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**TIKTOK LIVE SHOPPING'S USE OF LIVE  
STREAMING TO INCREASE WORD OF  
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**Abstract:** Live streaming has become a well-liked way for businesses to boost interaction and consumer engagement, ultimately leading to positive word-of-mouth promotion. Word of mouth is crucial in business since it serves as a reliable gauge for assessing a product's quality prior to purchase, hence reducing uncertainty in decision-making. Previous studies overlooked the benefits of live streaming for word-of-mouth. Hence, the objective of this study is to examine the emergence of word-of-mouth communication facilitated by live streaming, employing the socio-technical approach and attachment theory. This quantitative research has a total of 12 hypotheses. Data was collected through the distribution of online questionnaires using purposive sampling, by examining 319 TikTok Live Shopping users. The data was collected and analyzed using SmartPLS. Live streaming yields a favorable impact on user engagement and viral marketing. Streamers exert significant effect on audience engagement, fostering strong connections with the platform, user loyalty, and word-of-mouth promotion. Consequently, marketers can optimize the utilization of live streaming by collaborating with the most compatible streamers. Additionally, this study discovered that vicarious expression does not have a beneficial impact on platform attachment. This study suggests using live streaming as a strategy to improve customer retention and build stronger relationships with customers, which offers insightful information for business experts in Indonesia. It addresses the constraints of previous research, which focused mainly on loyalty to brands in terms of transactions, by providing theoretical support for exploring the relationship between user stickiness and word-of-mouth generation on live streaming platforms.

**Keywords:** Live Streaming, Word of Mouth, TikTok Live Shopping**CITATION**Sonda, A. S. K. and Balqiah, T. E. 2023. TikTok Live Shopping's Use of Live Streaming to Increase Word of Mouth. *Jurnal Aplikasi Manajemen*, Volume 21, Issue 4, Pages 1091-1108. Malang: Universitas Brawijaya. DOI: <http://dx.doi.org/10.21776/ub.jam.2023.021.04.17>.

## INTRODUCTION

Live streaming is a new selling method that simultaneously transmits audio and video data in real-time to enable online users to watch or share experiences, including buying or selling goods (Thorburn, 2014). Viewers can also interact with streamers and other viewers in real time (Hamari and Sjöblom, 2017). Live streaming has a greater chance of establishing interaction with the audience, but little research has focused on the advantages of using live streaming. However, due to the growing popularity of live streaming, brands have no choice but to engage in live-streaming sales in an effort to retain customers (Zhang and Tang, 2023). Therefore, it is crucial to research the benefits of live streaming in Indonesia.

In Indonesia, several platforms provide live-streaming shopping, such as TikTok, Instagram, Shopee, and Facebook. However, this research focuses on TikTok because Indonesia is the second country with the most active monthly users of TikTok in the world (Annur, 2021). The popularity of TikTok has also soared since the Covid-19 pandemic. According to app analysis company Sensor Tower, With 315 million downloads in the first quarter of 2020, TikTok became the most popular app worldwide (Annur, 2021). TikTok adds several other functions, such as the live shopping feature to shop directly (Oh et al., 2017). TikTok is a free social media application that can be used to watch, share, and create short video clips (Ma and Hu, 2021). Erdly (2021) stated that TikTok offers a "unique" space for small business owners because it is a platform that can be used for creative expression. TikTok gives freedom to consumers and businesses and offers them the opportunity to reach their audience in a better way.

One of the efforts to retain consumers is to continue to interact and build customer engagement that can make customers become attached to the brand or what is known as user stickiness. Due to its significance in defining a user's commitment to a platform, user stickiness is essential to live-streaming shopping. Stickiness is a crucial indicator of a user's desire to purchase because it shows how often they are willing to revisit a site they have previously shown interest in (Lin, 2007). This research uses a socio-technical approach of the social system (interaction and identification) and technical system (synchronicity and vicarious expres-

sion) to measure user stickiness. Some researchers use this approach to study online consumer behavior. Attachment theory, which considers both platform attachment and emotional attachment to streamers, can be used to quantify user stickiness. Customers can endorse or interact with other customers to form word of mouth if user stickiness is formed.

Live streaming has been the subject of several previous research, including research from (Li et al., 2021; Zhang et al., 2017; Zheng et al., 2022), which focused on the variables that affect customer engagement, stickiness, and purchase intention. Other researchers have investigated the effects of live-streaming techniques and the variables influencing impulse purchases (Lo et al., 2022). On the other hand, not much is known about the impact of live streaming on word-of-mouth. The impact of stickiness on the spread of word of mouth has been studied, but not in the context of live streaming (Zhang et al., 2017). Because live streaming is so new, much research hasn't been done in Indonesia. The studies that have been conducted in the past may not necessarily reflect Indonesian culture or consumer behavior. Different nations may experience different outcomes or reactions when using live streaming (Li et al., 2021). Investigating how live streaming sales strategy affects user stickiness and attachment and the spread of word of mouth in Indonesia is very interesting.

