

THE INFLUENCE OF SOCIAL MEDIA USE INTENSITY AND FAN ENGAGEMENT ON PERCEIVED SUSTAINABLE ECONOMIC VALUE CREATION AMONG THAI SPORTS FANS

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ABSTRACT

This study examines how social media use intensity and fan engagement influence perceived sustainable economic value creation among Thai sports fans. Using data from 250 respondents and Partial Least Squares Structural Equation Modeling (PLS-SEM), the analysis tested the relationships among social media use, fan engagement, and sustainability-related value perceptions. The results show that social media use intensity strongly enhances fan engagement, and that both social media use and fan engagement significantly increase perceptions of sustainable economic value. The model demonstrates moderate explanatory power ($R^2 = 0.412$ for fan engagement; $R^2 = 0.336$ for sustainable economic value creation), underscoring the role of digital engagement in shaping fans' sustainability perceptions. These findings extend the understanding of digital fan behavior and provide practical implications for sport organizations seeking to leverage social media to support long-term, sustainability-oriented value creation.

Keywords: Social Media, Fan Engagement, Sustainable Economic Value, Sports Fans

INTRODUCTION

In recent years, the sport industry has become a major contributor to the global economy, driven by media rights, sponsorship, ticketing, merchandising, and an expanding range of digital services. At the same time, digital technologies—particularly social media platforms such as Facebook, X (Twitter), Instagram, TikTok, and YouTube—have transformed how sport organizations communicate with audiences and how fans consume sport content. Social media provides real-time updates, behind-the-scenes access, and interactive features that extend the sport experience beyond the physical venue.

For sport organizations, this shift presents both opportunities and challenges. Social media enables cost-effective relationship marketing and data-driven fan targeting, while empowering active online communities that can shape brand narratives in real time. Prior research shows that social media fosters fan engagement through likes, comments, shares, and user-generated content, strengthening identification, loyalty, and behavioral intentions (Abeza et al., 2013; Filo et al., 2015). More recent

evidence indicates that social media use intensity can influence sport-related consumption behaviors (Chen et al., 2025), highlighting its role as a mechanism through which digital engagement contributes to economic outcomes.

Alongside digital transformation, sustainability has become a central concern in sport management. Scholars argue that sport organizations should be evaluated not only on financial performance but also on environmental and social impact (McCullough et al., 2020). Sustainability initiatives, when communicated effectively, can enhance trust, legitimacy, and long-term stakeholder support (Cayolla & Escadas, 2023; Constantinescu, 2024). Evidence from the Thai service sector similarly shows that perceived value and brand-related factors drive long-term loyalty and sustainable economic outcomes (Chomchom & Phonsri, 2025).

These developments underscore the need to understand sustainable economic value creation in sport—not only the ability to generate immediate revenue, but the capacity to create long-term value aligned with environmental responsibility, social contribution, and stakeholder expectations. Fans play a central role: their decisions to attend games, purchase merchandise, subscribe to digital platforms, and support sponsors directly influence the economic sustainability of sport organizations. Their perceptions of organizational value are increasingly shaped by what they encounter on social media.

In Thailand, social media is especially influential in how fans experience sport. Terason and Pahasing (2025) demonstrate that Thai fans actively construct and express “digital nationalism” through online sport engagement, reflecting strong emotional involvement and participatory fan culture. Despite this, limited empirical research has examined how social media use intensity and fan engagement shape perceptions of sustainable economic value creation, particularly in non-Western contexts. Wantayakul N., Decha O., Whangmahaporn B. (2025).

To address this gap, the present study focuses on Thai sports fans and investigates how social media use intensity and fan engagement influence their perceptions of sustainable economic value creation. The objective is to provide empirical insight into how social media can be leveraged not only to stimulate short-term sport consumption but also to foster sustainable economic value within the sport industry.

OBJECTIVE

To examine how social media use intensity and fan engagement influence sports fans' perceptions of sustainable economic value creation in Thailand.

