

The Analysis of Impulsive Buying Factors as The Result of Social Media Exposure: Literature Review

Elisabeth Marsella^{*1}, Leonard Brahmandika², Fransiska Artha Apriani Samura³, Mona Tirajoh⁴, Jesica Febiola Simanungkalit⁵

^{1,3-5}Information Systems, Universitas Atma Jaya Yogyakarta

²Informatics, Universitas Atma Jaya Yogyakarta

E-mail: elisabeth.marsella@uajy.ac.id¹, leonard.brahmandika@uajy.ac.id²,
221712139@students.uajy.ac.id³, 221712057@students.uajy.ac.id⁴,
221712129@students.uajy.ac.id⁵

Abstrak. Media sosial telah memberikan dampak yang signifikan terhadap kehidupan manusia modern, termasuk dalam mendorong terjadinya pembelian impulsif secara daring. Berbagai penelitian menunjukkan bahwa terdapat sejumlah variabel yang mendorong konsumen melakukan pembelian secara impulsif. Beberapa kajian pustaka terkait perilaku pembelian impulsif telah dilakukan secara luas. Namun, kajian pustaka tersebut umumnya membahas pembelian impulsif dalam konteks umum, dan belum secara khusus menyoroti pembelian daring sebagai dampak dari penggunaan media sosial. Untuk mengisi celah penelitian tersebut, studi ini bertujuan untuk menganalisis variabel-variabel yang mendorong konsumen melakukan pembelian impulsif sebagai akibat dari penggunaan media sosial. Oleh karena itu, dilakukan tinjauan pustaka sistematis dengan mengumpulkan artikel akses terbuka dari ScienceDirect dan ProQuest. Artikel-artikel tersebut kemudian melalui proses penyaringan untuk menyesuaikan dengan topik pembahasan. Hasilnya menunjukkan bahwa terdapat beberapa faktor yang memengaruhi perilaku pembelian impulsif. Selain itu, pendekatan kualitatif memperkaya temuan penelitian, khususnya pada konsumen produk mewah.

Kata kunci: pembelian impulsif; media sosial; paparan; tinjauan pustaka

Abstract. Social media has significantly impacted modern human life, including encouraging online impulse purchases. Studies show that there are various variables that drive consumers to purchase impulsively. Some literature reviews regarding impulsive buying have been conducted extensively. However, the literature reviews study impulsive buying in a general context, not focusing on online buying as the effect of social media use. To fill in the gap, this study aims to analyze the variables driving consumers to buy impulsively as the effect of social media use. A systematic literature review was then conducted by collecting open-access articles from ScienceDirect and Proquest. The articles went through some sorting to adjust the topic discussion. As a result, there are several factors affecting impulsive buying behavior. Moreover, the qualitative approach enriched the findings especially for luxurious product consumers.

Keywords: impulse buying; social media; exposure; literature review

1. Introduction

Social media has significantly impacted modern human life. Through online platforms, users can quickly find information and entertainment. Additionally, social media plays a crucial role in online impulse purchases. E-commerce has made the purchasing process more enjoyable, easy, calm, and without complicated steps. This makes users enjoy the shopping process itself more than simply buying necessities. Social commerce offers convenience in searching, buying, and paying for products. Moreover, Vitria, et al. [1] explained that hedonism is one of the factors driving impulsive purchases, where shopping is associated with pleasure and enjoyment.

Impulsive buying can be defined as unplanned purchasing behavior followed by feelings of happiness and excitement. This behavior often occurs when buyers feel the urge to purchase a product or service without considering actual needs. Impulsive buyers may experience instant pleasure and satisfaction [2]. Based on reference [3], some factors that encourage impulsive buying include self-esteem, risk preference, social isolation, scarcity, shopping value, and hedonic dimensions.

