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Perceived effects of social media use on awareness, social influence, and intention to practice sustainability

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Abstract

Social media has emerged as a significant tool for shaping awareness and enhancing influence on sustainable behavioral intention. This study investigates how social media adoption fosters sustainability intentions by examining its effect on awareness, social conformity, and sustainable practices. Using a quantitative approach, data were collected from 175 Generation Z university students in Bangladesh, the most active demographic on social media. Partial least squares structural equation modeling (PLS-SEM) was employed to analyze the relationships between social media adoption, awareness of social media use behavior, social influence, and sustainability practices. The findings confirm that social media awareness significantly drives social influence, which, in turn, strengthens sustainability intentions. However, awareness alone does not directly translate into real-life sustainable actions, highlighting the role of social influence and behavioral determinants in bridging the intention-behavior gap. The study extends theoretical discussions on social influence and sustainability by integrating media system dependency and social influence theories. Practical implications suggest businesses, policymakers, and sustainability advocates should leverage social media platforms to enhance engagement, peer influence, and digital literacy to promote sustainability behaviors. Future research should expand the study across diverse populations to validate the findings.

Keywords: Social Media; Awareness; Social Influence; Sustainable Practices; Behavioral Intentions; Digital Engagement; Generation Z; Structured Equation Modeling

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1. Introduction

Although sustainability has long been introduced, unsustainable behaviors at home, workplaces, and in mobility continue to hinder progress toward sustainable development goals (Arora and Mishra, 2019). However, with increasing human interaction with technology, researchers suggest that persuasive technology, particularly social media, can be crucial in shaping sustainable behavior (Duffett, 2020). Social media, including sustainability, is increasingly recognized as a tool for influencing consumer behavior (Sivarajah et al., 2020). Traditionally, social media served as a platform for personal connections and entertainment (Kapoor et al., 2018). However, it has evolved into an integrated communication tool spanning commercial, non-commercial, and civil society sectors, disseminating valuable sustainability-related information (Lundmark et al., 2017). Consequently, social media now influences home life (lifestyle and consumption), workplace behavior, and mobility choices (Ngai et al., 2015).

Social media's potential impact is immense, with 3.6 billion users in 2020, which is projected to reach 4.41 billion by 2025 (Statista, 2020). However, its mere adoption is insufficient for fostering sustainability (Kapoor et al., 2018). Improper use can harm social and environmental sustainability (Talwar et al., 2019). Thus, responsible and sustainable engagement with social media is essential to drive positive community influence (Phua et al., 2017). Social influence significantly modifies behavioral intentions toward sustainability (Varshneya et al., 2017) and promotes sustainable real-life practices (Zhao et al., 2019). However, studies largely address social media's role in current affairs, business, and politics (Kapoor et al., 2018), with minimal exploration of social media-generated social influence on sustainability behaviors (Sivarajah et al., 2020). The existing study by Confetto et al. (2023) examines how social media content influences sustainability advocacy among Generation Z in Italy but does not explore the broader impact on awareness, social influence, and real-life sustainable practices. Also, Vilkaite-Vaitone (2024) explores how social media influencers shape sustainable consumption by leveraging their credibility, trustworthiness, and expertise. However, the study focuses primarily on influencer marketing, overlooking the broader role of social media in shaping youth awareness, social influence, and sustainability practices across various life contexts.

Furthermore, Li et al. (2024) investigated the role of social media influencers and value co-creation in shaping sustainable green lifestyles, finding that social media contact positively influences sustainability behavior, with value co-creation partially mediating this effect. However, their study did not support the moderating role of social media influencers and social norms, indicating a gap in understanding broader social influence mechanisms. While previous studies have examined the relationships between social media adoption, social influence, and sustainability behavior, the present study extends this discussion by integrating these elements into a unified framework. It empirically tests their combined effects, offering insights beyond influencer-driven dynamics in a broader context, thus addressing specific gaps in prior research. Moreover, existing research rarely integrates sustainism philosophy, which envisions sustainability as an ongoing practice in all aspects of life—home, workplace, and mobility (Schwarz and Elffers, 2010). The current study aims to:

- Examine the effect of social media behavior on social influence.
- Assess the impact of social media-driven social influence on behavioral determinants leading to sustainable practices.

Theoretically, this study integrates insights from information and communication technology, digital psychology, behavioral sciences, and sustainability studies, making it relevant across disciplines. The empirically tested model provides practical guidance for businesses, policymakers, and NGOs on leveraging social media to drive social influence and sustainability practices. It highlights how social media use shapes sustainable behavior at home, in workplaces, and during mobility. Unlike prior research, which focuses on the intention stage despite the well-documented intention-behavior gap in sustainability (Kollmuss and Agyeman, 2002), this study extends the model to real-life sustainability practices. This approach enhances understanding of social media's role in driving real-world sustainability transformations, positioning it as a key tool for accelerating sustainable development.

