UNDERSTANDING THE INFLUENCING MECHANISM OF USERS’ PURCHASE INTENTION AND MEDIATING EFFECT OF TRUST IN STREAMER: A SOCIO-TECHNICAL PERSPECTIVE

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ABSTRACT

Purpose This study primarily aims to investigate the role of trust in the streamer in the formation path of purchase intention and the influencing factors of both trust in the streamer and purchase intention.

Theoretical framework: Given that live streaming e-commerce possesses strong social attributes and requires technological means to facilitate remote social interactions, we have chosen to adopt the socio-technical theory as the theoretical foundation for this study.

Design/methodology/approach: This study employs an empirical research approach and utilizes random sampling to distribute questionnaires to users of the Douyin platform. We select users who have an intention to purchase or have prior purchasing experience on the live streaming platform for our survey.

Findings: According to the findings of the study, identification, two-way communication, and visibility have a significant impact on purchase intention. Trust in the streamer serves as a mediating factor in the relationship between these three variables and purchase intention. Synchronization cannot directly influence purchase intention and cannot impact purchase intention through trust in streamer either.

Research, practical & social implications: For theoretical implications, prior research rarely delved into how trust in a streamer affects purchase intention. This study addresses this gap and helps researchers explore this field further. It explores the role of trust in streamer in shaping purchase intention, also offering practical strategies for retailers to enhance trust.

Originality /value: This study innovates by breaking down trust into trust in the streamer to examine its impact on purchase intention formation. Future research can explore trust from different perspectives, offering new insights into trust in live streaming commerce.

Keywords: live streaming e-commerce, socio-technical theory, trust, purchase intention.

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RESUMO

Objetivo: Este estudo tem como objetivo principal investigar o papel da confiança no streamer na trajetória de formação da intenção de compra e os fatores que influenciam tanto a confiança no streamer quanto a intenção de compra.

Referencial teórico: Dado que o comércio eletrônico por streaming ao vivo possui fortes atributos sociais e requer meios tecnológicos para facilitar as interações sociais remotos, optamos por adotar a teoria sociotécnica como base teórica para este estudo.

Desenho/metodologia/abordagem: Este estudo emprega uma abordagem de pesquisa empírica e utiliza amostragem aleatória para distribuir questionários aos usuários da plataforma Douyin. Seleccionamos usuários que têm intenção de compra ou experiência anterior de compra na plataforma de transmissão ao vivo para nossa pesquisa.

Resultados: De acordo com os resultados do estudo, a identificação, a comunicação bidirecional e a visibilidade têm um impacto significativo na intenção de compra. A confiança no streamer serve como fator mediador na relação entre essas três variáveis e a intenção de compra. A sincronização não pode influenciar diretamente a intenção de compra e também não pode impactar a intenção de compra através da confiança no streamer.

Implicações de pesquisa, práticas e sociais: Para implicações teóricas, pesquisas anteriores raramente se aprofundaram em como a confiança em um streamer afeta a intenção de compra. Este estudo aborda essa lacuna e ajuda os pesquisadores a explorar ainda mais esse campo. Ele explora o papel da confiança no streamer na formação da intenção de compra, oferecendo também estratégias práticas para os varejistas aumentarem a confiança.

Originalidade/valor: Este estudo inova ao dividir a confiança em confiança no streamer para examinar seu impacto na formação da intenção de compra. Pesquisas futuras podem explorar a confiança sob diferentes perspectivas, oferecendo novos insights sobre a confiança no comércio por streaming ao vivo.


1 INTRODUCTION

With the development of real-time sharing technology, live streaming e-commerce, as one of social e-commerce, becomes a brand-new branch of e-commerce industry. During the 2022 Double Eleven period, Live-streaming streamers delivered outstanding performances. Both established and new streamers on Taobao experienced rapid growth, with pre-sales leading to year-on-year sales increases of 365% and 684%,
respectively (Cinda Securities, 2023). Live streaming e-commerce comprises multiple roles, including sellers, buyers, streamers or anchors and MCN (Multi-Channel Network) agencies (Li, 2023). Specifically, streamers serve the e-commerce platform, and live streamers sell products and share the experiences of production trial to consumers (Han, 2020). In live streaming e-commerce, fixed brand streamers are usually employed by official flagship stores, and third-party streamers sell multi-brand products (Zhang et al., 2022), so the streamer is not necessarily a seller of products, and this role is sometimes a bridge between consumers and sellers.

