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Digital Customer Experience and Brand Loyalty: Mediating Engagement and Moderating Authenticity Among Generation Z

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Abstract

Grounded in the stimulus–organism–response paradigm, this study examines how digital customer experience (DCE) shapes brand loyalty (BL) among Generation Z social-commerce consumers, testing brand engagement (BE) as a mediating mechanism and brand authenticity (BA) as a moderating boundary condition. Survey data were collected from 384 Generation Z Shopee consumers across Kendari City, Konawe Regency, and Kolaka Regency, Indonesia, and analyzed using partial least squares structural equation modeling. Results show that DCE significantly predicts both BE and BL directly, that BE significantly and partially mediates the DCE–BL relationship, and that BA exerts a significant direct effect on BL but does not significantly moderate the BE–BL relationship. Theoretically, this study contributes an integrated test combining the stimulus–organism–response paradigm, consumer brand engagement theory, and brand authenticity theory within one moderated-mediation model, providing statistically decisive evidence that brand authenticity operates as an independent driver of loyalty rather than a condition strengthening engagement's effect, narrowing an unresolved debate over authenticity's structural role in recent social-commerce literature. Practically, brands should treat experience quality and authenticity-building as parallel, independently justified investments rather than assuming authenticity multiplies engagement's returns. These results extend social-commerce loyalty research to an underrepresented, non-metropolitan Indonesian context.

INTRODUCTION

Social commerce has emerged as one of the fastest-growing channels through which brands build and sustain consumer relationships worldwide, as social media platforms have evolved from purely communicative tools into fully transactional marketplaces that embed purchase decisions within everyday social interaction (Utami et al., 2025). This transformation is nowhere more visible than in Indonesia, where Generation Z, the demographic most native to this environment, has become at once the most digitally engaged and the least brand-loyal consumer cohort on platforms such as Shopee, since their purchase decisions are shaped less by product information alone than by the broader social and experiential context of the platform itself (Huwaida et al., 2024). Confronting this cohort, marketing scholarship has increasingly positioned digital customer experience, brand engagement, and brand authenticity as the principal psychological levers through which brands attempt to convert transient online interactions into durable brand loyalty (Hollebeek et al., 2014; Lemon & Verhoef, 2016; Morhart et al., 2015), setting the stage for the specific problem this study addresses.

Despite this growing theoretical attention, and despite substantial managerial investment in enhancing digital experience and engagement, brand loyalty among Generation Z social-commerce consumers remains persistently difficult to secure, a gap between practitioner effort and relational outcome that recent work attributes partly to the fact that the internal features and

functions of engagement itself are still not fully understood, which in turn limits scholars' and practitioners' ability to apply it effectively (Fang et al., 2025) To close this gap, researchers have generally turned to the stimulus–organism–response paradigm (Mehrabian & Russell, 1974), proposing that experience-driven engagement functions as the central mechanism converting brand stimuli into loyalty-relevant responses, a proposition that has itself been empirically supported in Indonesian social-commerce settings where online customer experience was shown to shape engagement, which subsequently drove repurchase-related behavioral intentions (Utami et al., 2025).

Building on this general S-O-R logic, scholars have turned to more fine-grained theories to specify precisely how engagement translates into loyalty and what conditions strengthen or weaken that translation. Consumer brand engagement theory (Hollebeek et al., 2014) supplies the cognitive-emotional-behavioral architecture through which engagement is conceptualized and measured, while brand authenticity theory (Morhart et al., 2015) supplies the credibility, integrity, continuity, and symbolism dimensions through which consumers judge whether a brand deserves their continued relational investment; critically, however, these two literatures have not converged on a single structural role for authenticity, with some studies positioning perceived brand authenticity as an antecedent that drives customer engagement itself (Kumar, 2025) and others positioning it as a direct antecedent of brand trust and loyalty rather than as a condition acting on engagement (Busser & Shulga, 2019).

