FACTORS AFFECTING THE SUCCESS AND SUSTAINABILITY OF CROWDFUNDING SYSTEMS IN INDONESIA BASED ON THE INFORMATION SYSTEM SUCCESS MODEL (ISSM) AND TECHNOLOGY ACCEPTANCE MODEL (TAM)

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Abstract. This study investigates the determinants affecting the efficacy and longevity of crowdfunding systems in Indonesia by integrating the Information System Success Model (ISSM) with the Technology Acceptance Model (TAM). The swift expansion of crowdfunding platforms in Indonesia shows their potential for social and philanthropic fundraising; however, their sustainability presents a significant problem. This study seeks to establish a conceptual framework linking system quality, information quality, and service quality (ISSM dimensions) with publication, user satisfaction, and behavioral intention (TAM dimensions) to clarify platform sustainability. A quantitative methodology is utilized, employing survey instruments assessed on a five-point Likert scale. The findings theoretically illustrate the complementary nature of ISSM and TAM in evaluating the factors influencing user satisfaction and the desire for continuing usage, hence promoting the long-term sustainability of crowdfunding systems.

Keywords: Crowdfunding, Information System Success Model, Technology Acceptance Model, Social Media Publication, User Satisfaction, Behavioral Intention, Sustainability.

INTRODUCTION

The principles of generosity and compassion are embedded in Islamic teachings as articulated in the Qur'an and the teachings of the Prophet Muhammad. The redistribution of wealth through charitable acts is an obligation for every honest Muslim. In Islamic practice, charity is classified into two categories: mandatory charity (e.g., zakat) and voluntary generosity (e.g., Sadaqah). Every charitable method possesses a distinct objective and execution style (Mohd Anim et al., 2023) (Mohd Anim et al., 2023:35).

The advent of crowdfunding platforms has transformed the traditional fundraising landscape by utilizing information technology to enable collective finance for social, entrepreneurial, and philanthropic projects. In recent years, crowdfunding has become popular as an alternative fundraising source. Crowdfunding allows entrepreneurs to accumulate funds by collecting small contributions from many people, typically via online crowdfunding platforms supported by proper technology (Do et al., n.d.). Generally, individuals are inclined to donate due to emotional motivations, highlighting the manifestation of human compassion, which indirectly contributes to problem resolution. Compassion, trustworthiness, motivation, acknowledgment, and a sense of belonging include numerous forms of emotional support. Emotional support also affects decision-making behavior, consumer satisfaction, well-being, and desire to participate in social commerce. Emotional support significantly correlates with the intention to offer social assistance (Kamarudin et al., 2023)

The quick advancement of information and communication technologies has enabled the expansion of crowdfunding. In Indonesia, crowdfunding portals such as Kitabisa.com have attained significant success in gathering public donations, whereas other others have faced challenges in sustaining their

operations. AlliedCrowd (2019) reports that approximately 21 percent of crowdfunding platforms remain operational, whereas nearly 79% become inactive. The gap highlights significant sustainability challenges and limitations in digital literacy among prospective advocates (Paramita, 2023:332).

This phenomenon suggests that although crowdfunding facilitates significant technological innovation to democratize funding access, its sustained success relies on several interconnected factors: system reliability, the quality of information provided, service responsiveness, and users' intention to stay engaged in using the platform. The weaknesses of several platforms such as Wujudkan.com and AyoPeduli.com demonstrate that technically proficient designs are insufficient without user trust, active involvement, and ongoing engagement. (Paramita, 2023:331)

The information quality dimension relates to the output attributes of the information system. The definition of information quality is dependent upon the specific type of information system implemented. (AbdelKader & Sayed, 2022:2).

The effectiveness of a crowdfunding platform can be systematically assessed from an information systems standpoint utilizing the Information System Success Model (ISSM) by DeLone and McLean (2003), which identifies system quality, information quality, service quality, user satisfaction, and net benefits as critical success factors (DeLone & McLean, 2003:21). The Technology Acceptance Model (TAM), created by Davis in 1989, elucidates user behavior in technology adoption via the perspective of perceived usefulness and perceived ease of use. The Technology Acceptance Model (TAM) has been utilized in several studies to analyze the factors influencing an individual's adoption of new technology. If systems are neither beneficial nor user-friendly, it may prove difficult for users to engage with the system consistently. (Jo & Bang, 2023). Success is defined as the degree to which an information system effectively contributes to the attainment of organizational objectives, including its impact on organizational performance (Lutfi, 2023:2).

The integration of these two models facilitates a comprehensive understanding that connects the technological, behavioral, and experiential factors affecting the system's performance and sustainability. Currently, sustainability serves as a fundamental principle for governmental policy formulation and corporate initiatives. Entrepreneurs in sustainability innovations are urged to significantly contribute to global transformation towards sustainable development for future generations. These entrepreneurs strive to harmonize economic, social, and environmental objectives, commonly known as the triple bottom line (Do et al., n.d.).

