

# A STUDY ON THE PURCHASE INTENTIONS OF AGRICULTURAL PRODUCTS BY CHINESE CONSUMERS IN ZHEJIANG PROVINCE ON A LIVE SALES PLATFORM

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## Abstract

The purpose of this paper was to explore the attitudes relating to the consumer purchase intentions of live streaming sales and to know the influences on consumers' final purchase decisions for farming products through live streaming. A quantitative online survey was used to examine consumer purchase intentions for live streaming sales to understand more about their thoughts and behavior regarding agricultural products. The study collected 208 online customer surveys from Chinese nationals, performing a non-probability purposive sampling technique to validate the analysis. The sample size of 208 was calculated based on G\*Power. The results show that attitude homophily and influencer professionalism in relation to the influencers, impacts the purchase intentions of consumers, suggesting that the consumer decision path involves both affective and internalization processes before the consumer makes a decision to purchase the product. Perceived uncertainty was shown to be a marginal effect whereby consumers are slightly concerned about the quality and price of purchases through live stream shopping. These findings confirm the theory of planned behavior (TPB) by revealing that consumers' purchase intentions come from their own decision making. Additionally, the study extends the elaboration likelihood model (ELM) by proving that attitude homophily and professionalism have a high effect on purchase intentions for live sales. It was found that attitude homophily and professionalism are key factors to increase consumers' trust in products. Therefore, it is suggested that businesses using live stream sales should pay more attention to enhance relatedness for current and potential consumers.

**Keywords** – Social Attractiveness, Physical Attractiveness, Attitude Homophily, Perceived Uncertainty, Professionalism, Purchase Intention

## 1. INTRODUCTION

E-commerce live streaming is a new innovative type of technology-driven business model that has been developed in recent years shifting from image-centric e-business platforms to video-centric live sales platforms (Song, Chen, Guo, & Gao, 2021). Live commerce rapidly transformed as a main

shopping channel in China and has become a dependable digital tool for customer engagement and sales (Greenwald, 2020). In 2020, the initial half hour of Taobao's Live presales campaign received \$7.5 billion in total operational value (Zhang J. , 2020) Live streaming e-commerce made \$6.1 trillion in 2020 on Taobao, one of the major giant online

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shopping platforms in China, while it was projected that this will rise to \$7.7 trillion in 2021 (Ma, 2021). When coronavirus hit the country, the agriculture industry could no longer sell its produce because the products are usually sold in markets (Pan, Yang, Zhou, & Kong, 2020). E-commerce giants allowed the farming product sector to expand into the online shopping arena through live-streaming; this helped China's farmers to persist through the pandemic by offering an entirely new way of business which is likely to be sustained after the pandemic has ended (Hao, 2020).

Livestreaming is the invention of smart agriculture which is an improvement from old-fashioned sales models and e-commerce (Wang, Li, & Chen, 2022). Compared to traditional e-businesses, livestreaming offers real-time communication and interaction (Yen, 2018), that can enrich customers' trust in the product, increase customers' trust in the sellers, and decrease perceived uncertainty, also reducing psychological distance, and enhancing the authentic viewing experience (Wongkitrungrueng, Dehouche, & Assarut, 2020b). Whether sale of agri-food products through live commerce can keep on a comparable track with non-agri-food products or services (Yang, Du, Hatzenbuehler, & Lu, 2021) is one the concerns of this research, as agri-foods are perishable and there are challenges to informing consumers of the product quality through live streaming. More knowledge on the persuasiveness of livestreaming in leading to purchase intentions is yet to be discovered. Lured by the increasing sales produced by this new method, live-streaming platforms have emerged in many businesses, while knowing how to upsurge live steaming sales has become a key issue for these businesses (Hu & Chaudhry, 2020).

The intention of this study was to determine the attitudes relating to consumers' purchasing desires regarding live streaming sales and the factors influencing consumers' final purchase decisions for farming products purchased through live stream shopping in China. Whether persuasion will increase the

intentions for consumption; and whether live streaming will be likely to continue in the post-epidemic era when lockdowns ease and shoppers are able to return to physical stores are some of the concerns relating to this research. This research paper plans to fill a gap by enhancing knowledge of the persuasion concept in relation to live sales and the definite purchase behavior it influences. Building on the elaboration likelihood model (ELM) introduced by Petty and Cacioppo (1986) and improved by Sokolovo and Kefi (2020), persuasion factors of physical attractiveness, social attractiveness, attitude homophily, professionalism, and perceived uncertainty, are used to examine how the purchase intentions for agri-food products occur based on the theory of planned behavior (TPB) as emphasized by Rausch and Kopplin (2021).

