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From Iran–Israel Conflict Feeds to Sustainable Energy Transition Support

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A R T I C L E I N F O

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A B S T R A C T

This study extends the Theory of Planned Behavior to resolve empirical anomalies regarding media effects by examining how social media exposure to the Iran–Israel conflict and information literacy shape university students' attitudes toward supporting sustainable energy transition amid Indonesia's 2026 fuel subsidy restrictions. Analyzing PLS-SEM data from 427 undergraduate students across five state universities in Malang City, the findings reveal that under high-stakes macro-geopolitical shocks, both conflict exposure and information literacy transcend routine non-significant effects to exert statistically significant positive impacts (R^2 = 0.075). This offers a novel theoretical framework showing how global crises activate youth policy support, highlighting key digital communication strategies for national energy security.

INTRODUCTION

The renewed escalation of the Iran–Israel conflict has rapidly evolved beyond a regional security concern into a global energy crisis. The Strait of Hormuz, through which approximately 20 million barrels of petroleum pass daily representing nearly 20% of total global petroleum consumption makes any military escalation in the Middle East a direct threat to international energy supply chains and price stability. Global oil market monitoring by Reuters Anushree Mukherjee (2026) reported Brent crude oil prices hovering at US$73.49 per barrel and West Texas Intermediate (WTI) at US$70.10 per barrel, illustrating that geopolitical turmoil imposes severe macroeconomic burdens on oil-importing developing nations. For Indonesia, where fossil fuels continue to dominate the national energy mix, this geopolitical volatility translated directly into domestic policy interventions. To mitigate fiscal pressure from rising state energy subsidies, the Indonesian government enacted a subsidized fuel purchase restriction under 024/KOM/BPH.DBBM (2026) of the Head of BPH Migas effective 1 April 2026, capping daily Pertalite and Biosolar purchases for private four wheeled vehicles at 50 liters per day Purnama (2026); Darmawan (2026) regulatory shift was further compounded by a non subsidized fuel price adjustment on 10 June 2026 (Diahwahyuningtyas, 2026) and the mandatory implementation of the B50 biodiesel policy effective 1 July 2026, which is projected to save up to IDR 48 trillion in state energy subsidies annually (Antara, 2026). Collectively, these cascading developments demonstrate how global geopolitical shocks are transmitted into national energy governance, making public and student support for the sustainable energy transition an issue of critical national priority.

In contemporary digital society, social media platforms serve as the primary arena through which geopolitical issues and energy policy changes are communicated to the public. Public discourse surrounding the Iran–Israel conflict in Indonesia has been remarkably widespread, with online sentiment monitoring revealing 7,922 unique social media posts across X/Twitter and YouTube between April 2024 and June 2025 alone. University students, as digital natives and key sociopolitical stakeholders, are continuously exposed to this stream of geopolitical information, which conditions their cognitive perceptions regarding national energy vulnerability. According to the Theory of Planned Behavior (TPB) introduced by Ajzen (1991) individual attitudes toward a specific behavior are shaped by cognitive evaluations of information received from the external environment. However, high information volume does not automatically guarantee accurate understanding, as digital spaces are frequently saturated with sensationalized narratives and misinformation. In this context, information literacy defined as an individual's capability to identify, access, evaluate, communicate, and synthesize information effectively acts as a vital cognitive filter that reinforces perceived behavioral control before a stable attitude is formed.

Despite growing academic interest in digital media exposure and youth civic engagement, empirical literature presents mixed and conflicting findings regarding how information exposure and information literacy influence attitude

formation. On one hand, Hasan et al. (2026) demonstrate that political information exposure on social media exerts a positive and statistically significant effect on young citizens' political attitudes. On the other hand, a substantial body of empirical research reveals that in routine, static, or health-related contexts, digital media exposure and information literacy frequently produce non-significant or inverse (negative) relationships with target attitudes. Specifically, Jauharuddin (2023) found that social media exposure to health information failed to establish a statistically significant relationship with health maintenance attitudes, indicating that digital browsing in routine settings is easily overshadowed by formal academic environments. Similarly, Hidayanto et al. (2026) observed that exposure to aggressive digital content yielded a negative and statistically non-significant effect on normative social attitudes, proving that external digital exposure does not automatically foster positive dispositions when internal values dominate.

