

FACTORS AFFECTING IMPULSIVE BUYING BEHAVIOR THROUGH LIVESTREAM ON E-COMMERCE PLATFORMS

● TRAN NGUYEN HUYNH NHU - NGUYEN VU PHUONG THUY

ABSTRACT:

Live-streaming is gradually gaining focus in business strategies and competition between businesses on e-commerce platforms. In line with Stimulus-organism-response (SOR) theory, the study evaluates the impact of stimulation factors on customers' impulsive buying behavior during live streams e-commerce, helping cosmetics businesses to have practical insights and optimize e-commerce strategies through live streams.

Keywords: Livestream, E-commerce, Impulsive buying behavior

1. Introduction

The phenomenal growth of impulsive buying behavior in Vietnam is attaining scholarly interest. Impulsive buying behavior affects the customer's decision process, which therefore holds significant academic and practical importance for online retailing marketers and researchers in the era of digital evolution. This purchasing behavior presents both challenges and opportunities. Customers may spend money on unnecessary products; while businesses can maximize revenue by selling more products or services. One of the forms that helps to stimulate impulsive buying behavior is live-streaming. With this form of marketing promotion, businesses can have real-time interaction, while building trust by bringing a realistic product image to the viewers.

In recent years, impulsive buying behavior has witnessed increases in academic research, but

the majority of them focused on a single platform like TikTok Shop. Meanwhile, other e-commerce platforms such as Shopee and Lazada are running live streaming every day. In addition, according to Euromonitor International, the massive growth potential of the cosmetics industry in Vietnam allowed the market to reach \$3.5 billion by 2026. As a result, developing an expanding comprehension of descendants of impulsive buying behavior on live-streaming cosmetics e-commerce becomes significantly crucial.

This current research contributes to three main objectives:

- To investigate influencing factors of impulsive buying behavior on e-commerce cosmetics live-streaming;

- To evaluate the determinants driving the multifaceted nature of buying behavior on live-streaming activities;

- Based on the research findings, to provide suggestions for cosmetics businesses to optimize e-commerce sales, thereby further increasing revenues.

2. Literature Review and Hypothesis Development

2.1. Theoretical Framework

2.1.1. Impulsive Buying Behavior and Live Streaming E-commerce

According to Rook (Rook & Fisher, 1995) impulsive buying behavior is defined as instantaneous, unplanned and environmentally stimulated consuming behavior. So as to be classified as impulsive, purchasing behavior must satisfy three criteria: they are without prior plan and spontaneous, customers show less concern for consequences of such purchasing decisions, and the decisions are precipitated by uncontrollable and irresistible factors (Dang et al., 2023). These elements can lead to individual gratification or a stronger emotional response to the desired good (Spiteri Cornish, 2020).

As the global economy continues its transition towards a digitally driven market, one of methods to foster impulsive buying behavior is live streaming. Ni & Ueichi (2024) defined the adoption of livestream shopping as a unique form of commerce that combines live videos, online purchasing, and instantaneous interaction. Live-streaming sessions

allow sellers to create social content, engage and interact with viewers in real time directly (Park & Lin, 2020). With this, retailers can provide product information to resonate with customers and therefore stimulate emotional purchasing. The immense popularity of live streaming, along with the rapid expanding use of e-commerce applications drives the importance to comprehend the nuanced interplay of aspects affecting customer behavior in this emerging environment.

2.1.2. Stimulus Response Theory

The Stimulus-Organism-Response (S-O-R) paradigm (Mehrabian & Russell, 1974) has been widely deployed in the sphere of e-commerce (Rohan et al., 2022) to explore determinants affecting customer behaviors. Within this theoretical framework, environmental factors are considered as stimuli provoking internal organismic states (such as time pressure, discount framework, competitive arousal, and product scarcity). These components add a layer to induce a variety of customer responses such as a positive attitude, which in turn results in impulsive buying behavior in novel ways.