2. Literature review

2.1. Theoretical foundation

The present study is grounded in media system dependency theory (Saeed et al., 2019), which explains how individuals form dependencies on social media for information, influence, and decision-making at micro, meso, and macro levels. It also draws upon the task-technology fit theory (Goodhue and Thompson, 1995), which suggests that social media adoption depends on its alignment with users' social and technological needs (Lu and Yang, 2014). Furthermore, social influence theory (Cialdini and Trost, 1998) explains how users' exposure to digital content and social interactions influence their attitudes and behaviors. Lastly, the theory of planned behavior (TPB) (Ajzen, 1991) supports the argument that attitude, efficacy, and perceived value shape users' intentions and behaviors toward sustainability.

2.2. Hypotheses development

2.2.1. Social media technology adoption and awareness of social media use

The adoption of social media technology is influenced by task-technology fit (Lu and Yang, 2014) and the perceived social need fit (Kietzmann et al., 2011). When social media functions meet their communication and informational needs, users engage with it more actively, increasing their awareness of its capabilities and ethical use (Xu et al., 2019). Furthermore, media competence—including literacy, situational factors, and trust—affects how effectively users integrate social media into daily practices (Vorderer et al., 2016). As users navigate digital platforms, they become more aware of social media behaviors, including security risks, misinformation, and responsible engagement (Ribble and Miller, 2013). These premises lead to the following hypothesis:

- H1: Users' social media technology adoption (USMTA) positively affects awareness of social media use behavior (ASMUB).

2.2.2. Social media sustainability orientations and awareness of social media use

Users' sustainability orientations influence how they interact with social media and engage in responsible digital practices (de Lenne and Vandenbosch, 2017; Saeed et al., 2019). Social media provides an avenue for

sustainability-related discourse, allowing users to share eco-friendly behaviors and ethical considerations (Wróblewski et al., 2018). Sustainism theory (Schwarz and Elffers, 2010) suggests that sustainability is an all-encompassing lifestyle encompassing social, environmental, and technological aspects. Users with sustainability-focused media engagement develop heightened awareness of responsible online behavior, such as fact-checking, avoiding digital waste, and amplifying sustainable messages (Huang et al., 2019). Consequently, sustainability orientations foster social media awareness, supporting the following hypothesis:

- H2: Users' social media sustainability orientations (USMSO) positively affect awareness of social media use behavior (ASMUB).

2.2.3. Awareness of social media use and social influence

Social influence theory (Cialdini and Trost, 1998) states that people conform to group behaviors when exposed to repeated messages from social networks. Media system dependency theory (Saeed et al., 2019) further posits that individuals depend on media for validation and decision-making. When users know responsible media usage, they engage in informed interactions, influencing their peers' perceptions and behaviors (Hu et al., 2019). The hierarchy of effects model (Duffett, 2020) suggests that higher awareness leads to greater knowledge and ultimately drives peer influence on sustainability behaviors. Thus, awareness of social media use behavior enhances social influence, leading to:

- H3: Awareness of social media use behavior (ASMUB) positively affects social influence derived from social media (SIDSM).

2.2.4. Awareness of social media use and determinants of sustainable behavior

According to the theory of planned behavior (Ajzen, 1991), behavior is shaped by attitude, efficacy, and perceived value. Awareness of social media use enables individuals to evaluate sustainability messages critically, influencing attitude formation (Prislin and Wood, 2005) and increasing self-efficacy (McLaughlin and Sillence, 2023). Users who are aware of media literacy and sustainability information are more likely to incorporate sustainable behavior into their digital and offline lives (Guan and So, 2016). Social learning theory (Bandura, 1997) further suggests that users model behaviors they frequently encounter online, reinforcing sustainable actions. Thus, awareness of social media uses behavior influences determinants of sustainable behavioral intention, leading to:

- H4: Awareness of social media use behavior (ASMUB) positively affects determinants of sustainable behavioral intention (DOSBI).

2.2.5. Social influence and the determinants of sustainable behavior

Social influence theory (Cialdini and Trost, 1998) asserts that compliance, conformity, and persuasion shape behavioral determinants. Social media exposure reinforces sustainability attitudes, efficacy, and perceived value (Cho et al., 2019; Duffett, 2020). Users observing pro-environmental behavior on social media are likelier to internalize and act on sustainable choices (Goldsmith, 2015). Research confirms that online communities influence efficacy beliefs (McLaughlin and Sillence, 2023) and value perceptions (Chen and Lin, 2019). Consequently, social influence strengthens sustainable behavioral determinants, supporting:

- H5: Social influence derived from social media (SIDSM) positively affects determinants of sustainable behavioral intention (DOSBI).