However, current research predominantly concentrates on either the technology aspect (ISSM) or the behavioral aspect (TAM) in isolation. Few examine its incorporation within the framework of charity crowdfunding, especially in Indonesia, where trust, literacy, and digital participation remain limited. Furthermore, prior studies never regarded social media articles as a characteristic indicative of digital engagement and the propagation of literacy via social media. Social media facilitates the establishment of social support, resulting in improved decision-making within a connected user environment (Abdelsalam et al., 2020). This work formulates an integrated model that amalgamates ISSM and TAM, incorporating the supplementary variable of Social Media Publication to bridge the existing research gap. The Social Media Publication Construction clarifies the impact of digital engagement and campaign distribution on online platforms, essential for building trust and enduring sustainability. Sustainable entrepreneurs seek to address these challenges by developing innovative products, services, or processes that enhance environmental and community welfare (Isaak et al., 2024). User satisfaction with the system will influence the intention to continue in using the application, which means creating sustainability (Mariana et al., 2023:133).

The existing phenomena in Indonesia highlight the necessity of this research. Although Indonesia ranks among the most charitable nations worldwide, its digital philanthropy potential remains largely unexplored, with approximately Rp 41 trillion raised yearly against a projected donation potential of Rp 327 trillion (Febrina et al., 2024:1). The gap indicates a contradiction between public charity and the digital instruments designed to enhance it. Addressing this issue needs enhancing

technology infrastructure and formulating a paradigm that incorporates sustained digital literacy, trust, and engagement.

This study seeks to discover and experimentally evaluate the elements that affect the effectiveness and sustainability of crowdfunding systems in Indonesia. It aims to clarify the impact of system quality, information quality, and service quality on user satisfaction and social media publication, which subsequently influences users' behavioral intentions to persist in utilizing the platform, ultimately contributing to the system's long-term sustainability. This research introduces an integrated ISSM-TAM methodology that simultaneously addresses system quality and user acceptance, in contrast to prior studies that analyzed these aspects independently. This integration introduces Social Media Publications as a social and communicative intermediary, representing a novel contribution that enhances the traditional ISSM-TAM model.

This research's theoretical contribution consists of expanding the ISSM-TAM integration to include modern digital attributes relevant to crowdfunding sustainability. This offers empirical insights for platform developers, philanthropic organizations, and legislators to create systems that are technically efficient, socially attractive, and financially acceptable. This research enhances the comprehension of how technology-driven crowdfunding might develop in developing countries such as Indonesia by analyzing the relationship of system quality, user behavior, and digital or social media publication.

RESEARCH METHOD

1.1 Research Design

This research employs a quantitative methodology using a structured survey tool to assess users' opinions of system quality, information quality, service quality, publication, user satisfaction, and behavioral intention. Each component is measured using a five-point Likert scale, with values ranging from 1 (strongly disagree) to 5 (strongly agree). The population comprises active users of crowdfunding platforms in Indonesia, namely those utilizing donation-based systems. Developing a suitable research methodology can facilitate the examination of each stage in the formation and achievement of the case, as seen in Figure 1.

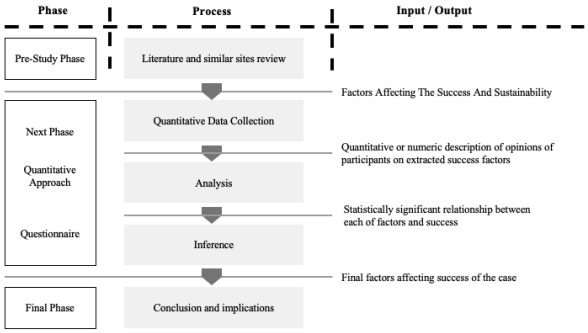

Fig. 1. Research process.

1.2 Constructs and Indicators

For the research entitled "Factors Affecting the Success and Sustainability of Crowdfunding Systems in Indonesia Based on the Information System Success Model (ISSM) and Technology Acceptance Model (TAM)" with the IS Success model and the TAM Model with the addition of a new variable, namely the Social Media Publication, here is a detailed description of the operational definition for each variable:

a. System Quality (SQ): Measures the technical reliability, performance, and user-friendliness of the platform.
b. Information Quality (IQ): Evaluates the accuracy, relevance, and clarity of information provided.
c. Service Quality (SEQ): Assesses the responsiveness and effectiveness of user support.
d. Social Media Publication (M): Users share or promote campaigns through social media platforms, contributing to wider exposure and engagement.
e. User Satisfaction (SAT): Represents users' overall contentment with their experience.
f. Behavioral Intention to Use (IT): Measures the intention to continue using the system.
g. Net Benefits Sustainability (NBS): Represents the system's long-term benefits and sustainability outcomes.

1.3 Conceptual Framework

The conceptual framework integrates ISSM and TAM constructs to explain user satisfaction and behavioral intention as mediators of sustainability. System, information, and service quality influence user satisfaction and publication, and user satisfaction and publication (SMPX) influence behavioral intention (TAM). User satisfaction and behavioral intention subsequently lead to net benefits, reflecting system success and sustainability.

