

# Brand Love and Customer Engagement in Social Commerce Platforms among Indonesian Consumers

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## ABSTRACT

This study investigates the relationships between brand affinity, customer engagement, and customer loyalty within social commerce platforms among Indonesian consumers. Grounded in relationship marketing and the Stimulus–Organism–Response (S-O-R) framework, the research adopts a quantitative approach to examine both direct and indirect effects among the constructs. Data were collected from 150 respondents using a structured questionnaire measured on a five-point Likert scale. The analysis was conducted using Structural Equation Modeling–Partial Least Squares (SEM-PLS) with SmartPLS 3. The results reveal that brand affinity has a significant positive effect on customer engagement and customer loyalty. Customer engagement also significantly influences customer loyalty, indicating its dominant role in shaping consumer commitment. Furthermore, mediation analysis confirms that customer engagement partially mediates the relationship between brand affinity and customer loyalty. These findings suggest that emotional attachment to a brand must be translated into active interaction to effectively generate loyalty in social commerce environments. This study contributes to the literature by integrating emotional and behavioral constructs within a unified framework and provides empirical evidence from an emerging market context. Practically, the findings offer strategic insights for businesses to enhance customer relationships through engagement-driven marketing approaches, thereby strengthening long-term loyalty in increasingly competitive digital marketplaces.

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## 1. INTRODUCTION

The rapid diffusion of digital technologies has fundamentally reshaped the architecture of contemporary commerce, most notably through the emergence of social

commerce platforms. Unlike conventional e-commerce, social commerce embeds social media functionalities such as interactive communication, user-generated content, and community-based engagement directly into transactional processes [1]–[3]. This

integration has reconfigured how consumers discover, evaluate, and interact with brands, shifting the locus of value creation from purely transactional exchanges to socially embedded experiences [4], [5]. In emerging economies such as Indonesia, this transformation is particularly salient due to high social media penetration and the widespread adoption of mobile-based consumption. Platforms such as Instagram, TikTok, and Shopee have evolved into hybrid ecosystems where social interaction and commercial activities are deeply intertwined [6]–[8].

This convergence has intensified competitive dynamics, compelling firms to move beyond short-term transactional strategies toward relational approaches that emphasize long-term customer relationships. Within this context, brand affinity has gained increasing prominence as a strategic construct, representing the emotional attachment and psychological closeness that consumers develop toward a brand. Strong brand affinity enhances not only consumers' affective evaluations but also their propensity to engage with and advocate for brands [9], [10]. In social commerce environments where visibility of user interaction amplifies influence brand affinity becomes a critical antecedent of relational outcomes.

Customer engagement plays a central role in operationalizing these relational dynamics. Conceptualized as a multidimensional construct encompassing cognitive, emotional, and behavioral dimensions, engagement reflects the depth of consumers' interactive experiences with brands [11]–[13]. Within social commerce platforms, engagement manifests through observable behaviors such as liking, commenting, sharing, and participating in brand-related discussions [10], [14]. These interactions extend beyond passive consumption, functioning as co-creative activities that shape brand meaning and influence peer decision-making. Consequently, higher levels of engagement are associated with stronger relational outcomes, including trust, satisfaction, and ultimately, customer loyalty.

Customer loyalty remains a cornerstone of marketing strategy due to its direct implications for firm performance, including repeat patronage, reduced acquisition costs, and positive word-of-mouth [15]–[17]. However, within social commerce contexts, loyalty is increasingly driven by experiential and relational factors rather than solely by functional attributes such as price and product quality. Elements such as perceived authenticity, quality of interaction, and emotional resonance with the brand have become decisive [18], [19]. This paradigm shift necessitates a more nuanced understanding of how affective constructs (e.g., brand affinity) and behavioral mechanisms (e.g., customer engagement) jointly influence loyalty formation in digitally mediated environments.

Despite the growing scholarly attention to social commerce, several gaps persist. First, empirical research examining the integrated relationships among brand affinity, customer engagement, and customer loyalty remains limited, particularly within a unified analytical framework. Second, the dominance of studies conducted in developed markets constrains the generalizability of findings to emerging economies, where socio-cultural dynamics and digital consumption patterns differ significantly. Third, there is a methodological gap in applying advanced analytical approaches, such as Structural Equation Modeling–Partial Least Squares (SEM-PLS), to simultaneously test complex direct and mediating relationships among latent constructs.