From the background previously described, user stickiness and word of mouth are essential factors in sales. Live streaming has a greater chance of establishing interaction with the audience, but little research has focused on the advantages of using live streaming. Research by Li et al. (2021) found that live streaming can encourage people to form emotional bonds with streams and the platform itself, making users more likely to stick around. However, existing studies, such as that of (Zhang et al., 2017; Zheng et al., 2022), did not analyze much of the advantages of using this strategy for word-of-mouth formation. Also, word of mouth is a cultural phenomenon that can differ according to geographic factors and consumer generations, so the results of existing studies that have not been conducted in Indonesia do not necessarily follow consumers and culture in Indonesia. In addition, there are differences in the use of platforms to social media, which are used as a forum for inte-

reaction. This study continues the study of Li et al. (2021), which has 10 hypotheses and was re-tested due to having a research gap, which is differences in live streaming and geographic platforms because Li et al. (2021) research was conducted in China only. Therefore, the ten hypotheses were re-tested in this study, and two new hypotheses, H11: Visit Duration positively impacts Word of Mouth and H12: User Retention positively impacts Word of Mouth, because there isn't enough study to illustrate how word of mouth develops as a result of the utilization of live streaming. Therefore, this study tries to examine whether the use of live streaming has a significant effect on the formation of important factors in sales, such as user attachment, user stickiness as measured by visit duration and user retention, and word of mouth, either directly or electronic word of mouth in Indonesia using the TikTok platform as a provider of live streaming shopping services in Indonesia.

## LITERATURE REVIEW

### TikTok Live Shopping

TikTok offers a unique "Shoppertainment" experience by combining things that make the content fun and entertaining, followed by commerce to drive business revenue and bring merchants, buyers, and creators closer together, such as creating opportunities for creators to communicate directly and make the most of features such as live streaming to increase sales of their products (Fikri, 2022). TikTok live shopping combines TikTok live streaming with TikTok Shop to enable consumers to buy products without leaving the app (Southern, 2022). Through this feature, sellers can display various interesting content in real time. This content can be in the form of product reviews, product unboxing, promos, or discounts. According to Fikri (2022), the live-streaming feature of TikTok is widely used by Micro, Small, and Medium Enterprises (MSMEs) and influencers to market various products to viewers, from clothing snacks to household appliances.

### Socio-Technical Approach

A "socio-technical platform" describes the live streaming platform because it is a form of social media (Zhang et al., 2019). To study online consumer behavior, some researchers use a socio-technical approach. Hu et al. (2016), for example,

used a socio-technical approach to investigate consumers' willingness to buy and discovered that technological and social influences coexist to shape consumer behavior. It is possible to classify streaming retail platforms as social technology platforms. So, this research takes a socio-technical approach to look at how live streaming platforms are affected by user attachment and stickiness. Wan et al. (2017) stated that interaction and identification are essential social elements. As a result, these two social factors are used in this study. The term "interaction" describes the online interaction and exchange of information between users and streamers or other viewers on live shopping platforms. Identification involves assessing similarities between people, groups, organizations, and others (Ng, 2015).

On technical factors, there are synchronicity and vicarious expression. Synchronicity, or the degree to which users communicate by simultaneously entering information and receiving feedback, is the primary technical feature of live-streaming retail platforms. (Kirk et al., 2015). Users will have a more positive experience with a platform if they can use it quickly and easily (Christoph et al., 2012). According to Manz and Sims (1981), vicarious expression streamers are streamers' attempts to demonstrate their product consumption experiences in a way that causes viewers to have a similar experience. By showcasing items based on what their viewers want, streamers help their audiences better understand the products they're viewing (Hong and Pavlou, 2014).

### Attachment Theory

According to Whan-Park et al. (2010), attachment can lead to motivation and action. The degree of product involvement significantly affects the desire to engage in online product communities (Choi, 2013). User stickiness (e.g., live streaming engagement) could be better explained by attachment than by loyalty or contentment. (Li et al., 2021). In a study of celebrity-fan connections, Stever (2011) found that fans' connection to celebrities diminishes the gap between them. The same goes for the live-streaming shopping environment. When the subscribers connect to the streamers, they trust and follow them and can even buy products recommended or sold by streamers (Li et al., 2021).

### User Stickiness

User stickiness is widely considered a proxy for customer loyalty and has been shown to be a strong predictor of purchase intention (Li et al., 2021). Following research from Li et al. (2021), user stickiness in this study is measured by visit duration and user retention. According to Li et al. (2021), visit duration is a user's visit to a website or platform, while user retention is a customer action where they continue to reuse products or visit websites as a habit. According to Gawron and Strzelecki (2021), user retention is a positive customer experience that leads to customer retention or repurchasing of products or services by satisfied customers.

### Word of Mouth

Guo et al. (2022) define word of mouth as one of the most powerful marketing tools that influence consumer behavior and is defined as informal communication between people about feelings about brands, products, organizations, or services. In this analysis, "word of mouth" (WOM) is used interchangeably with online and offline behavior, and WOM is defined as the positive interactive experience shared with others. And this research's focus on WOM is solely on positive word of mouth. Word of mouth formed from live streaming shopping can be used as an online marketing strategy to help increase brand awareness and brand sales and help streamers get more audience (Cuesta-Valiño et al., 2022). In addition, Hong et al. (2017) found that word of mouth has a crucial influence on customers' online buying choices and significantly impacts product sales.

### HYPOTHESIS DEVELOPMENT

Online interactions give consumers a feeling of immersion in a virtual world (Hudson et al., 2019). Studies on social platforms and usage behavior show that interaction influences user attitudes towards specific social platforms, influencing usage intentions (Curras-Perez et al., 2014). Unlike traditional ways of selling, live streaming shopping helps streamers to talk to their audience directly in real-time, thereby enabling more effective interactions. Thus, watching live streaming makes it easier to develop interactions than watching other types of content on digital media (Hou, 2019). As a result, the more interaction the user has with

other streamers or viewers, the more likely the user is to form an emotional attachment.

