
ORIGINAL RESEARCH ARTICLE

The influence of host characteristics on impulsive online purchases by consumers: Examining the effects of flow experience and independent self-construal

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ABSTRACT

Purpose: The professional integrity of e-commerce livestream hosts is crucial, as they function as intermediaries connecting businesses and consumers. The research investigates how the characteristics of e-commerce livestream hosts influence the mechanisms behind consumers' impulsive motivations for online purchases. The goal is to propose targeted managerial insights for the e-commerce livestreaming sector, fostering robust and sustainable growth. **Design/Methodology/Approach:** The research targets Chinese consumers engaged in online livestream shopping, utilising a quantitative research methodology through a questionnaire survey. Data was collected through the dissemination of online questionnaires on e-commerce platforms, resulting in 683 valid sample responses collected between July and August 2023. **Findings:** Analyzing the data reveals that anchor characteristics positively impact consumers' impulsive online purchases and, concurrently, positively influence the consumers' level of flow experience. Conversely, the consumers' flow experience level positively impacts their impulsive online purchases, with the flow experience serving as a partial mediator. Additionally, the independent self-concept moderates the process where anchor characteristics positively influence consumers' tendencies for impulsive online purchases, augmenting its effectiveness. **Conclusion:** Anchor characteristics directly impact consumers' impulsive online purchases and can also indirectly boost consumers' impulsive online purchases by enhancing their flow experience. **Practical Implications:** The present study explores which e-commerce livestream hosts impact consumers' impulsive online purchasing behaviours, offering insights for future research. Additionally, by exploring the impact factors of e-commerce livestream hosts' characteristics on consumers' impulsive online purchasing behaviours, this research provides theoretical suggestions for livestream hosts, offers guidance for consumers, and serves as a reference for businesses to enhance their livestreaming strategies.

Keywords: characteristics of livestream hosts; flow experience; impulsive online buying; independent self-construction

1. Introduction

As internet technology advances, the mode of online shopping is undergoing constant evolution. The traditional method of browsing product information and images on web pages is gradually becoming insufficient to meet the needs of online shoppers. The desire for a more in-depth examination of product performance (or effects), transparent product information, and a higher-quality interactive experience is prompting the emergence of new models in online shopping to cater to diverse user needs. Consequently, the model of online live-streaming sales has emerged. As the scale of the e-commerce livestreaming industry

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grows, more enterprises are joining this sector. Correspondingly, the demand for e-commerce livestream hosts is continuously increasing, and the scale is expanding.

E-commerce anchors, operating as online marketing professionals, act as intermediaries between consumers and merchants, underscoring the importance of their professional qualities. As online product guides for consumers, they provide valuable product insights through detailed and comprehensive explanations. Beyond promoting and publicizing products for merchants, e-commerce anchors employ diverse strategies to arouse consumers' purchasing desires and prompt them to make buying decisions.

In contrast to thoughtful, rational purchases, impulsive buying without much contemplation possesses characteristics of randomness and is challenging to control. It often accompanies a pleasurable inclination, and online impulsive buying may even result in consumers purchasing products they do not genuinely require. Impulsive buying behaviour is a frequent phenomenon in consumers' daily lives, with 80% of buying behaviours classified as impulsive buying^[1]. In online shopping, 34% of shopping behaviours are categorised as impulsive buying, and 83% of consumers have experienced unplanned impulsive buying behaviours classified as unexpected^[2]. As online shopping becomes widely accepted by the public, its convenience and randomness advantage over traditional offline shopping has contributed to the increased prevalence of consumers' impulsive buying.

E-commerce livestreaming presents more advantages than traditional online shopping, leading consumers to encounter even more irresistible reasons for impulsive buying. Amidst the rapid development of the e-commerce live streaming industry, there is a shortage of research on the online impulsive purchasing behaviour of audiences as consumers within the e-commerce live streaming context. Hence, this study will categorise the characteristics of e-commerce livestream hosts and explore how e-commerce livestream hosts impact consumers' online impulsive buying behaviour, aiming to offer guidance for future scholars' research. Additionally, by exploring the impact factors of e-commerce livestream hosts' characteristics on consumers' online impulsive buying behaviour, this study aims to provide theoretical suggestions for e-commerce livestream hosts, offer guidance for consumers, and serve as a reference for companies to enhance their livestreaming strategies.