The live-streaming e-commerce platform has incubated or attracted many people to become live streamers. These individuals have generated excellent sales performance through the platform. In 2020, Luo Yonghao made his first live streaming sales event and achieved sales of 110 million yuan (Li, 2022). The sales results of the pre-sale live broadcasts during the 2021 Singles' Day showed that Li Jiaqi achieved a final sales amount of 10.653 billion yuan, Wei Ya recorded sales of 8.252 billion yuan, and Xue Li ranked third with sales of 930 million yuan (Wang, 2021). During the 2022 Singles' Day, a couple from Guangdong province achieved a new record in Douyin e-commerce by live streaming continuously for 13 hours and generating sales of 700 million yuan in a single session (Feng, 2022).

Live streaming e-commerce possesses strong social and technological attributes. These characteristics enable consumers to engage in two primary behaviors within live streaming e-commerce (Liu, 2021). One involves observing the streamers' presentations within live rooms, while the other entails making purchases within these live rooms (Liu, 2021). Watching the livestream serves as a precursor to the purchasing behavior. The technological tools of live streaming e-commerce allow consumers to authentically see the streamers and engage in real-time interactions with them. Throughout this process, users' purchase intentions or behaviors can be influenced by various factors.

Based on the attributes of live-streaming e-commerce, the purpose of this study is to investigate the factors influencing consumer purchase intention in live streaming e-commerce, as well as to explore the role of trust in the live streamer in the formation of purchase intention.
2 LITERATURE REVIEW

2.1 SOCIO-TECHNICAL THEORY

Socio-Technical model is raised by Bostrom & Heinen (1977), consisting of technical and social subsystems. Social system focuses on human attributes, such as values, attitudes and skills and relationships, power structures and reward systems (Bostrom & Heinen, 1977), while the technology system emphasizes on the tasks, technologies and process of transforming inputs into outputs (Bostrom & Heinen, 1977). Live streaming e-commerce was originated from social e-commerce, so it has strong social attribute; simultaneously, the business model need IT technology to achieve social interaction. Streamers, representing brands, need to introduce products and interact with potential consumers, and viewer and co-viewer can also communicate with each other (Zhang, et al. 2022). The simultaneous presence of social and technical elements is a fundamental characteristic of live streaming commerce (Zhang, et al. 2022). Socio-technical theory strongly fits with live streaming e-commerce. Recently, researchers have applied socio-technical model to study of live streaming e-commerce. Zhang et al. (2022) demonstrated that social and technical attribute was a significant feature of live streaming e-commerce. They also studied the impact of social and technical enables on trust and how trust affect in the live streaming commerce scenario on the basis of socio-technological model (Zhang et al., 2022). Li, Li & Cai. (2021) proposed antecedent factors of users’ attachment, including technical factors (e.g. synchronicity and vicarious expression) and social factors (e.g. interaction and identification) based on socio-technical model, in order to understand how live streaming service affects the user stickiness through users’ attachment.

2.2 TRUST IN STREAMER

Trust is defined as the consumers’ expectation toward successful transaction between buyer and seller under a high-risk environment (Gefen, Karahanna & Straub, 2003). Trust in streamer refers to the belief that the streamer is reliable, offers high-quality services, and does not exploit customers (Lu, Zhao & Wang, 2010). Trust in streamers is defined as the conviction that the streamer is reliable, offers high-quality services, and treats customers fairly, as per Wongkitrungrueng and Assarut (2018). Streamers act as opinion leaders in the live room. When users perceive streamers as experts in specific fields or trust their personal taste, they become more willing to continue watching the live commerce.
streaming and seek help from them. Zhang et al. (2022) investigated how social and technical factors impact trust in streamers and its consequent influence on users' intentions to remain engaged in the live streaming commerce environment. Therefore, the streamer plays a significant role in live broadcasts, and trust in streamer plays a crucial role in the path of consumer behavior or awareness formation. In this study, trust in streamer signifies that consumers can perceive this trust, and this perception can motivate consumers to engage in certain behaviors within the context of live streaming shopping.