In the domain of information literacy, Durmuş Iskender et al. (2023) and Taş & Yiğitalp (2026) reported non-significant or weak predictive relationships between literacy levels and target attitudes in static public health contexts. Conversely, Sholiha (2019) demonstrated a strong negative correlation between health hazard information literacy and target attitudes, indicating that in routine risk contexts, information literacy functions primarily as a preventive or risk-averse filter that suppresses undesirable behaviors rather than actively driving endorsement for broader public policies.

These empirical discrepancies expose a critical theoretical research gap: existing literature predominantly examines media exposure and information literacy within routine, preventive, or domain specific settings where information stimuli lack immediate macroeconomic consequences for the individual, resulting in mixed, non-significant, or suppressive outcomes. To resolve this theoretical paradox, this study offers a distinct contribution to knowledge enrichment that extends far beyond mere geographical or sample differences. By extending the Theory of Planned Behavior (TPB), this research investigates how social media exposure and information literacy operate under a high stakes macro geopolitical crisis contex (Ajzen, 1991). Unlike routine health browsing, social media exposure to the Iran–Israel geopolitical conflict represents an exogenous economic shock directly transmitted into domestic daily realities via tangible fuel subsidy restriction policies (such as the BPH Migas 50-liter daily purchase cap and the mandatory B50 biodiesel program). Therefore, the core theoretical contribution of this study lies in proving that when digital media exposure is driven by high-stakes international crises and filtered through information literacy, it transcends non-significant or suppressive effects, successfully activating behavioral beliefs and perceived behavioral control to foster positive, proactive student support for the national sustainable energy transition.

THEORETICAL REVIEW

Theory of Planned Behavior

The Theory of Planned Behavior (TPB), conceptualized by Ajzen (1991) serves as the foundational psychological framework for understanding human social behavior and attitude formation. TPB posits that individual behavior is driven by behavioral intentions, which are determined by three core antecedents: attitudes toward the behavior, subjective norms, and perceived behavioral control. An attitude toward a behavior reflects an individual's favorable or unfavorable cognitive and affective evaluation of performing that specific action. According to Ajzen (1991), attitudes are directly conditioned by behavioral beliefs, which represent the perceived consequences and probability of outcomes associated with the behavior. In the context of energy policy and socio-environmental transitions, individuals form positive attitudes toward supporting sustainable energy when they process external information that links fossil fuel dependence with systemic economic and geopolitical vulnerabilities Jannati & Prasetya (2026). Furthermore, perceived behavioral control is reinforced by individual internal capabilities such as information literacy which provide the cognitive self efficacy required to critically evaluate external information before forming a stable behavioral disposition (Lawanda & Ulfa, 2021). Therefore, extending TPB to account for digital information environments provides a robust theoretical foundation for examining how social media exposure to global geopolitical conflict and individual information literacy jointly influence university students' attitudes toward supporting the sustainable energy transition.

Social Media Exposure

Social media exposure refers to the degree to which individuals interact with, consume, and attend to media messages delivered through digital networking platforms (Deborah & Anggraeni, 2022). In communication literature, media exposure is multidimensional, typically operationalized through three key dimensions: exposure frequency (how often an individual encounters specific content), duration (the length of time spent interacting with the content), and attention (the level of cognitive focus allocated to processing the message). During global geopolitical crises such as the Iran–Israel conflict social media platforms function as real time information conduits that broadcast breaking news, expert commentary, and visual narratives regarding energy supply disruptions and oil price volatility (Sehatman et al., 2026). As digital natives, university students experience continuous exposure to these geopolitical news flows, which shapes their cognitive awareness of national energy vulnerability and the urgency of alternative energy policies (Hasan et al., 2026). Within the TPB framework, social media exposure serves as an external information stimulus that feeds into students' behavioral belief structures regarding the necessity of a sustainable energy transition.

Information Literacy

Information literacy is defined as a set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and

participating ethically in communities of learning (Lawanda & Ulfa, 2021). Modern information literacy frameworks extend beyond basic technical retrieval skills to emphasize higher-order cognitive competencies, including information source identification, comprehension, critical interpretation, ethical communication, and rigorous evaluation of credibility. In digital media ecosystems characterized by information overload, algorithmic curation, and pervasive disinformational narratives, information literacy acts as an indispensable cognitive filter (Zain & Asmara, 2026). Higher information literacy enables individuals to discern factual geopolitical analysis from sensationalized media content, evaluate the economic rationale behind domestic fuel subsidy restrictions, and synthesize complex energy transition arguments (Allawy et al., 2026). Under TPB principles, information literacy enhances perceived behavioral control and analytical self-efficacy, enabling students to construct well-founded attitudes grounded in critical evaluation rather than superficial media impressions.

