

The Influence of Live Streaming on Flash Sale and Its Impact on Impulse Buying of Shopee E-Commerce Users in Indonesia

Ridwan Alif Nurfatria¹, Hakim Ramadhan², Muhammad Rifqi³, Adi Setiawan⁴, M Misbak⁵

Faculty of Economics and Business, Universitas Swadaya Gunung Jati, Cirebon, Indonesia

Author Email: ridwanalifnurfatria@gmail.com¹, hakimr241@gmail.com², muhhammad.rifqii021@gmail.com³, a.setiawan28@gmail.com⁴, misbakdarman@gmail.com⁵

Abstract. This study aims to analyze the influence of Live streaming and Flash sale variables on the Impulse Buying behavior of Shopee E-commerce users in Indonesia. The method used is quantitative with descriptive analysis techniques to explain the characteristics of the sample and inferential analysis techniques using SPSS and AMOS software analysis tools. The study population consisted of Shopee e-commerce users in Indonesia, with a sample of 140 respondents selected by non-probability methods with purposive sampling techniques and analysis methods used in this study namely validity test, reliability test, classical assumption test, cross-tabulation test and path analysis. Data was obtained by distributing google form questionnaires through social media. The results of the analysis show that the existence of Live Streaming and Flash Sale has a positive and significant effect on Impulse Buying. This research provides a deeper understanding of the factors that influence Impulse Buying behavior in the context of Live Streaming and Flash Sale of Shopee e-commerce users. The results of this study can provide guidance for Shopee and other e-commerce parties to design more effective marketing strategies and focus on Flash Sale to increase impulse purchases. The results of the validity test output show that the data of this study is declared valid and the reliability test shows that each variable in this study is declared reliable or consistent. The statistical assumption test shows a positive and significant influence, which means that quality Live Streaming can provide stimulus to the Flash Sale program which is a limited number of offers for a short period of time so that it can encourage users to make impulse purchases or unplanned purchases. The path analysis fit model test shows a match of several samples that can subsidize the population as a whole.

Keyword: Live Streaming, Flash Sale, E-commerce, Impulse Buying

1 Introduction

Advanced internet technology offers many conveniences in our daily lives, one of which is in the business field. Businesses are now using information and communication technology as a sales promotion tool to launch brands, expand their market, make transactions, and even buy goods through e-commerce. This happens because of the rapid development of internet users.



Figure 1. Data of Internet Users in Indonesia
Source: Hootsuite.co.id (2023)

Total Population (total population): 276.4 million, Mobile connected devices: 353.8 million (128% of total population), Internet users: 212.9 million (77% of total population) and Active Social Media Users: 167 million (60.4% of total population).

The presence of the Internet brings many important impacts to various industrial sectors, including the emergence of e-commerce services [1]. E-commerce refers to all online commercial activities through smart phones and computing devices, including the buying and selling of physical or digital products, which act as a bridge between businesses, consumers, and society [2]. Some of the e-commerce platforms include Amazon, Alibaba, eBay, and others. Indonesia has also begun to follow the development and transformation of the world of trade through online business. In Indonesia, we can find various platforms such as Shopee, Tokopedia, Lazada, Blibli and Bukalapak. Shopee was first launched in Singapore in 2015 and became the most preferred platform in Indonesia in the same year. It can be said, Shopee is very successful in Indonesia.

Shopee is one of the marketplace businesses that has a C2C (consumer to consumer) business concept, which is a type of marketplace business that only provides a platform to facilitate the meeting of buyers and sellers. Shopee is the leading e-commerce platform in Southeast Asia and Taiwan. Shopee is designed to provide an easy, secure, and fast online shopping experience both through payment and strong logistical support to buyers and sellers. With a wide selection of product categories ranging from electronics, health & beauty, baby needs & toys, clothing, fitness equipment, to daily necessities. Shopee aims to continuously improve its platform and become the e-commerce destination of choice in Southeast Asia and Taiwan. Shopee comes in the form of a mobile application and website to make it easier for potential customers to shop [3]. The marketing strategy carried out by shopee is very successful, strategies carried out to increase sales, such as flash sale programs, cashback, discounts, tagline free shipping and live streaming [4].

