Pakistan Journal of Life and Social Sciences
www.pjlss.edu.pk
https://doi.org/10.57239/PJLSS-2025-23.1.00238

RESEARCH ARTICLE

The Influence of Live Streaming Shopping on the Impulsive Purchase Behaviour

Amelia Putri Qatarina[1], Indrawati[2]*

[1,2] Faculty of Economics and Business, Telkom University, Bandung, Indonesia

ARTICLE INFO

Received: Nov 22, 2024

Accepted: Jan 19, 2025

Keywords

Livestreaming Shopping

Demand

Convenience

Interactivity

Playfulness

Impulsive Purchase Behaviour

ABSTRACT

The digital era has transformed digital marketing for the beauty and skincare industry, with live streaming emerging as a key tool to boost online sales through real-time interaction. This research explores how Somethinc, a leading Indonesian FMCG brand can leverage live streaming shopping to drive impulsive purchase behaviour. The study examines the influence of live streaming stimuli namely demand, convenience, interactivity and playfulness on impulsive purchase behaviour. Data was collected from 400 Somethinc consumers via Google Forms using non-probability purposive sampling. Analysis was conducted using PLS-SEM techniques to assess the model and hypotheses. Findings indicate that demand, convenience, interactivity, and playfulness positively affect impulsive purchase behaviour. Interactivity in the livestream was found to have the most significant influence on impulsive purchase behaviour. This suggests that Somethinc could improve their interactivity by through QnAs or other interactive activities that would drive higher impulsive purchase tendencies.

***Corresponding Author:**

indrawati@telkomuniversity.ac.id

1. INTRODUCTION

The digital era has revolutionized consumer behaviour, blurring the lines between traditional and online commerce. Among the catalysts for this transformation, live streaming shopping has emerged as a powerful tool for fostering real-time interactions that drive impulsive purchase behaviour. As e-commerce grows, slowly closing in on offline retail, there is a strong expectation for retail stores to enhance their digital marketing strategies as their sales targets are impacted by this trend. According to Bloomberg intelligence (2024), the annual growth of e-commerce retail in Indonesia could reach 15% and traditional offline retail will lag behind at 5% in 2026. Many businesses have adopted livestreaming shopping as a digital marketing tool to improve customer engagement while boosting online sales through e-commerce platforms (Wongkitrungrueng & Assarut, 2020). Especially now that the beauty and personal skin care market in Indonesia is expected to grow and reach 10.8 billion USD in 2029 (Statista Consumer Market Insights, 2024). Previous studies have explored many livestream sales drivers using an S-O-R framework (LI et al., 2024; Zhang et al., 2024). As consumers become increasingly immersed in these live experiences, the immediacy and excitement of the platform can drive them to make unplanned purchases, often without thorough consideration. Moreover, impulsive purchase behaviour is a consumer behaviour that occurs frequently in live shopping indicating the prevalence of impulsive buying behaviour in e-commerce (Prasetio & Muchnita, 2022). Finally, a survey conducted by GoodStats throughout Indonesia revealed that 48.7% of the people purchase products through live shopping at least once a month (GoodStats,

2024). Another survey showed that the beauty, care & health category was ranked most purchased category from TikTok live (Populix, 2023).

2. LITERATURE REVIEW

Marketing

Marketing is a multifaceted endeavour that encompasses the thoughtful processes of communicating, delivering, and exchanging valuable products or services with customers, clients, partners, and the broader community (Kotler et al., 2023).

Stimulus-organism-response framework

The Stimulus-Organism-Response framework found by Mehrabian & Russell in 1974 explains human emotional responses to environmental stimuli through three key dimensions. These dimensions consist of stimuli derived from both internal and external environments, the organism's state, and the resulting behavioural reactions (Mehrabian & Russell, 1974). The SOR model has been used in retail research to understand online consumer behaviour (Kamila & Ariyanti, 2024). Live streaming commerce represents an innovative shopping paradigm that employs a diverse array of stimuli to encourage potential consumers to participate in purchasing activities (Ming et al., 2021; Yang et al., 2024).