To address these gaps, this study investigates the direct and indirect relationships between brand affinity, customer engagement, and customer loyalty in the context of social commerce in Indonesia. Specifically, this research aims to: (1) examine the effect of brand affinity on customer engagement; (2) analyze the influence of brand affinity on customer loyalty; (3) evaluate the impact of customer engagement on customer loyalty; and (4) assess the mediating role of customer engagement in the relationship between brand affinity and customer loyalty. A

quantitative approach is employed, utilizing survey data from 150 respondents and analyzed using SEM-PLS.

This study offers both theoretical and practical contributions. Theoretically, it advances the relationship marketing and social commerce literature by integrating emotional and behavioral constructs into a cohesive framework that explains loyalty formation in digital environments. Practically, the findings provide actionable insights for firms operating within social commerce ecosystems, particularly in designing strategies that foster deeper emotional connections and sustained engagement. In an increasingly competitive and digitally mediated marketplace, understanding the mechanisms underpinning customer loyalty is critical for achieving long-term competitive advantage.

## 2. LITERATURE REVIEW

### 2.1 *Theoretical Foundation*

This study is grounded in relationship marketing theory and consumer behavior perspectives, which emphasize the strategic importance of fostering long-term relational exchanges rather than relying solely on transactional interactions. Relationship marketing posits that sustained interactions, emotional bonds, and mutual value creation between firms and customers generate stronger relational outcomes, such as customer loyalty and advocacy, a premise that becomes increasingly salient within digital environments characterized by high interactivity and user participation, particularly in social commerce platforms [20]–[22]. Complementing this perspective, the Stimulus–Organism–Response (S-O-R) framework provides a robust theoretical lens for explaining consumer behavior in such contexts, wherein external stimuli related to the brand (e.g., brand affinity) shape internal psychological states (e.g., customer engagement), which in turn drive behavioral responses (e.g., customer loyalty). This integrative theoretical foundation enables a comprehensive

examination of both direct and mediating relationships among the key constructs, thereby offering a more nuanced understanding of how relational and psychological mechanisms jointly influence loyalty formation in social commerce settings.

### 2.2 *Social Commerce Platforms*

Social commerce refers to the integration of social media and e-commerce functionalities, enabling users to engage in buying and selling activities within a socially interactive environment. Unlike conventional e-commerce, social commerce places greater emphasis on user interaction, content sharing, and community influence in shaping purchasing decisions. In the Indonesian context, platforms such as TikTok, Instagram, and Shopee have emerged as dominant channels, offering features such as live shopping, influencer marketing, and user-generated reviews that facilitate commercial activities within social ecosystems [23]–[25]. These platforms enable bidirectional communication between brands and consumers, fostering more immersive and personalized shopping experiences. Moreover, the presence of social signals such as likes, comments, and shares enhances the visibility of user interactions and amplifies their influence on broader audiences [26], [27]. As a result, social commerce environments create conditions in which relational constructs, particularly brand affinity and customer engagement, become central determinants in shaping consumer behavior and decision-making processes.

### 2.3 *Brand Affinity*

Brand affinity refers to the emotional bond, psychological closeness, and sense of identification that consumers develop toward a brand, extending beyond mere awareness or cognitive evaluation by emphasizing affective attachment and personal relevance. Consumers with high brand affinity tend to perceive the brand as aligned with their values, identity, and lifestyle, which

strengthens their relational orientation toward the brand. In social commerce contexts, this affinity is continuously reinforced through interactive mechanisms such as storytelling, personalized communication, and ongoing engagement between brands and users [9], [10]. Features including influencer endorsements, behind-the-scenes content, and interactive campaigns contribute to deepening emotional connections and enhancing perceived authenticity. Empirical evidence consistently indicates that strong brand affinity is associated with higher levels of trust, increased consumer engagement, and stronger purchase intentions. From a theoretical perspective, brand affinity can be conceptualized as a key stimulus within the Stimulus–Organism–Response (S-O-R) framework, as it shapes consumers' internal psychological states and subsequently drives behavioral outcomes; accordingly, it is expected to play a critical role in influencing both customer engagement and customer loyalty [20]–[22].

