

The Effects of Social Proof and Influencer Authenticity on Purchase Decisions: The Moderating Role of Consumer Skepticism Among TikTok Shop Users in Medan

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Abstract

This study aims to examine the effects of social proof and influencer authenticity on purchase decisions, and to test the moderating role of consumer skepticism among TikTok Shop users in Medan. A quantitative associative research design was employed. Primary data were obtained through a structured questionnaire distributed to 100 respondents selected via non-probability accidental sampling, using a five-point Likert scale. Data collection was conducted between June and August 2026. Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4.0, involving measurement model evaluation, structural model estimation, and bootstrapping for hypothesis testing. The results indicate that social proof ($\beta = 0.199$; $p = 0.046$) and influencer authenticity ($\beta = 0.375$; $p < 0.001$) exert positive and significant effects on purchase decisions. Consumer skepticism also has a positive and significant direct effect on purchase decisions ($\beta = 0.408$; $p < 0.001$). However, consumer skepticism does not significantly moderate the effects of social proof ($\beta = 0.102$; $p = 0.243$) or influencer authenticity ($\beta = -0.123$; $p = 0.156$) on purchase decisions. The full structural model explains 84.1% of the variance in purchase decisions ($R^2 = 0.841$; Adjusted $R^2 = 0.832$). These findings extend social proof theory and source authenticity literature in the social commerce context and provide managerial guidance for TikTok Shop sellers and marketers in designing credible, transparent promotional communications.

Keywords:

Social proof; Influencer authenticity; Consumer skepticism; Purchase decision; TikTok Shop.

1. INTRODUCTION

Digital transformation has profoundly reshaped consumer behavior, particularly the process of purchase decision-making. Social media platforms have evolved beyond communication tools and now function as social commerce ecosystems that integrate entertainment, social interaction, and transactions within a single interface. TikTok Shop, an in-app shopping feature embedded within TikTok, allows sellers, buyers, and creators to exchange information and complete transactions without leaving the platform. Through short-video content and live-streaming features, TikTok Shop encourages rapid, often impulse-driven purchasing behavior (Anggraini, 2023). Understanding what drives consumers to complete purchases on such platforms has therefore become a central concern in contemporary marketing research.

The scale of this phenomenon in Indonesia is substantial. In 2024, Indonesia ranked second globally in TikTok Shop Gross Merchandise Value (GMV), reaching approximately USD 6.198 billion (around IDR 100.5 trillion), representing a 39% year-on-year increase and placing the country behind only the United States (Tasya SB, 2025). Despite this growth, TikTok Shop still trails competitors such as Shopee, which controls roughly 67% of the affiliate-marketplace segment (Snapcart, 2024). The gap suggests that high engagement does not automatically translate into purchase decisions—a persistent conversion challenge that heightens the strategic

importance of understanding the informational and psychological drivers of purchase behavior on TikTok Shop.

A key informational cue in this environment is social proof, defined as the tendency of individuals to follow the choices or actions of others because these are perceived as credible signals of quality (Cialdini, 2021; Sukarnoto et al., 2025). On TikTok Shop, social proof is highly salient and easily observable through product ratings, review counts, positive comments, user-generated videos, and the number of concurrent viewers during live sessions (Latifa et al., 2025). These cues help consumers reduce uncertainty in high-choice environments. However, emerging concerns about manipulated reviews and fabricated engagement metrics indicate that the effectiveness of social proof is contingent on its perceived authenticity (Rama & Adriyanto, 2025), motivating closer examination of the conditions under which social proof shapes purchase behavior.

A second increasingly emphasized cue is influencer authenticity, which refers to the extent to which followers perceive an influencer as genuine, honest, transparent, and true to self in communicating product information (Audrezet et al., 2020; Lou & Yuan, 2019). Authentic influencers cultivate parasocial trust and stronger emotional connections with their audiences, enhancing the persuasive power of their recommendations (Zniva et al., 2023). On TikTok Shop, where influencers serve as key intermediaries between brands and consumers through short videos and live streams, perceived authenticity becomes especially consequential. Prior evidence indicates that influencer marketing positively affects purchase decisions among TikTok Shop users (Nurjana, 2026), yet overly commercial endorsements can weaken authenticity and reduce persuasive impact.

Beyond informational cues, an important psychological trait that may condition how consumers process such cues is consumer skepticism—the general tendency to doubt or question the veracity of claims and information conveyed through advertising and promotional messages (Obermiller & Spangenberg, 1998; Wen & Kim, 2025). In social commerce, this tendency has intensified as users increasingly encounter sponsored content, paid endorsements, and platform-driven algorithms. Highly skeptical consumers scrutinize the authenticity of reviews, the credibility of influencers, and the validity of testimonials more critically, which may attenuate—or, in some circumstances, reinforce—the effect of persuasive cues on purchase decisions.