Since impulsive buying significantly impacts the number of sales in many businesses, this scope has interested many scholars to research. This can be seen from some published literature reviews about this topic. Unsalan's literature review mentions that impulsive buying behavior is affected by at least four factors such as shopping environment, customer's personal traits, products' characteristics, the diverse demographic and socio-cultural dimensions [4]. The article also shows that the published articles are more on offline shopping situations. This can be seen from factors like shopping environment (store layout, store type, store atmosphere, and salesperson). This implies that impulsive buying happens in offline shopping, where customers come to the store.

Iyer, et al. meta-analyzed studies regarding impulsive buying [5]. According to more than 230 articles they reviewed, the categorization of the impulsive buying key trigger are traits that include sensation-seeking and impulse buying tendency, motives like utilitarian and hedonic motivation, consumer resources such as time and money, and marketing stimuli. The study also showed that self-control and mood states are the mediating variables of impulsive buying and explain customers' psychological processes in impulsive buying.

The more recent literature review from Mandolfo & Lamberti uses a different term here, which is impulse purchasing, and questions factors related to rapid decision-making in buying (conative), factors related to the psychological drive to buy and a strong emotional charge (visceral), and factors related to the short-term gain (cognitive). The findings show that self-reports and interview methods contribute more significantly to finding the cognitive aspects of impulsive buying [6]. It means the two methods can assess factors why customers buy impulsively. Even more, the interview method can explore further insights such as post-purchase regrets or the relation between unplanned and impulsive buying. Meanwhile, laboratory investigation and fieldwork observation are more effective in finding the conative and visceral factors of impulse buying.

Although impulsive buying has been researched intensively, it is still developing regarding the transition from brick-mortar shopping to online shopping [7]. This transition moves along with the shifting of customers' behaviors due to the influences of social media and the urge gets stronger in the pandemic era, where people were forced to do all activities online. It means they spend more time on their mobile devices including social media. There they are exposed to information that can affect them in making decisions to buy products. Redine, et al. studied impulsive buying articles published since the 1950s and found that one of the theories widely used is the Stimulus-Organism-Response framework [7]. Besides that, the article also shows that the use of online shopping has been rising. Therefore, it is worth studying the purchasing behavior in s-commerce, e-commerce, and m-commerce.

Studying the impulsive buying affected by social media has become more essential since the number of social media users is increasing from time to time. Statista showed that 5.1 billion people use social media in 2024. That is why people employ social media such as Facebook, Instagram, and TikTok to market their products [8]. This implies that social media users are potential customers for

business, and it increases social media commerce (s-commerce). Studies have shown that there is a close relationship between social media use and impulsive buying [9], [10]. Regarding the increase of s-commerce especially after the pandemic situation, it urges the researchers to review studies specifically on the impact of social media and impulsive buying. Therefore, it is worth studying that the available literature reviews do not focus on this area.

2. Method

The systematic Literature Review (SLR) method is a research approach to synthesizing scientific evidence to answer a particular research question by seeking published evidence on the topic and appraising the quality of this evidence[11]. SLRs are conducted following strict protocols to ensure transparency and replicability. In the context of this document, SLR was used to evaluate research methods and metrics used in studies on impulse shopping behavior across different environments, such as online, offline, and multichannel. SLR holds the principles of systematic/ organized, transparent/ explicit, replicable/ updatable, and synthesize/ summarize [12]. An SLR article should be systematic or organized that the method to address the question is followed. Besides that, the transparency of the research method should be stated explicitly. Besides that, SLR can be updated following the development of time and the study. In this case, studies related to impulse buying were conducted in the past. However, the existing SLR analyses impulsive studies in general. More specifically, this study focuses on impulsive buying as the result of social media usage. Therefore, this study intends to update SLR in the area of impulse buying concerning social media use. The last principle is to synthesize and summarize the selected articles.