2.2.6. Awareness of social media use and intention to practice sustainability

Users aware of responsible social media behaviors tend to extend sustainability practices into real-life settings (Huang et al., 2019). TPB (Ajzen, 1991) explains that awareness fosters positive attitudes and self-efficacy, increasing the likelihood of real-world application. Self-determination theory (Ryan and Deci, 2000) further suggests that individuals aware of sustainability messages feel intrinsically motivated to act. As social media platforms encourage sustainable engagement, awareness transforms into actual behavioral intention, leading to:

- H6: Awareness of social media use behavior (ASMUB) positively influences the intention to practice sustainability into reality (IPSR).

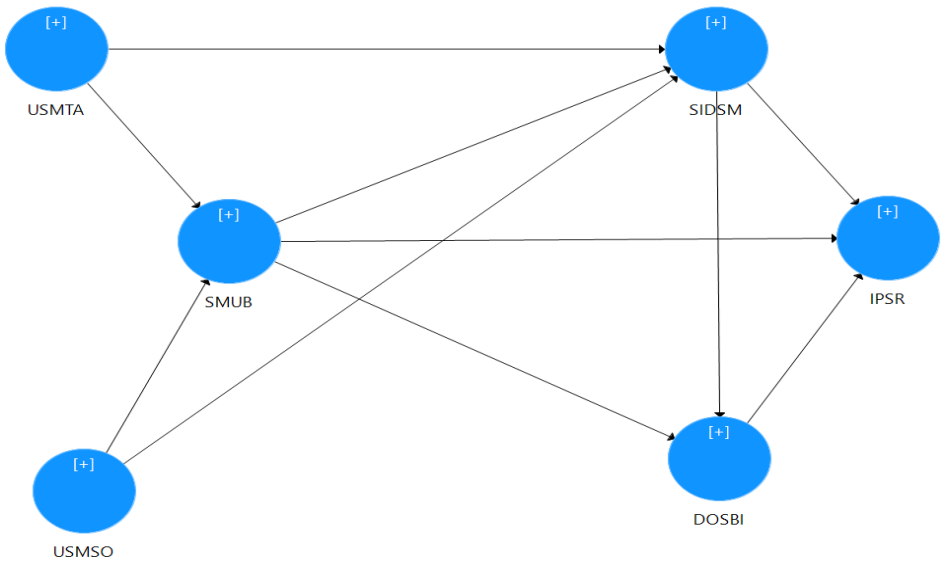

Figure 1. The hypothetical relationships between the variables in the research model

2.2.7. Social influence and intention to practice sustainability

Social influence shapes sustainable behaviors (Veland et al., 2014). Normative influence theory (Cialdini and Goldstein, 2004) states that individuals adopt behaviors consistent with peer expectations. Social media's viral nature enhances the diffusion of sustainability messages, reinforcing behavioral intentions (Weiksner et al., 2008). Studies confirm that socially influenced attitudes translate into sustainable actions (Duffett, 2020). Thus, peer influence on social media strengthens real-life sustainability intentions, supporting:

- H7: Social influence derived from social media (SIDSM) positively affects the intention to practice sustainability into reality (IPSR).

2.2.8. Determinants of sustainable behavior and intention to practice sustainability

TPB (Ajzen, 1991) states that attitudes, efficacy, and perceived value predict behavioral intention and eventual action. While behavioral intention and actual behavior often diverge (Webb and Sheeran, 2006), enhanced motivation increases real-world sustainability engagement (Cai et al., 2019). Sustainable consumption models (Liao et al., 2020) confirm that individuals who believe in sustainability's benefits are more likely to act. Thus, stronger behavioral determinants drive sustainability intentions into practice, leading to:

- H8: Determinants of sustainable behavioral intention (DOSBI) positively influence intention to practice sustainability into reality (IPSR).

Based on the hypotheses developed, the following research model (Figure 1) is drawn to be tested empirically.

3. Materials and methods

This study aims to explain how social media adoption fosters social influence among users, shaping their behavioral determinants and ultimately influencing their intention to practice sustainability. An explanatory research methodology examined structured relationships between multiple variables (Saunders et al., 2009). This study was based on university student Generation Z, the most active social media users globally (Statista, 2020), and is ideal for studying social media's impact on sustainability behaviors. They heavily rely on social media for information, decision-making, and shaping attitudes toward sustainable consumption (Duffett, 2020). Using university students aligns with purposive sampling, as they represent the next generation of mainstream consumers entering the sustainable goods market.

The researcher approached 500 students conveniently but voluntarily received 175 completed responses. The questionnaire items were adapted from previous literature (Table 1). The questionnaire was developed in English, cross-checked by two professors, and pretested with five participants to ensure clarity and feasibility. A pilot test with 20 Generation Z students further validated its effectiveness. The survey included a welcome message emphasizing social media learning, adoption, and anonymity for respondents aged 18 and above. It comprised two sections: media user profiles and statements related to the hypothetical model.

