

How Cunbo Affect Consumer Purchase Intention? Analysis from Source Credibility and Parasocial Relationship

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Abstract: Cunbo is a specific "live e-commerce" form in China. Rather than celebrities, local farmers or village cadres are always endorsers to advertise their agricultural products through live streaming. Due to China's developed e-commerce, live streaming industry, and the popularity of smartphones, even farmers, can easily engage in live streaming. While most former studies focus on celebrities' effects, very few studies when endorsers were mainly farmers. Thus, this study aims to research how Cunbo affects consumers' purchase intention when endorsers are farmers. Based on source credibility theory, this study explores the effects of 3 elements (i.e., attractiveness, expertise, and trustworthiness) on Chinese consumer purchase intention through Cunbo. Meanwhile, this article considers credibility and parasocial relationship as two mediating variables to study their roles between 3 elements of source credibility and Chinese consumers' purchase intention. The Process Macro of SPSS has been used in this study as a tool to test the collected data and hypotheses. A total of 302 responses have been collected through a structured questionnaire. The findings indicate that attractiveness, expertise, and trustworthiness have a significant relationship with Chinese consumers' purchase intention toward agricultural products. Also, credibility and parasocial relationship play mediating roles between the relationships.

Keywords: E-commerce; China; Purchase Intention; Source Credibility; Parasocial relationship

1 Introduction

1.1 Background of the Study

The COVID-19 outbreak prompted a surge in live streaming viewers. The number of live streaming viewers in China has reached 562 million in 2020 based on CNNIC (China Network Information Center). In the first half of 2020, there were more than 10 million live commerce held in China, with more than 40 thousand

active streamers, which had been viewed over 50 billion times. Live commerce has developed into a widely accepted business model in China.

Initially, only urban dwellers could easily access and use the Internet, so they also became the first generation of Taobao sellers. Later, with the development of the economy and Internet technology, more and more rural residents could access the Internet and became Taobao sellers (Qi & Guo, 2019). National rural internet retail sales in China reached 1.7 trillion yuan in 2019, up nearly 20 percent, and made up 16.1 percent of all social consumer goods retail sales. At the same time, agricultural items were sold online for about 397.5 billion yuan (Li et al, 2021).

Cunbo appeared with the rise of rural e-commerce. According to a widely accepted definition (What is Cunbo, 2020), Cunbo (村播) is a specific "live e-commerce" form. Local farmers or village cadres are always streamers to advertise their agricultural products through live streaming. Taobao's Cunbo program has accumulated 110,000 farmers' anchors, with more than 2.3 million broadcastings, driving the sales of agricultural products to exceed 5 billion yuan through Cunbo in 3 years (Securities daily, 2021).

Rural e-commerce has brought considerable benefits to China's economy. The divide between urban and rural regions has shrunk as a result of the growth of rural e-commerce, and many rural inhabitants' incomes have increased (Yin & Choi, 2022). Now more and more farmers are selling and advertising their products through Cunbo. China is a predominantly agricultural country; many rural residents engage in agriculture. Understanding why and how Cunbo enhances consumers' purchase intention helps streamers (farmers) of Cunbo improve how they interact with the audience and better introduce and sell local agricultural products.

Two theories are built to explore the relationship between Cunbo and purchase intention. Source credibility always refers to as the good traits of communicators that influence the receiver's acceptance (Ohanian, 1990). Source credibility affects consumer behavior. For example, celebrity endorsement improves purchase intention for cosmetic products (Rungruangjit, 20202). The parasocial relationship is a psychological relationship, which means that people develop friendship, identification, and illusions of intimacy after contact with the media persona repeatedly (Chung, 2017). Parasocial relationships can be built between consumers and streamers. Consumers have been proven to create parasocial interactions with people they follow on social media. In Cunbo, consumers are able to interact with the streamer, like asking questions about products or asking for a lower price, and the streamers will respond to consumers immediately.

1.2 Purpose of the Study

This study aims to investigate how source credibility and parasocial relationship affect consumer purchase intention through Cunbo based on source credibility

model and parasocial relationship theory. This study should promote the following research objectives to fulfill the purpose:

1. Based on the source credibility model, to explore how Cunbo affects consumers' purchase intention on agriculture products by trustworthiness and expertise.
2. To explore the relationship between different levels of parasocial relationship and consumers' purchase intention and factors that enhance parasocial relationship.

Source credibility model and parasocial relationship are widely used to analyze consumer behavior. The previous studies focus on celebrity's influence on consumer behavior. Studies have shown that celebrities can enhance credibility and parasocial relationships (Rungruangjit, 2022). However, in Cunbo, most endorsers are farmers; they advertise and sell their agricultural products. Cunbo, as a new form of live commerce, has not been paid much attention.

This study explores how Cunbo affects consumer purchase intention from a consumer's perspective. It can help farmers and village cadres understand consumer demand and provides valuable guidance for advertising and selling agricultural products by Cunbo.

1.3 Theoretical and Conceptual Framework

1.3.1 Source Credibility Model (SCM)

A widely used technique for assessing the effectiveness of endorsements is the source credibility model (Lim et al., 2017). Most studies have adopted expertise (or competence) and trustworthiness as key dimensions of source credibility (Fogg & Tseng, 1999). Consumers are more likely to believe the information offered by a trustworthy endorser, making credibility vital for production endorsement. Given their trustworthy knowledge, endorsers can gain the trust of customers based on expertise (Mat et al., 2019). Besides, the messages of an attractive communicator are demonstrated to be more convincing (Chaiken, 1979). Physical attractiveness influences stereotype categorization, people always form comprehensive notions of who they observe simply based on physical attractiveness (Patzner, 1983).

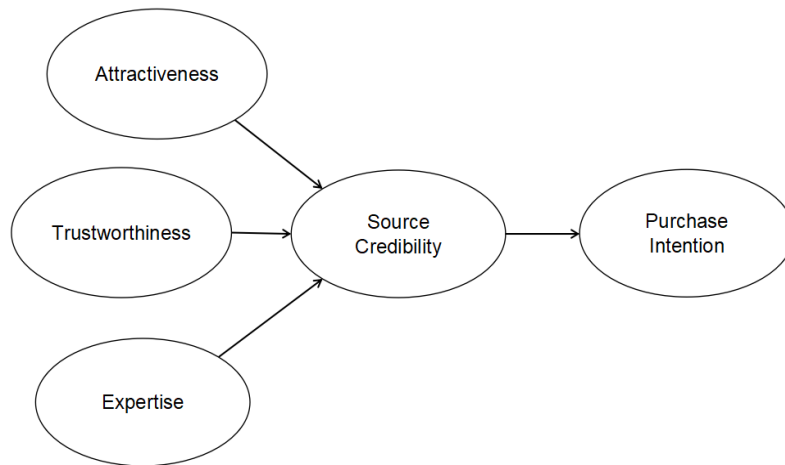


Figure 1: Theoretical Framework – SCM

1.3.2 Parasocial Relationship Theory (PRT)

The parasocial relationship is a one-sided relationship, that people (social media users) develop with mediated personas (Horton & Wohl, 1956). Nowadays, parasocial relationship not only influences traditional media but also affects Internet users (or internet social media) (Labrecque, 2014). The internet even provides a better platform for influencers and their fans to strengthen this relationship. Consumers are more likely to devote more attention to the influencers if they can be perceived as physically or socially attractive (Sokolova & Kefi, 2020). In some commerce contexts, it has been proven that consumers tend to form parasocial relationships with others who are perceived as experts. Similarly, consumers tend to form parasocial relationships with influencers who are believed as experts (Yuan, & Kim, 2016). Trust also plays an important role in this process. The study has shown that trustworthiness is a vital factor to enhance the parasocial relationship (Yuan & Lou, 2020).