This ambiguity has, if anything, sharpened rather than resolved in the most recent literature. (Wu, 2026) reports that perceived brand authenticity significantly strengthens the relationship between customer engagement and e-loyalty intentions in influencer-mediated social commerce, treating authenticity explicitly as a boundary condition; (Lyu et al., 2026) by contrast, explain authenticity's influence on trust and loyalty through parallel mediating mechanisms, perceived sincerity, self-congruence, and emotional attachment, drawn from self-determination, social identity, and self-congruity perspectives, with no interaction term at all; and (Fang et al., 2025) reaffirm, in a 2025 Scopus-indexed study of 575 consumers, that engagement's translation into loyalty operates through a distinct psychological-contract mechanism rather than through authenticity-based conditioning. Taken together, this cutting-edge but fragmented evidence base indicates that whether brand authenticity functions as an antecedent of engagement, a direct driver of loyalty, or a moderator of the engagement–loyalty link is not a settled matter but an active empirical contest, one that a single, rigorously tested moderated-mediation model could help adjudicate.

This theoretical fragmentation is compounded by a contextual imbalance in where such models have been tested. Empirical attention to Generation Z social-commerce behavior in Indonesia has concentrated disproportionately on e-commerce platforms rather than the social-commerce interactions that increasingly define Gen Z's shopping journey, a specific imbalance that Huwaida et al. (2024) explicitly identify as a gap requiring further bridging; moreover, the studies that do exist remain geographically concentrated, leaving non-metropolitan, cross-regency populations, such as those spanning Kendari City, Konawe Regency, and Kolaka Regency in Southeast Sulawesi, almost entirely absent from this literature. The conceptual and contextual gaps thus reinforce one another: without testing the engagement–authenticity–loyalty structure in an under-represented population, it remains unclear whether the conflicting structural roles reported by (Busser & Shulga, 2019; Kumar, 2025; Lyu et al., 2026; Wu, 2026) genuine theoretical disagreement or merely reflect differences in the samples and contexts each study happened to draw upon.

Building directly on this dual gap, the present study aims to examine the effect of digital customer experience on brand loyalty among Generation Z Shopee consumers, testing brand engagement as a mediating mechanism and brand authenticity as a moderating boundary condition on the engagement–loyalty relationship, a specification chosen precisely because it allows the competing antecedent-versus-moderator accounts of authenticity described above to be tested against one another within one integrated model rather than across disconnected studies. The novelty of this study is twofold: theoretically, it offers one of the first integrated tests combining the stimulus–organism–response paradigm, consumer brand engagement theory, and brand authenticity theory within a single moderated-mediation structure, providing direct empirical evidence on which of the structural roles proposed by the fragmented recent literature best describes how authenticity operates; contextually, it extends this test to an empirically underrepresented secondary-city Indonesian social-commerce population, drawing on survey data from 384 Generation Z Shopee consumers across Kendari City, Konawe Regency, and Kolaka Regency, analyzed using partial least squares structural equation modeling to establish both the reliability of the measurement model and the significance of each hypothesized structural path.

METHODS

Research Design

This study employed a quantitative, cross-sectional, explanatory research design intended to test the hypothesized causal relationships among digital customer experience, brand engagement, brand authenticity, and brand loyalty among Generation Z Shopee consumers. Partial least squares structural equation modeling (PLS-SEM) was selected as the analytical technique because it is particularly well suited to models that combine mediation and moderation within a single structural framework, accommodates the exploratory and prediction-oriented objectives of this study, and performs robustly with the ordinal, Likert-scaled survey data typical of consumer behavior research (Hair et al., 2022).