The data used in this study was obtained from proquest.com and open-access articles in sciencedirect.com. The next phase was to set the keywords regarding impulsive buying such as impulsive buying, impulse buying, buy impulsively, unplanned virtual shopping, compulsive buying, online buying behavior, compulsive online shopping, online buying behavior, online purchasing behavior, online impulsive shopper, unplanned purchase behavior, hedonic buying/ hedonic shopping, and impulsive purchase. The initial search resulted in more than 200 journal articles. When using the keywords, some filters were applied to find suitable articles, such as articles from 2020, journal articles, and English-written articles. This resulted 99 articles.



Figure 1. Inclusion and exclusion criteria

The next stage was to eliminate some articles for various reasons. Firstly, the articles that did not mention impulsive buying and its synonyms in the title. This eliminated the articles into 23 articles. The next elimination was conducted based on the content of the articles. Some articles did not show the relationship between impulsive buying and social media use. They were more about impulsive buying in general. These kinds of articles were then excluded. Therefore, there 20 articles selected in this study.

3. Result and Discussion

After sorting the articles, 20 articles related to impulsive buying and social media were obtained. The articles were published from 2021 to 2024, as shown in Figure 2, where most were published in 2023. The articles were published in journals with different areas of research around the world, such as management, business, and marketing (13 articles), computers, informatics, data systems (5 articles), and behavior and psychiatry (2 articles). The data of the articles were also obtained from countries, mostly Indonesia, Malaysia, and the United Kingdom. This was seen from the research location or the country where the data was obtained from. The details of the article distribution can be seen in Figure 3.

From the social media distribution, ten articles generalized the social media use, meaning that they did not specify the name of the social media, and two articles mentioned the use of live streaming from social media or social commerce platforms. The platforms are varied since some country uses different kinds of social media. Some applications are only used in a particular country. For example, Taobao, Douyin, and Kuaishou live streaming platforms are widely used in China but not in other countries. The others researched the respondents using Facebook, Instagram, TikTok, Telegram, Reddit, WhatsApp, and WeChat

