

Building Consumer Trust Through Brand-Generated Short-Form Videos: Evidence from Generation Z in the Premium Motorcycle Salon Industry

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Abstract—The rapid growth of short-form video marketing has transformed how brands engage Generation Z consumers. However, despite the widespread adoption of Brand-Generated Content (BGC), little is known about which content characteristics effectively build consumer trust and stimulate purchase intention among this highly skeptical demographic. This study investigates the effects of credibility, informativeness, and entertainment on consumer trust and purchase intention using a stimulus-based survey of 157 Generation Z motorcycle users in the Greater Jakarta area. Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The results reveal that credibility and entertainment significantly enhance both consumer trust and purchase intention, with consumer trust acting as a partial mediator of these relationships, as both dimensions retain significant direct effects on purchase intention alongside their indirect effects through trust. In contrast, informativeness shows no significant effect on either outcome. One plausible, though tentative, explanation is an information overload dynamic, in which excessive functional detail in short-form BGC may disrupt the format's persuasive appeal; however, this study did not directly measure cognitive load, and the interpretation should be treated as exploratory. These findings suggest that informativeness should not be assumed ineffective, but may instead be more suitable for later stages of the customer journey through a content funneling approach that aligns information depth with consumers' evolving needs. This study contributes to the growing literature on short-form video marketing by extending the understanding of trust formation among Generation Z and offering actionable implications for digital marketing strategy, while acknowledging the limitations posed by its purposive sample and single-stimulus design.

Keywords—Brand-Generated Short Video Content, Consumer Trust, Purchase Intention, Generation Z, Motorcycle Salon.

I. INTRODUCTION

The digital landscape has fundamentally shifted consumer behavior, particularly with the rise of

Generation Z. Social media platforms have evolved from mere networking sites to primary sources for lifestyle inspiration and brand search [1]. Furthermore, as a demographic with increasing buying power [2], [3], Gen Z dominates social media platforms, such as Instagram and TikTok, where short-form videos have become the primary medium for information and entertainment [4]. Concurrently, the Indonesian automotive industry has seen a significant evolution due to the increasing volume of motorcycles [5], which has led to a rising demand for advanced aesthetic and protection services, specifically premium motorcycle salons. To capitalize on this growth and secure long-term digital presence, these salons heavily rely on Brand-Generated Content (BGC) through short-form videos [6], [7], [8].

However, deploying BGC to this specific demographic presents a unique challenge in earning their trust [9]. Generation Z possesses a high degree of persuasion knowledge, making them inherently skeptical of corporate promotional motives and naturally inclined towards the perceived authenticity of User-Generated Content (UGC) [10]. For BGC to effectively drive purchase intention, it must first successfully navigate this skepticism to build consumer trust [11], [12]. Previous studies have shown that short video content attributes, such as credibility, informativeness, and entertainment, influence consumer attitudes, particularly trust, and ultimately drive purchase intention [11], [13], [14]. Furthermore, a theoretical gap exists regarding how specific video dimensions achieve this. While some studies, such as Luo et al. [12] and Mustafi and Hosain [15], argue that entertainment significantly builds trust, Ghenie et al. [11] found it to be insignificant. To address this gap and the practical challenges in the motorcycle salon industry, this research investigates how the specific characteristics of brand-generated short video content can effectively build consumer trust and stimulate purchase intention among Generation Z consumers. Specifically, this study aims to answer three research questions: (1) How does brand-generated short video content influence purchase intention? (2) How does it influence consumer trust? and (3) Does consumer trust mediate the relationship between brand-generated short video content and purchase intention?

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II. LITERATURE REVIEW

Purchase intention represents a consumer's tendency and desire to buy a specific product or service, shaped by their prior experiences, satisfaction, and emotional attitudes [16]. Grounded in the Theory of Planned Behavior, it serves as the most direct predictor of actual behavior, indicating that higher intention significantly increases the probability of an actual purchase transaction [17]. Furthermore, it acts as a reflection of a consumer's planned future actions, bridging the gap between their internal beliefs and tangible purchasing decisions [18].

Consumer trust is defined as a strong belief and positive expectation regarding a brand's intentions, particularly in situations that involve consumer risk and vulnerability [19]. Comprehensively, this psychological state is evaluated through the dimensions of trustworthiness (integrity), benevolence (goodwill), and the brand's perceived competence in fulfilling consumer

expectations [20], [21]. Ultimately, establishing this trust mitigates perceived risks and significantly boosts consumer confidence, thereby encouraging them to proceed with actual purchasing decisions [12].

