

Article

## Factors Influencing Users' Satisfaction with Online Agricultural Products in China's First and Second-Tier Cities Under the Epidemic

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**Abstract:** The Covid-19 crisis brought with it significant changes to human lives including changes to behaviour. Particularly, the Coronavirus lockdowns and other restrictions contributed to the rise of online shopping for agricultural products in China's first and second-tier cities. The core aim of the investigation is to evaluate the factors that influence the satisfaction of users with online agricultural products in first and second-tier cities in China during the pandemic. The research methodology is qualitative and relies on interpretivism to examine the experiences regarding the satisfaction of users with online agricultural products in first and second-tier cities in China during the crisis. An inductive approach is applied and the specific data collection instrument in this research entails semi-structured interviews to facilitate a comprehensive inquiry and gain rich insights. Semi-structured interview sessions are conducted with 30 participants including Chinese shoppers who used online agricultural products between 2019 and 2022 just before the Covid-19 crisis or during the pandemic. The research findings indicate that optimism was found to be crucial to the increased consumption of online agricultural products and high quality emerged as the most influential factor behind users' satisfaction with online agricultural products. However, online agricultural product sellers in China need to ensure excellence in their operations to succeed in the competitive online marketplace. Conclusively, this investigation achieved its overarching aim of evaluating the factors that influence the satisfaction of users with online agricultural products in first and second-tier cities in China during the pandemic.

**Keywords:** Agricultural product; consumerism, online shopping; China; pandemic; Covid-19

### Introduction

The unprecedented Covid-19 crisis brought with it rising changes to individuals and societies of the world and thus making the pandemic a unique time in the history of humankind. More so, the onset of the pandemic in China in late 2019 marked the start of a ravaging virus that has left no country unscathed as the disease evolves over the years. According to Venkatesh (2020), humans are potentially currently faced with the greatest challenge of their life as the Covid-19 pandemic had afflicted over 10 million people leaving over 500 individuals dead worldwide in about the first 6 months since the virus was discovered. Even more worrying, the figure has continued to increase as Coronavirus variants spread around the world despite the discovery of vaccines and immunization programmes being underway. For instance, approximately 587 million cases were recorded by the start of August 2022 with 6,431,115 deaths worldwide (Elflein, 2022).

Against the backdrop of the evolving virus and changes to society, businesses arguably experienced the most adverse effects as government policies meant to curb the spread of Coronavirus and the ensuing economic downturn reduced people's expenditure. Brammer, Branicki, and Linnenluecke (2020) assert that the profound effects of the pandemic forced governments to close borders, ban mass gatherings, and enforced social distancing all of which birthed a new normal not only for citizens but also for businesses. In particular, the requirement that residents leave their homes only for essential activities meant that businesses struggled.

The current statistics are damning, as the duration between October 2020 and January 2021 saw a quarter of companies' sales fall by 50% and on average by 27% (World Bank, 2021). The implication is that global businesses were significantly affected as the changes caused by the virus took hold at the height of the pandemic. However, businesses around the world also sought ways to survive by embracing different approaches to get through the changes and restrictions.

Liu and Kao (2022) affirm that digital platform development promotes the sale of agricultural products, particularly during the pandemic. This is because consumers increasingly use the platforms rather than visit brick-and-mortar stores, which is linked to crucial factors such as convenience. This was evident in China since the pandemic started in the country, as e-commerce played an indispensable role to help the agricultural market to adjust to the crisis with statistics showing a 40% rise in online transactions of the products within the first part of 2020 (Maren et al., 2022).

Online shopping for agricultural products by Chinese users means the consumers not just receive e-commerce platform services but also services linked to logistics distribution, which influences their satisfaction. Liu and Kao (2022) add this can ultimately adversely affect the development of the agricultural products e-commerce market. Thus, it is imperative that businesses operating in e-commerce sell agricultural products in China to enhance competitiveness by paying attention to customer satisfaction.