Impulsive purchase behavior

Impulsive buying behaviour refers to an unplanned buying behaviour that arises among customers when they are stimulated (Lv et al., 2022). In the world of online shopping, impulse buying refers to consumers who don't resist the temptation of digital triggers, leading them to make spontaneous purchases. Online shopping tends to encourage impulsive behaviour more promptly than conventional retail situations, making it especially significant for the examination of live streaming commerce (Ming et al., 2021).

Demand

Demand can be closely defined as the "buying desire" that arises from the audience's needs and wants to purchase a product (Lv et al., 2022). It is generated from a preference, need, or lack of a particular commodity. In Kamila & Ariyanti (2024), Demand was found to have a positive influence on impulse buying.

Convenience

Convenience is a dimension of utilitarian value that is said to save time, money, effort, and can also influence purchase intention and behaviour (Wongkitrungrueng & Assarut, 2020). According to Lin et al., (2022), the convenience of live streaming can eliminate the necessity for consumers to search, select and search for a product as information can be directly provided to them in real time. The convenience and speed of accessing information online, combined with the vast amount of data readily available with a single click, motivate consumers to participate in online shopping (Indrawati et al., 2022).

Interactivity

Interactivity is the activity between a streamer and a viewer. Interactivity during a livestream can improve consumer buying process by enhancing emotions during a live stream, which in turn increases their willingness to buy (Lin et al., 2022). This level of interaction stimulates viewers' buying behaviour, enhancing their overall shopping experience (Liu, 2022).

Playfulness

Playfulness is closely defined as the entertainment or degree of pleasure consumers may feel when watching live streaming activities that satisfies consumers' pleasure psychology (Yang et al., 2024). It can also be interpreted that playfulness is the engaging mindset a person adopts during an experience associated with pleasure and enjoyment.

3. METHODS

Data collection and analysis technique

This study employs a descriptive causal approach with a quantitative methodology, aligned with the research objective. The strategy used in this research is a survey approach, meaning that data were collected through a questionnaire to obtain quantitative information from the participants. In this study, the measurement scale used is a Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The research adopts a non-probability sampling method, specifically purposive sampling. Cochran formula was used to determine sample size with the Z-value set at 1.645, using a significance level of 5% (e = 0.05 for a one-tailed test). According to Indrawati (2015), purposive sampling is a technique where specific members of the population are chosen to serve as a sample, as these individuals are believed to best represent or provide the necessary information to address the research question. Questionnaires were distributed using Google Forms, which was later shared through social media platforms such as Instagram, x, TikTok and WhatsApp. To calculate the minimum sample size, Cochran formula was used, resulting in a minimum sample size of 271 responses. To enhance the participant count and improve the ability to generalize the findings, a final sample of 400 participants was gathered. This study employs a quantitative approach, collecting data via surveys and analyzing it using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4.0 software. Based on the literature review and the study's objective the following hypotheses are developed:

H1: Demand has a positive and significant influence on impulsive purchase behaviour in the Somethinc live streaming shopping.

H2: Convenience has a positive and significant influence on impulsive purchase behaviour in the Somethinc live streaming shopping.

H3: Interactivity has a positive and significant influence on impulsive purchase behaviour in the Somethinc live streaming shopping.

H4: Playfulness has a positive and significant influence on the impulsive purchase behaviour in the Somethinc live streaming shopping.

The measurement model (outer model) is used to evaluate validity and reliability of the constructs where factor loadings, AVE, Cronbach's alpha, and composite reliability are found. The structural model (inner model) was used to test the hypotheses through path coefficients, T statistics and P value. Finally, the R-squared values is used to assess the predictive power to provide a good fit for the data. Hypotheses are assessed at a 95% confidence level using a one-tailed test, with a t-value threshold of 1.64, to determine the strength and significance of the relationships between variables. This study presents a demographic profile with two genders, primarily consisting of female participants (79%, n=316) and individuals aged 17-24 years (47.8%, n=191). Most respondents held a Bachelor's degree (51.8%, n=207) and reported a monthly income of Rp 1,000,000–Rp 5,000,000 (41.3%, n=165). Geographically, the majority were from Java island (63.8%, n=255), reflecting the brand's significant reach among young, educated, mid-income consumers in this region.