2.3 PURCHASE INTENTION

Purchase intention, as defined by Sharma, Pradhan, and Srivastava (2021), refers to a consumer's stated desire or readiness to acquire a specific product or service at a later time. In the research conducted by Qing & Jin (2022), purchase intention can be regarded as a behavioral indicator that signifies a consumer's inclination to purchase products and services, reflecting their readiness to make a purchase. In this study, consumer purchase intention refers to the awareness of intending to buy products before actual purchase actions, indicating that this consciousness precedes the act of making a purchase.

3 HYPOTHESES DEVELOPMENT

3.1 TRUST IN STREAMER AND PURCHASE INTENTION

Given the fact that streamers can share experiences after purchasing and using products, viewers’ doubts can be relieved in real-time. The communication allows streamers are like consumers’ best friends, giving rise to the construction of relationship and reduction in psychological distance (Zhang et al., 2022). Wongkitrungrueng & Assarut (2020) found trust in sellers had a positive contribution to customer engagement. Shofiya & Fachira (2021) illustrated that customer engagement can positive mediate purchase intention in social media marketing. Choi (2019) demonstrated that customer engagement can be able to increase users’ purchase intention in social e-commerce. Therefore, the following hypotheses are proposed:

H1: Trust in streamer can positively influence purchase intention.

3.2 SYNCHRONIZATION AND TRUST IN STREAMER

Synchronization allows streamer to interact with viewers in real time, which provides a more effective and efficient communication compared with traditional e-
commerce. The immediacy of response helps customers to experience efficient communication (Chiang & Hsiao, 2015). The quick response allows viewers to feel that own shopping needs can be met effectively, providing a perception of that streamers think highly of consumers. Synchronous interaction between streamers and consumers fosters the development of a relational bond, ultimately enhancing the perceived trust of consumers (Wongkitrungrueng & Assarut, 2018). Such the relationship can shorten the psychological distance between consumers and viewers (Yoon, Choi, & Sohn, 2010). Streamers are like close friends and family to consumers, making it easier for consumers to trust them. Therefore, the following hypotheses are proposed:

H2: Synchronization can positively influence trust in streamer.
H3: Trust in streamer mediates the relationship between synchronization and purchase intention.

3.3 TWO-WAY COMMUNICATION AND TRUST IN STREAMER

Hou et al. (2019) illustrated that two-way communication is the interaction allowing a two-way flow of information. Live streaming platform provides the chance of bidirectional communication between streamers and customers. Streamers can give a quick response to customers through verbal expression, and customers can ask questions via a scrolling screen. Streamers, representing brands, need to introduce products and interact with potential consumers, and viewer and co-viewer can also communicate with each other (Zhang, et al. 2022). Such the interaction is similar to communication between consumers and their best friends, helping to build a close relationship and enhance trust. Therefore, the following hypotheses are proposed:

H4: Two-way communication can positively influence trust in streamer.
H5: Trust in streamer mediates the relationship between two-way communication and purchase intention.

3.4 IDENTIFICATION AND TRUST IN STREAMER

Identification is the extent to similarity between individuals and groups, organizations and other individuals (Brown, Barry, Dacin, & Gunst, 2005; Ng, 2015). Identification allows individuals or organizations and encourage individuals to build long-term relationships with them (Ashforth, Harrison, & Corley, 2008; Bhattacharya & Sen, 2003). Social interaction between consumers and online sellers can be promoted by
identification, making it helpful to construct a long-term relationship with sellers (Hu, Zhang, & Wang, 2017). The close relationship between consumers and streamers can be established when consumers perceived the similarity to streamers. Such the perception would make consumers believe that the performance of streamers is real. Therefore, the following hypotheses are proposed:

H6: Identification can positively influence trust in streamer.

H7: Trust in streamer mediates the relationship between identification and purchase intention.

3.5 VISIBILITY AND TRUST IN STREAMER

Treem & Leonardi (2013) explained that traditional e-commerce makes sellers difficult to be seen by consumers, while live streaming e-commerce allows consumers to have a visual communication with streamers. It is believed that visibility can shorten psychological distance between customers and streamers (Lv, Jin, & Huang, 2018), building a social relationship (O’Riordan, Feller, & Nagle, 2016). In the context of live streaming e-commerce, visualization enables streamers to present in a live room, allowing consumers to believe that the streamers or sellers are real. The sense of reality could enhance the level of consumers’ trust in streamer. Therefore, the following hypotheses are proposed:

H8: Visibility can positively influence trust in streamer.