Yanyan (2018) mentioned that as e-commerce's rise in China is associated with online shopping for agricultural products in the nation, and elements such as service quality are critical to consumer satisfaction in the environment. More importantly, Chinese users in first and second-tier cities such as Beijing and Shanghai increasingly use e-commerce channels to shop for agricultural products leading to impacts on their satisfaction even as online shopping accelerated during the Covid-19 pandemic. First and second-tier cities include megacities based on infrastructure, economic development, amenities, as well as population size in which cities on the coast such as Guangzhou, Beijing, Shanghai, and Shenzhen have over 10 million inhabitants each (Huang and Qian, 2018). Conversely, second-tier cities such as Wuhan, Nanjing, Hangzhou, and Chengdu usually involve provincial capitals, special economic zones, and sub-provincial cities that represent the fastest-growing urban areas (Sun et al., 2013). This reveals a challenging disease, which is causing far-reaching effects on global societies. The aim of this research, as described, is to perform a thorough analysis of the relationship between user happiness and online agriculture goods in Chinese first and second-tier cities. Additionally, it seeks to identify the factors that influence consumer satisfaction with online agriculture goods.

## Literature Review

### 1. Expectancy Disconfirmation Theory

The theory proposes that customers develop different expectations regarding service quality based on personal experiences, advertising, and word-of-mouth, which enables them to apply varying standards to form subjective ratings as well as satisfaction judgments (Oliver, 1997). The theory of expectancy disconfirmation by Oliver (1980) suggests that disconfirmation is positively linked to customer satisfaction in which positive disconfirmation is understood as perceived performance exceeding the expectation. For this reason, expectancy disconfirmation represents a critical determinant of consumer satisfaction. The theory signifies that customers formulate expectations about products and service performance before purchase, which means that the outcomes of the purchase of online agricultural products must be congruent with user expectations to generate a confirmation. Otherwise, unfulfilled user expectations about a product and service performance lead to disconfirmation because of dissatisfaction.

Accordingly, the theory of expectancy disconfirmation by Oliver (1980) is relevant to this investigation of user satisfaction with online agricultural products in Chinese cities during the Covid-19 crisis.

More so, the theory suggests positive disconfirmation occurs when consumed products and service exceeds expectations causing satisfaction. On the other hand, negative disconfirmation is a result of product and service's decreased performance than expectations. The expectancy disconfirmation theory, however, has drawbacks including that it is based on the assumption that pre-use expectations are similar to retrieved expectations (Elkhani & Bakri, 2017). Another problem with expectancy disconfirmation theory entails the assumption that the process of disconfirmation operated in every consumption context despite the fact that the user assessment of products and services may rely on performance evaluation only without necessarily drawing upon expectations (Yuksel & Yuksel, 2001).

## 2. Relationship between User Satisfaction and Online Agricultural Products in China's First and Second-Tier Cities

A journal article by Chunshang (2020) explores the influencing factors of customer satisfaction in the agricultural online shopping supply chain in China. Importantly, the author notes that the e-commerce retail sales of agricultural products in the nation reached 397 billion Yuan in 2019, which represented a growth of 1.5 over 2016. Chunshang (2020) conducted the study using factor analysis, which represents a statistical technique. A critical finding of the investigation is that agricultural products' quality involves the most significant factor and then after-sales service, online shopping platform, as well as the price factor. Chunshang (2020) recommends that enhancing the quality of agricultural products, e-commerce platform convenience, and after-sales services represents the best approach to improve consumer satisfaction. A key strength of using the article by Chunshang (2020) in this research is that it reveals a rather strong association between user satisfaction and online agricultural products in China.