METHODOLOGY

Research design

This study adopts a quantitative, cross-sectional survey design to examine relationships between social media use intensity, fan engagement, and perceptions of sustainable economic value creation among sports fans. A structured questionnaire was developed from prior research on social media in sport, fan engagement, and sustainability-related value perceptions (Abeza et al., 2013; Cayolla & Escadas, 2023; Chen et al., 2025; McCullough et al., 2020). This design is suitable for testing associations among latent constructs using structural equation modeling.

Population and sample

The target population consists of sports fans in Thailand who (1) follow at least one sport team, league, or athlete and (2) use social media to consume sport-related content (e.g., news, highlights, live streams, fan pages).

Non-probability purposive sampling is employed, and data are collected online via survey links shared through sport-related social media groups, fan pages, and university networks. For structural equation modeling, a sample of 200–300 respondents is typically recommended;

therefore, this study targets at least 250 valid responses, which is deemed adequate given the model complexity and number of indicators.

Measures

All constructs were measured using multi-item scales adapted from established instruments and tailored to the Thai sport and social media context, using a five-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree).

Table 1
Measurement of latent constructs

Construct	Measure	Adapted from
Social media use intensity (SMI)	Four items on frequency, time spent, and psychological involvement in sport-related social media use.	Chen et al., 2025
Fan engagement (FE)	Four items on behavioral and emotional engagement (consumption, contribution, and creation on social media).	Abeza et al., 2013; Filo et al., 2015
Sustainable Economic Value Creation (SEV)	Four items on fans' perceptions of long-term, responsible economic value created by their sport team/organization.	Cayolla & Escadas, 2023; McCullough et al., 2020; Constantinescu, 2024

Demographic variables (e.g., age, gender, education), sport-related characteristics (e.g., main sport followed, favorite team, years as a fan), and basic social media usage information (e.g., main platform used) were also collected for descriptive and control purposes.

Data collection procedures

Data were collected using an online survey platform. Respondents first viewed an informed consent form explaining the study purpose, voluntary participation, and confidentiality; only those who agreed proceeded to the questionnaire. Screening questions ensured that participants were sports fans and regular users of social media for sport-related purposes. The survey link was distributed over several weeks via sport-related social media communities, including professional club fan pages, online supporter groups, and university sport networks. Duplicate and low-quality responses were reduced by limiting multiple submissions from the same device and by removing inconsistent or incomplete questionnaires during data cleaning.

Data analysis

Data analysis is conducted in two main stages using PLS-SEM, following the guidelines of Hair et al. (2022). In the first stage, descriptive statistics (means, standard deviations, and frequencies) are computed to summarize the sample profile and key variables. The reflective measurement model is then assessed in terms of reliability and validity. The evaluation criteria for the measurement and structural models follow commonly recommended thresholds for PLS-SEM and are summarized in Table 2.

Table 2
PLS-SEM Data Analysis Procedures

Analysis Step	Criteria / Procedures
1. Measurement Model Evaluation	- Outer Loadings (≥ 0.70)

	- Cronbach's Alpha (≥ 0.70) - Composite Reliability (CR) (≥ 0.70) - Average Variance Extracted (AVE) (≥ 0.50) - Discriminant Validity: HTMT (< 0.85)
2. Structural Model Evaluation	- Path Coefficients (β), t-values and Significance (p-values) - Coefficient of Determination (R^2) - Effect Size (f^2) - Bootstrapping (5,000 resamples)

Indicator reliability is evaluated using outer loadings, with values of 0.70 or higher considered acceptable. Items with loadings between 0.40 and 0.70 are examined for possible removal only if their deletion leads to an improvement in composite reliability (CR) or average variance extracted (AVE), whereas items with loadings below 0.40 are treated as candidates for removal, subject to content validity considerations. Internal consistency reliability is assessed using Cronbach's alpha, rho_A, and CR, with values of 0.70 or above regarded as satisfactory for exploratory and confirmatory purposes. Convergent validity is evaluated via AVE, which should exceed 0.50 for each construct, indicating that the construct explains more than half of the variance of its indicators.