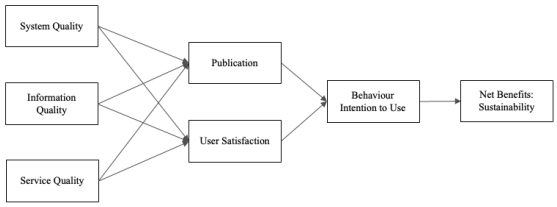

Fig. 2. Integrated ISSM–TAM Framework for Crowdfunding Systems.

This integration allows assessment of both technical (ISSM), behavioral (TAM) dimensions, and publication, offering a holistic model for evaluating the success and long-term viability of crowdfunding platforms.

1.4 Population & Sampling

This study focuses on internal users and stakeholders of crowdfunding platforms in Indonesia, specifically those connected to the Universa Crowdfunding System. These encompass platforms like Teman Berbagi, Rumah-Yatim, Qudwah Indonesia, Al Bunyan, Pengantar Surga, and PuniaKita.com. More than 400 individuals are currently active users across these platforms. This group includes operational staff, program officers, IT teams, finance personnel, and campaign managers who consistently interact with the crowdfunding system, and more than 10.000 donors from those crowdfunding system.

In this research, a total of 112 participants were chosen through purposive sampling. The participants were selected proportionally from the internal team members of the specified organizations and reflect active system users who have direct experience engaging with the platform and donors. The main objective of this phase is to assess the research tool regarding its reliability, clarity, and usability prior to large-scale implementation.

The sample from the pilot study (n=112) is utilized exclusively for evaluating instrument reliability, face validity, and internal consistency, rather than for hypothesis testing. A pilot test sample of 30 to 50 participants is adequate for preliminary validation. This aligns with practices in structural

equation modeling (SEM-PLS), where refining instruments before conducting a full-scale analysis is an essential step (Johanson & Brooks, 2010a:2).

Following this, the comprehensive survey will be distributed to a wider audience of users from various partner institutions through the Universa Crowdfunding System. A targeted sampling approach will be utilized to guarantee that participants possess pertinent experience with the platform. The survey will be distributed through Google Forms, featuring explicit instructions, deadlines, and planned reminders to enhance response rates and ensure data completeness

In the primary investigation, the sample size should be at least 10 times the highest number of structural paths directed at a latent construct, a guideline often known as the "10-times rule" in PLS-SEM (Hair et al., 2019:12). In a scenario where a model comprises as many as 6 paths directed towards a single construct, it is essential to have at least 60 valid samples for accurate analysis. Nevertheless, contemporary guidelines advocate for the utilization of power analysis or Monte Carlo simulations to achieve a more precise assessment. Considering this, and to guarantee model stability and generalizability, an objective of 100–150 respondents will be sought (Ketchen, 2013:24).

RESULT AND ANALYSIS

This chapter presents the results of the Partial Least Squares Structural Equation Modeling (PLS-SEM) analysis conducted with SmartPLS version 4. The main objective is to evaluate the links among different latent components and to validate the measurement model via direct effects (path coefficients). This study examines the factors of System Quality (SQ), Information Quality (IQ), Service Quality (SEQ), Social Media Publication (SMPX), User Satisfaction (SAT), and Behavioral Intention to Use (IT). The analysis will clarify the statistical significance of these correlations and supply a thorough assessment of the constructs based on the Likert scale responses from the study's participants.

The theoretical connection between ISSM and TAM establishes a solid basis for understanding system success. The ISSM components (system, information, and service quality) primarily affect publication and user satisfaction, which in turn forecast behavioral intention (TAM). Publication (SMPX) functions as a mediating concept linking perceived quality to the intention to use. When users recognize elevated system quality, their publication and satisfaction increase, so promoting ongoing usage and positive word-of-mouth, which are essential markers of sustainability. The findings of the investigation are illustrated in Figure 3.

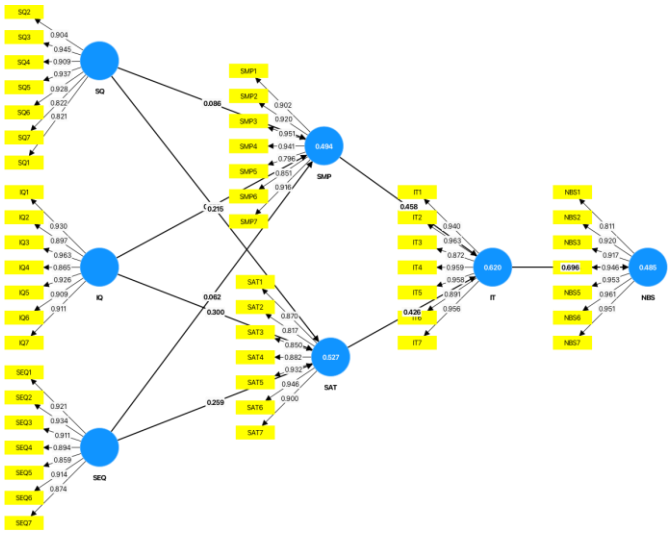

Fig. 3. Path Model

From the results of data processing through PLS-SEM, it produces a graph as shown in Figure 3, that has a detailed explanation such as: Outer Model which contains Outer Loading, also contains Inner Model which contains Path Coefficients. Below will be explained one by one starting from the Outer Model to the Inner Model. The summary of Outer Model and Path coefficients shown in Table 1.