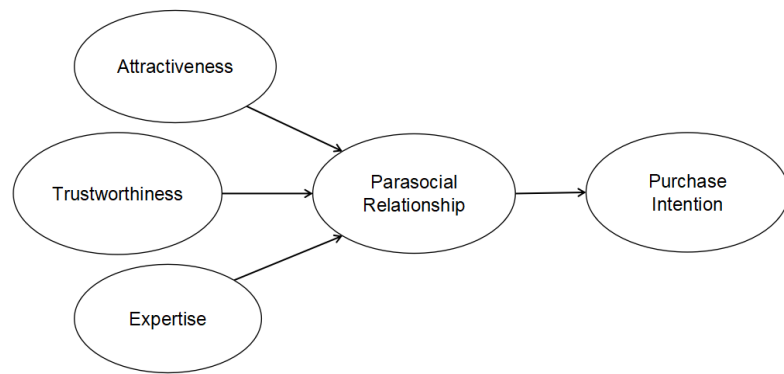


Figure 2: Theoretical Framework-PRT

Based on the review of literature, the conceptual model is presented in Figure 3.

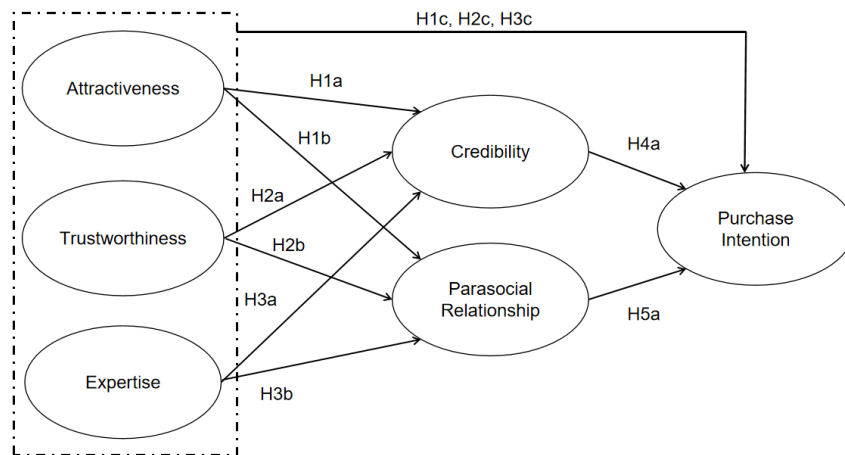


Figure 3: Conceptual Framework

2 Literature Review

2.1 Cunbo in China

Cunbo is one type of live streaming commerce. According to a widely accepted definition (What is Cunbo, 2020), Cunbo is a specific "live e-commerce" form. Unlike celebrities who endorse products, local farmers or village cadres are always streamers to advertise their agricultural products through live streaming platforms. Live streaming commerce is a development of electronic commerce which incorporates in-the-moment social engagement. On a live streaming platform, it carries out e-commerce operations and transactions (Cai, 2019).

At the Taobao Live Streaming Ceremony held on March 30, 2019, Taobao's "Cunbo plan" was officially launched, announcing that it would cultivate 1,000 farmers with a monthly income of over 10,000 in 100 counties across the country. One year after Taobao's "Cunbo plan" launched, more than 1.4 million live streams of agricultural products have been carried out on Taobao's Cunbo. In addition, the live broadcast area covers more than 2,000 counties in 31 provinces and cities across the country, attracting more than 60,000 "farmer streamers" to join Taobao's "Cunbo Program" (Chen, 2022).

China's developed live streaming industry and e-commerce industry enable farmers to have live streaming on various platforms, such as Douyin and Kuaishou, in addition to Taobao.

2.2 Live Streaming Influencers in Cunbo

According to Qi et al. (2022)'s definition, on the online live streaming platform, the influencer is a person who has some fans and interacts both within and outside of the live streaming sales events. As a result, the influencers can use the information about the demands of their followers (or future customers), which may influence consumers' purchasing behavior. These qualities set the influencer apart from conventional retailers (Qi et al., 2022). Influencers in Cunbo also need to interact with the audience or fans, mostly within the live streaming sales event, to promote their agricultural products. Most of the influencers in Cunbo are local farmers, even though few may attract many fans after providing some live streaming content.

Selling and marketing agricultural products is one of the greatest challenges under covid-19. With the traditional sales channels gradually declining, "farmer streamer influencers" emerged, and many started the trend of farmers' Cunbo to speak for their agricultural products. Due to the effective promotion of live streaming, many local farmers can sell their agricultural products to the whole country by using the live streaming platform at home. Among them, the income of nearly 2,000 new farmers in the first year of Taobao's "village seeding program" exceeded 10,000 yuan (Chen, 2022).

2.3 Theoretical Framework and Hypothesis Development

2.3.1 Purchase Intention of Live Streaming Products

Live streaming has been around for a while in China, but it has recently gained popularity in 2019 and established itself as a crucial channel for consumers and retailers (Zhou et al., 2021). During the COVID-19 epidemic, it has seen a swift increase of the growth of this industry. Chinese live streaming audience were 638 million as of June 2021, with 384 million (or 38% of all internet users) watching live streaming from online retailers. The market for live streaming in China was worth 1.2 trillion yuan (around \$190 billion) in 2020 (Zhang, 2022).

Purchase intention can be regarded as a consumer's willingness to purchase a specific item (sometimes service) based on their subjective and overall evaluation (Dodds et al., 1991). Purchase intentions, according to Hsu (1987), were defined as specific exchange behaviors that emerged from customers' overall evaluations of a product. It is a perceptual response to one's perspective of an item. One of the active study topics in the literature is customer online purchase intention. The level of a consumer's desire to engage in particular purchasing behaviors on the Internet can be determined by their customer's online purchase intention (Salisbury et al., 2001). Ajzen (1991) points out that purchase intention can measure the willingness of the consumer to engage in a particular action. Based on theories, consumer intention is defined as the willingness of online purchases through Cunbo in this research.