Consumer skepticism is therefore theoretically positioned as a plausible boundary condition of the effects of social proof and influencer authenticity on purchase behavior. Drawing on the Persuasion Knowledge Model (Friestad & Wright, 1994) and information-processing accounts of skepticism (Boerman et al., 2018), consumers with different levels of skepticism may process reviews, ratings, comments, audience-size cues, influencer recommendations, and promotional claims differently. Highly skeptical consumers are expected to interpret persuasive cues through a more critical evaluative lens, potentially weakening the direct effect of social proof and influencer authenticity on purchase decisions. At the same time, skeptical processing may deepen engagement with credible cues rather than uniformly suppress persuasion. These competing possibilities are theoretical propositions requiring empirical examination and constitute the analytical focus of the present study.

Although prior studies have separately examined social proof, influencer authenticity, and consumer skepticism, several gaps remain. First, most existing work treats these constructs as isolated predictors rather than as an integrated model in the context of live-stream-driven social commerce. Second, studies employing PLS-SEM to jointly test the direct effects of social proof and influencer authenticity together with consumer skepticism as a moderator remain scarce, particularly on emerging platforms such as TikTok Shop. Third, empirical evidence from second-tier Indonesian cities such as Medan—where consumer digital literacy and purchase patterns may differ from metropolitan centers—remains limited.

This study offers three main contributions. Theoretically, it integrates social proof theory and source-authenticity literature within a moderation framework and empirically tests consumer skepticism as a psychological boundary condition in a live-stream social commerce setting. Methodologically, it applies PLS-SEM in SmartPLS 4.0 to jointly estimate direct and interaction effects. Practically, it provides evidence-based guidance for TikTok Shop sellers, brand managers, and influencers on designing credible, transparent, and authentic promotional communications. Accordingly, the study's objectives are: (1) to analyze the direct effects of social proof, influencer authenticity, and consumer skepticism on purchase decisions; and (2) to test whether consumer skepticism moderates the effects of social proof and influencer authenticity on purchase decisions among TikTok Shop users in Medan. The remainder of the paper is organized as follows: Section 2 develops the theoretical framework and hypotheses, Section 3 describes the research method, Section 4 presents the results and discussion, and Section 5 concludes with theoretical and managerial implications, limitations, and directions for future research.

1.1. Social Proof Theory

Social proof is a foundational construct in social influence research, describing the tendency of individuals to look to the actions and opinions of others when determining appropriate behavior, particularly under conditions of uncertainty or high information volume (Cialdini, 2021). Rooted in informational social influence, social proof functions as a heuristic that reduces cognitive effort by treating the observed choices of others as evidence of quality or appropriateness. In the digital marketplace, social proof manifests in multiple visible forms, including star ratings, review counts, positive comments, user-generated content, follower

numbers, purchase indicators, and real-time viewer counts during live-stream sessions (Latifa et al., 2025; Sukarnoto et al., 2025).

The uncertainty-reduction mechanism of social proof is especially salient in social commerce environments, where consumers cannot physically inspect products and must rely on mediated cues (Rama & Adriyanto, 2025). On TikTok Shop, algorithmically curated content amplifies socially validated products, further enhancing the persuasive weight of aggregated social signals. Yet, growing concerns about paid reviews, incentivized ratings, and manipulated engagement introduce ambiguity about the informational value of these cues, meaning that the effectiveness of social proof depends on both its visibility and its perceived credibility.

1.2. Influencer Authenticity

Influencer authenticity refers to the extent to which an audience perceives an influencer as genuine, transparent, consistent, and true to self across communicative contexts (Audrezet et al., 2020). Authenticity is typically operationalized through dimensions such as perceived genuineness, honesty in disclosure, consistency between on-camera and off-camera personas, and transparency about commercial relationships (Erz & Christensen, 2018). Authenticity is a critical antecedent of trust, and by extension, of persuasion effectiveness in influencer marketing (Lou & Yuan, 2019).

A distinctive feature of influencer-driven persuasion is the parasocial relationship developed between the influencer and the audience—a one-sided but affectively meaningful bond that resembles interpersonal connection (Zniva et al., 2023). Parasocial trust amplifies the persuasive impact of authentic influencers because followers interpret recommendations as advice from a trusted acquaintance rather than as advertising. On TikTok Shop, where influencers act as central intermediaries between brands and consumers through short-form video and live streams, perceived authenticity becomes a pivotal source-based determinant of purchase intention and behavior (Nurjana, 2026). Conversely, overtly commercial, scripted, or inconsistent endorsements erode authenticity and diminish persuasive power.