#### 2.4 Customer Engagement

Customer engagement is defined as the extent of a customer's cognitive, emotional, and behavioral investment in interactions with a brand, encompassing activities such as content consumption, participation in discussions, and value co-creation through user-generated content. Within social commerce environments, engagement becomes highly observable and quantifiable through digital interactions including likes, comments, shares, and live participation which not only reflect individual involvement but also shape brand perceptions among wider audiences, thereby positioning engagement as both an individual-level construct and a broader social phenomenon [11], [12]. Conceptually, customer engagement is widely understood as a multidimensional construct consisting of cognitive engagement (the degree of attention and interest in brand-related content),

emotional engagement (the level of enthusiasm, enjoyment, or attachment toward the brand), and behavioral engagement (the actions undertaken by consumers in interacting with the brand). As such, customer engagement functions as a critical mechanism through which relational constructs are translated into tangible behavioral outcomes; accordingly, in this study, it is positioned as a mediating variable that links brand affinity to customer loyalty [28]–[30].

#### 2.5 Customer Loyalty

Customer loyalty refers to a deeply held commitment to repurchase or consistently use a preferred product or service over time, and is commonly conceptualized in two dimensions: behavioral loyalty, reflected in repeat purchasing behavior, and attitudinal loyalty, which captures emotional commitment and the willingness to engage in positive word-of-mouth [15], [16]. In the context of social commerce, loyalty is shaped not only by product satisfaction but also by the quality of interactions and the overall experiential value provided by the platform. Consumers who develop strong emotional connections with a brand and actively engage within its digital ecosystem are more likely to exhibit sustained loyalty [31], [32]. Furthermore, loyal customers in social commerce environments frequently assume the role of brand advocates, voluntarily promoting the brand within their social networks, thereby amplifying its reach and credibility through electronic word-of-mouth (e-WOM). This dual function of loyalty as both a retention mechanism and a driver of customer acquisition—underscores its strategic importance in digitally mediated marketplaces.

#### 2.6 Conceptual Framework and Hypothesis Development

Based on the theoretical and empirical review, this study proposes a conceptual framework that integrates brand affinity, customer engagement, and customer loyalty within the context of

social commerce. Prior research indicates that brand affinity exerts a significant positive influence on customer engagement, as consumers who feel emotionally connected to a brand are more likely to invest time, attention, and effort in interacting with brand-related content, including participating in discussions, sharing experiences, and engaging in value co-creation. Within social commerce environments—where interaction constitutes a core feature—brand affinity functions as a primary driver that encourages consumers to move beyond passive consumption toward active participation. In addition, brand affinity is strongly associated with customer loyalty, as emotional attachment fosters repeat purchasing behavior and reduces the likelihood of switching to competing brands. This form of loyalty is not solely based on rational evaluation but is reinforced by affective commitment, trust, and reduced perceived risk in digital environments, leading to higher retention rates and stronger advocacy behaviors.

Furthermore, customer engagement plays a pivotal role in strengthening customer loyalty by deepening the relational bond between consumers and brands. Engaged consumers tend to develop higher levels of satisfaction, familiarity, and trust through continuous interaction, all of which are critical components of sustained loyalty. In social commerce platforms, engagement activities—such as commenting, sharing, and participating in live sessions—also create a sense of community and belonging, embedding consumers within a network of brand-related interactions that further reinforce loyalty. Importantly, customer engagement is conceptualized as a mediating variable that explains how relational constructs translate into behavioral outcomes. Specifically, this study posits that brand affinity, as an emotional stimulus, first drives active interaction in the form of engagement,

which subsequently leads to long-term commitment reflected in customer loyalty. Without sufficient engagement, the influence of brand affinity on loyalty may remain indirect or attenuated; therefore, examining the mediating role of customer engagement enables a more comprehensive understanding of the underlying mechanisms of consumer behavior in social commerce. The relationships are subsequently formulated into a set of testable hypotheses.