2.3.2 The S-O-R framework

According to Mehrabian and Russell (1974), the stimulus that people receive from external environment would trigger their internal evaluation states, which can subsequently result in either positive or negative conduct (response). The organism would respond to environmental stimuli through a series of psychological or cognitive processes with some behavioral reactions. Attitude of individual is a manifestation of their internal response, and their particular conduct is a manifestation of their exterior response (Lorenzoromero & Gomezborja, 2016). This model has been effectively used in e-commerce research to examine user behaviors, including website stickiness and customer loyalty, as well as settings like conventional live streaming platforms and online brand communities (Kang, 2021).

For this study's theoretical framework, it is preferable to employ the S-O-R framework. The first reason is that this model has been used to determine the effect of interactivity on consumer engagement behavior in live streaming commerce environment (Kang, 2021). Second, Cunbo, as a type of live e-commerce, is very interactive. It needs more interaction before transactions. For example, the audience asks the influencer on Cunbo to personally pick fruit on the tree and taste to describe the taste of the fruit, which aims to get a complete picture of a product. Thus, the S-O-R framework help this article build an integrated model to reflect three

dimensions of source credibility (attractiveness, trustworthiness, expertise) during interaction to affect purchase intention.

2.3.3 Source Credibility

A term frequently used to suggest a influencers' favorable traits, which influence the receiver's reception of certain message is source credibility (Ohanian,1990). Source credibility model is a widely used methodology for assessing the effectiveness of endorsements (Lim et al., 2017). Most studies have adopted expertise (or competence) and trustworthiness as key dimensions of source credibility (Fogg & Tseng, 1999). Consumers are more inclined to believe the information offered by a trustworthy endorser, making credibility vital for production endorsement. Given their professional knowledge, customers will trust endorsers more based on expertise (Mat et al., 2019). Besides, the messages of an attractive communicator are demonstrated to be more convincing (Chaiken, 1979). Physical attractiveness influences stereotype categorization. People always form comprehensive notions of whom they observe simply based on physical attractiveness (Patzner,1983). This research is built on the theoretical underpinnings of Ohanian's (1990) source credibility model. It describes source credibility as a concept which contains three components, including influencer's attractiveness, trustworthiness, and expertise. Many former researches had focused on celebrity under this model, which also showed that all of these components had a significant impact on purchase intention under celebrities' endorsement. However, previous studies mostly focus on celebrity's influence on consumer behavior, and endorsers are always celebrities in live commerce. The endorser (or seller) in Cunbo are always local farmers or village cadres who advertise and sell their agricultural products through live streaming, which has not been studied yet under this model.

2.3.4 Attractiveness

In this paper, "attractiveness" refers to the physical traits or qualities that may attract the desired audience due to personal features and physical appearance (Ohanian,1990). Chaker et al. (2019) describe it has a "beauty premium", because attractiveness positively affects both personal and professional life. Attractive salesperson is perceived as more reliable than ordinary one (Kulesza, 2014). In the social psychology literature, the role of attractiveness is well-established, which suggests that exposure to or interaction with attractive people tends to generate favorable feelings and even desires to create a close connection (Lemay Jr, Clark, & Greenberg, 2010). Consumer intentions are significantly impacted by physical attractiveness. Endorsers with appealing traits might influence buyers' intentions to buy (Kahle & Homer, 1985). Therefore, the following hypotheses were made:

H1a: Attractiveness of Cunbo live streamer influencer is positively associated with credibility Cunbo e-commerce.

H1b: Attractiveness of Cunbo live streamer influencer is positively associated with parasocial relationship (PR).

H1c: Attractiveness of Cunbo live streamer influencer is positively associated with purchase intention (PI).

2.3.5 Trustworthiness

Ohanian (1990) defines trustworthiness as the amount of faith that consumers have in influencers' ability to communicate the claims they consider to be the most reliable. Customers are more willing to trust the information offered by a trustworthy endorser, so trustworthiness is crucial for practical endorsement. According to AlFarraj (2021), 40% of respondents between 18-24 put more faith in influencers than actual brand promotion. Additionally, trustworthiness is related to credibility. Trustworthiness is an important component of constructing the credibility of peer endorsers (Munnukka, 2016). Moreover, customers are more likely to buy from endorsers who have won over their supporters' trust by effectively fostering favorable sentiments toward the things they promote (Tripp et al., 1994). Endorser with a high trustworthiness score might alter the attitudes of consumers and their intent to make purchases (Mat et al., 2019). Accordingly, the following hypotheses were established:

H2a: Trustworthiness of Cunbo live streamer influencer is positively associated with credibility.

H2b: Trustworthiness of Cunbo live streamer influencer is positively associated with parasocial relationship (PR).

H2c: Trustworthiness of Cunbo live streamer influencer is positively associated with purchase intention (PI).

2.3.6 Expertise

The fundamental definition of expertise is the level of the endorser's perceived knowledge, experience, or abilities to sell the product (Van der Walldt, 2009). It is believed that different celebrities have varying levels of product expertise. For instance, athletes are believed to have extensive knowledge of sports items, whereas celebrities are believed to be knowledgeable about beauty products (Gong & Li, 2017). The expression based on professional expertise shows credibility, which depends on knowledge to promote products (Mat et al., 2019). Expertise will not only impact credibility perceived by the influencers but also affect customer purchase intention and behavior (Schouten, 2019). The endorser who owns high-expertise is also more convincing and positively influences customers' attitudes and buying intentions (Goldsmith et al., 2000). Therefore, the following hypotheses were proposed:

H3a: Expertise of Cunbo live streamer influencer is positively associated with credibility.

H3b: Expertise of Cunbo live streamer influencer is positively associated parasocial relationship (PR).

H3c: Expertise of Cunbo live streamer influencer is positively associated with purchase intention (PI).

2.3.7 Credibility

Endorsers are frequently employed in advertisements to increase message's credibility. Consumer's attitude toward endorsers always affects their perceived credibility toward advertisement (Clow et al., 2006). Many researchers have studied the effects of celebrities as endorsers on consumer behavior (Munnukka, 2016). Moreover, Pornpitakpan (2004) points out that celebrity endorsers' perceived credibility enhance the purchase intention of consumers under the model of source credibility. Based on literature review, it has shown that past studies have not researched credibility and the dimensions of source credibility when the endorser is such a special group of people (local farmers and village cadres). Additionally, mediation effects of credibility also have not been studied on Cunbo. Thus, the following hypotheses were made:

H4a: Credibility Cunbo e-commerce is positively associated with Purchase Intention (PI).

H4b: Credibility Cunbo e-commerce mediates the relationship between attractiveness of Cunbo live streamer influencer and purchase intention (PI).

H4c: Credibility Cunbo e-commerce mediates the relationship between trustworthiness of Cunbo live streamer influencer and purchase intention (PI).