1.1 Outer Loadings Analysis

Table 1. Summary of Outer loading.

	IQ	IT	NBS	SAT	SEQ	SMPX	SQ
IQ1	0,930						
IQ2	0,897						
IQ3	0,963						
IQ4	0,865						
IQ5	0,926						
IQ6	0,909						
IQ7	0,911						
IT1		0,940					
IT2		0,963					
IT3		0,872					
IT4		0,959					
IT5		0,958					
IT6		0,891					
IT7		0,956					
NBS1			0,811				
NBS2			0,920				
NBS3			0,917				
NBS4			0,946				
NBS5			0,953				
NBS6			0,961				
NBS7			0,951				
SAT1				0,870			
SAT2				0,817			
SAT3				0,850			
SAT4				0,882			
SAT5				0,932			
SAT6				0,946			
SAT7				0,900			
SEQ1					0,921		
SEQ2					0,934		
SEQ3					0,911		
SEQ4					0,894		
SEQ5					0,859		
SEQ6					0,914		
SEQ7					0,874		
SMPX1						0,902	
SMPX2						0,920	
SMPX3						0,951	
SMPX4						0,941	
SMPX5						0,796	
SMPX6						0,851	
SMPX7						0,916	
SQ2							0,904

	IQ	IT	NBS	SAT	SEQ	SMPX	SQ
SQ3							0,945
SQ4							0,909
SQ5							0,937
SQ6							0,928
SQ7							0,822
SQ1							0,821

The outer loadings test is performed to measure the extent to which each indicator reflects the latent construct it represents. The outer loading value (λ) indicates the contribution or strength of the relationship between the indicator and the latent variable.

According to Hair et al. (2021), the interpretation criteria are:

- $\lambda \geq 0.708 \rightarrow$ the indicator is very reliable and valid.
- $0.40 \leq \lambda < 0.70 \rightarrow$ indicators are still acceptable if AVE and construct reliability are high.
- $\lambda < 0.40 \rightarrow$ indicator should be eliminated.

1.1.1 Information Quality (IQ)

Table 2. Information Quality Interpretation

Indicators	Loading	Interpretation
IQ1	0.929998	Highly effective — indications consistently reflect the quality of information.
IQ2	0.897328	Robust and reliable, exceeding the optimal threshold (0.70).
IQ3	0.962599	It is the most robust, demonstrating a significant contribution to constructs.
IQ4	0.865317	Outstanding, demonstrating a strong association.
IQ5	0.926056	Extremely reliable and consistent.
IQ6	0.908580	Demonstrates significant measurement stability.
IQ7	0.911280	Consistently strengthening the overall reliability of IQ constructs.

IQ conclusion: All indicators have a loading > of 0.86, with a range of 0.865317 – 0.962599, which means the convergent validity is very strong. Construct Information Quality has a balanced and stable indicator contribution.

1.1.2 Intention to Use (IT)

Table 3. Intention to Use Interpretation

Indicators	Loading	Interpretation
IT1	0.939714	Extremely high - the primary indicator of the intention to use the indicator.
IT2	0.962586	Most robust among IT indicators.
IT3	0.871847	Robust and satisfy the validity standards.
IT4	0.959244	The internal consistency is exceptional.
IT5	0.958331	Reliable and supports construct validity.
IT6	0.890682	Consistent and substantial.
IT7	0.955940	Extremely significant, strengthening the IT framework.

IT conclusions: All loadings were high-value (0.871847 – 0.962586), indicating that the IT indicators are empirically highly consistent and valid. This construct represents the intent of use behaviour with exceptional reliability.

1.1.3 Net Benefit Sustainability (NBS)

Table 4. Net Benefit Sustainability Interpretation

Indicators	Loading	Interpretation
NBS1	0.811083	The validity is significantly elevated.
NBS2	0.920471	Robust and secure.
NBS3	0.916632	Excellent.
NBS4	0.946079	Extremely elevated, signifying an important indicator.
NBS5	0.952821	One of the most effective indicators in constructions.
NBS6	0.960754	Extremely reliable at its most reliable.
NBS7	0.950600	Highly effective and reliable.

NBS conclusion: All loading values above 0.81, with a peak at NBS6 = 0.960754, prove that the sustainability benefit indicator is empirically valid and homogeneous.

