Social Media Marketing Activities and Consumer Brand Engagement: The Moderating Role of Gamification among Generation Z E-Commerce Users

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Abstract. This study examines the effect of Social Media Marketing Activities (SMMAs) on Consumer Brand Engagement (CBE) by considering the moderating role of gamification within the framework of the Elaboration Likelihood Model (ELM). The research focuses on Generation Z as active users of e-commerce platforms in Indonesia. Data were collected through an online survey involving 220 respondents and analyzed using the Partial Least Squares–Structural Equation Modeling (PLS-SEM) approach. The results indicate that the dimensions of entertainment, trendiness, and customization have a significant effect on consumer brand engagement, while interactivity and electronic word of mouth do not exhibit significant effects. Furthermore, gamification is found to strengthen most of the relationships between social media marketing activities and consumer brand engagement, except for the electronic word of mouth dimension. These findings suggest that emotional and experiential factors play a dominant role in shaping Generation Z consumers' engagement. This study enhances digital marketing literature and provides practical insights for e-commerce companies to develop more effective, experience-focused marketing strategies.

Keywords: Consumer Brand Engagement; Gamification; Social Media Marketing Activities; Generation Z; E-commerce.

Abstrak. *Studi ini mengkaji pengaruh* Social Media Marketing Activities (SMMAs) *terhadap* Consumer Brand Engagement (CBE) *dengan mempertimbangkan peran moderasi* gamification *berdasarkan pendekatan* Elaboration Likelihood Model (ELM). *Penelitian difokuskan pada Generasi Z yang merupakan pengguna aktif* platform e-commerce *di Indonesia. Data diperoleh melalui survei daring yang melibatkan 220 responden dan dianalisis menggunakan metode* Partial Least Squares–Structural Equation Modeling (PLS-SEM). *Hasil analisis menunjukkan bahwa dimensi* entertainment, trendiness, *dan* customization *berpengaruh signifikan terhadap* consumer brand engagement. *Sementara itu,* interactivity *dan* electronic word of mouth *tidak menunjukkan pengaruh yang berarti. Lebih lanjut,* gamification *mampu memperkuat sebagian besar hubungan antara* social media marketing activities *dan* consumer brand engagement, *kecuali pada dimensi* electronic word of mouth. *Temuan ini mengindikasikan bahwa faktor emosional dan*

pengalaman memainkan peran dominan dalam membentuk keterlibatan konsumen Generasi Z. Studi ini memperkaya literatur pemasaran digital dan memberikan wawasan praktis bagi perusahaan e-commerce *untuk mengembangkan strategi pemasaran yang lebih efektif dan berfokus pada pengalaman pelanggan.*

Kata kunci*: Consumer Brand Engagement; Gamification; Social Media Marketing Activities; Generation Z; E-commerce.*

BACKGROUND

Advancements in information and communication technology have revolutionized interactions between consumers and brands through social media platforms, particularly within the e-commerce context (Pu et al., 2023). In the Indonesian context, the accelerated growth of e-commerce ecosystems has increased significantly in the post-pandemic period, supported by the adoption of technologies such as financial technology (FinTech) and artificial intelligence (Wardhana, 2024). The eCBD report by Sugiarti (2025) indicates that Indonesia has recorded the highest e-commerce growth rate in the world (30.5%), driven by increasing internet penetration and the dominance of Generation Z as active digital users.

Generation Z, which accounts for 27.94% of Indonesia's population (A'yun, 2024), is recognized as a highly critical digital consumer group that is particularly responsive to social media content (Sugiarti, 2025). Rather than passively receiving information, Gene-ration Z tends to selectively filter, evaluate, and respond to content based on its relevance, entertainment value, and level of interactivity. E-commerce platforms with the highest traffic in Indonesia include Shopee, Tokopedia, Blibli, Lazada, and Bukalapak, highlight-ing the importance of effective digital strategies (Arif, 2024). In this context, Social Media Marketing Activities (SMMAs) which encompass entertainment, inter-activity, trendiness, customization, and electronic word of mouth serve as a strategic approach to building and strengthening consumer relationships (Kim & Ko, 2012).