Short-form video has emerged as a dominant digital communication tool, offering a concise and accessible format perfectly suited for fast-paced consumer behaviors [22]. The effectiveness of this format is structurally evaluated through three primary dimensions: credibility, informativeness, and entertainment [11], [12]. Content credibility refers to the perceived trustworthiness, expertise, and overall reliability of the information source [23]. Informativeness reflects the content's capacity to reduce uncertainty and dynamically demonstrate product features, effectively updating the consumer's knowledge state [24]. Finally, entertainment captures the hedonic value and intrinsic enjoyment derived from the media, functioning as a mood management tool that fosters positive affective responses [25].

Short Video Content

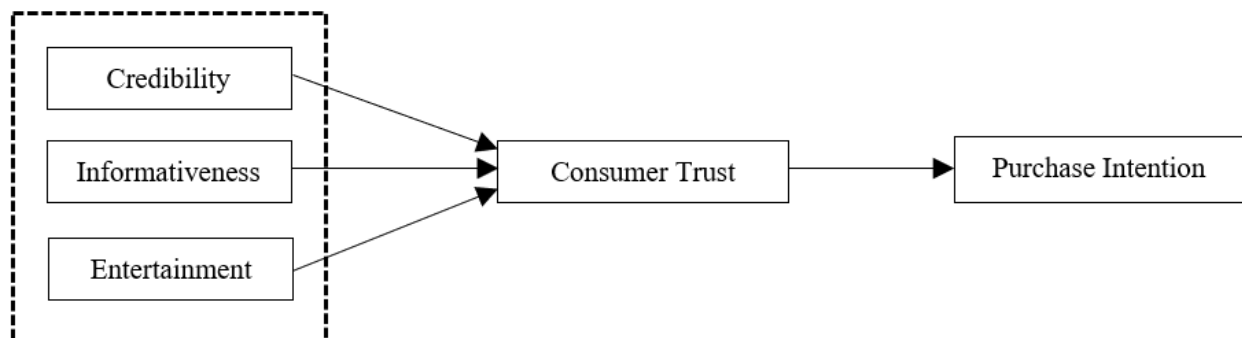


Figure. 1.
Conceptual Framework

Based on this conceptual framework, the following hypotheses are proposed:

H1-H3: Credibility (H1), Informativeness (H2), and Entertainment (H3) have a positive and significant effect on Purchase Intention.

H4-H6: Credibility (H4), Informativeness (H5), and Entertainment (H6) have a positive and significant effect on Consumer Trust.

H7: Consumer Trust has a positive and significant effect on Purchase Intention.

H8-H10: Consumer Trust significantly mediates the relationship between Credibility (H8), Informativeness (H9), Entertainment (H10), and Purchase Intention

III. METHODOLOGY

This study employs a quantitative, explanatory research approach utilizing a stimulus-based survey design to accurately measure consumer psychological responses and behavioral intentions [26], [27]. The target population comprises Generation Z individuals (aged 18–29) residing in the Jabodetabek area who are active Instagram and motorcycle users. A non-probability, purposive sampling technique is applied to reach this specific demographic [28]. The minimum sample size is determined using the inverse square root method, which requires at least 155 respondents for a

model of this structural complexity and expected path coefficients [29]. A total of 157 valid samples are successfully collected, satisfying the requirements for robust statistical power.

Data collection is conducted through an online questionnaire utilizing a five-point Likert interval scale [27]. To prevent recall bias and ensure a uniform evaluative frame of reference, the instrument incorporated a targeted stimulus where respondents were required to watch a single, standardized brand-generated short video lasting 79 seconds. This video, sourced directly from PT SCT Motor Indonesia, uses a curiosity-driven hook followed by a step-by-step visual demonstration of the motodetailing process, from the vehicle's initial condition to its fully restored, polished result. It was selected as the stimulus because it reflects the brand's positioning as a premium motorcycle salon emphasizing visual transformation and craftsmanship, making it representative of the BGC format typically used in this industry segment.