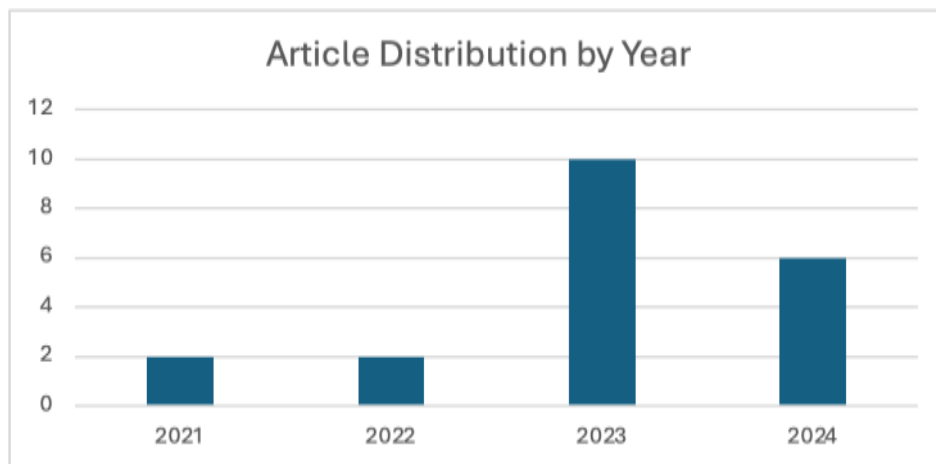


Figure 2. Article Distribution Year

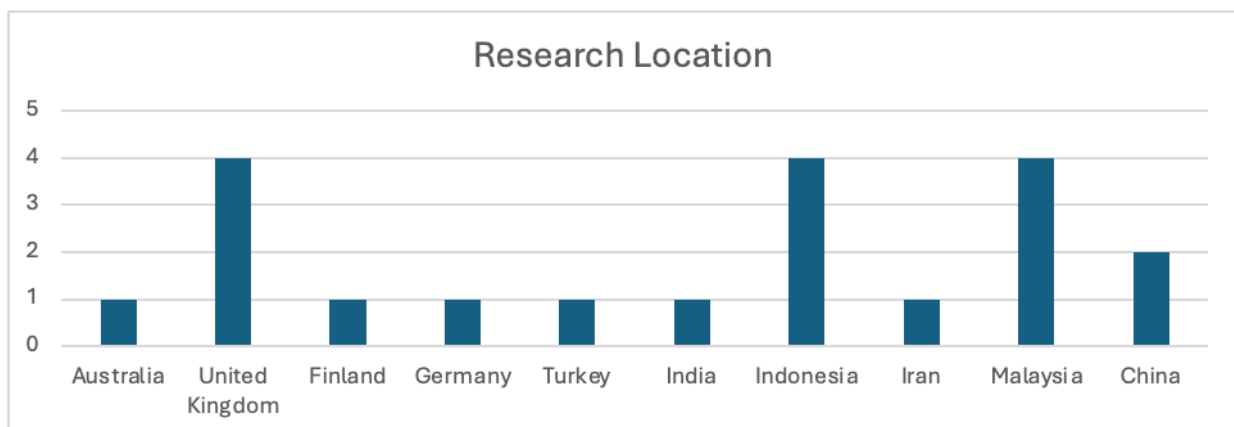


Figure 3. Research Location

In terms of the research method, seventeen studies applied the quantitative method by distributing questionnaires or surveys. The studies implemented some frameworks such as Stimulus-Organism-Response, Theory of Planned Behaviour, and other developed frameworks. The other three articles implemented a mixed method approach in collecting the data by combining surveys with

interviews or netnography by assembling data from social media to identify the consumers' motives for social commerce engagement with brands' social commerce platforms.

SOR is one of the most frequently used frameworks to see the factors affecting consumers' impulsive buying [2], [9], [13], [14], [15], [16], [17], [18]. This framework can explain how people make decisions based on cause-and-effect indications [2]. In the online shopping context, this framework explains how social commerce stimuli affect consumers' impulsive buying behavior. Stimuli (S) define the environmental factor affecting the organismic and internal states and the environmental factor arousing the organismic and internal states [14], [19]. Organism (O) is a human's affective and mental state that mediates the impact of the stimulus [14], [20]. Response (R) is the resultant actions relating to buying decisions or buying behavior.

The articles implementing SOR showed that the stimuli can be varied. One article has different stimuli from the others depending on the research condition. As aforementioned, stimuli were defined as the environmental factors affecting the consumers' internal state. The stimuli were then divided into six categories: cognitive reaction, affective reaction, product feasibility, consumer traits, perceived value, and social stimuli. Each category includes different kinds of stimuli that can be seen in the following table

Table 1. Category-Stimuli Relations

No	Category	Stimuli	Reference
1	cognitive factor	top review information, cognitive reaction, information fit to task, expertise, likeability, visual appeal, social media advertisement, similarity	[2], [9], [13], [14], [17]
2	affective factor	affective reaction, hedonic motivation	[2], [18]
3	product factor	scarcity persuasion, product feasibility	[2], [14]
4	consumer traits	emotional intelligence, individual impulse buying, purchase frequency, viewing frequency, IT affordance	[2], [9], [15], [18]
5	perceived value	price perception, perceived acquisition value, perceived transaction value	[2], [9]
6	Social factor	social media community, susceptibility to social influence	[2], [17]

From the studies, all stimuli except the social media community were positively connected to impulsive buying tendency or the urge to buy impulsively, which later influenced impulsive buying behavior. The rejected hypothesis was that the social media community positively influenced impulse buying intention in Saudi Arabia. This means there is no positive of the social media community in Saudi Arabian consumers [17]. The reason was that Saudi Arabian consumers tried to avoid uncertainties and high risk of using new technology [17].

When all frameworks were seen all together, there were similarities to the TOR framework. The other frameworks showed some variables affecting impulsive buying behavior. Using the same category as the TOR framework, variables affecting impulsive buying are categorized into cognitive reaction, affective reaction, personal traits, and social stimuli [3], [15], [16], [21], [22], [23], [24], [25], [26], [27], [28].