Succinctly, the work by Chunshang (2020) helps this research by showing that online agricultural products in the country can promote user satisfaction by improving products' quality and online shopping platform. However, the article by Chunshang (2020) seems limited in this research especially because it fails to focus on China's first and second-tier cities, which signifies that it may not necessarily lead to the first research objective despite providing crucial empirical evidence. Similar to the article by Chunshang (2020), research by Chen and Yang (2022) explores the effects the Covid-19 pandemic has on agricultural food sales among Chinese organizations. Crucially, the authors observe that the sale of agricultural food products sold on e-commerce platforms in the Asian nation has risen as the pandemic evolves. Chen and Yang (2022) considered financial statements' data of listed firms between 2015 and 2020, which involved the adoption of the financial statements. Specifically, their investigation included empirical evaluation using the translog revenue function. In their findings, Chen and Yang (2022) demonstrate that the pandemic caused slowed the sale of agri-food products in the country. They suggest that agricultural food companies in China consider the sales model involving e-commerce channels and contactless distribution, which can enhance the process of taking agri-food products to the dinner table and thus positively influence satisfaction amid the pandemic.

Chen and Yang (2022) argue that the use of e-commerce platforms to promote agri-food products can enhance effectiveness, as the agricultural products can be sent directly from businesses and thus reducing the staleness. Critically, overall effectiveness favourably impacts user satisfaction. For this reason, a positive outcome of the evidence provided by Chen and Yang (2022) is that it signifies the need for online agricultural products to involve effectiveness in areas such as quality and distribution to satisfy consumers in China. A drawback, however, is that Chen and Yang (2022) do not offer explicitly identify user satisfaction in their research, which might limit its contribution to this research's aim and objectives.

In contrast to the work by Cheng and Yang (2022), Wenji (2020) demonstrates that e-commerce does not improve effectiveness and user satisfaction concerning online agricultural products in China. Wenji (2020) conducted an investigation on inventions of China's fresh food in commercial aspects using online shopping. The scholar used a systematic review of literature as the method of research. One of the key findings is that the Chinese context of e-commerce is marked by the effects of different factors including cold chain transportation facilities, which makes it impossible to ensure timely and quality delivery of fresh food to customers and thus adversely affecting user satisfaction altogether. More significantly, Wenji (2020) highlights that agricultural products' e-commerce in the Asian country involves an excessive loss in the transportation procedure increasing the operating costs and the logistics cost of fresh online shopping

companies is as high as 60% in addition to the last-mile distribution gap between the delivery time and the time consumers require. It follows that Wenji (2020) identifies a negative relationship between satisfaction and online agricultural products in China. However, Hao, Guo, and Qiao (2021) undertook a study on online shopping distribution optimization of rice agricultural products in China based on customer satisfaction. The authors utilized the method of in-depth mining as well as evaluation of online review data including an analysis of 25.000 comments on the popular Chinese e-commerce platform JD.com’s rice and agricultural products.

A crucial finding by Hao et al. (2021) is that the crucial logistics factors valued by customers include delivery timeliness, package integrity, service responsiveness, and door-to-door delivery. This includes the need to improve distribution systems for online agricultural products to improve customer satisfaction in the country. A major advantage is that Hao et al. (2021) article reveals a positive association between customer satisfaction and online agricultural products, as users increasingly value logistics elements including delivery timeliness. Zheng and Ma (2021) agree that e-commerce improves user satisfaction concerning online agricultural products in China’s rural and metropolitan areas. This includes the fact online marketplaces raise the competitive ability of upcoming direct-to-customer farms in rural areas. In other words, online agricultural products in the country positively relate to user satisfaction by promoting effectiveness in which farm products can be taken directly to consumers such as those in first and second-tier cities in China, which promotes factors such as delivery timeliness.

Similarly, Hong et al., (2019) investigated the association between customer satisfaction and fresh e-commerce logistics services. They argue that logistics in fresh e-commerce firms is the integral link to customer satisfaction. This is because of the particularity of fresh products in terms of companies dealing with online agricultural products identifying the logistics service elements valued by consumers (Hong et al. 2019). However, the use of the works by Hao et al. (2021), Hong et al. (2019) and Zheng and Ma (2020) in this research has drawbacks in that the emphasis is not on China’s first and second-tier cities concerning the association between user satisfaction and online agricultural products. Crucially, this implies a knowledge gap.