4. RESULTS AND DISCUSSIONS

In this study, SmartPLS was utilized to perform two types of model testing: the measurement model (outer model) and the structural model (inner model). The process begins with evaluating the measurement model, which aims to assess validity and reliability. This testing includes analysing the t-values from the bootstrap procedure to test the hypothesis by determining the significance of the effects.

From the Descriptive analysis result, we find that all five items of Demand, convenience, interactivity, playfulness and impulsive purchase behaviour are categorized as "Good"

Table 1: Descriptive analysis results

Variable	Total Score	Ideal Score	Percentage	Category
Demand	4821	6000	80.4%	Good

Convenience	4876	6000	81.3%	Good
Interactivity	4931	6000	82.2%	Good
Playfulness	4942	6000	82.4%	Good
Impulsive Purchase Behaviour	4811	6000	80.2%	Good

From table 1 above, it is seen that Playfulness scored the highest at 82.4%, followed by Interactivity (82.2%), Convenience (81.3%), Demand 80.4%, and Impulsive Purchase Behaviour at 80.2%, all fit into the category of good. In this study, SmartPLS was utilized to perform two types of model testing: the measurement model (outer model) and the structural model (inner model).

Measurement model (outer model) testing

Validity is a test of how well an instrument that is developed measures the particular concept it is intended to measure. This test determines whether the questionnaire used in the study is suitable and capable of providing reliable data. There are two approaches to validity testing which are convergent validity and discriminant validity. The following figure shows the outer model results:

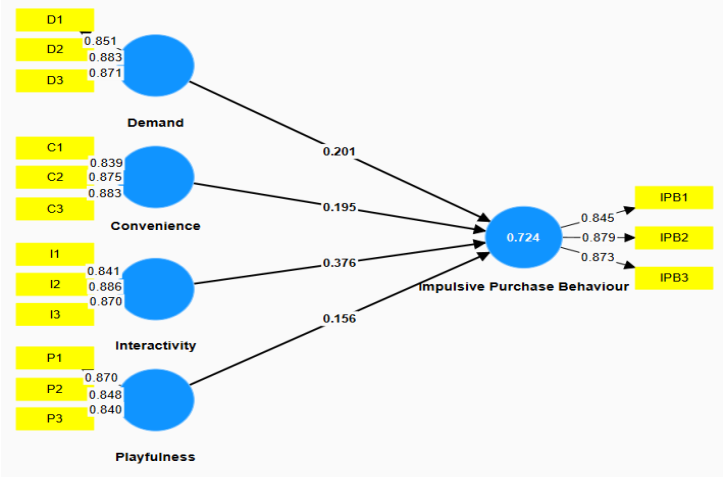

Figure 1: Outer model results

Convergent validity

A measurement is considered to possess convergent validity when the loading factor exceeds 0.7. Additionally, for the AVE indicator to satisfy the criteria for convergent validity, its value must be at least 0.50 (Indrawati, 2015).

Table 2: Convergent validity results

Variables	Item Code	Item	Factor loading
Demand	D1	The livestream makes me want to buy Somethinc products	0.851
	D2	I think the process of watching the live stream makes me want to own Somethinc product	0.883
	D3	I can see the Somethinc product I need in the live stream	0.871
Convenience	C1	livestream Somethinc saves me much time	0.839
	C2	I find the payment process of purchasing Somethinc through livestream simple	0.875
	C3	Live streaming various delivery method reduces the trouble of picking up Somethinc product	0.883

Interactivity	I1	I can interact with the Somethinc streamer in the livestream	0.841
	I2	I can interact with others by leaving a message in the Somethinc livestream	0.886
	I3	Reading other viewer's responses in the Somethinc livestream makes me feel engage	0.870
Playfulness	P1	I think the content of Somethinc livestream is interesting	0.870
	P2	I feel joyful watching Somethinc live stream	0.848
	P3	I think it is interesting to participate in Somethinc live streaming activities	0.840
Impulsive Purchase Behaviour	IPB1	I impulsively buy Somethinc products that I had not intended to purchase in the livestream.	0.845
	IPB2	While watching Somethinc's live stream, I often buy somethinc products spontaneously	0.879
	IPB3	While watching the Somethinc live stream, I often buy Somethinc products without thinking	0.873

The table above shows that all constructs had a Factor loading value exceed 0.7 indicating valid convergent validity. Moreover, most of the values are above 0.70, suggesting a strong and significant correlation.