2. Theory and research hypothesis

2.1. The role of characteristics of livestream hosts

Individuals known as e-commerce anchors on e-commerce live platforms demonstrate, introduce, and provide product trials to stimulate consumers' desire to purchase^[3]. Different types of hosts can influence Consumers' purchasing intention^[4], and factors such as popularity, interactivity, innovativeness, and the level of product involvement contribute to fans' purchasing intention^[5]. Stimulated by the shopping environment, consumers may develop challenging emotions and an intense longing for a specific product, likely resulting in impulsive buying behaviour^[6].

People with higher popularity can attract more attention from consumers^[7] and noticeably foster greater trust among consumers^[8]. The higher the host's popularity, the more favourable the attitudes consumers hold toward the product and the host, resulting in a stronger inclination to purchase the product. Exposure, as one of the manifestations of popularity, significantly impacts the quantity of products sold when opinions are expressed by individuals with high exposure rates^[9]. Viewing it from the perspective of the celebrity effect, the popularity of a celebrity directly influences the admiration felt by the audience. The higher the popularity, the easier it is to form a positive attitude, leading to a sense of flow immersion.

Enormously professional communicators can significantly enhance the credibility of online product

reviews, as people are more inclined to trust expert opinions. Expert opinions can alter people's attitudes toward some issues^[10]. The host's professional explanations of products can effectively reduce consumers' perceived risks during purchases and stimulate their willingness to buy^[11]. The lack of knowledge about products and their related information often leads consumers to seek assistance in making purchase decisions. When hosts can provide comprehensive and insightful explanations of products desired by the audience (consumers) and offer accurate and practical assessments along with reasonable purchase recommendations based on audience needs, it can encourage an increase in audience purchasing inclination. The host's professional explanations can also satisfy the audience's curiosity and interest in the product, enabling them to enter a high-quality experience.

Conversely, e-commerce hosts engage in interactive behaviours such as exchanging information during live broadcasts, enhancing and strengthening the audience's sense of participation. Furthermore, in contrast to the monotonous product-selling live rooms, a lively and entertaining live atmosphere is advantageous for audience participation. Timely interaction is in generating impulsive consumption in online marketing^[12]. Studies have shown that real-time interaction between hosts and the audience significantly enhances the marketing audience's flow experience, and the consumer's flow state can impact impulsive purchasing decisions^[13].

When people are initially attracted, the most powerful determining factor is the physical attractiveness of others^[14]. A favourable image is more likely to gain people's trust and stimulate impulsive buying behaviour in consumers^[13]. Broadcasters with charismatic and handsome appearances and pleasant voices leave a high-quality first impression on the audience. This positive attitude may also be transferred to the products, encouraging viewers to stay in the live room. Charismatic, professional, and trustworthy hosts are more likely to generate purchase intentions in consumers^[15], and attractive hosts are better at eliciting positive emotions in consumers, which can then be transferred to the products^[10]. Such hosts can create a positive buying experience and atmosphere for the audience. Moreover, humorous hosts are more likely to captivate viewers, close the distance, liven up the atmosphere in the live room, and facilitate viewer immersion, thereby promoting impulsive buying in consumers. Simultaneously, during frequent interactive processes, consumers can immerse themselves, experience a brief escape from reality and forget about worries, a concentrated manifestation of the flow experience. Viewers watching live broadcasts in rooms where the host has a good image and a captivating audio effect gain an immersive aesthetic experience. The stronger the host's attractiveness, the more likely viewers are to immerse themselves and experience pleasure, leading to the flow experience^[16].

Consequently, this study posits that the characteristics of e-commerce hosts influence consumers' flow experiences and tendencies for impulsive online purchases, leading to the formulation of hypotheses:

H1: The characteristics of e-commerce hosts positively impact consumers' impulsive online purchases.

H2: The characteristics of e-commerce hosts positively impact consumers' flow experiences.

