



Product Scarcity Appeals, Social Media Promotion, and Impulse Buying: Evidence from Cadbury ENHYPEN Edition

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Abstract

Limited edition collaborations between fast-moving consumer goods brands and K-pop idols have reshaped how young consumers respond to scarcity cues and digital promotional content. This study examines the influence of product scarcity appeals and social media promotion on impulse buying toward Cadbury ENHYPEN Edition among K-pop consumers in Bandung. Using a quantitative survey design, primary data were collected through a structured questionnaire from respondents selected through purposive sampling. The data were analyzed using multiple linear regression after instrument quality and classical assumption testing. The findings show that product scarcity appeals have a positive and significant relationship with impulse buying. Social media promotion also has a positive and significant relationship with impulse buying and emerges as the stronger predictor in the regression model. Jointly, both predictors explain 67.2 percent of the variance in impulse buying. The Stimulus-Organism-Response framework is used as an interpretive lens rather than a fully tested model because internal psychological states were not measured directly and no mediation pathway was examined. The study contributes to consumer behavior literature by integrating scarcity appeals, social media promotion, and fandom-based symbolic consumption in a limited edition FMCG context.

Keywords: product scarcity appeals; social media promotion; impulse buying; K-pop fandom; limited edition product.

1 Introduction

The development of limited-edition products has become an important strategy in contemporary fast-moving consumer goods marketing. In highly competitive consumer markets, brands are increasingly required to create not only functional value but also symbolic, emotional, and social value. One way to achieve this is through limited-edition collaboration, where a product is offered within a particular campaign period, with distinctive packaging, collectible elements, or associations with popular cultural figures. In such a context, scarcity does not merely indicate limited supply. It also becomes a persuasive marketing cue that increases perceived value, urgency, and desirability (Aggarwal, Jun, & Huh, 2011; Roux, Goldsmith, & Cannon, 2023). This strategy is particularly relevant for young consumers, whose purchasing decisions are often shaped by digital exposure, social media conversations, and cultural communities such as K-pop fandoms.

K-pop fandom has become a distinctive consumer segment because it combines emotional attachment, community participation, symbolic consumption, and intensive social media activity. In brand collaboration campaigns, K-pop idols are not only promotional figures but also carriers of cultural meaning that can influence how consumers perceive a product. Tertiano and Salehudin (2023) show that K-pop fandom-brand collaborations can shape customer engagement, attitudes toward celebrities, and purchase intention. This suggests that the consumption of idol-related products is often connected to identity, belonging, and emotional support for the idol. For FMCG brands, this condition creates a strategic opportunity because affordable consumer products can gain additional symbolic value when associated with a fandom culture.

Cadbury ENHYPEN Edition provides a relevant case for examining this phenomenon. In July 2025, Cadbury Dairy Milk publicly promoted its collaboration with ENHYPEN in Indonesia through the “Fall in Love with Chocolate Like Never Before” campaign, which connected chocolate consumption with the emotional and cultural appeal of a K-pop group (Yuniartha, 2025). The campaign attracted attention because it combined an everyday FMCG product with limited-edition and idol-related elements. In this context, the product was not perceived merely as chocolate but also as a collectible and emotionally meaningful item for consumers who were familiar with ENHYPEN. Social media further intensified the campaign through official promotional content, fan discussions, product-sharing posts, unboxing content, and electronic word-of-mouth.

A preliminary survey conducted among 35 K-pop consumers in Bandung indicated that this phenomenon was closely related to scarcity perception, social media exposure, and spontaneous purchasing behavior. The survey showed that 91.4 percent of respondents knew that Cadbury ENHYPEN Edition was a limited-edition product, while 80.0 percent felt encouraged to purchase it immediately before it became unavailable. In addition, 85.7 percent frequently encountered promotional content about the product on social media, and 82.9 percent stated that such content increased their interest in buying the product. More importantly, 68.6 percent reported purchasing the product spontaneously without prior planning, while 77.1 percent stated that their purchase decisions were driven more by emotional factors, such as supporting ENHYPEN or fear of missing out, than by functional needs. These preliminary findings indicate that impulse buying in this context may be shaped by the combined presence of product scarcity appeals and social media promotion.

Product scarcity appeals are relevant because limited availability can create urgency, exclusivity, and fear of missing an opportunity. Classical scarcity theory explains that consumers tend to assign higher value to objects that are difficult to obtain (Brock, 1968; Cialdini, 2009). In marketing, scarcity cues may appear through limited quantity, limited time, restricted access, high demand, or perceived uniqueness. Recent studies also confirm that scarcity can influence consumer decision-making and impulse buying by strengthening urgency, perceived value, and fear of missing out (Cengiz & Şenel, 2024; Ladeira, Lim, de Oliveira Santini, Rasul, Perin, & Altinay, 2023; Zhang, Jiang, Turner, & Pahlevan-Sharif, 2022). In the case of Cadbury ENHYPEN Edition, scarcity appeals are especially meaningful because the product is connected to a fandom context, where limited availability may increase the perceived value of owning, collecting, or sharing the product within a community.

Social media promotion is another important stimulus because it shapes how consumers encounter, interpret, and respond to a campaign. Social media marketing activities are commonly reflected through entertainment, interaction, trendiness, customization, electronic word-of-mouth, and informativeness (Godey, Manthiou, Pederzoli, Rokka, Aiello, Donvito, & Singh, 2016; Kim & Ko, 2012; Yadav & Rahman, 2017). In a fandom-based campaign, these dimensions become more powerful because promotional messages are not limited to official brand communication. They are also reproduced and amplified by fans through comments, reposts,

reviews, unboxing videos, and community discussions. Liadeli, Sotgiu, and Verlegh (2023) show that brand-owned social media can influence engagement and sales-related outcomes. This perspective is relevant to Cadbury ENHYPEN Edition because official campaign content was amplified through fan discussions, unboxing posts, product-sharing content, and community-based electronic word-of-mouth.