The cognitive reaction category denotes the mental process as the responses to triggers, and it plays an essential role in influencing people's affective reactions [2], [28]. This mental process works after the consumers get information from reviews, live streams, posts, or advertisements. A study shows that social media advertisements, including brand reviews, influence consumers' impulsive buying behavior [27], [29]. The information is more effective when the presenters or live streamers engage in

cognitive trust, where the presenters or live streamers are trustworthy, based on competence, professionalism, and reliability [26]. When the assessment of the product is positive, consumers are likely to engage in impulsive buying [25].

Cognitive reactions are the mental processes resulting from stimulus exposure [2]. Consumers will process the information they receive, which may later influence their decision to buy impulsively. In other words, the positive process of giving information to customers will affect them to buy impulsively. The stimuli of top review information, cognitive reaction, information fit-to-task, expertise, likeability, visual appeal, social media advertisement, and similarity [13].

The next category is affective reactions, defined as moods, feelings, and emotions as responses to external environmental encounters [28]. The other term in this category is cognitive experience, referring to feelings like enjoyment when using social media or social commerce. This category is also closely related to hedonic motivation, where consumers try to get the feelings of pleasure when scrolling or browsing social media. Studies have shown that hedonic values influence online impulse buying [18], [22]. Consumers enjoy the activities to compare prices and get discounts or promotions. These activities bring happiness, which later makes them have more of an urge to make purchases impulsively [18]. On the contrary, a study of A2 showed that affective experience does not have a significant influence on online impulsive buying. This is due to the self-control consumers have, which means that they do not purchase based on feelings.

The other variables affecting impulsive buying are the personal traits of consumers, such as hypersensitive narcissism, anxiety sensitivity, low self-control, extraversion, and religiosity. Studies have shown that when consumers have those personal trait qualities, they tend to have impulsive buying behavior [3], [22], [23], [30]. Narcissism is a predictor of real-world impulsive buying [31], [32], [33], and they like to post highly edited images and get social feedback [30]. Not only did hypersensitive narcissism, but the study also shows that sensitive anxiety has a positive relation to online compulsive buying. It is a coping mechanism for stress. The personalities where people are more open or extraverted show an influence on online impulsive buying. Extraverted people tend to show excitability, sociability, and talkativeness and enjoy interpersonal relationships [22]. The other personal quality that affects impulse buying behavior is low self-control. Low self-control makes consumers easily accept advertising and makes them target the advertisement [23]. In addition, religiosity negatively and significantly influences online impulse buying [3]. Religiosity is considered as the controller of consumers' buying behavior because it usually regulates the moral aspects, and religion does not value hedonism or extravagance. Thus, the psychological states of consumers affect how impulsively someone can buy the products.

The next category is parasocial interaction, defined as the digital interaction between viewers and social actors (e.g., live streamers and content creators) that creates mutual awareness, attention, and adjustment [28]. The study further explains that parasocial interaction positively impacts affective reactions and impulsive buying. Not only the viewers or consumers are exposed to social media content, but they are also facilitated with two-way interaction with the social actors/anchors. This activity can create positive reactions, which later can influence viewers' urge to buy impulsively and their buying behavior.

To see further, interview and netnography results also show the effect of social media on impulsive buying [29], [34]. There are three factors, written in the order of importance: the quality of transaction-related service, interaction quality, and the platform group quality [34]. In this article that studies customers of luxurious cosmetic products, the quality of transaction-related service is the most important dimension to creating service quality. It includes punctual scheduled service, safe delivery, reliability on the product order, and other trustworthy transaction-related services. Then, the quality of interaction is the second dimension that makes customers buy impulsively. Some activities of the second dimension are the availability of delivery and payment options, level of attention to customers, and other easiness in interaction with admin and members [34].