H1: Brand affinity has a positive effect on customer engagement

H2: Brand affinity has a positive effect on customer loyalty

H3: Customer engagement has a positive effect on customer loyalty

H4: Customer engagement mediates the relationship between brand affinity and customer loyalty

### 3. RESEARCH METHODS

#### 3.1 Research Design

This study adopts a quantitative research design with an explanatory approach to investigate the causal relationships among brand affinity, customer engagement, and customer loyalty within social commerce contexts. This design is appropriate for testing theoretically grounded hypotheses and evaluating both direct and indirect effects among latent constructs. Data were collected באמצעות a cross-sectional survey, capturing respondents' perceptions and behavioral tendencies at a single point in time. The analytical framework employs Structural Equation Modeling–Partial Least Squares (SEM-PLS), implemented using SmartPLS 3, due to its suitability for predictive and exploratory research, its robustness when applied to relatively small sample sizes, and its capacity to estimate complex structural models involving multiple constructs and mediating relationships simultaneously.

#### 3.2 Population and Sample

The target population in this study comprises Indonesian consumers

who actively utilize social commerce platforms for browsing, interacting, and purchasing products. Due to the absence of a comprehensive sampling frame, a non-probability sampling approach was adopted, specifically purposive sampling, to ensure that respondents possess relevant experience aligned with the research objectives. The selection criteria were defined as follows: respondents must be Indonesian residents, must have prior experience using social commerce platforms (such as live shopping features or social media-based marketplaces), and must have interacted with or purchased from a brand through social commerce within the past six months. These criteria were established to ensure the validity and contextual relevance of the collected data.

A total of 150 valid responses were obtained and included in the data analysis. This sample size satisfies the minimum requirements for Structural Equation Modeling–Partial Least Squares (SEM-PLS), particularly based on the “10-times rule,” which recommends that the sample size should be at least ten times the maximum number of structural paths directed at a latent construct within the model. Accordingly, the sample is considered adequate for estimating both the measurement and structural models, as well as for testing the hypothesized direct and mediating relationships among the constructs.

### 3.3 Data Collection Technique

Data were collected using a structured questionnaire distributed online, designed to measure respondents’ perceptions of brand affinity, customer engagement, and customer loyalty within social commerce platforms. The instrument employed a five-point Likert scale, ranging from 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, to 5 = strongly agree, which enables the quantification of subjective perceptions and facilitates statistical analysis. Prior to full distribution, the questionnaire was reviewed to ensure clarity of items,

relevance to the constructs being measured, and overall content validity, thereby supporting the reliability and accuracy of the data collected.

### 3.4 Operational Definition of Variables

This study examines three primary latent variables: brand affinity (independent variable), customer engagement (mediating variable), and customer loyalty (dependent variable), each operationalized based on established literature. Brand affinity refers to the emotional attachment and psychological closeness between consumers and a brand, reflected through indicators such as feelings of connection, personal relevance, and emotional identification. Customer engagement represents the level of consumer involvement in brand-related interactions, encompassing cognitive, emotional, and behavioral dimensions, with indicators including frequency of interaction, enthusiasm toward brand content, and participation in brand activities. Customer loyalty denotes the commitment to repurchase and sustain a relationship with a brand, measured indicators such as repeat purchase intention, willingness to recommend, and resistance to switching to competing brands. All constructs are specified as reflective measurement models, in which the observed indicators are assumed to be manifestations of the underlying latent variables.

### 3.5 Instrument Development

Measurement items for each construct were adapted from prior empirical studies to ensure reliability and validity, with the questionnaire comprising multiple indicators for each variable, namely brand affinity (4–5 items), customer engagement (5–6 items), and customer loyalty (4–5 items). The items were slightly modified to align with the specific context of social commerce in Indonesia while preserving their original conceptual meaning, and the instrument was developed in a structured format to ensure consistency and comparability of responses across participants.

### 3.6 Data Analysis Technique

Data analysis was conducted using SEM-PLS with SmartPLS 3, following a two-stage approach that includes evaluation of the measurement model (outer model) and the structural model (inner model). The outer model assessment aims to examine the reliability and validity of the constructs, including convergent validity, which is assessed outer loadings ( $> 0.70$ ) and Average Variance Extracted ( $AVE > 0.50$ ), as well as internal consistency reliability, evaluated using Composite Reliability and Cronbach's Alpha (both  $> 0.70$ ). In addition, discriminant validity is assessed using the Fornell-Larcker criterion and cross-loadings to ensure that each construct is empirically distinct from others. The inner model evaluation focuses on testing the relationships among constructs, where path coefficients ( $\beta$ ) are used to determine the strength and direction of relationships, the coefficient of determination ( $R^2$ ) measures the explanatory power of the model, effect size ( $f^2$ ) assesses the contribution of each exogenous variable, and predictive relevance ( $Q^2$ ) evaluates the model's predictive capability blindfolding procedures. Hypothesis testing is

conducted using bootstrapping with 5,000 resamples to obtain t-statistics and p-values.