Impulse buying is commonly understood as a sudden, unplanned, and emotionally driven purchase response (Beatty & Ferrell, 1998; Rook, 1987). Contemporary impulse buying research has increasingly emphasized the role of digital environments, where consumers are exposed to interactive, visual, social, and persuasive stimuli that can shorten the path from exposure to purchase (Iyer, Blut, Xiao, & Grewal, 2020; Redine, Deshpande, Jebarajakirthy, & Surachartkumtonkun, 2023). The Stimulus-Organism-Response (S-O-R) framework is adopted as a limited interpretive lens rather than as a fully specified empirical model. Product scarcity appeals and social media promotion represent external stimuli, while impulse buying represents the observed behavioral response. Urgency, excitement, perceived value, social belonging, and fear of missing out are treated as conceptually implied psychological processes rather than measured organism variables. Accordingly, the empirical analysis tests direct stimulus-to-response relationships and does not evaluate mediation or empirically confirm the complete S-O-R sequence (Mehrabian & Russell, 1974; Zhang et al., 2022).

Although previous studies have examined scarcity appeals, social media marketing, and impulse buying in various settings, limited attention has been given to their combined role in the context of affordable FMCG products associated with K-pop fandom in Indonesia. Most existing studies focus on general consumer products, fashion, social commerce, or live-streaming environments, while the intersection of limited-edition FMCG, fandom-based symbolic value, and social media promotion remains underexplored. This study therefore seeks to fill this gap by examining product scarcity appeals and social media promotion as two marketing stimuli that may explain impulse buying toward Cadbury ENHYPEN Edition among K-pop consumers in Bandung.

Based on this background, the purpose of this study is to examine the influence of product scarcity appeals and social media promotion on impulse buying, both partially and simultaneously. The study contributes to consumer behavior and marketing literature by examining scarcity appeals and social media promotion within a limited-edition fast-moving consumer goods and Korean pop collaboration context. The Stimulus-Organism-Response perspective supports a cautious interpretation of possible psychological processes but is not presented as a fully tested mediation model. Practically, the findings are expected to provide insights for FMCG brands in designing credible scarcity messages, emotionally engaging social media campaigns, and fandom-oriented promotional strategies that can stimulate consumer response while maintaining responsible marketing practices.

2 Literature Review

2.1 Product Scarcity Appeals

Product scarcity appeals refer to marketing messages that emphasize the limited availability of a product in order to increase perceived value, urgency, and consumer desire. In marketing, scarcity is not merely an objective condition of limited supply but also a persuasive cue that shapes how consumers evaluate a product. The theoretical foundation of scarcity appeals can be traced to commodity theory, which argues that a commodity tends to be perceived as more valuable when it becomes less available (Brock, 1968). This logic is consistent with the scarcity principle, which explains that people assign greater value to opportunities or objects that are difficult to obtain

(Cialdini, 2009). In a consumption context, scarcity cues may encourage consumers to act quickly because postponing a decision is perceived as increasing the risk of losing access to the product.

Scarcity appeals are commonly communicated through different message formats, including limited quantity, limited time, restricted access, high demand, and uniqueness cues. Aggarwal et al. (2011) show that limited-quantity and limited-time messages can influence consumer motivation by creating a sense of competition and urgency. Eisend (2008) also explains that scarcity appeals work because consumers interpret limited availability as a signal of desirability. More recent literature expands scarcity beyond stock limitation by emphasizing the role of access, demand signals, and perceived uniqueness. Roux et al. (2023) argue that scarcity in marketing may involve not only lack of availability but also lack of access, which is highly relevant for limited-edition products distributed through selected channels or campaign periods.

In limited-edition marketing, scarcity is particularly powerful because it combines functional restriction with symbolic value. A limited-edition product is not only perceived as difficult to obtain but may also be viewed as special, collectible, and socially meaningful. This is relevant to FMCG products that collaborate with popular culture figures, where the value of the product extends beyond its utilitarian function. Ladeira et al. (2023) confirm through meta-analysis that product scarcity generally produces a positive effect on consumer decision-making, although the magnitude of the effect may vary depending on scarcity type, product category, and consumer characteristics. In digital commerce, scarcity cues can also activate fear of missing out, urgency, and emotional arousal, which may lead consumers to make faster and less deliberative decisions (Zhang et al., 2022). Similarly, Cengiz and Şenel (2024) demonstrate that perceived scarcity can strengthen impulse buying tendencies through psychological mechanisms such as FOMO.

In the context of Cadbury ENHYPEN Edition, product scarcity appeals are relevant because the product was positioned as a limited-edition collaboration associated with a K-pop group. This context makes scarcity multidimensional. Quantity scarcity may be perceived through limited stock, time scarcity through the campaign period, access scarcity through selected distribution channels, demand-related messaging through consumer discussions and reports of high demand, and uniqueness perception through the symbolic value of the ENHYPEN collaboration. Therefore, product scarcity appeals in this study are understood as marketing stimuli that combine limited availability, perceived exclusivity, and collectible meaning.

2.2 Social Media Promotion

Social media promotion refers to marketing communication activities conducted through social media platforms to inform, persuade, engage, and influence consumers. Unlike conventional promotion, social media promotion is interactive, networked, and participatory. Consumers are not only receivers of promotional messages but also participants who can comment, share, review, and reproduce brand-related content. This makes social media particularly influential in campaigns that rely on cultural relevance, community engagement, and electronic word-of-mouth.