A forced 4-point Likert scale was employed to minimize central tendency bias, where respondents might select neutral options to avoid expressing a strong opinion. Prior research has shown that midpoints in Likert scales can encourage non-committal responses, reducing data clarity (Garland, 1991). Additionally, forced-choice formats, such as 4-point scales, have improved response reliability, particularly in certain demographic groups (Dolnicar et al., 2011). Given these factors, the 4-point scale was selected to enhance data quality and response accuracy.

Data analysis included SPSS-based frequency distributions and PLS-SEM using SmartPLS 3.2 for structural model testing, given the framework's complexity (Hair et al., 2019). Formative measurement models were assessed through VIF, indicator weights, redundancy analysis, and predictive accuracy (Shmueli et al., 2019). The structural model's explanatory power was verified using R^2, Q^2, SRMR, and NFI values (Hair et al., 2019).

Table 1. Questionnaire items

Constructs	Statements	Sources adapted
Users' Social Media Technology Adoption (USMTA)	I check the technology fit for adopting social media I check my competencies in different situations when adopting social media. I check security and trustworthiness when adopting social media.	(Alsaleh et al., 2019).
Users' Social Media Sustainability Orientations (USMSO)	I am social connectedness and social support-oriented I am non-entertainment informational and rational media exploration-oriented I am learning, educating, and knowledge-sharing oriented. I am sustainability (e.g., product, service, person, place, organizations) and likeliness oriented.	(Shahzalal and Adnan, 2022).
Social media use behavior (SMUB)	I use social media as a first/primary means of communication I use social media as a routine, normal social behavior platform beyond emotional connection. I use social media to engage/be actively involved in many issues.	Tuck and Thompson, 2024
Social Influence Derived from Social Media (SIDSM)	I conform to social media peers' behavior/recommendations I comply with social media peers' requests/guidelines. I am obedient to some extent to other social media users. Social media peers persuade me a lot.	(Guadagno and Cialdini, 2005; Guadagno et al., 2013; Xie et al., 2016).
Determinants of Sustainable Behavioural Intention (DOSBI)	Social media-based social influence changes my attitude toward sustainability. Social media-based social influence changes my efficacy levels to sustainability. Social media-based social influence changes my perceived value of sustainability.	(Duffett, 2020; Stathopoulou et al., 2019).
Intention to Practice Sustainability into Reality (IPSR)	As a social media user, I intend to practice more sustainability at home As a social media user, I intend to practice more sustainability in the workplace. As a social media user, I intend to practice more sustainability in mobility.	(Choi and Feinberg, 2021).

4. Results

4.1. User profile

Table 2 gives the major profile characteristics of the sample from social media users (N=175). It was found that people specifically look at diverse sustainability issues, including religious, political, and technological, and not limited to only the so-called four bold issues (i.e., social, economic, environmental, and cultural). Nowadays, over half of the social media users (56.6%) search sustainability issues on social media, whereas 19% mostly look at fun/relaxation/entertainment/time passing. A substantial number of people (88%) believe that social media users can either be effective or ineffective for sustainability.

Table 2. Profile of the surveyed participants

Usage of social media	n	%	Mean	SD	Particulars	n	%
1 Hr	6	3.4			Mostly attached to sustainability issue/s (not exclusive):		
2 Hr	41	23.4			Social	124	70.9
3 Hr	48	27.4			Economic	56	32.0
4 Hr	33	18.9			Environmental	49	28.0
5 Hr	47	26.9			Cultural	38	21.70
Total	175	100.0	3.42	1.210	Political	68	38.90
					Religious	33	18.90
Gender					Legal	14	8.0
Male	102	58.3			Ethical	28	16.0
Female	73	41.7			Technological	48	27.40
Total	175	100	1.42	0.495	Explore profile:		
Age							
<=19	16	9.1			Sustainability issues	99	56.60
20	30	17.1			current affairs/learning/education	70	40.0
21	56	32.0			Strengthening social network/F/FRr	93	53.10
22	41	23.4			Fun/relaxation/entertainment/time passing	34	19.40
23	16	9.1					
>=24	16	9.1					
Total	175	100	21.34	1.363			

Table 3. Pattern matrix in EFA and reliability

Constructs	Items	Loadings	Scores	Mean	SD	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha
IPSR	SAH	.926	.521	2.59	.838	.841	.726	.899
	SAW	.892	.349	2.57	.826	.819	.703	
	SMB	.782	.162	2.58	.846	.744	.555	
DOSBI	EFB	.803	.332	2.59	.838	.718	.515	.853
	PVL	.817	.361	2.54	.842	.727	.529	
	ATT	.815	.357	2.55	.849	.726	.527	
SIDSM	CNF	.763	.240	2.62	.869	.694	.488	.854
	PRS	.800	.292	2.58	.825	.717	.530	
	CPL	.880	.513	2.61	.823	.767	.590	
SMUB	PMC	.882	.521	2.61	.843	.764	.589	.850
	AEI	.739	.214	2.62	.842	.675	.461	
	RNE	.810	.310	2.61	.822	.722	.541	
USMTA	CMP	.751	.277	2.56	.875	.667	.449	.832
	TCF	.839	.454	2.52	.877	.722	.522	
	SCT	.781	.322	2.55	.901	.687	.479	
USMSO	SBL	.838	.393	2.50	.816	.749	.563	.854
	NRK	.801	.319	2.49	.836	.722	.523	
	LED	.731	.201	2.51	.808	.661	.470	
	SCS	.717	.186	2.57	.854	.652	.456	