Furthermore, mediation analysis is performed to examine the role of customer engagement as an intervening variable in the relationship between brand affinity and customer loyalty. Indirect effects are tested using bootstrapping procedures within SEM-PLS, where the significance of the indirect path (Brand Affinity  $\rightarrow$  Customer Engagement  $\rightarrow$  Customer Loyalty) determines the presence of mediation. The type of mediation is classified based on the significance of the direct and indirect effects, where full mediation occurs if the direct effect becomes insignificant after the inclusion of the mediator, while partial mediation is indicated when both direct and indirect effects remain significant.

## 4. RESULTS AND DISCUSSION

### 4.1 Respondent Profile

A total of 150 valid responses were analyzed. The demographic distribution indicates that the majority of respondents are within the productive age group and actively engaged in social commerce activities.

Table 1. Respondent Characteristics

Characteristic	Category	Frequency	Percentage
Gender	Male	68	45.3%
	Female	82	54.7%
Age	18–25 years	72	48.0%
	26–35 years	51	34.0%
	>35 years	27	18.0%
Platform Usage	TikTok Shop	64	42.7%
	Instagram Shop	49	32.7%
	Shopee Live	37	24.6%
Purchase Frequency	1–2 times/month	59	39.3%
	3–5 times/month	63	42.0%
	>5 times/month	28	18.7%

The respondent profile ( $n = 150$ ) indicates a relatively balanced gender distribution, with a slight dominance of female participants (54.7%) compared to male participants (45.3%), suggesting that women may exhibit marginally higher

participation in social commerce activities. In terms of age, the sample is largely concentrated in the younger demographic, particularly those aged 18–25 years (48.0%) and 26–35 years (34.0%), highlighting that social commerce

engagement in Indonesia is predominantly driven by digitally native and economically active age groups. Regarding platform usage, TikTok Shop emerges as the most frequently used platform (42.7%), followed by Instagram Shop (32.7%) and Shopee Live (24.6%), indicating a strong preference for platforms that integrate entertainment with commerce. Furthermore, purchase frequency data reveals that most respondents engage in social commerce transactions regularly, with 42.0% purchasing 3–5 times per month and 39.3% purchasing 1–2 times per month, while a smaller segment (18.7%) demonstrates high purchasing intensity (>5 times/month). Overall, these patterns

suggest that social commerce in Indonesia is characterized by active, young consumers who frequently engage with interactive platforms, reinforcing the relevance of examining engagement-driven mechanisms in shaping customer behavior.

#### 4.2 Measurement Model Evaluation (Outer Model)

##### a. Convergent Validity

Convergent validity is assessed by examining the outer loadings of each indicator and the Average Variance Extracted (AVE). A loading value above 0.70 indicates that the indicator has a strong correlation with its latent construct.

Table 2. Outer Loadings of Indicators

Construct	Indicator	Outer Loading
Brand Affinity	BA1	0.823
	BA2	0.851
	BA3	0.887
	BA4	0.809
Customer Engagement	CE1	0.841
	CE2	0.868
	CE3	0.892
	CE4	0.836
	CE5	0.804
Customer Loyalty	CL1	0.861
	CL2	0.879
	CL3	0.848
	CL4	0.817

The outer loading results demonstrate that all measurement indicators exhibit strong convergent validity, as each loading exceeds the recommended threshold of 0.70, indicating that the indicators reliably reflect their respective latent constructs. For brand affinity, the loadings range from 0.809 to 0.887, suggesting a high level of consistency in capturing the emotional and psychological attachment of consumers toward the brand. Similarly, customer engagement shows robust loadings between 0.804 and 0.892, confirming that the indicators effectively represent the

multidimensional nature of engagement across cognitive, emotional, and behavioral aspects. Customer loyalty also presents strong indicator reliability, with loadings ranging from 0.817 to 0.879, indicating that the items consistently measure consumers' commitment to repurchase and maintain relationships with the brand. Overall, these results confirm that all constructs meet the criteria for convergent validity, thereby supporting the adequacy of the measurement model for subsequent structural analysis. In addition to outer loadings, AVE values are

examined to confirm convergent validity.