1.3. Consumer Skepticism

Consumer skepticism is defined as a general tendency to doubt or critically evaluate the truthfulness of marketing claims and promotional information (Obermiller & Spangenberg, 1998). It is often studied as a stable individual difference variable but can also be domain-specific—directed at advertising, influencers, online reviews, sponsored content, or specific platforms (Boerman et al., 2018; Wen & Kim, 2025). Grounded in the Persuasion Knowledge Model (Friestad & Wright, 1994), skepticism reflects the consumer's ability and inclination to recognize persuasive intent and to discount it accordingly.

Skepticism has several downstream implications. First, it shapes information processing: skeptical consumers tend to engage in more systematic, effortful evaluation of persuasive messages rather than accepting them at face value. Second, it influences evaluative behavior, including scrutiny of source credibility, message consistency, and evidentiary cues. Third, in the social commerce environment, skepticism is particularly relevant because users are simultaneously exposed to organic user-generated content, sponsored endorsements, and algorithmically promoted material. Skepticism toward online reviews, influencers, and platform-mediated content has been shown to shape both attitudes and behavioral intentions (Rama & Adriyanto, 2025; Wen & Kim, 2025).

1.4. Consumer Skepticism as a Moderator

Beyond its direct effects, consumer skepticism has been proposed as a boundary condition for a range of persuasion-related relationships. The theoretical logic rests on the Persuasion Knowledge Model: when consumers activate their persuasion knowledge, they reinterpret persuasive cues as commercially motivated and adjust their responses accordingly (Friestad & Wright, 1994). Under this logic, skepticism should attenuate the persuasive impact of both social proof and influencer authenticity, because highly skeptical consumers are expected to discount the informational value of aggregated social signals and to question the sincerity of influencer endorsements.

Theoretically, two mechanisms underpin this moderating role. First, skepticism activates counter-arguing and defensive processing, which can weaken the elaboration of persuasive cues. Second, skepticism triggers source-scrutiny: skeptical consumers may probe whether reviews are authentic, whether ratings are inflated, and whether influencer endorsements are transparently disclosed. If persuasive cues survive this scrutiny, their influence may be preserved; if they do not, the persuasive impact is diminished.

However, the moderating role of skepticism is not deterministic. Some studies indicate that when persuasive cues are transparent, verifiable, and information-rich, skeptical consumers may respond as favorably as—or even more favorably than—less skeptical consumers, because their evaluative demands are satisfied (Wen & Kim, 2025). The direction and magnitude of the interaction may therefore depend on the platform, cue type, and product category. This theoretical ambiguity, combined with the scarcity of empirical tests in live-stream social commerce contexts, motivates the empirical examination undertaken in the present study.

1.5. Hypotheses Development

1.5.1. Social Proof and Purchase Decisions

Social proof theory posits that consumers rely on the observed behavior of others as an efficient heuristic when facing uncertainty (Cialdini, 2021). In social commerce, this heuristic is operationalized through ratings, review counts, and live-stream audience size, which serve as informational cues that reduce risk and legitimize purchase choices (Latifa et al., 2025). Empirical evidence consistently shows that social proof cues positively influence consumers' willingness to purchase across e-commerce and social commerce platforms (Sukarnoto et al., 2025; Rama & Adriyanto, 2025). In the TikTok Shop context, where cues are highly visible and continuously updated, we expect a similar effect on purchase decisions.

H1: Social proof positively affects purchase decisions.

1.5.2. Influencer Authenticity and Purchase Decisions

Source authenticity is a well-established antecedent of persuasion effectiveness in marketing communications (Audrezet et al., 2020). Authentic influencers cultivate parasocial trust that translates into higher engagement, favorable brand attitudes, and stronger behavioral intentions (Lou & Yuan, 2019; Zniva et al., 2023). In the TikTok Shop environment, where consumers rely heavily on influencer-mediated demonstrations to evaluate products, perceived authenticity is expected to enhance the credibility of recommendations and thereby increase the likelihood of purchase (Nurjana, 2026).

H2: Influencer authenticity positively affects purchase decisions.

1.5.3. Consumer Skepticism and Purchase Decisions

Traditional advertising research characterizes skepticism as a barrier to persuasion (Obermiller & Spangenberg, 1998). However, more recent research suggests that skepticism can accompany deeper information processing, which may translate into more confident purchase decisions when consumers encounter credible and verifiable cues (Wen & Kim, 2025). In social commerce contexts, where consumers actively evaluate multiple sources of information before purchase, skepticism may be associated with a more thorough, evaluative purchase process rather than avoidance. We therefore expect skepticism to exert a significant effect on purchase decisions, while remaining open about the direction of this effect.

H3: Consumer skepticism significantly affects purchase decisions.