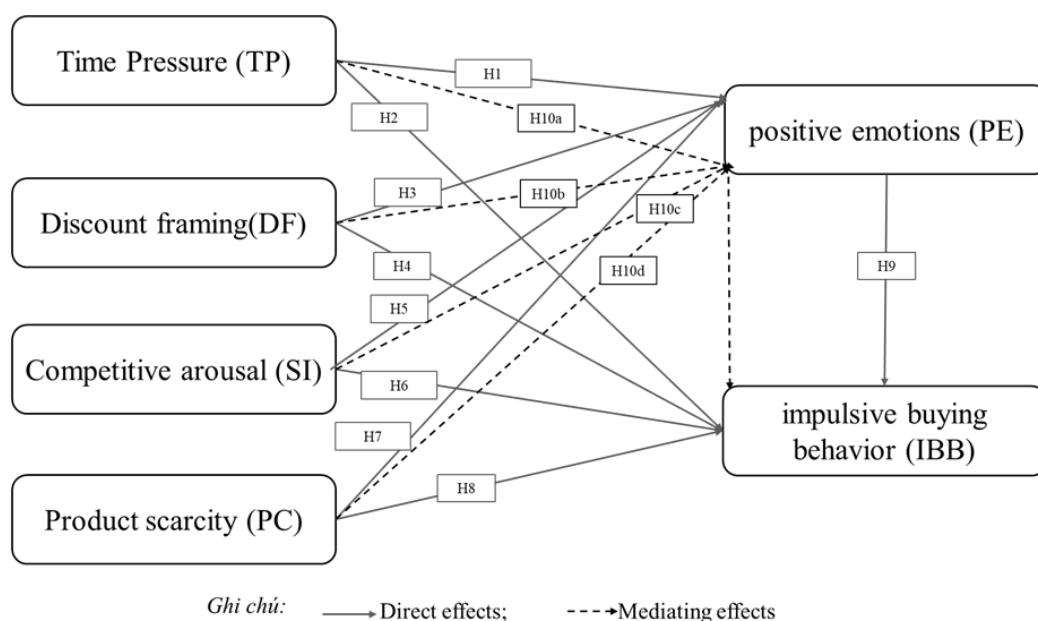
2.2. Hypothesis Development

In the realm of S-O-R theory, the study suggested hypotheses below:

H1: Time pressure positively relates to positive emotions.

H2: Time pressure positively relates to impulsive

Figure 1: Proposed research model



buying behavior.

H3: Discount framing positively relates to positive emotions.

H4: Discount framing positively relates to impulsive buying behavior.

H5: Competitive arousal positively relates to positive emotions.

H6: Competitive arousal positively relates to impulsive buying behavior.

H7: Product scarcity positively relates to positive emotions.

H8: Product scarcity positively relates to impulsive buying behavior.

H9: Positive emotions positively relate to impulsive buying behavior.

H10: Positive emotions mediate the relationship between:

(a): Time pressure and impulsive buying behavior;

(b): Discount framing and impulsive buying behavior;

(c): Competitive arousal and impulsive buying behavior;

(d): Product scarcity and impulsive buying behavior.

3. Research Methodology

- Qualitative research: based on theory and referencing previously researched models to form a research model and preliminary scale for 4 independent variables and 3 dependent variables; Using the hand-to-hand interview method to collect expert opinions in the field of consumer behavior in Ho Chi Minh City to adjust the research model and measurement scale.

- Quantitative research: Utilize the survey approach to gather primary data by utilizing Google Platform forms that are delivered online via social

media and QR code scanning. A 5-point Likert scale, ranging from strongly disagree to agree, is used in the questionnaire. Factor analysis and 29 observed variables are used in the study; so, $n = 29 \times 5 = 145$ is the minimal number of samples required (Hair et al., 2010). Customers who have bought live streams from e-commerce platforms, both male and female, make up the survey's anticipated sample size of 300.

Then, the data will be cleaned and analyzed using Smartpls 3.3 software with the following methods: Descriptive Statistics; Sample evaluation; Cronbach's alpha testing; Valid analysis method Partial Least Squares Structural Equation Modeling

4. Findings and Discussions

4.1. Descriptive statistics for sample

The period for survey collection is from February 2024 to April 2024, through an online survey. The number of responses was 289. After processing and cleaning the data, there were 29 invalid responses. Most of the errors were not answering all the questions or answering the same answer for all questions. Finally, 260 valid survey responses formed the sample for the official research program.