1.1.4 User Satisfaction (SAT)

Table 5. User Satisfaction Interpretation

Indicators	Loading	Interpretation
SAT1	0.869951	High validity.
SAT2	0.816993	It is still strong and significant.
SAT3	0.850312	Reliable.
SAT4	0.882469	Strong and supportive model.
SAT5	0.931773	The indicators are very strong.
SAT6	0.946211	Most powerful in the user satisfaction construct.
SAT7	0.899606	Stable and valid.

SAT Conclusion: All User Satisfaction indicators have a loading > 0.81, with a highest value of 0.946211. This confirms that the user satisfaction construct is measured very well and consistently.

1.1.5. Service Quality (SEQ)

Table 6. Service Quality Interpretation

Indicators	Loading	Interpretation
SEQ1	0.920755	Very high and reliable.
SEQ2	0.934358	The strongest indicator in the SEQ construct.
SEQ3	0.910504	Valid and stable.
SEQ4	0.893613	Excellent.
SEQ5	0.858657	Quite high and acceptable.
SEQ6	0.913757	Excellent and supports construct reliability.
SEQ7	0.874361	Valid and consistent.

SEQ conclusion: The loading range is 0.858657 – 0.934358, all above the 0.70 threshold. Construct Service Quality meets the criteria of very strong measurement reliability.

1.1.6. Social Media Publication (SMPX)

Table 7. Social Media Publication Interpretation

Indicators	Loading	Interpretation
SMPX1	0.902071	Powerful and significant.
SMPX2	0.920246	Very reliable.
SMPX3	0.950725	One of the strongest indicators.
SMPX4	0.940955	Consistent and valid.
SMPX5	0.795734	It is still accepted (marginal), because it is close to the limit of 0.80.
SMPX6	0.850909	Strong and stable.
SMPX7	0.916321	Excellent.

SMPX Conclusion: Although SMPX5 (0.795734) is slightly lower, all other indicators are very strong (>0.85). The Social Media Publication construct demonstrates high convergent validity and empirical support for user social engagement.

1.1.7. System Quality (SQ)

Table 8. Social Media Publication Interpretation

Indicators	Loading	Interpretation
SQ1	0.821055	High and significant validity.
SQ2	0.903587	Reliable.
SQ3	0.945366	Very strong – the dominant indicator.
SQ4	0.909226	Valid and stable.
SQ5	0.937416	Very strong and reliable.
SQ6	0.927603	High consistency.
SQ7	0.821635	Valid and significant.

SQ Conclusion: All indicators above 0.82, indicate System Quality is measured very strongly. The SQ3 indicator (0.945366) is the main determinant of system quality perception, confirming the technical strength and reliability of the crowdfunding platform.

General Conclusion

a. All constructs in the model meet the outer loading criteria ≥ 0.70, with a range of 0.795734 – 0.962599. This confirms that all indicators have high convergent validity and represent latent constructs consistently.
b. There is no indicator with a < load of 0.70, so no items need to be eliminated from the measurement model.
c. High values on Information Quality, System Quality, and Intention to Use indicate the stability and reliability of the research instrument.
d. Overall, the measurement model met the criteria of an excellent fit measurement model, as per the standards of Hair et al. (2021).

All constructs demonstrated excellent indicator reliability, as all outer loadings exceeded the threshold of 0.70, ranging from 0.795734 to 0.962599. The results confirm strong convergent validity across all latent variables, ensuring that each indicator consistently reflects its corresponding construct. Therefore, the measurement model achieves empirical reliability and theoretical robustness, suitable for further structural model assessment in the PLS-SEM framework.

1.2 Construct Reliability and Validity

Upon confirming that all indicators meet the outer loading requirement of ≥ 0.70 and that each construct possesses indicators with positive and significant outer weights, the next phase in evaluating the reflective measurement model entails examining the construct's reliability and the validity of convergence.

Reliability and validity were evaluated to verify the internal consistency and convergent validity of all latent constructs. Reliability was examined via Cronbach's alpha, rho_A, and composite reliability (ρc), whilst convergent validity was tested using the average variance extracted (AVE). Hair et al. (2019) claim that Cronbach's alpha and composite reliability higher than 0.70 indicate adequate internal consistency, while AVE values surpassing 0.50 imply satisfactory convergent validity. The result is explained in Table 2.

Table 2. Construct Reliability and Validity

Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
0,967	0,969	0,973	0,837
0,976	0,976	0,980	0,874
0,971	0,972	0,976	0,854
0,954	0,959	0,962	0,786
0,961	0,965	0,968	0,812
0,959	0,964	0,967	0,807
0,959	0,962	0,966	0,804

Construct Reliability and Validity Analytical Explanation

Four main indicators are used to evaluate the internal consistency and validity of the construct, namely:

a. Cronbach's Alpha (α)
b. Composite Reliability (ρ_a / rho_a)
c. Composite Reliability (ρ_c / rho_c)
d. Average Variance Extracted (AVE)

1.2.1. Cronbach's Alpha (α)

Cronbach's Alpha value measures the internal consistency of the indicators in each latent construct. In the context of PLS-SEM, a α ≥ value of 0.70 is considered to indicate adequate reliability (Hair et al., 2019:15).