4.2. Results for measurement model

The results for the measurement model (Table 3 and 4) meet the criteria of statistical soundness, as suggested by experts (Hair et al., 2019). The correlation of the global single-item measure with other items is >0.70, which ensures convergent validity. All weights for the formative constructs are statistically significant (p-value < 0.05) except obedience as a social influence (OBD) (0.029), which loading (i.e., 0.067<0.5) is not significant too, therefore found the least contributor (Hair et al., 2011; 2019a) the social influence construct so omitted in the structural model. All the reflective indicators' loading in actual intention to practice sustainability in reality (AIPSR) construct is ≥0.708 (Table 3), in which CA is ≥0.70≤0.95, AVE is 0.757 (Table 4).

Based on the weight score (Table 4) of the formative constructs (Hair et al., 2019), it was found that task and social technology fit (0.395), non-entertainment rational media exploration orientation (0.376), use of

social media as a primary means of social communication (0.470), conformity influence (0.438) and attitude (0.458) have the highest contribution in explaining their respective constructs. In contrast, sustainable practice at home (0.887) contributes the most to explaining sustainability practice as a reflective construct.

4.3. Results for structural model and test of hypotheses

The structural model is out of multicollinearity (VIF) problems (Table 5) with the inner VIF values <0.5 (Hari et al., 2019). The R^2 values (Table 5) of the endogenous constructs are closer to 0.70, including the value of actual intention to practice sustainability into reality (AIPSR) is over 0.70 (0.76). Hence, the variables in the model have substantial explanatory power (Hair et al., 2019). Also, the Q^2 values >0 revealed that all the exogenous constructs have predictive relevance for the endogenous construct. Not only that, but also the values closer to 0.60 suggest (Table 5) that they have large predictive accuracy in the PLS path model (Cheah et al., 2018).

Moreover, according to the values of PLSpredict, all Q^2 predict values are >0, the same as Q^2 *values generated in the blindfolding procedure in SmartPLS,* indicating that the model has no lack of predictive accuracy (Shmueli et al., 2019). However, using AIPSR as a key endogenous variable, as none of the tested indicators' values of root mean squared error (RMSE) and mean absolute error (MAE) of the PLS model were found to be higher than that of the LM (linear model) that suggest that the model has high model's out-of-sample predictive power (Shmueli et al., 2019). Overall, the model's NFI >0.90, SRMR of 0.030, and Chi-Square of 236.164 add value to the model's fitness (Hair et al., 2019).

The study tested several hypothesized relationships (Figure 2) using structural equation modeling (SEM), with path coefficients (β), t-statistics, and p-values determining statistical significance (Table 5). The findings indicate strong support for most hypotheses, while one was not supported. The relationship between USMTA and ASMUB was significant (β = 0.238, t = 2.017, p = 0.044), supporting the hypothesis that USMTA positively influences ASMUB. Similarly, USMSO significantly impacted ASMUB (β = 0.626, t = 5.806, p = 0.000), indicating a strong effect.

ASMUB was significantly associated with SIDSM (β = 0.830, t = 16.130, p = 0.000), confirming its pivotal role in influencing SIDSM. The relationship between ASMUB and DOSBI was also significant but weaker (β = 0.230, t = 1.802, p = 0.072), suggesting a marginal effect. Additionally, SIDSM positively influenced DOSBI (β = 0.628, t = 5.131, p = 0.000), demonstrating a strong association. However, the impact of ASMUB on AIPSR was not supported (β = 0.025, t = 0.215, p = 0.829), indicating no significant relationship. In contrast, SIDSM significantly affected AIPSR (β = 0.357, t = 2.447, p = 0.014), and DOSBI strongly predicted AIPSR (β = 0.535, t = 4.820, p = 0.000), highlighting their crucial roles in influencing AIPSR.

Overall, the results (Table 5) indicate that social media influence significantly strengthens determinants of sustainable behavioral intentions. However, while several relationships are statistically significant, their practical impact varies. For instance, the strong association between ASMUB and SIDSM (β = 0.830) suggests that awareness of social media behavior plays a crucial role in shaping social influence. Conversely, the relationship between ASMUB and DOSBI (β = 0.230) is weaker, indicating that while social media awareness may influence determinants of sustainable behavior, other mediating factors may be at play. Additionally, the non-significant effect of ASMUB on AIPSR (β = 0.025, p = 0.829) suggests that social media awareness alone does not directly translate into real-life sustainable practices. These results support the theoretical framework,

confirming the significant influence of most proposed relationships while highlighting one non-significant path, warranting further investigation.