Therefore, the research question is whether persuasions and characteristics of streamers can increase the purchase intentions for agri-foods in a live commerce situation? The remaining sections are structured as follows: the first section presents identification of factors and theories that influence actual purchase behavior along with previous studies; the second section prepares the conceptual framework; the third section explains the research methodology, data analysis, and findings; and the last section includes the discussion, conclusion, implications, and limitations of the study.

## **2. THEORETICAL BACKGROUND**

### **2.1 Livestreaming Commerce**

Livestreaming commerce is an attractive new channel for businesses wherein streamers open live streams to communicate with customers in real time (Chen & Lin, 2018). The most exciting feature of the live sales is communication in real-time; streamers can show the characteristics of the product, introduce how to use it, and answer pop-up questions during broadcasting (Chen, Zhao, & Wang, 2022). China's livestreaming e-commerce industry has beheld enormous

growth amid the COVID-19 pandemic which enhanced new market opportunities for businesses and inserting new channels into the economy (Xinhua, 2021). Livestreaming has gained a main role in building awareness and boosting the sales for brands, even for smaller operators such as farmers from remote regions, particularly during the lockdown of the pandemic (Hao, 2020). In China, livestreaming has increasingly gained popularity as an emerging platform resulting in a massive market value of \$149.9 billion in 2020 (Xinhua, 2021), and projected market value of \$187.5 billion by the end of 2021 (Statista, 2020).

Recent research has shown that live streaming has enormous opportunities in reaching consumer engagement and building trust (Hu & Chaudhry, 2020; Wongkitrungrueng & Assarut, 2020a; Kang, Lu, Guo, & Li, 2021; Qiu, Chen, & Lee, 2021); live streaming can generate consumer purchase intentions (Zhang, Qin, Wang, & Luo, 2019; Sun, Shao, Li, Guo, & Nie, 2019; Addo, Fang, Asare, & Bakabbey, 2021; Lu & Chen, 2021); but limited academic evidence exists regarding the persuasion factors which increase consumer purchase intentions in live streaming e-commerce and whether there is potential to sell agri-food products through live streaming after the pandemic has ended. Chen et al. (2019) initially observed the impacts of live streaming on the sales of online retailers' products and discovered that the adoption of live streaming significantly improves online product sales. They also found that the live streaming approach is more resourceful for certain types of products because the sales of experienced goods increased 27.9% more than when these goods were searched through live sales (Chen, Hu, Lu, & Hong, 2019). Hence, research also shows that live commerce is beneficial for different sized sellers including both big and small businesses (Song, Chen, Guo, & Gao, 2021).

## 2.2 Exploiting Attractiveness in Persuasion

The elaboration likelihood model (ELM)

of persuasion was first introduced by Petty and Cacioppo (1981); ELM seeks to explain alternative ways in which individuals process stimuli and the results of these processes on changing attitudes and behavior. Researchers often mention ELM while studying persuasion, where the motivation and aptitudes of the person processing the message affect whether quality divergence or other marginal prompts would influence the thoughts, intentions, or attitudes of the receiver (Sokolova & Kefi, 2020). According to Petty and Cacioppo (1984), attractiveness of a message source has a greater impact on persuasion under situations of low involvement in argument quality. Unlike other theories, ELM only specifies the route and does not mandate fixed variables in the framework (Tam & Ho, 2005). Hence, researchers can use the distinct characteristics of the research setting to advance distinguishing variables for measurement (Chen, Zhao, & Wang, 2022). Prior studies apply ELM to consumer participation (Bao & Wang, 2021), and consumer response (Chang, Lu, & Lin, 2020).

Attractiveness includes physical as well as social elements (Rubin & Step, 2000). Referring to Sokolova (2020), physical attractiveness, social attractiveness, and attitude homophily, are key characteristics of persuasive attractiveness which are likely to have a positive effect on consumer purchase intentions. Additionally, Chen, Lu, and Zheng (2020) mentioned that perceived professionalism also has a positive influence on consumer buying behavior, while Song et al. (2021) describes that receiving details of product related information by the consumers lessens uncertainty. Drawing from the above-mentioned concepts, it is believed that persuasive attractiveness which includes the physical, social, and homophilic elements of attitudes, professionalism, and perceived uncertainty, would engage and increase consumer purchase intentions in live streaming sales. Based on ELM and the findings of previous studies, it is proposed that persuasive attractiveness leads consumers to make final buying decisions via

live streaming sales; the factors of physical attractiveness, social attractiveness, attitude homophily, perceived uncertainty, and professionalism, will be seen to impact final buying decisions.