### 3. Theoretical Framework

In line with the expectancy disconfirmation theory by Oliver (1980), the theoretical framework is provided below to support this investigation regarding the factors influencing users’ satisfaction with online agricultural products in China’s cities during the pandemic. More significantly, the theory measures consumer satisfaction from the perceived quality of services and products (Elkhani & Bakri, 2017). Therefore, the theoretical framework provided below includes variables drawn from reviewed literature and the theory of expectancy disconfirmation in line with this investigation’s core idea of user satisfaction with online agricultural products.

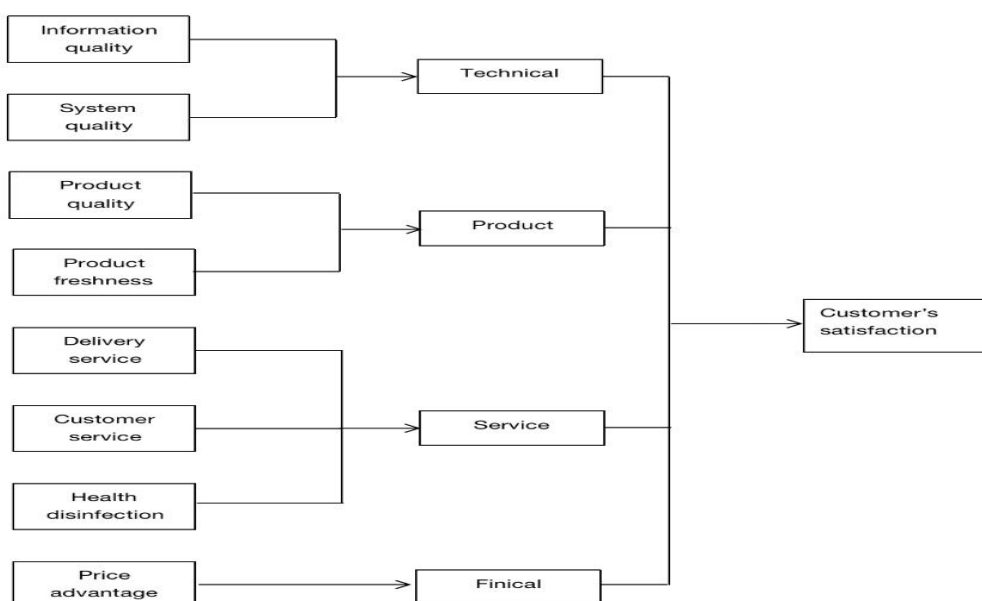


Figure 1. Theoretical Framework

## Methodology

An inductive approach was adopted in this investigation about the factors impacting the satisfaction of users with online agricultural products in first and second-tier cities in China during the pandemic. More so, the inductive approach involves the application of detailed raw data readings to derive themes and concepts based on a researcher's interpretations (Jebreen 2012).

### 1. Research Design

For this reason, an interpretive philosophy was selected to support the investigator in observing the social world to gain a comprehensive understanding as well as make meanings of the factors behind online agricultural products in China during the pandemic. Saunders et al. (2015) assert that interpretivism includes the view that humans are different from physical phenomena, as they generate meanings, and thus interpretivists focus on studying the meanings. In other words, the use of interpretivism in this investigation was gradually concerned with the factors related to China's first and second-tier cities all of which enabled the generation of rich insights specific to the case. This means the factors impacting users' satisfaction with online agricultural products in China during the Covid-19 crisis were treated as unique not just because of the situation but also participants involved.

Qualitative research is applied to explore the potential antecedents as well as factors about which little is known and explored (Khan, 2014). This is because a core aim is to develop a comprehensive account of the phenomenon under study. For this reason, qualitative research was suitable to explore the factors affecting users' satisfaction with online agricultural products in China as the area is marked by insufficient knowledge and a research gap. In this investigation, the investigator especially used the questions of how, why, and what in line with the topic of user satisfaction with online agricultural products in China's first and second-tier cities under the pandemic (Oun & Bach 2014).