Reliability test and validity

Reliability ensure consistent measurements across time and across various items (Bougie & Sekaran, 2019). According to Joe et al. (2023), reliability can be calculated using the Alpha Cronbach calculation technique. If the Cronbach Alpha value > 0.60, therefore it can be considered reliable. Reliability can be assessed through the utilization of Cronbach's alpha and composite reliability metrics (Indrawati, 2015). Cronbach's Alpha and Composite Reliability score of 0.7 is generally regarded as a benchmark for demonstrating acceptable reliability. The AVE indicator to satisfy the criteria for convergent validity, its value must be at least 0.50 (Sholihin & Ratmono, 2020).

Table 3: Latent variable reliability and validity

	Cronbach's alpha	**Composite reliability**	**Average variance extracted (AVE)**
Convenience	0.834	0.900	0.750
Demand	0.837	0.902	0.754
Impulsive Purchase Behaviour	0.833	0.90	0.750
Interactivity	0.833	0.90	0.750
Playfulness	0.812	0.889	0.727

Discriminant validity

The assessment of discriminant validity, which is evaluated through the cross-loading factor coefficients and the Fornell-Larcker criterion, serves to delineate the unique attributes of the research construct.

Table 4: Fornell-Lacker results

	Convenience	**Demand**	**Impulsive Purchase Behaviour**	**Interactivity**	**Playfulness**
Convenience	**0.866**				
Demand	0.779	**0.868**			

Impulsive Purchase Behaviour	0.769	0.771	**0.866**		
Interactivity	0.791	0.783	0.804	**0.866**	
Playfulness	0.766	0.788	0.744	0.743	**0.853**

The results shown in table 4 show that the loading values for each construct are greater than the cross-loading values. This indicates that all constructs or latent variables exhibit strong discriminant validity. This indicates that all constructs or latent variables exhibit strong discriminant validity, with the construct indicator block performing better than the other indicator blocks.

Structural model (inner model)

The objective of this structural model's measurement is to examine the interactions among various latent variables. At a significance threshold of 5%, the path coefficient necessitates a T-value exceeding 1.65, as derived from the bootstrapping process.

R-square test

R-squared criterion is used to measure the proportion of variation in a construct. The R-squared values of 0.67, 0.33 and 0.19 respectively suggests "good", "moderate" and "weak" (Indrawati, 2015). The following is the table for the R square results:

Table 5: R-square results

	R-square
Impulsive Purchase Behaviour	0.724

The R square of impulsive purchase behaviour is 0.724 or 72% which explains that the variation in impulsive purchase behaviour can be explained by the independent variables (demand, convenience, interactivity and playfulness) by 72%. This result indicates good explanatory power of the model used in this study.

Q-Square test

Q-square measure if a model has predictive relevance. The threshold is >0 to conclude that model has predictive relevance. >0 (weak), >0.25 (moderate) and >0.50 (strong) (Hair et al., 2019).

Table 6: Q-square results

	Q^2 predict
Impulsive Purchase Behaviour	0.720

Based on these results, it can be determined that the existing variables have predictive relevance and can be reused under the same measurement conditions or assumptions.

Path coefficient

According to Hair et al., (2021), t-value is used for concluding the coefficient is statistically significant at a certain error probability. Similarly, a higher path coefficient of the model produces either overall weak or strong effects effect. The results of testing Path Coefficients on each variable are shown in the table below:

Hypothesis testing

Table 7: Hypothesis testing

	Original sample (O)	**Sample mean (M)**	**Standard deviation (STDEV)**	**T statistics (|O/STDEV|)**	**P values**
Convenience -> Impulsive Purchase Behaviour	0.195	0.197	0.048	4.079	0.000
Demand -> Impulsive Purchase Behaviour	0.201	0.201	0.051	3.952	0.000

Interactivity -> Impulsive Purchase Behaviour	0.376	0.377	0.048	7.834	0.000
Playfulness -> Impulsive Purchase Behaviour	0.156	0.155	0.057	2.751	0.003

Based on the table above, it can be seen that the smallest path value is the influence between playfulness on impulsive purchase decision of 0.156 (T Statistic 2.751). While the largest path value is the influence between interactivity and impulsive purchase behaviour of 0.376 (T Statistic 7.834).