1.5.4. Moderating Role of Consumer Skepticism

Drawing on the Persuasion Knowledge Model (Friestad & Wright, 1994), the effects of persuasive cues on purchase decisions are hypothesized to depend on consumers' skepticism level. Skeptical consumers activate defensive processing and counter-arguing, potentially attenuating the persuasive impact of social proof and influencer authenticity. This constitutes a classic conditional-effect (boundary condition) hypothesis: skepticism does not necessarily eliminate the effects but is expected to change their strength.

For social proof, skeptical consumers may discount aggregate cues such as ratings and viewer counts, viewing them as susceptible to manipulation. Consequently, the effect of social proof on purchase decisions is expected to be weaker among more skeptical consumers.

H4: Consumer skepticism moderates the effect of social proof on purchase decisions.

For influencer authenticity, skeptical consumers may probe the sincerity of endorsements and be more attentive to signs of scripted or commercial framing. As a result, the effect of influencer authenticity on purchase decisions may also depend on the consumer's skepticism level.

H5: Consumer skepticism moderates the effect of influencer authenticity on purchase decisions.

The conceptual framework linking these constructs is depicted in Figure 1.

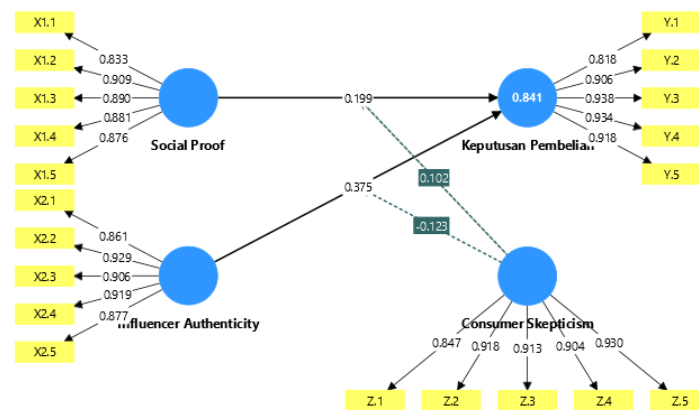


Figure 1. Measurement Model (Outer Model) Estimation Results

2. RESEARCH METHOD

2.1. Research Design

This study adopts a quantitative associative research design to examine the effects of social proof, influencer authenticity, and consumer skepticism on purchase decisions among TikTok Shop users in Medan. A quantitative approach was chosen because it enables empirical hypothesis testing and permits estimation of the direction and magnitude of relationships among latent constructs. Data collection was conducted between June and August 2026 (see Section 3.3 for details on the collection procedure).

2.2. Population and Sample

The target population comprises TikTok Shop users residing in Medan who have made at least one purchase through the platform. Because the exact population size is unknown, the population is treated as infinite. The minimum sample size was determined using the Lemeshow formula for unknown populations, which yielded a minimum requirement of 96 respondents. To improve robustness against invalid or incomplete responses, the sample was rounded up to 100 respondents.

Respondents were recruited using a non-probability accidental sampling technique, in which individuals who met predefined inclusion criteria and who were accessible to the research team were invited to participate. The inclusion criteria were: (i) currently residing in Medan; (ii) holding an active TikTok account; (iii) having been exposed to promotional content from an influencer on TikTok Shop; and (iv) having made at least one purchase through TikTok Shop in the six months preceding the survey.

We acknowledge explicitly that the combination of a sample size of 100 and a non-probability accidental sampling design constrains the study's statistical power and limits the generalizability of the findings to the broader population of TikTok Shop users in Indonesia. The sample is best interpreted as representative of the specific subset of TikTok Shop users in Medan who were accessible to the research team during the data collection window. These limitations are discussed further in the Conclusion section.

2.3. Data Collection and Instrument

Primary data were collected via a structured questionnaire distributed to eligible respondents between June and August 2026. All items used a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), consistent with prior practice in behavioral research (Wibowo, 2025). The questionnaire measured four latent constructs—social proof (X1), influencer authenticity (X2), consumer skepticism (Z), and purchase decision (Y)—each represented by five reflective indicators. Item wording was adapted from validated scales in the prior literature and refined to fit the TikTok Shop context.

2.4. Data Analysis

The proposed model was estimated using Partial Least Squares Structural Equation Modeling (PLS-SEM) in SmartPLS 4.0. PLS-SEM was chosen because it is well suited to prediction-oriented research, tolerates non-normally distributed data, and handles complex models involving moderating effects and relatively small samples effectively (Hair et al., 2022). The analysis followed a two-stage procedure: assessment of the measurement (outer) model and evaluation of the structural (inner) model.