Students' Attitudes Toward Supporting Sustainable Energy Transition

Attitude toward supporting the sustainable energy transition represents an individual's cognitive endorsement, emotional commitment, and behavioral willingness to favor renewable energy adoption and government energy transition policies over traditional fossil fuel reliance (Jannati & Prasetya, 2026). In accordance with social psychology literature, attitude is structured around three interrelated components: the cognitive component (beliefs and perceptions regarding the economic and environmental necessity of renewable energy), the affective component (feelings of urgency or concern regarding energy security), and the conative/behavioral component (readiness to adjust personal fuel consumption habits and support green energy initiatives). Within the context of Indonesia's B50 biodiesel mandate and subsidized fuel restriction policies, university students' attitudes reflect their evaluation of whether national energy sovereignty and environmental sustainability outweigh immediate personal costs associated with fuel purchase caps (Antara, 2026);(Purnama, 2026)

Social Media Exposure to the Iran–Israel Conflict on Students' Attitudes

The theoretical relationship between information exposure and attitude formation is well-established within communication and socio-environmental literature. Under the Theory of Planned Behavior (TPB), information exposure acts as an external cognitive stimulus that heightens message salience and reshapes an individual's behavioral belief structure. On one hand, Hasan et al. (2026) demonstrate that political information exposure on social media exerts a positive and statistically significant influence on young citizens' political attitudes. In times of international instability, continuous exposure to social media news regarding the Iran–Israel conflict illustrates the vulnerability of global oil supply chains and the economic risks of fossil fuel dependency, thereby strengthening students' behavioral beliefs regarding the necessity of renewable energy policies.

On the other hand, empirical literature reveals that media exposure does not universally result in positive attitude shifts, often yielding non significant or inverse (negative) directional effects. In routine or health related contexts,

Jauharuddin (2023) observed that social media exposure to health information failed to establish a statistically significant relationship with health maintenance attitudes, indicating that media browsing in static environments is easily overshadowed by formal academic settings. Furthermore, Hidayanto et al. (2026) demonstrated that exposure to aggressive digital content yielded a negative and statistically non significant effect on normative social attitudes, proving that external media exposure fails to foster positive dispositions when internal values dominate.

Synthesizing these conflicting empirical perspectives within the TPB framework indicates that media exposure in routine or normative settings often produces non-significant or suppressive directional outcomes because the information lacks immediate personal economic consequences. However, when social media exposure is driven by high stakes geopolitical crises linked to tangible domestic energy constraints (such as fuel subsidy caps), it successfully functions as a salient informational cue that fosters positive student attitudes toward supporting sustainable energy initiatives.

H1: Social media exposure to the Iran–Israel conflict has a significant positive effect on university students' attitudes toward supporting the sustainable energy transition.

Information Literacy and Students' Attitudes

Theoretical frameworks on digital citizenship and decision-making emphasize information literacy as a critical internal capability that conditions how individuals process policy-related information. Under the principles of the Theory of Planned Behavior (TPB), information literacy operates as a key determinant of perceived behavioral control, enhancing an individual's analytical self-efficacy to evaluate complex policy issues (Zain & Asmara, 2026). On one hand, scholars demonstrate that higher information literacy directly fosters positive policy evaluations, critical media engagement, and sustainability commitments (Allawy et al., 2026). Rather than accepting digital content at face value, highly information literate individuals engage in critical evaluation, cross-verifying news sources and identifying algorithmic biases to construct rational attitudes.

On the other hand, empirical investigations regarding the influence of information literacy on attitude formation present conflicting findings across different operational domains. In public health contexts, Durmuş Iskender et al. (2023) and Taş & Yiğitalp (2026) observed non significant predictive relationships between literacy dimensions and target attitudes, suggesting that literacy effects may be constrained in static or routine contexts. Conversely, Sholiha (2019) demonstrated a strong negative correlation between health hazard information literacy and target attitudes, proving that in routine risk settings, information literacy functions primarily as a preventive or risk-averse filter that suppresses undesirable behaviors rather than actively driving endorsement for broader public policies.