The collected data are analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) via SmartPLS 4. PLS-SEM is selected because it is highly suitable for explanatory research in predicting target constructs and testing specific mediation pathways without strict multivariate normality assumptions [29]. The analytical procedure is executed in two stages. First, the measurement (outer) model is evaluated to establish

indicator reliability, internal consistency (Cronbach's Alpha and Composite Reliability), and construct validity (Average Variance Extracted and Heterotrait-Monotrait Ratio) [29]. Subsequently, the structural (inner) model is assessed using a bootstrapping procedure to test the significance of both the direct relationships and the mediating effects [29].

acquiescence bias toward negative-scaled items are identified. These items are systematically eliminated to correct data entry inconsistencies and prevent distorted reliability results. As presented in Table I, the refined constructs demonstrate strong internal consistency. All Cronbach's Alpha and Composite Reliability (CR) values exceed the 0.70 threshold [29]. Convergent validity is also established, with all Average Variance Extracted (AVE) values well above the minimum acceptable level of 0.50 [29]. Table II confirms that the discriminant validity of our measurements remains below 0.90 [29].

IV. FINDINGS AND DISCUSSION

A. Measurement Model Evaluation

The measurement model is evaluated to ensure the reliability and validity of the research instrument. During the initial data screening, reliability issues caused by

Table I.
Measurement Model Evaluation

Construct	Indicator	Outer Loadings	Ca	CR (rho_c)	AVE
Credibility	Crdo1	0.765	0.788	0.876	0.592
Credibility	Crdo2	0.860	0.788	0.876	0.592
Credibility	Crdo3	0.885	0.788	0.876	0.592
Informativeness	Inf01	0.864	0.830	0.897	0.703
Informativeness	Inf02	0.877	0.830	0.897	0.703
Informativeness	Inf03	0.847	0.830	0.897	0.703
Entertainment	Ent01	0.896	0.862	0.916	0.745
Entertainment	Ent02	0.878	0.862	0.916	0.745
Entertainment	Ent03	0.882	0.862	0.916	0.745
Consumer Trust	CTr01	0.848	0.865	0.908	0.784
Consumer Trust	CTr02	0.805	0.865	0.908	0.784
Consumer Trust	CTr03	0.845	0.865	0.908	0.784
Consumer Trust	CTr04	0.877	0.865	0.908	0.784
Purchase Intention	Plnt01	0.845	0.814	0.875	0.712
Purchase Intention	Plnt02	0.825	0.814	0.875	0.712
Purchase Intention	Plnt03	0.846	0.814	0.875	0.712
Purchase Intention	Plnt04	0.454	0.814	0.875	0.712
Purchase Intention	Plnt05	0.804	0.814	0.875	0.712

Table II.
Discriminant Validity (Hmt)

	CR	IN	EN	CT	PI
Credibility					
Informativeness	0.837				
Entertainment	0.721	0.725			
Consumer Trust	0.883	0.703	0.686		
Purchase Intention	0.735	0.806	0.808	0.586	

B. Structural Model and Hypothesis Testing

The structural model exhibits moderate to substantial explanatory power, predicting 55.4% of the variance in Consumer Trust ($R^2 = 0.554$) and 45.7% of the variance in Purchase Intention ($R^2 = 0.457$). Table III summarizes the structural path analysis, combining both direct and mediating effects. The path analysis reveals that Credibility and Entertainment are significant drivers of

both Consumer Trust and Purchase Intention. Because their direct effects on Purchase Intention (H1, H3) remain significant even when Consumer Trust is included in the model, Consumer Trust functions as a partial mediator for these two dimensions (H8, H10) rather than a full mediator, where the content dimensions influence purchase intention both directly and indirectly through trust. Consumer Trust also holds the highest predictive

power on Purchase Intention among all constructs (H7: $T=15.484$). Conversely, the Informativeness dimension consistently failed to reach significance across all paths (H2, H5, H9), with p -values of 0.067–0.068 falling marginally above the conventional $\alpha = 0.05$ threshold

applied in this study. While these values approach significance, they do not meet the pre-specified criterion and are therefore treated as non-significant; this proximity to the threshold is discussed further as a limitation of statistical power in the Discussion section.

Table III.
Hypothesis Testing Results

H	Path	β -Value	T-Statistics	P-Value	Result
H1	CR $\rightarrow$ PI	0.296	4.703	0.000	Supported
H2	IN $\rightarrow$ PI	0.075	1.488	0.068	Rejected
H3	EN $\rightarrow$ PI	0.207	3.432	0.000	Supported
H4	CR $\rightarrow$ CT	0.437	5.072	0.000	Supported
H5	IN $\rightarrow$ CT	0.111	1.496	0.067	Rejected
H6	EN $\rightarrow$ CT	0.305	3.706	0.000	Supported
H7	CT $\rightarrow$ PI	0.678	15.484	0.000	Supported
H8	CR $\rightarrow$ CT $\rightarrow$ PI	0.296	4.703	0.000	Supported
H9	IN $\rightarrow$ CT $\rightarrow$ PI	0.075	1.488	0.068	Rejected
H10	EN $\rightarrow$ CT $\rightarrow$ PI	0.207	3.432	0.000	Supported