At the measurement-model stage, convergent validity was assessed via outer loadings (≥ 0.70) and Average Variance Extracted ($AVE \geq 0.50$). Internal consistency reliability was evaluated using Cronbach's alpha, rho_A, and composite reliability, each with a threshold of 0.70. Discriminant validity was assessed using

Purchase Decision (Y)		0.817	
Y.1	0.818		Valid
Y.2	0.906		Valid
Y.3	0.938		Valid
Y.4	0.934		Valid
Y.5	0.918		Valid
Consumer Skepticism (Z)		0.815	
Z.1	0.847		Valid
Z.2	0.918		Valid
Z.3	0.913		Valid
Z.4	0.904		Valid
Z.5	0.930		Valid

Source: Authors' SmartPLS 4.0 output.

3.1.1.3. Internal Consistency Reliability

Table 2 presents Cronbach's alpha, rho_A, and composite reliability (rho_c). All values exceed the 0.70 threshold, confirming that indicators for each construct exhibit strong internal consistency.

Table 2. Reliability Statistics

Construct	Cronbach's alpha	rho_A	Composite reliability (rho_c)	Description
Consumer Skepticism (Z)	0.943	0.949	0.957	Reliable
Influencer Authenticity (X2)	0.940	0.942	0.954	Reliable
Purchase Decision (Y)	0.943	0.945	0.957	Reliable
Social Proof (X1)	0.926	0.930	0.944	Reliable

Source: Authors' SmartPLS 4.0 output.

3.1.1.4. Discriminant Validity

Discriminant validity was assessed using HTMT ratios, the Fornell–Larcker criterion, and cross-loadings. As shown in Table 3, all HTMT values are below the 0.90 threshold, indicating adequate discrimination between constructs. The highest HTMT value (0.898, between consumer skepticism and purchase decision) remains within acceptable bounds.

Table 3. Heterotrait-Monotrait Ratio (HTMT)

Construct	CS	IA	PD	SP	CS × SP	CS × IA
Consumer Skepticism (CS)	–					
Influencer Authenticity (IA)	0.801	–				
Purchase Decision (PD)	0.898	0.888	–			
Social Proof (SP)	0.782	0.855	0.881	–		
CS × SP	0.130	0.264	0.144	0.068	–	
CS × IA	0.199	0.166	0.247	0.278	0.717	–

Source: Authors' SmartPLS 4.0 output.

Table 4 reports Fornell–Larcker results. For each construct, the square root of the AVE (on the diagonal) exceeds its correlations with other constructs, further supporting discriminant validity.

Table 4. Fornell–Larcker Criterion

Construct	Consumer Skepticism	Influencer Authenticity	Purchase Decision	Social Proof
Consumer Skepticism	0.903			
Influencer Authenticity	0.758	0.899		
Purchase Decision	0.851	0.836	0.904	
Social Proof	0.739	0.799	0.828	0.878

Source: Authors' SmartPLS 4.0 output.

Table 5 presents cross-loadings. Each indicator loads most strongly on its assigned construct, providing additional support for discriminant validity at the indicator level.

Table 5. Cross-Loadings

Indicator	Consumer Skepticism	Influencer Authenticity	Purchase Decision	Social Proof
X1.1	0.574	0.644	0.627	0.833
X1.2	0.687	0.695	0.728	0.909
X1.3	0.725	0.723	0.788	0.890

X1.4	0.643	0.711	0.762	0.881
X1.5	0.602	0.730	0.714	0.876
X2.1	0.620	0.861	0.683	0.683
X2.2	0.731	0.929	0.769	0.743
X2.3	0.654	0.906	0.742	0.701
X2.4	0.679	0.919	0.776	0.746
X2.5	0.715	0.877	0.780	0.714
Y.1	0.724	0.742	0.818	0.636
Y.2	0.759	0.743	0.906	0.733
Y.3	0.795	0.777	0.938	0.785
Y.4	0.771	0.745	0.934	0.799
Y.5	0.793	0.774	0.918	0.780
Z.1	0.847	0.623	0.658	0.521
Z.2	0.918	0.709	0.805	0.712
Z.3	0.913	0.644	0.728	0.641
Z.4	0.904	0.680	0.791	0.704
Z.5	0.930	0.754	0.840	0.732

Source: Authors' SmartPLS 4.0 output.

3.1.2. Structural Model Evaluation

The structural model was evaluated for multicollinearity, path coefficients, statistical significance, and effect sizes. Figure 3 displays the inner-model estimation results, including path coefficients and their associated p-values.