H4d: Credibility Cunbo e-commerce mediates the relationship between expertise of Cunbo live streamer influencer and purchase intention (PI).

2.3.8 Paraoscial Relationship

The parasocial relationship theory, which has its origins in media studies and psychology, has described the reasons certain customers heed certain influencers' suggestions but not others (Horton & Wohl, 1956). The phrase "parasocial relationship" describes an intimate, one-sided relationship that a viewer develops over time with a media influencer or celebrity as a result of frequent interactions with the performance via mediated reality (Dibble et al., 2015). Because of its functional characteristics that increase viewer's contact with influencers through increased interactivity, online environments enhance the growth of parasocial interactions between audiences and influencers (Labrecque, 2014). In prior studies, researchers have found that parasocial relationship is highly associated with source credibility. A higher source credibility enhances the formation of a stronger parasocial relationship. For example, Rungruangjit (2022) investigates the relationship between parasocial relationships and purchase intention under the influence of celebrities' endorsement through live streaming commerce. These

studies' results have told that parasocial relationship is highly positively associated with increasing consumer's purchase intentions. However, the endorsers in Cunbo is a special group. The endorser (or sellers) in Cunbo are always local farmers or village cadres. Previous research has not investigated the effect of parasocial relationship when these kinds of people (much closer to common people, instead of celebrities) are endorsers and to what degree the audience will form parasocial relationships with them. Thus, the following hypotheses were made:

H5a: Parasocial relationship (PR) is positively associated with Purchase Intention (PI).

H5b: Parasocial relationship (PR) mediates the relationship between attractiveness of Cunbo live streamer influencer and purchase intention (PI).

H5c: Parasocial relationship (PR) mediates the relationship between trustworthiness of Cunbo live streamer influencer and purchase intention (PI).

H5d: Parasocial relationship (PR) mediates the relationship between expertise of Cunbo live streamer influencer and purchase intention (PI).

3 Methods

3.1 Data Collection and Sample Characteristics

This research uses online questionnaire to explore customers' attitudes and online purchase behavior through Cunbo. Participants are Chinese online customers who have the experience watching Cunbo or purchasing agricultural products through Cunbo and have different education levels, and monthly incomes. Two filter questions were asked at the start of the poll to make sure that the participant was eligible. The following filter questions were posed to the participants: 1) Have you seen influencers (farmers) promote and sell agricultural products on any live-streaming platforms? 2) Have you purchased any agricultural products after watching their promotion? The participants who answer yes, which means they have relevant experience, can continue to answer the questionnaire.

The participant demographics are shown in percentage form in Table 1. Effective responses are collected by 302 participants with 143 males and 159 females. The concentration of their ages is between 18-37, which accounts for 76.82%. 88.41% of them have 1500-6000 monthly income.

Table 1 Demographics of Participant

Demographics	Frequency %
Gender	
Male	47.35
Female	52.65
Age	
≤17	2.98
18-20	17.88
23-27	21.85
28-32	19.54
33-37	17.55
38-42	9.6
43-47	8.28
>48	2.32
Monthly income	
Less than 1500 RMB	2.98
1501-3000 RMB	39.4
3001-4500 RMB	28.81
4501-6000 RMB	20.2
6000-7500 RMB	5.96
>7500 RMB	2.65
Frequency of purchasing agricultural products by e-commerce platform (Taobao, Meituan, Jingdong, etc.)	
never	0.33
sometimes	9.93
usually	64.57
always	25.17
Frequency of watching Cunbo	
sometimes	9.6
usually	58.61
always	31.79
The money spent on purchasing agricultural products through Cunbo (every month)	
<200 RMB	39.4
200-400 RMB	38.74
400-600 RMB	15.23
600-800RMB	3.97

800-1000 RMB	1.66
>1000 RMB	0.99
How many sellers(influencers) on Cunbo do you often follow?	
1-2	35.1
3-4	37.42
5-6	25.5
>7	1.99

3.2 Measures and Reliability Tests

Measures used in this study came from other studies. The constructs include attractiveness (ATT), trustworthiness (TRU), expertise (EXP), credibility (CRE), parasocial Relationship (PR), and purchase Intention (PI). All the characteristics ranges from 1 (Strongly disagree) to 7 (Strongly agree), were evaluated by using a seven-point Likert scale. A pilot test was conducted with 54 people to collect responses in order to pretest the reliability of the measurements. All measurement items should be preserved for the official reliability tests because the results of the pilot test did not show any reliability issues.

Cronbach's alpha, also known as tau-equivalent reliability, is a reliability coefficient that offers a mechanism to assess how reliable tests work on the inside. The dependability of variables on different scales is evaluated using this coefficient, which has a range of 0 to 1. Cronbach's alpha was employed to evaluate the consistency of the variables. With a minimum desired effect size of 0.7, Cronbach's alpha reaches an adequate reliability coefficient (Bujang et al., 2018). All of the effective responses to questionnaires were gathered in two months. Table 2 shows Cronbach's alpha value for each variable. According to the results, these all values were more than 0.7, which indicates that all of the variables' reliability is acceptable.

Table 2 Cronbach's Alpha (α) of Each Variable

Variables	No. of Items	α
Attractiveness (ATT)	5	0.888
Trustworthiness (TRU)	5	0.887
Expertise (EXP)	5	0.866
Credibility (CRE)	5	0.859
Parasocial Relationship (PR)	5	0.857
Purchase Intention (PI)	5	0.865

3.3 Correlation Test

The r coefficient, often known as the correlation coefficient, measures the correlations between different variables. The correlation r number, which ranges from -1 to +1, can be either positive or negative to indicate a positive or negative correlation connection. It shows that the two variables are positively associated if the r value is between 0 and +1, or they are negatively associated if the value is negative. The correlation between two variables is stronger the closer the r value is near |1|.

Table 3 correlation analysis

Variables	ATT	TRU	EXP	CRE	PR	PI
ATT	1					
TRU	0.393**	1				
EXP	0.252**	0.340**	1			
CRE	0.271**	0.330**	0.419**	1		
PR	0.280**	0.457**	0.410**	0.408**	1	
PI	0.479**	0.470**	0.533**	0.524**	0.462**	1

** $P < 0.01$. Correlation is significant at the 0.01 level (2-tailed).

* $P < 0.05$. Correlation is significant at the 0.05 level (2-tailed).

The result of the correlation analysis between different variables are showed in table 3. The absolute magnitude of the observed correlation coefficient (two variables), which ranged from 0.90 to 1.00, will get a high correlation, according to the method of interpretation of a correlation coefficient described by Schober (2018). A significant correlation between the two variables is shown by a r value of between 0.7 and 0.89. A moderate correlation exists when the two variables' r values are between 0.4 and 0.69. Other values (< 0.4) show no significant or negative correlation. Most variables in the data set have a modest association with other variables in this research.