Table 9. Cronbach's Alpha Interpretation

Construct	Cronbach's Alpha	Interpretation
IQ	0.967374	The reliability is very good, signifying that all construct indicators consistently measure latent variables.
IT	0.975640	The reliability is exceptionally excellent, exhibiting near-perfect homogeneity among the indicators.

NBS	0.970888	The reliability is very good, consistent, and stable.
SAT	0.954210	Exhibits high dependability and satisfies the optimal minimum threshold (≥0.9 for intricate reflective models).
SEQ	0.961385	The reliability is outstanding, demonstrating consistent measurements.
SMPX	0.959468	The internal consistency is excellent.
SQ	0.958733	Exhibits high reliability, with indicators demonstrating strong mutual support.

Conclusion: Cronbach's Alpha's entire value ranges from 0.954210 to 0.975640, indicating that all constructs meet the requirements of high reliability and reliability for structural model analysis.

1.2.2. Composite Reliability (ρ_a/rho_a)

The Composite Reliability value (ρ_a) is used as a measure of internal reliability adjusted for the contribution of actual indicators, considered more accurate than Cronbach's Alpha.

Table 10. Composite Reliability (ρ_a/rho_a) Interpretation

Construct	Composite Reliability (ρ_a)	Interpretation
IQ	0.969184	Extremely elevated, signifying stability among indicators.
IT	0.976414	Extremely high, almost perfect reliability.
NBS	0.971551	Extremely reliable.
SAT	0.958677	Elevated and uniform.
SEQ	0.965149	Highly commendable and dependable.
SMPX	0.963921	The internal consistency is extremely strong.
SQ	0.961894	Elevated and consistent among items.

Conclusion:

All ρ_a values > 0.95, indicating the model has outstanding composite reliability. Values above 0.90 already indicate very strong construct reliability for advanced socio-technological research such as the TAM-IS Success model used in this study.

1.2.3. Composite Reliability (ρ_c/rho_c)

The Composite Reliability value (ρ_c) is the combined reliability indicator of all indicators against latent constructs, with an ideal rating of ρ_c ≥ 0.70.

Table 11. Composite Reliability (ρ_c/rho_c) Interpretation

Construct	Composite Reliability (ρ_c)	Interpretation
IQ	0.972908	The combined reliability is very high.
IT	0.979728	Perfect reliability, close to 1.
NBS	0.976015	Reliability is very strong.
SAT	0.962385	Excellent and meets the limits of reliability theory.
SEQ	0.967993	The consistency of the construct is very high.
SMPX	0.966794	Strong and stable reliability.
SQ	0.966170	High reliability between indicators.

Conclusion: The Composite Reliability value (ρ_c) is entirely in the range of 0.962–0.980, well above the minimum limit of 0.70, which means that the entire construct is very consistent and empirically reliable.

1.2.4. Average Variance Extracted (AVE)

The AVE value indicates convergent validity, i.e. how large the proportion of the variance of the indicator described by the latent construct.

General criteria: AVE ≥ 0.50 is considered to indicate good convergent validity (Fornell & Larcker, 1981).

Table 12. Average Variance Extracted Interpretation

Construct	AVE	Interpretation
IQ	0.836999	Variance explained was high (83.7%).
IT	0.873634	The variance is very high (87.4%), indicating the indicator consistently represents the construct.
NBS	0.853566	Convergent validity is very strong.
SAT	0.785554	The variance is good and meets the validity limit (≥0.5).
SEQ	0.812161	Convergent validity is high (81.2%).
SMPX	0.806677	The indicator is very representative (80.7%).
SQ	0.803613	Convergent validity is high and stable.

Conclusion: All AVE values > 0.78, indicating that each construct explains more than 78% of the variance of its indicators, which means the model has excellent convergent validity.

Overall Interpretation: The results of these reliability and validity tests show that:

a. All latent constructs in the model meet the high reliability requirements, both based on Cronbach's Alpha and Composite Reliability. A range of values between 0.954210 – 0.979728 indicates that there are no internal consistency issues among the indicators.
b. The validity of the convergence is fully met, with all AVEs > 0.78, which means that each construct is empirically represented by its indicators.
c. The measurement model can be declared fit in terms of reliability and validity, so it is feasible to proceed to the structural model evaluation stage (Structural Model Assessment).
d. A high reliability value (close to 1.0) also indicates that respondents provide consistent and stable answers, which reinforces the quality of the Likert Scale-based survey data used.