### **2.3 Consumer Purchase Intentions**

Consumer purchase intention is considered to be the most immediate predictor of behavior, determined by attitudes and subjective norms; purchase intention is then followed (Rausch & Kopplin, 2021). The theory of planned behavior (TPB) is an extended model of the theory of reasoned action (TRA) which comprises a new constituent named perceived behavioral control (PBC), the addition process is vital (Liu, Liu, & Mo, 2020) because the original model has a restraint in foreseeing behaviors that are not entirely controlled by the individual's desire (Ajzen, 1991). Essential development of the TPB is required in attitude-behavior models because an individual's attitude only weakly predicts consumer behavior (LaPiere, 1934; Wicker, 1969; Rausch & Kopplin, 2021); a favorable attitude might not be assumed into behavior due to the individual's social pressures (Fishbein & Ajzen, 2010) and the individual's amount of motivation for the effort to make it happen (Ajzen, 1991). The TPB model highlights that a person's decision-making is oriented by a logical assessment of the effects of his or her behavior (Bamberg & Möser, 2007). Three primary factors that determine behavioral intentions are included in the TPB model: (1) attitudes regarding the behavior, (2) subjective norms of the behavior and (3) the perceived behavioral control relating to the performance of that behavior (Liu, Liu, & Mo, 2020).

A variety of recent research shows that behavioral intentions or purchase intentions have been found to be predictors of actual purchase behavior; however, the agreeable dimensions of purchase intentions include attitude, norms, and perceived behavioral control (Chen, Li, Davison, & Liu, 2021; Rausch & Kopplin, 2021). Attitude is the first

predictor of purchase behavior that refers to individuals' beliefs about the effects of the behavior, with an estimation of the results of these consequences (Ajzen, 1991). If a person considers a particular behavior will result in a favorable outcome, he or she will have a positive attitude towards that behavior (Liu, Liu, & Mo, 2020). Norms are the second predictor of actual purchasing behavior, including subjective norms and moral norms. Subjective norms refer to the response of important reference individuals in the closer community such as family members or close friends (Ajzen, 1991); moral norms should also be maintained such as environmentally-friendly behavior or pro-social behavior, that combine both self and social interests (Liu, Liu, & Mo, 2020; Chen M. F., 2016). Perceived behavioral control (PBC) is the last predictor of consumer purchase intentions, and indicates whether performing a certain behavior is reasonable or difficult (Ajzen, 1991); this contains self-efficacy and controllability (Liu, Meng, Chen, & Duan, 2020). Generally, when the behavior matches moral norms, and the consumer possesses positive attitudes, and higher perceived control over certain activities or products, it is more likely that the consumer's purchase intentions will be formed into action.

### **3. RESEARCH MODEL DEVELOPMENT AND HYPOTHESIS**

It is important for businesses to understand the persuasive cues made by streamers in order to prepare a fine balance between creativity and control (Sokolova & Kefi, 2020). The characteristics of live streaming anchors matter because live streaming involves anchors with rich media content using various types of communications in real time compared to other traditional online interactions such as texts, images, or videos (Song, Chen, Guo, & Gao, 2021). Referring to the elaboration likelihood model (ELM) and theory of planned behavior (TPB), attractiveness and control are presented as factors that could increase consumer purchase intentions for

agricultural foods through live streaming sales: attitude homophily, physical attractiveness, social attractiveness, professionalism, and perceived uncertainty.

Attitude homophily refers to individuals who have similarity in terms of education, beliefs, and social status (Prisbell & Andersen, 1980). The listener or potential customer who would feel alike or would like to be alike to the speaker will have homophily of attitude and will be more willing to create a positive relationship with them (Brown & Basil, 2010; Lu & Chen, 2021). Physical attractiveness can be described in social psychology literature as finding a person's physical appearances and features appealing or pleasing (Sokolova & Kefi, 2020). Socially attractive refers to the likability of the streamers (Sokolova & Kefi, 2020). Attractive streamers or speakers can transform thoughts (Sharma, 1990) and tend to influence the audience (Chaiken, 1979), forming convincing peripheral cues for decision making (Sokolova & Kefi, 2020), that can decrease consumers' uncertainty over the product offers. Hence, it is proposed that:

H1: Streamer's attitude homophily is positively related to purchase intentions.

H2: Streamer's physical attractiveness is positively related to purchase intentions.

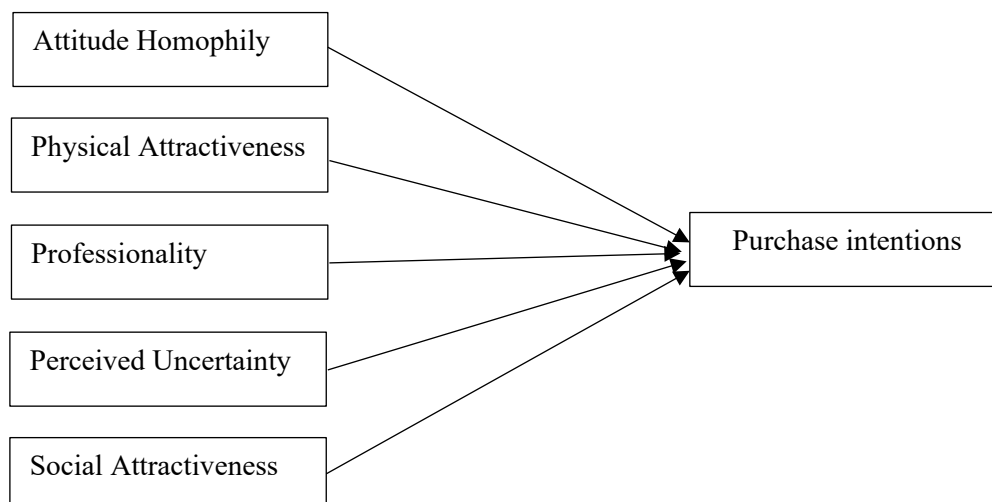
H3: Streamer's social attractiveness is positively related to purchase intentions.