Discriminant validity was assessed using both the Fornell-Larcker criterion and the heterotrait-monotrait ratio of correlations (HTMT). Under the Fornell-Larcker criterion, the square root of each construct's AVE is required to exceed its correlations with other constructs. For HTMT, values below 0.85 (or below 0.90 for conceptually similar constructs) are taken as evidence of adequate discriminant validity.

In the second stage, the structural model is evaluated. Given the predictive orientation of the study and the use of Likert-type indicators, PLS-SEM is considered appropriate. Path coefficients are estimated and their significance is tested using a non-parametric bootstrapping procedure with a large number of resamples (e.g., 5,000–10,000 subsamples, two-tailed test, $\alpha = 0.05$). Coefficients of determination (R^2 and adjusted R^2) are used to assess the explanatory power of the endogenous constructs. Effect sizes (f^2) are computed to evaluate the relative contribution of each exogenous construct to the R^2 values, adopting thresholds of 0.02, 0.15, and 0.35 to denote small, medium, and large effects, respectively. Predictive relevance (Q^2) is examined using the blindfolding procedure, with Q^2 values greater than zero indicating that the model has predictive relevance for the dependent constructs.

Through this analytical approach, the study seeks to provide robust empirical evidence on how social media use intensity and fan engagement contribute to sports fans' perceptions of sustainable economic value creation, offering methodological and practical guidance for sport organizations designing digital strategies that support long-term, responsible growth.

RESULTS

Descriptive statistics

Data from 250 sports fans were analyzed. The three constructs—social media use intensity (SMI), fan engagement (FE), and perceived sustainable economic value creation (SEV)—were calculated as mean scores of four indicators each, using a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). Overall, the descriptive statistics showed moderate to moderately high perceptions on all constructs. These results are summarized in Table 3.

Table 3
Descriptive statistics and correlations among constructs (N = 250)

Construct	Mean	SD	SMI	FE	SEV
SMI	3.023	1.190	1.000	0.642	0.503

FE	3.092	1.130	0.642	1.000	0.543
SEV	3.070	1.220	0.503	0.543	1.000

Measurement model

Survey data obtained from 250 sports fans were used to estimate the measurement model. The three latent constructs—social media use intensity (SMI), fan engagement (FE), and perceived sustainable economic value creation (SEV)—were each measured with four indicators on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). Overall, the indicators showed moderate to moderately high mean scores. The outer loadings, reliability coefficients, and AVE values for each construct are reported in Table 4.

Table 4
Measurement model results: outer loadings, reliability, and convergent validity

Construct	Item	Loading	Cronbach's alpha	AVE	CR
Social media use intensity (SMI)	SMI1	0.906	0.927	0.820	0.948
	SMI2	0.907			
	SMI3	0.904			
	SMI4	0.906			
Fan Engagement (FE)	FE1	0.887	0.913	0.793	0.939
	FE2	0.883			
	FE3	0.903			
	FE4	0.889			
Sustainable Economic Value Creation (SEV)	SEV1	0.892	0.928	0.822	0.949
	SEV2	0.911			
	SEV3	0.909			
	SEV4	0.914			

As shown in Table 4, the standardized outer loadings for all items were high, ranging from approximately 0.88 to 0.91 across the three constructs. The loadings for SMI1–SMI4, FE1–FE4, and SEV1–SEV4 all exceeded the recommended threshold of 0.70, indicating strong indicator reliability.

Internal consistency reliability was also excellent. Cronbach's alpha coefficients were 0.927 for social media use intensity (SMI), 0.913 for fan engagement (FE), and 0.928 for sustainable economic value creation (SEV). The corresponding composite reliability (CR) values were 0.948, 0.939, and 0.949, respectively, all well above the recommended minimum of 0.70, reflecting very high internal consistency for each construct.

Convergent validity, assessed using AVE, was satisfactory for all constructs. The AVE values were 0.820 for SMI, 0.793 for FE, and 0.822 for SEV, all exceeding the 0.50 criterion, confirming that each latent variable explained a substantial proportion of the variance in its indicators.