4 Results

4.1 Evaluation of Measurement Results

This study uses regression model, a statistical method for examining the relationships between variables, to analyze. In most cases, the researcher aims to determine the relationship between one variable and another (Sykes, 1993). Mediation is the additional variable to the relationship between X and Y. A simple mediation model is showed in figure 1, In this model, X causes the mediator (M), and M causes Y, resulting in the relationship $X \rightarrow M \rightarrow Y$ (MacKinnon, 2007). In the model that predicts M from X, a is the coefficient for X, while b and c' are respective coefficients that predicts Y from M and X. The product of a and b measures the indirect effect of X on Y via M, whereas c' measures the direct effect of X (Hayes, 2009).

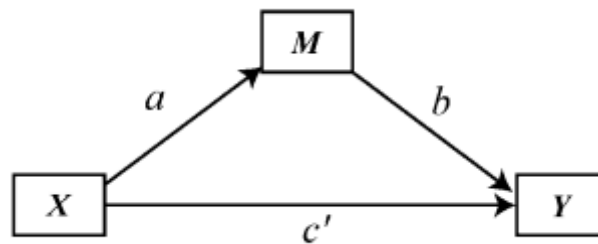


Figure 4 Mediation Model

In hypothesis model of this research, attractiveness (ATT), trustworthiness (TRU), expertise (EXP) are three independent variables that each is associated with purchase intention (PI). Credibility and parasocial relationship (PR) mediate the relationship between three independent variables (ATT, TRU, EXP) and purchase intention.

4.2 Hypothesis Analysis

The finding based on structural model analysis is shown in Table 4. In H1a, $\beta = 0.121$, $p < 0.05$, which indicates that attractiveness of Cunbo live streamer influencer is greatly positively associated with credibility of Cunbo e-commerce. Thus, H1a is supported. In H1b, $\beta = 0.08$, $p = 0.136 > 0.05$, so H1b is rejected, which indicates that attractiveness of Cunbo live streamer influencer does not greatly affect parasocial relationship. In H1c, $\beta = 0.255$, $p < 0.01$, hence H1c is supported so attractiveness of Cunbo live streamer influencer is greatly associated with purchase intention. In H2a, $\beta = 0.170$, $p < 0.01$, so H2a is supported, which shows that trustworthiness of Cunbo live streamer influencer is significantly associated with credibility of Cunbo e-commerce. H2b, $\beta = 0.322$, $p < 0.01$, so H2b is supported, which indicates that

trustworthiness of Cunbo live streamer influencer is significantly associated with parasocial relationship. In H2c, $\beta = 0.144$, $p < 0.01$, so H2c is supported, which shows that trustworthiness of Cunbo live streamer influencer significantly impact purchase intention. In H3a, $\beta = 0.315$, $p < 0.01$, so H3a is supported, which means that expertise of Cunbo live streamer influencer significantly impact credibility of Cunbo e-commerce. In H3b, $\beta = 0.277$, $p < 0.01$, so H3b is supported, which shows that expertise of Cunbo live streamer influencer significantly impact parasocial relationship. In H3c, $\beta = 0.269$, $p < 0.01$, so H3c is supported, which means that expertise of Cunbo live streamer influencer significantly impact purchase intention. In H4a, $\beta = 0.248$, $p < 0.01$, so H4a is supported, which indicates that Credibility Cunbo e-commerce is positively associated with purchase intention. In H5a, $\beta = 0.113$, $p = 0.22 > 0.05$, so H5a is rejected, which indicates that parasocial relationship does not greatly affect purchase intention.

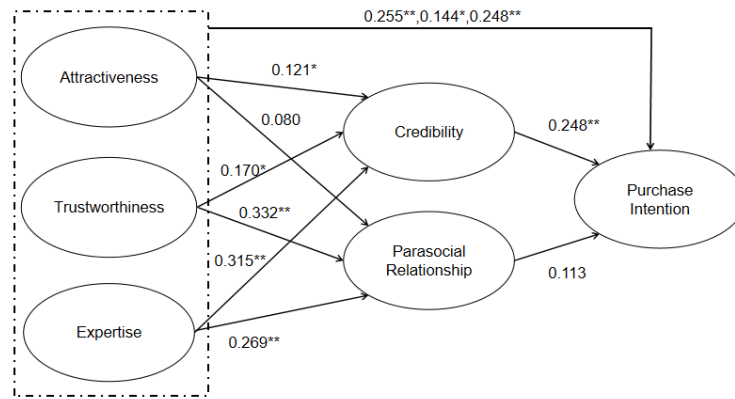
In table 6, conclusions based on hypothesis test result are shown.

Table 4. Hypothesis Analysis

Hypotheses	Path	Coefficient	<i>t</i> value	<i>p</i> -value
H1a	ATT→CRE	0.121	2.170	0.031*
H1b	ATT→PR	0.080	1.493	0.136
H1c	ATT→PI	0.255	5.683	0.000**
H2a	TRU→CRE	0.170	2.947	0.003**
H2b	TRU→PR	0.332	6.003	0.000**
H2c	TRU→PI	0.144	2.971	0.003**
H3a	EXP→CRE	0.315	6.047	0.000**
H3b	EXP→PR	0.277	5.267	0.000**
H3c	EXP→PI	0.269	5.718	0.000**
H4a	CRE→PI	0.248	5.269	0.000**
H5a	PR→PI	0.113	2.310	0.22

** $P < 0.01$. Correlation is significant at the 0.01 level (2-tailed).

* $P < 0.05$. Correlation is significant at the 0.05 level (2-tailed).



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*P<0.05. Correlation is significant at the 0.05 level (2-tailed).

Figure 5 Result of hypothesized model

Table 5 shows the results of the mediation analysis of credibility (CRE) and parasocial relationship (PR), taken as the mediation factors between three independent variables (ATT, TRU, EXP) and purchase intention. The total, direct, and indirect impacts are computed by using SPSS 24 and Hayes Process Macro. The indirect effects via CRE and PR are significant because $p < 0.01$, showing that CRE and PR plays a mediation role between three independent variables (ATT, TRU, EXP) and purchase intention under Cunbo. The total effects of variables, like ATT→CRE→PI and ATT→PR→PI, may be the same due to their zero-order correlation with dependent variables, based on Alwin (1977).

In table 6, conclusion of hypothesis test results is demonstrated.