**H1:** Interaction positively impacts Emotional Attachment to Streamers.

Consumers who feel connected to an online retailer are more likely to purchase and engage with the retailer over time. (Hu et al., 2017). The audience's emotional attachment to the streamer will increase due to their similarity (Ladhari et al., 2020). Viewers will identify with a streamer if they think their personality is similar to the streamers. As a result, the audience will respond positively to the streamer and will be more likely to want to form a connection with them.

**H2:** Identification positively impacts Emotional Attachment to Streamers.

Streamers often only provide little product information in text, photos, and live videos on live-streaming shopping platforms. The consumer must contact the seller immediately to discuss other specifics and requirements (Lin et al., 2019). According to Tang et al. (2016), synchronization of live streaming can facilitate interaction between viewers, enhancing the quality of live streaming content. When one viewer adds a comment, all other viewers can immediately see it on the screen, and this comment has the potential to impact the behavior of the other viewers. In the meantime, when streamers respond to comments, other users get instantaneous responses. In real-time, streamers can examine viewer comments and respond to them via text and voice (Wang et al., 2019).

**H3:** Synchronicity positively impacts Platform Attachments.

Consumers can lessen their hesitation about product purchases and increase trust among those who share similar physical attributes and values by sharing values through instant interactions and product testing (Lu and Chen, 2021). The knowledge of product information is enhanced for viewers as streamers present products following their needs (Hong and Pavlou, 2014).

**H4:** Vicarious Expression positively impacts Platform Attachments.

Emotional attachment is a long-lasting, stable psychological relationship between users and

services that influences motivation and behavior (Li et al., 2021). Users are more inclined to interact with streamers and buy their recommended products when they emotionally bond with them. The attachment of consumers to celebrities can result in intense reactions (Ilicic and Webster, 2011).

User stickiness is comparable to interpersonal connection stickiness on live-streaming shopping platforms. Therefore, the term "emotional attachment to streamers" in this study denotes an emotional connection that reflects the user's emotional commitment and readiness to maintain or improve their relationship with the streamer. Furthermore, emotional attachment influences user stickiness positively (Li et al., 2021). In this study, stickiness was measured by visit duration and user retention. As a result, this study suggests:

**H5:** Emotional Attachment to Streamers positively impacts Visit Duration.

**H6:** Emotional Attachment to Streamers positively impacts User Retention.

Emotional attachment to streamers is the main aspect that motivates users to become more emotionally attached to a platform because of the relationship that develops between the streamer and the consumer on the live-streaming purchasing site. (Li et al., 2021). Many live-streaming shopping platforms encourage viewer-streamer interaction, showing that emotional attachment to streamers affects platform engagement.

**H7:** Emotional Attachment to Streamers positively impacts Platform Attachment.

Maintaining the user-platform connection requires platform attachment (Li et al., 2021). User participation and retention rates can significantly increase when users are attached to online communities (Performativas et al., 2007). Many features, such as real-time interaction, are available on the live-streaming shopping platform to assist consumers in their decision-making process. People are gradually becoming accustomed to using this platform for sightseeing and shopping. Systems that enable live-streaming attachments can promote regular visits and active engagement from users, thereby enhancing user retention. As a result, this study suggests:

**H8:** Platform Attachments positively impact Visit Duration.

**H9 :** Platform Attachment positively impacts User Retention.

According to Liu et al. (2021), visitors who stay on a website for a long time are more likely to return. Xu et al. (2018) also found that the duration of a user's visit can positively affect retention. Thus, this study proposes:

**H10:** Visit Duration positively impacts User Retention.

When customers like a website's content, features, goods, and services and stick with that positive attitude, that's identified as user stickiness (Wu et al., 2010). Zhang et al. (2017) found that stickiness has a positive influence on the formation of word of mouth. Therefore, this study considers that stickiness, as measured by visit duration and user retention, can also cause WOM, so the following hypothesis is proposed:

**H11:** Visit Duration positively impacts Word of Mouth.

**H12:** User Retention positively impacts Word of Mouth.

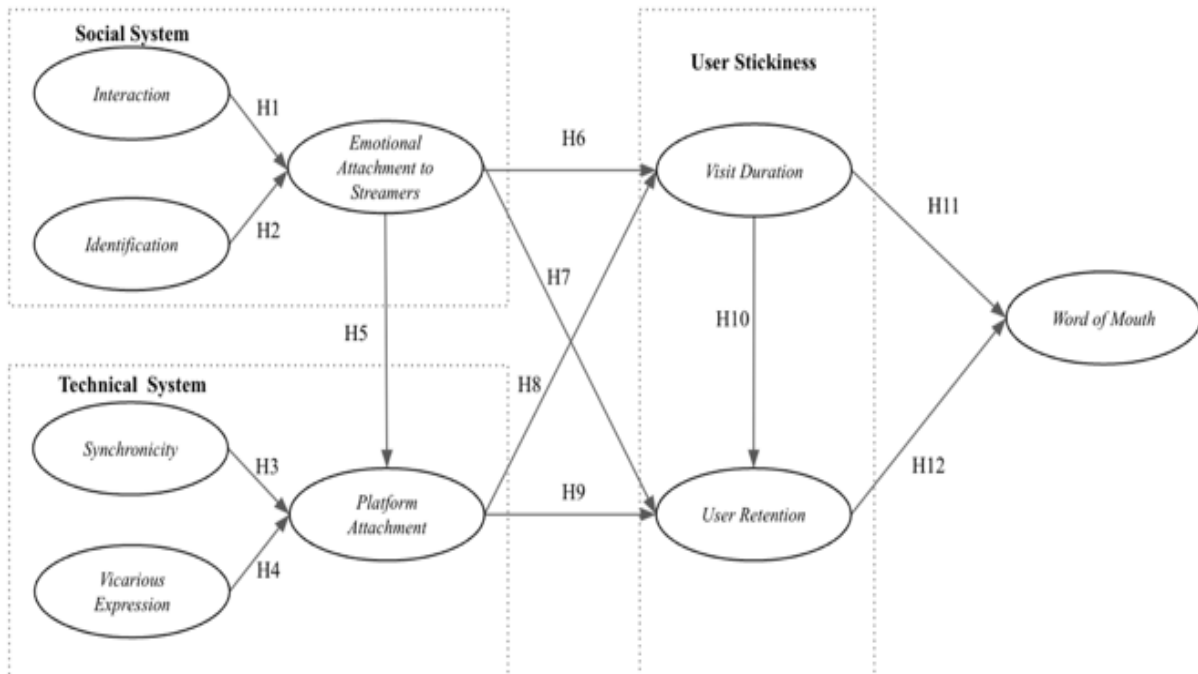
In forming the framework of the research model, this study uses two reference journals. Li et al. (2021), the first journal reference, experimented with 425 users of the Chinese live-streaming shopping platform Taobao Live to test a theoretical model based on attachment theory and a socio-technical approach to comprehend the impact of live-streaming services affect user stickiness using user attachments. Because of the topics' similarities, Li et al. (2021) research model was used in this study. Limitations of Li et al. (2021) study is that there is no explore culture because it only examines the results of data obtained from Taobao Live users in China. So, with the research model of Li et al. (2021), this research uses data from Indonesia with a different platform, TikTok. The second reference journal is from Zhang et al. (2017), who present a model for the relationship between stickiness and customer engagement. The "Sina" corporate microblog's users completed 260 valid questionnaires, which were then analyzed using structural equation modeling. The difference between the research of Zhang et al. (2017) and this research is their study examined company social networks where the research focus was too large

because it did not focus on just one sales method, so this study decided to use the research model from Zhang et al. (2017) to examine only one sales method, live streaming.

In the study of Li et al. (2021), research stops at stickiness or loyalty to a brand as seen from visit duration and user retention. Meanwhile, Zhang et al. (2017) research continues to form word of mouth from stickiness. Stickiness and word of mouth are two different forms of loyalty. According to the literature, stickiness is a form of behavioral loyalty, which is loyal behavior in the form of consumer repurchasing. At the same time, word of mouth is attitudinal loyalty, consumers' commitment to a brand (Lemon et al., 2002). In this study, a research model was built to examine the relationship between user attachment, user stickiness, and word of mouth from live streaming usage and tested on the live streaming shopping platform TikTok to find out whether the use of live streaming, which forms user stickiness will have a positive effect on word of mouth. So, the final result of establishing this research model is shown in Figure 1.

**METHOD**

This quantitative research uses data collection through online questionnaires and has 12 hypotheses with a purposive sampling approach. Data was collected by distributing questionnaires online to respondents in 2022 according to the following criteria: the respondents must be at least 17 years old, using TikTok in everyday life, TikTok Live Shopping users, have interacted with TikTok Live Shopping / Streaming, have purchased a product that was sold during TikTok Live Shopping, and domiciled in Jabodetabek (Indonesia). Data analysis was performed using SmartPLS. This study uses 55 indicators in operational variables, as seen in Table 1. A 7-point Likert scale was used to represent respondents' answers using numbers 1 (Strongly Disagree) to 7 (Strongly Agree). This research questionnaire used two questions: about the platform (TikTok) and brands. In the questions for visit duration, user retention, and word-of-mouth variables in this study, respondents were asked about the experience of brand on TikTok. The brand in this research question is seller who sells products and has TikTok account to sell their products.