2.2. Mediating effect of flow experience

The concept of flow experience describes an internal psychological transformation that individuals undergo when participating in a specific social activity^[17]. Flow experiences are not limited to offline purchasing environments but apply to online sales environments^[18]. Before consumers generate the desire to purchase and eventually make impulsive purchases, they must match their purchasing ability with the product, achieving a reasonable alignment^[19]. Flow experiences play a crucial role in this process. The professionalism of hosts can positively influence viewers' flow experiences, promoting consumers' willingness to make impulsive online purchases^[20]. When consumers are in a state of flow, their attention is highly concentrated,

leading them to listen attentively to the host’s comprehensive product explanations, influencing their perception of product features, and consequently affecting their willingness to purchase. Moreover, online live shopping gives consumers a sense of pleasure, control, and freedom compared to offline physical stores, enhancing the overall shopping experience and making consumers more prone to impulsive purchasing decisions^[21].

In contrast to the traditional promotional content found on e-commerce websites, live shopping in e-commerce provides consumers with a greater sense of involvement, control, and freedom, leading to a flow experience. Audiences in a state of flow experience more pleasure and a sense of fun, becoming more engaged in and participating in live activities, quickly arousing interest in products, influencing purchasing intentions and even impulsive buying behaviour.

Therefore, this study posits that consumers’ flow experiences influence their tendencies for impulsive online purchases, thus proposing hypotheses:

H3: Consumer flow experiences positively impact impulsive online purchases.

H4: Flow experiences mediate the relationship between e-commerce host characteristics and impulsive online purchasing behaviour.

2.3. The regulatory effect of independent self-construction

Self-construal involves a collection of thoughts, emotions, and behaviours related to whether individuals separate or interconnect themselves with others^[22]. Because individuals with a relational self-construal are more concerned about their position and roles within a group, emphasizing the group’s role and others’ opinions and valuing a sense of belonging and communication with group members^[22], their ideas and actions are largely influenced by relevant social groups^[23], which may weaken the influence of their thoughts on their behaviour. Simultaneously, individuals with an independent self-construal centre their attention on themselves, including their qualities, abilities, and thoughts. They value their uniqueness and strive for independence, diminishing the influence of others on themselves and exhibiting detachment from social situations^[22].

Hence, the present study deduces that consumers’ independent self-construal affects their inclination toward impulsive online purchases, thereby formulating the hypothesis:

H5: Positive impact of consumer independent self-construal on impulsive online purchases.

The research model for this study, built upon the hypotheses presented earlier, is depicted in **Figure 1**.

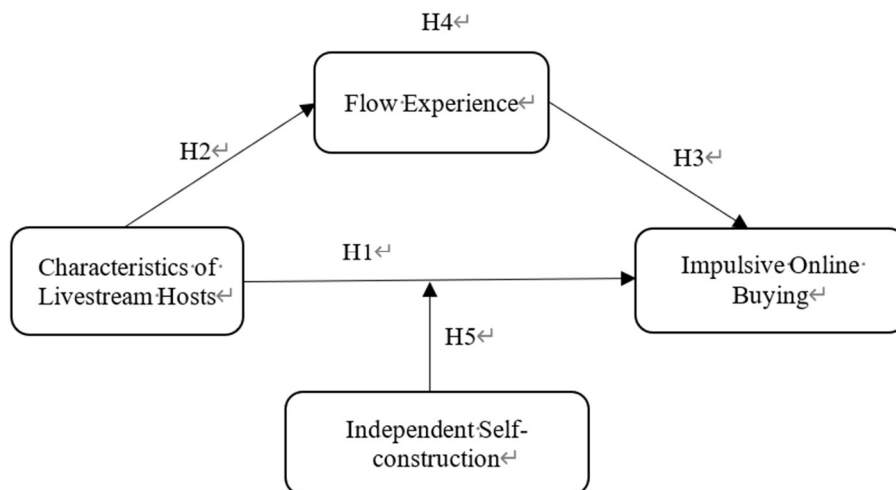


Figure 1. Research framework.