2 Literature Review

2.1 Live Streaming

Live Streaming is the real-time audio and video broadcast of a program over the internet, giving the audience an immediate sensation as if they were on the scene. Live streaming also acts as an important promotional tool and influences purchase decisions, while creating interactive experiences that enhance customers relationships. Live streaming commerce is characterized as a part of e-commerce that incorporates real-time social interaction, a characteristic that is exclusive to live broadcasts. Live streaming or live broadcast is a development of media that involves real-time interaction. Live streaming is a very effective way to communicate with customers, as it can capture their attention completely and create high engagement [5], [6], [7], [8]. Based on this understanding, it can be concluded that live streaming is an activity to sell products involving live streamers who show different aspects of the product and attitudes and abilities to communicate with consumers so as to encourage the audience to buy it. Some indicators contained in Live Streaming [9] that is:

1. Attractiveness
 - a. Live Streaming hosts have an interesting style of speech.
 - b. Live Streaming hosts are physically attractive.
2. Trustworthiness
 - a. Live Streaming hosts are honest when conveying product-related information.
 - b. Live Streaming hosts can be trusted when offering products.
3. Expertise
 - a. Experienced Live Streaming Hosts regarding the products delivered.
 - b. Live Streaming Hosts have the appropriate expertise to deliver products live.
4. Product Usefulness
 - a. Products in Live Streaming have benefits.
 - b. Products in Live Streaming meet a need.
5. Purchase Convenience
 - a. Sales in Live Streaming make it easy without having to travel.
 - b. Sales in Live Streaming are convenient to do.

2.2 Flash Sale

Flash sale is a strategy in online business to sell goods exclusively at a price that is much cheaper than the original, and of course in a very limited time. Flash sales are limited offers for a short period of time, limited to one per customer and only valid until supplies run out. Flash sale is a form of sales method in a limited and relatively short period of time. Flash sale is the sale of products with limited quantities, affordable prices and limited time limits [10], [11], [12], [13]. Based on this understanding, it can be concluded that flash sale is a marketing strategy that provides goods in limited quantities and provides cheaper prices than the usual price. Flash sale indicators contained in sales promotions [9] that is:

1. Promotion Frequency is the number of sales promotions carried out at a time through sales promotion media.
 - a. Promotions provide more attractive sales.
 - b. Frequent promotions on various social media attract buying interest.
2. Promotion Quality is a measure of how well sales promotions are done.
 - a. Flash Sale provides relevant product information.
 - b. Flash Sale provides accurate product information.
3. Promotion Time is the value or number of sales promotions carried out by the company.
 - a. Flash Sale duration does not last long.
 - b. Flash Sale provides free prices.
4. The accuracy or suitability of promotional targets is an important factor in achieving the company's desired targets.
 - a. Flash Sale encourages for the purchase of products.
 - b. Flash Sale allows saving on product purchase expenses.

2.3 Impulse Buying

Impulse buying is buying without a plan and paying less attention to the consequences it will receive. So, consumers often feel that they are buying goods that they don't really need at that time. "Impulsive buying is an emotional decision or according to the impulse of the heart. Emotions can be very strong and act as the basis of a domain's purchase motive." Impulse buying is the act of buying that was not previously consciously recognized as a consequence. Impulsive buying includes purchases that are not planned and accompanied by positive emotions [14], [15], [16], [17]. Based on this understanding, it can be concluded that impulse buying is the desire to buy goods without planning and not in accordance with needs. Impulse buying indicator [18] that is:

1. Pure Impulse
 - a. Making unplanned purchases on the basis of attractive products
 - b. Making unplanned purchases because it is on the basis of an attractive brand
2. Impulse Reminders
 - a. Making unplanned purchases on the basis of remembering the product seen again is needed
 - b. Making an unplanned purchase because spontaneously when making a payment at the cashier, then seeing a product and remembering that the product is needed
3. Impulse Advice
 - a. Making unplanned purchases on the basis of advice from others who have used the product first.
 - b. Making unplanned purchases on the basis of a desire to try.
4. Planned Impulse
 - a. Make a purchase because you are tempted by the coupons that the seller offers.
 - b. Make purchases because you are tempted by existing discounts.

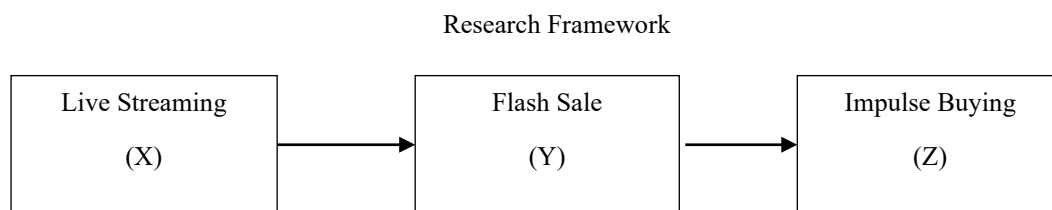


Figure 2. Research Framework

- H1** : Live Streaming has a positive effect on Impulse Buying.
H2 : Flash Sale has a positive effect on Impulse Buying.