Table 5 Mediation analysis

Path	Effect	Coefficient	SE	t value	p-value	LLCI	ULCI
ATT→PI	Direct	0.3182	0.0409	7.7807	0.0000**	0.2377	0.3987
TRU→PI	Direct	0.2759	0.0460	5.9944	0.0000**	0.1853	0.3665
EXP→PI	Direct	0.3558	0.0464	7.6730	0.0000**	0.2645	0.3804
ATT→CRE→PI	Total	0.4195	0.0444	9.4404	0.0000**	0.3320	0.5069
ATT→PR→PI	Total	0.4195	0.0444	9.4404	0.0000**	0.3320	0.5069
TRU→CRE→PI	Total	0.3969	0.0431	9.2155	0.0000**	0.3132	0.4816
TRU→PR→PI	Total	0.3969	0.0431	9.2155	0.0000**	0.3132	0.4816
EXP→CRE→PI	Total	0.4987	0.0457	10.9168	0.0000**	0.4088	0.5332
EXP→PR→PI	Total	0.4987	0.0457	10.9168	0.0000**	0.4088	0.5332
Indirect effect	Effect	Coefficient	Boot SE	Boot LLCI		Boot LLCI	
ATT→CRE→PI	Indirect 1	0.1012	0.0335	0.0404		0.1719	
ATT→PR→PI	Indirect 2	0.0875	0.0289	0.0372		0.1503	
TRU→CRE→PI	Indirect 3	0.1154	0.0350	0.0544		0.1920	
TRU→PR→PI	Indirect 4	0.1210	0.0336	0.0630		0.1939	
EXP→CRE→PI	Indirect 5	0.1429	0.0356	0.0771		0.2169	
EXP→PR→PI	Indirect 6	0.1123	0.0327	0.0563		0.1841	

Table 6 Summary of Hypothesis

Hypothesis	Results
H1a: Attractiveness of Cunbo live streamer influencer is positively associated with credibility of Cunbo e-commerce.	Supported
H1b: Attractiveness of Cunbo live streamer influencer is positively associated with parasocial relationship.	Rejected
H1c: Attractiveness of Cunbo live streamer influencer is positively associated with purchase intention.	Supported
H2a: Trustworthiness of Cunbo live streamer influencer is positively associated with credibility of Cunbo e-commerce.	Supported
H2b: Trustworthiness of Cunbo live streamer influencer is positively associated with parasocial relationship.	Supported
H2c: Trustworthiness of Cunbo live streamer influencer is positively associated with purchase intention.	Supported
H3a: Expertise of Cunbo live streamer influencer is positively associated with credibility of Cunbo e-commerce.	Supported
H3b: Expertise of Cunbo live streamer influencer is positively associated parasocial relationship.	Supported
H3c: Expertise of Cunbo live streamer influencer is positively associated with purchase intention.	Supported
H4a: Credibility Cunbo e-commerce is positively associated with Purchase Intention.	Supported
H4b: Credibility Cunbo e-commerce mediates the relationship between attractiveness of Cunbo live streamer influencer and purchase intention.	Supported
H4c: Credibility Cunbo e-commerce mediates the relationship between trustworthiness of Cunbo live streamer influencer and purchase intention.	Supported
H4d: Credibility Cunbo e-commerce mediates the relationship between expertise of Cunbo live streamer influencer and purchase intention.	Supported
H5a: Parasocial relationship is positively associated with Purchase Intention .	Rejected
H5b: Parasocial relationship mediates the relationship between attractiveness of Cunbo live streamer influencer and purchase intention.	Supported
H5c: Parasocial relationship mediates the relationship between trustworthiness of Cunbo live streamer influencer and purchase intention.	Supported
H5d: Parasocial relationship mediates the relationship between expertise of Cunbo live streamer influencer and purchase intention.	Supported

Discussion

Cunbo is a new form of e-commerce in China, whose appearance attributes to the developed live streaming industry and Internet popularization. E-commerce is always a popular topic in research. Source credibility is critical for influencing consumers to create parasocial relationship in e-commerce, according to several research that have utilized the parasocial relationship theory to examine the relationship between parasocial relationships and sources (Rungruangjit, 2022). Nevertheless, most former studies have discussed the effects of celebrity endorsement, but few talk about the effects when endorsers are farmers and more ordinary people.

This paper aims to explore the effects of 3 elements (i.e., attractiveness, expertise, and trustworthiness) on Chinese consumer purchase intention through Cunbo. Meanwhile, this article considers credibility and parasocial relationship as two mediating variables to study their roles between 3 elements of source credibility and Chinese consumers' purchase intention. Consequently, the results of this study lead to a better understanding of the new burgeoning Cunbo. This study hopes to provide a basic understanding of Cunbo and provide some basic guidelines for influencers on Cunbo or relevant departments.

Conclusion

This study examines how Cunbo affects consumer's purchase intention by considering source credibility and parasocial relationship. Most hypotheses, except for H1b and H5a, have been supported based on the analysis of the result. It indicates that credibility can strengthen consumers' purchase intention through three dimensions (attractiveness, trustworthiness, expertise) of source credibility (Lu & Chen, 2021; Xiao & Chan, 2018; Rungruangjit, 2022), which is consistent with former research focusing on celebrity endorsers (Rahmi et al., 2017; Weismueller et al., 2020). An important finding is that parasocial relationship does not significantly affect purchase intention on Cunbo, which is inconsistent with form researches that focus on celebrity endorse effectiveness. Capland and Turner (2007) pointed out that consumers feel more confident giving their personal information while using live streaming commerce. Customers can create parasocial connections through live streaming commerce and reduce stress in real life. However, different social and cultural environments may led to different perceptions of the parasocial relationship.

Acknowledgements

Theoretical Implications

This study confirms and builds upon other research findings, as well as presents a number of critical theoretical implications. Although e-commerce has been a popular area to research due to its rapid development and huge economic benefits, Cunbo is still a very new form of e-commerce, whose characteristic is that endorsers are always farmers, or more ordinary people, contrary to celebrity. Most studies have focused on celebrity's influences in e-commerce (eg. Rahmi, 2017; Rungruangjit, 2022; Weismueller, 2020;). This study focuses on the special endorser group and explores the effects of this group, which aims for developing new perspectives on farmer endorser effects.

Additionally, this research also discovers that parasocial relationship mediated the relationship between Cunbo influencer's qualities and consumer's purchase intentions when the parasocial relationship theory and the source credibility model were combined, which is consistent with former research that studied endorsement effectiveness when celebrity acts as endorser (Rungruangjit, 2022). Furthermore, it was discovered that endorsers' attractiveness and parasocial relationship might not directly influence consumers' purchase intentions. However, the results show that the parasocial relationship mediates the relationship between attractiveness of Cunbo live streamer influencer and purchase intention. Thus, in Cunbo, different from celebrity endorsement, it can be inferred that influencers in Cunbo must also be able to build parasocial connections with customers in addition to being attractive.