Resolving these empirical discrepancies within the TPB framework highlights that unlike routine risk contexts where literacy acts as a passive or suppressive filter, complex macro environmental transitions require higher order

cognitive evaluation. In the context of national energy transitions, information literacy provides students with the critical self efficacy needed to navigate national economic trade offs such as understanding the strategic rationale behind fuel subsidy restrictions thereby enabling them to filter digital noise and form rational, supportive attitudes toward sustainable energy goals.

H2: Information literacy has a significant positive effect on university students' attitudes toward supporting the sustainable energy transition.

Conceptual Framework

Based on the theoretical synthesis of the Theory of Planned Behavior Ajzen (1991) and the reviewed conceptual literature, this study formulates a conceptual framework linking Social Media Exposure to the Iran–Israel Conflict ($X1$) and Information Literacy ($X2$) as independent predictor constructs directly influencing University Students' Attitudes Toward Supporting the Sustainable Energy Transition (Y). The structural relationships are illustrated in Figure 1.

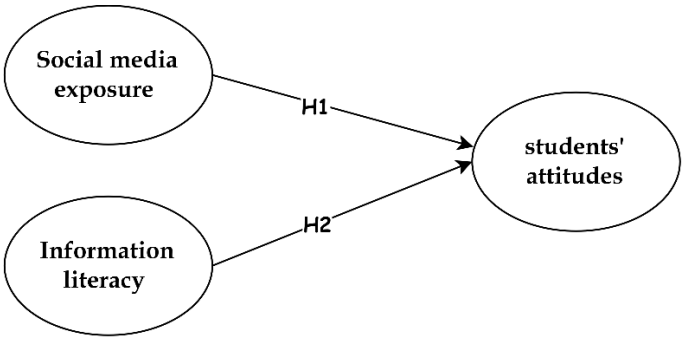


Figure 1. Conceptual Framework

METHODOLOGY

Provide a clear and shortened version of your methods in conducting the research, the population and sample, and means of data analysis.

Research Design and Location

This study employed a quantitative explanatory research design with a cross-sectional survey approach to examine the partial and simultaneous effects of social media exposure to the Iran–Israel conflict ($X1$) and information literacy ($X2$) on university students' attitudes toward supporting the sustainable energy transition (Y) amid Indonesia's fuel subsidy restriction policy. The cross-sectional design allows for collecting primary data at a single point in time to analyze structural relationships between predictor and outcome constructs.

The research was conducted across five State Higher Education Institutions (PTN) located in Malang City, East Java, Indonesia, namely: Brawijaya University (UB), State University of Malang (UM), Maulana Malik Ibrahim State Islamic University of Malang (UIN Malang), State Polytechnic of Malang (POLINEMA), and Health Polytechnic of the Ministry of Health in Malang (POLTEKKES Kemenkes Malang). Malang City was purposefully selected as the study setting because it represents one of Indonesia's premier educational hubs, characterized

by a highly concentrated, academically diverse, and digitally active student population, thereby providing high sample representativeness.

Population, Sample, and Respondent Criteria

The target population in this study comprised active undergraduate students from the 2023 academic cohort across the five state higher education institutions in Malang City, totaling 140,356 students. To determine the minimum required sample size from a known finite population, Slovin's formula was applied with a 95% confidence level ($e = 0.05$):

$$n = \frac{N}{1 + N \cdot e^2} = \frac{140{,}356}{1 + 140{,}356 \times (0.05)^2} \approx 399 \text{ respondents}$$

To ensure proportional representation from each participating institution, respondents were selected using a *proportionate stratified random sampling* technique based on the student distribution across the five universities. To ensure that selected respondents were relevant to the research context, specific inclusion criteria were established in accordance with the study objectives:

1. Active undergraduate students from the 2023 cohort enrolled in one of the five State Higher Education Institutions in Malang City (Universitas Brawijaya, Universitas Negeri Malang, UIN Maulana Malik Ibrahim Malang, Politeknik Negeri Malang, or Poltekkes Kemenkes Malang).
2. Active users of social media platforms in daily life.
3. Previously exposed to, read, or viewed news and information regarding the Iran–Israel conflict through social media platforms.
4. Willing to voluntarily participate as respondents and complete the questionnaire in full.