Population, Sampling Technique, and Sample Size Determination

The population of this study comprised all Generation Z consumers residing in Kendari City, Konawe regency , and Kolaka Regency who actively used Shopee and had purchased at least one product through the platform within the preceding twelve months; because no sampling frame enumerating this population exists, the population size was treated as unknown. Respondents were selected using purposive sampling, in which prospective participants first answered a set of screening questions confirming that they were at least eighteen years old and identified as Generation Z, actively used social media, had followed or viewed a brand's social media account, had interacted with that brand's content, and had purchased the brand's product within the past twelve months; respondents who had never purchased the recalled brand were excluded, since the brand loyalty construct presupposes actual consumption experience. Because the population size was unknown, the minimum required sample size was determined using (Cochran, 1977) formula for infinite populations at a 95% confidence level and a 5% margin of error, yielding a minimum requirement of 384 respondents; this figure was further cross-checked against the sample-size guidance of (Hair et al., 2022) for PLS-SEM, which ties minimum sample size to the maximum number of paths directed at any single endogenous construct in the model; a criterion comfortably satisfied here, since the most complex construct in the model, brand loyalty, receives paths from the exogenous, mediating, moderating, and interaction terms simultaneously. To accommodate

anticipated non-response and incomplete submissions, 450 questionnaires were distributed rather than the bare minimum of 384. As summarized in Table 1, the obtained valid sample of 384 respondents met the calculated minimum requirement precisely, corresponding to a fulfillment rate of 100%.

Table 1. Sample size determination and response rate

Indicator	Value
Minimum sample size (Cochran, 1977; 95% CI, 5% margin of error)	384
Questionnaires distributed	450
Questionnaires returned	411
Incomplete or ineligible responses	27
Valid questionnaires analyzed	384
Response rate	91.3%
Usable response rate	85.3%
Minimum sample size fulfillment	384 / 384 (100%)

3.3. Data Collection Procedure and Response Rate

Data were collected using a self-administered, structured online questionnaire in which respondents first completed the screening items described above before proceeding to the main measurement items, all of which were anchored to a single brand of the respondent's own choosing that they had seen, followed, interacted with, and purchased through social media. Of the 450 questionnaires distributed, 411 were returned and 27 were subsequently excluded for incompleteness or failure to meet the screening criteria, leaving 384 valid responses for analysis, as shown in Table 1. The resulting response rate of 91.3% and usable response rate of 85.3% substantially exceed the average individual-level survey response rate of 52.7% reported across organizational and consumer research, indicating a low risk of non-response bias and supporting the adequacy of the achieved sample for subsequent structural equation modeling.

3.4. Measurement and Operationalization of Constructs

All four constructs were measured using multi-item reflective scales adapted to the social-media brand-interaction context and rated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Digital customer experience was operationalized following the multidimensional customer-experience conceptualization of (Lemon & Verhoef, 2016), capturing sensory, cognitive, emotional, and behavioral responses to a brand's digital touchpoints. Brand engagement was operationalized following (Hollebeek, 2011) consumer brand engagement framework, capturing cognitive, emotional, and behavioral engagement with the brand. Brand authenticity was operationalized following (Morhart et al., 2015) integrative framework, capturing perceived credibility, integrity, continuity, and sincerity. Brand loyalty was operationalized in line with (Oliver, 1999) conceptualization of loyalty as encompassing repurchase intention, brand preference, and resistance to switching. An overview of the instrument, including the number of items retained for each construct, is presented in Table 3.

Table 3. Summary of the measurement instrument

Construct	Theoretical grounding	Number of items
Digital customer experience	Lemon & Verhoef (2016)	8

Construct	Theoretical grounding	Number of items
Brand engagement	Hollebeek et al. (2014)	6
Brand authenticity	Morhart et al. (2015)	6
Brand loyalty	Oliver (1999)	6
Total		26

3.5. Data Analysis Technique

Data were analyzed using PLS-SEM in SmartPLS 4 (Ringle et al., 2022), following the two-stage assessment procedure recommended by (Hair et al., 2022). In the first stage, the measurement model was evaluated for indicator reliability using outer loadings, internal consistency reliability using Cronbach's alpha and composite reliability (rho_a and rho_c), and convergent validity using average variance extracted, with discriminant validity subsequently assessed using both the (Fornell & Larcker, 1981) criterion and the heterotrait-monotrait ratio of correlations (Henseler et al., 2015). In the second stage, the structural model was evaluated using path coefficients, the coefficient of determination (R^2) and adjusted R^2 for each endogenous construct, effect sizes (f^2), and out-of-sample predictive relevance (Q^2predict) obtained through PLSpredict, while the significance of all direct, indirect, and moderating paths was assessed using a bootstrapping procedure with 5,000 resamples, consistent with current PLS-SEM best practice (Hair et al., 2022). The moderating effect of brand authenticity on the relationship between brand engagement and brand loyalty was estimated using the two-stage approach to interaction modeling, in which the latent interaction term was constructed from the standardized indicators of the two underlying constructs.