3. Research methods

3.1. Participants and procedure

The research targets Chinese e-commerce consumers who watch online live broadcasts, employing a quantitative research approach through a questionnaire survey. Utilising platforms like Tmall and Tiktok, 800 questionnaires were distributed via online surveys from July to August 2023 (Begin by randomly selecting a day, followed by a random selection of a particular online live broadcast on that day. A total of 5 live broadcasts were sampled, with responses collected numbering 87, 113, 125, 199, and 276 for each respective broadcast). After excluding invalid responses, 683 valid questionnaires were collected, resulting in a questionnaire validity rate of 85.38%. Subsequent data processing and analysis will be performed using SPSS 26 software, with the relationships between variables examined through regression analysis.

3.2. Measures

The variables covered in this study encompass anchor characteristics, flow experience, impulsive online purchasing, and independent self-construal. The scales used in the questionnaire are translated based on existing classical scales, either directly quoted or adapted, and utilise a 7-point scoring system, with responses ranging from “strongly disagree” to “strongly agree.”

When assessing the characteristics of e-commerce anchors, Wei et al.^[24] define fame as the extent to which the anchor is known and recognised by the public, using their 4-item scale, which includes statements like “This anchor is well-known on live platforms or in related fields”; attractiveness is defined using the definition of Yan et al.^[25], considering it as the degree to which the anchor attracts attention from online viewers (consumers). A 4-item scale is employed, including statements like “The unique live style of this e-commerce anchor attracts me”; Li and Li^[26] define the entertaining nature of e-commerce anchors as the ability of the anchor’s words and actions to bring joy to viewers during live broadcasts. They use a 3-item scale, including statements such as “The anchor’s use of personalised and humorous language makes me feel cheerful.” Liu et al.^[27] define professionalism as the perceived familiarity with products and the reserve of relevant professional knowledge that e-commerce anchors possess during the process of viewers watching live broadcasts. Measurement utilises the 4-item scale of Li et al.^[28], including statements like “This e-commerce anchor has relevant knowledge in the field of the products they sell”; Zhao and Wang^[29] define interactivity as the process of cross-temporal and spatial information exchange and communication between viewers and anchors during live broadcasts. Measurement adopts the 4-item scale of Liu et al.^[16], including statements like “The content of this e-commerce anchor’s live broadcast allows me to participate actively.”

The concept of flow experience is adopted from Ha et al.^[30], defined as an unconscious experience in which users ignore their surroundings, filter out unpleasant sensations, are not disturbed by external factors, concentrate their attention, and perceive a time distortion as passing quickly. Measurement employs the 4-item scale used by Xiong et al.^[31], with items like “I feel time passes quickly when watching this anchor’s live broadcast.”

The definition of impulsive online purchasing used in this study is derived from Chen and Zhou^[32], wherein consumers, upon having a specific need and being stimulated while browsing products online, experience an immediate, unplanned, and intense psychological reaction. This psychological state prompts consumers to think of making an immediate direct purchase. Measurement employs a 4-item scale, with items like “After watching this anchor’s live broadcast, I want to own the product immediately.”

The definition of self-construal is based on Singelis^[22], distinguishing whether individuals explicitly differentiate or connect themselves with others in defining independent self-construal. Independent self-

construal is characterised by the degree to which team members need to collaborate and interact with each other to accomplish team tasks. Measurement utilises a 12-item scale developed by Singelis^[22], including items such as “My behaviour is consistent regardless of who I am with.”

The results of the reliability and validity tests for each scale, presented in **Table 1**, demonstrate that the chi-square to degrees of freedom ratio for each scale is below 5. The RMSEA values conform to the standard, indicating a well-fitting model. The SRMR values also meet the standard, reflecting good model alignment. Furthermore, GFI, TLI, and CFI values exceed 0.95, signifying a well-fitted model. The internal consistency coefficients (Cronbach’s α) for each scale are all above 0.8. All scales exhibit strong performance, meeting the criteria for utilisation.

Table 1. Results of scale reliability and validity testing.