Data Collection Technique and Measurement Scale

Primary data were gathered using a self-administered, structured online questionnaire distributed via Google Forms. Online administration was selected due to its operational efficiency, broad accessibility, and alignment with the digital habits of undergraduate students. The questionnaire consisted of three main sections: respondent screening and demographic profile, items measuring independent variables ($X1$ and $X2$), and items measuring the dependent variable (Y). All questionnaire items were measured using a 4 point Likert scale to eliminate neutral mid-point bias and force respondents to take a definitive stance on each statement. The response anchors were defined as follows:

- 1 = Strongly Disagree (*Sangat Tidak Setuju* / STS)
- 2 = Disagree (*Tidak Setuju* / TS)
- 3 = Agree (*Setuju* / S)
- 4 = Strongly Agree (*Sangat Setuju* / SS)

Operational Definition of Variables (DOV)

The operationalization of variables in this study details the conceptual definition, dimensions, measurement indicators, and measurement scale for each construct, as summarized in Table 1.

Table 1. Operational Variables

Variables	Dimensions	Source
Social Media Exposure (X1)	Frequency, duration, and attention toward Iran–Israel conflict content on social media	(Deborah & Anggraeni, 2022)
Information Literacy (X2)	Information source identification, comprehension, interpretation, communication, and evaluation	(Lawanda & Ulfa, 2021)
Students' Attitude (Y)	Perceived importance of the energy transition, learning interest, and willingness to contribute	(Jannati & Prasetya, 2026)

Data Analysis Technique

Data analysis was conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM) facilitated by SmartPLS software. PLS-SEM was chosen due to its capability to handle complex structural models, its robustness with non-normal data distributions, and its suitablity for exploratory extensions of theoretical models such as the Theory of Planned Behavior (Hair et al., 2021).

RESULTS

Data Collection and Respondent Profile

Primary data collection yielded a total of 427 valid questionnaire responses from active undergraduate students (cohort 2023) across five State Higher Education Institutions (Perguruan Tinggi Negeri / PTN) in Malang City: Brawijaya University (UB), State University of Malang (UM), Maulana Malik Ibrahim State Islamic University of Malang (UIN Malang), State Polytechnic of Malang (POLINEMA), and Health Polytechnic of the Ministry of Health in Malang (POLTEKKES Kemenkes Malang). The realized sample size exceeded the minimum threshold of 399 respondents determined via Slovin's formula by 28 respondents (7.02%), establishing a statistically robust dataset. All 427 respondents met the screening criteria as active social media users who had previously been exposed to digital news regarding the Iran–Israel conflict.

Measurement (Outer) Model Evaluation

The evaluation of the measurement (outer) model was conducted to establish the reliability and validity of the research instruments. Following PLS-SEM guidelines, the outer model was evaluated through indicator reliability (outer loadings), convergent validity (Average Variance Extracted / AVE), internal consistency reliability (Composite Reliability) and discriminant validity (Fornell-Larcker criterion and cross-loading analysis).

Indicator Reliability and Loading Analysis

Indicator reliability was evaluated by examining the outer loading values of each item on its respective construct using Partial Least Squares Structural Equation Modeling (PLS-SEM). In accordance with established PLS-SEM

methodological standards, an indicator is considered reliable if its outer loading achieves or exceeds the minimum recommended threshold of 0.50 (Hair et al., 2021);(Sarstedt et al., 2022) Indicators failing to meet this threshold or exhibiting negative cross-contributions were systematically eliminated across sequential model modification stages to ensure optimal convergent validity.

In the initial measurement model estimation, several items across all three constructs demonstrated outer loadings below the 0.50 cut-off mark or exhibited negative values. For Social Media Exposure (*X*1), items X1.1 (0.345), X1.2 (0.204), X1.4 (-0.218), and X1.5 (0.094) failed to meet the validity threshold. For Information Literacy (*X*2), items X2.1 (0.367), X2.2 (0.070), X2.3 (0.234), X2.4 (-0.083), and X2.6 (0.021) were identified as invalid. For Students' Attitude (*Y*_1), items Y1.2 (-0.347), Y1.3 (-0.111), and Y1.5 (-0.189) exhibited negative loadings. Consequently, all invalid items were pruned prior to the second re-estimation.

Following the removal of these initial invalid items, the model was re-estimated during the modification stage. The remaining indicators exhibited improved loading parameters, specifically X1.3 (0.831), X1.6 (0.774), X2.5 (1.000), Y1.1 (0.849), and Y1.4 (0.560). However, item Y1.6 yielded an outer loading of 0.463, falling short of the required 0.50 threshold. To maintain rigorous measurement standards and prevent attenuation bias in structural parameter estimations, Y1.6 was excluded in the subsequent refinement step.