Managerial Implications

In China, it is easy to be an influencer on live streaming platforms. Moreover, the government has encouraged more and more farmers to participate in e-commerce because it greatly increases income level and boost the economic development (Tang et al., 2021). Thus, in the future, more farmers may choose Cunbo as an effective method to advertise and sell their products. Different from common live streaming commerce, Cunbo is still a new area. Compared with celebrities, endorsers in Cunbo are less skilled. However, as more and more people enter this area, it will keep on improving and standardizing. Long-term market competitiveness will finally move toward competition with online endorsers' skills. Even now, some farmers attract massive followers through their characteristics and skills, even can be regarded as celebrities. However, taking into account the characteristics of farmers, most of them have a relatively low level of education, and it is less possible for them to realize how most successfully advertise or sell their agricultural products on their own. Therefore, governments and relevant platforms should guide and teach them in some ways which aim to increase promotion efficiency, and this paper may provide some perspectives for them.

Moreover, consumers require influencers who can engage them in light-hearted and amiable dialogues, speak to them as if they are friends, and clearly and politely respond to their inquiries in the context of live streaming commerce, where goods are sold in real time (Rungruangjit,2022). As a result, parasocial relationships should be an important aspect to examine. Building solid parasocial relationships with customers can help influencers strengthen their buying intentions. During the interaction, the audiences ask questions about the products, and live streamers need to answer based on their expertise. As the result shows, expertise plays a vital role in increasing consumers' purchase intention. Therefore, influencers on Cunbo should increase their expertise in order to strengthen credibility and solidify parasocial relationships to enhance consumer's purchase intention. Additionally, governments can help train farmers as a method of supporting.

Limitations and Future Research

There are certain restrictions on this study, which presents chances for more research. First, this study only focused on Chinese consumers; most participants are relatively young. Additionally, this study only focuses on agricultural products which are frequently sold in Cunbo without accounting for any specific goods information, including price or product category. Future research should thus identify product categories and pricing points in order to provide more precise results. Second, Taobao's "Cunbo plan" was officially launched in 2019, which indicates that it is a new and dynamic market. As more people enter this area, there could be a lot of potential changes in the Cunbo industry. Third, few farmers have attracted many followers through their characteristics and performance, even can be regarded as celebrities. This research does not accurately exclude this small group of the endorser. Some participants may consider them when filling the questionnaire. Thus, future studies should specifically exclude this type of endorser.

Fourth, the link between the respondents' demographic traits, which may operate as moderating variables affecting the present dependent variables, was not tested in this study. The demographic information is just used for determining reliable responses. For instance, the people who do not know Cunbo are excluded because it is impossible for them to make effective responses.

Additionally, the demographic data in Table 1 gives some information to comprehend the traits of the respondents. For instance, according to the demographic profile, people ages 18-37 make up the majority of the audience of Cunbo. Thus, future studies can examine age differences because age may also contribute greatly consumer's attitude toward Cunbo.

References

- [1] AlFarraj, O., Alalwan, A. A., Obeidat, Z. M., Baabdullah, A., Aldmour, R., & Al-Haddad, S. (2021). Examining the impact of influencers' credibility dimensions: attractiveness, trustworthiness and expertise on the purchase intention in the aesthetic dermatology industry. *Review of International Business and Strategy*.
- [2] Alwin, D. F. (1977). Associations vs. Effects: A Note of Clarification. *Social Forces*, 250-252.
- [3] Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, 50(2), 179-211.
- [4] Bujang, M. A., Omar, E. D., & Baharum, N. A. (2018). A review on sample size determination for Cronbach's alpha test: a simple guide for researchers. *The Malaysian Journal of Medical Sciences*, 25(6), 85.
- [5] Cai, J., & Wohn, D. Y. (2019). Live streaming commerce: Uses and gratifications approach to understanding consumers' motivations.
- [6] Caplan, S. E., & Turner, J. S. (2007). Bringing theory to research on computer-mediated comforting communication. *Computers in human behavior*, 23(2), 985-998.
- [7] Chaiken, S. (1979). Communicator physical attractiveness and persuasion. *Journal of Personality and Social Psychology*, 37(8), 1387.
- [8] Chaker, N. N., Walker, D., Nowlin, E. L., & Anaza, N. A. (2019). When and how does sales manager physical attractiveness impact credibility: A test of two competing hypotheses. *Journal of Business Research*, 105, 98-108.
- [9] Chen, Guang. (2022). Taobao "Village Seeding Program" How to help rural economic revitalization. *Media Practice*. 61-64.
- [10] Chung, S., & Cho, H. (2017). Fostering parasocial relationships with celebrities on social media: Implications for celebrity endorsement. *Psychology & Marketing*, 34(4), 481-495.
- [11] Clow, K., James, K., Kranenburg, K. and Berry, C. (2006), "The relationship of the visual element of an advertisement to service quality expectations and source credibility", *Journal of Services Marketing*, Vol. 20 No. 6, pp. 404-411.
- [12] CNNIC. (2020). The 46th Statistical Report on Internet Development in China.
- [13] Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16(3), 297-334.
- [14] Dibble, J. L., Hartmann, T., & Rosaen, S. F. (2015). Parasocial interaction and parasocial relationship: Conceptual clarification and a critical assessment of measures. *Human Communication Research*, 42, 21-44.
- [15] Dodds, W. B., Monroe, K. B., & Grewal, D. (1991). Effects of price, brand, and store information on buyers' product evaluations. *Journal of marketing research*, 28(3), 307-319.

- [16] Fogg, B. J., & Tseng, H. (1999). The elements of computer credibility. In *Proceedings of the SIGCHI conference on Human Factors in Computing Systems*, 80-87.
- [17] Gong, W., & Li, X. (2017). Engaging fans on microblog: the synthetic influence of parasocial interaction and source characteristics on celebrity endorsement. *Psychology & Marketing*, 34(7), 720-732.
- [18] Hayes, A. F. (2009). Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. *Communication monographs*, 76(4), 408-420.
- [19] Horton, D., & Richard Wohl, R. (1956). Mass communication and parasocial interaction: Observations on intimacy at a distance. *Psychiatry*, 19(3), 215-229.
- [20] Hsu, S.C. (1987), *English of Management*, Tunghua Publishing, Taiwan.
- [21] MacKinnon, D. P., Fairchild, A. J., & Fritz, M. S. (2007). Mediation analysis. *Annual review of psychology*, 58, 593Munnukka, J., Uusitalo, O., & Toivonen, H. (2016). Credibility of a peer endorser and advertising effectiveness. *Journal of Consumer Marketing*.
- [22] Kahle, L. R., & Homer, P. M. (1985). Physical attractiveness of the celebrity endorser: A social adaptation perspective. *Journal of consumer research*, 11(4), 954-961.
- [23] Kang, K., Lu, J., Guo, L., & Li, W. (2021). The dynamic effect of interactivity on customer engagement behavior through tie strength: Evidence from live streaming commerce platforms. *International Journal of Information Management*, 56, 102251.
- [24] Kulesza, W., Szypowska, Z., Jarman, M. S., & Dolinski, D. (2014). Attractive chameleons sell: The mimicry-attractiveness link. *Psychology & Marketing*, 31(7), 549-561.
- [25] Labrecque, L. I. (2014). Fostering consumer–brand relationships in social media environments: The role of parasocial interaction. *Journal of Interactive Marketing*, 28, 134–148.
- [26] Li, X., Guo, H., Jin, S., Ma, W., & Zeng, Y. (2021). Do farmers gain internet dividends from E-commerce adoption? Evidence from China. *Food Policy*, 101.
- [27] Lemay Jr, E. P., Clark, M. S., & Greenberg, A. (2010). What is beautiful is good because what is beautiful is desired: Physical attractiveness stereotyping as projection of interpersonal goals. *Personality and Social Psychology Bulletin*, 36(3), 339-353.
- [28] Lim, X. J., Radzol, A. M., Cheah, J., & Wong, M. W. (2017). The impact of social media influencers on purchase intention and the mediation effect of customer attitude. *Asian Journal of Business Research*, 7(2), 19-36.
- [29] Lorenzo-Romero, C., Alarcon-del-Amo, M. D. C., & Gómez-Borja, M. Á. (2016). Analyzing the user behavior toward electronic commerce stimuli. *Frontiers in behavioral neuroscience*, 10, 224.