H9: Trust in streamer mediates the relationship between visibility and purchase intention.

3.6 SYNCHRONIZATION AND PURCHASE INTENTION

Synchronous technology not only enables real-time interaction between streamers and users but also facilitates interaction among users themselves. Customers can interact more with other consumers and receive quicker responses regarding product information (Sa’ait., Kanya, & Nazrin, 2016). When product or service information is unclear, customers often seek additional information and references from sources other than official product information channels (Sa’ait., Kanya, & Nazrin, 2016). Interpersonal interaction, whether through conversations with others or online research, can influence and modify users' purchase decisions by gathering information (Sa’ait., Kanya, & Nazrin, 2016). Xue & Yu (2012) stated that responsiveness, timely response, is one of
characteristics of interpersonal interaction. Responsiveness significantly contributes to the purchase intention by positively influencing cognitive trust (Chang & Dong, 2016). Khatoon, Zhengliang & Hussain (2020) demonstrated that responsiveness has a positive impact on purchase intention in the context of E-banking. The application of the aforementioned research findings in other fields is quite common, but their application in the field of live streaming e-commerce is relatively limited. Therefore, the following hypotheses are proposed:

H10: Synchronization can positively influence purchase intention.

3.7 TWO-WAY COMMUNICATION AND PURCHASE INTENTION

Live streaming e-commerce, as a new format of social e-commerce, has significant social attribute. In social commerce, consumers have closer relationships and access more information through social interactions (Yin et al., 2019). For example, users can interact by sharing product experiences, giving recommendations, and participating in community discussions (Yin et al., 2019). User interactions and word-of-mouth communication in social networks influence users' subsequent purchase intentions, as indicated by previous studies (Liang & Turban, 2011; Hajli & Sims, 2015). The interaction between users and brands can influence users' purchase behavior, including their likelihood to repurchase products (Thomson, 2006). In live streaming e-commerce, it is not possible to overlook the interaction between the streamer and other customers in a live stream, which is also a key characteristic of live streaming (Hou et al., 2019). Communication occurs between the streamer and customers, as well as among customers themselves, allowing for mutual feedback. Such bidirectional interaction facilitates the flow of information and influences the intention and behavior of viewers. Therefore, the following hypotheses are proposed:

H11: Two-way communication can positively influence purchase intention.

3.8 IDENTIFICATION AND PURCHASE INTENTION

In live-streaming e-commerce, streamers demonstrate how to use products and showcase their efficacy in a live room. Customers compare their own situation with that of the streamers and contemplate whether the product is suitable for them. Magno's (2017) study found that similarity between bloggers and readers positively influences reader engagement and purchase intention for recommended products. The more alignment there
is between the content of digital influencers and consumers' values, the higher the likelihood of consumers following the suggestions of digital influencers (Casaló, Flavián & Ibáñez-sánchez, 2020). Simpson et al. (2000) identified a significant impact of perceived homophily on purchase intent via regression analysis. Perceived similarity has partial mediation effects on purchase intention through both normative and informational influence (Liu, Luo & Cao, 2018). However, Gomes, Marques & Dias (2022) found the relationship between similarity and purchase intention is not significant. In context of live streaming e-commerce, the feedback and recommendations from streamers could influence customers’ behavior and intention. Therefore, the following hypotheses are proposed:

H12: Identification can positively influence purchase intention.

3.9 VISIBILITY AND PURCHASE INTENTION

In context of live-streaming e-commerce, customers have the ability to watch streamers showcasing products and explaining the effectiveness of using them in real time, due to IT technology. Visualized marketing in various fields has the potential to change customers' awareness and behavior. In the realm of blogging, visual appeal, as an integral component of electronic word-of-mouth (e-WOM), has the capacity to alter beliefs concerning recommended products and services (Kim & Lennon, 2008). Mulyani, Najib & Guteres (2021) stated that visual information has a positive impact on purchase intention of Instagram Food Blogger. Argyris, Muqaddam & Miller (2021) found that the visual portrayal of an Influencer's extroverted personality enhances the perceived credibility of the Influencer, thereby influencing subsequent purchase intentions. Visual appeal exerts a significantly positive impact on consumers' impulsive buying decisions (Huang & Suo, 2021). The visualization in live-streaming e-commerce is dynamic and real-time, making the streamer appear as if they are having a face-to-face conversation with you. Kana (2020) demonstrated that there exists a substantial and positive correlation between face-to-face sales and sales promotions, exerting an impact on purchasing decisions. Khairolt et al. (2021) argued that face-to-face sales variables exhibit a positive yet statistically insignificant influence on purchase intention in the context of social media advertising. Therefore, the following hypotheses are proposed:

H13: Visibility can positively influence purchase intention.
4 METHOD

4.1 MEASURES

The respondents primarily come from China and were selected from the Douyin platform, including consumers who have an awareness of shopping through live streaming or have experience in live streaming shopping. The initial questionnaire was developed in English, then translated, backtranslated, and pretested using respondents from the same demographic group. A 7-point Likert scale is utilized to assess respondents’ opinions, with ratings ranging from '1=strongly disagree' to '7=strongly agree.' This study received 489 questionnaires, out of which 453 were valid. SmartPLS 4 was employed to analyze the proposed model and mediating effects.

We conducted pretests and made adjustments to all measurement items to align them with the live streaming e-commerce context. The questionnaire comprised two sections: personal information and scales. The first section includes a screening question to identify individuals with no prior live streaming shopping experience or no intention to make purchases on a live streaming platform. The second section consists of five constructs. The questionnaire containing three items for measuring identification was adapted from the study by Wan, Lu, Wang, & Zhao (2017). A scale consisting of ten items to assess synchronization was derived from the works of Hou et al. (2019). A 3-item measure of visibility was created by drawing and modifying from Sun et al. (2019). A 3-item measure of two-way communication was created by drawing and modifying from Hou et al. (2019). A four-item measure of trust in streamer was created by drawing and modifying from Apiradee & Nuttapol (2018). A four-item measure of purchase intention was created by drawing and modifying from Chen, Lu & Wang (2017).

4.2 DATA COLLECTION AND SAMPLE

We collected data from the Chinese Douyin platform, focusing on individuals who had live streaming shopping experience or intended to make purchases this way. To ensure our questionnaire was suitable, we conducted a pilot test with 30 participants. We made slight improvements in readability, length, and clarity based on the pretest results. Following statistical guidelines (Lind, Marchal & Wathen, 2007), we determined that we needed a minimum of 385 valid responses. A total of 489 responses were collected, of which 453 were considered valid after removing those without shopping experience or purchase intention. Table 1 illustrates that male respondents accounted for 39.3% of the
valid responses, while female respondents constituted 60.7%. Furthermore, 51.4% of the valid respondents fell within the age range of 25 to 29.

<table>
<thead>
<tr>
<th>Demographic profile</th>
<th>Categories</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>178</td>
<td>39.3%</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>275</td>
<td>60.7%</td>
</tr>
<tr>
<td>Age</td>
<td>≤18</td>
<td>3</td>
<td>0.7%</td>
</tr>
<tr>
<td></td>
<td>19-24</td>
<td>109</td>
<td>24.1%</td>
</tr>
<tr>
<td></td>
<td>25-29</td>
<td>233</td>
<td>51.4%</td>
</tr>
<tr>
<td></td>
<td>30-39</td>
<td>106</td>
<td>23.4%</td>
</tr>
<tr>
<td></td>
<td>≥40</td>
<td>2</td>
<td>0.4%</td>
</tr>
<tr>
<td>Education Level</td>
<td>High school or less</td>
<td>8</td>
<td>1.8%</td>
</tr>
<tr>
<td></td>
<td>College degree</td>
<td>49</td>
<td>10.8%</td>
</tr>
<tr>
<td></td>
<td>Bachelor degree</td>
<td>294</td>
<td>64.9%</td>
</tr>
<tr>
<td></td>
<td>Master degree or above</td>
<td>102</td>
<td>22.5%</td>
</tr>
<tr>
<td>Occupation</td>
<td>Civil servant</td>
<td>44</td>
<td>9.7%</td>
</tr>
<tr>
<td></td>
<td>Company’s employees</td>
<td>56</td>
<td>12.4%</td>
</tr>
<tr>
<td></td>
<td>Freelancer</td>
<td>5</td>
<td>1.1%</td>
</tr>
<tr>
<td></td>
<td>Student</td>
<td>105</td>
<td>23.2%</td>
</tr>
<tr>
<td></td>
<td>Teacher or researcher</td>
<td>238</td>
<td>52.5%</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>5</td>
<td>1.1%</td>
</tr>
</tbody>
</table>

Source: Authors Data

5 ANALYSIS OF DATA

5.1 MEASUREMENT MODEL

The data analysis in this section involved two main steps. First, we assessed the research model's validity and reliability. The second step involved evaluating the structural model using SmartPLS 4.