The concept of social media promotion in this study is grounded in the social media marketing activities framework. Kim and Ko (2012) identify entertainment, interaction, trendiness, customization, and word-of-mouth as key dimensions of social media marketing activities. Godey et al. (2016) further show that these activities can influence brand equity and consumer behavior because they create consumer experiences that are more engaging than one-way promotional exposure. Yadav and Rahman (2017) add informativeness as an important dimension, particularly in digital and e-commerce contexts where consumers rely on online content to obtain product information, availability details, and purchase guidance. Based on these perspectives, social

media promotion in this study includes entertainment, interaction, trendiness, customization, electronic word-of-mouth, and informativeness.

Social media promotion becomes more persuasive when promotional content is emotionally engaging, socially validated, and repeatedly circulated within a community. Liadeli et al. (2023) show that brand-owned social media can affect engagement and sales-related outcomes, especially when the content stimulates interaction and consumer participation. In fandom-based marketing, social media is even more central because fans often act as voluntary amplifiers of campaign messages. They produce unboxing videos, share purchase experiences, repost official content, and create community discussions. These activities transform brand promotion into a shared social experience, where promotional exposure is reinforced by peer influence and group participation.

The relevance of social media promotion is also strengthened in K-pop collaboration campaigns. Tertiano and Salehudin (2023) show that K-pop fandom-brand collaborations can shape customer engagement, attitudes toward celebrities, and purchase intention. This indicates that promotional content featuring K-pop idols does not only communicate product attributes but also activates emotional attachment, fandom identity, and social belonging. In the case of Cadbury ENHYPEN Edition, social media promotion may influence impulse buying because it exposes consumers to visually attractive content, idol-related symbolism, fan-generated discussions, and information about product availability. These promotional cues can increase excitement, social proof, and urgency, particularly among consumers who are emotionally connected to ENHYPEN or familiar with K-pop fandom culture.

2.3 Impulse Buying

Impulse buying refers to a spontaneous, unplanned, and immediate purchasing response that is often accompanied by emotional activation and reduced cognitive evaluation. Rook (1987) defines impulse buying as a sudden and powerful urge to buy immediately, which is often hedonically complex and may occur with limited consideration of consequences. Beatty and Ferrell (1998) further explain that impulse buying occurs when consumers experience a sudden urge to purchase without prior intention to buy a specific product or category. These foundational perspectives show that impulse buying is not merely an unplanned purchase but also a psychological response shaped by emotion, situational stimuli, and the immediacy of the buying opportunity.

Contemporary studies show that impulse buying has become increasingly relevant in digital and social media environments. Iyer et al. (2020) argue that impulse buying is influenced by internal factors such as affective states and external stimuli such as promotional cues, store environment, and marketing communication. Redine et al. (2023) also emphasize that impulse buying research has expanded from traditional retail to online and social commerce contexts, where consumers are exposed to more intense, interactive, and personalized stimuli. In digital environments, the path from exposure to purchase is shorter because consumers can move from seeing promotional content to making a transaction within the same platform or through a linked marketplace.

Impulse buying in fandom contexts can also be interpreted through hedonic, emotional, and symbolic consumption. Hedonic consumption emphasizes pleasure, excitement, novelty, and experiential gratification, whereas emotional consumption reflects the affective satisfaction derived from acquiring an idol-related product. Evidence from purchases of official Korean pop (K-pop) merchandise indicates that hedonic shopping motivation is positively associated with impulse buying, while research on idol-endorsed brands identifies perceived emotional value, relatedness needs, and brand-based self-realization as relevant features of fan consumption (Fitria & Andarini, 2025; Chen, Chen, Ma, & Wang, 2022). Symbolic consumption becomes salient

when possession communicates support, belonging, or self-definition, and studies of K-pop collaborations and fan-collectible consumption associate social identification with engagement, purchase intention, and impulsive consumption (Tertiano & Salehudin, 2023; Zhao & Zhang, 2026). These perspectives provide a contextual interpretation of fandom purchasing but are not treated as measured constructs or statistically tested mechanisms in the present study.

The Stimulus-Organism-Response model distinguishes environmental stimuli, internal cognitive and affective states, and observable behavioral responses (Mehrabian & Russell, 1974). In the present model, product scarcity appeals and social media promotion are specified as external stimuli, whereas impulse buying is specified as the response. Urgency, excitement, perceived value, social belonging, fear of missing out, and parasocial closeness provide theoretically plausible descriptions of the organism stage in fandom-based digital consumption (Zhang et al., 2022). However, no internal psychological state was operationalized as a measured variable in the questionnaire. The present study therefore evaluates direct relationships between the stimuli and the response without testing mediation or claiming empirical validation of the complete Stimulus-Organism-Response sequence. As comparative evidence from Indonesian live commerce, Prasetya, Hurriyati, and Dirgantari (2026) found that parasocial interaction fully mediated the relationship between live-stream e-branding and impulse buying, providing an example of how an organism variable can be measured and tested explicitly.

2.4 Hypothesis Development

Product scarcity appeals are expected to have a positive effect on impulse buying because scarcity cues create urgency, increase perceived value, and heighten the perceived risk of missing an opportunity. When consumers perceive a product as limited in quantity, time, access, or uniqueness, they may feel encouraged to make a faster purchase decision before the opportunity disappears. This mechanism is consistent with commodity theory, the scarcity principle, and empirical evidence showing that scarcity can increase consumer desirability and purchase motivation (Brock, 1968; Cialdini, 2009; Aggarwal et al., 2011; Ladeira et al., 2023). In the context of Cadbury ENHYPEN Edition, the limited-edition status and collectible value of the collaboration may strengthen consumers' urge to purchase spontaneously. Therefore, the first hypothesis is formulated as follows:

H1: Product scarcity appeals have a positive and significant effect on impulse buying.