RESULTS AND DISCUSSION

Results

3.1. Respondent Profile and Data Collection

Of the 450 questionnaires distributed to Generation Z Shopee consumers in Kendari City, Konawe Regency, and Kolaka Regency, 411 were returned and 384 met the inclusion criteria and were retained for analysis, yielding a response rate of 91.3% and a usable response rate of 85.3% (Table 1). Both figures exceed the 70% threshold commonly regarded as adequate for survey-based research (Hair et al., 2022). The final sample of 384 respondents also exceeds the minimum size required by Cochran's formula (95% confidence level, 5% margin of error) and satisfies the minimum sample recommendations of (Hair et al., 2022) for PLS-SEM models with four latent constructs, one mediator, and one moderator.

Table 1. Response rate and sample adequacy

Description	n	%
Questionnaires distributed	450	100.0
Questionnaires returned	411	91.3
Incomplete/ineligible responses	27	6.0
Valid questionnaires analyzed	384	85.3

Table 2 summarizes respondent characteristics. The sample was predominantly female (59.4%) and aged 21–23 years (38.0%); most respondents were students (47.9%) and resided in Kendari City (47.4%). A majority had used Shopee for three years or more (70.5% combined) and purchased through the platform four or more times in the preceding three months (58.3% combined), indicating an experienced user base well suited to assessing brand-related constructs.

Table 2. Respondent characteristics (n = 384)

Characteristic	Category	n	%
Gender	Male	156	40.6
	Female	228	59.4
Age	18–20 years	92	24.0
	21–23 years	146	38.0
	24–26 years	94	24.5
	27–29 years	52	13.5
Occupation	Student	184	47.9
	Private employee	82	21.4
	Civil servant	28	7.3
	Entrepreneur	48	12.5
	Unemployed/fresh graduate	42	10.9
Domicile	Kendari City	182	47.4
	Konawe Regency	116	30.2
	Kolaka Regency	86	22.4
Shopee usage duration	< 1 year	31	8.1
	1–2 years	82	21.4
	3–4 years	146	38.0
	> 4 years	125	32.5
Purchase frequency (past 3 months)	2–3 times	106	27.6
	4–5 times	131	34.1
	6–10 times	93	24.2
	> 10 times	54	14.1
Most-purchased category	Skincare and cosmetics	136	35.4
	Fashion and accessories	112	29.2
	Electronics and gadget accessories	51	13.3
	Food and beverages	43	11.2
	Household products	42	10.9
Average transaction value	< IDR 100,000	83	21.6

Characteristic	Category	n	%
	IDR 100,000–249,999	152	39.6
	IDR 250,000–499,999	96	25.0
	≥ IDR 500,000	53	13.8
Repeat purchases (same brand)	2 times	129	33.6
	3–4 times	146	38.0
	5–6 times	68	17.7
	> 6 times	41	10.7

3.2. Measurement Model (Outer Model) Assessment

All indicators loaded above the recommended minimum of 0.60, with the majority exceeding 0.70 (Hair et al., 2022), supporting item-level reliability. Table 3 presents the reliability and convergent validity statistics for each construct. Cronbach's alpha, composite reliability (rho_a and rho_c), and average variance extracted (AVE) all exceeded the recommended thresholds of 0.70, 0.70, and 0.50, respectively, confirming that the measurement model demonstrates adequate internal consistency reliability and convergent validity.