To understand how Generation Z processes such marketing content, Grounded in the Elaboration Likelihood Model formulated by Petty & Cacioppo (1986), this research differentiates information processing mechanisms into central and peripheral routes, reflecting varying levels of cognitive elaboration. The dimensions of entertainment and interactivity are classified within the central route, as they require a high level of cognitive engagement, whereas trendiness, customization, and e-WOM are processed heuristically through the peripheral route. Furthermore, gamification is considered a potential moderating variable that may strengthen the association between SMMAs and consumer brand engagement. Gamified features, such as point systems, digital badges, ranking boards, and interactive challenges have been shown to enhance user experience and loyalty (Bulu & Natalia, 2024). However, prior studies have not extensively explored the empirical inte-gration of gamification within this context.

This study extends prior research by examining a relatively unexplored dimension of adopting an ELM-based approach to map the processing routes of each SMMA dimension and to examine the moderating role of gamification. By focusing on Generation Z in Indonesia, this research provides a significant contextual contribution, given the geographical and demographic limitations of previous studies (Tarabieh, 2022). The results of this research provide actionable implications for support the development of more relevant and effective digital marketing strategies for e-commerce practitioners in Indonesia.

THEORETICAL REVIEW

Elaboration Likelihood Model (ELM)

Introduced by Petty and Cacioppo (1986), the ELM explainst the persuasion process through two distinct information-processing routes: the central route, which involves careful cognitive evaluation, and the peripheral route, which relies on heuristic cues. Information processing through the central route takes place when individuals are both highly motivated and cognitively capable of critically evaluate information, resulting in more enduring attitude changes (Petty et al., 1995). In contrast, the peripheral route emerges when elaboration is low, and individuals are influenced by affective or visual cues such as source attractiveness.

Social Media Marketing Activities (SMMAs)

SMMAs encompass various marketing efforts carried out on social media channels that are designed to cultivate interactive relationships with consumers and strengthen their engagement with brands (Kim & Ko, 2012). SMMAs consist of five main dimensions: (1) Entertainment – entertaining content that creates enjoyable experiences and enhances consumer loyalty; (2) Interactivity – two-way communication that strengthens consumer engagement and closeness with the brand; (3) Trendiness – the delivery of up-to-date and timely information; (4) Customization – the personalization of content according to individual preferences to increase consumer satisfaction; and (5) Electronic Word of Mouth (e-WOM) – online reviews and recommendations that exert a substantial effect on consumer decision-making.

Gamification

Gamification is defined as the integration of game-design elements into non-game environments with the aim of enhancing user motivation and engagement, such as e-commerce, to enhance user engagement and experience (Deterding et al., 2011). Elements including points, badges, leaderboards, and challenges can stimulate user motivation through incentives and competition (Huotari & Hamari, 2017). The implementation of gamification in e-commerce can increase consumer engagement by enhancing the enjoyment of the shopping experience and not solely focused on transactional activities (Hamari et al., 2014).
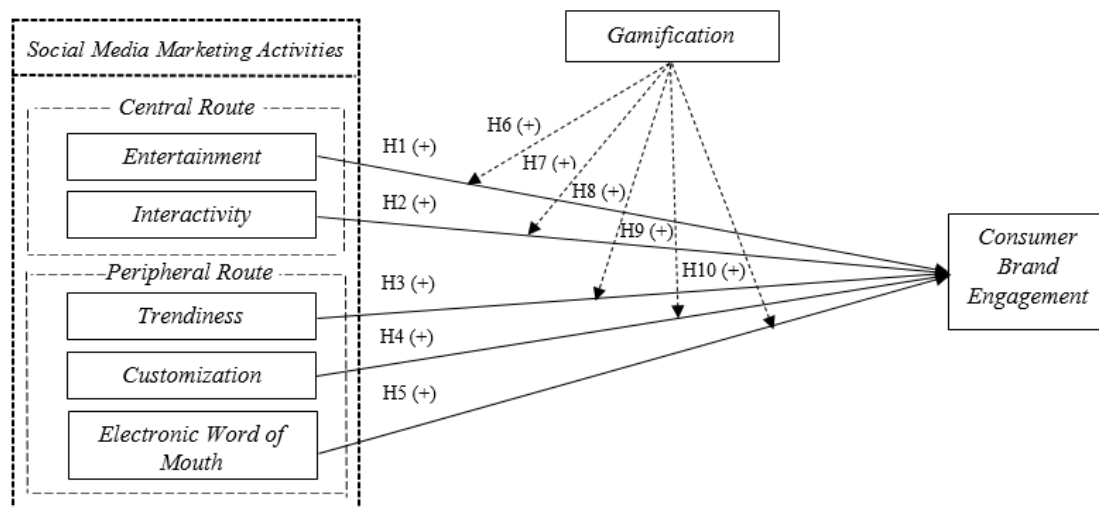
Customer Brand Engagement (CBE)

