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The Determinants of Purchase Intention on Agricultural Products via Public-Interest Live Streaming for Farmers during COVID-19 Pandemic

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Abstract: In order to sell unmarketable products and alleviate farmers' economic difficulties caused by the COVID-19 pandemic, public-interest livestreaming for farmers with the property of altruism has been emerging as a new way of mobile commerce and has attracted a huge amount of attention among Chinese consumers. In this paper, based on the theory of reasoned action, we intend to explore the influencing factors from the levels of the platform, product, and consumer that affect consumers' attitudes and purchase intentions towards agricultural products via public-interest livestreaming. We have collected 475 valid responses from Chinese consumers (especially from youth) who experienced the public-interest livestreaming for farmers and then constructed a structural equation model using the partial least-squares method. The results show that consumers' attitudes towards agricultural products have a significant positive impact on their purchase intentions with respect to livestreaming. Perceived interactivity, perceived endorsement, product familiarity, subjective norms, altruistic value, and the livestream shopping experience all significantly positively affected consumers' attitudes toward the agricultural products in the mobile livestreaming. Moreover, subjective norms can also directly impact consumers' purchase intentions. We can see that the proposed influencing factors from the platform, product, and consumer levels provide a better explanation of the attitudes and purchase intentions, respectively. This paper aims to expand the empirical research on the purchase intentions of agricultural products and then to provide insights into the phenomenon of public-interest livestreaming during COVID-19, which can assist farmers in addressing the dilemma caused by the epidemic and promote rural economic development by mobile commerce. Additionally, the insights from this case study in China can also be extended to other countries where farmers have suffered from the impact of COVID-19.

Keywords: COVID-19; online altruism; mobile commerce; agricultural product; public-interest live streaming; consumer behavior; purchase intention

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1. Introduction

The outbreak of the coronavirus (COVID-19) pandemic has not only dramatically changed individuals' daily lives, but has also had a huge influence on the economy around the world. Many national and local governments had imposed a series of epidemic prevention policies, such as transient lockdowns, stay-at-home orders, online working and courses, etc., to prevent the spread of this mysterious infectious disease in the initial stage [1]. In particular, the traditional marketing channels, logistics outlets, and consumers' purchase behaviors were greatly affected. Port disruptions and congestion become common due to logistics stagnation and export interruption as the precautionary measures [2]. Many offline activities have been converted to online models and then have been carried out in different ways. For example, consumers increasingly rely on online shopping when staying at home. As a result, livestream e-commerce has witnessed great development. Therein, public-interest livestreaming for farmers to sell agricultural products has developed rapidly

against the backdrop of COVID-19, which is well adapted to environmental changes and the transformation of people's consumption patterns.

An agricultural product is defined as any raw or processed agricultural commodity derived from crops and livestock [3], which includes fresh vegetables, fruits, meat, aquatic products, eggs and milk, live poultry, and primary processing products. In particular, fresh agricultural products are easily damaged and are perishable. The rapid spread of COVID-19 has had devastating effects on global economies and a significant impact on agricultural product trade [4], which has been reduced by 5 to 10 percent in aggregate [1]. The shipping network has suffered a major blow, which especially impacted the security and stability of the global supply chain system [5]. If agricultural products are no longer fresh due to the shipping controls, adverse consequences will result, as agricultural products are unsalable. In this way, farmers will pay a heavy cost for the severe situation when the initial investment of capital input of seeds, fertilizers and pesticides are not translated into income.

As early as 2013, livestreaming for farmers had already taken shape in China. For the purpose of farmers' public-interest, the platform and other entities (e.g., local government, media agency) with a non-profit jointly launched livestreaming for unmarketable agricultural products to alleviate farmers' economic difficulties. Initially, for the development of rural e-commerce, a series of measures were adopted by the government to promote the effective alignment of production and consumption between urban and rural areas and then build a new development pattern for revitalizing the rural economy [6]. In recent years, China has placed great importance on the construction of rural logistics and distribution systems. Through the promotion of e-commerce in villages and the acceleration of the rural logistics' express network layout, the foundation of livestreaming for farmers has been established.

During COVID-19, it is an innovative practice of using the Internet to expand sales channels performed by public-interest livestreaming, which is extremely popular among Chinese consumers. In this process, remarkable achievements have been made in solving the difficulties of farmers, which is quite altruistic. The purpose of public-interest livestreaming is to help farmers sell unsalable agricultural products and improve farmers' income, so as to inject new vitality into the rural economy.

More importantly, both the government and multiple market entities have become involved in this great mass effort, such as media institutions, e-commerce platforms, vendors, MCNs, and the basic levels of government, which is quite different from the initial developing stage. For example, the officers of villages' and towns' governments have even joined in the livestreams as anchors to endorse their local agricultural products while introducing the advantages of their local areas. Consumers enter the live streaming room through different e-commerce or social media platforms to purchase these agricultural products. For example, "Thank You for Paying for Hubei Province" was the most groundbreaking event among many live streaming activities to help farmers. On the evening of 6 April 2020, a two-hour mobile live stream launched by China Media Group for Hubei agricultural products obtained 40.14 million RMB in income and attracted 10.91 million views with 160 million likes via social media.

The contributions of this paper can be summarized as follows:

- Based on the theory of reasoned action, we construct a structural equation model to explore consumers' attitudes and purchase intentions towards agricultural products via public-interest livestreaming for farmers, which has become a popular phenomenon during the COVID-19 pandemic.
- We divide the behavior beliefs into three levels, i.e., platform level, agricultural products level, and consumer level, which aim to cover the potential variables regarding this kind of mobile live streaming during the COVID-19 pandemic.
- We find that the perceived interactivity, perceived endorsement, product familiarity, subjective norms, altruistic value, and livestream shopping experience all significantly positively affect consumers' attitudes. Although there exists no direct impact of the per-

ceived interactivity on purchase intentions and altruistic value on purchase intentions, the mediating relationship can be realized through the effect of attitudes.

2. Literature Review and Research Question

2.1. Theory of Reasoned Action

Theory of Reasoned Action (TRA) is recognized as one of the most influential theories for explaining and predicting human behavior, which is proposed by Fishbein and Ajzen [7]. According to the TRA, the individuals' performance of a specified behavior is determined by their behavioral intention, which is jointly affected by the attitude and subjective norms. The basic assumption underlying the TRA is that human beings usually behave in a sensible manner, i.e., considering the available information and implications of their performance (or not performance) is the immediate determinant of that action [8].

The TRA posits that certain information or important beliefs affect an individual's behavioral intentions, and individual attitudes and subjective norms (SN) act as mediators [9]. The intent to perform is the immediate antecedent of any behavior. The stronger a person's intention, the more he is expected to try, and therefore the greater the possibility that the behavior is actually performed [10]. Behavioral attitude reflects the individual's evaluation of the outcome of the behavior (such as favorable or unfavorable). A person's attitude toward a certain object is influenced by his behavioral beliefs, which guide his behavioral intention. An individual's behavior is affected by personal and normative influence, which means the person's perception is related to the people who are around him and important to him [11].

Because of excellent predictability, TRA has been quite useful to predict behavioral intentions and behaviors in the areas of marketing [12] for various research scenarios, e.g., coupon use [13], participation in sports activities [14], and electric vehicle use [15]. Shimp et al. used TRA to explain consumers' usage of traditional coupons, and they proved that TRA could explain consumers' intention to use coupons in shopping [16]. Based on TRA, Hsu found that individuals' positive attitudes towards blogs significantly positively affect their willingness to use [17].

2.2. Consumers' Purchase Intention

Intention is understood as an individual's promptness to perform the behavior [18]. Purchase intention is the most important step for a product, which is crucial in the food industry. It is revealed in Roseira's study that the stronger the intention a person displays towards purchasing organic food, the more likely they effectively purchase that type of food product [19]. Yang analyzed the relevant factors affecting consumers' purchase intention of surplus food blind box and established a perceived model of consumers' purchase intention [20]. Liu et al. investigated whether food photographs in online reviews influence consumers' purchase intentions [21]. Muela-Molina found that the advertisements for functional food often employing the celebrities and authorities to increase consumers' purchase intention [22]. Some factors such as consumers' income and concern on self-health are strongly related to Chinese consumers' intent to purchase organic food [23].

With the development of technology and the shift in consumption patterns, scholars begin to explore the consumers' online purchase intention in the background of electronic commerce, which show accelerated expansion worldwide [24]. The performance of online celebrities can stimulate consumers' emotions, and thus enhance consumers' purchase intention regarding the products recommended [25]. Guo analyzed consumers' intention to purchase fresh agricultural products and revealed that the fresh agricultural products' live features can positively influence consumers' purchase intention in the livestream [26].

2.3. Research Question and Organizations

Currently, there exists various studies on consumers' purchase intention for products through offline and online outlets. However, only a few dimensions of influencing factors are considered in each work. From the consumer level, Gomes et al. investigated the customer-oriented factors of online grocery shopping in German [27]. Paul et al. used the

theory of planned behavior and reasoned action to predict green product consumption from the angle of consumers such as subjective norms and environmental concern [28]. Changchit's study intends to examine what factors play a crucial role in encouraging or discouraging consumers among consumers' perceived usefulness, perceived ease of use, perceived security and perceived uncertainty of online shopping in Thailand [29]. For the live characteristics, Guo et al. revealed that the fresh agricultural products' live features positively influenced consumers' purchase intention [26]. Meng et al. also paid attention to the performance of online celebrities in the level of platform [25]. However, the live broadcast e-commerce industry chain consists of the supply side, the platform side, and the consumers [30]. The upstream supply side primarily consists of commodity suppliers (e.g., manufacturers, brands, distributors, and origin) [31]. In the livestreaming for farmers, commodity suppliers provide agricultural products for sale. Considering consumer perception, Chen et al. introduced a "People-Product-Place" marketing strategy for livestreaming e-commerce and studied the impact of strategy on impulsive purchase behavior [32]. Chong et al. defined platform attributes and consumer characteristics as the proposed antecedents of livestreaming commerce continuance usage [33]. From the levels of green agri-food attributes and livestreaming features, Wang et al. analyzed the fitness between livestreaming e-commerce and green agri-food [34].