4.2. Measurement model

4.2.1. Scale reliability

Internal consistency reliability is assessed through Cronbach's alpha indices, composite reliability (Nunnally & Bernstein, 1994; Hair Jr et al., 2017), and the RhoA coefficient (Dijkstra & Henseler, 2015). Assessing the statistical significance of the data by reaching the discriminant value after running Bootstrap 5,000 times (Hair Jr et al., 2017)

The Cronbach's alpha coefficient of the concepts is in the range 0.7-0.8, composite reliability has a value in the range 0.8-0.9, and the rhoA coefficient

Table 1. Reliability Assessment

	Cronbach's Alpha	rho_A	Composite Reliability	AVE
Time Pressure (TP)	0.820	0.843	0.880	0.648
Discount Framing (DF)	0.806	0.805	0.886	0.723
Competitive Arousal (SI)	0.873	0.874	0.913	0.725
Product Scarcity (PC)	0.882	0.883	0.927	0.809
Positive Emotions (PE)	0.918	0.920	0.942	0.803
Impulsive Buying Behavior (IBB)	0.798	0.841	0.869	0.627

Table 2. Fornell-Larcker Analysis

	1	2	3	4	5	6
1. DF	0.851					
2. IBB	0.325	0.792				
3. PC	0.360	0.473	0.900			
4. PE	0.545	0.615	0.546	0.896		
5. SI	0.344	0.485	0.530	0.491	0.852	
6. TP	0.422	0.421	0.418	0.531	0.421	0.805

Table 3. Heterotrait-monotrait Ratio Statistics (HTMT) Analysis

	1	2	3	4	5	6
1. DF						
2. IBB	0.407					
3. PC	0.429	0.540				
4. PE	0.635	0.705	0.604			
5. SI	0.413	0.571	0.603	0.547		
6. TP	0.519	0.496	0.496	0.598	0.497	

is > 0.5 , which shows that the scales achieved reliability (Hair Jr et al., 2017) (table 4.1). After testing, the cross-loading coefficient achieved discriminant value because in its construct it is much larger than in the constructs. The Fornell-Larcker criterion compares the square root of the AVE of each construct in the Fornell-Larcker criterion test results table (table 4.2), which is higher than

the correlation coefficient between the constructs, and further evaluates the HTMT (the Heterotrait-monotrait ratio of correlations) results in table 4.3 to strengthen reliability, all indices are less than 0.9 (Dijkstra & Henseler, 2015)

4.3. Structural model

4.3.1. Direct impact

This research model is divided into 3 models

Table 4. Hypothesis Testing

Hypothesis	Coefficient	T Statistics	P Values	Result
H1 TP -> IBB	0.079	1.250	0.211	Unsupported
H2 TP -> PE	0.231	3.883	0.000	Supported
H3 DF -> IBB	-0.060	1.066	0.286	Unsupported
H4 DF -> PE	0.032	5.151	0.000	Supported
H5 SI -> IBB	0.191	3.258	0.001	Supported
H6 SI -> PE	0.153	2.672	0.008	Supported
H7 PC -> IBB	0.114	1.734	0.083	Unsupported
H8 PC -> PE	0.259	3.551	0.000	Supported
H9 PE -> IBB	0.450	6.292	0.000	Supported
R ² PE = 0.503			Q ² PE = 0.377	
R ² IBB = 0.437			Q ² IBB = 0.248	