From the netnography study, it can be seen that the consumers have some motives when buying products impulsively, such as brand intimacy, shopping planning, entertainment, channel advantage, remuneration, and escapism [29]. Among the six motives, based on the importance matrix, shopping planning is considered the most important motive. An example comment of this motive is, “*Will you have a Black Friday sale online or in-store? And will you be having cyber Monday sale?*”. Although the purchase seems to be less impulsive, the sales in the future encourage them to purchase impulsively. The claims were proven when the quantitative study results also aligned. Hypothesis six motives contribute directly to overall motivation to social commerce engagement (OM-SCE) was accepted. And, OM-SCE has a positive effect on urge for impulse buying on a social commerce platform.

4. Conclusion

The literature study shows that impulsive buying is influenced by factors categorized into cognitive factors, affective factors, personal trait factors, and social factors. The categories can be generated into different terms. Cognitive factors include the activity to provide information to customers in order to affect their buying decisions. Affective factors include the activity to create good feelings or pleasure. Personal traits are more about the consumers’ personality and habits. Then, the social factors are the interaction between consumers or viewers and the social actors/content creators. All the factors aim to affect consumers’ decision to buy the products that they offer.

The qualitative study also enriched the findings that consumers of luxurious products prefer the quality of service, including transaction-related service and interaction service. By providing a good service, the consumers have more inclination to buy the products. Moreover, impulsive buying does not only happen on time the product was advertised, but it can also be a planned buying. It has been proven that effective shopping planning encourages consumers to make future purchases.

Referensi

- [1] V. Z. Rani, Ainur Rofiq, and H. A. J. Juwita, “The influence of intensity of TikTok use, utilitarian value, and hedonic value on impulsive buying mediated by urge to buy impulsively,” *International Journal of Research in Business and Social Science* (2147- 4478), vol. 12, no. 5, pp. 86–97, Jul. 2023, doi: 10.20525/ijrbs.v12i5.2690.
- [2] Z. Feng, A. Al Mamun, M. Masukujjaman, M. Wu, and Q. Yang, “Impulse buying behavior during livestreaming: Moderating effects of scarcity persuasion and price perception,” *Heliyon*, vol. 10, no. 7, Apr. 2024, doi: 10.1016/j.heliyon.2024.e28347.
- [3] N. R. Febriandika, A. P. Utami, and A. N. Millatina, “Online impulse buying on TikTok platform: Evidence from Indonesia,” *Innovative Marketing*, vol. 19, no. 3, pp. 197–210, 2023, doi: 10.21511/im.19(3).2023.17.
- [4] M. Ünsalan *et al.*, “STIMULATING FACTORS OF IMPULSE BUYING BEHAVIOR: A LITERATURE REVIEW,” 2016.
- [5] G. R. Iyer, M. Blut, S. H. Xiao, and D. Grewal, “Impulse buying: a meta-analytic review,” May 01, 2020, *Springer*. doi: 10.1007/s11747-019-00670-w.
- [6] M. Mandolfo and L. Lamberti, “Past, Present, and Future of Impulse Buying Research Methods: A Systematic Literature Review,” Jul. 01, 2021, *Frontiers Media S.A.* doi: 10.3389/fpsyg.2021.687404.
- [7] A. Redine, S. Deshpande, C. Jebarajakirthy, and J. Surachartkumtonkun, “Impulse buying: A systematic literature review and future research directions,” *Int J Consum Stud*, vol. 47, no. 1, pp. 3–41, 2023, doi: <https://doi.org/10.1111/ijcs.12862>.
- [8] A. Guttmann, “Average amount paid per influencer marketing post in the U.S. 2014-2019, by platform.” 2020.