Table 3. Reliability and convergent validity

Construct	Loading range	Cronbach's α	rho_a	rho_c	AVE
Digital Customer Experience (DCE)	0.723–0.758	0.884	0.884	0.908	0.551
Brand Engagement (BE)	0.674–0.830	0.848	0.849	0.887	0.567
Brand Authenticity (BA)	0.718–0.828	0.860	0.861	0.896	0.589
Brand Loyalty (BL)	0.711–0.849	0.887	0.889	0.915	0.642

3.3. Discriminant Validity

Discriminant validity was assessed using the Fornell-Larcker criterion (Table 4) and the heterotrait-monotrait (HTMT) ratio (Table 5). The HTMT values ranged from 0.293 to 0.875, all below the conservative threshold of 0.90 recommended by (Henseler et al., 2015), supporting discriminant validity across all construct pairs. The Fornell-Larcker criterion was satisfied for most construct pairs; the correlation between DCE and BA (0.806) marginally exceeded the square root of BA's AVE (0.767), a common occurrence for conceptually related constructs in social-media brand-experience research and one that HTMT — regarded as the more robust criterion (Henseler et al., 2015) — did not flag as problematic (DCE–BA HTMT = 0.823).

Table 4. Fornell-Larcker criterion

	BA	BE	BL	DCE
BA	**0.767**			

	BA	BE	BL	DCE
BE	0.723	**0.753**		
BL	0.725	0.659	**0.801**	
DCE	0.806	0.697	0.775	**0.743**

Note. Diagonal values (bold) are the square roots of AVE.

Table 5. Heterotrait-monotrait ratio (HTMT)

	BA	BE	BL	DCE
BE	0.819			
BL	0.827	0.731		
DCE	0.823	0.777	0.875	
BE × BA	0.357	0.401	0.293	0.393

3.4. Structural Model (Inner Model) Assessment

The coefficient of determination (R^2) for Brand Loyalty was 0.712 (adjusted R^2 = 0.708), indicating that DCE, BE, BA, and their interaction jointly explained 71.2% of the variance in Brand Loyalty — a substantial level of explanatory power (Hair et al., 2022). The R^2 for Brand Engagement was 0.485 (adjusted R^2 = 0.484), reflecting a moderate effect. The Q^2predict values for BL (0.668) and BE (0.480) were both well above zero, confirming that the model possesses satisfactory predictive relevance (Table 6).

Table 6. Structural model summary

Endogenous construct	R^2	Adjusted R^2	Q^2predict	RMSE	MAE
Brand Loyalty (BL)	0.712	0.708	0.668	0.580	0.428
Brand Engagement (BE)	0.485	0.484	0.480	0.726	0.583

Effect sizes (f^2) and collinearity statistics (VIF) for each structural path are reported in Table 7. DCE exerted a very large effect on BE (f^2 = 0.944) and a medium-to-large effect on BL (f^2 = 0.266), while BE's effect on BL was small-to-medium (f^2 = 0.120) and BA's main effect on BL was small (f^2 = 0.037). The BE × BA interaction term showed negligible effect size (f^2 = 0.000). All VIF values were below 5 (ranging from 1.000 to 3.037), indicating that collinearity is not a concern in the structural model.

Table 7. Effect size (f^2) and collinearity statistics (VIF)

Path	f^2	VIF
DCE → BE	0.944	1.000
DCE → BL	0.266	3.037
BE → BL	0.120	2.155
BA → BL	0.037	2.693
BE × BA → BL	0.000	1.193

3.5. Hypothesis Testing

Path coefficients were estimated using a bootstrapping procedure with 5,000 resamples. As shown in Table 8, DCE had a strong and significant effect on BE (β = 0.697, t = 25.378, p < .001) and a significant direct effect on BL (β = 0.483, t = 8.752, p < .001). BE significantly and positively influenced BL (β = 0.274, t = 5.965, p < .001), and BA also exerted a significant positive main effect on BL (β = 0.169, t = 3.159, p = .002). However, the interaction term (BE × BA → BL) was not statistically significant (β = 0.005, t = 0.225, p = .822), indicating that the moderating effect of Brand Authenticity on the relationship between Brand Engagement and Brand Loyalty was not supported in this sample.