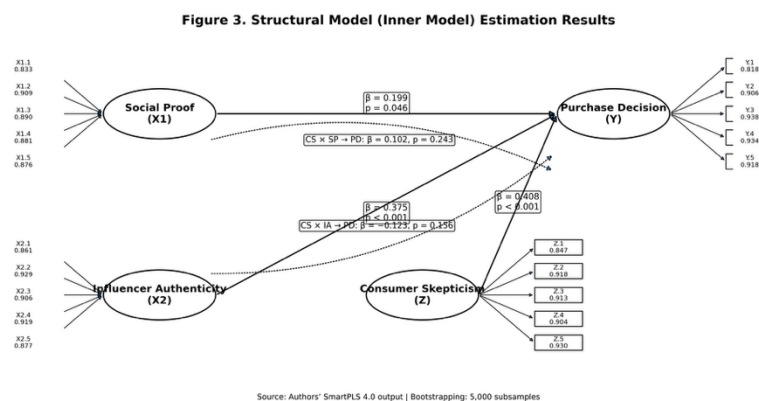


Figure 3. Structural Model (Inner Model) Estimation Results

3.1.2.1. Multicollinearity

Inner-model Variance Inflation Factors (VIF) were inspected. Consistent with Hair et al. (2022), all VIF values were below the threshold of 5, indicating that multicollinearity is not a concern in the structural model.

3.1.2.2. Path Coefficients and Hypothesis Testing

Table 6 summarizes bootstrapping results (5,000 subsamples) for the five hypothesized paths.

Table 6. Path Coefficients and Hypothesis Testing (Bootstrapping)

Hypothesis / Path	β (O)	Sample mean (M)	STDEV	t-statistic	p-value	Decision
H1: Social Proof $\rightarrow$ Purchase Decision	0.199	0.197	0.100	1.997	0.046	Supported
H2: Influencer Authenticity $\rightarrow$ Purchase Decision	0.375	0.391	0.102	3.662	< 0.001	Supported
H3: Consumer Skepticism $\rightarrow$ Purchase Decision	0.408	0.396	0.077	5.302	< 0.001	Supported
H4: CS $\times$ Social Proof $\rightarrow$ Purchase Decision	0.102	0.099	0.087	1.167	0.243	Not supported
H5: CS $\times$ Influencer Authenticity $\rightarrow$ Purchase Decision	-0.123	-0.116	0.086	1.420	0.156	Not supported

Source: Authors' SmartPLS 4.0 output.

3.1.3. Direct Effects

H1: Social Proof → Purchase Decision. The path coefficient is 0.199 ($t = 1.997$; $p = 0.046$), indicating that social proof exerts a positive and statistically significant effect on purchase decisions. H1 is supported.

H2: Influencer Authenticity → Purchase Decision. The path coefficient is 0.375 ($t = 3.662$; $p < 0.001$), reflecting a positive and significant effect. H2 is supported.

H3: Consumer Skepticism → Purchase Decision. The path coefficient is 0.408 ($t = 5.302$; $p < 0.001$), the largest direct effect in the model. H3 is supported. The positive sign is notable and is interpreted with care in Section 4.6.

3.1.4. Moderating Effects

H4: Consumer Skepticism × Social Proof → Purchase Decision. The interaction coefficient is 0.102 ($t = 1.167$; $p = 0.243$). Because $p > 0.05$ and $t < 1.96$, the interaction is not statistically significant. H4 is not supported.

H5: Consumer Skepticism × Influencer Authenticity → Purchase Decision. The interaction coefficient is -0.123 ($t = 1.420$; $p = 0.156$). Because $p > 0.05$ and $t < 1.96$, the interaction is not statistically significant. H5 is not supported.

Taken together, the moderation results indicate that consumer skepticism operates in this sample primarily as a direct antecedent of purchase decisions rather than as a boundary condition for the effects of social proof or influencer authenticity. Importantly, non-significant moderation does not imply that consumer skepticism is unrelated to the purchase process; the direct effect of skepticism remains substantial and highly significant.

3.1.5. Explanatory Power: R^2 and f^2

Table 7 reports the coefficient of determination (R^2) and adjusted R^2 for the endogenous construct.

Table 7. Coefficient of Determination (R^2)

Endogenous Construct	R^2	Adjusted R^2
Purchase Decision (Y)	0.841	0.832

Source: Authors' SmartPLS 4.0 output.

The R^2 value of 0.841 (Adjusted $R^2 = 0.832$) indicates that 84.1% of the variance in purchase decisions is jointly explained by the full structural model, which includes social proof, influencer authenticity, consumer skepticism, and the two interaction terms. Following Hair et al. (2021), this value falls in the substantial range for consumer-behavior research. However, R^2 should not be interpreted as evidence of causality; the design is cross-sectional and self-reported, and the value reflects the joint variance explained by all predictors—not the effect of social proof and influencer authenticity alone. Consumer skepticism, whose direct effect is the largest of the three predictors, contributes substantially to the explained variance.