C. Discussion and Managerial Implications

These findings provide profound insights into Generation Z's cognitive processing of brand communications within the automotive aesthetics industry. The paramount significance of Credibility highlights that Gen Z demands authentic, unexaggerated visual portfolios. This finding is consistent with Ghenie et al. [11], who similarly identified credibility as a significant predictor of trust in short-form video marketing. Likewise, the significant effect of Entertainment aligns with Luo et al. [12], confirming that engaging and enjoyable content strengthens consumers' trust and purchase intention. However, this result contrasts with Ghenie et al. [11], who reported that Entertainment did not significantly influence trust. The discrepancy may stem from differences in industry context. The present study focuses on a premium motorcycle aesthetic service, where visually engaging and emotionally appealing content naturally complements consumers' motivations. In contrast, Ghenie et al. [11] examined a broader social commerce context in which entertainment alone may not have been sufficient to establish trust. The current finding also supports Ghenie et al.'s [11] "low-effort watching" strategy, suggesting that highly engaging and casual content signals brand benevolence and helps overcome Generation Z's inherent persuasion knowledge [10].

In contrast, Informativeness is consistently non-significant across H2, H5, and H9. This finding contradicts Ghenie et al. [11], who found Informativeness to be a significant determinant of trust. One plausible explanation is an "information overload" dynamic, in which dense, procedural, or technical content disrupts the storytelling narrative of short-form BGC, causing it to be perceived as an aggressive hard sell rather than a trust signal [30], [31]. This interpretation is consistent with Liu and Cabading [13], who suggest that in industries where visual appeal and emotional satisfaction are prioritized, purely functional value often needs to be integrated into more creative content formats. However, it is important to note that this study did not directly

measure perceived information load or cognitive burden; the "information overload" explanation is therefore offered as a plausible post-hoc interpretation of the non-significant path, not a directly tested mechanism. The proximity of the p -values (0.067–0.068) to the significance threshold also suggests the possibility of an underpowered effect rather than a true null relationship, which future research with larger or more diverse samples could help clarify.

Managerially, these findings advocate for a content funnelling strategy rather than a one-size-fits-all approach, grounded specifically in the dimensions that showed statistically supported effects. Because Credibility and Entertainment are the only dimensions with confirmed significant effects on both trust and purchase intention, brands should prioritize these two elements, such as credible visual transformations and entertaining storytelling, to capture attention and establish trust at the top of the funnel, while embedding functional information within engaging narratives rather than presenting it as dense technical explanations. Given that Informativeness did not show a significant effect in this study's short-form, top-of-funnel context, this does not mean detailed information is ineffective altogether; rather, it suggests informativeness may be better suited to later funnel stages, where consumers actively seek analytical detail. More detailed information, such as pricing, service specifications, and promotional terms, could instead be tested at bottom-of-funnel touchpoints, including captions, pinned comments, or direct communication channels. By aligning content depth with consumers' stage in the marketing funnel, brands can potentially maximize audience retention, strengthen trust, and improve purchase conversion, while informativeness is repositioned for later testing rather than assumed to be ineffective.

D. Limitations and Future Research

This study is subject to several limitations that warrant consideration. First, the reliance on a purposive sampling method and a single, standardized video within a stimulus-based survey design restricts the external

validity of the results. Second, the sample is specifically confined to Generation Z respondents in the Jabodetabek area evaluating a premium motorcycle salon. Consequently, these findings have limited generalizability and may not seamlessly translate to other consumer cohorts or different industries. Future research should explore multiple stimuli across various platforms and demographics to validate the consistency of these structural relationships.

V. CONCLUSION

This study demonstrates that brand-generated short-form videos influence Generation Z's purchase intention both directly and through building consumer trust. Specifically, Credibility and Entertainment significantly enhance Consumer Trust and Purchase Intention, with Consumer Trust acting as a partial mediator of these relationships, whereas Informativeness does not generate significant effects in this context. These findings extend the growing literature on short-form video marketing by highlighting the central role of trust in overcoming Generation Z's skepticism toward brand-generated communications, while offering a tentative explanation, an information overload dynamic, for the limited effect of informativeness that warrants further empirical testing. Consequently, marketers should adopt a content funnelling strategy that prioritizes credibility and entertainment in early-stage content, while testing more detailed informational content at later stages of the customer journey. These conclusions should be interpreted within the boundaries of the study's purposive sample, single-stimulus design, and industry-specific context, as outlined in the Limitations section.