	χ^2/df	RMSEA	SRMR	GFI	TLI	CFI	Cronbach α
Characteristics of livestream hosts	3.349	0.059	0.032	0.951	0.962	0.970	0.922
Flow experience	3.724	0.076	0.034	0.951	0.957	0.966	0.903
Impulsive online buying	2.395	0.045	0.039	0.997	0.996	0.995	0.838
Independent self-construction	2.928	0.076	0.014	0.980	0.991	0.993	0.877

4. Results

4.1. Description statistics and correlation analysis of variables

Table 2 displays the descriptive statistics and correlation analysis of each variable. The results reveal a significant correlation among the research variables.

Table 2. Descriptive statistics and correlation analysis of variables (N = 754).

	M \pm SD	A	B	C	D
Characteristics of livestream hosts (A)	3.711 \pm 0.730	1			
Flow experience (B)	3.693 \pm 0.683	0.667***	1		
Impulsive online buying (C)	3.649 \pm 0.666	0.671***	0.704***	1	
Independent self-construction (D)	3.076 \pm 1.101	-0.066	-0.049	0.106*	1

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$: A significant level, as below; all values are rounded to three decimal places, as below.

4.2. Regression analysis

In the following sections, this study will use regression analysis to examine the causal relationships between variables, testing the model’s overall, direct, and indirect effects. First, demographic variables will be treated as dummy variables and included in the model. The specific test results are presented in **Table 3**.

Table 3. Results of regression analysis (1).

Outcome variable	M1			M2			M3		
	Impulsive online buying			Flow experience			Flow experience		
	β	SE	t	β	SE	t	β	SE	t
Characteristics of livestream Hosts	0.674	0.027	22.810***	0.346	0.032	9.763***	0.692	0.027	23.701***
Flow experience				0.474	0.034	13.741***			
R		0.690			0.769			0.698	
R ²		0.476			0.591			0.487	
adjR ²		0.467			0.583			0.479	
ΔR^2		0.407			0.115			0.429	
F		55.301***			80.617***			57.991***	

The examination of the overall effect of the model shows the data results in Model 1, with $R = 0.690$, $R^2 = 0.476$, adjusted $R^2 = 0.467$, R^2 change = 0.407, and F value = 55.301 ($p < 0.001$), indicating model significance. The predictive effect of anchor characteristics on employees' impulsive online purchases is significant ($\beta = 0.674$, $t = 22.810$, $p = 0.000 < 0.001$). Simultaneously, the upper and lower limits of the 95% confidence interval from the bootstrap test [0.562, 0.667] do not include 0, indicating a significant overall effect.

Subsequently, the direct and indirect effects of the model are examined. Building upon Model 1, the mediator variable, flow experience, is introduced into the regression model. As shown in Model 2, the results display $R = 0.769$, $R^2 = 0.591$, adjusted $R^2 = 0.583$, R^2 change = 0.115, and an F value of 80.617 ($p < 0.001$), indicating model significance. The test results suggest that with the inclusion of the mediator variable, flow experience, the predictive effect of anchor characteristics on consumer impulsive online purchases remains significant ($\beta = 0.346$, $t = 9.763$, $p = 0.000 < 0.001$). The upper and lower limits of the 95% confidence interval from the bootstrap test [0.252, 0.379] do not include 0, indicating a significant direct effect. Thus, H1 is validated. According to the findings in this analysis, the attributes of e-commerce anchors have a notably positive influence on consumers' impulsive purchasing behaviour.

Similarly, the results of Model 2 show that the predictive effect of the mediator variable, flow experience, on consumer impulsive online purchases is significant ($\beta = 0.474$, $t = 13.741$, $p = 0.000 < 0.001$). The upper and lower limits of the 95% confidence interval from the bootstrap test [0.396, 0.529] do not include 0. Thus, H3 is confirmed. The findings from this examination indicate that the flow experience significantly influences consumers' impulsive buying behaviour. Specifically, when consumers possess a heightened flow experience, it stimulates them to make hasty purchasing decisions.

Furthermore, in Model 3, R is 0.698, R^2 is 0.487, adjusted R^2 is 0.479, R^2 change is 0.429, and F value is 57.991 ($p < 0.001$), indicating model significance. Additionally, the predictor variable, anchor characteristics, significantly predict the mediator variable, flow experience ($\beta = 0.692$, $t = 23.701$, $p = 0.000 < 0.001$), and the upper and lower limits of the 95% confidence interval from the bootstrap test [0.594, 0.701] do not include 0. Based on the above, the indirect effect of flow experience is significant, indicating that H2 and H3 are validated, and the mediating effect is established. According to the findings in this analysis, the attributes of e-commerce anchors have a notable positive influence on consumers' flow experience. When e-commerce anchors possess vivid positive characteristics, they increase consumers' sense of flow experience and stimulate impulsive purchasing.