Summary

All constructs in the model demonstrated excellent internal consistency reliability, with Cronbach's Alpha values ranging from 0.954 to 0.976 and Composite Reliability (ρ_a and ρ_c) values above 0.96, confirming robust measurement stability. Moreover, the Average Variance Extracted (AVE) values exceeded 0.78, indicating high convergent validity. Therefore, the measurement model satisfies the reliability and validity criteria established by Hair et al. (2021) and Fornell & Larcker (1981), confirming that each latent variable is both consistent and empirically valid.

1.3 Measurement Model Evaluation: Path Coefficients

Path coefficients are numerical values derived from PLS Algorithm estimations that indicate the degree and direction of the direct association between latent constructs in a structural model. The Path Coefficients Matrix explained in Table 3.

Table 13. Path coefficients matrix.

	IQ	IT	NBS	SAT	SEQ	SMPX	SQ
IQ				0,300		0,575	
IT			0,696				
NBS							
SAT		0,426					
SEQ				0,259		0,062	
SMPX		0,458					
SQ				0,215		0,086	

Path Coefficients Matrix Analytical Explanation.

The structural model was evaluated to ascertain the robustness and significance of the proposed links among the latent constructs. Path coefficient analysis was employed to assess the direct effects within the model, with elevated values signifying better predictive correlations among variables (Hair et al., 2019).

The table above shows the value of the path coefficient (β) between latent constructs in the structural model. The path coefficient indicates the direction (positive/negative) and the strength of the direct influence between the independent and dependent variables.

The β value ranges between −1 and +1:

- Positive (+) values → one-way relationship; An increase in the construct of the cause increases the construct of the consequence.
- A negative value (−) → an opposite relationship.
- The higher the absolute value of β, the stronger the influence between constructs.

This model reflects the relationship structure proposed in the theoretical framework of the IS Success Model and the Technology Acceptance Model (TAM) with the addition of social variables (Social Media Publication) and service (Service Quality).

1.3.1. Information Quality (IQ) as an Independent Construct

IQ conclusions: Information Quality constructs empirically have the largest direct influence on Social Media Publication (β = 0.575032) and moderate influence on User Satisfaction (β = 0.299556). It reinforces the role of information quality as a key element in building user experience and social participation. As presented in Table 14.

Table 14. Path coefficients IQ

Path	Coefficient (β)	Interpretation
IQ → SAT	0.299556	The quality of information has a positive and moderate influence on user satisfaction. Accurate, relevant, and reliable information on crowdfunding systems enhances user satisfaction by 0.2996. This influence supports the theory that information quality is an essential factor of satisfaction (DeLone & McLean, 2003).

Path	Coefficient (β)	Interpretation
IQ → SMPX	0.575032	The robust correlation between Information Quality and Social Media Publication indicates that high-quality information promotes publication activity on social media. The value of β = 0.5750 indicates an important effect on consumers' digital social interaction.
IQ → SQ / IT / NBS / SEQ	–	There is no direct impact on other constructs. The effect is indirect via social satisfaction and publication.

1.3.2. Intention to Use (IT) as a Mediator and Assessor of Sustainability

IT Conclusion: Intention to Use is a central mediator and a key determinant of the sustainability of system benefits. These results are consistent with the TAM model, where Behavioral Intention is the primary predictor of Actual Use and Net Benefits, as presented in Table 15.

Table 15. Path coefficients IT

Path	Coefficient (β)	Interpretation
IT → NBS	0.696374	This link is the most robust among all structural models. The value of β = 0.6964 indicates that the user's intention to utilize the system has a substantial direct impact on Net Benefit Sustainability. This indicates that an increased user motivation for continuing with the system will result in greater benefits and sustainability.
IT → Other Constructs	–	There are no other significant direct relationships, suggesting that IT serves as a major mediating variable towards sustainability.

1.3.3. User Satisfaction (SAT) as a Behavioral Outcome

SAT Conclusion: Construct Satisfaction plays an important role in strengthening the relationship between system/information quality and user behavioral intent. A β value of 0.425973 indicates a strong and significant relationship in the empirical model, as presented in Table 16.

Table 16. Path coefficients SAT

Path	Coefficient (β)	Interpretation
SAT → IT	0.425973	User satisfaction exerts a significant and positive influence on the intention to use (β = 0.4260). User satisfaction markedly enhances the intention to persist in utilizing the crowdfunding mechanism. These findings support the core principles of the Technology Acceptance Model and the Information Systems Success Model, indicating that satisfaction becomes a significant mediator affecting usage behavior.

1.3.4. Service Quality (SEQ) as a Supportive Construct

SEQ conclusion: Service quality plays a supporting factor in user satisfaction, but it is not the main factor that influences digital social behavior. The highest β value in the SEQ was found on the SEQ → SAT line (0.259307). As presented in Table 17.

Table 17. Path coefficients SEQ

Path	Coefficient (β)	Interpretation
SEQ → SAT	0.259307	Service Quality has a positive effect on User Satisfaction with a value of β = 0.2593, indicating that the quality of system service contributes to increased satisfaction, although the effect is not as large as Information Quality or System Quality.
SEQ → SMPX	0.061856	Positive but weak effect on Social Media Publication (β = 0.0619). This indicates that the improvement of services does not directly encourage social publication activities.