REFERENCES

- [1] C. Forsey, "The State of Social Media in 2024: How You Can Drive Communities, Sales & Virality," HubSpot, Feb. 15, 2023. [Online]. Available: <https://blog.hubspot.com/marketing/state-of-social-media>.
- [2] GoodStats Data, "38% Gen Z Indonesia Berstatus Pekerja pada 2025," GoodStats Data, Feb. 22, 2026. [Online]. Available: <https://data.goodstats.id/statistic/38-gen-z-indonesia-berstatus-pekerja-pada-2025-8uAkQ>.
- [3] E. F. Santika, "Apa betul Gen Z Hedon? Ini survei pengeluaran bulanannya," Katadata, Jun. 3, 2024. [Online]. Available: <https://databoks.katadata.co.id/energi/statistik/bcef58d823bca3d/apa-betul-gen-z-hedon-ini-survei-pengeluaran-bulanannya>.
- [4] A. Schaefer, "How Gen Z uses social media and what that means for brands," Sprout Social, Oct. 28, 2025. [Online]. Available: <https://sproutsocial.com/insights/gen-z-social-media/>.
- [5] Badan Pusat Statistik (BPS), "Perkembangan Jumlah Kendaraan Bermotor Menurut Jenis (Unit), 2024," 2024. [Online]. Available: <https://www.bps.go.id/id/statistics-table/2/NTcjMg==/perkembangan-jumlah-kendaraan-bermotor-menurut-jenis.html>.
- [6] J. D. Barquero Cabrero, B. Castillo-Abdul, J. A. Talamás-Carvajal, and L. M. Romero-Rodríguez, "Owned media, influencer marketing, and unofficial brand ambassadors: differences between narratives, types of prescribers, and effects on interactions on Instagram," *Humanit. Soc. Sci. Commun.*, vol. 10, no. 1, 2023, doi: 10.1057/s41599-023-01779-8.
- [7] A. Kumar, R. Bezawada, R. Rishika, R. Janakiraman, and P. K. Kannan, "From Social to Sale: The Effects of Firm-Generated Content in Social Media on Customer Behavior," *J. Mark.*, vol. 80, no. 1, pp. 7–25, 2016, doi: 10.1509/jm.14.0249.
- [8] G. Liadeli, F. Sotgiu, and P. W. J. Verlegh, "A Meta-Analysis of the Effects of Brands' Owned Social Media on Social Media Engagement and Sales," *J. Mark.*, vol. 87, no. 3, pp. 406–427, 2023, doi: 10.1177/00222429221123250.
- [9] A. Lueerssen-Medina, "UGC isn't what it used to be. Most of what we see today is cleverly disguised marketing masquerading as authenticity," LinkedIn, Oct. 13, 2025. [Online]. Available: https://www.linkedin.com/posts/alicialumedina_ugc-isnt-what-it-used-to-be-most-of-what-activity-7383410588984619008-XF6W.
- [10] M. Mayrhofer, J. Matthes, S. Einwiller, and B. Naderer, "User generated content presenting brands on social media increases young adults' purchase intention," *Int. J. Advert.*, vol. 39, no. 1, pp. 166–186, 2020, doi: 10.1080/02650487.2019.1596447.
- [11] D. Ş. Ghenie, M. C. Avornicului, and D. A. Sitar-Taut, "Influence of short-form video advertising on purchase intention in social commerce: the power of word-of-mouth and flow experience," *Online Inf. Rev.*, pp. 1–20, 2025, doi: 10.1108/OIR-06-2025-0454.
- [12] C. Luo, N. A. M. Hasan, A. M. Zamri bin Ahmad, and G. Lei, "Influence of short video content on consumers purchase intentions on social media platforms with trust as a mediator," *Sci. Rep.*, vol. 15, no. 1, 2025, doi: 10.1038/s41598-025-94994-z.
- [13] L. Liu and C. B. Cabading, "The Impact of Women's Clothing Short Video Content Marketing on Consumers' Purchase Intention," *Rev. Integr. Bus. Econ. Res.*, vol. 14, p. 663, 2024.
- [14] H. Zhao and C. Wagner, "How TikTok leads users to flow experience: investigating the effects of technology affordances with user experience level and video length as moderators," *Internet Res.*, vol. 33, no. 2, pp. 820–849, 2023, doi: 10.1108/INTR-08-2021-0595.
- [15] M. A. A. Mustafi and M. S. Hosain, "The role of online advertising on purchase intention of smartphones: mediating effects of flow experience and advertising value," *J. Contemp. Mark. Sci.*, vol. 3, no. 3, pp. 385–410, 2020, doi: 10.1108/jcmars-05-2020-0024.
- [16] P. Kotler and K. L. Keller, *Marketing Management*, 15th ed. Pearson Education Limited, 2016.
- [17] I. Ajzen, "The theory of planned behavior," *Organ. Behav. Hum. Decis. Process.*, vol. 50, no. 2, pp. 179–211, 1991, doi: 10.1016/0749-5978(91)90020-T.
- [18] N. Kim, E. Chun, and E. Ko, "Country of origin effects on brand image, brand evaluation, and purchase intention," *Int. Mark. Rev.*, vol. 34, no. 2, pp. 254–271, 2017, doi: 10.1108/IMR-03-2015-0071.
- [19] M. Uttenthal, "A conceptual analysis of trust," *Soc. Sci. Inf.*, vol. 63, no. 3, pp. 392–410, 2024, doi: 10.1177/05390184241270835.
- [20] H. Kim and S. Gupta, "Investigating Customer Resistance to Change in Transaction Relationship with an Internet Vendor," *Psychol. Mark.*, vol. 29, no. 4, pp. 257–269, 2012, doi: 10.1002/mar.20519.
- [21] M. Sohaib, A. A. Safeer, and A. Majeed, "Role of social media marketing activities in China's e-commerce industry: A stimulus organism response theory context," *Front. Psychol.*, vol. 13, 2022, doi: 10.3389/fpsyg.2022.941058.
- [22] X. Dai and J. Wang, "Effect of online video infotainment on audience attention," *Humanit. Soc. Sci. Commun.*, vol. 10, no. 1, p. 421, 2023, doi: 10.1057/s41599-023-01921-6.
- [23] M. Alrubaian, M. Al-Qurishi, A. Alamri, M. Al-Rakhami, M. M. Hassan, and G. Fortino, "Credibility in Online Social