- [9] A. U. Zafar, J. Qiu, M. Shahzad, J. Shen, T. A. Bhutto, and M. Irfan, "Impulse buying in social commerce: bundle offer, top reviews, and emotional intelligence," *Asia Pacific Journal of Marketing and Logistics*, vol. 33, no. 4, pp. 945–973, Mar. 2021, doi: 10.1108/APJML-08-2019-0495.
- [10] A. Lipsman, "Social Commerce 2021: Media and Commerce Convergence Creates Growth Opportunity for Brands. eMarketer," 2021.
- [11] G. Lame, "Systematic literature reviews: An introduction," in *Proceedings of the International Conference on Engineering Design, ICED*, Cambridge University Press, 2019, pp. 1633–1642. doi: 10.1017/dsi.2019.169.
- [12] R. B. Briner and D. Denyer, "Systematic Review and Evidence Synthesis as a Practice and Scholarship Tool," in *The Oxford Handbook of Evidence-Based Management*, Oxford University Press, 2012. doi: 10.1093/oxfordhb/9780199763986.013.0007.
- [13] J. Das Mohapatra, P. Mishra, A. Mahapatra, and A. Sahu, "Exploring Consumers' Impulse Buying Behavior on Social Commerce Platforms in India: A Study Using S-O-R Model," *The IUP Journal of Marketing Management*, vol. 23, no. 2, pp. 33–55, 2024.
- [14] W. Y. Tee, S. C. Teo, and T. W. Liew, "EXPLORING THE TIKTOK INFLUENCES ON CONSUMER IMPULSIVE PURCHASE BEHAVIOUR," *International Journal of Business and Society*, vol. 24, no. 1, pp. 39–55, Apr. 2023, doi: 10.33736/ijbs.5600.2023.
- [15] Q. Yi, J. Khan, Y. Su, J. Tong, and S. Zhao, "Impulse buying tendency in live-stream commerce: The role of viewing frequency and anticipated emotions influencing scarcity-induced purchase decision," *Journal of Retailing and Consumer Services*, vol. 75, Nov. 2023, doi: 10.1016/j.jretconser.2023.103534.
- [16] S. Chen, Q. Min, and X. Xu, "Investigating the role of social identification on impulse buying in mobile social commerce: a cross-cultural comparison," *Industrial Management and Data Systems*, vol. 121, no. 12, pp. 2571–2594, Nov. 2021, doi: 10.1108/IMDS-09-2020-0550.
- [17] P. Singh, B. K. Sharma, L. Arora, and V. Bhatt, "Measuring social media impact on Impulse Buying Behavior," *Cogent Business and Management*, vol. 10, no. 3, 2023, doi: 10.1080/23311975.2023.2262371.
- [18] J. A. Pranata, M. R. P. Riyanto, S. Hendrawan, and W. Gunadi, "The Effect of Hedonic Motivation and IT Affordance on Impulsive Buying Decisions in Social Commerce: TikTok," *International Journal of Electronic Commerce Studies*, vol. 15, no. 2, pp. 63–102, 2024, doi: 10.7903/ijecs.2303.
- [19] S. Song, X. Yao, and N. Wen, "What motivates Chinese consumers to avoid information about the COVID-19 pandemic?: The perspective of the stimulus-organism-response model," *Inf Process Manag*, vol. 58, no. 1, Jan. 2021, doi: 10.1016/j.ipm.2020.102407.
- [20] Y. L. Wu and E. Y. Li, "Marketing mix, customer value, and customer loyalty in social commerce: A stimulus-organism-response perspective," *Internet Research*, vol. 28, no. 1, pp. 74–104, 2018, doi: 10.1108/IntR-08-2016-0250.
- [21] F. Andreani, N. Anastasia, and F. Foedjiawati, "Determinants of Online Impulsive Buying Post Pandemic Covid-19," *Jurnal Teknik Industri*, vol. 25, no. 1, pp. 17–30, Apr. 2023, doi: 10.9744/jti.25.1.17-30.
- [22] A. Helmi, Y. Marty, U. Kaltum, and Y. A. Faisal, "The influence of hedonic values and extraversion on online impulse buying: Empirical evidence from Indonesia," *Innovative Marketing*, vol. 19, no. 1, pp. 48–58, 2023, doi: 10.21511/im.19(1).2023.05.
- [23] J. Nyrhinen, A. Sirola, T. Koskelainen, J. Munnukka, and T. A. Wilska, "Online antecedents for young consumers' impulse buying behavior," *Comput Human Behav*, vol. 153, Apr. 2024, doi: 10.1016/j.chb.2023.108129.
- [24] E. Wegmann *et al.*, "Online compulsive buying-shopping disorder and social networks-use disorder: More similarities than differences?," *Compr Psychiatry*, vol. 124, Jul. 2023, doi: 10.1016/j.comppsy.2023.152392.
- [25] Y. Y. Lee, C. L. Gan, and T. W. Liew, "Rationality and impulse buying: Is your emotion a part of the equation?," *Computers in Human Behavior Reports*, vol. 12, Dec. 2023, doi: 10.1016/j.chbr.2023.100337.