In the era of the COVID-19 epidemic, public-interest livestreams for farmers are emerging as new social phenomena, which have become an important part of e-commerce and bring changes to shopping modes. It is not clear about the influence mechanism of consumers' purchase intention and which factors will impact on consumers' willingness to buy agricultural products via public-interest livestreams. Although there exists a number of related works about online purchase intention of consumers, few studies involve and fully consider the three levels of platform, product and consumer. Based on the TRA, we construct the behavioral belief from three aspects: platform level (Perceived interactivity, PEEIM, perceived endorsement), product level (Shipping, product familiarity) and consumer level (Subjective norms, altruistic value, live shopping experience) and then explore the influencing factors that affect consumers' purchase intention of agricultural products via public-interest livestreaming for farmers. As a result, we proposed three research questions.

- RQ1: During COVID-19, how do the characteristics of platform affect the attitudes and intention to buy agricultural products via public-interest livestreams?
- RQ2: During COVID-19, how do the characteristics of agricultural products affect the attitudes and intention to buy agricultural products via public-interest livestreams?
- RQ3: During COVID-19, how do the characteristics of consumers affect the attitudes and intention to buy agricultural products via public-interest livestreams?

The organization of this paper is presented as follows: Section 3 describes the hypothesis and proposes the conceptual model. Section 4 analyzes the collected sample and describes the data in detail. Section 5 presents the hypotheses test and the data analysis. Section 6 provides an in-depth discussion from three levels of public-interest live streaming. Section 7 concludes this paper.

3. Hypothesis Development

In this paper, we investigate the attitude and purchase intention of agricultural products from Chinese consumers and reveal the influencing factors via public-interest livestreams for helping farmers. The proposed conceptual model consists of perceived interactivity (IN), perceived effectiveness of e-commerce institutional mechanism (PEEIM), perceived endorsement (PE), shipping (SP), product familiarity (PF), subjective norms (SN), altruistic value (AV), live shopping experience (SE), attitude (ATT) and purchase intention. The definitions of each construct are given in Table 1.

Table 1. Construct definition.

Construct	Definition	References
IN	The degree to which consumers perceive two-way communications with the streamer, e-commerce platform.	Kang et al. (2020) [35]
PEEIM	The buyer's perception of the financial security of online trading platforms, which assumes that an intermediary or third-party safeguarding mechanism is available to protect consumers from any risk or fraud when performing online transactions.	Fang et al. (2014) [36]
PE	The support provided by an influential third party to make the person or thing endorsed more credible and reliable.	Fireworker et al. (1977) [37]
SP	The consumers will receive the ordered product with good packaging, quantity and quality in accordance with the order, as well as the specified delivery time and place.	Patterson. et al. (1993) [38]
PF	Familiarity with a product means that consumers have a great deal of direct or indirect experience with the product, which may influence consumers' decisions.	Bettman et al. (1980) [39]
SN	People's intention and behavior are affected by the SN of people or social groups that are important to them, which are perceived as the approval or disapproval of a particular behavior.	Fishbein and Ajzen (1975) [7]
AV	The drive to promote the well-being of others. The psychological drive of it is to help people in need, rather than to achieve a goal.	Santos, F.M. (2012) [40]
SE	SE includes sensory, feeling, cognitive and behavioral responses that are part of product design and labeling, packaging, communication and environment	Brakus et al. (2009) [41]
ATT	The individual's positive or negative feelings about the agricultural products and the livestreaming for farmers.	Fishbein and Ajzen (1975) [7]
PI	It measures consumer's willingness to buy agricultural products in the livestreaming, which strongly predicts an individual's behavior.	Fishbein and Ajzen (1975) [7]

3.1. Attitude and Purchase Intention

According to TRA, consumers' attitude is an important antecedent variable that affects their behavioral intention [7], which reflects a person's positive or negative feeling and predisposition toward a behavior [18]. The mental perception can be formed about what they like or dislike. This finding is echoed by Changchit et al., who claim that attitudes have a strong influence on Thai consumers' willingness to use online grocery shopping [29]. Kim found that consumers' behavior of purchasing groceries on mobile terminals is a decision-making process from exposure to attitude to PI among South Korean consumers [42]. If consumers have a positive ATT towards online purchasing channels, their intention will also increase [43]. Paul, using the theory of planned behavior and reasoned action, found that the attitude towards green product purchasing is positively related to green product purchase intention [28]. If consumers have a favorable impression of the agricultural products recommended by the streamers, the PI of consumers will also be improved. Therefore, the following hypothesis is proposed:

Hypothesis 1 (H1). *Consumers' attitudes toward agricultural products in public-interest livestreaming for farmers will positively affect PI.*

3.2. Perceived Interactivity

Live streaming becomes a new model in the electronic business, which enables sellers (streamers) to directly interact with consumers in real time, where the streamers can show the appearance, functions and any relevant information of the product. Compared with traditional e-commerce, live streaming has significant advantages in the aspects of product display, time cost, shopping experience, etc. [44]. Consumers may ask about product price, transportation and other concerned issues. The streamers will respond to users' reaction and questions accordingly. Real-time interaction can influence consumer behavior and

ultimately achieve the purpose of prompting consumers to click the link to complete the purchase behavior [45].

In this way, IN is a very prominent feature in the live streaming business environment. During the two-way communication and transaction process, IN can promote consumers to form positive attitudes [35]. The interactions on social platforms among consumers can obtain a better understanding and insight into products [46]. Tu et al. revealed that IN has a significant positive impact on students' intention and behavior in online class systems [47]. Zhao pointed out that IN with a significant social effect can directly increase the purchase intention of sustainable clothes among Chinese consumers [48]. In social network marketing, Pejman et al. found that IN would promote consumers' sustainable purchasing behavior [49]. The livestreaming platform is a vital place for consumers to communicate with each other or exchange views and remarks. Consumers in the live streaming room can easily have real-time interactions with streamers or service providers. In addition, streamers and brand owners can also instantly receive consumers' feedback in turn. As a result, we proposed the following hypothesis:

Hypothesis 2 (H2a). *IN positively affects consumers' attitudes towards agricultural products in public-interest livestreaming.*

Hypothesis 2 (H2b). *IN positively affects consumers' PI towards agricultural products in the public-interest livestreaming.*

3.3. Perceived Effectiveness of E-Commerce Institutional Mechanism

The perceived effectiveness of e-commerce institutional mechanism (PEEIM) is an important factor to guarantee the consumers get rid of any risk when performing online purchase activities by intermediary or third-party service providers [36]. The cooperation between e-commerce firms and third parties are reached to build their safeguarding mechanisms. When buyers do not receive the purchased products, the third-party entities will help refund buyers' payments. This suggests that PEEIM is practically relevant in public-interest live streaming [2]. The higher PEEIM is, the weaker the impact of trust in vendors on the users' behavioral intention of adopting mobile commerce [50]. Masri et al. also found that PEEIM has a significant impact on consumers' purchase and reuse intentions [51]. Consumers may be skeptical of the agricultural products recommended by anchors for fear of privacy and transaction security not being guaranteed, so they are not willing to buy the agricultural products. Therefore, we put forward the following hypotheses:

Hypothesis 3 (H3a). *PEEIM positively affects consumers' attitudes towards agricultural products in public-interest livestreaming.*

Hypothesis 3 (H3b). *PEEIM positively affects consumers' PI towards agricultural products in public-interest livestreaming.*

3.4. Perceived Endorsement

The endorsement originated from the bank bill business and refers to an accessory act of the bill in which the payee signs on the bill in order to transfer. Later, endorsement means confirmation, agreement and supportiveness, which can be understood as the support provided by an influential third party to make the consumers feel that the product is more credible. Fireworker et al. found that early endorsements were mainly about personalities, which could be divided into three types: expert endorsements, celebrity endorsements and typical consumer endorsements [37]. In recent years, many brands began to cite endorsements from impartial third parties in their advertising. Miller et al. have shown that teenagers are very interested in food and drink advertisements endorsed by celebrities, and they may be persuaded by athletes' endorsements [52]. Bergkvist et al. point out that celebrity endorsement can promote people to have a good impression of products on sale [53]. In the public-interest

livestreams for helping farmers, the anchors not only include Internet celebrities, but also local officers and stars participate in recommending agricultural products one after another. This is why many consumers pay attention to livestreaming for farmers and finally place orders. Therefore, the following hypothesis is proposed:

Hypothesis 4 (H4). *PE positively affects consumers' attitudes towards agricultural products in public-interest livestreaming.*

3.5. Shipping

SP is an indispensable part for consumers when shopping online. Due to the continuous acceleration of the pace of life, it is a top priority for e-commerce operators to improve the service quality of logistics. The better SP service means the consumers receive the ordered product with qualified packaging, sufficient quantity, and good quality in accordance with the order. Moreover, the specified delivery time is also a vital consideration [38]. A retail study found that free SP was the most likely reason to convince people to complete the final step of the purchase process [54].