- Networks: A Survey," IEEE Access, vol. 7, pp. 2828–2855, 2019, doi: 10.1109/ACCESS.2018.2886314.
- [24] X. Cai, J. Cebollada, and M. Cortiñas, "Impact of seller- and buyer-created content on product sales in the electronic commerce platform: The role of informativeness, readability, multimedia richness, and extreme valence," J. Retail. Consum. Serv., vol. 70, 2023, doi: 10.1016/j.jretconser.2022.103141.
- [25] M. Grizzard and C. J. Francemone, "Media Entertainment Theory," in The International Encyclopedia of Media Psychology. Wiley, 2020, pp. 1–6, doi: 10.1002/9781119011071.iemp0258.
- [26] J. W. Creswell and J. D. Creswell, Research Design: Qualitative, Quantitative, and Mixed Method Approaches, 2023. [Online]. Available: <https://archive.org/details/researchdesign0000unse>.
- [27] W. L. Neuman, Social Research Methods: Qualitative and Quantitative Approaches. Pearson, 2014.
- [28] U. Sekaran and R. Bougie, "An easy way to help students learn, collaborate, and grow," 2016. [Online]. Available: www.wileypluslearningspace.com.
- [29] J. F. Hair, T. Hult, C. Ringle, M. Sarstedt, N. Danks, and S. Ray, Classroom Companion: Business Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R Workbook, 2021, doi: 10.1007/978-3-030-80519-7.
- [30] K. K. Coker, R. L. Flight, and D. M. Baima, "Video storytelling ads vs argumentative ads: how hooking viewers enhances consumer engagement," J. Res. Interact. Mark., vol. 15, no. 4, pp. 607–622, 2021, doi: 10.1108/JRIM-05-2020-0115.
- [31] S. Sujatmiko, M. Mattarima, P. Panus, A. G. Samalam, and I. L. D. Lawalata, "The Role of Emotional Storytelling in Product Promotional Videos on Purchase Intention: A Systematic Literature Review with Emphasis on Skincare Service Products," Golden Ratio Mapp. Idea Lit. Format, vol. 6, no. 1, pp. 155–162, 2025, doi: 10.52970/grmilf.v6i1.1492.
- APPENDIX OPERATIONAL DEFINITIONS