1.3.5. Social Media Publication (SMPX) as a Social Mediator

Conclusion of SMPX: Social Media Publication serves as a social link between communication activities and user behavior. The influence of β = 0.457503 shows a significant social contribution to the adoption of crowdfunding systems. As presented in Table 18.

Table 18. Path coefficients SMPX

Path	Coefficient (β)	Interpretation
SMPX → IT	0.457503	Social Media Publication has a strong influence on Intention to Use. The value of β = 0.4575 confirms that publication activities on social media play a significant role in building the intention to use the system. The higher the user's engagement in sharing social information, the stronger their desire to continue participating.

1.3.6. System Quality (SQ) as a Technical Foundation

SQ Conclusion: Although the direct influence of System Quality on Satisfaction is significant (β = 0.215298), the contribution to Social Media Publication is relatively small. However, as a technical foundation, system quality remains a key element in building a satisfactory user experience. As presented in Table 18.

Table 18. Path coefficients SQ

Path	Coefficient (β)	Interpretation
SQ → SAT	0.215298	System Quality has a positive effect on User Satisfaction of 0.2153, indicating that a reliable, fast, and easy-to-use system increases user satisfaction.
SQ → SMPX	0.085884	Small positive effect on Social Media Publication (β = 0.0859). This shows that the technical aspects of the system do not have a direct effect on the social behavior of users but rather play an indirect role through publication and satisfaction.

1.3.7. Synthesis of the Full Path Coefficients Matrix

The synthesis of all the relationships between constructs according to the data presented in Table 19.

Table 19. Path coefficients SQ

Path Relationship	β (Coefficient)	Strength	Management	Interpretation
IQ → SAT	0.299556	Moderate	Positive	The quality of information increases user satisfaction.
IQ → SMPX	0.575032	Strong	Positive	Good information encourages social publications.
IT → NBS	0.696374	Very Strong	Positive	The intention of direct use increases the sustainability of the system's benefits.
SAT → IT	0.425973	Moderate	Positive	Satisfaction reinforces the intention of use.
SEQ → SAT	0.259307	Moderate	Positive	The quality of service improves user satisfaction.
SEQ → SMPX	0.061856	Weak	Positive	Small influence on social publications.
SMPX → IT	0.457503	Strong	Positive	Social publications increase usage intent.
SQ → SAT	0.215298	Moderate	Positive	The quality of the system reinforces user satisfaction.
SQ → SMPX	0.085884	Weak	Positive	The quality of the system has little effect on social publications.

Interpretation.

a. Strongest Pathways: IT → NBS (β = 0.696374) is the most powerful and significant path in the model. IQ → SMPX (β = 0.575032) and SMPX → IT (β = 0.457503) also showed a strong relationship, confirming the social dimension as a driver of use behavior.
b. Core Mediations: Satisfaction (SAT) and Social Media Publication (SMPX) function as important mediators between system/information quality and Intention to Use. Intention to Use is the main mediator towards Sustainability (NBS).
c. Model Implication: The technical dimension (System Quality, Information Quality, Service Quality) builds Satisfaction and Publication. The social dimension (Social Media Publication, Affiliate) strengthens user participation. These two dimensions contribute to the sustainability of the system through Intention to Use.

Summary

The path coefficient matrix reveals that Intention to Use (IT) is the strongest determinant of Net Benefit Sustainability (NBS) (β = 0.696374), confirming behavioral intention as the central driver of system success. Furthermore, Information Quality exerts a substantial influence on Social Media Publication (β = 0.575032) and Satisfaction (β = 0.299556), underscoring the importance of credible information in enhancing user engagement. The roles of Satisfaction (β = 0.425973) and Social Media Publication (β = 0.457503) as mediators are empirically validated, bridging technical quality with user behavioral intention. Although Service Quality (β = 0.259307) and System Quality (β = 0.215298) show smaller direct effects, they remain crucial components of user experience and system reliability. Overall, the structural model exhibits theoretical coherence and empirical robustness, fully aligning with the integrated IS Success–TAM framework.

CONCLUSION

1. The combined PLS-SEM analysis, which includes outer loadings, construct reliability and validity, and path coefficients, confirms that the measurement model is empirically solid and conceptually acceptable.
2. All indicators exhibit robust reliability (loadings 0.795–0.963; $\alpha > 0.95$; CR > 0.96; AVE > 0.78), consequently demonstrating convergent and discriminant validity.
3. Structural findings indicate that Intention to Use ($\beta = 0.696374$) is the most significant predictor of sustainability, whereas Social Media Publication ($\beta = 0.457503$) serves as an essential social mediator connecting information and user behavior.
4. The incorporation of SMPX improves the IS Success–TAM framework by integrating social influence and digital engagement as essential elements of system success and sustainability, especially in the crowdfunding ecosystem.

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