

ARTICLE

Research on the Willingness of Elderly People to Participate in Online Live-streaming Shopping

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ABSTRACT

With the rapid development of Internet technology, live-streaming shopping has spread rapidly in China and has become an important part of e-commerce. This study aims to explore the current situation and influencing factors of online live-streaming shopping among elderly people in China. Data was collected from 517 elderly people through questionnaires. The results showed that 87.4% of the elderly participated in live-streaming shopping, while 12.6% did not. Among the elderly who participated, there were slightly more men than women, with a high school or technical secondary school education, a monthly income of 3,000 yuan or less, most living with their spouses, and a higher proportion of the elderly living in second - and third-tier cities. Although online shopping has a high level of participation among the elderly in China, there are still some elderly people who do not participate because of the complexity of the operation process, the dislike of the sales pitches of the hosts, and the inability to guarantee the quality. In order to increase the participation of the elderly, this article also provides corresponding improvement suggestions.

Keywords: Online live-streaming shopping; Seniors; Willingness to participate; Influencing factors.

1. Introduction

In recent years, with the rapid development of Internet technology, online live-streaming shopping

has become an important e-commerce model, profoundly changing consumers' shopping behavior. Live-streaming shopping, also known as "live-streaming sales", is an e-commerce model in which

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goods are sold through live video streaming. In this model, merchants or live-streamers interact with viewers through live-streaming platforms such as Douyin, Kuaishou, Taobao Live, etc., showing the features, usage methods and effects of the goods, thereby facilitating purchases. Since 2015, the scale of China's online live-streaming shopping market has expanded rapidly, attracting a large number of consumers to participate. According to the 54th Statistical report on the development of China's Internet released by the National Bureau of Statistics in August 2024^①, there are nearly 1.1 billion Internet users in China, and 905 million online shopping users account for 82.3% of all Internet users. The number of Internet users aged 60 and above accounted for 14.3 percent of the total Internet users in China. However, existing research has mostly focused on the younger consumer group, while studies on the willingness of older people to participate in online live-streaming shopping are relatively insufficient (Ding et al., 2023). This study, in the form of a questionnaire survey, mainly explores two aspects: one is the current situation of Chinese seniors' participation in live-streaming shopping, and the other is the influencing factors that affect seniors' participation in live-streaming shopping, with the aim of providing a reference for the development of Chinese seniors' participation in live-streaming shopping.

2. Literature Review

Existing studies have found that online shopping for the elderly has gradually evolved from an emerging consumption pattern to an important part of daily life (Anderson et al., 2017), but the actual use of this behavior among the elderly population is still constrained by multiple factors. Technology acceptance has a significant impact on the engagement of older people with online shopping. Older people's acceptance of technology is influenced not only by their familiarity with smart devices

but also by digital literacy and cognitive abilities (Seifert et al., 2021), with significant generational differences compared to younger people (Li et al., 2024), although some older people are willing to try new ways of shopping. Technical complexity and operational barriers remain significant hindrances. Therefore, age-friendly technologies such as simplifying interface design, optimizing user experience, and adding voice control can effectively enhance their willingness to use (McLaughlin et al., 2020), and the mechanisms of action include: Three key paths - payment process simplification (Shin et al., 2024), intergenerational collaboration function embedding (Wang et al., 2024), and multimodal interaction optimization (Lim et al., 2024) - aging-friendly design has become a new dimension for platforms to attract elderly users. In addition, performance expectations and social influence during online shopping drive the willingness of the elderly to participate (Lian et al., 2014), among which the elderly who receive technical guidance from their children have a higher willingness to consume live streaming, and there is a significant synergy between instrumental support and emotional support (Ren et al., 2024; Zeng et al., 2024). At the same time, trust is also an important factor influencing the participation of older people in live-streaming shopping. Older consumers tend to be cautious about the security of online transactions, especially when it comes to personal information protection and payment security (Oliveira et al., 2017). Some scholars have pointed out that enhancing platform transparency, establishing reliable after-sales service mechanisms, and providing third-party payment guarantees are effective strategies for increasing trust (Mou et al., 2017). In addition, a sense of social isolation plays a significant role in online shopping behavior among the elderly. Live-streaming shopping is not just a consumption activity; it also provides a social pathway through interactive functions, which has a positive impact on reducing loneliness and increasing social engagement among the elderly (Chen et al., 2016). Engaging in online communities and live-streaming shopping interactions can

① China Internet Society. Release of the 54th "Statistical Report on the Development of China's Internet" [J]. Media Forum, 2024, 17 (2096-5079):121

significantly enhance the psychological well-being of older people (Seifert et al., 2021). However, the effectiveness of such interaction largely depends on whether the platform is designed to meet the social needs of older people (Chopik et al., 2016). To better promote the participation of seniors in online live-streaming shopping, attention should be paid to how to further improve the quality of life and satisfaction of the senior population by designing age-friendly platforms, enhancing user experience, strengthening data security and social support.