Table 8 presents the effect sizes (f^2) for each path in the structural model. Following Hair et al. (2021), f^2 values of 0.02, 0.15, and 0.35 correspond to small, medium, and large effects respectively.

Table 8. Effect Sizes (f^2)

Path	f^2	Category
Consumer Skepticism → Purchase Decision	0.390	Large
Influencer Authenticity → Purchase Decision	0.168	Medium
Social Proof → Purchase Decision	0.051	Small
CS × Influencer Authenticity → Purchase Decision	0.030	Small
CS × Social Proof → Purchase Decision	0.021	Small

Source: Authors' SmartPLS 4.0 output.

The largest f^2 is observed for consumer skepticism → purchase decision (0.390, large), followed by influencer authenticity → purchase decision (0.168, medium), and social proof → purchase decision (0.051, small but non-trivial). The two interaction terms exhibit small effect sizes (0.030 and 0.021). It is important to note that f^2 reflects the incremental contribution of a predictor to R^2 and is conceptually distinct from statistical significance; a small f^2 can coexist with either a significant or a non-significant path coefficient, as observed here for the interaction terms.

3.2. Discussion

The findings collectively suggest that, in the TikTok Shop environment in Medan, purchase decisions are shaped by a combination of informational cues (social proof), source characteristics (influencer authenticity), and a psychological trait (consumer skepticism), while the theorized moderating role of skepticism is not empirically supported. Each finding is discussed below in light of the theoretical framework and prior literature.

3.2.1. Social Proof and Purchase Decisions (H1)

The positive and significant effect of social proof on purchase decisions ($\beta = 0.199$; $p = 0.046$) supports H1 and is consistent with prior evidence from social commerce and online marketplace research (Latifa et al., 2025; Sukarnoto et al., 2025; Rama & Adriyanto, 2025). Consumers on TikTok Shop appear to rely on cues such as review counts, ratings, positive comments, and live-stream audience size as heuristics that reduce uncertainty and legitimize purchase choices. Theoretically, the result extends social proof theory (Cialdini, 2021) to short-video and live-streaming commerce, where cues are dynamic, real-time, and algorithmically amplified. Contextually, the finding is coherent with the highly visual and interactive nature of TikTok Shop, where multiple social signals are simultaneously observable. Managerially, TikTok Shop sellers should invest in mechanisms that generate credible, verifiable social cues—authentic reviews, transparent rating aggregates, and visible engagement during live sessions—while avoiding practices that erode the informational value of these cues.

3.2.2. Influencer Authenticity and Purchase Decisions (H2)

The significant positive effect of influencer authenticity ($\beta = 0.375$; $p < 0.001$) supports H2 and aligns with the source-authenticity literature (Audrezet et al., 2020; Lou & Yuan, 2019; Zniva et al., 2023). The relatively larger magnitude of this coefficient compared to social proof suggests that in the TikTok Shop context, source-based cues (authentic influencers) may be more influential than aggregate social cues (review volume). This finding reinforces the growing emphasis on source authenticity in social commerce and is consistent with the parasocial-relationship account: authentic influencers cultivate trust, which enhances persuasive impact. Managerially, brands are advised to partner with influencers whose communication style is genuine, whose disclosure is transparent, and whose on-camera and off-camera personas are consistent, while avoiding overly scripted or transparently commercial endorsements that can undermine perceived authenticity.

3.2.3. Consumer Skepticism as a Direct Predictor (H3)

The strong positive direct effect of consumer skepticism on purchase decisions ($\beta = 0.408$; $p < 0.001$) supports H3 and requires careful interpretation. Traditional advertising research often frames skepticism as an obstacle to persuasion (Obermiller & Spangenberg, 1998), yet the present findings indicate a positive association with purchase decisions. This should not be read as evidence that skepticism universally increases purchasing; rather, in this sample it appears to reflect an active evaluative posture. Skeptical consumers may engage in more systematic information processing (Wen & Kim, 2025) and, once persuaded by credible cues, may translate that scrutiny into more confident purchase decisions. This interpretation is consistent with the Persuasion Knowledge Model's view that skepticism reflects awareness of persuasive intent, not necessarily rejection of persuasive content (Friestad & Wright, 1994).

An alternative interpretation is that skepticism, when measured as a general disposition, may capture a broader tendency toward deliberate decision-making that coexists with—or even facilitates—purchase in information-rich environments such as TikTok Shop. This finding should be understood in association-not-causation terms, given the cross-sectional design.