**Figure 1. Conceptual Framework**

**Table 1. Variable Operational Definitions**

<b>Construct</b>	<b>Measures</b>
<b>Interaction</b> (Lin et al., 2019)	<ol style="list-style-type: none"> <li>1. As a viewer, I can share my opinion with other streamers or viewers.</li> <li>2. As a viewer, the streamer knows I'm paying attention.</li> <li>3. As a viewer, I feel more connected to the streamer in real-time.</li> <li>4. As a viewer, the host will give me plenty of opportunity to comment.</li> <li>5. As a viewer, the streamer gives enough time to ask questions.</li> </ol>
<b>Synchronicity</b> (Yuping, 2003)	<ol style="list-style-type: none"> <li>1. I can see the platform swiftly pass my comments through while watching live streaming.</li> <li>2. I quickly see what other people have said when I watch the live streaming.</li> <li>3. I can see other people's comments right away when I watch the livestream.</li> <li>4. I can see my feedback is quickly responded to by the platform when I watch the live stream.</li> </ol>
<b>Vicarious Expression</b> (Li et al., 2013)	<ol style="list-style-type: none"> <li>1. I can grasp what the streamer is attempting to express about the suggested product by watching the live stream.</li> <li>2. I can grasp the streamer's perspective on their experience with the product by watching the live stream.</li> <li>3. I can picture the streamer's intended message regarding the endorsed product by watching the live stream.</li> <li>4. I can picture what the streamer wants to say about the streamer's experience using the product by watching the live stream.</li> <li>5. I can guess what the streamer wants to say about the recommended product by watching the live stream.</li> <li>6. I can guess what the streamer is trying to say about their experience using the product by watching the live stream.</li> </ol>
<b>Emotional Attachment to Streamers</b> (Ren et al., 2012; Wohn et al., 2020)	<ol style="list-style-type: none"> <li>1. I feel like making friends with streamers.</li> <li>2. I feel like interacting with streamers in the future</li> <li>3. I'm interested in learning more about streamers.</li> <li>4. I feel a strong emotional bond with my favorite streamer.</li> <li>5. I feel close to the streamer.</li> <li>6. I'm happy when I see my favorite streamer.</li> </ol>
<b>User Retention</b> (Lu and Chen, 2021; Salamah et al., 2022)	<ol style="list-style-type: none"> <li>1. I browse this brand's Live Streaming Shopping almost daily.</li> <li>2. I used to look for this brand's live-streaming shopping videos when accessing TikTok.</li> <li>3. I come back/visit this brand's Live Streaming Shopping often.</li> <li>4. I intend to continue using the TikTok live-streaming shopping platform.</li> <li>5. I will continue to use TikTok's live-streaming shopping platform in the future.</li> <li>6. I will regularly use the TikTok live-streaming shopping platform in the future.</li> </ol>
<b>Visit Duration</b> (Lu and Chen, 2021; Zhang et al., 2019)	<ol style="list-style-type: none"> <li>1. I spend a lot of time browsing this brand on TikTok.</li> <li>2. I usually spend much time watching this brand's live-streaming shopping.</li> <li>3. I plan to remain longer at this brand's live-streaming store to shop.</li> <li>4. I would spend more time on this brand's live-streaming shopping than any other brand.</li> <li>5. I will extend my stay at this brand's live-streaming shopping.</li> </ol>

Construct	Measures
<b>Platform</b>	1. I feel like this live-streaming shopping site is a part of my daily life.
<b>Attachment</b> (Zhang et al., 2017; Lu and Chen, 2021)	2. I am attached to the live-streaming shopping platform TikTok. 3. I feel it is important for me to use this live-streaming shopping platform. 4. I prefer TikTok's live-streaming shopping service over other sites. 5. I get more satisfaction from using live-streaming shopping services on TikTok than on other platforms. 6. I feel that using a live-streaming shopping service on TikTok is more important than using any service on other platforms. 7. The overall experience I had on TikTok made me not going to switch to other platforms. 8. I feel TikTok is a part of me. 9. I feel TikTok is an exceptional live-streaming shopping platform for me. 10. I can identify myself with TikTok. 11. I feel very attached to TikTok. 12. TikTok means a lot to me.
<b>Identification</b> (Wan et al., 2017)	1. I see a lot of parallels between the streamer lifestyle and mine. 2. I possess many characteristics in common with streamers. 3. I think the value streamer shares my values. 4. I think my self-image matches the streamer's.
<b>Word-of-mouth</b> (Van Tonder et al., 2017; Limoli, 2017)	1. If asked, I will say positive things about this brand to others. 2. If asked, I would recommend this brand to others. 3. If asked, I would encourage others to use this brand. 4. I say positive things about this brand to other people. 5. I recommend this brand to people who ask me for advice. 6. I encourage friends and relatives to shop from this brand.

**Table 2. Respondent Characteristics**

	Choices	Frequency	%
<b>Gender</b>	Male	89	27,9%
	Female	230	72,1%
<b>Age</b>	17-24	264	82,75%
	25-32	43	13,47%
	33-40	11	3,44%
	>40	1	0,3%
<b>Last Education</b>	High School	212	66,45%
	Bachelor	103	32,38%
	Master	4	1,25%
<b>Occupation</b>	Student	226	70,84%
	Private Employees	24	7,52%
	Government Official	3	0,94%
	Entrepreneur	11	3,44%
	Freelance	27	8,46%
	Unemployed	20	6,26%
	Others	8	2,5%

Source: Processed Data (2022)



## RESULTS

### Respondent Characteristics

Based on Table 1, the main test in this study was done by an online survey via the Google form, which 319 respondents filled in. Overall, the profile of the respondents was dominated by females aged 17-24 years; their last education was high school and a student.

### Validity and Reliability

Based on Table 3, all variables have reached the minimum limit of AVE (0.5) and Cronbach's Alpha and Composite Reliability (0.7) to validate the variables and achieve good reliability.

### Structural Model Testing

The structural model is evaluated by look-

ing at the R-Square value and the significance level of the path coefficient. This study also measures the Q square value to evaluate the structural model by measuring the predictive relevance of this research model. The R Square and Q Square values of this study can be seen in Table 4.

### Hypothesis Testing Results

This study used the t-value to see whether there was a significant influence between the independent and dependent variables. Table 5 presents the results of the hypothesis test. Almost all hypotheses are proven because the t-statistic value is above 1.65, and hypothesis 4 is not proven because it has a t-statistic value of less than 1.65. Based on the results, the Vicarious Expression variable has no significant effect on the Platform Attachment.