Professionalism can be explained as possessing professional knowledge about products and being an industry expert; professionalism increases consumer purchase intentions because the streamer can provide good explanations about the products, they can solve potential product problems, and are able to respond with solutions through live streaming sales (Chen, Lu, & Zheng, 2020). Yang et al. (2021) highlight that the business name and product reputation are prevailing indicators which are attributed towards live streaming sales as they have been known to be in markets for other products due to the importance of quality-related issues particularly for sales of farming products (Yang, Du, Hatzenbuehler, & Lu, 2021). Professionalism seems to encourage purchase intentions, it is therefore proposed that:

H4: Streamer's professionalism is positively related to purchase intentions.

Perceived uncertainty links to consumers receiving details of product related information which can lessen product uncertainty as well as other non-information engagement such as social presence and trust; this can convert to consumer persuasion during live streaming sales (Song, Chen, Guo, & Gao, 2021). Both information engagement and non-information engagement are mutually beneficial to product sales

### Conceptual Framework



(Bar-Gill & Reichman, 2021). Chen et al. (2020) claimed that the influence of trust in the streamer is more than double compared with the influence of quality or trust in the product during live stream sales. Simply, persuasion of attractiveness in livestreaming can encourage consumer purchase intentions. Thus, it is proposed that:  
H5: Streamer's perceived uncertainty is negatively related to purchase intentions.

## **4. RESEARCH DESIGN**

### **4.1 Sampling**

A quantitative online survey was used to examine consumers actual purchase behavior with live streaming sales to understand more about their thoughts and behavior regarding agricultural products in online purchases. The study disseminated 370 online customer surveys to consumers in Zhejiang province in China via a purposive sampling technique to validate the analysis. A purposive sampling method was used because the research targeted only people with experience of live stream shopping who had not yet purchased agricultural products via a live streaming platform. The research also focused on generation Z customers as they are the largest group in China who watch live streaming and participate in live streaming commerce. They are therefore more representative than other generations. Excluding the respondents who had no experience of live stream shopping or who had already purchased agricultural products via a live streaming platform (162 respondents), yielded a total of 208 valid surveys, useable for data analysis. The minimum sample size was verified by G\*Power 3.1 (Faul et al., 2007). The result suggested a minimum sample size of 200 to assure the research model would have a statistical power of 0.9 with a medium effect size of 0.3. The collected sample size of 208 was therefore deemed suitable for analysis as it was larger than this threshold (see appendix 2).

### **4.2 Measures**

The survey method and measurement items used in the study were adapted and modified from previous literature. Some adaptations were made for a better fit with the current study context. Persuasion attractiveness including social attractiveness, physical attractiveness, and attitude homophily, were adapted from Sokolovo and Kefi (2020) and Lee and Watkins (2016). Perceived uncertainty items were revised from Zang et al., (2020) and Torkzadeh and Dhillon (2002). Influencer professionalism was taken from Liu et al., (2020) and Netemeyer and Bearden (1992). Purchase intentions items were modified from Kim et al. (2015); Sun and Li (2019); and Sokolova and Kefi (2019). Appendix 1 shows the measurement items in detail. The researchers also controlled gender, age, monthly income, and live streaming shopping frequency. A 5-point Likert scale was employed in the survey. A Chinese version of the instrument was developed via translation of the English instrument based on the translation panel approach as the survey context was in China (Van de Vijver & Leung, 1997).

### **4.3 Statistical Treatment of Data**

SmartPLS software 3 was applied to test the model. SmartPLS is a professional partial least squares structural equation modeling software, which is widely used in management, marketing, organizational behavior, information systems, and other fields. Its principle is to use the partial least squares method. PLS is able to analyze latent variables without requiring strict normal distributions among the data (Hair, 2014). This approach is necessary in this study which suffers from a problem of collinearity. In this study, the researchers only focus on the identification of the key drivers of constructs and not theory confirmation. The theory confirmation was best handled by covariance-based structural modeling. The researchers started with a confirmatory phase to assess the measurement model.