Goodness of fit

To validate the overall model, Goodness of Fit (GoF) is used. The following are the results of the Goodness of Fit evaluation in this study:

Table 8: Goodness of Fit (GoF) results

	Saturated model	Estimated model
SRMR	0.056	0.056

The criterion values for SRMR is SRMR < 0.08 to be considered a good model fit (Ringle et al., 2024). Based on the results in Table 8, the SRMR value of the model used in this study can be said to be good because the SRMR value is less than 0.08, so the model is suitable for use in this study.

5. CONCLUSION

The research findings on the variables of convenience, demand, interactivity, and playfulness have demonstrated their significant roles in influencing impulsive purchase behaviour. Among these, interactivity emerged as the most impactful factor, as evidenced by its high coefficient of 0.376 and a t-statistic value of 7.834. This indicates that engaging and interactive elements are crucial in driving impulsive buying tendencies. Following this, demand shows a strong influence, with a coefficient of 0.201 and a t-statistic value of 3.952, highlighting the importance of consumer needs in shaping impulsive behaviour. Convenience also plays a significant role, with a coefficient of 0.195 and a t-statistic value of 4.079, suggesting that ease of access and usability strongly contribute to impulsive purchases. Lastly, playfulness, while having a relatively smaller effect, remains statistically significant, with a coefficient of 0.156 and a t-statistic value of 2.751, indicating that elements of fun and enjoyment also encourage impulsive buying. These findings emphasize the need for businesses to focus on these variables, particularly interactivity, to effectively enhance impulsive purchase behaviour.

5.1 Suggestions and managerial implication

To enhance interactivity in Somethinc livestream, host can improve interaction, , specifically on the statement that has the lowest response which is "I can interact with others by leaving a message in the Somethinc livestream" by actively engaging with the Somethinc audience, Somethinc can create a more dynamic and participatory experience, fostering stronger connections with the audience, thus enhance impulsive purchase behaviour. By providing more payment options in the livestream shopping catalogue this could make it more convenient for them stimulating impulsive purchase behaviour. By expanding the product catalog displayed during sessions or showcasing a wider range of products, consumers will have better visibility and variety, potentially stimulating their demand to make purchases. Finally, Playfulness stimuli can also be enhanced by providing more entertainment or elements of humour, discuss entertaining topics and organize activities that could make users find the livestream more “playful”.

5.2 Limitations and future research directions

This study finds that demand, convenience, interactivity and playfulness accounts for 72% of the influence on impulsive purchase behaviour. However, further research could explore mediating factors such as trust or usefulness that could influence the relationship between stimuli of livestreaming to impulsive purchase behaviour. Other stimuli factors such as price, promotion or streamer charisma could also be investigated as new marketing strategies of livestreaming sessions. Future studies could incorporate moderators such as money availability and time availability as these

moderators could affect the impulsive behaviour of Somethinc consumers and thus gain deeper insights into drivers of impulsive purchase behaviour.

REFERENCES

Bougie, R., & Sekaran, U. (2019). *Research Methods for Business* (8th ed.).

Goodstats. (2024, July 2). *Soaring Popularity, What are the Habits of Indonesian People when Shopping Live Shopping?* https://goodstats.id/article/popularitas-melejit-bagaimana-kebiasaan-masyarakat-indonesia-saat-belanja-live-shopping-PpeKR

Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Soumya Ray. (2021). *Partial least squares structural equation modeling (PLS-SEM) using R. Cham: Springer*.

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). *When to use and how to report the results of PLS-SEM. European Business Review, 31(1), 2–24*.

Indrawati, I., Ramantoko, G., Widarmanti, T., Aziz, I. A., & Khan, F. U. (2022). Utilitarian, hedonic, and self-esteem motives in online shopping. *Spanish Journal of Marketing - ESIC*, *26*(2), 231–246. https://doi.org/10.1108/SJME-06-2021-0113

Indrawati, Ph. D. (2015). *Metode penelitian manajemen dan bisnis* .

Joe, F., Hair, JR., Page, M., Brunsveld, N., Merkle, A., & Cleton, N. (2023). *Essentials of Business Research Methods* (Fifth).