**Table 3. Results of the Validity and Reliability Test**

Variable	Validity		Reliability		
	Average Variance Extracted (AVE)	Conclusion	Cronbach's alpha	Composite reliability	Conclusion
Interaction	0,577	Valid	0,817	0,872	Reliable
Identification	0,789	Valid	0,911	0,937	Reliable
Synchronicity	0,617	Valid	0,801	0,865	Reliable
Vicarious Expression	0,651	Valid	0,821	0,882	Reliable
Emotional Attachment to Streamers	0,668	Valid	0,917	0,934	Reliable
Platform Attachment	0,681	Valid	0,957	0,962	Reliable
Visit Duration	0,764	Valid	0,923	0,942	Reliable
User Retention	0,749	Valid	0,923	0,947	Reliable
Word of mouth	0,680	Valid	0,906	0,927	Reliable

Source: Processed Data (2022)

**Table 4. R Square and Q Square**

Variable	R Square	Q Square
Emotional Attachment to Streamers	0,547	0,538
Platform Attachment	0,616	0,500
Visit Duration	0,772	0,410
User Retention	0,636	0,431
Word of Mouth	0,461	0,283

Source: Processed Data (2022)

**Table 5. Results of the Hypothesis Test**

<b>Hipotesis</b>	<b>Path Coefficient</b>	<b>t-value</b>	<b>Conclusion</b>
H1: Interaction positively impacts Emotional Attachment to Streamers.	0,321	5,838	Accepted
H2: Identification positively impacts Emotional Attachment to Streamers.	0,514	9,554	Accepted
H3: Synchronicity positively impacts Platform Attachments.	0,121	2,653	Accepted
H4: Vicarious Expression positively impacts Platform Attachments.	0,038	0,695	Rejected
H5: Emotional Attachment to Streamers positively impacts Visit Duration.	0,708	16,943	Accepted
H6: Emotional Attachment to Streamers positively impacts User Retention.	0,206	3,111	Accepted
H7: Emotional Attachment to Streamers positively impacts Platform Attachment.	0,120	2,202	Accepted
H8: Platform Attachments positively impact Visit Duration.	0,627	10,383	Accepted
H9: Platform Attachment positively impacts User Retention.	0,398	6,097	Accepted
H10: Visit Duration positively impacts User Retention.	0,429	6,692	Accepted
H11: Visit Duration positively impacts Word of Mouth	0,329	4,328	Accepted
H12: User Retention positively impacts Word of Mouth.	0,382	4,971	Accepted

Source: Processed Data (2022)

## DISCUSSIONS

### The Effect of Interaction on Emotional Attachment to Streamers

This study shows that, unlike traditional ways of selling, live streaming shopping helps streamers to talk to their audience directly in real-time, thereby enabling more effective interactions to build emotional attachment to streamers. People interacting with streamers are likelier to become loyal and participate in streaming events. Interaction can help build deeper communication with the streamer, allowing viewers to understand the streamer and bond with them better. It can also increase trust between viewers and streamers. It is in line with Li et al. (2021), who stated that if people frequently interact with others, the audience tends to like that person. Fiedler and Sarstedt (2014) also found that users' engagement increases when they can express themselves and form relationships with others through social interaction.

### The Effect of Identification on Emotional Attachment to Streamers

This study shows that Identification has a significant effect on Emotional Attachment to Str-

eamers, which shows that when viewers perceive that a streamer's personality resembles their own, they are more likely to identify with the streamer and develop a stronger attachment to and liking for the streamer; this, in turn, strengthens the viewer's relationship with the streamer. Identification can help streamers create a stronger connection with their audience in live streaming. Thus, identification can influence the formation of attachments with streamers. Identification is the process of identifying someone or something. Live streaming viewers can identify themselves with streamers in various ways, such as identity, values, and so on, which are similarities between viewers and streamers. If viewers can identify with a streamer, they tend to form an emotional attachment to that streamer. A long-term relationship between streamer and viewer can be established when this happens. This is consistent with the study conducted by Li et al. (2021) and Hu et al. (2017), who also said that identification with streamers will lead to ongoing participation and interaction with streamers. Results from Ladhari et al. (2020) also said that the similarities between viewers and streamers will increase emotional attachment to streamers.

### **The Effect of Synchronicity on Platform Attachment**

This study shows that Synchronicity has a significant effect on Platform Attachment. Synchronization in this study includes technical factors (technical systems), so it can be concluded that the technical features in the live streaming platform, synchronization, have the potential to enhance consumers' purchasing experience, thereby fostering their loyalty to the platform. This is consistent with the findings of the study conducted by Li et al. (2021) and Tang et al. (2016), who discovered that synchronization during live streaming can support viewers in enhancing the experience by interacting with the content. The findings from Christoph et al. (2012) also said that users will have a better experience if a platform enables them to enter information, provide input, and receive feedback right away. Users' experience will depend on how responsive the platform is to user input. If the synchronization process on the platform is good, it can make users become attached to the platform they use

### **Effect of Vicarious Expression on Platform Attachment**

Based on the results, Vicarious Expression has no significant effect on Platform Attachment. It shows that consumers may already be able to understand product information well because the live streaming method is showing products and interacting via video in real-time. So, viewers may already understand the recommended product because the footage shown is clear, and they can interact well with the streamer. It could also be that the interaction is so good that viewers don't have to see the streamer displaying and demonstrating the use of the product more fully. The vicarious expression does not have a positive effect on the formation of platform attachments. This result is not in line with the research of Li et al. (2021), who stated that vicarious expression is a representative expression of a streamer to show their consumption experience using a product that can make the audience feel the experience of consuming the product, which in turn increases engagement with the platform. Hamilton et al. (2016) assert that streamers can give customers a complete understanding and make it simpler for both parties to develop a sense of identity and belonging in virtual

spaces through facial expressions and body language.