### 2. Data Collection

The population used in this investigation included consumers of online agricultural products in China, which is in line with this investigation's topic of the factors influencing users' satisfaction with online agricultural products in China's first and second-tier cities under the epidemic. In other words, only individuals who have shopped online for agricultural products in the cities during the Covid-19 pandemic were considered.

This was achieved using purposive sampling. According to Rai and Thapa (2015), purposive sampling includes non-probability sampling techniques, as the researcher uses subjective, judgmental, as well as selective methods to choose the units to be studied.

Inclusion criteria used for purposive sampling was as follows:

- i. Must have used online agricultural products between 2019 and 2022
- ii. Must have bought from JD.com

The inclusion criteria were meant to ensure only individuals who have shopped online for agricultural products in the cities during the Covid-19 pandemic were part of the sample. The researcher perceived that the individuals were likely to offer helpful, first-hand information. More so, the researcher decided to use the popular e-commerce platform JD.com in China because it represents the largest retailer in the nation and offers agricultural products to customers. This led to the identification of 38 potential participants who met the inclusion criteria, which made them a target population. Thirty (30) out of the thirty-eight targeted participants showed a willingness to participate in this investigation. A major drawback of utilizing purposive sampling is that the method is gradually prone to researcher bias, as the researcher decides the study subjects to be used and makes judgments.

The tool used to collect data in this investigation was interviews. Oun and Bach (2015) argue that interviews relate to a procedure involving increased interaction with the participants, as the researcher asks questions and the interviewees provide answers. In this investigation, interviews were undertaken with participants in which an interactive process took place when the researcher asked questions to seek specific information in line with the aim of the factors influencing the satisfaction of users with online agricultural products in China's first and second-tier cities during the pandemic. The questions used by the investigator are listed in an interview guide provided in appendix 1 of this investigation. The investigator made attempts

to comprehend user satisfaction with online agricultural products from the interviewees' viewpoint. This shows the selection of interview methods was appropriate to achieve the aim of this investigation.

Specifically, semi-structured interviews were carried out in this investigation. Semi-structured interviews involve methods that allow the use of a pre-determined set of open-ended questions and an opportunity for the researcher to probe particular themes and responses further (Adams, 2015). The open-ended questions in the semi-structured interview are particularly important because they enable the researcher to pursue interesting themes to gain a proper understanding of users' satisfaction with online products in China.

In this investigation, interviews were carried out with the thirty participants online. Online interviews, Jones and Abdelfattah (2020) argue, involve interviews that rely on internet technologies including videos to facilitate a method similar to face-to-face interviews in terms of reliance on direct and immediate interaction between the researcher and participants.

The researcher also notified the interviewees that the sessions were recorded to enable transcription with ease after the interviews were conducted. Subsequently, they were asked to sign a consent form to give the researcher permission to include them in the investigation of the factors influencing the satisfaction of users with online agricultural products in China's first and second-tier cities during the pandemic. The researcher then asked the interview questions and applied probes accordingly to collect the necessary data. Each interview session was allowed up to 20 minutes, as the interviewer used every opportunity to seek clarifications. All the interview sessions were completed successfully. The researcher transcribed the recorded interviews into an MS Word document especially focusing on pertinent information to help towards achieving the research aim of the factors influencing the satisfaction of users with online agricultural products in China's first and second-tier cities during coronavirus.