3 Research Method

The research method applied in this study uses quantitative research. Quantitative methods are defined as methods for testing certain theories, by collecting data to refute existing theories [19]. The data used is primary data using an online questionnaire through google form to respondents with measurements using a Likert scale with a score of 1-5. Likert scale is a scale used to measure the attitudes, opinions, and perceptions of a person or

group of people about social phenomena [20]. With the Likert scale, the variables to be measured are described into variable indicators.

The population in this study is all Shopee e-commerce users who take advantage of the Live Streaming feature and Flash Sale program. In this study, the number of samples was 140 respondents taken through the application of non-probability sampling methods using purposive sampling techniques. Non probability sampling is a sampling technique that does not provide equal opportunities for every element or member of the population to be selected as a sample [21]. Purposive sampling technique is a sampling technique based on certain considerations [22]. The research data obtained were processed with SPSS and AMOS software using analytical tools used by undergoing testing procedures for validity test, reliability test, classical assumption test, cross-tabulated test and path analysis.

Determination of the number of samples that play an important role in the estimation and interpretation of the results, the ideal and representative sample size is incorporated in the number of indicators of the observation variables multiplied by 5 to 10 times [23]. On this basis, the number of indicators in this study is 26 indicators then $26 \times 5 = 130$. Therefore, the sample taken in this study was 140 respondents.

4 Results and Discussion

4.1 Validity Test and Reliability Test

Validity testing is carried out to determine the validity or absence of a questionnaire from each of these variables. The validity tests that have been carried out in this study are shown in the following table:

Table 1. Validity and Reliability Test Result

Research Variables	Invalid item	C α coefficient
Live Streaming	-	0,765*
Flash Sale	-	0,760*
Impulse Buying	-	0,782*

*Corrected total item linkage coefficient (r_{tid}) < 0,1660

*Reliable

4.2 Cross Tabulation Test

Table 2. Cross Tabulation Test Result

		Gender		Total
		Male	Female	
Age	10-20	5	13	18
	20-30	58	58	116
	30-40	1	0	1
	40-50	3	2	5
Total		67	73	140
		47,9%	52,1%	100%
Domicile	Cirebon	40	48	88
	Indramayu	3	4	7
	Majalengka	12	13	25
	Kuningan	5	2	7
	Bandung	1	2	3
	Yogyakarta	1	0	1
	Tegal	0	1	1
	Karawang	0	1	1
	Kupang	1	0	1
	Merauke	1	0	1
	Serang	3	1	4
Jakarta	0	1	1	
Total		67	73	140
		47,9%	52,1%	100%

Demographic respondent data in this study was mostly aged 20-30 years with a total of 116 respondents. The gender is mostly female with a total of 73 respondents, and for domicile most of them are Cirebon City with a total of 88 respondents.

4.3 Classical Assumption Test

A. Normality Test

The normality test, Kolmogorov-Smirnov aims to determine the distribution of the variables observed in the questionnaire, distributed normal. For the standard error used is $\text{sig} \leq 0.01$.

Table 3. Normality Test Result

Asymp. Sig (2-tailed)	Live Streaming	Flash Sale	Impulse Buying
	0,008	0,005	0,002

Based on normality testing and it can be known that the value of the Live Streaming, Flash Sale and Impulse Buying variables is ≤ 0.01 meaning that the data from each variable is normally distributed.

B. Multicollinearity Test

The multicollinearity test is used to determine whether there is a strong correlation among the independent variables included in the formation of the model. To detect linear regression models experiencing multicollinearity can be checked using the Variance Inflation Factor (VIF) for the independent variable, that is, if the independent variable has a VIF value of ≤ 10 it means that multicollinearity has occurred.

Table 4. Multicollinearity Test Result

Model	VIF
Live Streaming(X)	1,778
Flash Sale(Y)	1,778

a. Dependent Variable: Impulse Buying

Based on the output results, it is known that the VIF value of the Live Streaming and Flash Sale variables is 1.778 each, smaller than 10, meaning that there has been multicollinearity of each independent variable (Live Streaming (X) and Flash Sale (Y)).