Table 8. Path coefficients and hypothesis testing

Hypothesized path	Original sample (β)	Sample mean	SD	t-statistic	p-value	Decision
DCE → BE	0.697	0.699	0.027	25.378	< .001	Supported
DCE → BL	0.483	0.482	0.055	8.752	< .001	Supported
BE → BL	0.274	0.274	0.046	5.965	< .001	Supported
BA → BL	0.169	0.170	0.053	3.159	.002	Supported
BE × BA → BL	0.005	0.005	0.022	0.225	.822	Not supported

3.6. Mediation Analysis

The indirect effect of DCE on BL through BE was significant (β = 0.191, t = 5.904, p < .001; Table 9), confirming that Brand Engagement partially mediates the relationship between Digital Customer Experience and Brand Loyalty, given that the direct effect of DCE on BL (β = 0.483, p < .001) also remained significant.

Table 9. Mediation (indirect effect) test

Indirect path	β	SD	t-statistic	p-value	Type of mediation
DCE → BE → BL	0.191	0.032	5.904	< .001	Partial mediation

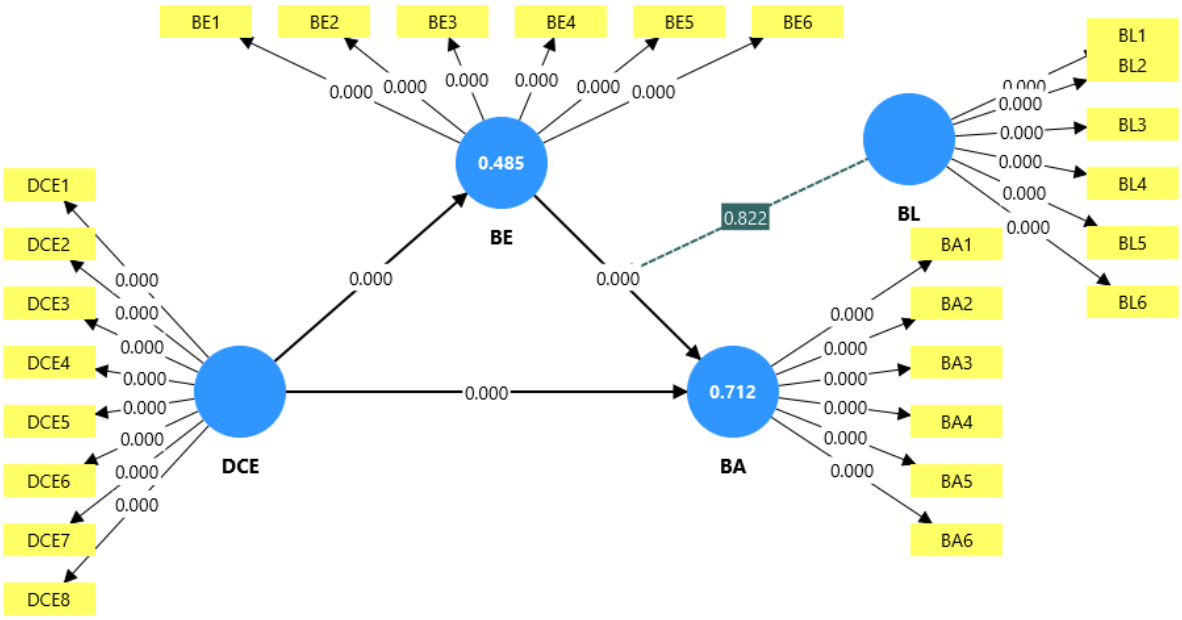

Figure 1 presents the estimated structural model with standardized path coefficients.*Figure 1. Structural model with standardized path coefficients (bootstrapping, n = 384). DCE = Digital Customer Experience; BE = Brand Engagement; BA = Brand Authenticity; BL = Brand Loyalty.*