CBE refers to consumers' active involvement with a brand across cognitive, emotional, and behavioral dimensions. According to Hollebeek et al. (2014), CBE comprises

three primary dimensions: (1) Cognitive Processing – a high level of concentration and attention toward brand-related interactions; (2) Affection – emotional attachment reflecting personal identification with the brand; and (3) Activation – observable behaviors such as purchasing, recommending, and participating in brand communities.

Hypotheses Development

Building on the underlying theoretical framework, this study proposes a conceptual model that illustrates the relationships between Social Media Marketing Activities, Gamification, and Consumer Brand Engagement. The proposed conceptual framework is presented in Figure 1 and serves as the foundation for the development of the research hypotheses.

Figure 1. Conceptual Framework

H1: Entertainment has a positive effect on consumer brand engagement.

Entertainment content on social media, such as humor, creative videos, or viral challenges, represents a major attraction for Generation Z. From the ELM perspective, relevant entertainment elements can trigger deeper elaboration through the central route, thereby enhancing consumers' emotional and psychological engagement with the brand. Studies by Rosdiana and Indrawati (2025), and Tarabieh (2022) support the positive impact of entertainment on consumer brand engagement.

H2: Interactivity has a positive effect on consumer brand engagement.

Interactive features such as comments, live chats, or polls provide opportunities for Generation Z to engage directly with brands. Within the ELM framework, interactivity promotes engagement through the central route, as it facilitates active and in-depth two-way communication. Findings by Cheung et al. (2020), and Hollebeek et al. (2014) indicate that interactivity strengthens trust and emotional bonds with brands.

H3: Trendiness has a positive effect on consumer brand engagement.

Trendiness reflects the extent to which brand content aligns with current trends. For Generation Z, brands that appear up-to-date and contemporary tend to be more

appealing. In ELM terms, trendiness is processed via the peripheral route, as consumer responses are often based on surface-level impressions. Studies by Malarvizhi et al. (2022), and Hazzam (2022) show that trendy content enhances engagement and even stimulates purchase intention.

H4: Customization has a positive effect on consumer brand engagement.

Personalized content and experiences tailored to user preferences create a sense of ownership among consumers. Within the ELM framework, customization is categorized under the peripheral route, as consumer reactions are typically emotional rather than cognitively intensive. De Keyser et al. (2020) emphasize that personalized experiences enhance user loyalty and engagement with brands.

H5: Electronic word of mouth has a positive effect on consumer brand engagement.

Electronic word of mouth (e-WOM), such as online reviews and recommenddations, plays a crucial role for Generation Z, which actively seeks social validation. In the context of ELM, e-WOM is classified under the peripheral route, as information is often processed quickly based on others' opinions. Research by Rosdiana and Indrawati (2025), and Malarvizhi et al. (2022) confirms that e-WOM encourages interaction and engagement with brands.

H6: Gamification positively moderates the effect of entertainment on consumer brand engagement.

The combination of entertainment and game elements, such as points or challenges, enhances content attractiveness, particularly for Generation Z. From an ELM perspective, this combination increases motivation and attention, thereby strengthening consumer engagement (Huang et al., 2024).

H7: Gamification positively moderates the effect of interactivity on consumer brand engagement.

Interactivity enhanced by gamification (e.g., point systems for comments) makes interactions more engaging and increases information elaboration through the central route (Zainuddin et al., 2020).

H8: Gamification positively moderates the effect of trendiness on consumer brand engagement.

Trendy content presented in gamified formats, such as trend-based leaderboards, encourages active participation. This combination reinforces Generation Z's spontaneous responses to up-to-date content (Bulu & Natalia, 2024).

H9: Gamification positively moderates the effect of customization on consumer brand engagement.

Gamified personalization, such as point systems based on user preferences, enhances the emotional user experience. This strengthens positive responses even when information is processed through the peripheral route (Neves et al., 2024).