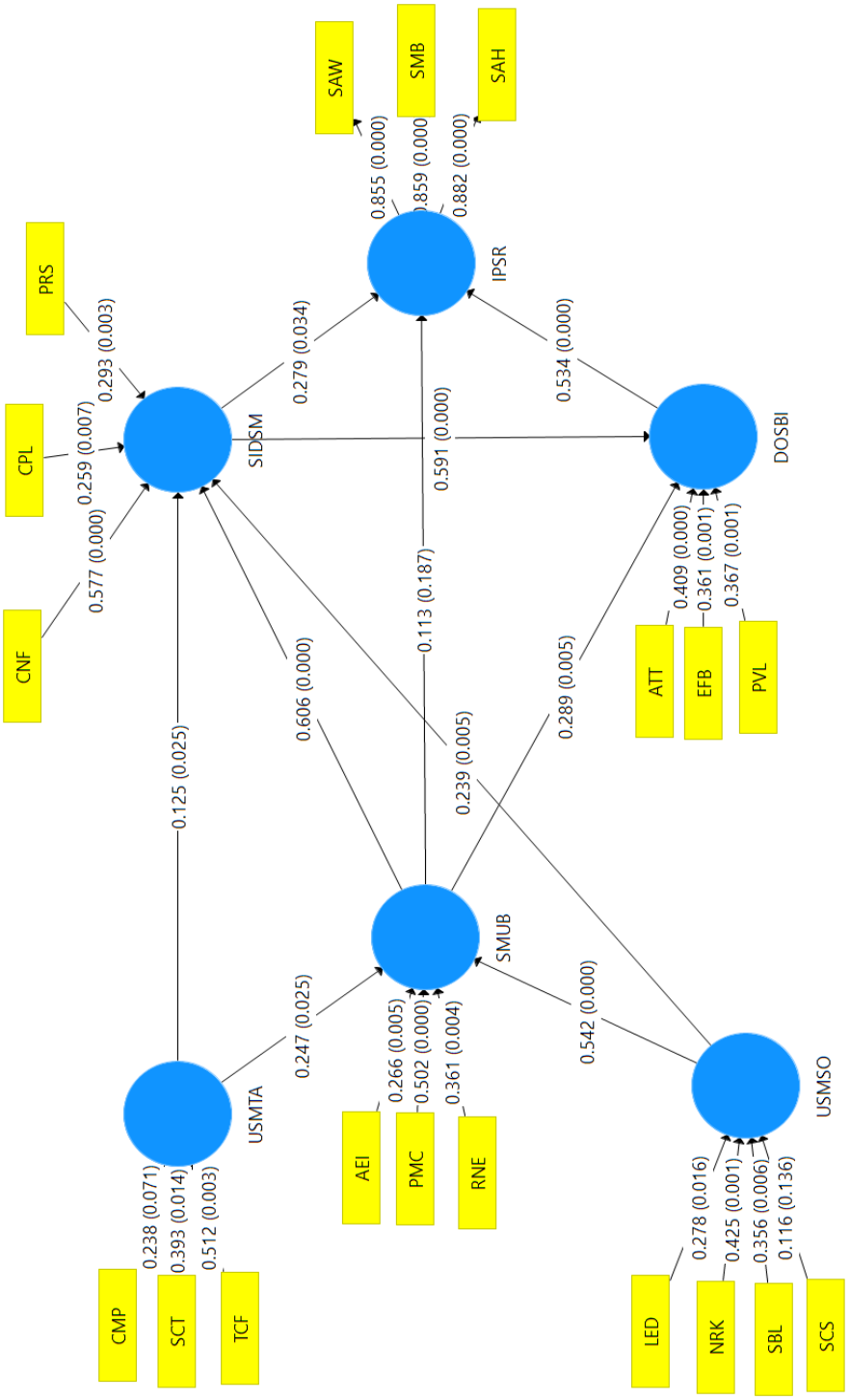

Figure 2. The structural model of the relationship between the variables. (Note: Values within constructs are factor scores for the formative constructs and factor loading for the reflective constructs; the values on the arrows are path coefficients, and the values in parentheses are p values.)