DISCUSSION

Overview of Findings in Relation to the Research Objectives

This study set out to examine how digital customer experience (DCE) shapes brand loyalty (BL) among Generation Z social-commerce consumers, and whether this relationship is transmitted through brand engagement (BE) and conditioned by brand authenticity (BA). Four of the five hypothesized structural relationships were supported: DCE exerted both a direct and an engagement-mediated effect on BL, BE itself significantly predicted BL, and BA exerted a significant direct effect on BL. Only the hypothesized interaction between BE and BA failed to reach significance. Consistent with the expectation that a discussion section should weigh all findings in proportion to their theoretical relevance rather than privileging only the confirmatory results, the sections below treat the null moderation not as an isolated anomaly but as informative evidence about the conditions under which brand authenticity operates in social commerce.

Theoretical Interpretation of the Structural Findings

Digital experience as the dominant stimulus in the response sequence. The stimulus–organism–response logic (Mehrabian & Russell, 1974) frames DCE as the environmental stimulus that triggers an internal organismic state (engagement) before manifesting in a behavioral response (loyalty). The present results extend this logic in an important way: rather than operating exclusively through engagement, DCE retained a strong direct association with loyalty even after the mediating path was accounted for. This pattern indicates that a sufficiently rich digital experience can shape loyalty through more than one route simultaneously, corroborating Lemon and (Lemon & Verhoef, 2016) contention that experience quality operates as a primary relational lever across, rather than only within, a single mechanism, and aligning with evidence from Indonesian social-commerce settings in which online customer experience has been shown to exert both direct and engagement-transmitted associations with downstream behavioral intentions (Utami et al., 2025).

Engagement as a partial, not exhaustive, transmission mechanism. The significant indirect effect of DCE on BL through BE confirms that engagement is a genuine, not merely nominal, mechanism linking experience to loyalty, consistent with (Hollebeek et al., 2014) conceptualization of consumer brand engagement as a positively valenced cognitive, emotional, and behavioral state that intervenes between brand stimuli and relational outcomes. However, because the direct DCE–BL path remained significant net of this mediation, engagement should be understood as one of several channels rather than the sole bridge connecting experience to loyalty. This qualifies a common implicit assumption in the customer-experience literature, namely that engagement fully absorbs experience's downstream relational value; the present findings instead point to a partial-mediation architecture in which experience retains independent explanatory power.

Brand authenticity as a parallel driver rather than a boundary condition. The most theoretically consequential finding is the co-occurrence of a significant direct effect of BA on BL with a non-significant BE × BA interaction. Read through (Morhart et al., 2015) integrative framework, in which authenticity is judged along credibility, integrity, continuity, and sincerity, this pattern suggests that authenticity operates as an independent evaluative input into loyalty formation rather than as a condition that

amplifies the strength of an already-formed engagement. Signaling theory (Spence, 1973) offers a compatible explanation: authenticity cues function as brand-level signals that reduce information asymmetry about a firm's underlying quality and intentions, a function that is conceptually separable from, and need not scale with, a consumer's level of behavioral engagement. This interpretation is further reinforced by recent work integrating self-determination, social identity, and self-congruity perspectives to explain why authenticity fosters trust and loyalty through value internalization, identity signaling, and reduced self-concept incongruity mechanisms that operate independently of engagement intensity rather than by moderating an existing engagement effect (Lyu et al., 2026)Taken together, these perspectives imply that the absence of an interaction effect is not a failure to detect a true moderation, but a substantively meaningful indication that authenticity's contribution to loyalty is additive rather than conditional.

Positioning Relative to Prior Empirical Evidence

The pattern of a direct authenticity effect without a corresponding interaction effect both aligns with and complicates the recent empirical record. It aligns with (Busser & Shulga, 2019), who modeled brand authenticity as an antecedent feeding into loyalty-relevant consumer involvement rather than as a statistical moderator, implying that direct-effect specifications of authenticity are already well established in adjacent service contexts. It complicates the picture set by (Wu, 2026), who reported a significant positive interaction between brand authenticity and customer engagement on e-loyalty intentions in influencer-mediated social commerce. A plausible reconciliation is contextual: (Wu, 2026) setting involves a third-party endorser whose credibility must first be authenticated before engagement can be trusted, making identity-consistency judgments especially salient at the point of conversion from engagement to loyalty; the present study's context, in which respondents evaluate a self-selected brand encountered through ordinary social-media interaction rather than through influencer mediation, may not activate the same authenticity-contingent skepticism. This contrast itself narrows, rather than merely restates, the boundary conditions under which brand authenticity functions as a moderator, and does so in a context, Generation Z social commerce in a non-metropolitan Indonesian setting, that has received markedly less empirical attention than the e-commerce-dominant literature base identified by (Huwaida et al., 2024)