Hypotheses H1, H2, and H3 proposed in this study are validated based on the results of the above data. The results of the total, direct, and indirect effects of the model are presented in **Table 4**.

Table 4. Decomposition of indirect, direct and total effect.

Type of effect	Effect	Boot SE	Boot LLCI	Boot ULCI	Ratio
Total effect	0.612	0.026	0.561	0.663	
Direct effect	0.331	0.031	0.271	0.392	54.11%
Indirect effect	0.281	0.031	0.221	0.342	45.89%

The 95% confidence intervals of each effect do not include 0, indicating the significance of each effect. The direct impact of anchor characteristics on impulsive online purchases (0.331) accounts for 54.11% of the total effect (0.612). The indirect effect (0.281) constitutes 45.89% of the full impact, indicating that flow experience partially mediates the model. Therefore, hypothesis H4 in this study is confirmed.

After the variables, the examination of moderation effects through regression analysis continues. As

shown in **Table 5**, in Model 5, R is 0.703, R^2 is 0.494, adjusted R^2 is 0.484, R^2 change is 0.003, and the F value is 50.205 ($p < 0.05$), indicating model significance. The bootstrap 95% confidence interval of the interaction term between the moderating variable, independent self-construal, and the predictor variable, anchor characteristics, on the impulsive online purchases does not include 0, with upper and lower limits [0.022, 0.121], and $\beta = 0.058$ ($t = 1.963$, $p = 0.041$), indicating a significant moderation effect.

Table 5. Results of regression analysis (2).

Outcome variable	M4			M5		
	β	SE	t	β	SE	t
Characteristics of livestream hosts	0.692	0.029	23.531***	0.704	0.030	23.484***
Independent self-construction	0.065	0.029	2.259*	0.051	0.029	1.732*
Interactive items				0.058	0.031	1.963*
R			0.701			0.703
R^2			0.491			0.494
$adjR^2$			0.482			0.484
ΔR^2			0.004			0.003
F			53.839***			50.205***

The interaction effects of the moderating variable, independent self-construal, are illustrated in **Figure 2**. For participants with lower levels of independent self-construal (M-1SD), anchor characteristics significantly and positively predict impulsive online purchases (simple slope = 0.324, $t = 7.993$, $p = 0.000$). In contrast, for participants with higher levels of independent self-construal (M + 1SD), anchor characteristics have a significant positive predictive effect and not only have a significant positive predictive effect, but the predictive effect also becomes stronger (simple slope = 0.464, $t = 9.784$, $p = 0.000$). This indicates that as independent self-construal increases, the influence of anchor characteristics on impulsive online purchases gradually intensifies, demonstrating a positive moderating effect. Therefore, hypothesis H5 in this study is validated.

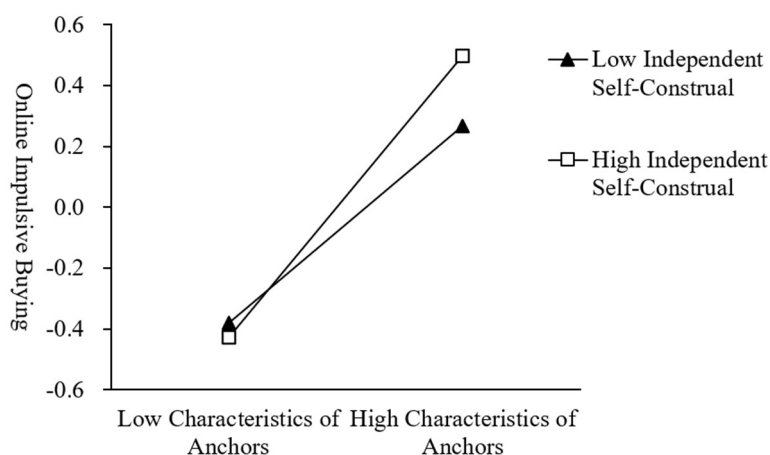


Figure 2. Interactive effect difference diagram.