**5. DATA ANALYSIS AND RESULTS**

**5.2 Evaluation of Measurement Model**

**5.1 Respondents Portfolio**

91.08% of the sample was composed of users aged from 18 to 25, 69.73% of which were female; this is not surprising as females are more likely to be responsible for shopping. The respondents were mainly from Zhejiang Province, China, as this province has the highest rank for the number of live streaming related enterprises. The Z generation were selected as they are the largest group in China to watch live streaming and participate in live streaming commerce. They are therefore more representative than other generations.

**5.2.1 Convergent Validity and Internal Consistency**

The measurement model was evaluated by assessing its validity and reliability. The convergent validity includes factor loadings and average variance extracted (AVE). All factor loadings were above 0.7, while the majority were close to 0.9. Average variance extracted (AVE) is an appropriate method to examine convergent validity. The results in Table 1 show that each value of AVE is higher than 0.5, indicating that the model has adequate convergent validity according to Hair et al. (2014). The

**Table 1** Construct Validity and Reliability

<i>CONSTRUCT</i>	<i>Convergent Validity</i>		<i>Cronbach's Alpha</i>	<i>Internal Consistency</i>	
	<i>Factor Loadings</i>	<i>AVE</i>		<i>rho_A</i>	<i>CR</i>
<i>Attitude homophily</i>		0.789	0.866	0.866	0.918
AH1	0.895				
AH2	0.880				
AH3	0.889				
<i>Influence Professionality</i>		0.719	0.870	0.876	0.911
PR1	0.882				
PR2	0.864				
PR3	0.840				
PR4	0.804				
<i>Perceived Uncertainty</i>		0.718	0.803	0.824	0.884
PU1	0.895				
PU2	0.875				
PU3	0.767				
<i>Physical Attractiveness</i>		0.845	0.909	0.914	0.943
PA1	0.924				
PA2	0.929				
PA3	0.905				
<i>Social Attractiveness</i>		0.705	0.895	0.914	0.943
SA1	0.869				
SA2	0.808				
SA3	0.898				
SA4	0.783				
SA5					
<i>Purchase intention</i>		0.726	0.874	0.876	0.914
P11	0.843				
P12	0.888				
P13	0.859				
P14	0.816				

internal consistency measurements include the Cronbach's alpha, Dijkstra–Henseler's rho\_A and composite reliability. Cronbach's Alpha is suitable to test the internal consistency of the variables and the composite reliability. The results show high consistency, with all values being above 0.8. For Rho\_A, values greater than 0.7 are deemed appropriate for internal consistency and reliability (Ramayah et al. 2018). In terms of composite reliability (CR), a threshold value of 0.7 is required (Hair et al., 2019). As all values are greater than the above-mentioned thresholds, the results of the analysis confirm the internal consistency of the data.

### 5.2.2 Discriminant Validity

The traditional method to test discriminant validity was proposed by Fornell and Larcker (1981), who suggested that AVE is an appropriate method to compare each construct using the squared inter-construct correlation of that same construct and all other reflectively measured constructs. While in modern research, scholars have pointed out that the AVE is not appropriate to test discriminant validity. Henseler et al. (2016) proposed the heterotrait-monotrait (HTMT) ratio of the correlations as a replacement. It is more reliable for testing the discriminant validity compared with the AVE. Table 2

shows the satisfactory results with all values being below 0.9 (Henseler et al., 2016).

## 5.3 Evaluation of the Structural Model

### 5.3.1 Collinearity and Path Coefficients

A bootstrapping procedure was then performed with 5000 re-samples to estimate the statistical significance of the path coefficients (Henseler et al., 2016). Based on the structural model shown in figure 2, the path between attitude homophily and purchase intentions was highly correlated ( $\beta=0.483$ ,  $t=6.468$ ,  $p<0.05$ ). Similarly, the relationship between influencer professionalism and purchase intentions was strong and significant ( $\beta=0.202$ ,  $t=2.113$ ,  $p<0.05$ ). Perceived uncertainty had a marginally significant correlation with purchase intentions ( $\beta=0.109$ ,  $t=1.706$ ,  $p<0.1$ ). It is usually acceptable to have a p value smaller than 0.05, while some scholars permit values smaller than 0.1 to determine significance in some social studies cases (Cohen, 1992). In this study, a middle-of-the-road approach was used, whereby the path between perceived uncertainty and purchase intentions was determined to be marginally significant. However, the findings do not provide any suggestion of a relationship among the other two paths. Physical attractiveness and social attractiveness are not connected to purchase intentions.