Table 4. Evaluation of results based on partial least squares-structural equation modeling: measurement model

Items	WT.	*P*	*T*	*PLDT*	Items	WT	*P*	LD	*T*	*PLDT*	Construct	CV (RD)	CA	rho_A	CR	AVE
TCF	0.512	0.003	12.75	***	CNF	0.577	0.000		18.887	***	USMTA	0.787***	n/a	1	n/a	n/a
SCT	0.393	0.014	11.01	***	CPL	0.259	0.002		12.943	***	USMSO	0.889***	n/a	1	n/a	n/a
CMP	0.236	0.071	10.72	***	OBD	0.029	0.347		0.941	ns	ASMUB	0.909***	n/a	1	n/a	n/a
SCS	0.116	0.136	11.16	***	PRS	0.293	0.003		12.568	***	SIDSM	0.840***	n/a	1	n/a	n/a
NRK	0.425	0.001	16.16	***	ATT	0.409	0.000		21.040	***	DOSBA	0.844***	n/a	1	n/a	n/a
LED	0.278	0.016	9.290	***	EFB	0.361	0.001		12.943	***	AIPSR	0.810***	0.903	0.903	0.903	0.757
SBL	0.356	0.006	11.79	***	PVL	0.367	0.001		15.335	***						
PMC	0.502	0.000	25.07	***	SAH	0.887[L]	0.000	0.882	23.829	***						
RNE	0.361	0.004	12.66	***	SAW	0.853[L]	0.000	0.855	18.598	***						
AEI	0.266	0.005	12.58	***	SMB	0.869[L]	0.000	0.859	20.491	***						

Note: WT =Weight. LD= Loadings. *P*= Significance of Weight. PLDT= = *P* value for factor loadings and *T* values Sig.= significance (*p*). [ns] = $P > 0.05$. ***= $P \leq 0.001$. [LD] = Loading for reflective items. CV(RD) = Convergent validity (Redundancy). CA= Cronbach's alpha; CR= Composite reliability. AVE: Average variance extracted.

Table 5. Hypotheses test results

							Hypothesised	R^2	Q^{2a}	VIF<5	***β***	*T*	*P*-	Decision
		PLSPredict					***Paths***					Statistics	values	
		RMSE		**MAE**			**USMTA →**			2.316	0.238	2.017	0.044	Supported
							ASMUB							
	AIPSR	PLS	LM	PLS	**LM**		**USMSO**	0.674	0.523	2.315	0.626	5.806	0.000	Supported
							→ASMUB							
	SMB	0.566	0.628	0.353	0.382		**ASMUB →**	0.689	0.524	1.000	0.830	16.130	0.000	Supported
							SIDSM							
	SAW	0.565	0.600	0.333	0.366		**ASMUB →**			3.200	0.230	1.802	0.072	supported
							DOSBI	0.688	0.516					
Model fit	SAH	0.542	0.563	0.319	**.340**		**SIDSM→**			3.219	0.628	5.131	0.000	Supported
							DOSBI							
Chi-Square	236.164						**ASMUB →**			3.389	0.025	0.215	0.829	Not supported
							AIPSR							
SRMR	0.036						**SIDSM →**	0.761	0.566	4.481	0.357	2.447	0.014	Supported
							AIPSR							
NFI	0.903						**DOSBI →**			3.201	0.535	4.820	0.000	Supported
							AIPSR							

[a]= Notes: PLS= PLS model LM= Linear model SRMR = standardized root mean square residual; RMSE = root mean square error; NFI = normed fit index

5. Discussion

The findings of this study reinforce the theoretical framework by demonstrating the significant role of social media in shaping awareness, social influence, and sustainable behavioral intentions among Generation Z. Users' social media technology adoption (USMTA) positively influences their awareness of social media use behavior (ASMUB). This supports prior research highlighting task-technology fit and digital competence as key factors in media adoption (Lu and Yang, 2014). Similarly, users' social media sustainability orientations (USMSO) strongly impact ASMUB, aligning with studies emphasizing the role of sustainability-focused digital engagement (de Lenne and Vandenbosch, 2017). These results indicate that as active social media users, Bangladeshi youth are increasingly conscious of their digital footprints and media consumption patterns.

Moreover, ASMUB's social influence derived from social media (SIDSM) is strongly supported. This suggests social media awareness fosters social conformity and engagement in sustainability discussions (Duffett, 2020). However, the link between ASMUB and determinants of sustainable behavioral intention (DOSBI) yields a weaker but significant relationship. This finding suggests that while awareness is essential, additional psychological and situational factors may mediate its impact on sustainability behaviors (McLaughlin and Sillence, 2018).

A robust association between SIDSM and DOSBI confirms that social media influence significantly strengthens determinants of sustainable behavioral intention. This aligns with normative influence theory, which suggests that individuals adjust behaviors based on peer expectations and digital social norms (Cialdini and Trost, 1998). Furthermore, SIDSM positively impacts individuals' intention to practice sustainability into reality (IPSR). This underscores the power of social media communities in translating digital influence into real-life actions, a critical finding for sustainability advocates in Bangladesh.