In the final outer model specification, only five indicators were retained: X1.3 and X1.6 for Social Media Exposure (*X*1), X2.5 for Information Literacy (*X*2), and Y1.1 and Y1.4 for Students' Attitude (*Y*1). As depicted in the final structural model diagram (Figure 2), all retained indicators demonstrated outer loadings comfortably exceeding the 0.50 standard, ranging from 0.617 to 1.000. This sequential elimination procedure guarantees that the five retained indicators (X1.3, X1.6, X2.5, Y1.1, and Y1.4) capture the core conceptual domains of their respective latent variables with high empirical precision, serving as a reliable foundation for structural path analysis.

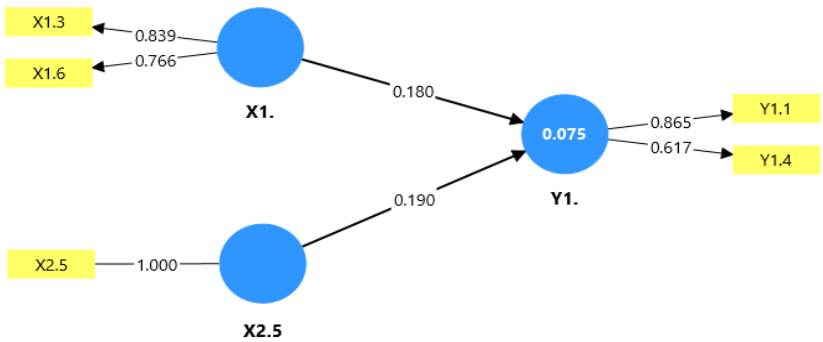


Figure 2. Final Outer Loadings of Retained Indicators

Convergent Validity and Construct Reliability

Convergent validity evaluates the extent to which a measure correlates positively with alternative measures of the same construct. It is established when the Average Variance Extracted (AVE) achieves or exceeds 0.50 (Hair et al., 2021). Internal consistency reliability was evaluated using Composite Reliability (ρ_c), which is recognized as a superior reliability metric in PLS-SEM compared to Cronbach's Alpha because it does not assume equal indicator loadings.

Table 2. Convergent Validity

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
X1.	0,452	0,460	0,784	0,645
Y1.	0,242	0,270	0,716	0,564

As presented in Table 2, the AVE values for Social Media Exposure (0.645) and Students' Attitude (0.564) both comfortably exceeded the 0.50 threshold, confirming convergent validity. Furthermore, Composite Reliability (ρ_c) for both constructs reached 0.784 and 0.716, respectively, exceeding the required 0.70 benchmark and establishing adequate internal consistency. Although Cronbach's Alpha values (0.452 and 0.242) remained below 0.70 due to the parsimonious reduction to two items per construct, the constructs were confirmed reliable based on Composite Reliability (ρ_c) standards (Hair et al., 2021). The single-indicator construct Information Literacy (*X*2) achieved an AVE of 1.000 and (ρ_c) of 1.000 by definition.

Discriminant Validity

Discriminant validity confirms that a construct is empirically distinct from other constructs in the structural model. It was evaluated using both the Fornell-Larcker criterion and cross-loading analysis.

Table 3. Discriminant validity

Fornell-Larcker criterion

	X1.	X2.5	Y1.
X1.	0,803		
X2.5	0,095	1,000	
Y1.	0,198	0,207	0,751

Note: Bold diagonal values represent the square root of the AVE for each construct; off-diagonal values represent inter-construct correlations.

Source: Primary data processed using SmartPLS 4 (2026)

According to the Fornell-Larcker criterion in Table 3, the square root of the AVE for Social Media Exposure (0.803) and Students' Attitude (0.751) exceeded their highest correlations with any other construct (r_{X1-X2} = 0.095; r_{X1-Y1} = 0.198; r_{X2-Y1} = 0.207).

Table 4. Cross Loadings

Cross loadings

	X1.	X2.5	Y1.
X1.3	0,839	0,041	0,171
X1.6	0,766	0,119	0,145
X2.5	0,095	1,000	0,207
Y1.1	0,191	0,171	0,865

Y1.4	0,091	0,139	0,617

Source: Primary data processed using SmartPLS 4 (2026)

The cross-loading analysis in Table 4 corroborated the Fornell-Larcker results. Each retained indicator loaded highest on its intended construct compared to its cross-loadings on other constructs (Tan & Masood, 2021). Consequently, discriminant validity was successfully established across all constructs.