**Table 2** Heterotrait-Monotrait Ratio (HTMT)

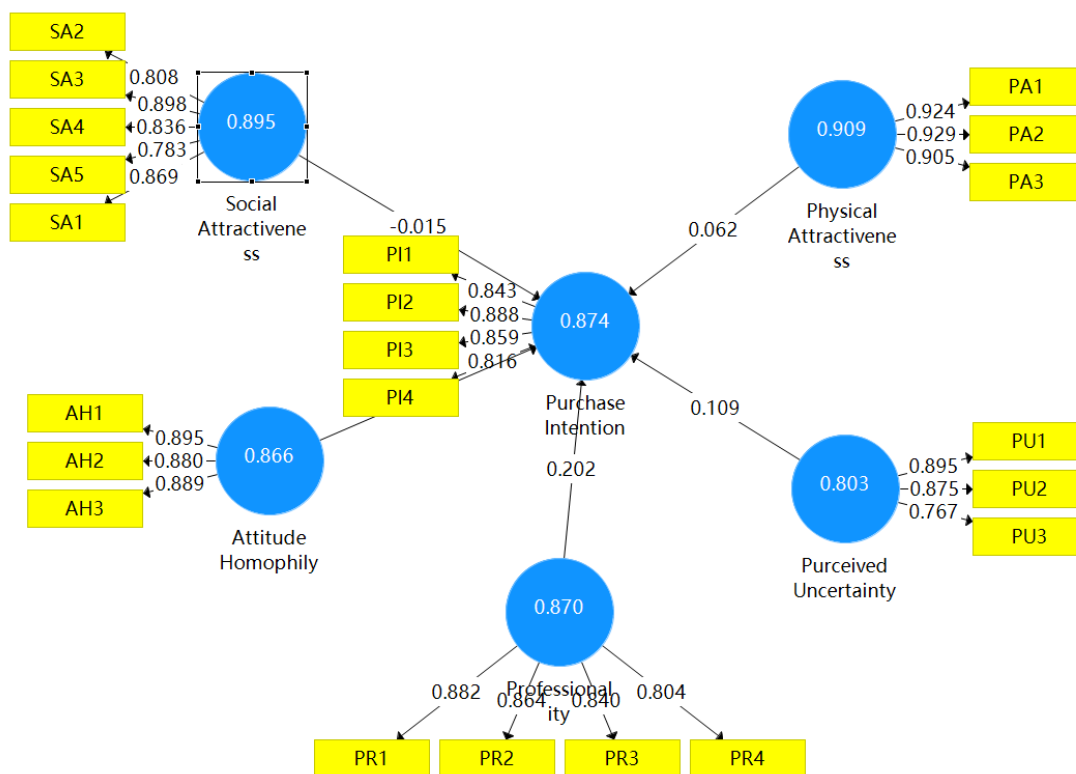
	Attitude Homophily	Influence Professionality	Perceived Uncertainty	Physical Attractiveness	Social Attractiveness	Purchase Intention
Attitude Homophily						
Influence Professionality	0.688					
Perceived Uncertainty	0.403	0.413				
Physical Attractiveness	0.551	0.624	0.307			
Social Attractiveness	0.658	0.761	0.460	0.697		
Purchase Intention	0.758	0.632	0.419	0.477	0.544	



**Table 3** Collinearity And Structural Model Path Coefficients

		Vif	Path Coefficient	95% Confidence Interval	T Values	P Values	Results
Attitude Homophily->	Purchase Intention	1.771	0.483	[0.335, 0.630]	6.468	***	Accept
Influence Professionality->	Purchase Intention	2.142	0.202	[0.008, 0.382]	2.113	**	Accept
Perceived Uncertainty->	Purchase Intention	1.206	0.109	[-0.004, 0.244]	1.706	*	Accept
Physical Attractiveness->	Purchase Intention	1.764	0.062	[-0.061, 0.196]	0.937	0.349	Reject
Social Attractiveness->	Purchase Intention	2.411	-0.015	[-0.187, 0.150]	0.170	0.865	Reject

Note(S): \*\*\*P<0.01 \*\*P<0.05 \*P<0.1



**Figure 2** Structural Model

## 6. DISCUSSION AND CONCLUSION

Both attitude homophily and influencer professionalism of the social influencers have a significant relationship with the purchase intentions of the consumers. This reflects that consumers go through a path of both affective and internalization processes before deciding

to purchase a product. Perceived uncertainty has a marginal effect whereby consumers are slightly concerned about the quality and price of items purchased through live stream shopping. Sample analysis demonstrated a slightly stronger impact of attitude homophily on purchase intentions. This indicates that influencers who behave similarly to

consumers may sell more products. Meanwhile social attractiveness and physical attractiveness do not play an important role in effecting consumers' purchase intentions.