As depicted in Table 2, the composite reliability (CR) for each construct ranged from 0.844 to 0.880, surpassing the threshold value of 0.6 as recommended by Bagozzi, Davis, and Warshaw (1992) and Fornell & Larcker (1981). Additionally, the Cronbach's alpha for each latent construct fell within the range of 0.843 to 0.866, exceeding the recommended threshold of 0.7 according to Nunnally & Bernstein (1994), indicating strong internal consistency.

Table 2 Results for reliability and convergent validity in CFA

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Items</th>
<th>Factor loading</th>
<th>Cronbach’s α</th>
<th>Composite reliability(rho_a)</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identification (IDE)</td>
<td>IDE1</td>
<td>0.885</td>
<td>0.866</td>
<td>0.880</td>
<td>0.787</td>
</tr>
<tr>
<td></td>
<td>IDE2</td>
<td>0.900</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>IDE3</td>
<td>0.876</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Two-way communication (TWC)</td>
<td>TWC1</td>
<td>0.880</td>
<td>0.843</td>
<td>0.844</td>
<td>0.760</td>
</tr>
<tr>
<td></td>
<td>TWC2</td>
<td>0.862</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TWC3</td>
<td>0.874</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visibility (VI)</td>
<td>VI1</td>
<td>0.868</td>
<td>0.854</td>
<td>0.858</td>
<td>0.774</td>
</tr>
<tr>
<td></td>
<td>VI2</td>
<td>0.891</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
In our study, we evaluated convergent validity using factor loadings and the average variance extracted (AVE). The factor loadings for all constructs were found to be above 0.5. Each construct's AVE ranged from 0.684 to 0.787, surpassing the AVE threshold value of 0.5, as recommended by Bagozzi, Davis, and Warshaw (1992). This indicates that convergent validity is achieved, as the listed items explain less error than the variance in their respective constructs (Bagozzi, Yi & Phillips., 1991).

For discriminant validity, we used AVE by comparing it with inter-variable correlations. In Table 3, the square root of each latent variable's AVE exceeded its correlations with other variables, confirming acceptable discriminant validity (Fornell & Larcker, 1981; Hair et al., 2006).

R2 statistics explain the variance in the endogenous variable due to the exogenous variable(s). Yan, Zhang & Zhang (2023) cite Chin (1998), who proposed R2 thresholds for endogenous latent variables: 0.67 (significant), 0.33 (moderate), and 0.19 (limited). The R2 in our model exceeds 0.33, indicating its acceptance. Trust in the streamer and purchase intention both show R2 values of 0.502 and 0.342, respectively—both surpassing 0.33. This demonstrates the model's strong explanatory power.
5.2 COMMON METHOD BIAS AND VARIANCE INFLATION FACTOR

Given that our data originates from a single source, we must consider the potential for common method bias (CMV). In our analysis using partial least squares structural equation modeling (PLS-SEM), we employed two methods to address CMV. First, we used the VIF-based Collinearity Assessment, following recommendations by Kock & Lynn (2012) and Kock (2015). This involved regressing all variables against a shared variable, with a VIF ≤ 3.3 indicating unbiased data from a single source. Secondly, we utilized the Correlation Matrix Method to examine inter-construct correlations. When these correlations are < 0.9, it suggests that CMV is not a significant concern (Yan, Zhang & Zhang, 2023). Our study's VIF values ranged from 1.245 to 2.009, and all construct correlations are between 0.239 and 0.574. This indicates that the likelihood of common method bias impacting our study is minimal.