H10: Gamification positively moderates the effect of electronic word of mouth on consumer brand engagement.

Gamification applied to e-WOM activities, such as badges for reviews or participation leaderboards, makes these activities more enjoyable and encourages active engagement (Leclercq et al., 2020).

RESEARCH METHODS

In this study, the sample consists of individuals belonging to Generation Z in Indonesia who are actively engaged in social media usage and conduct transactions through e-commerce platforms. This group was selected due to its high sensitivity to digital content, including interactive features, personalization, and game-based elements (gamification). Respondents were selected using purposive sampling, with inclusion criteria specifically defined to ensure relevance to the research aims. The established respondent criteria were as follows: (1) aged between 12 and 27 years (born between 1997 and 2012); (2) demonstrating active usage of social media channels such as Instagram, TikTok, Twitter, or Facebook; and (3) having made purchases on e-commerce platforms such as Shopee, Tokopedia, Blibli, Lazada, or Bukalapak.

The data used in this study are primary data. Data collection was conducted through an online questionnaire designed using Google Forms and distributed via various social media channels. Each questionnaire item was developed based on established theories and expert references and was measured using a five-point Likert scale, anchored from strongly disagree (1) to strongly agree (5).

RESULTS AND DISCUSSIONS

Data were collected online using Google Forms from 17 June to 14 July 2025, resulting in a total of 220 respondents. The collected data were subsequently processed and analyzed using SmartPLS version 4.0.

Respondent Characteristics

In terms of e-commerce platform usage, Shopee emerged as the dominant platform, selected by 52.7% of respondents (116 individuals). This was followed by Tokopedia at 24.5%, Blibli at 10.9%, Lazada at 8.2%, and Bukalapak at 3.6%. The majority of respondents were female, totaling 122 individuals (55.5%), while 98 respondents (44.5%) were male. This distribution aligns with previous findings suggesting that women tend to be more active in digital interactions related to consumption.

Regarding age distribution, most respondents fell within the 18–22 years age range, accounting for 110 individuals (50%). This was followed by those aged 23–28 years (42.7%) and the youngest group aged 13–17 years (7.3%), further reinforcing the strong representation of digitally active Generation Z consumers. In terms of employment status, the student category dominated with 89 respondents (40.5%), followed by private-sector employees (25.9%), public-sector employees (18.2%), housewives (12.7%), and others (2.7%). This indicates that most respondents are either still pursuing education or are in the early stages of their professional careers. With respect to monthly income or allowance, the largest proportion of respondents fell within the range of IDR 1,000,001–3,000,000 (36.4%), followed by IDR 3,000,001–5,000,000 (31.4%), and above IDR 5,000,000 (24.1%), while only 8.2% of respondents reported income below IDR 1,000,000.

Outer Model Assessment

The outer model assessment aims to evaluate the validity and reliability of the indicators used to measure the latent constructs. This assessment includes the evaluation of convergent validity, discriminant validity, and construct reliability through the values of Average Variance Extracted (AVE), Composite Reliability (CR), and Cronbach's Alpha.

Table 1. Results of Validity and Reliability Testing

Indicator	AVE	Cronbach's Alpha	Composite Reliability
Social Media Marketing Activity			
Entertainment	0,748	0,829	0,838
Interactivity	0,656	0,742	0,753
Trendiness	0,666	0,750	0,751
Customization	0,691	0,775	0,793
E-WOM	0,653	0,733	0,746
Gamification	0,616	0,845	0,856
Consumer Brand Engagement	0,565	0,846	0,850

All constructs in this study meet the criteria for validity and reliability. All constructs achieved AVE values exceeding 0.50, indicating satisfactory levels of convergent validity, as the indicators adequately explain their respective latent constructs. Furthermore, the values of Cronbach's Alpha and Composite Reliability (CR) are all above 0.70, demonstrating strong internal consistency and confirming that the research instruments are reliable.

Inner Model Assessment

An evaluation of the inner structural model was undertaken to examine the robustness of the relationships between latent variables in the proposed model. This assessment includes tests of model fit and predictive capability, as indicated by the values of R^2 and Q^2.