Social media promotion is also expected to have a positive effect on impulse buying because digital promotional content can create repeated exposure, emotional engagement, social proof, and easier access to product information. The dimensions of entertainment, interaction, trendiness, customization, electronic word-of-mouth, and informativeness can stimulate both cognitive and affective consumer responses (Kim & Ko, 2012; Godey et al., 2016; Yadav & Rahman, 2017). In a K-pop collaboration context, social media promotion may become more influential because fans and consumers actively share content, discuss product availability, and reinforce collective excitement around the campaign. Research on Korean pop fandom-brand collaborations further supports the relevance of customer engagement and attitudes toward celebrities in shaping purchase intention (Tertiano & Salehudin, 2023). Therefore, the second hypothesis is formulated as follows:

H2: Social media promotion has a positive and significant effect on impulse buying.

Product scarcity appeals and social media promotion are expected to jointly explain variations in impulse buying. Scarcity cues may create urgency and perceived exclusivity, while social media promotion may amplify product-related information through repeated exposure, community interaction, and electronic word-of-mouth. The simultaneous analysis evaluates whether both

predictors collectively contribute to the regression model rather than whether their joint effect has a particular positive direction. Therefore, the third hypothesis is formulated as follows:

H3: Product scarcity appeals and social media promotion jointly have a significant effect on impulse buying.

Based on the preceding literature review and hypothesis development, the conceptual framework of the study is presented in Figure 1. The framework specifies product scarcity appeals and social media promotion as the two predictor variables and impulse buying as the outcome variable. The model reflects the direct relationships tested through multiple linear regression as well as the joint significance of both predictors in the same model. No organism variable, mediating mechanism, or interaction effect is included because these elements were not operationalized in the empirical design.

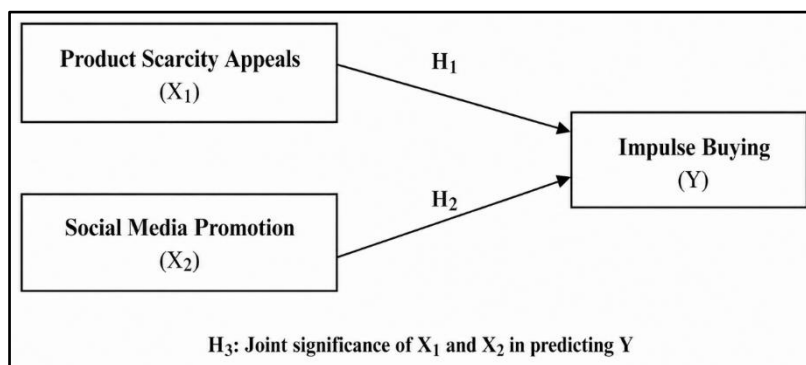


Figure 1: Conceptual framework of the study

Note: H₃ represents the joint significance of X₁ and X₂ in the multiple linear regression model and does not indicate an interaction effect.

Source: Developed for the present study.

As illustrated in Figure 1, the empirical model is intentionally parsimonious and focuses on direct stimulus-to-response relationships. Product scarcity appeals and social media promotion are treated as the independent variables, while impulse buying is treated as the dependent variable. Hypotheses H1 and H2 represent the partial effects of each predictor, whereas H3 represents their joint significance in the multiple regression model. This framework is fully aligned with the variables measured in the questionnaire and the statistical procedures used in the study.

3 Research Method

This study employed a quantitative research design with descriptive and verificative purposes. The descriptive component was used to explain the empirical condition of product scarcity appeals, social media promotion, and impulse buying among respondents. The verificative component was used to test the hypothesized statistical effects of product scarcity appeals and social media promotion on impulse buying. This design was considered appropriate because the study aimed not only to describe consumer perceptions of Cadbury ENHYPEN Edition but also to examine the relationship between marketing stimuli and impulse buying behavior (Sugiyono, 2020).

The research object was Cadbury ENHYPEN Edition, a limited-edition chocolate product associated with Cadbury's collaboration campaign with the K-pop group ENHYPEN in Indonesia. The unit of analysis was the individual consumer. The target respondents were K-pop

consumers in Bandung, including ENHYPEN fans and consumers familiar with ENHYPEN, who had been exposed to information about Cadbury ENHYPEN Edition and recognized its limited-edition status. This respondent profile was relevant because the constructs examined in this study required prior exposure to scarcity-related messages and social media promotional content.

Before the main data collection, an exploratory preliminary survey was conducted in October 2025 through a separate Google Forms questionnaire administered to 35 members of K-pop communities and ENHYPEN fans in Bandung. The preliminary instrument contained six yes-or-no questions designed solely to identify initial patterns of limited-edition awareness, social media exposure, emotional purchase motivation, and spontaneous purchasing. The 35 preliminary participants were excluded from the main survey, and preliminary responses were not incorporated into the final dataset of 112 respondents. The main survey was conducted separately in December 2025 using the final five-point Likert-scale instrument, thereby preventing duplicate participation and preserving the independence of the data used for hypothesis testing.

