumption as a key driver of brand equity in digital environments.

For practitioners, this underlines the strategic importance of consistently delivering high-quality, emotionally engaging, and easily consumable content. Rather than prioritizing only highly interactive formats, national teams may benefit from reinforcing passive engagement patterns that form the basis of long-term loyalty and identification.

Second, the limited – and occasionally negative – associations between contributory activity (e.g., commenting, liking, sharing) and brand equity components suggest that not all digital interactions are beneficial. Some contributions may reflect frustration, irony, or criticism rather than genuine support. In TPB terms, such actions are more sensitive to social norms and situational cues, and therefore more volatile (Ajzen, 1991). SIT likewise indicates that when identification is weak, contribution may be impulsive and misaligned with brand goals (Tajfel & Turner, 1979). This challenges the assumption that more interaction automatically signals stronger affinity. As Zailskaite-Jakste and Minelgaite (2021) show, the impact of contribution depends heavily on message tone and content, while Ahiabor et al. (2023) found more positive effects in a different

context (foreign club teams), underscoring the importance of cultural and symbolic setting. Future research should therefore incorporate sentiment analysis and contextual assessment of user messages, including the notion of *critical loyalty*, where negative commentary nonetheless reflects emotional investment.

Third, the absence of significant associations between content creation and any dimension of brand equity suggests that user-generated content, though often regarded as the *highest* form of engagement, does not automatically translate into higher awareness, stronger associations, or deeper loyalty in national team contexts. Motivations behind creation are heterogeneous: some fans may primarily use the team as a backdrop for self-presentation, rather than as an expression of shared identity. Prior work (Zailskaite-Jakste & Minelgaite, 2021; Vale & Fernandes, 2018) indicates that creation may have more indirect or delayed effects, for instance by amplifying visibility or fostering peer-to-peer interactions, which are difficult to capture in cross-sectional designs. Longitudinal and qualitative approaches are needed to better understand these diffuse, time-lagged impacts.

Comparisons with earlier studies (e.g., Schivinski & Łukasik, 2015; Schivinski et al., 2019) suggest that context is crucial. While all COBRA levels may enhance brand equity in commercial settings, the identity-laden and emotionally charged nature of national teams appears to alter engagement dynamics. In such environments, contributory or creative acts may signal frustration or critique just as easily as allegiance. Active engagement therefore cannot be equated with positive brand outcomes; instead, it seems to require a prior foundation of trust and identification to yield beneficial effects.

Taken together, these results support a reorientation of engagement strategies from maximizing activity volume to cultivating meaningful, emotionally grounded connections. Effective communication should prioritize scalable, resonant content that supports passive engagement, while segmenting audiences by engagement levels and gradually nurturing those with stronger identification toward deeper, but value-aligned, forms of contribution and creation.

6. CONCLUSIONS

This study provides compelling evidence that not all forms of digital fan engagement contribute equally to the brand equity of national sports teams. Consequently, the four proposed hypotheses were only partially supported. The positive influence of fan engagement on brand awareness, brand associations and perceived quality, and brand loyalty was confirmed exclusively for the consumption dimension of the COBRA model. In contrast, contribution and creation did not positively affect the examined brand equity dimensions, suggesting that different forms of engagement generate distinct outcomes for national team brands. Among the COBRA levels, only passive content consumption consistently enhanced all CBBE dimensions, including brand awareness, associations, perceived quality, and loyalty, challenging the assumption that more active forms of engagement are always more beneficial. The findings support the relevance of CBBE, Consumer Engagement Theory, and Social Identity Theory for understanding how digital environments shape brand value, but also highlight the need for complementary qualitative approaches (e.g., sentiment or narrative analysis) to capture the symbolic and affective aspects of fan behavior. Overall, the results suggest a shift from maximizing the volume of interactions toward fostering meaningful identification with the brand's values, both online and offline.

7. PRACTICAL IMPLICATIONS

From a brand management perspective, these findings suggest the need to recalibrate social media strategies for national teams. Given the strong impact of passive engagement, priority should be placed on emotionally resonant, high-quality content that reinforces identification, belonging, and national pride through coherent storytelling, national symbols, and shared experiences – strengthening brand equity without requiring high user effort.

Interactive and user-generated content should be used selectively and strategically. Not all fan-created content builds brand value, especially in times of criticism or crisis, so moderating dialogue and engaging loyal, emotionally committed fans as trusted co-creators is crucial. Finally, integrating online

communication with offline touchpoints into a unified brand experience will help national teams cultivate durable, emotionally anchored brand equity in an increasingly digital sports landscape.

8. LIMITATIONS

Several limitations should be considered when interpreting these findings. The cross-sectional design precludes causal inference, and future studies should use longitudinal designs to track changes in fan engagement and brand perceptions over time. The focus on followers of the Polish Men's National Volleyball Team limits generalizability to other sports, teams, and cultural contexts, underscoring the need for comparative studies. Reliance on self-reported data also introduces potential bias, which could be reduced by combining surveys with objective social media metrics. Finally, the absence of qualitative methods constrains insight into the deeper motives and meanings of engagement, suggesting that future research should incorporate interviews, focus groups, or content analysis to build a more contextualized understanding of digital fan engagement and brand equity.

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