3.2.4. Non-Significant Moderating Effects (H4 and H5)

The non-significant moderating effects of consumer skepticism on the social proof–purchase decision path ($\beta = 0.102$; $p = 0.243$) and the influencer authenticity–purchase decision path ($\beta = -0.123$; $p = 0.156$) are conceptually important. Although prior conceptual arguments (Section 2.4) suggest that skepticism should attenuate the impact of persuasive cues, the current results indicate that, at least in this sample, skepticism operates as a parallel direct predictor rather than as a contingent factor. Non-significant moderation does not imply that consumer skepticism is unrelated to the persuasive dynamics of social proof or influencer authenticity, but that the current evidence does not support a systematic interaction in this sample.

Several explanations are plausible. First, the social-proof cues on TikTok Shop are highly visible, algorithmically amplified, and simultaneously present, so their persuasive impact may not vary strongly with consumers' skepticism level. Second, when influencer authenticity is already established through consistent behavior and transparent disclosure, its persuasive power may be relatively insulated from consumer skepticism, which is instead absorbed as a direct predictor. Third, the sample size ($n = 100$) limits statistical power to detect small-to-moderate interaction effects; the interaction f^2 values (0.030 and 0.021) fall in the small range, and with modest samples such effects are difficult to identify with statistical certainty. Fourth, this study measured skepticism as a general disposition. Future work could distinguish between domain-specific forms of skepticism (advertising skepticism, influencer skepticism, review skepticism, platform skepticism), which may yield stronger boundary effects.

Overall, the discussion supports the conclusion that credible and authentic communication remains central to converting attention into transactions on TikTok Shop, and that consumer skepticism should not be assumed to uniformly weaken marketing effectiveness. Rather, the results invite a reconceptualization of skepticism as an evaluative posture that can coexist with—rather than obstruct—purchase behavior in social commerce settings.

4. CONCLUSION

This study examined the effects of social proof and influencer authenticity on purchase decisions, and tested the moderating role of consumer skepticism among TikTok Shop users in Medan. Using PLS-SEM in SmartPLS 4.0 on data from 100 respondents, five hypotheses were tested. Social proof (H1: $\beta = 0.199$; $p = 0.046$) and influencer authenticity (H2: $\beta = 0.375$; $p < 0.001$) exert positive and significant effects on purchase decisions. Consumer skepticism has a positive and significant direct effect on purchase decisions (H3: $\beta = 0.408$; $p < 0.001$). However, consumer skepticism does not significantly moderate the effect of social proof (H4: $\beta = 0.102$; $p = 0.243$) or influencer authenticity (H5: $\beta = -0.123$; $p = 0.156$) on purchase decisions. The full model explains 84.1% of the variance in purchase decisions ($R^2 = 0.841$; Adjusted $R^2 = 0.832$).

Theoretically, the study integrates social proof theory and source-authenticity literature within a moderation framework and empirically tests consumer skepticism as a psychological factor in a live-stream social commerce context. The finding that skepticism functions as a direct predictor rather than a moderator offers a nuanced perspective on how skepticism operates in TikTok-driven purchase environments, and invites reconceptualization of skepticism as an evaluative posture rather than a persuasion obstacle.

Managerially, the results imply that TikTok Shop sellers, brand managers, and influencers should prioritize credible, transparent, and authentic communication. Social proof cues—ratings, reviews, and engagement indicators—should be authentic and verifiable, since manipulated cues may erode trust. Partnerships with influencers should emphasize authenticity, honest disclosure, and consistency between on-camera and off-camera personas. Marketers should not view skeptical consumers as unreachable; rather, they should design content that provides substantive information and evidence, enabling skeptical consumers to satisfy their evaluative needs and translate scrutiny into confident purchase decisions.

The findings should be interpreted in light of several limitations, each of which suggests directions for future research. First, the sample size ($n = 100$) meets the Lemeshow minimum for unknown populations but constrains statistical power for detecting small-to-moderate interaction effects such as those observed for H4 and H5. Second, the non-probability accidental sampling design limits generalizability; the sample is not statistically representative of all TikTok Shop users. Third, data collection was confined to Medan; cross-city and cross-cultural replications are encouraged. Fourth, the cross-sectional data limit causal inference; longitudinal or experimental designs would strengthen causal claims. Fifth, all variables were measured via self-report from a single questionnaire, raising potential concerns about common-method bias. Sixth, consumer skepticism was measured as a general disposition; future studies should distinguish among advertising, influencer, review, and platform skepticism. Seventh, the model focuses on three antecedents and does not include other potentially relevant variables such as involvement, digital literacy, platform trust, perceived risk, or hedonic motivation. Future research should employ larger and more diverse samples, longitudinal or experimental designs, multi-group analysis (MGA), and cross-platform comparisons (e.g., TikTok Shop vs. Shopee Live, Instagram Shopping, or YouTube Shopping) to enrich understanding of how platform affordances shape the effects of social proof and influencer authenticity.

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