Attitude homophily has a positive relationship with purchase intentions, indicating that value sharing is a strong aspect of persuasion. The influencer shares the consumers' values through daily dynamics, such as short videos, or the content of blogs. The shared values build an affective link with influencers and those shared values are also indicative of the quality of the content the influencers propose. The shared values are related to the internalization process which seems to predominate in the results of this study. Attitude homophily reflects the similarity between influencers and consumers. Brock (1965) claimed that similarity is a persuasion tool especially when it is relevant to the situation. This is particularly true for the younger generation: the younger generation is more likely to be affective and thus could be more easily affected by someone who has similarity with them. These results prove that the attitude homophily of the influencer has a positive impact on purchase intentions.

Influencer professionalization has a significant positive relationship with purchase intentions, showing that consumers care about who sells the product. This result is in accordance with (Sokolova & Kefi, 2020). Expertise, defined as someone who is knowledgeable and experienced, is one of the key elements of credibility, along with goodwill, and trustworthiness. People are likely to purchase products introduced by an influencer who is familiar with the product. There is no doubt that consumers are more trusting of influencers who have sold or used the product before, and therefore these influencers are more persuasive and have a deeper impact on consumers' purchase intentions. In this case, the company should hire a host who is deeply involved in its industry.

The results of this study showed a marginal effect of perceived uncertainty on purchase intentions. This can be explained by the concept that people are concerned about

whether there is information asymmetry. To be specific, consumers are afraid to purchase a product which does not have a good quality match with its payment. Moreover, they care about what after-sales services will be accessible if the product is not good. In this matter, a live streaming platform can improve after-sales service and thus develop its trustworthiness with consumers. Another factor which could impact consumers' purchase decisions is non-diversification of the product category, which results in consumers not being able to find the product they need. In this situation, the corporation should increase the diversity of products in each category, to meet the demands of different consumers.

The results do not demonstrate any effect of physical attractiveness on consumers' real purchases. This contrasts with traditional superstars, whereby TV and magazine models generally exhibit a perfect physical appearance and rarely communicate with people to keep their mystique. In contrast, to consumers who purchase in live streaming, social influencers are perceived as more authentic and real (Djafarova & Rushworth, 2017). For that reason, attitude homophily plays a significant role as expected, rather than physical attractiveness.

Another explanation of this result could be the result of different understandings of beauty. Human form, appearance, posture, behavior, demeanor, language, and modifications, are the comprehensive embodiment of physical beauty. By dressing up, and applying make-up, people can enhance their integrated external image. At the same time, people have different beauty preferences. For example, the younger generation prefer a person who looks fashionable and wears make-up, while older people are more likely to prefer someone who looks natural and has less visible make-up. Influencers reduce the psychological distance by acting as themselves, or as a "neighborhood" boy or girl. To do so, they not only speak like friends but also use make-up which allows their natural imperfections to show, which could make them appear less

beautiful, and less perfect, but more natural and similar to normal people. This indirectly proves that attitude homophily has a significant positive relationship with purchase intentions.

It is also interesting to claim that the data of this study does not provide any suggestion that social attractiveness is related with purchase intentions. One possible reason is that the younger generation have more independent thinking, and therefore can make decisions without others' influence. This is dissimilar to the phenomenon of public celebrities, whereby they are trusted by the people, who thus follow them. In live stream shopping, people buy products based on their needs. If there is no purchase potential, they will not waste their money. Another reason is people are realistic, therefore they care more about the quality and price of the product no matter whether they like the live streaming host or not.

## 7. IMPLICATIONS

### 7.1 Theoretical Implications

This research provides some major theoretical contributions to the literature. First, the findings reveal that consumers' purchase intentions come from their own decision making regarding their relatedness with the streamers, which also confirms the theory of planned behavior (TPB); the TPB model expresses that a person's decision making is oriented by his or her own logical assessment (Bamberg & Moer, 2007) which contains behavioral attitudes, subjective and moral norms, and perceived behavioral control in relation to the behavior (Liu, Liu, & Mo, 2020; Chen M. F., 2016; Ajzen, 1991). Second, this study extends the elaboration likelihood model (ELM) of persuasion, introduced by Petty and Cacioppo (1986) and improved by Sokolovo and Kefi (2020), in the livestreaming commerce context to understand ways to reduce consumers' perceived uncertainty. The ELM theory was used to study consumers' purchase intentions, finding that attitude homophily and

professionalism have a significant relationship to the buying of products. This is useful information for livestreaming e-commerce businesses when thinking about how they should relate with their consumers, while this finding enriches our knowledge of the underlying purchase intentions of the consumers.