Table 2. Results of Model Fit Testing

Model Fit Index	Value	Acceptable Threshold	Interpretation
SRMR	0,10	0,1	Model Fit

SRMR is employed as an indicator to assess the adequacy of the model's fit between the theoretical model and the empirical data, with values of ≤ 0.10 considered acceptable. The results show an SRMR value of 0.10, which lies exactly at the acceptable threshold. This indicates that the model achieves an acceptable level of fit, suggesting that the structural relationships among variables are adequately supported by the data.

Table 3. R-square and Q-square Values

	R-Square	Q-Square
Consumer Brand Engagement	0,767	0,755

Approximately 76.7% of the variation in consumer brand engagement is explained by the set of independent variables specified in the model. An R^2 value above

0.67 is classified as strong, demonstrating that the model possesses very strong predictive capability.

Table 4. Q-square Values

Variable	Q^2 Value	Interpretation
Entertainment	0,482	High
Interactivity	0,308	Moderate
Trendiness	0,327	Moderate
Customization	0,380	High
Electronic Word of Mouth	0,311	Moderate
Gamification	0,421	High
Consumer Brand Engangement	0,387	High

The Q^2 values are interpreted as follows: values greater than 0.35 indicate high predictive relevance; values between 0.15 and 0.35 indicate moderate predictive relevance; and values below 0.15 indicate low predictive relevance. As shown in Table 4, most of the constructs exhibit high predictive relevance, further confirming the robustness and predictive strength of the proposed research model.

Hypotheses and Moderation Testing

Table 5. Results of Hypothesis and Moderation Testing

Hypothesis	t-Statistic	p-Value	Decision
H1	6,767	0,000	Supported
H2	0,276	0,391	Not Supported
H3	2,128	0,017	Supported
H4	2,715	0,003	Supported
H5	0,536	0,296	Not Supported
H6	2,659	0,004	Supported
H7	1,807	0,035	Supported
H8	3,370	0,000	Supported
H9	2,625	0,004	Supported
H10	1,003	0,158	Not Supported

Discussions

(H1) Effect of Entertainment on Consumer Brand Engagement

Entertainment elements in social media marketing activities exert a positive and statistically significant impact on Consumer Brand Engagement. Entertaining content (e.g., humorous videos, digital challenges, memes) triggers positive emotional responses and deep cognitive and affective engagement through the ELM central route. This finding is consistent with Rosdiana and Indrawati (2025) serta Tarabieh (2022) who confirm that entertainment enhances consumer engagement and strengthens brand image.

(H2) Effect of Interactivity on Consumer Brand Engagement

Contrary to expectations, interactivity does not show a significant effect on Consumer Brand Engagement. Although interactivity is theoretically positioned within the ELM central route, the forms of interactivity offered by e-commerce platforms may not be sufficiently engaging or responsive to create meaningful experiences for selective consumers amid information overload. This finding contradicts Cheung et al. (2020) and

Hollebeek et al. (2014) which emphasize the importance of interactivity. The discrepancy may be attributed to differences in the perceived relevance of interactive features across age segments (Hazzam, 2022).

(H3) Effect of Trendiness on Consumer Brand Engagement

Trendiness demonstrates a positive and statistically significant effect on Consumer Brand Engagement. For Generation Z, brands that are up-to-date and aligned with current trends foster positive perceptions and emotional closeness. This process occurs rapidly and is often processed via the ELM peripheral route, as consumers evaluate brands based on contemporariness rather than in-depth analysis. This finding aligns with Malarvizhi et al. (2022) who demonstrate that trendiness positively influences consumer brand engagement and even consumers' propensity to pay higher prices.

(H4) Effect of Customization on Consumer Brand Engagement

Customization, or the personalization of content and services, positively affects Consumer Brand Engagement. Personalization makes consumers feel that their needs are recognized, thereby fostering stronger emotional bonds. Within the ELM framework, customization is processed through the peripheral route, as positive responses are driven by perceived relevance rather than extensive cognitive evaluation. Although this finding contrasts with Rosdiana and Indrawati (2025), it is consistent with Malarvizhi et al. (2022) and De Keyser et al. (2020) who report that personalization enhances loyalty and active engagement.