According to Lopienski, positive customer perceptions regarding flat-rate shipping can increase orders and their value [55]. Vasić also pointed out that in Serbia's online shopping market, the logistics service would affect consumers' purchase satisfaction [56]. The delivery mode, price and quality of SP service promised by merchants will affect consumers' ATT towards agricultural products in the livestreaming room. Therefore, the following hypothesis is proposed:

Hypothesis 5 (H5). *SP positively affects consumers' attitudes towards agricultural products in public-interest livestreaming.*

3.6. Product Familiarity

Familiarity with a product will influence consumers' purchase decision-making [39]. The brands that consumers are familiar with have great advantages over unfamiliar brands in terms of contact frequency and acceptance attitude. Relatively speaking, consumers work less to process information about brands they are familiar with. Information is easier to retrieve and store, and consumers generally prefer these brands [57]. In addition, a consumer's attitude toward a specific brand is affected by their familiarity with the brand [58]. In the field of tourism consumption, Verbeke et al. found that a strong sense of familiarity may weaken consumers' perception of risks related to tourism destinations and make consumers more confident about destinations and their products [59]. So, the following hypotheses are proposed:

Hypothesis 6 (H6). *PF positively affects consumers' attitudes towards agricultural products in public-interest livestreaming.*

3.7. Subjective Norms

SN can be considered as a consumers' perception of what he or she should or should not do from surroundings or social groups that are important to them, according to possible rewards or punishments that may be obtained from carrying out such behavior [7,43]. SNs reflect the social pressure people feel when participating in behaviors [18]. Kim found that SNs are significantly related to the acceptance and purchase intention of online shopping in South Korea [42], which is consistent with Driediger's research conclusion on the online shopping of Thai consumers [60]. Park et al., taking American consumers as the research sample, have shown that there is an indirect and positive relationship between SN and recycling intentions with consumers' attitudes towards recycling as the intermediary [61].

In the livesteaming for farmers, the opinions and remarks of people close to consumers may affect consumers' attitudes towards it to a certain extent. The recommendation of

friends and relatives may prompt consumers to watch the livestreaming for farmers and purchase farm products directly. Therefore, the following hypotheses are proposed:

Hypothesis 7 (H7a). *SN positively affects consumers' attitudes towards agricultural products in public-interest livestreaming.*

Hypothesis 7 (H7b). *SN positively affects consumers' PI towards agricultural products in public-interest livestreaming.*

3.8. Altruistic Value

People may behave altruistically in the hope that they will be rewarded for it, gain a positive reputation, or reduce the personal pain they feel from other people's situations [62]. Altruistic value reflects the customers' beliefs that the store is socially responsible, and consumers with altruism tend to choose stores with social responsibility [63].

Altruism is often used to study topics such as environmental protection and sustainable development. Many empirical studies had shown that altruism value has a significant impact on environmental attitudes and behaviors [64]. Saleem found that altruism helps to cultivate consumers' positive attitudes, and these attitudes had a significant influence on hotel guests' green behavioral intentions [65]. Leckie et al. revealed that altruistic value had a positive impact on consumers' loyalty to green brands, e.g., some new energy vehicle brands [66]. It is revealed that sustainability awareness positively influences the consumer altruism, which in turn enhances the consumer PI, green brand loyalty and evangelism [67]. The altruistic and collectivistic value were shown to positively influence attitude and intention towards green hotel selection [64].

This study introduced the altruism value as a unique variable. Because the public-interest livestreaming for helping farmers has the attribute of mutual assistance and altruism. The MCNs and streamers assist farmers to sell unsalable agricultural products through their recommendations, which can increase farmers' income. Consumers may also decide to place orders to help farmers during COVID-19 because of the value of altruism. Therefore, the following hypothesis is proposed:

Hypothesis 8 (H8a). *AV positively affects consumers' attitudes towards agricultural products in public-interest livestreaming.*

Hypothesis 8 (H8b). *AV positively affects consumers' PI towards agricultural products in public-interest livestreaming.*

3.9. Live Shopping Experience

The consumer experience includes the perception of different product quality and their related feelings. Similarly, Brakus et al. argued that consumer experience includes sensory, feeling, cognitive and behavioral responses that are part of product design and labeling, packaging, communication and environment [41].

Consumers' shopping experience is considered to be a factor causing positive emotions [68]. Bernard et al. found that online shoppers with more experience show lower privacy concerns, and that consumers without online shopping experience often think online shopping is risky because their personal information may be leaked. Credit cards may also be used without authorization [69]. Experienced shoppers were more confident in their own judgment than less experienced online shoppers [70]. People with rich online shopping experiences can often filter out extraneous details, which makes them more focused on their interaction with the site and thus can be keenly involved in the cognitive processing of information [71]. We assumed that people who often go live-shopping have a clear cognitive attitude towards the agricultural products recommended by anchors in the live streaming, so the following hypothesis is proposed:

Hypothesis 9 (H9). *The live shopping experience has a positive impact on the attitude towards the agricultural products recommended by streamers in public-interest livestreaming.*

In view of the previous literature review, the model construction of this study is based on TRA. The level of behavioral belief in this study consists of three levels: the platform level (IN, PEEIM, PE), agricultural product level (SP, PF) and consumer level (SN, AV, SE). The proposed model and assumptions are illustrated in Figure 1.

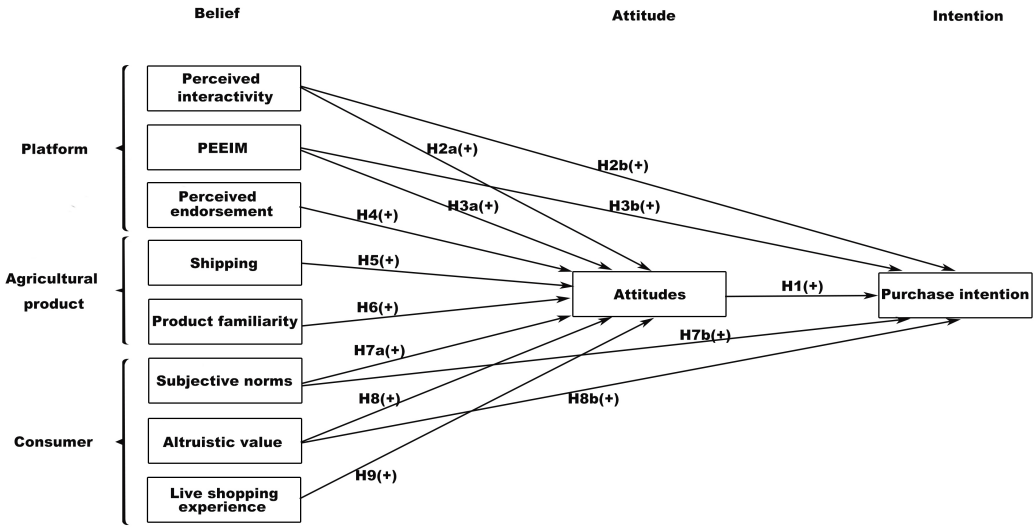

Figure 1. The proposed conceptual model.

4. Data Collection

We conducted an online and offline questionnaire survey from 10 April 2022 to 29 April 2022 for Chinese consumers, who used to purchase agricultural products through public-interest livestreaming. Questionnaires were mainly distributed online through social media (such as Wechat, QQ, Weibo and Douban) and questionnaire platforms (such as WJX) to expand the sample range as much as possible, which ensured that this study was not limited by geographical factors. The snowballing sampling method is also adopted in offline channels.

A total of 677 participants filled in the questionnaire. To make sure they were valid participants, we set up the screening questions for those who had purchased agricultural products via public-interest livestreaming, asking them to specifically answer what agricultural products they had purchased on which platform. Three types of responses were screened out: first, those who had not purchased agricultural products during the public-interest livestreaming for farmers; second, those who filled in the questionnaire for less than 60 s; third, the filling results of all items are almost the same value. After filtering bad dates out, a total of 475 valid questionnaires were obtained with an effective recovery of 70.16%. The number of samples exceeds ten times the maximum value of the model path [72,73], meeting the basic requirements of implementing PLS-SEM through SmartPLS. The questionnaire item presented in Appendix A Table A1 used the Likert seven-point scale, with scores ranging from "strongly disagree = 1" to "strongly agree = 7". We analyzed the overall reliability and validity of the questionnaire by SPSS in Table 2. The reliability is acceptable if Cronbach's α coefficient > 0.8. Bartlett test was applied to test the degree of correlation between various variables (KMO > 0.9 indicating a strong correlation). When p value is less than 0.05, the questionnaire has construct validity. In this way, the questionnaire has relatively better reliability and validity.

Table 3 shows the basic information of valid samples. Therein, 36.8% were male and 63.2% were female. Overall, 82.5% of the valid samples are in the age range of 19 to 25 years old, who are relatively young and almost students. The middle-aged and elderly groups

are relatively small. The vast majority of valid participants were well-educated. In terms of economic region, the largest number of respondents were from the eastern part of the China region (e.g., Jiangsu, Shandong, Guangdong and Shanghai), which accounts for 56.2 percent. Additionally, 19.4% and 16.2% of valid participants come from the center (e.g., Hunan, Hubei, Henan) and western (e.g., Sichuan, Shanxi, Guangxi) parts of China, respectively.

Table 2. Reliability and validity of questionnaire.

Cronbach's α	KMO	p Values
0.955	0.945	0.000

Table 3. Descriptive analysis.

Profile Category		Frequency	Percent
Gender (N = 475)	Male	175	36.8
	Female	300	63.2
Age	Under 18	6	1.3
	19–25	392	82.5
	26–35	48	10.1
	36–45	20	4.2
	46–60	9	1.9
	Above 60	0	0.0
Job	Student	358	75.4
	Enterprise staff	45	9.5
	Civil servants	31	6.5
	Freelancer	28	5.9
	Other	13	2.7
Education	Junior high school and under	7	1.5
	High school	18	3.8
	College	31	6.5
	Undergraduate	385	81.05
	Master's and above	34	7.15
Area	Northeast	28	5.9
	Eastern	267	56.2
	Central	92	19.4
	Western	77	16.2
	Foreign areas	11	2.3

As an effective way to measure the common method biases (CMB), we applied Harman's one-factor test in this study. The result showed that the principal component of one fixed factor can explain no more than 50% of the variance. The first (largest) factor accounted for 34.75% and no factor accounted for more than 50% of the variance, which was within an acceptable range and showed that CMB may not be a serious issue for the collected data set [74]. In addition to the Harman's one-factor test, a full collinearity test is a practical approach presented for the identification of the common method bias [75]. The most common test to evaluate the level of collinearity between indicators is the variance inflation factor (VIF). We conducted a full collinearity test by calculating VIF values for all independent and dependent variables. If all VIFs resulting from a full collinearity test are equal to or lower than 3.3, the model can be considered as free of common method bias. In our study, the highest VIF value was observed for PI3 (VIF = 2.626), which was below the most conservative VIF threshold of 3.3. Moreover, the anonymity of participants is guaranteed. We also indicated that there were no right or wrong answers in these questionnaires.