5.3 HYPOTHESIS TESTING

The conceptual model's path connections were determined through bootstrap resampling (N = 5000) using SmartPLS software. The outcomes are presented in Figure 1 and Table 4. We found evidence that the model adequately fit to the data. Firstly, the results indicated that trust in streamer positively impacted purchase intention (β=0.241, p<0.001). Secondly, identification positively influences trust in streamer (β=0.349, p<0.001) and purchase intention (β=0.152, p<0.05). Both visibility and two-way communication significantly impact purchase intention (β=0.157, p<0.01, β=0.144, p<0.05) and trust in streamer (β=0.274, p<0.001, β=0.309, p<0.001). However, synchronization does not have a significant relationship with trust in streamer (β=0.038, p>0.05) and purchase intention (β=0.086, p>0.05). Thus, hypotheses H1, H4, H6, H8, H11, H12, H13 were supported except H2, H10.
Table 4 Hypothesis Testing

| Relationships | Sample mean (M) | Standard deviation (STDEV) | T statistics (|O/STDEV|) |
|---------------|----------------|----------------------------|-----------------|
| IDE -> PI     | 0.152          | 0.060                      | 2.556*          |
| IDE -> TRS    | 0.349          | 0.045                      | 7.690***        |
| SYN -> PI     | 0.086          | 0.060                      | 1.409NS         |
| SYN -> TRS    | 0.038          | 0.060                      | 0.603NS         |
| TRS -> PI     | 0.241          | 0.058                      | 4.167***        |
| TWC -> PI     | 0.144          | 0.058                      | 2.473*          |
| TWC -> TRS    | 0.309          | 0.044                      | 6.982***        |
| VI -> PI      | 0.157          | 0.052                      | 2.947**         |
| VI -> TRS     | 0.274          | 0.046                      | 5.933***        |

Note: *p < 0.05, **p < 0.01, ***p < 0.001, NS: Non-significant
Source: Authors Data

5.4 TESTING FOR MEDIATING EFFECTS

We employed bootstrapping with 5000 samples to examine the mediating role of trust in the streamer between identification, visibility, synchronization, two-way communication, and purchase intention. This method allowed us to generate and evaluate 95% confidence intervals for indirect effects using percentiles. As shown in Table 5, Trust in the streamer partially mediates the relationships between identification and purchase intention, synchronization and purchase intention, as well as visibility and purchase intention, due to the fact that both these three variables towards purchase intention and trust in streamer are significant.

Indirect relationship between identification and purchase intention is significant ($\beta=0.084$, $p<0.001$). The path coefficient of indirect effect of two-way communication on purchase intention is 0.074 ($p<0.001$). Trust in streamer also mediates the relationship...
between visibility and purchase intention ($\beta=0.066$, $p<0.01$). However, synchronization cannot influence purchase intention through trust in streamer, and there is also not direct relationship. Thus, hypotheses H5, H7, H9 were supported, and hypothesis H3 was not supported.

Table 5 Indirect and mediating effects

<table>
<thead>
<tr>
<th>Path</th>
<th>Total effect</th>
<th>Direct effects</th>
<th>Indirect effects</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient</td>
<td>T statistics</td>
<td>Coefficient</td>
</tr>
<tr>
<td>IDE -&gt; PI</td>
<td>0.236</td>
<td>4.262***</td>
<td>0.152</td>
</tr>
<tr>
<td>SYN -&gt; PI</td>
<td>0.096</td>
<td>1.569NS</td>
<td>0.086</td>
</tr>
<tr>
<td>TWC -&gt; PI</td>
<td>0.219</td>
<td>3.814NS</td>
<td>0.144</td>
</tr>
<tr>
<td>VI -&gt; PI</td>
<td>0.223</td>
<td>4.422***</td>
<td>0.157</td>
</tr>
</tbody>
</table>

Note: *p < 0.05, **p < 0.01, ***p < 0.001, NS: Non-significant
Source: Authors Data

6 DISCUSSION AND CONCLUSION

6.1 RESEARCH FINDINGS

The primary focus of this study is to examine the influence of socio-technical factors (namely synchronization, visibility, two-way communication, and identification) on users' purchase intentions, mediated by their trust in the streamer. According to the findings of this study, synchronization does not have a significant impact on purchase intention, regardless of whether it is mediated through trust in the streamer or not. Besides, visibility, identification, and synchronization can all directly influence purchase intention, and they can also impact purchase intention through the mediation of trust in the streamer. Trust in the streamer exert a partial mediation effect on relationships between these variables and purchase intention.