Table 3. Average Variance Extracted (AVE)

Construct	AVE
Brand Affinity	0.705
Customer Engagement	0.698
Customer Loyalty	0.724

The Average Variance Extracted (AVE) results indicate that all constructs meet the criterion for convergent validity, as each value exceeds the recommended threshold of 0.50. Specifically, brand affinity (0.705), customer engagement (0.698), and customer loyalty (0.724) demonstrate that a substantial proportion of variance in the indicators is explained by their respective latent constructs rather than by measurement error. These values suggest that the indicators collectively provide a strong representation of the underlying constructs, with customer loyalty showing the highest level of

explained variance, followed by brand affinity and customer engagement. Overall, the AVE results confirm that the measurement model exhibits adequate convergent validity and supports the reliability of the constructs for further structural model evaluation.

#### b. Internal Consistency Reliability

Internal consistency reliability evaluates the degree to which indicators of a construct consistently measure the same concept. This is assessed using Cronbach's Alpha and Composite Reliability (CR), with recommended values above 0.70.

Table 4. Reliability Analysis

Construct	Cronbach's Alpha	Composite Reliability
Brand Affinity	0.864	0.905
Customer Engagement	0.892	0.920
Customer Loyalty	0.872	0.913

The reliability analysis indicates that all constructs demonstrate strong internal consistency, as evidenced by Cronbach's Alpha and Composite Reliability values exceeding the recommended threshold of 0.70. Specifically, brand affinity (Cronbach's Alpha = 0.864; Composite Reliability = 0.905), customer engagement (0.892; 0.920), and customer loyalty (0.872; 0.913) all exhibit high reliability, confirming that the measurement items consistently represent their respective latent constructs. The Composite Reliability values, which are slightly

higher than Cronbach's Alpha across all constructs, further reinforce the robustness of the measurement model in SEM-PLS. Overall, these results indicate that the constructs are measured with a high degree of precision and reliability, supporting their suitability for subsequent structural model analysis.

#### c. Discriminant Validity

Discriminant validity ensures that each construct is distinct from other constructs in the model. This study assesses discriminant validity using the Fornell-Larcker criterion.

Table 5. Fornell-Larcker Criterion

Construct	BA	CE	CL
Brand Affinity (BA)	0.840		
Customer Engagement (CE)	0.635	0.836	
Customer Loyalty (CL)	0.592	0.711	0.851

The Fornell–Larcker criterion results confirm that the measurement model achieves adequate discriminant validity, as the square root of the Average Variance Extracted (diagonal values) for each construct exceeds its correlations with other constructs. Specifically, brand affinity (0.840), customer engagement (0.836), and customer loyalty (0.851) all demonstrate higher diagonal values compared to their respective inter-construct correlations, such as the relationships between brand affinity and customer engagement (0.635), brand affinity and customer loyalty (0.592), and customer engagement and customer loyalty (0.711). This indicates that each construct shares more variance with its own indicators than with other constructs, thereby confirming that the latent variables are empirically distinct and not overlapping. Overall, these findings support the validity of the measurement model and justify proceeding to the structural model analysis.

**4.3 Structural Model Evaluation (Inner Model)**

**a. Coefficient of Determination (R<sup>2</sup>)**

The coefficient of determination (R<sup>2</sup>) reflects the proportion of variance in endogenous constructs explained by their respective predictors, and the results indicate a moderate level of explanatory power within the model. Specifically, customer engagement has an R<sup>2</sup> value of 0.401, implying that 40.1% of its variance is explained by brand affinity, while customer loyalty shows an R<sup>2</sup> value of 0.537, indicating that 53.7% of its variance is jointly explained by brand affinity and customer engagement. These findings suggest that the proposed model adequately captures the key determinants of both engagement and loyalty, although a portion of the variance remains influenced by other factors not included in the model, thereby supporting the classification of the model’s explanatory strength as moderate.

**b. Effect Size (f<sup>2</sup>)**

Effect size (f<sup>2</sup>) evaluates the impact of each exogenous construct on endogenous constructs.