Although existing studies have explored the behavior of elderly people participating in live-streaming shopping and its influencing factors from multiple dimensions and revealed the mechanisms of key elements such as technology acceptance, social impact, trust, and social needs, they have mostly focused on technology acceptance and socio-psychological levels, paying insufficient attention to differences in cultural backgrounds and current situations. This study will build on this and further explore the current situation and influencing factors of elderly people's participation in online live-streaming shopping under the combined influence of factors such as Chinese cultural background and policy support.

3. Questionnaire collection and data analysis

Data collection for this study began in October 2024. The subjects were elderly, defined based on the legal retirement age in China, which is 60 for men and 55 for women. The study collected data on the participation of Chinese seniors in online live-streaming shopping through questionnaires. A total of 600 questionnaires were distributed and 517 valid questionnaires were retrieved. Among them, 452 elderly people participated in online shopping, accounting for 87.4%; There were 65 elderly people who did not participate in live-streaming shopping, accounting for 12.6 percent. This shows that online shopping has a high level of participation among the elderly in China. This phenomenon indicates that online shopping, as an emerging shopping model,

has gradually been accepted by the majority of the elderly. However, the data also reveals that some elderly people are still not taking full advantage of this emerging shopping model. Therefore, an in-depth analysis of the factors influencing elderly people's participation in live-streaming shopping is of great significance for further enhancing their engagement.

3.1 Analysis of samples of Elderly People participating in live-streaming shopping

The statistics of elderly people who participated in online shopping are shown in Table 1. The data shows that among the elderly who participated in live-streaming shopping, men accounted for 54.4%, slightly higher than women's 45.6%. The result suggests that in the current online shopping environment, older men may be more willing to try or use this shopping method more frequently. However, the gender difference is not significant, indicating that online shopping is more prevalent among both elderly men and women.

The distribution of educational attainment shows that those with a high school or technical secondary school education account for the highest proportion, at 44.2%, followed by those with a college or bachelor's degree, at 31.4%. It shows that elderly people with a secondary education level are more willing to engage in live-streaming shopping. Educational attainment may influence older people's understanding and acceptance of web technology. Older people with a secondary education level may have certain advantages in technology acceptance and information processing ability, and thus be more willing to try and use online shopping. However, the nearly 20% participation rate among those with lower educational attainment (junior high school and below) indicates that the threshold for live-streaming shopping is not high and it has some appeal to those with lower educational attainment. At the same time, those with a monthly income of 3,000 yuan or less accounted for the highest proportion, reaching 59.5%, indicating that online shopping is more prevalent among low-income elderly people.

This may be because live-streaming shopping offers more price discounts and promotions that attract price-sensitive consumers. At the same time, it also

suggests that online shopping may be an effective way for low-income seniors to get the goods they need.

Table 1 Statistical results of the sample of Elderly People participating in online shopping (N=452)

Statistics	Options	Frequency	Proportion
Gender	male	246	54.4%
	female	206	45.6%
Educational attainment	Junior high school and below	88	19.5%
	High school or technical secondary school	200	44.2%
	College or bachelor's degree	142	31.4%
	Graduate and above	22	4.9%
Monthly income	3,000 yuan or less	269	59.5%
	3001 ~ 6000	109	24.1%
	6001 ~ 9000	56	12.4%
	More than 9,000 yuan	18	4.0%
Living conditions	Live with one's spouse	238	52.7%
	Living with parents	56	12.4%
	Living with children	111	24.6%
	Living alone	25	5.5%
City of residence	Living in a nursing home	22	4.9%
	First-tier cities	95	21.0%
	Second - and third-tier cities	206	45.6%
	Fourth-tier and lower-tier cities	100	22.1%
Frequently watch live streaming platform types	Rural areas	51	11.3%
	E-commerce platforms	277	61.3%
	Short video platforms	332	73.5%
	Social media platforms	132	29.2%
	Live streaming platforms	181	40.0%
	Information Platform	153	33.8%
	Others	38	8.4%