Discriminant validity was examined using the Fornell–Larcker criterion. The square roots of the AVE for SMI, FE, and SEV (0.91, 0.89, and 0.91, respectively) were greater than the inter-construct correlations (SMI–FE = 0.642, SMI–SEV = 0.503, FE–SEV = 0.543), indicating that each construct shared more variance with its own indicators than with the other constructs.

Taken together, these results indicate that the measurement model exhibits strong reliability as well as adequate convergent and discriminant validity, and is therefore suitable for subsequent structural analysis using PLS-SEM.

Structural model results

The structural model was evaluated using path coefficients, t-values, p-values, effect sizes (f^2), and the coefficients of determination (R^2) for the endogenous constructs. Figure 1 presents the PLS-SEM structural model with the standardized path coefficients and R^2 values. Table 5 summarizes the estimated path coefficients among social media use intensity (SMI), fan engagement (FE), and perceived sustainable economic value creation (SEV).

Figure 1

Depicts the PLS-SEM structural model with the standardized path coefficients and R^2 values

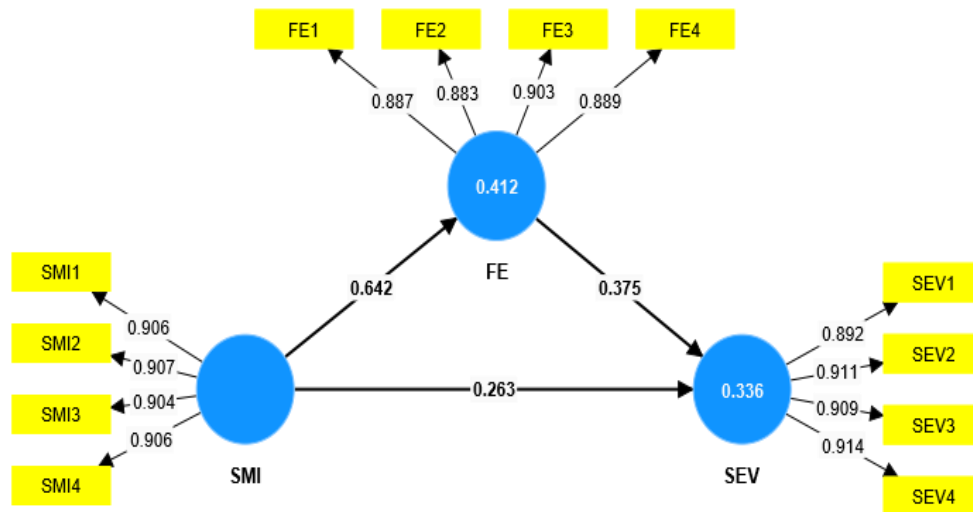


Table 5
Structural model results

Paths	β	t-value	p-value	f^2	Hypothesis	Result
SMI $\rightarrow$ FE	0.642	17.816	0.000*	0.701	H1	Supported
FE $\rightarrow$ SEV	0.375	5.639	0.000*	0.124	H2	Supported
SMI $\rightarrow$ SEV	0.263	5.858	0.000*	0.061	H3	Supported

Note. *p-value < 0.001.

As shown in Table 5, social media use intensity exerts a strong positive effect on fan engagement ($\beta = 0.642$, $t = 17.816$, $p < .001$), indicating that higher levels of social media use are associated with substantially greater fan engagement. Both SMI and FE also exhibit significant positive effects on perceived sustainable economic value creation. The path from FE to SEV is moderately strong and statistically significant ($\beta = 0.375$, $t = 5.639$, $p < .001$), suggesting that fans who are more engaged with sport-related content on social media are more likely to perceive that sport organizations generate sustainable economic value.

The direct effect of SMI on SEV is smaller but remains significant ($\beta = 0.263$, $t = 5.858$, $p < .001$), implying that intensive social media use directly contributes to higher perceptions of sustainable economic value, even after accounting for the effect of fan engagement.

Regarding effect sizes, SMI demonstrates a large effect on FE ($f^2 = 0.701$), whereas the effects of FE and SMI on SEV fall within small-to-medium ($f^2 = 0.124$) and small ($f^2 = 0.061$) ranges, respectively. The explanatory power of the model is presented in Table 6.