The identifiable accessible population comprised 419 members of Korean pop (K-pop) and ENHYPEN-related communities in Bandung who satisfied the initial eligibility criteria. For pragmatic planning, the minimum recruitment target was calculated using $n = N / [1 + N(e^2)]$, with $N = 419$ and $e = .10$. The calculation yielded 80.73, which was rounded upward to 81 respondents. The 10 percent value was adopted as a pragmatic planning benchmark because the study examined an under-researched and context-specific fandom-based collaboration, while the broader target population was distributed across community and social media channels without a complete probability sampling frame. Although the statistical analysis tested predefined hypotheses, the empirical application was exploratory in context because it focused on a narrowly defined consumer group whose valid participation required prior awareness of the product and exposure to its promotional communication. This justification follows the principle that sample size planning should be aligned with the study's inferential purpose, accessible population, and practical recruitment conditions (Lakens, 2022).

Purposive sampling was therefore used to recruit respondents whose characteristics were directly relevant to the constructs under investigation. The inclusion criteria required respondents to be at least 17 years old, reside or be active in Bandung, be familiar with K-pop or ENHYPEN, be aware of Cadbury ENHYPEN Edition, and have encountered its promotional information through social media. The final dataset contained 112 valid responses, exceeding the minimum recruitment target by 31 respondents and providing a larger empirical basis than the initial planning threshold. Because respondent selection was nonrandom, the 10 percent parameter should not be interpreted as a probability-based estimate of sampling error or as evidence of population-wide representativeness. Accordingly, the findings are interpreted within the accessible subpopulation defined by the recruitment channels and eligibility criteria, consistent with the appropriate scope of inference for purposive samples (Andrade, 2021).

Primary data were collected using a structured online questionnaire distributed through Google Form to K-pop community channels and social media networks in Bandung. The questionnaire used a five-point Likert scale ranging from 1, indicating strongly disagree, to 5, indicating strongly agree. To interpret the descriptive mean scores, the five-point response scale was divided into five non-overlapping intervals using a class width of 0.80, calculated as $(5 - 1) / 5$. After rounding to two decimal places, mean scores from 1.00 to 1.79 were classified as very low, 1.80 to 2.59 as low, 2.60 to 3.39 as moderate, 3.40 to 4.19 as high, and 4.20 to 5.00 as very high. These criteria were applied consistently to the descriptive interpretation of product scarcity appeals, social media promotion, and impulse buying. The categories indicate the relative level of each construct within the observed sample and do not determine statistical significance. Product scarcity appeals were measured using 10 items covering five dimensions: quantity scarcity, time scarcity, access scarcity, demand-related messaging, and uniqueness perception. These items

were developed by synthesizing scarcity and limited-edition product literature, particularly Aggarwal, Jun, and Huh (2011), Eisend (2008), and Roux, Goldsmith, and Cannon (2023). Social media promotion was measured using 12 items covering six dimensions: entertainment, interaction, trendiness, customization, electronic word-of-mouth, and informativeness, based on the social media marketing activities framework developed by Kim and Ko (2012), Godey et al. (2016), and Yadav and Rahman (2017). Impulse buying was measured using 8 items covering four dimensions: spontaneity, urge to buy, emotional activation, and disregard for consequences, based on the impulse buying literature developed by Rook (1987), Beatty and Ferrell (1998), and later impulse buying studies.

The empirical model contained two predictor variables, product scarcity appeals and social media promotion, and one outcome variable, impulse buying. No organism construct was included in the questionnaire or multiple linear regression model. Consequently, the statistical analysis examined direct stimulus-to-response relationships and did not test an indirect or mediating pathway. References to urgency, excitement, perceived value, social belonging, and fear of missing out are therefore limited to theoretical interpretation rather than reported as empirical findings.

Because product scarcity appeals, social media promotion, and impulse buying were measured through self-reports obtained from the same respondents in a single questionnaire administration, the research design was susceptible to common method bias. Several procedural remedies were applied during instrument design and administration by using context-specific and clearly worded items, allowing respondents to complete the online questionnaire independently, assuring the confidentiality of responses, and maintaining voluntary participation. These procedures were intended to reduce item ambiguity, evaluation apprehension, and socially desirable responding. However, procedural controls can reduce but cannot eliminate shared method variance, so the estimated associations should be interpreted with appropriate caution (Podsakoff, Podsakoff, Williams, Huang, & Yang, 2024).

Before hypothesis testing, the research instrument was evaluated through validity and reliability tests. Item validity was assessed using Pearson Product Moment correlation, while reliability was examined using Cronbach's Alpha, with .70 used as the minimum acceptable threshold for internal consistency. The data were then examined through classical assumption tests, including normality, multicollinearity, heteroscedasticity, and autocorrelation tests. Multiple linear regression was used to examine the partial and simultaneous effects of product scarcity appeals and social media promotion on impulse buying. The t-test was used to examine partial effects, the F-test was used to examine the simultaneous effect, and the coefficient of determination was used to assess the proportion of variance in impulse buying explained by the model. All statistical analyses were conducted using SPSS version 26.0 at a 5 percent significance level.

4 Research Results and Discussion

4.1 Respondent Profile

This study involved 112 respondents who were relevant to the Cadbury ENHYPEN Edition campaign context. As shown in Table 1, the respondents were dominated by female consumers, accounting for 84.8 percent of the sample. Most respondents were between 18 and 22 years old, representing 67.0 percent of the sample. This profile indicates that the sample was largely composed of young consumers, which is consistent with the digital and fandom-oriented nature of the campaign. In terms of fandom status, 67.0 percent of respondents identified themselves as ENHYPEN fans or ENGINE, while 33.0 percent were familiar with ENHYPEN but did not

identify as active fans. All respondents stated that they were aware of the limited-edition status of Cadbury ENHYPEN Edition, confirming that the scarcity context had been recognized by the full sample.