Figure 2 shows the percentage of purchase platform where respondents mentioned (number of mentioned for each platform/number of total mentioned platforms). We can

see that the main platforms include PDD (i.e., Pinduoduo or Buy Together), Taobao, TikTok and JD and etc. In particular, the number of consumers' mentioned purchasing on PDD account for 43%.

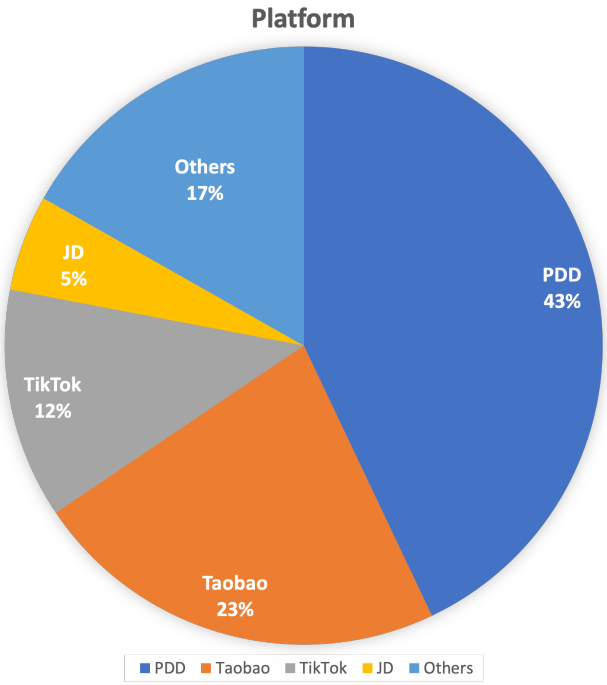

Figure 2. Purchase platform.

5. Analysis Results

SmartPLS is adopted to analyze both the measurement and the structural model with partial least square structural equation modeling (PLS-SEM), which has better prediction ability with relatively small sample size [76]. Meanwhile, the data does not require the normal distribution, which can ensure convergence. The maximum iteration number is set as 300, and the stop criterion is set as 10^{-7}. In order to test the structural model, 5000 subsamples, bias-corrected and accelerated, are set up in the PLS bootstrapping algorithm. The two-tailed hypotheses testing was performed.

5.1. Reliability and Validity

We use the internal consistency reliability, convergent validity and discriminant validity to evaluate the structural model. The internal consistency reliability is composed of Cronbach's coefficient (α) and composite reliability (CR), and the values should be 0.60 and above [77], preferably greater than 0.70 [78]. In order to evaluate the convergent validity, this study uses out loading (>0.70) of each indicator and average variance extracted (AVE) (>0.50) to evaluate each construct [79,80]. The purpose of discriminative validity is to ensure that structures differ from one another. The correlation between any item of different constructs should be lower than the square root of the average variance shared by items within a construct [81]. PE5, SP1, SP5, PF5, SE1 and ATT5 were deleted after pre-test.

As shown in Table 4, we can see that the values of Cronbach's (α) coefficient and CR for each construct are varied between 0.711–0.894 and 0.838–0.922, respectively, much higher than 0.60, indicating that the questionnaire has good internal consistency and high reliability. Except for IN1 and PE4, the out loading of all other items was greater than 0.7, but IN1 (0.679) and PE4 (0.634) do not significantly damage the internal consistency. The AVE for each construct ranges from 0.530 to 0.716, which is larger than the threshold of 0.50, proving that all constructs pass the test and have good polymerization validity. The variance inflation factor (VIF) was used to evaluate collinearity issues and showed that all items are less than 3, which is acceptable. As shown in Table 5, the square root

(diagonal) of each AVE is higher than the cross-construct correlation (non-diagonal value), so the discriminant validity is also verified. Therefore, we can see that the reliability and validity evaluation values of each construct are in accordance with the standard.

Table 4. Validity and reliability result.

Construct	Item	Loading	VIF	Cronbach's α	CR	AVE
IN	IN1	0.679	1.659	0.779	0.849	0.530
	IN2	0.750	1.815			
	IN3	0.763	1.525			
	IN4	0.709	1.407			
	IN5	0.734	1.482			
PEEIM	PEEIM1	0.748	1.604	0.827	0.879	0.591
	PEEIM2	0.773	1.673			
	PEEIM3	0.788	1.699			
	PEEIM4	0.762	1.625			
	PEEIM5	0.773	1.686			
PE	PE1	0.771	1.552	0.746	0.840	0.570
	PE2	0.808	1.648			
	PE3	0.794	1.502			
	PE4	0.634	1.229			
SP	SP2	0.740	1.391	0.711	0.838	0.634
	SP3	0.777	1.335			
	SP4	0.866	1.621			
PF	PF1	0.844	2.252	0.841	0.894	0.680
	PF2	0.861	2.362			
	PF3	0.858	2.093			
	PF4	0.727	1.424			
SN	SN1	0.749	1.737	0.807	0.866	0.564
	SN2	0.768	1.798			
	SN3	0.742	1.535			
	SN4	0.780	1.665			
	SN5	0.713	1.476			
AV	AV1	0.779	1.789	0.847	0.891	0.621
	AV2	0.761	1.754			
	AV3	0.763	1.610			
	AV4	0.825	1.952			
	AV5	0.810	1.999			
SE	SE2	0.829	1.996	0.868	0.910	0.716
	SE3	0.869	2.435			
	SE4	0.869	2.371			
	SE5	0.817	1.830			
ATT	ATT1	0.800	1.830	0.829	0.886	0.661
	ATT2	0.851	2.089			
	ATT3	0.777	1.606			
	ATT4	0.822	1.806			
PI	PI1	0.835	2.269	0.894	0.922	0.704
	PI2	0.848	2.344			
	PI3	0.869	2.626			
	PI4	0.841	2.279			
	PI5	0.800	1.919			

Table 5. Discriminant validity (Fornell–Larcker criterion).

	ATT	AV	IN	PE	PF	PI	PEEIM	SE	SN	SP
ATT	0.813									
AV	0.554	0.788								
IN	0.510	0.438	0.728							
PE	0.570	0.489	0.456	0.755						
PF	0.484	0.227	0.374	0.445	0.824					
PI	0.802	0.489	0.451	0.535	0.455	0.839				
PEEIM	0.532	0.443	0.563	0.509	0.387	0.503	0.769			
SE	0.686	0.370	0.408	0.507	0.491	0.613	0.490	0.846		
SN	0.631	0.588	0.473	0.536	0.466	0.636	0.489	0.519	0.751	
SP	0.492	0.465	0.501	0.561	0.394	0.476	0.598	0.429	0.477	0.796

5.2. Hypothesis Analysis

The test results of the structural model are shown in Table 6, where 8 of the 13 hypotheses are valid. The results of the hypothesis structural models are shown in Figure 3.

Table 6. Hypothesis analysis.

Hypothesis	Path	T Statistics	*p* Values	Path Coefficient	Result
H1	ATT→PI	16.351	0.000	0.648 ***	Supported
H2a	IN→ATT	2.272	0.023	0.092 *	Supported
H2b	IN→PI	0.212	0.832	−0.008	Not
H3a	PEEIM→ATT	1.074	0.283	0.050	Not
H3b	PEEIM→PI	1.654	0.098	0.069	Not
H4	PE→ATT	2.256	0.024	0.091 *	Supported
H5	SP→ATT	0.042	0.966	0.002	Not
H6	PF→ATT	2.051	0.040	0.082 *	Supported
H7a	SN→ATT	3.448	0.001	0.166 ***	Supported
H7b	SN→PI	4.806	0.000	0.210 ***	Supported
H8a	AV→ATT	4.924	0.000	0.190 ***	Supported
H8b	AV→PI	0.529	0.597	−0.021	Not
H9	SE→ATT	8.730	0.000	0.381 ***	Supported

*** $p < 0.001$, * $p < 0.05$.

In the hypothesis H1, the relationship between attitudes and purchase intention ($\beta = 0.648$; $p < 0.001$) has a significant positive effect, which is the most significant of all hypotheses, so H1 is proved to be valid. For platform level, H2a ($\beta = 0.092$; $p < 0.05$), H4 ($\beta = 0.091$; $p < 0.05$) are supported, which indicated that IN and PE have a significant positive effect on attitude. H2b ($\beta = -0.008$; $p = 0.832$), H3a ($\beta = 0.050$; $p = 0.283$), H3b ($\beta = 0.069$; $p = 0.098$) are unproven hypotheses. For produce level, H6 ($\beta = 0.082$; $p < 0.05$) was supported and showed that PF is related with attitudes. However, H5 ($\beta = 0.002$; $p = 0.966$) is not proved. For consumer level, H7a ($\beta = 0.166$; $p < 0.001$) and H7b ($\beta = 0.210$; $p < 0.001$) are also considered to be valid, indicating that subjective norms have significant positive effects on attitudes and purchase intentions. H8a ($\beta = 0.190$; $p < 0.001$) and H9 ($\beta = 0.381$; $p < 0.001$) also proved that both altruistic value and live shopping experience have significant positive effects on attitude. H8b ($\beta = -0.021$; $p = 0.597$) is not supported.

The endogenous construction quality of the structural equation model can be measured by R^2, which has three thresholds of 0.75, 0.50 and 0.25, representing strong, medium and weak prediction accuracy, respectively [80]. We use the adjusted R^2 as the standard for judgment. It can be seen from Figure 3 that both attitude and purchase intention have good prediction accuracy, which is 0.631 and 0.671, respectively.