Structural (Inner) Model Evaluation

Having confirmed measurement model validity and reliability, the structural (inner) model was evaluated to examine overall model fit, explanatory power (R^2), and hypothesis testing through path coefficients.

Structural Model Fit Summary

Structural model fit was evaluated using Standardized Root Mean Square Residual (SRMR), unweighted least squares discrepancy (d_{ULS}), geodesic discrepancy (d_G), Chi-square, and Normed Fit Index (NFI).

Table 5. Fit Summary

Fit summary	Saturated model	Estimated model
SRMR	0,138	0,138
d_ULS	0,286	0,286
d_G	0,097	0,097
Chi-square	262,596	262,596
NFI	-2,009	-2,009

Source: Primary data processed using SmartPLS 4 (2026)

As shown in Table 5, the SRMR value was 0.138 for both the saturated and estimated models, exceeding the conservative threshold of 0.10. Similarly, the NFI was -2.009, indicating that the structural model did not achieve optimal global incremental fit. While these fit indices suggest structural complexity constraints, PLS-SEM prioritizes explanatory and predictive capabilities over global goodness-of-fit (Hair et al., 2021).

Coefficient of Determination (R^2Test)

The coefficient of determination (R^2) measures the proportion of variance in the dependent construct explained by the combined independent predictor constructs.

Table 6. R^2 Test

	R-square	R-square adjusted
Y1.	0,075	0,070

Source: Primary data processed using SmartPLS 4 (2026)

As presented in Table 6, the R^2 value for Students' Attitude ($Y1$) was 0.075, with an Adjusted R^2 of 0.070. This demonstrates that Social Media Exposure to the Iran–Israel conflict (X^1) and Information Literacy (X^2) jointly explain 7.5% of the total variance in university students' attitudes toward supporting the sustainable energy transition. The remaining 92.5% of the variance is determined by exogenous factors outside the conceptual model.

Hypothesis Testing and Path Coefficients

Hypothesis testing was conducted using a non-parametric bootstrapping procedure with 5,000 resamples to generate path coefficients (β), standard deviations, t-statistics, and two-tailed p-values. A relationship is deemed statistically significant if the t-statistic exceeds 1.96 and the p-value is less than 0.05.

Table 7. t-statistics

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
X1. -> Y1.	0,180	0,187	0,046	3,895	0,000
X2.5 -> Y1.	0,190	0,191	0,052	3,668	0,000

Source: Primary data processed using SmartPLS 4 (2026)

The bootstrapping empirical results in Table 7 demonstrate the following:

1. **Test of H1**: The path coefficient from Social Media Exposure (X_1) to Students' Attitude ($Y1$) was β = 0.180 with a t-statistic of 3.895 and p = 0.000. Since t = 3.895 > 1.96 and p = 0.000 < 0.05, **H1 is accepted**. Social media exposure to the Iran–Israel conflict has a statistically significant positive effect on university students' attitudes toward supporting the sustainable energy transition.
2. **Test of H2**: The path coefficient from Information Literacy ($X2$) to Students' Attitude ($Y1$) was β = 0.190 with a t-statistic of 3.668 and p = 0.000. Since t = 3.668 > 1.96 and p = 0.000 < 0.05, **H2 is accepted**. Information literacy has a statistically significant positive effect on university students' attitudes toward supporting the sustainable energy transition.

DISCUSSION

The discussion elaborates academically on the empirical findings, linking the structural relationships among social media exposure, information literacy, and student attitudes to the Theory of Planned Behavior (TPB), while explicitly addressing model constraints and unexpected empirical outcomes.

The Effect of Social Media Exposure to the Iran–Israel Conflict on Students' Attitudes Toward Supporting Sustainable Energy Transition

The empirical results confirm that social media exposure to the Iran–Israel conflict exerts a statistically significant positive effect on university students' attitudes toward supporting the sustainable energy transition. Grounded in the

Theory of Planned Behavior Ajzen (1991), social media coverage of Middle Eastern military tensions serves as a salient external stimulus that heightens awareness of national energy vulnerability and strengthens students' behavioral beliefs regarding bioenergy policies. This positive influence aligns with Hasan et al. (2026) and Deborah & Anggraeni (2022), who established that digital media exposure directly shapes young citizens' socio-political dispositions.