Table 1: Respondent Profile

Characteristic	Category	n	%
Gender	Female	95	84.8
Gender	Male	17	15.2
Age	< 18 years	11	9.8
Age	18 to 22 years	75	67.0
Age	23 to 27 years	15	13.4
Age	> 27 years	11	9.8
Fandom status	ENHYPEN fan or ENGENE	75	67.0
Fandom status	Familiar with ENHYPEN but not a fan	37	33.0
Limited-edition awareness	Aware of the product's limited-edition status	112	100.0

Source: Processed primary data, 2025.

The respondent profile strengthens the contextual relevance of the study. Cadbury ENHYPEN Edition combines an FMCG product with symbolic and affective value derived from K-pop fandom. The dominance of young female respondents and ENHYPEN-aware consumers indicates that the sample was appropriate for examining how scarcity cues and social media promotion shape impulse buying in a fandom-based marketing context.

4.2 Descriptive Statistics and Measurement Quality

Table 2 presents the descriptive statistics and measurement quality of the three research variables. Product scarcity appeals recorded a mean score of 4.01 and was classified in the high category, indicating that respondents generally perceived Cadbury ENHYPEN Edition as limited, distinctive, and relatively difficult to obtain during the campaign. Social media promotion obtained the highest mean score of 4.08 and was also classified in the high category, reflecting favorable perceptions of the campaign's entertainment, interaction, trend relevance, customization, electronic word-of-mouth, and informativeness. Impulse buying recorded a mean score of 3.96 and fell within the high category, indicating a relatively strong tendency toward spontaneous, urgent, and emotionally activated purchasing among the respondents.

Table 2: Descriptive Statistics and Measurement Quality

Variable	Items	Mean	Interpretation	Validity Range	Cronbach's Alpha
Product scarcity appeals	10	4.01	High	0.697 to 0.799	0.941
Social media promotion	12	4.08	High	0.729 to 0.786	0.959
Impulse buying	8	3.96	High	0.742 to 0.779	0.918

Note: Mean-score interpretation criteria were 1.00 to 1.79 = very low, 1.80 to 2.59 = low, 2.60 to 3.39 = moderate, 3.40 to 4.19 = high, and 4.20 to 5.00 = very high.

Source: Processed primary data, 2025.

The validity test showed that all item correlation values exceeded the minimum validity threshold used in this study. The reliability test also indicated strong internal consistency, as all Cronbach's Alpha values were above .70. These results demonstrate that the measurement items were valid and reliable for regression analysis. The high mean scores further indicate that respondents

perceived Cadbury ENHYPEN Edition as a strong combination of scarcity-based messaging and social media promotional exposure, both of which were associated with a high impulse buying tendency.

4.3 Classical Assumption Tests

The classical assumption tests indicated that the regression model was suitable for interpretation. The residual distribution did not show a statistically significant departure from normality, as indicated by the Kolmogorov-Smirnov Monte Carlo significance value of .261, and the scatterplot showed no systematic heteroscedasticity pattern. The Durbin-Watson statistic of 1.749 and the non-significant run test, $p = .255$, also supported the absence of a systematic residual sequence.

Collinearity diagnostics produced a tolerance value of .275 and a Variance Inflation Factor (VIF) of 3.642 for both predictors. Pearson correlation analysis based on the composite scores of the 112 respondents showed a strong positive association between product scarcity appeals and social media promotion, $r = .852$, $p < .001$. This association is conceptually plausible because social media content in a fandom-driven limited-edition campaign may simultaneously communicate high demand, restricted availability, exclusivity, and user-generated scarcity cues. Nevertheless, the constructs remain conceptually distinct because product scarcity appeals measure perceived restrictions in quantity, time, access, demand, and uniqueness, whereas social media promotion measures entertainment, interaction, trendiness, customization, electronic word-of-mouth, and informativeness. The VIF value did not indicate severe collinearity under the criterion adopted in the study, but the substantial predictor correlation requires cautious interpretation of their separate regression coefficients.

4.4 Regression Analysis and Hypothesis Testing

Multiple linear regression was used to examine the effects of product scarcity appeals and social media promotion on impulse buying. Table 3 presents the regression results and hypothesis testing summary.

Table 3: Multiple Regression and Hypothesis Testing

Predictor	B	SE	β	t	P	Effective Contribution
Constant	2.684	1.966		1.365	.175	
Product scarcity appeals	0.313	0.089	0.370	3.533	.001	28.9%
Social media promotion	0.335	0.073	0.481	4.599	< .001	38.3%

Model summary: $R = .820$; $R^2 = .672$; Adjusted $R^2 = .666$; $F(2, 109) = 111.676$; $p < .001$.
Source: Processed primary data, 2025.

Based on the unstandardized coefficients, the regression equation is:

$$Y = 2.684 + 0.313X_1 + 0.335X_2$$

The regression equation shows that higher perceived product scarcity appeals and stronger social media promotion are associated with higher impulse buying scores. Product scarcity appeals had a positive and significant conditional association with impulse buying ($B = 0.313$, $\beta = 0.370$, $t = 3.533$, $p = .001$), supporting H1, while social media promotion also had a positive and significant conditional association ($B = 0.335$, $\beta = 0.481$, $t = 4.599$, $p < .001$), supporting H2. The larger standardized coefficient for social media promotion indicates a greater relative contribution within the fitted two-predictor model. Because product scarcity appeals and social media

promotion were strongly correlated, the coefficient comparison should not be interpreted as evidence that one construct has a universally stronger causal effect.