Kamila, F. N., & Ariyanti, M. (2024). From Stream to Splurge: Analyzing Impulsive Fashion Buying Trends in TikTok Live Shopping. In *Studies in Big Data* (Vol. 163, pp. 461–478). Springer Science and Business Media Deutschland GmbH. https://doi.org/10.1007/978-3-031-73632-2_39

Kotler, P., Armstrong, G., & Balasubramanian Sridhar. (2023). *(Global edition) Principles of Marketing Nineteeth Edition*. https://api.pageplace.de/preview/DT0400.9781292449333_A46720135/preview-9781292449333_A46720135.pdf

Lin, S. C., Tseng, H. T., Shirazi, F., Hajli, N., & Tsai, P. T. (2022). Exploring factors influencing impulse buying in live streaming shopping: a stimulus-organism-response (SOR) perspective. *Asia Pacific Journal of Marketing and Logistics*, *35*(6), 1383–1403. https://doi.org/10.1108/APJML-12-2021-0903

Liu, L. (2022). *Factors Affecting Consumers' Purchasing Behaviours in Live Streaming E-Commerce: A Review* (pp. 508–515). https://doi.org/10.2991/978-94-6463-036-7_75

LI, X., Huang, D., Dong, G., & Wang, B. (2024). Why consumers have impulsive purchase behavior in live streaming: the role of the streamer. *BMC Psychology*, *12*(1). https://doi.org/10.1186/s40359-024-01632-w

Lv, X., Zhang, R., Su, Y., & Yang, Y. (2022). Exploring how live streaming affects immediate buying behavior and continuous watching intention: A multigroup analysis. *Journal of Travel and Tourism Marketing*, *39*(1), 109–135. https://doi.org/10.1080/10548408.2022.2052227

Mehrabian, & Russell. (1974). An approach to environmental psychology. *The MIT Press*.

Ming, J., Jianqiu, Z., Bilal, M., Akram, U., & Fan, M. (2021). How social presence influences impulse buying behavior in live streaming commerce? The role of S-O-R theory. *International Journal of Web Information Systems*, *17*(4), 300–320. https://doi.org/10.1108/IJWIS-02-2021-0012

Peta Penjualan Ritel RI: Online Kalahkan Gerai Fisik. (2024, July 10). *Bloomberg Intelligence*. https://www.bloombergtechnoz.com/detail-news/43161/peta-penjualan-ritel-ri-online-kalahkan-gerai-fisik

Populix. (2023). *Populix Research: Shopee Live Becomes Most Popular Live Streaming Feature* .

Prasetio, A., & Muchnita, A. (2022). The Role Website Quality, Credit Card, Sales Promotion On Online Impulse Buying Behavior. *Jurnal Manajemen*, *26*(3), 424–448. https://doi.org/10.24912/jm.v26i3.922

Ringle, Christian M, Wende, Sven, Becker, & Jan-Michael. (2024). *SmartPLS 4. Bönningstedt: SmartPLS*.

Sholihin, M., & Ratmono, D. (2020). *Analisis SEM-PLS dengan WarpPLS 7.0 untuk hubungan nonlinier dalam penelitian sosial dan bisnis*.

Statista Consumer Market Insights. (2024, October 10). *Revenue of the beauty & personal care market in Indonesia from 2020 to 2029*. Statista.

https://www.statista.com/forecasts/1220238/indonesia-revenue-beauty-and-personal-care-market

Wongkitrungrueng, A., & Assarut, N. (2020). The role of live streaming in building consumer trust and engagement with social commerce sellers. *Journal of Business Research*, *117*, 543–556. https://doi.org/10.1016/j.jbusres.2018.08.032

Yang, G., Chaiyasoonthorn, W., & Chaveesuk, S. (2024). Exploring the influence of live streaming on consumer purchase intention: A structural equation modeling approach in the Chinese E-commerce sector. *Acta Psychologica*, *249*. https://doi.org/10.1016/j.actpsy.2024.104415

Zhang, C., Pan, S., & Zhao, Y. (2024). More is not always better: Examining the drivers of livestream sales from an information overload perspective. *Journal of Retailing and Consumer Services*, *77*. https://doi.org/10.1016/j.jretconser.2023.103651