By using NVivo software to undertake data analysis of the transcribed data, the researcher prepared the data for analysis in line with the process provided by Elo and Kyngas (2008). This included the identification of the key coding units and units for analysis, which included words and sentences that interested the researcher. The identified coding units were as follows:

Table 1. Demographic profile of participants

	<b>Gender</b>	<b>Age</b>	<b>Occupation</b>	<b>City of residence</b>
Interviewee 1	Male	Middle-aged	Student	Shanghai
Interviewee 2	Female	Young	Unemployed graduate	Tianjin
Interviewee 3	Female	Retired nurse	Nurse	Changsha
Interviewee 4	Transgender	21	College student	Xuzhou
Interviewee 5	Male	22	University student	Haikou
Interviewee 6	Male	53	Cashier	Yantai
Interviewee 7	Male	Young	Accountant	Wuhan
Interviewee 8	Female	Middle-aged	Retailer	Wuhan
Interviewee 9	Female	19	University student	Quanzhou
Interviewee 10	Female	Youth	Banker	Jinhua
Interviewee 11	Female	66	Retired	Ningbo
Interviewee 12	Male	27	Engineer	Shenyang
Interviewee 13	Male	22	Engineer	Nantong
Interviewee 14	Undisclosed	44	Nurse	Jinan
Interviewee 15	Female	30	Teacher	Jinan
Interviewee 16	Male	32	University student	Taiyuan
Interviewee 17	Male	23	Student	Shaoxing
Interviewee 18	Female	37	Cashier	Shenzhen
Interviewee 19	Female	39	Engineer	Foshan
Interviewee 20	Female	25	College student	Foshan
Interviewee 21	Male	24	Student	Chongking
Interviewee 22	Female	33	Manager	Nantong
Interviewee 23	Female	28	HR Consultant	Ningbo
Interviewee 24	Male	51	Delivery person	Wuhan

Interviewee 25	Male	42	Retailer	Yantai
Interviewee 26	Male	56	Shopkeeper	Harbin
Interviewee 27	Female	36	Unemployed	Wuxi
Interviewee 28	Female	22	Student	Hefei
Interviewee 29	Female	41	Accountant	Nanjing
Interviewee 30	Male	18	Student	Shanghai

The total number of codes identified was listed. Crucially, the researcher identified multiple coding units in the transcribed data for the thirty participants. Most importantly, all the coding units were identified in line with the aim of this investigation regarding the factors that influence the satisfaction of users with online agricultural products in China's first and second-tier cities during the Covid-19 pandemic.

Guided by the steps by Elo and Kyngas (2008), the researcher sought to organize the data by creating open codes, categories, and abstraction. Since the data analysis was electronic, the open codes were identified in NVivo software. Open codes included headings describing all aspects of the transcribed data. The researcher then sought to make sense of the result by grouping the codes into categories based on this investigation's aim and research objectives.

Lastly, the researcher reported the identified categories including optimistic, high-quality, and excellence, which were evident in the NVivo analysis. The key categories were applied to answer this investigation's research questions and promote the achievement of the aim as well as objectives. The following is the report and appropriate analysis of the results.

### 3. Content Analysis

This investigation used content analysis to analyze the data. According to Saunders et al. (2015), content analysis includes a specific analytical technique to categorize and code voice, text, and visual data utilizing a systematic coding scheme in qualitative analysis. However, Saunders et al. (2015) concede that content analysis can also be applied to qualitative data such as interviews to code variables such as attitude and satisfaction.

The preparation phase was carried out in this investigation by selecting the units of analysis including words and phrases drawn from the collected data about the factors affecting users' satisfaction with online agricultural products in first and second-tier cities in China during the Covid-19 crisis (Elo & Kyngas, 2007). The preparation stage started from scratch in that the investigator sought to analyze the collected data without pre-defined coding units and categories. Rather, the investigator used judgment to identify words and phrases that were representative of the entire collected data as used and applied by the participants.

The coding was done electronically using NVivo software rather than manually. Crucially, NVivo by QSR International is appropriate for qualitative analysis including content analysis because the software provides a workspace to store, manage, and analyze unstructured data with relative ease (Phillips & Lu, 2018).

## Findings and Discussion

One of the objectives of this investigation entailed critically evaluating the relationship between user satisfaction and online agricultural products in Chinese first and second-tier cities. Therefore, this investigation was interested in identifying how users of online agricultural products perceived satisfaction by evaluating their overall feelings. Overwhelmingly, this investigation found optimism regarding satisfaction with online agricultural products in Chinese first and second-tier cities during the pandemic.