The simultaneous test showed that product scarcity appeals and social media promotion jointly contributed significantly to the regression model, $F(2, 109) = 111.676$, $p < .001$, supporting H3. The coefficient of determination indicated that the two predictors jointly explained 67.2 percent of the variance in impulse buying, while 32.8 percent remained unexplained by the model. The effective contribution calculation allocated 28.9 percentage points of the explained variance to product scarcity appeals and 38.3 percentage points to social media promotion. Given the strong correlation between the predictors, these values should be interpreted as model-based allocations of the total explained variance rather than as independent causal shares or separate partial R^2 values.

4.5 Discussion

The finding that product scarcity appeals significantly influence impulse buying supports the scarcity principle and commodity theory, which argue that limited availability can increase perceived value, urgency, and desirability (Brock, 1968; Cialdini, 2009). In the context of Cadbury ENHYPEN Edition, scarcity was not only functional but also symbolic. The product was perceived as limited, campaign-specific, and emotionally meaningful because it was associated with ENHYPEN. This finding is consistent with Aggarwal et al. (2011), who demonstrated that scarcity messages can increase consumer motivation, and with Ladeira et al. (2023), who confirmed through meta-analysis that product scarcity generally produces a positive effect on consumer decision-making. The result also aligns with recent studies that identify urgency and fear of missing out as possible mechanisms connecting scarcity with impulse buying, although the proposed mechanisms were not measured in the present study (Cengiz & Şenel, 2024; Zhang et al., 2022).

The stronger standardized coefficient of social media promotion indicates that digital promotional exposure was the more prominent predictor of impulse buying within the estimated model. This result is consistent with the social media marketing activities framework, which identifies entertainment, interaction, trendiness, customization, electronic word-of-mouth, and informativeness as relevant dimensions of digital consumer response (Kim & Ko, 2012; Godey et al., 2016; Yadav & Rahman, 2017). Brand-owned content, fan discussions, user-generated content, and community sharing may reinforce product visibility and social validation in fandom-based campaigns (Liadeli et al., 2023). Nevertheless, the regression coefficient represents relative statistical contribution within the estimated model and does not establish a particular emotional or psychological mechanism.

The findings also permit a broader contextual interpretation of impulse buying as potentially hedonic, emotional, and symbolic within fandom culture. Cadbury ENHYPEN Edition combined an everyday chocolate product with limited-edition packaging, collectible associations, and idol-related meaning, so the perceived purchase value could extend beyond functional consumption toward pleasure, emotional satisfaction, and participation in a culturally meaningful campaign. Prior research on official K-pop merchandise links hedonic shopping motivation with impulse buying, while studies of idol-endorsed brands identify emotional value, relatedness, and self-realization as relevant features of fan consumption (Fitria & Andarini, 2025; Chen et al., 2022). Product ownership may also function as identity signaling by communicating fandom affiliation or symbolic support, consistent with evidence that community identification shapes engagement and purchase intention and that self-pleasure and social identity can contribute to impulsive fan-collectible consumption (Tertiano & Salehudin, 2023; Zhao & Zhang, 2026). However, hedonic consumption, emotional consumption, symbolic consumption, and identity signaling were not

measured in the questionnaire, so this interpretation remains theoretically informed rather than empirically established.

The strong positive correlation between product scarcity appeals and social media promotion also reflects the integrated nature of the Cadbury ENHYPEN Edition campaign. Social media exposure did not operate separately from scarcity communication because official posts, fan discussions, availability updates, unboxing content, and reports of limited stock could simultaneously increase promotional exposure and reinforce perceptions of scarcity. This overlap helps explain the Variance Inflation Factor of 3.642 and indicates that each regression coefficient represents a conditional contribution after accounting for the other predictor. Accordingly, the larger standardized coefficient for social media promotion should be interpreted as a model-specific relative contribution rather than as evidence that scarcity appeals are unimportant or fully separable from digital campaign exposure.

The simultaneous result indicates that product scarcity appeals and social media promotion jointly explain a substantial proportion of the variance in impulse buying. The coefficient of determination (R^2) of .672 indicates that both predictors are relevant within the observed sample. This finding represents joint explanatory power and should not be interpreted as either statistical interaction or empirical confirmation of a complete Stimulus-Organism-Response pathway. Within the Stimulus-Organism-Response perspective, product scarcity appeals and social media promotion function as measured stimuli, while impulse buying functions as the measured response. Urgency, excitement, perceived value, social belonging, and fear of missing out remain plausible but unobserved psychological processes because no organism construct or mediation pathway was included in the model. Future research should measure these internal states directly and test the mediating role of each construct before drawing conclusions about the complete psychological sequence (Mehrabian & Russell, 1974; Zhang et al., 2022).

5 Conclusions and Suggestions

5.1 Conclusion

This study examined the influence of product scarcity appeals and social media promotion on impulse buying toward Cadbury ENHYPEN Edition among K-pop consumers in Bandung. Based on 112 valid responses, the findings show that both marketing stimuli play an important role in explaining impulse buying behavior in the context of a limited-edition FMCG product associated with K-pop fandom.

First, product scarcity appeals had a positive and significant effect on impulse buying. This indicates that limited availability, time restriction, access limitation, demand-related cues, and uniqueness perception can increase consumers' urgency and desire to purchase the product spontaneously. In the Cadbury ENHYPEN Edition context, scarcity was not only perceived as limited product availability but also as symbolic exclusivity because the product was connected to ENHYPEN and fandom-based collectible value.