Table 6

Coefficient of determination (R^2) for endogenous constructs

Endogenous construct	R^2
FE (Fan engagement)	0.412
SEV (Sustainable economic value creation)	0.336

The model explains 41.2% of the variance in fan engagement ($R^2 = 0.412$) and 33.6% of the variance in perceived sustainable economic value creation ($R^2 = 0.336$), indicating a moderate level of explanatory power. Overall, the findings support all three hypothesized relationships and underscore the central role of social media use intensity and fan engagement in shaping fans' perceptions of sustainable economic value creation within the sports context.

Discussion

This study examined how social media use intensity and fan engagement influence perceptions of sustainable economic value creation among Thai sports fans. The PLS-SEM results supported all three hypotheses and align with previous research on digital engagement and sport sustainability. First, social media use intensity strongly increased fan engagement ($H1$; $\beta = 0.642$, $f^2 = 0.701$), confirming that social media plays a central role in driving fans' behavioral and psychological involvement.

This finding is consistent with prior studies identifying social media as a platform for relationship building and value co-creation in sport (Abeza et al., 2013; Filo et al., 2015). The large effect size also reflects the high level of digital participation among Thai sports fans, including expressions of "digital nationalism" (Terason & Pahasing, 2025). Second, both social media use intensity and fan engagement significantly enhanced perceptions of sustainable economic value creation ($H2$ and $H3$). Fan engagement had a moderate effect ($\beta = 0.375$, $f^2 = 0.124$), suggesting that more engaged fans are more receptive to messages about long-term economic and social contributions by sport organizations. The smaller direct effect of social media use ($\beta = 0.263$, $f^2 = 0.061$) indicates that social media functions not only as an engagement tool but also as a key channel through which fans encounter information about community impact and sustainability initiatives. The model shows moderate explanatory power: social media use intensity explains 41.2% of fan engagement, and with engagement explains 33.6% of SEV.

These values mirror prior PLS-SEM research on sport consumption and sustainability (McCullough et al., 2020), suggesting that factors such as team performance or offline community activities may also shape sustainability perceptions. Theoretically, the study extends sport social media research by linking digital engagement to perceptions of sustainable economic value—an outcome rarely examined in sport contexts. It also contributes evidence from a non-Western digital environment, where social media use is high and fan identity is strongly expressed online. Managerially, the results indicate that sport organizations should view social media as a strategic tool for communicating and reinforcing sustainable value. Content that integrates entertainment with transparent information about economic, community, and environmental contributions may strengthen fans' perceptions of long-term organizational value. Targeting highly engaged fans with tailored sustainability messaging could further enhance responsible fan support.

CONCLUSION AND FUTURE WORK

The findings show that intensive social media use substantially increases fan engagement, and that both social media use and engagement positively shape fans' perceptions of sustainable economic value. The model demonstrates moderate explanatory power for both fan engagement and SEV, highlighting the growing importance of digital engagement within contemporary sport ecosystems.

Theoretically, this research bridges social media and fan engagement literature (Abeza et al., 2013; Filo et al., 2015; Matang, 2023) with frameworks on sustainability-oriented value creation

(McCullough et al., 2020; Cayolla & Escadas, 2023; Constantinescu, 2024), while contributing early empirical insights from the Thai context (Terason & Pahasing, 2025). Practically, the results suggest that clubs and leagues aiming for long-term, responsible growth should invest in strategies that stimulate meaningful social media engagement and clearly communicate how their operations create economic, social, and environmental benefits.

Future research should validate and extend this model using primary survey data from broader segments of Thai sports fans and, where possible, include comparative samples from other countries. Longitudinal or experimental designs would help clarify causal pathways and evaluate the impact of specific sustainability messages or content formats. Incorporating additional constructs—such as team identification, trust, perceived authenticity, brand equity, or behavioral indicators (e.g., purchases, attendance, digital engagement metrics)—would further enrich understanding of how digital fan engagement contributes to sustainable economic value creation in sport.

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