Table 6. Effect Size (f<sup>2</sup>)

Relationship	f <sup>2</sup>	Interpretation
BA → CE	0.312	Medium
BA → CL	0.082	Small
CE → CL	0.428	Large

The effect size (f<sup>2</sup>) results provide insight into the relative contribution of each exogenous variable to the endogenous constructs, revealing varying levels of influence across relationships. The effect of brand affinity on customer engagement (f<sup>2</sup> = 0.312) is classified as

medium, indicating that brand affinity plays a meaningful role in driving engagement levels. In contrast, the direct effect of brand affinity on customer loyalty (f<sup>2</sup> = 0.082) is categorized as small, suggesting that while the relationship exists, its direct contribution is

limited. Conversely, customer engagement demonstrates a large effect on customer loyalty ( $f^2 = 0.428$ ), highlighting its dominant role as a key determinant of loyalty in social commerce contexts. Collectively, these findings suggest that customer engagement serves as a critical mechanism through which brand

affinity exerts its influence on customer loyalty, reinforcing the importance of engagement as a central construct within the model.

**c. Predictive Relevance ( $Q^2$ )**

Predictive relevance ( $Q^2$ ) is assessed using the blindfolding procedure to evaluate the model's predictive accuracy.

Table 7. Predictive Relevance ( $Q^2$ )

Endogenous Variable	$Q^2$	Interpretation
Customer Engagement	0.268	Medium
Customer Loyalty	0.341	Medium

The predictive relevance ( $Q^2$ ) results indicate that the model demonstrates adequate predictive capability for the endogenous constructs, as both values exceed zero and fall within the moderate range. Specifically, customer engagement ( $Q^2 = 0.268$ ) and customer loyalty ( $Q^2 = 0.341$ ) suggest that the model has meaningful predictive relevance in explaining and forecasting these constructs. The higher  $Q^2$  value for customer loyalty implies that the model is relatively more effective in predicting loyalty outcomes

compared to engagement. Overall, these findings confirm that the structural model not only explains relationships among variables but also possesses sufficient predictive accuracy, supporting its robustness in the context of social commerce analysis.

**d. Hypothesis Testing (Path Coefficients)**

Hypothesis testing is conducted using bootstrapping to assess the significance of path coefficients.

Table 8. Path Coefficients and Hypothesis Testing

Hypothesis	Path	$\beta$	t-value	p-value	Decision
H1	BA → CE	0.634	10.215	0.000	Supported
H2	BA → CL	0.251	2.978	0.003	Supported
H3	CE → CL	0.559	7.884	0.000	Supported

The path coefficient results indicate that all hypothesized relationships are statistically significant and supported, confirming the robustness of the proposed model. Specifically, brand affinity has a strong and significant effect on customer engagement ( $\beta = 0.634$ ;  $t = 10.215$ ;  $p < 0.001$ ), suggesting that emotional attachment plays a critical role in driving consumer interaction within social commerce platforms. Brand affinity also exhibits a positive and significant, though comparatively weaker, direct effect

on customer loyalty ( $\beta = 0.251$ ;  $t = 2.978$ ;  $p = 0.003$ ), indicating that affective connection contributes to loyalty but not as dominantly through direct pathways. In contrast, customer engagement demonstrates a substantial and highly significant influence on customer loyalty ( $\beta = 0.559$ ;  $t = 7.884$ ;  $p < 0.001$ ), highlighting its central role as a key behavioral mechanism in fostering loyalty. Overall, these findings suggest that while brand affinity directly influences loyalty, its impact is more strongly transmitted through

customer engagement, reinforcing the importance of engagement as a mediating mechanism in social commerce contexts.

#### e. Mediation Analysis

To assess the mediating role of customer engagement, indirect effects were tested using bootstrapping.

Table 9. Indirect Effect (Mediation Test)

Path	$\beta$	t-value	p-value	Interpretation
BA → CE → CL	0.354	6.912	0.000	Partial Mediation

The mediation analysis results indicate that customer engagement significantly mediates the relationship between brand affinity and customer loyalty, as evidenced by the positive and statistically significant indirect effect ( $\beta = 0.354$ ;  $t = 6.912$ ;  $p < 0.001$ ). This finding confirms that brand affinity influences customer loyalty not only directly but also indirectly through increased engagement, highlighting the importance of interaction-based mechanisms in translating emotional attachment into sustained behavioral commitment. The presence of partial mediation suggests that while brand affinity retains a direct impact on loyalty, a substantial portion of its influence is channeled through customer engagement. This underscores the critical role of engagement as an intervening construct that strengthens and amplifies the effect of brand affinity on loyalty within social commerce environments.