Second, social media promotion had a positive and significant effect on impulse buying and emerged as the stronger predictor in the regression model. This finding indicates that entertaining content, interactive communication, trend relevance, customization, electronic word-of-mouth, and informative promotional messages can strengthen consumers' emotional engagement and purchase urge. Social media promotion was particularly influential because the campaign was circulated not only through official brand communication but also through fan discussions, user-generated content, unboxing posts, and community-based sharing.

Third, product scarcity appeals and social media promotion simultaneously explained a substantial proportion of impulse buying, with an R^2 value of .672. This means that 67.2 percent of the variance in impulse buying was explained by the two predictors, while the remaining 32.8 percent was influenced by other factors outside the model. The simultaneous result should be interpreted as joint explanatory power rather than statistical synergy, because this study did not test an interaction effect between product scarcity appeals and social media promotion.

Overall, the findings indicate that perceived product scarcity and social media promotion were directly associated with impulse buying within the sampled Korean pop consumer context in Bandung. The results support the relevance of both external marketing stimuli but do not establish the psychological mechanisms connecting promotional exposure with purchasing behavior. Emotional meaning, fandom attachment, social proof, urgency, and fear of missing out therefore remain theoretically plausible interpretations rather than measured findings. Any conclusion concerning the organism stage requires future research that operationalizes and tests the relevant cognitive and affective variables.

5.2 Managerial Implications and Suggestions

The findings provide several managerial implications for FMCG brands, particularly those that use celebrity or K-pop collaboration strategies. First, brands should design scarcity messages that are credible, transparent, and specific. Scarcity cues such as limited stock, limited campaign period, exclusive packaging, or collectible items can stimulate urgency, but they should be communicated responsibly. Artificial or exaggerated scarcity may create short-term attention but can weaken consumer trust when consumers perceive the message as manipulative.

Second, social media promotion should not only focus on product exposure but also on emotional and community engagement. For limited-edition collaboration products, promotional content should combine entertainment, informativeness, and fandom relevance. Brands need to provide clear information about product availability, purchase channels, campaign periods, and collectible elements while maintaining creative content that resonates with the target audience. This balance is important because consumers need both emotional stimulation and practical purchase guidance.

Third, FMCG brands should actively manage electronic word-of-mouth. User-generated content, fan discussions, unboxing videos, and consumer testimonials can strengthen social proof and expand campaign reach. However, brands should also monitor consumer complaints, misinformation, and frustration caused by unclear stock availability or uneven distribution. Responsive communication on social media is necessary to maintain positive engagement and prevent negative sentiment.

Fourth, brands should manage product distribution carefully. Limited availability can create urgency, but excessive difficulty in obtaining the product may produce disappointment and reduce consumer satisfaction. Therefore, limited-edition campaigns should be supported by clear distribution planning, reasonable purchase limits, transparent restock information, and accessible official purchase channels.

Fifth, marketers should treat fandom communities as meaningful consumer communities, not merely as promotional targets. Campaigns involving K-pop idols should respect the emotional relationship between fans and artists. Ethical and responsible marketing is important, especially because young consumers may be more sensitive to social pressure, fear of missing out, and impulsive consumption encouraged by fandom dynamics.

5.3 Limitations and Future Research

Several limitations define the appropriate scope of the findings. First, the sample was restricted to K-pop consumers in Bandung, so the results should not be extended automatically to consumers in other locations. Second, purposive sampling enabled the recruitment of respondents familiar with Cadbury ENHYPEN Edition but did not provide probability-based representativeness. Third, all constructs were measured through a self-reported questionnaire completed by the same respondents in a single administration, creating a potential risk of common method bias. Although clear item wording, confidential data handling, independent questionnaire completion, and voluntary participation served as procedural safeguards, shared method variance cannot be ruled out. Fourth, the cross-sectional design captures consumer responses at one point in time and does not establish long-term behavioral patterns or causal ordering over time.

Fifth, the model only examined product scarcity appeals and social media promotion as predictors of impulse buying. Although the model explained 67.2 percent of the variance in impulse buying, other relevant psychological and social factors were not included. Future research should consider additional variables such as fear of missing out, parasocial relationship intensity, fandom involvement, brand attachment, perceived product value, collecting behavior, and consumer self-control. Future studies may also examine mediation or moderation mechanisms to explain how and under what conditions scarcity appeals and social media promotion influence impulse buying.

Finally, future research can expand the study by using a larger and more diverse sample, comparing fans and non-fans, examining different product categories, or applying mixed methods to capture deeper emotional and social meanings behind fandom-based consumption. Further studies may also test an interaction effect between product scarcity appeals and social media promotion to determine whether these two stimuli strengthen each other statistically in driving impulse buying. Future studies should also measure predictors and outcomes at different times or obtain them from different sources and apply an appropriate marker-variable or latent-method procedure to assess shared method variance more directly.

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Nomenclature

Symbol	Description
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B	Unstandardized regression coefficient
df	Degrees of freedom

Symbol Description

F	F-statistic for simultaneous hypothesis testing
H ₁	Hypothesis on the effect of product scarcity appeals on impulse buying
H ₂	Hypothesis on the effect of social media promotion on impulse buying
H ₃	Hypothesis on the simultaneous effect of product scarcity appeals and social media promotion on impulse buying
n	Number of respondents in a category
p	Probability value or significance value
r	Pearson correlation coefficient
R	Multiple correlation coefficient
R ²	Coefficient of determination
SE	Standard error
t	t-statistic for partial hypothesis testing
VIF	Variance inflation factor
X ₁	Product scarcity appeals
X ₂	Social media promotion
Y	Impulse buying
β	Standardized regression coefficient

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