As shown in Table 7, a bootstrapping procedure was used to test the mediating effects. For the unproven hypothesis H2b, H3a, H3b, H5, and H8b, we can see that there exist the mediating relation between IN→ATT→PI and AV→ATT→PI, which show that the H2b

and H8b can be supported by mediating by attitude. The variables of shipping and PEEIM have no mediating effect with purchase intention via attitude.

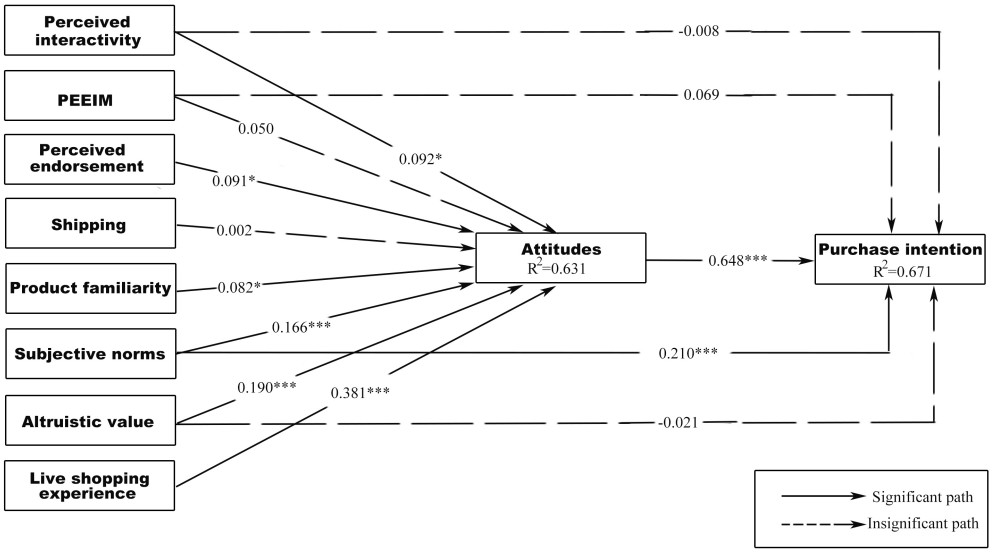

Figure 3. The structural model (*** $p < 0.001$, * $p < 0.05$).

Table 7. Mediating relationship.

Indirect Path	Std. Beta	Std. SD	T Statistics	Confidence Intervals (2.5%)	Confidence Intervals (97.5%)	*p* Values
AV→ATT→PI	0.123	0.026	4.756 ***	0.073	0.174	0.000
SP→ATT→PI	0.001	0.027	0.042	−0.051	0.057	0.966
PEEIM→ATT→PI	0.032	0.030	1.068	−0.026	0.092	0.286
PE→ATT→PI	0.059	0.026	2.218 *	0.008	0.111	0.027
SN→ATT→PI	0.107	0.031	3.426 ***	0.046	0.169	0.001
PF→ATT→PI	0.053	0.026	2.023 *	0.004	0.107	0.043
IN→ATT→PI	0.060	0.026	2.263 *	0.010	0.115	0.024
SE→ATT→PI	0.247	0.032	7.740 ***	0.181	0.308	0.000

*** $p < 0.001$, * $p < 0.05$.

6. Discussion

Based on the TRA, we construct the behavioral belief from three aspects: platform level (Perceived interactivity, PEEIM, perceived endorsement), product level (Shipping, product familiarity) and consumer level (Subjective norms, altruistic value, Live shopping experience). We aim to explore whether these factors affect consumers' attitude and purchase intention for agricultural products recommended through watching the public-interest livestreaming. It is found that consumers' attitudes towards farm products in livestreaming have a significant positive impact on consumers' purchase intentions. This is consistent with the research conclusion of Kim [42]. If the consumer has a positive attitude towards the agricultural products recommended by livestreaming, it is likely to indicate that he or she will place an order to purchase.

6.1. Platform Level

At the level of platform, perceived interactivity significantly affects consumers' attitudes towards agricultural products in the live streaming for farmers, which confirms the result in [35] that interactivity is a key feature of the live broadcast commerce via mobile devices (e.g., smartphones, pad and tablet). It helps to cultivate users' positive attitudes in communication and transaction. In the live streaming room, streamers interact with consumers in various ways and answer consumers' questions about products in real time, which is very beneficial for consumers to build a quick understanding of the agricultural

products recommended by streamers and then develop positive cognitive and affective attitudes. Our study is consistent with previous studies about perceived interactivity. According to Wu [82], perceived interactivity mediates the effect of actual interactivity on attitude toward the website. It is revealed by Hou et al. [83] that interactivity enhances continuous watching intention, which increases the perceived value of livestreaming and strengthens favorable attitudes of viewers.

The perceived endorsement has a significant positive effect on attitudes. Among public-interest livestreaming, the streamers are becoming more and more diversified, including Internet celebrities, professional anchors, stars and even chief officers of local governments in the initial stage. They recommend agricultural products in order to increase turnover, which makes consumers feel more assured about the recommended agricultural products. If the streamer is a local official or consumers' favorite star, many consumers think it adds credibility to the farm products. At this level, three hypotheses (i.e., H2b, H3a and H3b) have not been proved. For example, perceived interactivity does not directly and significantly affect consumers' purchase intention, but indirectly affects consumers' purchase intention through attitude as an intermediary.

Although consumers will have a positive impression of the recommended farm products because of the positive interaction between the streamer and consumers, the consumer is literally rational and they will still choose whether to place an order based on their own demand, which reflects that it is not easy for the livestreaming in brief and fixed periods of time to stimulate the consumer's purchase intention. Neither of the two hypotheses about PEEIM has been proved to be valid, indicating that PEEIM cannot directly impact on consumers' attitude towards agricultural products and purchase intention. In China, this intermediary and third-party protection mechanism is jointly formed by live streaming platforms, third-party payment institutions and consumer protection organizations. The reason is that the surveyed consumers have great trust in the established payment system and believe in the national regulation and supervision. They do not pay too much attention to the protection of personal information in transactions, but also express some helplessness in this aspect. In the Internet virtual environment, it is very difficult to prevent the leakage of personal information. Therein, the RQ1 has been addressed.

6.2. Products Level

At the level of farm products, the hypothesis of product familiarity is supported by data. The more familiar consumers are with the agricultural products recommended by streamers, the more positive they will be on the slow-selling agricultural products due to the COVID-19 pandemic. Consumers are more favorable to brands or products they are familiar with from both cognitive and affective perspectives through three ways: (1) they used to purchase or enjoy same kind of products personally; (2) such products have been recommended by relatives, friends or mobile media advertise; (3) some agricultural products have already been well-known brand, such as Yantai apple, Wuhan duck goods and Liuzhou snail noodles, etc. Once they encounter the familiar agricultural products in public-interest livestreaming, consumers only need to pay less time, energy and search costs to acquire corresponding information and form cognitive and affective attitudes. Perception of logistics service quality is not significantly affect consumers' attitudes on agricultural products in live streaming. Through subsequent investigation, the main reasons can be summarized as three points: First, the expectation value of farm products is not high. When buying agricultural products in the mobile live streaming room, consumers themselves have reduced the expectation value and sense of surprise for receiving target goods. So they do not have too high requirements for timely service of logistics; second, it is non-rigid demand. In the live streaming room, depending on the property of public-interest, it is not urgent use or desirable taste to buy agricultural products; third, the adjustment of consumer psychology. Consumers have certain psychological constructions and tolerance for the damage of agricultural products in logistics, so they do not have too many requirements

for the return and exchange service in logistics. In this way, the RQ2 can be answered to reveal the factors related to the characteristics of products.

6.3. Consumers Level

At the level of consumers themselves, subjective norms have a significant positive impact on consumers' attitude and purchase intention for the agricultural products recommended by the public-interest livestreaming. Potential consumers would be influenced by relatives, colleagues and friends to buy agricultural products in the live streaming room through mobile apps. It is of great importance to leave an impression on the cognition of potential consumers about agricultural products. According to a 2019 report by McKinsey, about 50 percent of new car information comes from passive sources, and more than half comes from friends or family [84]. Fulk et al. found that consumers' family members, friends and colleagues' attitudes towards new technologies would also have an impact on them [85], which reflects the social pressure people feel when purchasing. The result of our study is contrary to Zhou et al. [86]. In their study, subjective norms are not significantly correlated with participants' willingness to accept and use live e-commerce shopping. However, this result echoes previous research such as the research of social commerce in Jordan [87], m-commerce in China [88], and intention to purchase organic food in China [89].

The value of altruism has a significant positive impact on consumers' attitudes on the farm products recommended by the streamer. The public-interest livestreaming is a special way to help farmers sell their products with the attribute of altruism. Consumers think that the live streaming for helping farmers gives farmers hands when they are in trouble because of COVID-19 pandemic. Through this way, the unsalable inventory can be sold out to ease the plight of farmers. Therein, consumers show a very positive attitude to the livestreaming. We found that consumers' online shopping experience also has a significant positive impact on their attitude for the agricultural products. The reason is that consumers with purchase experience have a confident grasp of their online shopping ability and understand various procedures and operations in mobile living room. They can keenly participate in the behavior of processing information, and have a clear cognitive attitude towards the agricultural products recommended by streamers in the live streaming. So the RQ3 is answered.

6.4. Limitations

First of all, the age of the samples in this study is relatively young, ranging from 19 to 25 years old, but the middle-aged and elderly group is small. Although the youth prefer online shopping, middle-aged consumers are also involved in the public-interest livestreaming with consumption potentiality. The shopping psychology of middle-aged and elderly groups as well as the factors affecting their online shopping are also worth paying attention to. As the reach of information technology continues to expand, the elderly are also gradually exposed to live shopping. Secondly, the educational level of the samples is also relatively concentrated, with 91.1% of them having received university education or above. There is a lack of research on people with low educational levels. Perhaps educational level can play a regulating role in some variables, which is worth supplementing by subsequent research. Finally, the respondents mainly come from provinces with relatively developed GDP levels, such as Shandong and Jiangsu in east China, and less coverage is provided to underdeveloped regions such as western China.