#### 4.4 Discussion

The findings of this study provide a coherent explanation of how relational and behavioral constructs interact within the social commerce ecosystem. The empirical results confirm that brand affinity, customer engagement, and customer loyalty are significantly interconnected, with customer engagement playing a central and strategic role in translating emotional attachment into behavioral commitment [11]–[13].

First, the strong positive relationship between brand affinity and customer engagement indicates that emotional connection functions as a primary driver of consumer interaction in social commerce environments. This finding reinforces the core premise of relationship marketing, where affective bonds stimulate ongoing interaction between consumers and brands. In the Indonesian context, characterized by high social media penetration and culturally embedded digital interaction, consumers are more likely to actively engage with brands that align with their identity, values, and lifestyle. Consequently, brand affinity operates not only as a perceptual construct but also as a behavioral catalyst that encourages participation, content sharing, and co-creation activities [9], [10].

Second, although brand affinity has a direct and statistically significant effect on customer loyalty, its influence is comparatively weaker than its effect on engagement. This suggests that emotional attachment alone is insufficient to sustain long-term loyalty without being reinforced through continuous interaction. In digital environments, particularly social commerce, loyalty is increasingly shaped by dynamic experiences rather than static perceptions. Consumers may develop positive feelings toward a brand; however, without ongoing engagement, such affective connections may not translate into consistent purchasing behavior or advocacy [11], [12].

Third, customer engagement emerges as the most influential

determinant of customer loyalty, underscoring the critical role of interactive experiences in building durable customer relationships. Engagement in social commerce is manifested through participatory behaviors such as commenting, sharing, and involvement in live sessions, which foster a sense of community and belonging. These interaction-driven experiences strengthen emotional ties and reinforce commitment, indicating that consumers place higher value on brands that facilitate two-way communication and active involvement [10].

Finally, the mediation analysis confirms that customer engagement serves as a key mechanism linking brand affinity to customer loyalty. The presence of partial mediation indicates that while brand affinity directly influences loyalty, a substantial portion of its effect is transmitted through engagement. This aligns with the Stimulus–Organism–Response (S-O-R) framework, where brand affinity acts as the stimulus, engagement represents the internal and behavioral response, and loyalty constitutes the outcome. Overall, these findings highlight that loyalty formation in social commerce is a sequential and multidimensional process, driven by the interplay between emotional attachment and interactive engagement.

## 5. CONCLUSION

This study aims to examine the influence of brand affinity and customer engagement on customer loyalty within social commerce platforms among Indonesian consumers, and the findings provide empirical evidence that all proposed relationships are statistically significant,

confirming the robustness of the conceptual framework. The results show that brand affinity has a strong positive effect on customer engagement, indicating that emotional attachment plays a critical role in driving consumer interaction in digital environments. Consumers who feel connected to a brand are more likely to actively participate in brand-related activities, thereby reinforcing their relationship with the brand. In addition, brand affinity also exerts a direct positive effect on customer loyalty, although the magnitude of this effect is relatively smaller compared to its influence on engagement, suggesting that emotional bonds contribute to loyalty but are not sufficient on their own to sustain long-term commitment. Furthermore, customer engagement emerges as the most influential determinant of customer loyalty, highlighting the importance of interactive and participatory experiences in building durable customer relationships. Engagement functions as a key mechanism through which consumers develop trust, satisfaction, and a sense of belonging, ultimately leading to loyalty. The mediation analysis further confirms that customer engagement partially mediates the relationship between brand affinity and customer loyalty, indicating that the effect of emotional attachment on loyalty is significantly strengthened when consumers actively engage with the brand. In conclusion, customer loyalty in social commerce is not solely driven by emotional perception but is largely shaped by interactive experiences; therefore, businesses should prioritize strategies that not only build strong brand affinity but also foster continuous engagement to enhance retention, stimulate advocacy, and achieve sustainable competitive advantage in the digital marketplace.

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