### 1. Factors Influencing The Satisfaction of Users with Online Agricultural Products

The most important aim of this investigation was to evaluate the factors that influence the satisfaction of users with online agricultural products in first tier cities in China during the pandemic. Specifically, the researcher sought to achieve the aim by asking the participants the third interview question about the factor of interest in their decision to purchase online agricultural products. In other words, the researcher sought to know the guiding factors in consumer decision-making regarding the consumption of online agricultural products in China's first tier cities during the Covid-19 crisis. This included gaining an understanding of the things that attract consumers of online agricultural products in the country.

The major result of this investigation involves high-quality products and services, which directly answers this investigation's second research question of the factors influencing the satisfaction of users with online agricultural products in first tier cities in China during the pandemic. In other words, the most critical factor affecting users' satisfaction with online agricultural products in the cities is the quality of products and services, which determines their decision to make online purchases altogether. Notably, 21 out of thirty interviewees reveal that they are gradually after quality products when buying agricultural products online. The content analysis process of the transcribed interview data revealed the notion of quality repeatedly emerged in all the answers, which signified that the buying procedure overwhelmingly hinges on quality. This includes the use of the word best, as the participants tried to describe the crucial role of quality online agricultural products in their decision making.

*"Quality first! I buy vegetables and fruits online and I can never compromise on quality".*  
(Interviewee 1)

*"Quality guided my decision-making and I have placed very high standards".*  
(Interviewee 3)

*"Quality is what matters most' concerning the decision to purchase online agricultural products".*  
(Interviewee 4)

*"I looked for quality online agricultural products".*  
(Interviewee 5)

*"I wanted satisfying agricultural products quality-wise. Even to this day I still seek quality products".*  
(Interviewee 9)

*"I do not compromise on quality. I want quality products, quality services including the website".*  
(Interviewee 18)

*"Quality of the products was the most crucial thing is checked when deciding to buy online agricultural products".*  
(Interviewee 22)

It becomes evident that product quality represents a critical determinant when people buy online agricultural products. Quality services emerge as a strong factor shaping user satisfaction with online agricultural products during the coronavirus. As an example, Interviewees 3 and 4's answers to the third question of the interview include the search for,

*"My interest is always quality and the services that I get' and 'the time taken to receive the products', respectively".*  
(Interviewees 3 and 4)

Evidently, this communicates the significance of quality services, as it affects users' satisfaction with online agricultural products in China's first tier cities. The finding of high-quality services is also evident in answer to the third question, which stated that,

*"I want to get products that are even better than what I can get at the local store in terms of quality".*  
(Interviewee 2)

The result involving high-quality products and services, thus, is strong because it is prevalent in the content analysis of the transcribed interview data, which makes it the most important factor regarding user satisfaction with online agricultural products. Furthermore, the concept of convenience represents a crucial factor influencing users' satisfaction with online agricultural products in China's first tier cities during the Coronavirus. More so, 9 out of thirty participants explicitly identify convenience as the most significant factor



in their decision making to purchase online agricultural products. For example, aged 31, Interviewee 13's answer to question three of the interview pointed out that,

*“My decision to buy online agricultural products was purely driven by convenience. Buying online is really convenient and that is what keeps me going back online to buy almost everything that I need”.*

*(Interviewee 13)*

*“Convenience increasingly attracted me to buy online agricultural products”,*

*(Interviewee 19)*

*“Convenience and quality guided my decision to buy online agricultural products because I want to get satisfied with whatever I purchase and consume”.*