5. Conclusion

Data analysis reveals that the attributes of anchors positively influence consumers' impulsive online purchases and, concurrently, positively affect consumers' levels of flow experience. Moreover, consumers'

levels of flow experience also positively impact their impulsive online purchases. This implies that anchor characteristics not only directly affect consumers' impulsive online purchases but can also indirectly increase consumers' impulsive online purchases by elevating their flow experience. The flow experience of consumers can serve as a partial mediator. Additionally, independent self-construction plays a moderating role in the process where anchor characteristics positively influence consumers' tendencies for online impulsive purchases, enhancing its effect.

6. Discussion

The traits of e-commerce anchors significantly contribute to elevating consumers' flow experience. From the consumer's standpoint, e-commerce anchors, with their striking appearance, humorous style, comprehensive and profound explanations, and diverse forms of communication with the audience, successfully craft a delightful and immersive atmosphere for the viewers. This makes them feel like they are present, losing time, fully engrossed in the live broadcast, and thoroughly enjoying the experience. The higher the visibility of the anchor and the larger the fan base, the more pronounced the anchor's sense of responsibility, enhancing the audience's trust in both the anchor and the promoted products. Exceptional e-commerce anchors can adeptly create a sales-oriented ambience based on their characteristics and environmental advantages, serving as online shopping guides and guiding consumers to follow their rhythm.

These anchors systematically present and remove products based on pre-planned segments, while viewers, driven by personal needs, click on product links to make purchases. In this process, the anchors meticulously craft a conducive sales atmosphere, utilising their fame, linguistic appeal, witty style, professional explanations, and various promotional activities in the live stream. This sparks consumer desires to make purchases and may even induce impulsive buying behaviour.

Compared to traditional offline shopping, e-commerce live shopping strongly emphasises the audience's sense of freedom, control, and participation, providing a more intense shopping experience. The traits of anchors, including their appearance, style, commentary, and communication, engross the audience in a flow experience, immersing them in the moment, causing them to lose track of time, and generating a sense of pleasure. Consequently, this reduces the perceived risks for the audience, stimulates the desire for exploration, and induces unplanned impulsive purchasing behaviour, even leading them to purchase products they initially did not need. When the characteristics of anchors are capable of attracting independent individuals, these individuals are more prone to experiencing impulsive buying when exposed to the anchor's explanations.

Nevertheless, large and small-scale anchors are surging in the rapidly evolving e-commerce streaming live-streaming industry. It is worth delving into whether audiences will shift their emphasis away from the anchor's popularity as the primary factor for tuning into live broadcasts and instead place greater importance on the quality and entertainment value of the content—an issue that warrants in-depth research.

7. Significance and suggestions

This study's theoretical analysis and empirical evidence affirm that intrinsic states impact consumers' willingness to engage in impulsive online purchases within affected-commerce live streaming. Consequently, during live broadcasts, attention should be directed towards consumers' internal experiences. The goal is to enhance consumers' flow experiences while watching live broadcasts. Avoiding a sole focus on technical upgrades and product price competition is advisable in live streaming. Instead, methods such as elevating anchors' professionalism and enhancing the streaming room's ambience can be employed to immerse consumers, ensuring a more gratifying viewing experience. Building upon the conclusions of this study, the following recommendations are presented:

Based on the research findings of this study, it is concluded that the fame, attractiveness, entertainment, professionalism, and interactivity features of e-commerce anchors all positively influence consumers' willingness to make impulsive online purchases. This is because viewers in streaming rooms where anchors have a good image and create an immersive listening effect obtain an immersive aesthetic experience^[33]. Anchors with more substantial attractiveness can immerse viewers more effectively, generating a sense of pleasure and leading to a flow experience^[16]. When businesses select e-commerce anchors, attention should be given to various features of the anchors.