### **The Effect of Emotional Attachment to Streamers on Platform Attachment**

According to this study, platform attachment is significantly impacted by an individual's emotional attachment to streamers, which shows that if live streaming viewers have gotten a sense of attachment to the streamer, then their following behavior will continue to watch live streaming from the streamer, which will cause them also to become use platforms that provide live streaming more often. This follows the research results by Li et al. (2021), which stated that once someone has developed an emotional bond with them, they are more likely to engage with streamers or purchase products they suggest. The findings from Stever (2011) say that emotional attachment can explain a person's behavior.

### **The Effect of Emotional Attachment to Streamers on Visit Duration**

The Emotional Attachment to Streamers variable significantly affects Visit Duration, so it can be said that emotional attachment to a streamer is an emotional relationship with a streamer that can reflect the user's emotional commitment and desire to maintain or improve their relationship with the streamer. It fits with the findings of Li et al. (2021), which stated that individuals who have an emotional bond with someone are more inclined to engage with streamers. The findings of Stever (2011) stated that viewers will spend more time searching for information and buying products from streamers they like.

### **The Effect of Emotional Attachment to Streamers on User Retention**

This research stated that Emotional Attachment to Streamers has a significant effect on User Retention, which shows that the longer viewers watch a streamer, the more they will tend to develop a sense of emotional attachment to the streamer. If someone has developed an emotional attachment to a streamer from a brand they like, they will extend the visit duration and revisit the brand's account more often. It is in line with the research of Li et al. (2021), where the hypothesis that emotional attachment to streamers positively impacts

user retention is accepted, with analysis in which users' emotional attachment to streamers and their desire to maintain or improve those relationships are defined as emotional attachment to streamers.

### **The Effect of Platform Attachment on Visit Duration**

The Platform Attachment variable significantly impacts the Visit Duration variable. Therefore, attachment to the platform can encourage users to frequently use and participate actively, increasing the duration of their visit, which is one of the measuring tools of user stickiness in this study. Platforms for live-streaming commerce offer tools to help customers make decisions, such as a real-time interaction area (Yang et al., 2022). Customers are rapidly growing accustomed to using this platform for sightseeing and shopping. By having a platform that is easy to use and accessible, consumers can comfortably spend time exploring the platform. The right platform will provide a pleasant experience for users, allowing them to spend more time exploring it.

This is in accordance with the results of research by Li et al. (2021) that a consumer's emotional connection with a platform can positively affect consumer attachment to that platform. According to Jiang and Dong (2008), attachment to the platform drives user loyalty to shopping sites. Findings from Performativas et al. (2007) show that engagement with the platform can significantly increase user participation and retention rates.

### **The Effect of Platform Attachment on User Retention**

This study showed that attachment to the platform could encourage users to frequently use and participate actively, increasing their return visit behavior. The live-streaming shopping platform provides features to assist consumers in making decisions, providing a place to interact in real-time. The right platform will provide a pleasant experience for users. A strong platform will also increase user satisfaction, keeping them regularly returning to the site. Customers are becoming more used to using this platform to shop and sightseeing.

This is in accordance with the results of research by Li et al. (2021), which stated that a consumer's emotional connection with a platform can positively affect consumer attachment to that plat-

form. According to Jiang and Dong (2008), attachment to the platform drives user loyalty to shopping sites. Findings from Performativas et al. (2007) showed that engagement with the platform can significantly increase user participation and retention rates.

### **The Effect of Visit Duration on User Retention**

This research shows that an increase in visit duration can help increase user retention because when customers spend more time on the website, they will be more engaged and understand the products and services the brand offers. It will make them more likely to visit the website repeatedly, buy products, and become loyal customers. This is in line with the findings of Liu et al. (2021), who stated that users who spend a significant amount of time on a website are more likely to return to that website later. Xu et al. (2018) also found that the duration of a user's visit can positively affect retention.

### **The Effect of Visit Duration on Word of Mouth**

This research's result shows that the length of the visit has a favorable impact on word-of-mouth. This is due to the fact that people feel more satisfied the longer they browse a website or watch live streaming. They'll be more likely to recommend them to others and give positive reviews. This is consistent with the study of Zhang et al. (2017), which found that the length of a visit positively affects the spread of word of mouth. Visit duration has a beneficial effect on word-of-mouth because customers who spend longer time on a website or watching a brand live stream are more likely to have a favorable opinion of the company or brand and are more likely to suggest it to friends, family, and coworkers. It can result in more word of mouth. This is also corroborated by research from Wu et al. (2010), which found that the length of a customer's visit to a brand's website is a measure of the stickiness of the brand or website.

### **The Effect of User Retention on Word of Mouth**

This study shows that User Retention has a significant effect on Word of Mouth. Using visit duration and user retention, this study evaluated user stickiness. User retention is a form of stickiness to a brand or website. User retention is a rep-

representative indicator of customer loyalty in the virtual world. If consumers have a positive experience with a product or service, they are likelier to recommend it to their friends, family, and colleagues. When consumers have developed retention behavior, they tend to recommend products or services to others. This finding is supported by Yang et al. (2003), who examined the relationship between customer loyalty and WOM, in which it was found that the loyal customers tend to develop positive WOM. This research's result is in line with the research of Zhang et al. (2017), which states that user retention has a positive influence on word-of-mouth formation.