4.4 Hypothesis Test

Table 5. Hypothesis Test Result

Hypothesis	Path	C.R	P	Result
H1 Live Streaming (X) →	Flash Sale (Y)	10,396	***	Accepted
H2 Flash Sale (Y) →	Impulse Buying (Z)	8,779	***	Accepted

Table 5 shows the results of the hypothesis test. The results show all hypotheses are accepted, since the value of C.R is more than 1.98 i.e. with C.R values of 10, 396 and 8.779 respectively. And the P value also shows the same result if the P value < less than 0.05 or symbolized *** (below 0.01) then it means that two hypotheses have a significant effect or are accepted.

4.5 Path Analysis

Path analysis is an extension of the regression model, which is used to test the fit of the correlation matrix against two or more causal relationship models that are being compared by the researcher [24].

4.6 Model Fit Test

Model fit testing aims to determine the suitability between the model and the data contained in this study, whether some samples can subsume the population as a whole. To measure the goodness of fit, two approaches can be used, namely the measurement of the overall fit model (absolute fit measure) and the comparison of the research model with other models (incremental fit measures) [25]. Goodness-of-Fit is intended to assess whether the data to be processed meets the assumptions of the structural equation model or not. Each of these approaches has several indices that have different functions and purposes from one another. To analyze this fit model, researchers use Structural Equation Modeling or SEM so that the output of the fit model is shown as follows.

Table 6. Result of Path Analysis Model Fit Test

GFT Size	Value	Test Criteria	Implication of H ₀
P- Value	0,402	≥ 0,05	Accepted
RMSEA	0,000	≤ 0,08	Accepted
CMIN	0,702	≤ 2,00	Accepted
GFI	0,997	≥ 0,90	Accepted
AGFI	0,980	≥ 0,90	Accepted
CFI	1,000	≥ 0,90	Accepted
TLI	1.006	≥ 0,90	Accepted

4.7 Decomposition Influence

Live Streaming (X) has a positive and very significant effect on Flash Sale (Y) is $(0.66)^2 = 0.4356$ or 43.56%. The remaining $(1 - 0.4356) = 0.5644$ or 56.44% is influenced by other variables not described by the model. Flash Sale (Y) has a positive and significant effect on Impulse Buying (Z) is $(0.6)^2 = 0.36$ or 36%. The remaining $(1 - 0.36) = 0.64$ or 64, % is influenced by other variables not described by the model. The magnitude of the residual variable path coefficient model e1 against the exogenous variable Flash sale (Y) is $\sqrt{0.5644} = 0.7513$. In the magnitude of the model the coefficient of the residual variable path e2 to the endogenous variable Impulse Buying (Z) $\sqrt{0.64} = 0.8$. Thus, the estimated structural influence of Flash Sale and Impulse Buying models is $Y = 0.66X + 0.7513e1$ and $Z = 0.6Y + 0.8e2$.

5 Conclusion

Based on the test results using SPSS and AMOS software analysis tools to test the Effect of Live Streaming on Flash Sale and Its Impact on Impulse Buying of Shopee e-commerce users in Indonesia, it can be concluded that live streaming and flash sale variables have a positive and significant effect on Impulse Buying, which means that quality Live Streaming can provide an interactive experience and stimulate Flash Sale programs that offer minimal large discounts 30% within a limited period of time and provides incentives to encourage purchases at the same time so as to encourage users to make impulse purchases or unplanned purchases.