Figure 2: Results of PLS-SEM

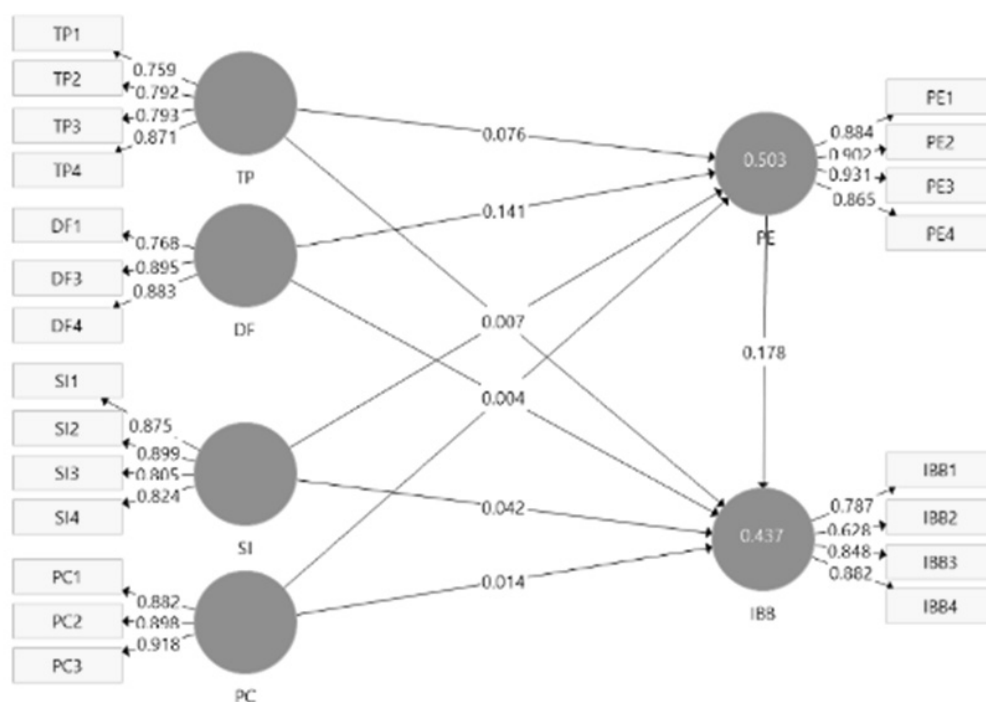


Table 5. Tests for mediator effects

		Coefficient	T Statistics	P Values	Result
H10a	TP -> PE -> IBB	0.104	3.624	0.000	Supported
H10b	DF -> PE -> IBB	0.136	3.546	0.000	Supported
H10c	SI -> PE -> IBB	0.069	2.261	0.024	Supported
H10d	PC -> PE -> IBB	0.117	3.442	0.001	Supported

with 1 dependent variable. The results show that the scale has absolutely no multicollinearity phenomenon because the VIF coefficient and variance exaggeration factor are less than 2.

Furthermore, the level of prediction R^2 of the Positive Emotion variable and R^2 of the Impulsive Buying Behavior variable is considered moderate ($R^2_{PE} = 0.503$; $R^2_{IBB} = 0.437$) (table 4.4). Besides, the index showing out-of-sample predictive capacity is evaluated through predictive relevance (Q^2) and the results are supported because the Q^2 coefficients of the dependent variables are larger than 0.

As suggested by Hair et al., (2017), the statistical significance of the regression coefficients was tested through the Bootstrap procedure 5,000 times. Table 4 shows that, with a confidence level of more than 95%, the relationships in the theoretical model,

including H2, H4, H5, H6, H8, and H9 are statistically significant. The remaining relationships are not statistically noteworthy at the 95% confidence level.

4.3.2. Mediating effects

Table 5 shows that the results of hypothesis H10(a-d) are statistically significant: Positive emotions are the mediating variables in the relationship between time pressure; Discount framing; Competitive arousal; and Product scarcity with impulsive buying behavior.

Summarizing the results from the above evaluation process, the study shows that the relationships are consistent with the proposed hypothesis, the results between the concepts in the study are statistically significant and the role of the central variables is significantly confirmed.

5. Conclusion

In light of the growing playing role of live-streaming ecommerce in Vietnam, this research provides comprehension of fundamental societal variables and their impacts on consumer impulsive buying behavior during live-streaming activities. Additionally, the study contributes to a more nuanced understanding by broadening influencing factors of customer impulsive buying behavior on live-streaming ecommerce, revealing the mediating effect of positive customer emotions on impulsive buying behavior. This current research is believed to be a significantly beneficial source of valuable information in determining the strategies of livestream for online sales growth.

From the empirical findings, different descendants that positively relate to impulsive buying behavior during live-streaming are highlighted. This can be the foundation to design more effective customer engagement programs. In order to provoke impulsive buying behavior, a cosmetic business should take two influences into account including creating a competitive arousal between viewers, and the feel of product scarcity. Besides, creating time pressure and providing promotion programs also to form positive emotions in customers, which can help to foster their impulsive buying behavior. With the adoption of the highly effective stimuli, cosmetics businesses can leverage these ecommerce platforms strategically, reduce unnecessary expenses, and then increase their online revenues■

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NHÂN TỐ TÁC ĐỘNG ĐẾN HÀNH VI MUA NGẪU HỨNG QUA LIVESTREAM TRÊN SÀN THƯƠNG MẠI ĐIỆN TỬ

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TÓM TẮT:

Phát trực tiếp đang dần được chú trọng trong chiến lược kinh doanh cùng với sự cạnh tranh giữa doanh nghiệp trên các sàn thương mại điện tử. Nghiên cứu này đã ứng dụng lý thuyết đáp ứng kích thích (SOR) để đánh giá mức độ tác động của yếu tố kích thích đến hành vi mua hàng ngẫu hứng của khách hàng trong các buổi phát trực tiếp trên các sàn thương mại điện tử, từ đó, đóng góp vào thực tiễn giúp doanh nghiệp cải thiện hoạt động bán hàng trên sàn TMĐT thông qua livestream.

Từ khoá: phát trực tiếp, hành vi mua hàng ngẫu hứng, sàn thương mại điện tử