7. Conclusions

In this paper, based on the theory of reasoned action, we have investigated the influencing factors of consumers' purchase intention of agricultural products via the public-interest livestreaming for farmers, which is emerging as new phenomenon in mobile commerce during the COVID-19 epidemic. It concludes that consumers' attitudes towards agricultural products have a positive impact on their purchase intention, and the impact is very significant. The relationship between different variables from levels of platform, product

and consumer on attitude and purchase intention are also revealed. Perceived interaction, perceived endorsement, product familiarity, subjective norms, altruistic value, and live shopping experience all significantly positively affect consumers' attitudes toward agricultural products by live streaming. Meanwhile, the variable of subjective norms can also directly and positively affect consumers' purchase intentions. This shows that consumers' purchasing behavior in the public-interest livestreaming for farmers is influenced by the persuasion from friends, celebrity and officers. The proposed model has a higher explanation for attitudes and purchase intention towards agricultural products via public-interest livestreaming for farmers.

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Abbreviations

The following abbreviations are used in this manuscript:

TRA	Theory of Reasoned Action
IN	Perceived Interactivity
PEEIM	Perceived Effectiveness of E-commerce Institutional Mechanism
PE	Perceived Endorsement
SP	Shipping
PF	Product Familiarity
SN	Subjective Norms
AV	Altruistic Value
SE	Live shopping experience
ATT	Attitude
PI	Purchase Intention

Appendix A. Questionnaire Items

Table A1. Questionnaire Items.

Construct	Item	References
Perceived interactivity (IN)	IN1: In the public-interest live streaming for farmers, I can interact with the streamer through bullet screen, connect microphone, tip and other ways. IN2: In the public-interest live streaming for farmers, I can fully communicate with streamers about agricultural products and related services through bullet screen or connect microphone and other ways. IN3: In the public-interest live streaming for farmers, sharing information and opinions with other consumers is easy. IN4: In the public-interest live streaming for farmers, Streamers can quickly respond to the needs and questions of potential consumers. IN5: After the public-interest live streaming, I can still communicate with streamers, merchants or sales platforms through private messages and comments.	Tu et al. [47] Ebrahimi et al. (2021) [49]

Table A1. *Cont.*

Construct	Item	References
Perceived effectiveness of institutional mechanism (PEEIM)	PEEIM1: When buying in the public-interest live streaming, I am confident that there are mechanisms in place to protect me against any potential risks (e.g., leaking of personal information, credit card fraud, goods not received, etc.) of online shopping if something goes wrong with my online purchase. PEEIM2: When I buy in the public-interest live streaming but did not receive the goods or the goods were of poor quality, I was sure there was a mechanism in place to make up for my loss. PEEIM3: If there is a problem when I buy in the public-interest live streaming, I believe the live streaming platform will actively coordinate and guide me on how to operate and solve the problem. PEEIM4: If there is a problem with purchasing through third-party payment (e.g., Wechat, Alipay, etc.) during the public-interest live streaming for farmers, I believe Wechat, Alipay and other third parties will actively help me solve the problems in the payment process. PEEIM5: When I feel cheated by the streamer's recommendation, I can complain to the streamer or the platform through some channels.	Ni et al. [51]
Perceived endorsement (PE)	PE1: In the public-interest live streaming for farmers, if the streamer tries to promise that the product is genuine, I think it is credible. PE2: In the public-interest live streaming for farmers, I think streamers who faithfully recommend agricultural products have professional ethics. PE3: In the public-interest live streaming for farmers, I think streamers are relatively familiar with products and experienced in recommending them. PE4: I will pay more attention to the current agricultural products if the officials of the production area or my favorite stars act as streamers to recommend them. PE5: I will feel more authentic if the officials of the production area or my favorite stars act as streamers to recommend them. *	Ohanian (1991) [90]
Shipping (SP)	SP1: In the public-interest live streaming for farmers, the option free shipping increases the number of sales. * SP2: After purchasing in the public-interest live streaming for farmers, I think the products will be delivered within the promised time. SP3: After receiving the goods, I believe that the quality of the products matches the recommended description (e.g., no weight loss, no damage, fresh and no deterioration, etc.). SP4: When buying in the public-interest live streaming for farmers, I think the platform can provide the appropriate shipping method (e.g., air freight, adequate preservation measures, etc.) according to the product characteristics. SP5: After purchasing in the public-interest live streaming for farmers, I think it would be convenient to return or exchange the goods. *	Vasić et al. (2019) [56]
Product familiarity (PF)	PF1: As for the agricultural products recommended by the streamers, I often see their advertisements in my life. PF2: As for the agricultural products recommended by the streamers, I often see related displays and sales campaigns in my life. PF3: I often hear people talking about the products that the streamers recommend. PF4: I'm familiar with the products the streamer recommends. PF5: I often buy agricultural products that I know well. *	Kent et al. (1994) [91] Laroche et al. (1996) [58]
Subjective norms (SN)	SN1: The cognition of my colleagues and friends on the public-interest live streaming for farmers will encourage me to contact it. SN2: My colleagues and friends' opinions on the public-interest live streaming for farmers will affect my attention to and purchase the agricultural products recommended. SN3: If someone recommends agricultural products to me, I will try to buy them. SN4: My friends and family support me to purchase in the public-interest live streaming for farmers. SN5: Among my friends and relatives, I think it is a trend to buy agricultural products through the public-interest live streaming for farmers.	Ahn (2020) [92] Wu (2014) [93]
Altruistic value (AV)	AV1: I think buying agricultural products in the public-interest live streaming for farmers can help people who are in trouble. AV2: I think it helps farmers clear unsaleable stocks and increase their income when buying agricultural products public-interest in the live streaming for farmers. AV3: I think platforms or streamers that carry out live streaming for farmers are very socially responsible. AV4: The public-interest live streaming for farmers assumes the social responsibility of helping the weak and poverty relief. AV5: I think the public-interest live streaming for farmers has a positive impact on rural economy and farmers' income.	Janssens et al. (2020) [94] Du et al. (2007) [63]

Table A1. *Cont.*

Construct	Item	References
Live shopping experience (SE)	SE1: I have a great deal of experience with online shopping. * SE2: I have been exposed to live streaming with goods very frequently and buy them.	Chiu (2009) [95]
	SE3: I am well-known with the different possibilities to exploit live shopping.	Srivastava et al. (2016) [96]
	SE4: I frequently update my knowledge about the functionalities of live shopping. SE5: I am very confident in employing live shopping.	
Attitude (ATT)	ATT1: I am comfortable shopping in the public-interest live streaming for farmers. ATT2: I like to purchase what I need from the public-interest live streaming for farmers. ATT3: I hold a positive attitude towards buying agricultural products in the public-interest live streaming for farmers. ATT4: I am an advocate of purchasing agricultural products in the public-interest live streaming for farmers. ATT5: It is a prudent choice to purchase agricultural products in the public-interest live streaming for farmers. *	Kim (2021) [42]
Purchase intention (PI)	PI1: I prefer to purchase agricultural products in the public-interest live streaming for farmers. PI2: I plan to do more of my shopping in the public-interest live streaming for farmers. PI3: My willingness to purchase agricultural products recommended by streamers is high. PI4: I am likely to recommend the public-interest live streaming for farmers to my friends. PI5: Public-interest live streaming for farmers inspires me to purchase more agricultural products.	Kim (2021) [42]

Note: * were deleted items.

References

1. Arita, S.; Grant, J.; Sydow, S.; Beckman, J. Has global agricultural trade been resilient under coronavirus (COVID-19)? Findings from an econometric assessment of 2020. *Food Policy* **2022**, *107*, 102204. [CrossRef] [PubMed]
2. Huang, T.; Chen, C.; Liao, G.Y.; Cheng, T.C.E.; Teng, C. How to Enhance Vendor-Specific Perceived Effectiveness of E-Commerce Institutional Mechanisms and Online Shopper Loyalty. *Int. J. Electron. Commer.* **2022**, *26*, 222–244. [CrossRef]
3. Counsel, L.R. Title 7-Agriculture. 2013. Available online: https://statecodesfiles.justia.com/us/2013/title-7/chapter-94/section-6502/section-6502.pdf (accessed on 20 May 2022).
4. Liu, Y.; Liu, S.; Ye, D.; Tang, H.; Wang, F. Dynamic impact of negative public sentiment on agricultural product prices during COVID-19. *J. Retail. Consum. Serv.* **2022**, *64*, 102790. [CrossRef]
5. Jin, L.; Chen, J.; Chen, Z.; Sun, X.; Yu, B. Impact of COVID-19 on China's international liner shipping network based on AIS data. *Transp. Policy* **2022**, *121*, 90–99. [CrossRef]
6. Ministry of Commerce. Implementation Opinions on Promoting the Application of E-Commerce. 2014. Available online: http://www.mofcom.gov.cn/article/b/g/201402/20140200481290.shtml (accessed on 21 May 2022).
7. Fishbein, M.; Ajzen, I. *Belief, Attitude, Intention, and Behavior: An Introduction to Theory, and Research*; Addison-Wesley Publishing: Reading, MA, USA, 1975.
8. Rehman, T.; McKemey, K.; Yates, C.; Cooke, R.; Garforth, C.; Tranter, R.; Park, J.; Dorward, P. Identifying and understanding factors influencing the uptake of new technologies on dairy farms in SW England using the theory of reasoned action. *Agric. Syst.* **2007**, *94*, 281–293. [CrossRef]
9. Madden, T.; Ellen, P.; Ajzen, I. A comparison of the theory of planned behavior and the theory of reasoned action. *Personal. Soc. Psychol. Bull.* **1992**, *18*, 3–9. [CrossRef]
10. Ajzen, I.; Madden, T. Prediction of goal-directed behavior: Attitudes, intentions, and perceived behavioral control. *J. Exp. Soc. Psychol.* **1986**, *22*, 453–474. [CrossRef]
11. Hale, J.; Householder, B.; Greene, K. The theory of reasoned action. *Persuas. Handb. Dev. Theory Pract.* **2002**, *13*, 259–288. [CrossRef]
12. Choo, H.; Chung, J. Antecedents to new food product purchasing behavior among innovator groups in India. *Eur. J. Mark.* **2022**, *38*, 608–625. [CrossRef]
13. French, D.P.; Sutton, S.; Hennings, S. The Importance of Affective Beliefs and Attitudes in the Theory of Planned Behavior: Predicting Intention to Increase Physical Activity. *J. Appl. Soc. Psychol.* **2005**, *35*, 1824–1848. [CrossRef]
14. Alzahrani, K.; Hall-Phillips, A.; Zeng, A. Applying the Theory of Reasoned Action to Understanding Consumers' Intention to Adopt Hybrid Electric Vehicles in Saudi Arabia. *Transportation* **2019**, *46*, 199–215. [CrossRef]