(H5) Effect of Electronic Word of Mouth on Consumer Brand Engagement

The analysis indicates that e-WOM does not have a significant influence on Consumer Brand Engagement. This may be due to relatively low trust in e-WOM or insufficient content strength to influence the perceptions of Generation Z consumers, who tend to be skeptical—particularly when information is not conveyed by known or highly credible sources. Within ELM, e-WOM is categorized under the peripheral route, as information is processed quickly based on perceived credibility or popularity. This finding contradicts Rosdiana and Indrawati (2025) and Malarvizhi et al. (2022) which suggest that e-WOM stimulates emotional and behavioral engagement.

(H6) Moderating Role of Gamification in the Relationship between Entertainment and Consumer Brand Engagement

Gamification is shown to positively strengthen the effect of entertainment content on Consumer Brand Engagement. The integration of entertainment with game elements (e.g., points, badges, leaderboards) enhances user experience by making it more immersive and motivating, encouraging more intensive interaction and active participation through the ELM central route. This result is confirmed by Huang et al. (2024), and Bulu and Natalia (2024) who find that gamification enhances emotional engagement and participation intentions.

(H7) Moderating Role of Gamification in the Relationship between Interactivity and Consumer Brand Engagement

Gamification further operates as a moderator, amplifying the positive association between interactivity and Consumer Brand Engagement. Game-based incentives (e.g., points for feedback, challenges) make two-way interactions more engaging and motivate active participation. Within ELM, gamification enhances the effectiveness of the central

route by adding motivational and competitive elements. This finding is supported by Neves et al. (2024) and Zainuddin et al. (2020) who report that gamification increases satisfaction and emotional bonds with brands.

(H8) Moderating Role of Gamification in the Relationship between Trendiness and Consumer Brand Engagement

The effect of trendiness on Consumer Brand Engagement becomes stronger when combined with gamification elements. Game features embedded in trending content (e.g., viral challenges, rewards) encourage Generation Z to actively participate, transforming trends into participatory activities. Within the ELM framework, gamification reinforces spontaneous responses to contemporariness via the peripheral route. This finding is supported by Bulu & Natalia (2024) and Zainuddin et al. (2020) who demonstrate that gamification stimulates consumer brand engagement and fosters strong emotional connections.

(H9) Moderating Role of Gamification in the Relationship between Customization and Consumer Brand Engagement

Gamification significantly strengthens the positive effect of customization on Consumer Brand Engagement. Reward systems or badges tailored to user preferences enhance emotional attachment. Although customization is processed through the ELM peripheral route, gamification deepens engagement through psychological stimulation based on rewards and recognition. This finding is supported by Huang et al. (2024), Neves et al. (2024), and Bulu and Natalia (2024) which confirm the positive moderating effect of gamification on customization and brand engagement.

(H10) Moderating Role of Gamification in the Relationship between e-WOM and Consumer Brand Engagement

Gamification does not exhibit a significant moderating interaction in the relationship between e-WOM and Consumer Brand Engagement. The passive and indirect nature of e-WOM activities, even when incentivized through game elements, appears insufficient to activate intensive user participation. As e-WOM operates through the ELM peripheral route, gamification is unable to fully transform this passive communication into the expected active interaction. This finding contradicts Leclercq et al. (2020) who argue that gamification can motivate reviews and recommendations. However, Huang et al. (2024) generally demonstrate that gamification is capable of enhancing consumer brand engagement, although their findings do not specifically address the moderating role of gamification in the e-WOM context.

CONCLUSIONS AND RECOMMENDATIONS

This study demonstrates that Social Media Marketing Activities exert a positive and statistically significant impact on Consumer Brand Engagement, with gamification serving as a moderating variable that strengthens this relationship. These findings indicate that well-managed content that is informative, interactive, and engaging can effectively enhance consumer engagement, particularly among Generation Z. From a theoretical perspective, the results support the relevance of the Elaboration Likelihood Model in explaining digital consumer behavior, which tends to process marketing information primarily through the peripheral route. From a practical standpoint, the findings highlight

the importance of experience-based digital marketing strategies and the incorporation of gamification elements in fostering long-term relationships with consumers. Nevertheless, despite its contributions, this study has certain limitations, including the application of a cross-sectional design and the dependence on self-reported perceptual measures. Therefore, future research is recommended to adopt longitudinal approaches, expand the research context, and incorporate additional variables such as trust and loyalty to enrich the understanding of the dynamics of consumer engagement.

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