References

- [1] R. F. Salsabila and A. Suyanto, "Analysis of Impulse Buying Factors in Beauty E-commerce," *Journal of Ocean Economics and Business*, vol. 13, no. 1, pp. 76–89, Jan. 2022, doi: 10.33059/jseb.v13i1.3568.
- [2] E. Halim, C. Nur, A. Adiba, Y. Kurniawan, and L. S. Saputra, "Comparative Analysis of the Effect of Live Streaming Shopping on E-commerce and S-commerce on Impulsive Buying Behavior in Indonesia."
- [3] M. Arbaiah, D. R. Pandjaitan, and D. A. S. Ambarwati, "The Effect of Hedonic Shopping Motivation Dimensions on Impulse Buying on Shopee Marketplace Sites," *Review of Accounting, Management, and Business*, vol. 2, no. 1, pp. 55–65, Jun. 2022, doi: 10.35912/rambis.v2i1.1477.
- [4] F. Desy Fitriana, S. College of Economics Surakarta Budi Istiyanto, P. Management Studies, and S. College of Economics Surakarta, "SHOPEE USERS IN SOLORAYA," vol. 2, no. 2, pp. 712–723, 2024, doi: 10.61722/jiem.v2i2.1031.
- [5] A. Verma and S. Kumar, *Emerging Business Practices And Trends During COVID-19*. Lucknow, 2021.
- [6] C. C. Chen and Y. C. Lin, "What drives live-stream usage intention? The perspectives of flow, entertainment, social interaction, and endorsement," *Telematics and Informatics*, vol. 35, no. 1, pp. 293–303, Apr. 2018, doi: 10.1016/j.tele.2017.12.003.
- [7] J. Cai, D. Y. Wohn, A. Mittal, and D. Sureshbabu, "Utilitarian and hedonic motivations for live streaming shopping," in *TVX 2018 - Proceedings of the 2018 ACM International Conference on Interactive Experiences for TV and Online Video*, Association for Computing Machinery, Inc, Jun. 2018, pp. 81–88. doi: 10.1145/3210825.3210837.
- [8] J. Cai and D. Yvette Wohn, *Live Streaming Commerce: Uses and Gratifications Approach to Understanding Consumers' Motivations*. [Online]. Available: <https://hdl.handle.net/10125/59693>
- [9] P. Kotler and K. L. Keller, *Marketing Management*, 13th ed. Jakarta: Erlangga, 2013.
- [10] A. Kunda et al., *INTRODUCTION TO BUSINESS : MANAGEMENT, FINANCING, MARKETING AND OPERATIONS*. Jakarta: PT. GLOBAL TECHNOLOGY EXECUTIVE, 2023.
- [11] D. Darwipat and A. Syam, "The Effect of Flash Sale Program on Impulsive Buying Behavior of Marketplace Consumers," 2020.

- [12] P. Kotler, G. Armstrong, and M. O. Opresnik, *Principles of Marketing (Global Edition)*, Seventeenth. Pearson Education, 2018.
- [13] H. Rafsanjani, "INTRODUCTION TO BUSINESS," 2023. [Online]. Available: <https://www.researchgate.net/publication/372557281>
- [14] C. Amos, G. R. Holmes, and W. C. Keneson, "A meta-analysis of consumer impulse buying," *Journal of Retailing and Consumer Services*, vol. 21, no. 2, pp. 86–97, Mar. 2014, doi: 10.1016/j.jretconser.2013.11.004.
- [15] J. Bisnis, D. Kajian, S. Manajemen, L. P. Wangi, and S. Andarini, "THE EFFECT OF FLASH SALE AND CASHBACK ON IMPULSE BUYING BEHAVIOR IN SHOPEE USERS".
- [16] N. Rozaini and B. A. Ginting, "THE EFFECT OF ECONOMIC LITERACY AND SELF-CONTROL ON IMPULSE BUYING BEHAVIOR FOR FASHION PRODUCTS".
- [17] J. C. Mowen and M. Minor, *Consumer Behavior translated by Dwi Kartika Yahya*. Jakarta: Erlangga, 2012.
- [18] C. W. Utami, *Retail Management: Strategy and Operational Implementation of Modern Retail Business in Indonesia*, 3rd ed. Jakarta: Salemba Empat, 2017.
- [19] J. W. Creswell, *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*, 4th ed. Singapore: Sage Publication, 2014.
- [20] Sugiyono, *Quantitative, Qualitative and R&D Research Methods*. Bandung: Alfabeta, 2017.
- [21] Sugiyono, *Statistics for Research*. Bandung: Alfabeta, 2018.
- [22] M. Y. Mahadianto and A. Setiawan, *Parametric Analysis of Dependencies with SPSS Program for Data Processing of Final Project, Thesis and Thesis. Discussion about: Validity and Reliability Test, Descriptive Analysis, Difference Test, Classical Assumptions, Linear Regression, and Path Analysis*. Jakarta: PT. Raja Grafindo Persada, 2013.
- [23] H. Joseph F, A. Rolph E, T. Ronald L, and B. William C, *Multivariate Data Analysis: With Readings*, 4th ed. New Jersey: Prentice Hall, 1995.
- [24] D. Garson, "Path Analysis," Raleigh, North Carolina, 2008.
- [25] I. Ghozali, *Model of Structural Equations: Concept and Application with AMOS 22 Program*. Semarang: Diponegoro University Publishing Board, 2014.