15. Muralidharan, S.; Ferle, C.; Pookulangara, S. Studying the Impact of Religious Symbols on Domestic Violence Prevention in India: Applying the Theory of Reasoned Action to Bystanders' Reporting Intentions. *Int. J. Advert.* **2018**, *37*, 609–632. [CrossRef]
16. Shimp, T.A.; Kavas, A. The theory of reasoned action applied to coupon usage. *J. Consum. Res.* **1984**, *11*, 795–809. [CrossRef]
17. Hsu, C.L.; Lin, C.C. Acceptance of blog usage: The roles of technology acceptance, social influence and knowledge sharing motivation. *Inf. Manag.* **2008**, *45*, 65–74. [CrossRef]
18. Ajzen, I. The Theory of Planned Behavior. *Organ. Behav. Hum. Decis. Process.* **1991**, *50*, 179–211. [CrossRef]
19. Roseira, C.; Teixeira, S.; Barbosa, B.; Macedo, R. How Collectivism Affects Organic Food Purchase Intention and Behavior: A Study with Norwegian and Portuguese Young Consumers. *Sustainability* **2022**, *14*, 7361. [CrossRef]
20. Yang, C.; Chen, X.S.J.; Wei, W.; Miao, W.; Gu, C. Could Surplus Food in Blind Box Form Increase Consumers' Purchase Intention? *Agriculture* **2022**, *12*, 864. [CrossRef]
21. Liu, H.; Feng, S.H.X. Process vs. Outcome: Effects of food photo types in online restaurant reviews on consumers' purchase intention. *Int. J. Hosp. Manag.* **2002**, *102*, 103179. [CrossRef]
22. Muela-Molina, C.; Perello-Oliver, S.; Garcia-Arranz, A. Health-related claims in food supplements endorsements: A content analysis from the perspective of EU regulation. *Public Health* **2021**, *190*, 168–172. [CrossRef]
23. Yin, S.; Wu, L.; Du, L.; Chen, M. Consumers' purchase intention of organic food in China. *J. Sci. Food Agric.* **2010**, *90*, 1361–1367. [CrossRef]
24. Rita, P.; Ramos, R. Global Research Trends in Consumer Behavior and Sustainability in E-Commerce: A Bibliometric Analysis of the Knowledge Structure. *Sustainablility* **2022**, *14*, 9455. [CrossRef]
25. Meng, L.M.; Duan, S.; Zhao, Y.; Lü, K.; Chen, S. The impact of online celebrity in live streaming e-commerce on purchase intention from the perspective of emotional contagion. *J. Retail. Consum. Serv.* **2021**, *63*, 102733. [CrossRef]
26. Guo, H.; Sun, X.; Pan, C.; Xu, S.; Yan, N. The Sustainability of Fresh Agricultural Produce Live Broadcast Development: Influence on Consumer Purchase Intentions Based on Live Broadcast Characteristics. *Sustainability* **2022**, *14*, 7159. [CrossRef]
27. Gomes, S.; Lopes, J. Evolution of the Online Grocery Shopping Experience during the COVID-19 Pandemic: Empiric Study from Portugal. *J. Theor. Appl. Electron. Commer. Res.* **2022**, *17*, 909–923. [CrossRef]
28. Paul, J.; Modi, A.; Patel, J. Predicting green product consumption using theory of planned behavior and reasoned action. *J. Retail. Consum. Serv.* **2016**, *29*, 123–134. [CrossRef]
29. Changchit, C.; Cutshall, R.; Lonkani, R.; Pholwan, K.; Pongwiritthon, R. Determinants of Online Shopping Influencing Thai Consumer's Buying Choices. *J. Retail. Consum. Serv.* **2019**, *18*, 1–23. [CrossRef]
30. Zhou, R.; Tong, L. A Study on the Influencing Factors of Consumers' Purchase Intention During Livestreaming e-Commerce: The Mediating Effect of Emotion. *Front. Psychol.* **2022**, *13*, 903023. [CrossRef]
31. You, C. Law and policy of platform economy in China. *Comput. Law Secur. Rev.* **2020**, *39*, 105493. [CrossRef]
32. Chen, B.; Wang, L.; Rasool, H.; Wang, J. Research on the Impact of Marketing Strategy on Consumers' Impulsive Purchase Behavior in Livestreaming E-commerce. *Front. Psychol.* **2022**, *13*, 905531. [CrossRef]
33. Chong, H.; Hashim, A.; Osman, S.; Lau, J.; Aw, E.X. The future of e-commerce? Understanding live streaming commerce continuance usage. *Int. J. Retail Distrib. Manag.* **2022**. [CrossRef]
34. Wang, M.; Fan, X. An Empirical Study on How Livestreaming Can Contribute to the Sustainability of Green Agri-Food Entrepreneurial Firms. *Sustainability* **2021**, *13*, 12627. [CrossRef]
35. Kang, K.; Lu, J.; Guo, L.; Li, W. The dynamic effect of interactivity on customer engagement behavior through tie strength: Evidence from live streaming commerce platforms. *Int. J. Inf. Manag.* **2021**, *56*, 102251. [CrossRef]
36. Fang, Y.; Qureshi, I.; Sun, H.; McCole, P.; Ramsey, E.; Lim, K. Trust, Satisfaction, and Online Repurchase Intention: The Moderating Role of Perceived Effectiveness of E-Commerce Institutional Mechanisms. *MIS Q.* **2014**, *38*, 407–427. [CrossRef]
37. Fireworker, R.; Friedman, H. The Effects of endorsements on product evaluation. *Decis. Sci.* **1977**, *8*, 576–583. [CrossRef]
38. Patterson, P. Expectations and product performance as determinants of satisfaction for a high-involvement purchase. *Psychol. Mark.* **1993**, *10*, 449–465. [CrossRef]
39. Bettman, J.; Park, C. Effects of Prior Knowledge and Experience and Phase of the Choice Process on Consumer Decision Processes: A Protocol Analysis. *J. Consum. Res.* **1980**, *7*, 234–248. [CrossRef]
40. Santos, F. A positive theory of social entrepreneurship. *J. Bus. Ethics* **2010**, *111*, 1. [CrossRef]
41. Brakus, J.; Schmitt, B.; Zarantonello, L. Brand Experience: What Is It? How Is It Measured? Does It Affect Loyalty? *J. Mark.* **2009**, *73*, 52–68. [CrossRef]
42. Kim, H. Use of Mobile Grocery Shopping Application: Motivation and Decision-Making Process among South Korean Consumers. *J. Theor. Appl. Electron. Commer. Res.* **2021**, *16*, 2672–2693. [CrossRef]
43. Pena-Garcia, N.; Gil-Saura, I.; Rodriguez-Orejuela, A.; Siqueira-Junior, J. Purchase intention and purchase behavior online: Across-cultural approach. *Heliyon* **2020**, *6*, e04284. [CrossRef]
44. Li, Y.; Li, X.; Cai, J. How attachment affects user stickiness on live streaming platforms: A socio-technical approach perspective. *J. Retail. Consum. Serv.* **2021**, *60*, 102478. [CrossRef]
45. Chen, A.; Lu, Y.; Wang, B. Customers' purchase decision-making process in social commerce: A social learning perspective. *Int. J. Inf. Manag.* **2017**, *37*, 627–638. [CrossRef]
46. Muntinga, D.; Moorman, M.; Smit, E. Introducing COBRAs: Exploring motivations for brand-related social media use. *Int. J. Advert.* **2011**, *30*, 13–46. [CrossRef]