## IMPLICATIONS

**Theoretical Implications.** This research explores how consumers are driven to word-of-mouth behavior when using live streaming, so this research contributes to the literature on word-of-mouth in the context of using live streaming strategies. This study investigates the relationship between attachment and stickiness in the development of word of mouth, as seen through live streaming. This study looks at how long a user stays on the site and how long they remain as a user. This study examines how the two stickiness types affect word of mouth. In the past, only stickiness has been used to measure loyalty. This research investigates the additional impact of "stickiness" on word of mouth. Consequently, this study addresses a knowledge vacuum in the literature, as prior investigations solely concentrated on brand loyalty within the context of transactions. This study provides a solid foundation for considering the relationship between user stickiness and word-of-mouth spreading on live streaming platforms.

**Practical Implications.** Streamers have a considerable influence on interactions with potential buyers who are live-streaming viewers and will be useful for increasing interactions in live-streaming so that they can be used as innovations in marketing activities. Streamers can immediately answer questions about products properly and clearly when consumers ask questions about products. Streamers can respond quickly in order to engage with viewers more. Consumers can be given the opportunity to interact with streamers and other consumers who can increase the effect of the interaction. Moreover, to pique viewers' interest and draw pos-

itive feelings from them, streamers may enhance their professionalism and incorporate entertaining elements into their live streams.

In this study, the platform attachment variable significantly influences visit duration. Platforms that provide live streaming can innovate to increase efficiency and effectiveness, increasing engagement with the platform and creating a good live streaming experience. The platform may be developed and optimized to attract more consumers and elevate user-streamer and viewer interactions. Live streaming platform managers should strive to improve synchronization, which can enhance consumers' viewing experience and increase their purchase intentions, such as by optimizing live-streaming shopping services.

In this study, there was no positive effect between vicarious expression and platform attachment. It may be due to the use of live streaming that shows products in real-time via video so that potential buyers who are live streaming viewers feel that they have had enough of the information provided by the streamer, so there is no need to refocus on the way the streamer and streamer's expression introduces the product. Thus, this factor does not affect the engagement to the platform significantly.

Using the results of this study, marketing professionals can make the most of live streaming by collaborating with good streamers and attracting an audience, both of which are necessary for forming attachments with consumers. As the main element in using the live streaming sales method, streamers must try to create a good atmosphere in live streaming to build their image and brand to increase participation to the number of consumers. Platform attachments affect user stickiness more than emotional attachments to streamers. It may be because consumers may not know streamers. Streamers can change, so consumers may not recognize them. Strong platform experiences increase consumer attachment, which has a greater effect on user stickiness. Platforms also make connecting easier for users and streamers, boosting user engagement. This study found that live streaming can form user stickiness, which helps form word of mouth. However, it can also be considered that other factors, such as price factors and product category factors (be it beauty products, food, and beverages, or clothing), can also have an indirect in-

fluence on the use of a live streaming strategy, which will later affect the formation of word of mouth.

### RECOMMENDATIONS

Based on the limitations of this study, future research can try to examine the use of live streaming with a questionnaire stimulated by one live streaming content or with an experiment so that research respondents can fill out a research questionnaire or run experiments with the same experience as other respondents. Then, further research can focus on the context under study, such as examining the use of live streaming from a TikTok account that sells various products. It is more common because many accounts on TikTok sell various products, not only special or official accounts from a brand or vice versa; further research can focus on just one brand. Future research can also examine the use of live streaming in one particular category, such as beauty. In addition, future research can also compare the use of live streaming on different platforms, such as comparing the use of live streaming on TikTok and Instagram. Then, further research can be conducted with samples using respondents from different age groups, considering that live streaming does not only apply but also affects young people. Research with data from different age groups may yield different results. Then, further research can examine data from samples in other regions of Indonesia because the results obtained may be different.

This research has several limitations, and the first is live streaming content, which has many variations, where on one TikTok account, the live streaming content provided varies. Also, streamers on TikTok accounts are not limited to just one streamer, so the respondents of this study can fill out a questionnaire while thinking about their experience watching a wide variety of live-streaming content from one TikTok account. Second, this research questionnaire does not mention that respondents have to answer research questions by thinking of one live streaming content by just one streamer from the TikTok brand account they choose, so that when filling out this questionnaire, respondents can fill in questions based on their experience watching live streaming from different streamers to different content even from the same TikTok account due to the large variety of live streaming

content. Then, on the questions for the interaction and vicarious expression variables, this study does not mention the platform in question (TikTok) so that the respondents to this research can answer this questionnaire by thinking about live streaming from other platforms, even though in the screening question the respondents have been asked to choose one account of live streaming from the TikTok platform they follow. Third, this research does not focus on research on a particular category. Still, this research examines the use of live streaming in various product categories (beauty, food and beverages, clothing, and so on).

### CONCLUSIONS

This study seeks to determine whether the use of live streaming significantly affects the formation of essential factors in sales, such as user attachment, user stickiness as measured by visit duration and user retention, and word of mouth, either directly or electronic. This study has 12 hypotheses, and based on the results, 11 hypotheses are accepted, and 1 is rejected. Based on the explanation and results of the analysis and the discussion described, it can be concluded that live streaming in Indonesia can form user attachments as measured through emotional attachment to streamers and platform attachments because they have a positive influence. Then, this study also found that user attachment formed from live streaming in Indonesia can also form user stickiness as measured by visit duration and user retention, which can form word of mouth. Then, this research found that vicarious expression, one of the technical factors of using live streaming, does not affect the formation of platform attachments. These results can occur because consumers feel sufficient about the information provided by streamers when live streaming is carried out. So, based on this research, the use of live streaming as a sales strategy has a positive influence on the formation of word of mouth, which is assisted by user attachment and user stickiness.

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