Theoretical Contribution

Three contributions follow from this configuration of results. First, the study integrates the stimulus–organism–response paradigm with consumer brand engagement theory and brand authenticity theory into a single tested model, rather than treating these frameworks in isolation as much of the extant literature does. Second, it supplies comparatively decisive statistical evidence, via a non-significant bootstrapped interaction term, against the assumption that brand authenticity generically strengthens the engagement–loyalty link, thereby sharpening rather than merely adding to the boundary-condition debate opened by studies such as (Wu, 2026). Third, by documenting a partial-mediation architecture in which experience retains direct explanatory power net of engagement, the study cautions against engagement-centric theorizing that implicitly treats engagement as the necessary and sufficient conduit between experience and loyalty.

Managerial Implications

At the level of individual brands and sellers operating in secondary-city Indonesian social commerce, these findings imply that investment in digital experience quality yields returns through two simultaneous channels rather than one, and therefore warrants prioritization over narrower engagement-only tactics; authenticity-building measures, meanwhile, should be pursued as a

parallel and independently justified investment rather than as a mechanism expected to multiply the returns to engagement campaigns. At a broader, cross-market level, the absence of a reliable interaction effect suggests that authenticity-signaling strategies, transparent communication, consistent brand narratives, and demonstrable follow-through on promises, can be deployed uniformly across customer segments regardless of their existing engagement level, offering a simpler and more scalable managerial heuristic than a segmentation strategy premised on targeting authenticity efforts only at already-engaged consumers.

Limitations and Future Research Directions

Two limitations qualify these conclusions and, in turn, motivate future inquiry. The cross-sectional design restricts causal interpretation of the modeled sequence, and although the theoretical ordering follows established S-O-R and engagement logic, longitudinal or experimental designs would allow the direct and mediated pathways from experience to loyalty to be disentangled with greater confidence. In addition, because respondents self-selected the brand they evaluated, brand-level heterogeneity, category, endorsement type, and prior relationship length, was not controlled, which may itself account for some of the discrepancy with moderation effects observed in more tightly controlled contexts such as (Wu, 2026); future studies could therefore profitably reformulate brand authenticity as a parallel antecedent alongside engagement, rather than solely as an interaction term, and test this reformulated structure across multiple brand categories and, following (Huwaida et al., 2024), across a wider set of Indonesian regions to establish the geographic generalizability of the present pattern.

CONCLUSION

This study examined the influence of digital customer experience on brand loyalty among Generation Z Shopee consumers by testing brand engagement as a mediator and brand authenticity as a moderator. The findings show that digital customer experience directly strengthens brand loyalty and also increases loyalty indirectly through brand engagement. Brand engagement therefore acts as a partial mediator. Brand authenticity also has a significant direct effect on brand loyalty. However, it does not strengthen the relationship between brand engagement and brand loyalty. This finding indicates that authenticity operates as an independent driver of loyalty rather than as a condition that increases the effect of engagement.

The study contributes by integrating digital customer experience, brand engagement, brand authenticity, and brand loyalty within a single model and by extending social-commerce research to Generation Z consumers in Kendari, Konawe, and Kolaka. Practically, brands and sellers should prioritize high-quality digital experiences while building authenticity through transparent communication, consistent actions, and credible brand narratives. The findings are limited by the cross-sectional design, the focus on one platform, and the regional research setting. Future studies may use longitudinal designs, multiple platforms, broader regions, and comparisons across product categories.

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