*(Interviewee 24)*

Further support in literature involves Liu and Kao (2022), as their research argues that the quality of e-commerce agricultural products is the most critical factor behind user satisfaction in China. It becomes evident that customers are gradually interested in high quality products and services when shopping for agricultural products online because it leads to their satisfaction. In particular, quality services indicate the need to ensure convenience to satisfy users of online agricultural products even more. In this line of thought, Brady and Cronin (2001) provide the theory of service quality suggesting that consumers of agricultural products in China using e-commerce channels lack direct, physical contact with the sellers and the products and thus require an exceptional experience to get satisfied. The outstanding experience hinges on quality services and products. The findings in this investigation also pinpoint convenience as a crucial factor affecting users' satisfaction with online agricultural products in China's first and second-tier cities during the Covid-19 crisis. Supporting literature is provided by Chunshang (2020), as the author recommends that enhancing the quality of agricultural products alongside e-commerce platform convenience represents the best approach to enhance consumer satisfaction. The implication is that convenient services offered by online agricultural product sellers significantly influence users' satisfaction in first and second-tier cities in China during the Covid-19 pandemic. Chen and Yang (2022) identify e-commerce business models as the most convenient way for businesses to ensure agri-food products reach the dinner table efficiently and thus promote satisfaction.

Therefore, this investigation's finding regarding the high quality is imperative as it reveals product quality, service quality, as well as convenience as important factors influencing users' satisfaction with online agricultural factors in China's first and second-tier cities during the coronavirus. Particularly, convenience emerges as a critical sub-theme in this investigation because it is closely linked to quality. Together with quality products and services, convenience directly determines user satisfaction levels with online agricultural products in the Asian nation's first and second-tier cities during the crisis.

### **Limitation**

Future research directions on factors influencing users' satisfaction with online agricultural products in China's first and second-tier cities under the epidemic should entail quantitative methods besides qualitative techniques. In other words, future researchers should seek to incorporate quantitative approaches such as surveys to provide a rigorous assessment of the factors that influence the satisfaction of users with online agricultural products in first and second-tier cities in China during the Coronavirus. This is because qualitative techniques are associated with several drawbacks including a lack of statistical representation and thus leading to a decreased generalization of results (Saunders et al. 2015). In view of that, a suggestion is made that future studies on the factors that influence the satisfaction of users with online agricultural products in first and second-tier cities in China during the pandemic utilize a mixed-method technique. More so, a mixed methodology would allow the application of qualitative methods together with quantitative techniques.

### **Conclusion**

This investigation has demonstrated that the search for quality by users of online agricultural products in China's first and second-tier cities is commonplace because it contributes to increased satisfaction. Consumers

not only know what they want and need but also perceive quality to be directly responsible for their satisfaction. A conclusion is reached that online agricultural businesses providing users with quality are likely to succeed because they make users satisfied. Shopping for online agricultural products became popular during the pandemic and the post-Coronavirus online agric-business is promising for sellers offering quality products as well as services in China's first and second-tier cities. Users of agricultural products gradually utilized online channels to satisfy their needs and wants especially against the backdrop of the Covid-19 restrictions including lockdowns. Accordingly, users were optimistic about being satisfied with online agricultural products during the pandemic and beyond. In particular, the role of quality products and services in their satisfaction increased as they seek the highest quality experience overall.

To this end, quality represents the most critical factor shaping users' satisfaction with online agricultural products. More so, users of online agricultural products in China's cities directly link quality to satisfaction. In other words, users of online agricultural products in the Asian nation cannot be satisfied without getting quality products as well as services. Online shopping for agricultural products is associated with rising convenience and online agricultural product sellers in China need to promote convenience to satisfy consumers. The products and services need to be superior especially given the competition with brick-and-mortar businesses in the post-Coronavirus duration. This investigation, therefore, found that online agricultural product sellers in Chinese first and second-tier cities must provide users with excellence in terms of products and services to guarantee satisfaction, which leads to enhanced success and outcomes. Conclusively, this investigation achieved its overarching aim of evaluating the factors that influence the satisfaction of users with online agricultural products in first and second-tier cities in China during the pandemic.

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**Conflicts of Interest:** There is no conflict on this study.

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