Interestingly, the direct influence of ASMUB on IPSR is not supported. This indicates that awareness alone does not guarantee behavioral change, consistent with the well-documented intention-behavior gap in sustainability research (Kollmuss and Agyeman, 2002). Instead, sustainable behavioral determinants (DOSBI) are crucial in bridging this gap, as Hypothesis 8 (H8) supports. These findings highlight the necessity of targeted behavioral interventions and policy efforts to translate awareness into action.

This study contributes to existing literature by integrating media system dependency theory, social influence theory, and theory of planned behavior into a unified sustainability model. Unlike prior studies focusing primarily on social media influencers (Li et al., 2024), this research examines the broader social influence mechanisms affecting youth sustainability behaviors. Furthermore, it expands sustainability research by examining intentions and real-world sustainability engagement, an area often overlooked in social media studies.

For policymakers and sustainability advocates in Bangladesh, the findings suggest that social media platforms can be leveraged to foster pro-sustainability attitudes through social influence strategies. Organizations should focus on interactive campaigns that enhance engagement, peer influence, and digital literacy to improve sustainability outcomes. Additionally, brands and businesses targeting Generation Z should emphasize eco-conscious messaging, as digital media significantly shapes young consumers' sustainable choices.

A key limitation of this study is the reliance on a student sample from a single public university in Bangladesh. While students are active social media users and influential in digital discourse, their behaviors

and sustainability engagement may not fully represent broader populations, such as professionals, older demographics, or individuals from diverse socio-economic backgrounds. This limits the generalizability of the findings beyond the academic setting. Future research should expand to more diverse samples, including working professionals and international participants, to enhance the external validity of the results. Studies should explore cross-cultural variations in social media-driven sustainability behaviors and examine the role of emerging technologies in strengthening sustainability communication. By harnessing the power of social media, stakeholders can drive meaningful change in consumer behavior, accelerating progress toward a more sustainable future.

Using a student sample from a single university in Bangladesh, while a potential limitation in terms of external validity, is justifiable based on theoretical and practical considerations. First, Generation Z, most university students, is the most active social media user globally (Statista, 2020). Their digital nativity makes them the ideal demographic for studying the impact of social media on sustainability behaviors. Research has consistently shown that young consumers rely heavily on social media for information, decision-making, and forming attitudes toward sustainable consumption (Duffett, 2020).

Second, selecting university students aligns with the purposive sampling approach, as they represent the next generation of mainstream consumers entering the market for sustainable goods and services. As future workforce participants and decision-makers, their adoption of sustainable practices can significantly shape broader societal behaviors (Kapoor et al., 2018). University students have also been widely used in prior research on consumer social responsibility, sustainability, and social media influence (Arli and Tjiptono, 2018), reinforcing the validity of this sampling choice.

Additionally, the convenience sampling approach is justified due to resource constraints while capturing a relevant and engaged demographic. University students are educated, informed, and highly exposed to global sustainability narratives, making them a valuable proxy for young, tech-savvy consumers in emerging markets. Despite being drawn from a single institution, their social media habits and sustainability attitudes are comparable to their counterparts worldwide, enhancing the study's applicability. While acknowledging the limitation, future studies can expand to include a more diverse sample across multiple universities or professional groups. However, this sample is relevant and strategically appropriate given the study's focus on social media-driven sustainability behavior.

6. Conclusion

This study provides empirical evidence on how social media use influences awareness, social influence, and sustainable practices among youth in Bangladesh. The findings confirm that adopting social media technology and sustainability orientations significantly enhances users' awareness of responsible social media behavior. This awareness, in turn, plays a pivotal role in shaping social influence, reinforcing normative pressures and peer influence mechanisms that strengthen sustainability intentions. However, the study finds that awareness alone does not lead directly to real-world sustainable practices, indicating the need for additional factors such as peer influence and behavioral determinants to bridge the intention-behavior gap.

The study contributes theoretically by integrating media system dependency theory, social influence theory, and the theory of planned behavior into a unified model of social media-driven sustainability behavior. Unlike previous studies focusing primarily on influencer-driven effects, this research highlights broader mechanisms

of digital social influence. The findings suggest that policymakers and sustainability advocates in Bangladesh and similar developing contexts can use social media platforms to drive sustainability awareness and behavioral change through interactive campaigns, peer-driven narratives, and digital literacy programs.

From a practical standpoint, businesses targeting Generation Z consumers should integrate sustainability messaging into their social media strategies, fostering engagement through user-generated content and digital storytelling. The role of peer influence suggests that sustainability campaigns should leverage social networks and community-based advocacy to drive behavioral change. Universities and educational institutions should also incorporate social media literacy programs to promote responsible digital engagement. This study offers valuable insights but is limited by its focus on students from a single university in Bangladesh, affecting generalizability. Future research should examine diverse populations and conduct longitudinal studies to understand better the long-term impact of social media-driven social influence on sustainability behaviors.

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