However, contrasting this result with broader literature reveals that media exposure does not universally yield positive shifts. In routine or static contexts, Jauharuddin (2023) observed that social media exposure to health information failed to establish a statistically significant relationship with health attitudes, while Hidayanto et al. (2026) found an inverse and non-significant effect of aggressive digital content on normative attitudes. This empirical divergence demonstrates that while routine digital browsing is easily overshadowed by internal values or academic settings, social media exposure to the Iran–Israel conflict was directly linked to real time domestic energy constraints specifically the BPH Migas fuel purchase cap thereby converting news consumption into a high stakes economic cue that successfully motivated positive attitude shifts.

The Effect of Information Literacy on Students' Attitudes Toward Supporting Sustainable Energy Transition

The structural estimation confirms that information literacy exerts a statistically significant positive effect on university students' attitudes toward supporting the sustainable energy transition. Under TPB principles, information literacy reinforces perceived behavioral control and analytical self efficacy, serving as a critical cognitive filter against misinformation and algorithmic bias (Zain & Asmara, 2026). Higher information literacy enables students to evaluate the strategic economic rationale behind national fuel subsidy limits, aligning with Allawy et al. (2026), who identified information literacy as a primary driver of critical policy evaluation and sustainability commitments.

Nevertheless, contextualizing this finding against existing research highlights domain specific variations. In static public health settings, Durmuş Iskender et al. (2023) and Taş & Yiğitalp (2026) observed non-significant predictive relationships between literacy dimensions and target attitudes. Conversely, Sholiha (2019) demonstrated a strong negative correlation between hazard information literacy and target attitudes, proving that in routine risk settings, literacy operates primarily as a preventive or suppressive filter. In contrast, when applied to complex macroeconomic energy transitions, information literacy acts as an activating cognitive mechanism that enables students to navigate national policy trade-offs, thereby translating critical evaluation skills into proactive support for sustainable energy goals.

Academic Synthesis and Policy Implications

Synthesizing these findings, social media exposure and information literacy jointly explain a modest yet meaningful proportion of variance in student attitudes. Theoretically, this highlights that while digital exposure and cognitive skills are vital antecedents, youth attitudes are also conditioned by unmodeled exogenous factors such as subjective norms, campus culture, and personal

financial constraints. Practically, government entities (ESDM and BPH Migas) should utilize digital media for transparent policy communication, while universities must embed digital literacy into curricula to foster informed advocates for national energy security.

CONCLUSIONS AND RECOMMENDATIONS

This study concludes that social media exposure to the Iran–Israel conflict and information literacy both exert statistically significant positive effects on university students' attitudes toward supporting the sustainable energy transition. These empirical findings reinforce the Theory of Planned Behavior (TPB) by demonstrating that external crisis exposure and internal cognitive capabilities jointly strengthen behavioral belief structures and perceived behavioral control amid domestic fuel rationing policies. Notably, the positive effect of social media exposure concurs with the empirical observations of Hasan et al. (2026), while contrasting with (Jauharuddin, 2023)due to the direct personal economic relevance of domestic fuel purchase caps (BPH Migas 50-liter daily limit). Similarly, the significant role of information literacy aligns with (Allawy et al., 2026);(Zain & Asmara, 2026) proving that critical cognitive filtering converts raw digital news into rational policy endorsement, despite constrained literacy effects reported in non-crisis domains (Durmuş Iskender et al., 2023).

Practically, government entities such as the Ministry of Energy and Mineral Resources (ESDM) and BPH Migas must formulate transparent digital communication strategies to explain energy transition policy rationales effectively. Concurrently, higher education institutions are advised to integrate digital information literacy and energy sustainability modules into academic curricula, thereby empowering students as critically informed advocates for national energy security and sustainable policy adoption.

FURTHER STUDY

The primary limitation of this research lies in the explanatory power of the structural model, where social media exposure and information literacy jointly account for only 7.5% ($R^2 = 0.075$) of the total variance in student attitudes. This indicates that the remaining 92.5% of attitude formation is driven by exogenous factors beyond the current conceptual framework. Future studies are recommended to expand the conceptual framework by incorporating additional TPB antecedents and contextual variables, such as subjective norms, peer group dynamics, institutional campus culture, family economic backgrounds, and direct personal financial constraints. Including these additional predictors will enhance the comprehensiveness of youth socioenvironmental decision making models.

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