Initially, anchors with fame find it easier to earn the audience's trust, making them more inclined to listen to the anchor's explanations and engage in interactions, ultimately driving impulsive online purchases. Therefore, when businesses select e-commerce anchors, emphasis should be placed on the anchor's fame. High-profile anchors with a substantial fan base are more likely to stimulate product sales. However, collaborating with renowned anchors often involves higher costs. Hence, businesses must consider the cost factor, clearly define their developmental stage, and develop precise and reasonable marketing strategies when partnering with renowned anchors. Furthermore, individuals naturally gravitate towards beautiful things. A well-presented external image, a sweet voice, or some unique charm of the anchor can captivate the audience, making them feel refreshed and eager to continue watching. The ubiquity of similar live streams has induced aesthetic fatigue among viewers. When perusing various streaming rooms, if an anchor fails to stimulate the audience's desire to continue watching instantly, viewers will likely switch to the next stream. Anchors with humour and entertainment can liven up the audience's atmosphere, creating a joyful, interactive experience. People are more drawn to a humorous atmosphere than dry and monotonous product explanations. Hence, when businesses select anchors, emphasis should be placed on the anchor's entertaining qualities. Choosing lively and humorous anchors can lower consumers' perceived risk, thus establishing a solid trust.

Furthermore, the meticulous, professional, and comprehensive product explanations provided by e-commerce anchors can effectively drive consumers' desire to purchase. When anchors explain products to the audience, they can deliver thorough, detailed, and comprehensive explanations, leveraging their accumulated professional knowledge in the product domain and understanding of the specific product. They can also provide effective evaluations based on consumer needs, making consumers willingly purchase products and, in some cases, even engage in impulsive, unplanned buying. Therefore, when selecting e-commerce anchors, it is essential to consider whether the anchor possesses sufficient professional knowledge of the products they sell and if they can recommend suitable products based on consumer needs. When the traits of anchors can attract consumers with an independent self-concept, these individuals are more likely to ignore external distractions, remain steadfast in their feelings, and make decisions guided by them. Consequently, in the presence of anchor explanations, they are more likely to facilitate impulsive purchases.

Finally, when selecting anchors, it is crucial to consider whether the anchor is proficient in communication and interaction with consumers. In live streams, anchors should be capable of promptly and effectively addressing consumer inquiries, offering sincere service to each viewer. Additionally, engaging in interactive activities like bullet-screen lotteries can bring the audience and the anchor closer together.

8. Limitations

This study acknowledges shortcomings based on directly verifying the relationship between anchor characteristics and online impulsive purchases and partially exploring the mediating mechanisms. The following provides further discussion on these limitations and offers suggestions for future research:

Given the limitations imposed by constraints, the sample size in this study is relatively restricted, potentially affecting the representativeness and generalizability of the research outcomes. Subsequent research

endeavours could consider broader sample sources, incorporating participants from diverse regions, age groups, and varying consumption levels to augment the research's generalizability.

Additionally, the variable selection in this study is relatively constrained, and the factors influencing consumers' impulsive purchase intentions in real-world environments are intricate and varied. Subsequent research efforts might contemplate incorporating additional potential influencing factors, including individual traits, socio-cultural backgrounds, shopping scenarios, etc., to comprehensively analyse the driving factors behind consumers' impulsive purchase intentions.

Moreover, the findings of this study might be limited in practical application, as there could be other unaccounted factors influencing consumers' impulsive purchase intentions. Subsequent research could further investigate these potential influencing factors to advance the understanding of consumer behaviour.

In future research endeavours, it is advised that researchers give priority to the issue of sample selection. This can be achieved by increasing the sample size and employing more suitable methods for research needs, ensuring the results are more compelling. Furthermore, researchers can expand the scope of their studies, delving into new influencing factors such as shopping scenarios, advertising effects, etc., to gain a more comprehensive understanding of the behavioural drivers of consumers in the impulsive purchasing process. In-depth research in these areas will improve the practicality and applicability of the studies.

Ethical statement

The Academic Committee of the International College, Krirk University, Thailand, approved this study on January 10, 2024 (Ref. No. 2024A1501).

Data availability statement

The data study supporting this study's findings is available from the corresponding author, Ce Fang, upon reasonable request.

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Conflict of interest

The author declares no conflict of interest.

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