### 7.2 Managerial Implications

Our findings show that persuasion attractiveness creates consumers' trust in products which is a key determinant of consumer purchase intentions. The researchers found that attitude homophily and professionalism are the major factors to increase consumers' purchase intentions. Therefore, it is suggested that live streaming sales businesses should pay more attention to enhance the relatedness (attitude homophily) of current consumers and potential consumers. Consequently, a streamer should evaluate the characteristics of the viewers during livestreaming to be able to relate with them and fulfill their concerns. At the same time, enhancing professional knowledge by trying to become an expert in agricultural food products or the industry related to their sales would be beneficial for streamers to gain trust and attention from their viewers. Streamers must focus on acquiring the necessary knowledge related to the products that they are selling including detailed information about the products, potential product problems, and possible solutions, to be able to influence consumers' purchase intentions. It is therefore suggested that attitude homophily and professionalism are significant factors to increase purchase intentions and live streaming sales of agricultural products, which are likely to continue in the post-pandemic era.

## 8. LIMITATIONS

This study reflects the actual purchasing behavior of consumers, especially regarding the purchasing of agricultural products through live streaming sales in China.

Although the findings are interesting and up to date, there are some limitations to this study which must be acknowledged. Firstly, convenience sampling was used to collect the data; future research could use alternative approaches which may provide a better evaluation or more detailed picture of consumer behaviors and their psychology. Secondly, the research mainly discusses Chinese consumers' attitudes and their purchasing behavior in relation to livestream sales of farm products. Therefore, future studies should extend the research scope to other contexts, providing a more inclusive understanding of live commerce. Thirdly, future studies can test the research model based on different product types such as search goods, experience goods, hedonic goods, or utilitarian goods. Finally, the elaboration likelihood model (ELM) only specifies the route and does not mandate fixed variables in the framework, therefore future research can extend knowledge in this area by adding new variables in the research. More research is definitely needed to bring light on this new and complex phenomenon.

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## **Appendix 1: Measuring Factors that Influence on Purchase Intention**

<p><b>Persuasion of Attractiveness (Lee and Watkins, 2016; Sokolova &amp; Kefi, 2020)</b></p> <p><b>Social Attractiveness</b></p> <ul style="list-style-type: none"> <li>▪ Q1: The streamer is pleasant to be with.</li> <li>▪ Q2: The streamer is sociable with me.</li> <li>▪ Q3: The streamer is easy to get along with.</li> <li>▪ Q4: I would like to have a friendly chat with the streamer.</li> <li>▪ Q5: The streamer could be a friend of mine.</li> </ul> <p><b>Physical Attractiveness</b></p> <ul style="list-style-type: none"> <li>▪ Q1: The streamer is good looking.</li> <li>▪ Q2: The streamer has a good figure.</li> <li>▪ Q3: I find the streamer to be very attractive physically.</li> </ul> <p><b>Attitude Homophily</b></p> <ul style="list-style-type: none"> <li>▪ Q1: The streamer behaves like me.</li> <li>▪ Q2: The streamer has thoughts and ideas that are similar to mine.</li> <li>▪ Q3: The streamer has a lot in common with me.</li> </ul> <p><b>Perceived Uncertainty (Zang et al., 2020; Torkzadeh &amp; Dhillon, 2002)</b></p> <ul style="list-style-type: none"> <li>▪ Q1: I worry about being charged unfairly when buying agricultural products from a streamer.</li> <li>▪ Q2: I worry about exposure to a limited product category when buying agricultural products from a streamer.</li> <li>▪ Q3: I feel that purchasing agricultural products from a streamer involves a high degree of uncertainty, i.e they may not express the disadvantages of the agricultural products.</li> </ul> <p><b>Professionalism (Liu et al., 2020, Netemeyer and Bearden, 1992)</b></p> <ul style="list-style-type: none"> <li>▪ Q1: The streamer knows about the products well.</li> <li>▪ Q2: The streamer has experience in using the product.</li> <li>▪ Q3: The streamer has powerful expertise in the area of this product.</li> <li>▪ Q4: The streamer has some talent in some skills.</li> </ul>
<p><b>Purchase Intention (Kim et al., 2015 ; Sun and Li, 2019; Sokolova and Kefi, 2019)</b></p> <ul style="list-style-type: none"> <li>▪ Q1: I will consider the live streaming platform as my first shopping choice when I need to buy agricultural products.</li> <li>▪ Q2: I intend to buy agricultural products through a live streaming platform.</li> <li>▪ Q3: I would purchase agricultural products promoted by a live streaming platform in the near future.</li> <li>▪ Q4: I would encourage people to buy agricultural products promoted by a live streaming platform.</li> </ul>



## Appendix 2. Sample Size

Anticipated effect size:	<input type="text" value="0.3"/>	<a href="#">?</a>
Desired statistical power level:	<input type="text" value="0.9"/>	<a href="#">?</a>
Number of latent variables:	<input type="text" value="6"/>	<a href="#">?</a>
Number of observed variables:	<input type="text" value="22"/>	<a href="#">?</a>
Probability level:	<input type="text" value="0.05"/>	<a href="#">?</a>
<input type="button" value="Calculate!"/>		
Minimum sample size to detect effect:	200	
Minimum sample size for model structure:	123	
Recommended minimum sample size:	200	