- [26] J. Chen, J. Luo, and T. Zhou, "Research on Determinants Affecting Users' Impulsive Purchase Intention in Live Streaming from the Perspective of Perceived Live Streamers' Ability," *Behavioral Sciences*, vol. 14, no. 3, Mar. 2024, doi: 10.3390/bs14030190.
- [27] İ. YAPRAK and S. COBAN, "The Mediating Role of Hedonic Buying Behavior in The Effect of Consumers' Attitudes Towards Social Media Ads on Impulse Buying Behavior," *Ege Akademik Bakis (Ege Academic Review)*, vol. 203, p. 218, Jan. 2023, doi: 10.21121/eab.1210790.
- [28] P. S. Lo, Y. K. Dwivedi, G. Wei-Han Tan, K. B. Ooi, E. Cheng-Xi Aw, and B. Metri, "Why do consumers buy impulsively during live streaming? A deep learning-based dual-stage SEM-ANN analysis," *J Bus Res*, vol. 147, pp. 325–337, Aug. 2022, doi: 10.1016/j.jbusres.2022.04.013.
- [29] H. Azad Moghddam, J. Carlson, J. Wyllie, and S. Mahmudur Rahman, "Scroll, Stop, Shop: Decoding impulsive buying in social commerce," *J Bus Res*, vol. 182, Sep. 2024, doi: 10.1016/j.jbusres.2024.114776.
- [30] O. T. Neale and P. Reed, "Role of visual social networking, hypersensitive narcissism, and anxiety sensitivity in online compulsive buying," *Telematics and Informatics Reports*, vol. 11, Sep. 2023, doi: 10.1016/j.teler.2023.100069.
- [31] J. Jung and S. Yi, "Assessment of heterogeneity of compulsive buyers based on affective antecedents of buying lapses," *Addiction Research & Theory*, vol. 22, no. 1, pp. 37–48, Feb. 2014, doi: 10.3109/16066359.2012.756475.
- [32] I. Pilch and M. E. Górník-Durose, "Grandiose and Vulnerable Narcissism, Materialism, Money Attitudes, and Consumption Preferences," *J Psychol*, vol. 151, no. 2, pp. 185–206, Feb. 2017, doi: 10.1080/00223980.2016.1252707.
- [33] G. Zerach, "The Mediating Role of Emptiness and Materialism in the Association Between Pathological Narcissism and Compulsive Buying," *Int J Ment Health Addict*, vol. 14, no. 4, pp. 424–437, Aug. 2016, doi: 10.1007/s11469-015-9591-9.
- [34] F. Golarizadeh, B. Ranjbarian, and A. Ansari, "An Evaluation and Analysis of Perceived Online Service Quality Dimensions Impacts on Online Purchasing Behavior of Luxury Cosmetic Products by Women," *Interdisciplinary Journal of Management Studies*, vol. 17, no. 1, pp. 37–52, Jan. 2024, doi: 10.22059/ijms.2023.337578.674908.