47. Tu, C.; McIsaac, M. The relationship of social presence and interaction in online classes. *Am. J. Distance Educ.* **2002**, *16*, 131–150. [CrossRef]
48. Zhao, L.; Lee, S.; Copeland, L. Social Media and Chinese Consumers'Environmentally Sustainable Apparel Purchase Intentions. *Asia Pac. J. Mark. Logist.* **2019**, *31*, 855–874. [CrossRef]
49. Ebrahimi, P.; Khajeheian, D.; Fekete-Farkas, M. A SEM-NCA Approach towards Social Networks Marketing: Evaluating Consumers' Sustainable Purchase Behavior with the Moderating Role of Eco-Friendly Attitude. *Int. J. Environ. Res. Public Health* **2021**, *18*, 13276. [CrossRef]
50. Sim, J.; Loh, S.; Wong, K.; Choong, C. Do We Need Trust Transfer Mechanisms? An M-Commerce Adoption Perspective. *J. Theor. Appl. Electron. Commer. Res.* **2021**, *16*, 2241–2262. [CrossRef]
51. Masri, N.W.; Ruangkanjanases, A.; Chen, S. The Effects of Product Monetary Value, Product Evaluation Cost, and Customer Enjoyment on Customer Intention to Purchase and Reuse Vendors: Institutional Trust-Based Mechanisms. *Sustainability* **2021**, *13*, 172. [CrossRef]
52. Miller, A.; Cassidy, O.; Greene, T.; Arshonsky, J.; Albert, S.; Bragg, M. A Qualitative Analysis of Black and White Adolescents' Perceptions of and Responses to Racially Targeted Food and Drink Commercials on Television. *Int. J. Environ. Res. Public Health* **2021**, *18*, 11563. [CrossRef]
53. Bergkvist, L.; Zhou, K. Celebrity endorsements: A literature review and research agenda. *Int. J. Advert.* **2016**, *35*, 642–663. [CrossRef]
54. Sands, W. The Future of Retail. 2019. Available online: https://www.walkersands.com/resources/the-future-of-retail-2019/ (accessed on 21 May 2022).
55. Lopienski, K. Understanding USPS Flat Rate Shipping for Ecommerce. 2019. Available online: https://www.shipbob.com/blog/flat-rate-shipping/ (accessed on 21 May 2022).
56. Vasić, N.; Kilibarda, M.; Kaurin, T. The Influence of Online Shopping Determinants on Customer Satisfaction in the Serbian Market. *J. Theor. Appl. Electron. Commer. Res.* **2019**, *14*, 70–89. [CrossRef]
57. Novemsky, N.; Dhar, R.; Schwarz, N.; Simonson, I. Preference fluency on choice. *J. Mark. Res.* **2007**, *44*, 347–356. [CrossRef]
58. Laroche, M.; Kim, C.; Zhou, L. Brand familiarity and confidence as determinants of purchase intention: An empirical test in a multiple brand context. *J. Bus. Res.* **1996**, *37*, 115–120. [CrossRef]
59. Verbeke, W.; Scholderer, J.L.L. Consumer appeal of nutrition and health claims in three existing product concepts. *Appetite* **2009**, *52*, 684–692. [CrossRef]
60. Driediger, F.; Bhatiasevi, V. Online grocery shopping in Thailand: Consumer acceptance and usage behavior. *J. Retail. Consum. Serv.* **2019**, *48*, 224–237. [CrossRef]
61. Park, J.; Ha, S. Understanding Consumer Recycling Behavior: Combining the Theory of Planned Behavior and the Norm Activation Model. *Fam. Consum. Sci. Res. J.* **2014**, *42*, 278–291. [CrossRef]
62. Kruse, P.; Wach, D.; Costa, S.; Moriano, J. Values Matter, Don't They?–Combining theory of planned behavior and personal values as predictors of social entrepreneurial intention. *J. Soc. Entrep.* **2018**, *10*, 55–83. [CrossRef]
63. Du, S.; Bhattacharya, C.; Sen, S. Reaping relational rewards from corporate social responsibility: The role of competitive positioning. *Int. J. Res. Mark.* **2007**, *24*, 224–241. [CrossRef]
64. Wang, L.; Wong, P.; Alagas, E. Antecedents of green purchase behavior: An examination of altruism and environmental knowledge. *Int. J. Cult. Tour. Hosp. Res.* **2020**, *14*, 63–82. [CrossRef]
65. Saleem, F. Antecedents of the Green Behavioral Intentions of Hotel Guests: A Developing Country Perspective. *Sustainability* **2021**, *13*, 4427. [CrossRef]
66. Leckie, C.; Rayne, D.; Johnson, L. Promoting Customer Engagement Behavior for Green Brands. *Sustainability* **2021**, *13*, 8404. [CrossRef]
67. Panda, T.K.; Kumar, A.; Jakhar, S.; Luthra, S.; Nayak, S.S. Social and environmental sustainability model on consumers' altruism, green purchase intention, green brand loyalty and evangelism. *J. Clean. Prod.* **2020**, *243*, 118575. [CrossRef]
68. Bagdare, S.; Jain, R. Measuring retail customer experience. *Int. J. Retail Distrib. Manag.* **2013**, *41*, 790–804. [CrossRef]
69. Bernard, E.; Makienko, I. The effects of information privacy and online shopping experience in E-commerce. *Inf. Syst. Res.* **2011**, *22*, 254–268. [CrossRef]
70. Cheema, A.; Papatla, P. Relative importance of online versus offline information for Internet purchases:Product category and Internet experience effects. *J. Bus. Res.* **2010**, *63*, 979–985. [CrossRef]
71. Ma, L.; Zhang, X.; Ding, X.; Wang, G. How Social Ties Influence Customers' Involvement and Online Purchase Intentions. *J. Theor. Appl. Electron. Commer. Res.* **2021**, *16*, 395–408. [CrossRef]
72. Hair, J.; Hult, G.; Ringle, C.; Sarstedt, M. *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*; SAGE Publications: Thousand Oaks, CA, USA, 2017; ISBN 9781483377445.
73. Gefen, D.; Rigdon, E.E.; Straub, D. An update and extension to sem guidelines for administrative and social science research. Editorial comment. *MIS Q.* **2011**, *35*, 3–14. [CrossRef]
74. Podsakoff, P.; Mackenzie, S.; Lee, J.; Podsakoff, N. Common method biases in behavioral research: A critical review of the literature and recommended remedies. *J. Appl. Psychol.* **2003**, *88*, 879–903. [CrossRef]
75. Kock, N. Common method bias in PLS-SEM: A full collinearity assessment approach. *Int. J. E-Collab.* **2015**, *11*, 1–10. [CrossRef]

76. Ringle, C.; Sarstedt, M.; Straub, D. Editor's comments: A critical look at the use of PLS-SEM in 'MIS Quarterly'. *MIS Q.* **2012**, *36*, 3–14. [CrossRef]
77. Nunnally, J. *Psychometric Theory*, 3rd ed.; Tata McGraw-Hill Education: New York, NY, USA, 1994.
78. Bagozzi, R.; Yi, Y. On the evaluation of structural equation models. *J. Acad. Mark. Sci.* **1988**, *16*, 74–94. [CrossRef]
79. Hair, J.; Sarstedt, M.; Hopkins, L.; Kuppelwieser, V. Partial Least Squares Structural Equation Modeling (PLS-SEM): An Emerging Tool for Business Research. *Eur. Bus. Rev.* **2014**, *26*, 106–121.. [CrossRef]
80. Hair, J.; Risher, J.; Sarstedt, M.; Ringle, C. When to use and how to report the results of PLS-SEM. *Eur. Bus. Rev.* **2019**, *31*, 2–24. [CrossRef]
81. Fornell, C.; Larcker, D.F. Evaluating structural equation models with unobservable variables. *J. Mark. Res.* **1981**, *18*, 39–50. [CrossRef]
82. Wu, G. The Mediating Role of Perceived Interactivity in the Effect of Actual Interactivity on Attitude Toward the Website. *J. Interact. Advert.* **2005**, *5*, 29–39. [CrossRef]
83. Hou, F.; Guan, Z.; Li, B.; Chong, A. Factors influencing people's continuous watching intention and consumption intention in live streaming: Evidence from China. *Internet Res.* **2020**, *30*, 141–163. [CrossRef]
84. McKinsey. McKinsey China Auto Consumer Insights 2019. 2019. Available online: https://www.mckinsey.com/~/media/McKinsey/Industries/Automotive%20and%20Assembly/Our%20Insights/China%20auto%20consumer%20insights%202019/McKinsey-China-Auto-Consumer-Insights-2019.pdf (accessed on 20 May 2022).
85. Fulk, J.; Schmitz, J.; Ryu, D. Cognitive Elements in the Social Construction of Communication Technology. *Manag. Commun. Q.* **1995**, *8*, 259–288. [CrossRef]
86. Zhou, M.; Huang, J.; Wu, K.; Huang, X.; Kong, N.; Campy, K. Characterizing Chinese consumers' intention to use live e-commerce shopping. *Technol. Soc.* **2021**, *67*, 101767. [CrossRef]
87. Alaa, M.; Wael, M.; Mamoun, M. The Influence of enjoyment factor toward the acceptance of social commerce. *Int. J. E-Bus. Res.* **2018**, *14*, 76–86. [CrossRef]
88. Chong, A. Predicting m-commerce adoption determinants: A neural network approach. *Expert Syst. Appl.* **2013**, *40*, 523–530. [CrossRef]
89. Roh, T.; Seok, J.; Kim, Y. Unveiling ways to reach organic purchase: Green perceived value, perceived knowledge, attitude, subjective norm, and trust. *J. Retail. Consum. Serv.* **2022**, *67*, 102988. [CrossRef]
90. Ohanian, R. The impact of celebrity spokespersons' perceived image on consumers' intention to purchase. *J. Advert. Res.* **1991**, *31*, 46–54.
91. Kent, R.; Allen, C. Competitive interference effects in consumer memory for advertising: The role of brand familiarity. *J. Mark. Commun.* **2001**, *7*, 17–41. [CrossRef]
92. Ahn, I.; Kim, S.; Kim, M. The Relative Importance of Values, Social Norms, and Enjoyment-Based Motivation in Explaining Pro-Environmental Product Purchasing Behavior in Apparel Domain. *Sustainability* **2020**, *12*, 6797. [CrossRef]
93. Wu, B.; Zhang, C. Empirical study on continuance intentions towards E-Learning 2.0 systems. *Behav. Inf. Technol.* **2014**, *33*, 1027–1038. [CrossRef]
94. Janssens, K.; Lambrechts, W.; Keur, H.; Semeijn, J. Customer Value Types Predicting Consumer Behavior at Dutch Grocery Retailers. *Behav. Sci.* **2020**, *10*, 127. [CrossRef]
95. Chiu, C.M.; Lin, H.Y.; Sun, S.Y.; Hsu, M.H. Understanding customers' loyalty intentions towards online shopping: An integration of technology acceptance model and fairness theory. *Behav. Inf. Technol.* **2009**, *28*, 347–360. [CrossRef]
96. Srivastava, M.; Kaul, D. Exploring the link between customer experience–loyalty–consumer spend. *J. Retail. Consum. Serv.* **2016**, *31*, 277–286. [CrossRef]