- [30] Lu, B., & Chen, Z. (2021). Live streaming commerce and consumers' purchase intention: An uncertainty reduction perspective. *Information & Management*, 58(7), 103509.
- [31] MacKinnon, D. P., Fairchild, A. J., & Fritz, M. S. (2007). Mediation analysis. *Annual review of psychology*, 58, 593
- [32] Mat, W. R. W., Kim, H. J., Manaf, A. A. A., Ing, G. P., & Adis, A. A. A. (2019). Young Malaysian consumers' attitude and intention to imitate Korean celebrity endorsements. *Asian Journal of Business Research*, 9(3), 1-23.
- [33] Mehrabian, A., & Russell, J. A. (1974). The basic emotional impact of environments. *Perceptual and Motor Skills*, 38(1), 283-301.
- [34] Munnukka, J., Uusitalo, O., & Toivonen, H. (2016). Credibility of a peer endorser and advertising effectiveness. *Journal of Consumer Marketing*.
- [35] Ohanian, R. (1990). Construction and validation of a scale to measure celebrity endorsers' perceived expertise, trustworthiness, and attractiveness. *Journal of Advertising*, 19(3), 39-52.
- [36] Patzer, G. L. (1983). Source credibility as a function of communicator physical attractiveness. *Journal of Business Research*, 11(2), 229-241.
- [37] Pornpitakpan, C. (2004). The effect of celebrity endorsers' perceived credibility on product purchase intention: The case of Singaporeans. *Journal of international consumer marketing*, 16(2), 55-74.
- [38] Qi, A., Sethi, S., Wei, L., & Zhang, J. (2022). Top or regular influencer? Contracting in live-streaming platform selling. *Contracting in live-streaming platform selling* (August 28, 2022).
- [39] Qi, J., Zheng, X., & Guo, H. (2019). The formation of Taobao villages in China. *China Economic Review*, 53, 106-127.
- [40] Rahmi, Y., Sekarasih, L., & Sjabadhyni, B. (2017). The influence of beauty vlog on perceived source credibility and purchase intention. *Makara Human Behavior Studies in Asia*, 21(1), 13-23.
- [41] Rungruangjit, W. (2022). What drives Taobao live streaming commerce? The role of parasocial relationships, congruence and source credibility in Chinese consumers' purchase intentions. *Heliyon*, e09676.
- [42] Salisbury, W., Pearson, R., Pearson, A., & Miller, D. (2001). Identifying barriers that keep shoppers off the world wide web: developing a scale of perceived web security. *Industrial management & data systems*, 101(4), 165-176.
- [43] Securities daily. (2021, Sept, 8). Three years after the launch of "Cunbo plan" on Taobao, the sales of agricultural products exceeded 5 billion yuan. Retrieved from <https://finance.sina.com.cn/jjxw/2021-09-08/doc-iktzqtyt4740575.shtml>
- [44] Schober, P., Boer, C., & Schwarte, L. A. (2018). Correlation coefficients: appropriate use and interpretation. *Anesthesia & Analgesia*, 126(5), 1763-1768.

- [45] Schouten, A.P., Janssen, L. and Verspaget, M. (2019), "Celebrity vs influencer endorsements in advertising: the role of identification, credibility, and product-endorser fit", *International Journal of Advertising*, pp. 1-24.
- [46] Sokolova, K., & Kefi, H. (2020). Instagram and YouTube bloggers promote it, why should I buy? How credibility and parasocial interaction influence purchase intentions. *Journal of Retailing and Consumer Services*, 53, 101742.
- [47] Sykes, A. O. (1993). An introduction to regression analysis.
- [48] Tang, K., Xiong, Q., & Zhang, F. (2022). Can the E-commercialization improve residents' income?--Evidence from "Taobao Counties" in China. *International Review of Economics & Finance*, 78, 540-553.
- [49] Tripp, C., Jensen, T. D., & Carlson, L. (1994). The effects of multiple product endorsements by celebrities on consumers' attitudes and intentions. *Journal of consumer research*, 20(4), 535-547.
- [50] Van der Waldt, D. L. R., Van Loggerenberg, M., & Wehmeyer, L. (2009). Celebrity endorsements versus created spokespersons in advertising: A survey among students. *South African Journal of Economic and Management Sciences*, 12(1), 100-114.
- [51] What is Cunbo? (2020. October 28). Retrieved from <https://www.jianshu.com/p/3ab85105220a>.
- [52] Weismueller, J., Harrigan, P., Wang, S., & Soutar, G. N. (2020). Influencer endorsements: How advertising disclosure and source credibility affect consumer purchase intention on social media. *Australasian marketing journal*, 28(4), 160-170.
- [53] Xiao, M., Wang, R., & Chan-Olmsted, S. (2018). Factors affecting YouTube influencer marketing credibility: a heuristic-systematic model. *Journal of Media Business Studies*, 1–26.
- [54] Yin, Z. H., & Choi, C. H. (2022). Does e-commerce narrow the urban–rural income gap? Evidence from Chinese provinces. *Internet Research*.
- [55] Yuan, S., & Lou, C. (2020). How social media influencers foster relationships with followers: The roles of source credibility and fairness in parasocial relationship and product interest. *Journal of Interactive Advertising*, 20(2), 133-147.
- [56] Zhang, L. (2022, April). The Development of Livestream Commerce in China. In *2022 International Conference on Creative Industry and Knowledge Economy (CIKE 2022)* (pp. 85-90). Atlantis Press.
- [57] Zhou, M., Huang, J., Wu, K., Huang, X., Kong, N., & Campy, K. S. (2021). Characterizing Chinese consumers' intention to use live e-commerce shopping. *Technology in Society*, 67, 101767.