6.2 DISCUSSION

According to the study findings, identification positively influences users’ purchase intention. The similarity between consumers and streamers can lead consumers to have an intention to purchase products. Identification is the extent to similarity between individuals and groups, organizations and other individuals (Brown, Barry, Dacin, & Gunst, 2005; Ng, 2015). This perspective suggests that people sharing similar characteristics are more likely to develop analogous interests and requirements (McCroskey, McCroskey, & Richmond, 2006). Such direct impact has confirmed findings of previous studies (Magno, 2017; Simpson et al., 2000). Social interaction
between consumers and online sellers can be promoted by identification, making it helpful to construct a long-term relationship with sellers (Hu, Zhang, & Wang, 2017). In the context of live streaming e-commerce, the close relationship between consumers and streamers can be established when consumers perceived the similarity to streamers. Trust in streamer also exert a significant impact on the relationship between identification and purchase intention (Lu & Chen, 2021; Li, Li & Cai, 2021).

Besides, two-way communication significantly influences purchase intention, which is confirmed by the study of Zhang et al. (2022), Huang & Suo (2021) and Li, Li & Cai (2021). Live streaming e-commerce exhibits strong social attributes, where streamers are required to provide feedback and engage in two-way interactions with consumers. In this process, consumers easily establish relationships with streamers, which is conducive to streamers gaining the trust of viewers and guiding them towards making purchases. In the study, trust in streamer mediates the relationship between two-way communication and purchase intention. This is similar to findings of Zhang et al. (2022).

Moreover, visibility also have a direct relationship with users’ purchase intention, and the relationship is also mediated by trust in streamer. Visual communication in live shopping allows customers to witness the authentic representation of streamers. This is helpful to diminish customers' purchase uncertainty and perceived risk, thereby reducing purchase resistance. Such similar findings can be found in study of Zhang et al. (2022), Sun et al. (2019) and Sun et al. (2018).

However, there is no significant relationship between synchronization and purchase intention, regardless of the presence of trust in the streamer as a mediating factor. This is inconsistent with the findings of Zhang et al. (2022), which conclude that there is a significant relationship between trust in streamers and synchronization. It does not confirm the findings of Chang & Dong (2016) and Khatoon, Zhengliang & Hussain (2020), which demonstrated that responsiveness has a positive impact on purchase intention. There could be several possible reasons for this. Firstly, the data in this study is primarily originated from one platform, which limits the scope of the data. Secondly, there may be intermediary variables between synchronization and purchase intention or trust in the streamer. Li, Li & Cai (2021) found that synchronization affect consumers’ stickiness through platform attachment. Zhang et al. (2022) synchronization can
6.3 CONCLUSION

This study offers both theoretical and practical contributions. On the one hand, this study explores the formation pathway of consumer purchase intention based on the socio-technical theory. Some scholars have already applied the socio-technical theory in live streaming commerce (Zhang et al., 2022; Li, Li & Cai., 2021), but they did not focus on consumer purchase intention. This research extends the application of this theory and interprets the correlation between the formation of consumer purchase intention and the characteristics of live streaming commerce, including both social and technological aspects. Secondly, this study examines the role and significance of trust in the streamer in shaping consumer purchase intention. While some previous scholars have investigated the role of trust in e-commerce in influencing the formation of consumers’ behaviors (Shekhar & Jaidev, 2020), there is limited literature that specifically explores this within the context of live streaming commerce. This study helps fill some of the research gaps in this area. Thirdly, Streamers play a vital social role in live streaming commerce, and trust can be subdivided into trust in the streamer within the context of live streaming commerce, providing a novel perspective for examining the role of trust in live streaming commerce.

On the other hand, this study provides strategies for live streaming commerce retailers on effectively increasing consumer purchase intention within the live streaming commerce context. Specifically, the findings of this study have shown that consumer trust in streamers can promote their purchase intention. Therefore, the focus shifts from how to generate purchase intention in consumers to how to build trust in streamers. In this regard, this research offers valuable insights in the areas of visibility, two-way communication, and identification that businesses or brands can consider for reference.

LIMITATION AND FUTURE DIRECTIONS

One limitation of this study is the use of respondents from a single country. This can be addressed by including more diverse samples in future research to identify potential cross-country or cross-cultural differences in live streaming commerce usage. Secondly, this
study exclusively collected data from the Douyin platform. In the future, researchers can explore consumer influencing factors on other platforms for comparison with the findings of this paper. Additionally, relying solely on SEM for quantitative analysis may restrict a holistic grasp of revisit intention. Future research should consider using mixed methods and conducting interviews to clarify the reasons for synchronization not affecting purchase intention.
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