Most elderly people live with their spouses (52.7%), followed by those living with their children (24.6%). This figure reflects that elderly people living with their families can provide them with more opportunities for technical support and information sharing, thereby promoting their engagement in live-streaming shopping. The proportion of elderly people living in second - and third-tier cities is 45.6%, followed by first-tier cities at 21.0%. This may be related to the level of urban development and the popularity of live-streaming shopping. At present, China's second - and third-tier cities have provided better online infrastructure and

a more relaxed pace of life, giving older people more opportunities and time to engage in online shopping. However, the proportion of elderly people shopping online in rural areas is relatively low, at only 11.3%, possibly due to insufficient coverage of door-to-door services by logistics delivery, which makes elderly people with mobility issues less enthusiastic about online shopping.

Short-video platforms are the most frequently watched live-streaming platforms by the elderly, accounting for 73.5%, followed by e-commerce platforms, accounting for 61.3%. This suggests that short video platforms are very popular among the

elderly, possibly because of their rich content, ease of operation, and strong entertainment and interactivity. The high proportion of e-commerce platforms suggests that older people are more inclined to buy goods directly in online live-streaming shopping, which may be related to the convenience and diversity of goods offered by e-commerce platforms.

3.2 Analysis of samples of Elderly People who did not participate in live-streaming shopping

The statistics of the elderly who did not participate in live-streaming shopping are shown in

Table 2, with more than half (52.3%) Older people think the process is too complicated. This finding highlights the significant impact of the technical threshold on the engagement of seniors in live-streaming shopping. Given that older people may have a relatively weaker ability to adapt to new technologies, live-streaming platforms need to develop more user-friendly interfaces, provide simplified operation processes, and be accompanied by easy-to-understand user guides or tutorials. In addition, technical training and support services for the elderly, such as community workshops or online tutorials, may help to lower this threshold.

Table 2 Statistics of Elderly People Who Did Not Participate in Live-streaming Shopping (N=65)

Statistics	Options	Frequency	Proportion
Reasons for not participating in live-streaming shopping	The online shopping process is too complicated	34	52.3%
	The emotional sales pitches of the hosts are annoying	21	32.3%
	It takes too much time to watch live-streaming shopping	20	30.8%
	There are no items I want in the live-streaming room	9	13.8%
	The quality of the products in the live streaming room cannot be guaranteed	24	36.9%
	There are privacy and financial risks in live-streaming shopping	14	21.5%
	There is no guarantee of after-sales service for online shopping	17	26.2%
	The logistics delivery of online shopping is not guaranteed	8	12.3%

In addition, 32.3% of the elderly are repulsed by the emotional sales pitches of live-streaming hosts, which may conflict with their consumption concepts and values. The elderly may prefer rational and stable consumption methods and hold a conservative attitude towards overly emotional or exaggerated sales tactics. As a result, streamers and platforms should consider adjusting their sales strategies and adopting more moderate and rational sales approaches to accommodate the consumption habits and psychological expectations of the elderly. 30.8 percent of older people think that watching online live-streaming shopping takes too much time, indicating that time cost is an important factor affecting their participation in decision-making. Given that older people may be more concerned about time efficiency, platforms could consider providing more precise and efficient shopping

recommendations to reduce the time they spend sifting through a vast amount of information. In addition, developing features that allow for quick browsing and comparison of items, or providing personalized shopping suggestions, could also help improve the shopping efficiency of older people. 13.8 percent of seniors said there were no items they wanted in their online live-streaming rooms, revealing problems with product diversity and matching. To attract more elderly people to participate, live-streaming platforms need to diversify their product range, especially those that better meet the needs and preferences of the elderly. At the same time, by analyzing the consumption behavior and preferences of the elderly, the platform can recommend products more precisely and improve the match between products and users' demands.

Quality and trust issues are the main concerns for the elderly who do not participate in online live-streaming shopping. 36.9% and 21.5% of the elderly are respectively worried about the quality of goods, privacy and economic risks. This requires live-streaming platforms to strengthen their control over product quality, increase transparency, and establish reliable after-sales service systems. In addition, strengthening data security and privacy protection measures, as well as providing third-party payment guarantees, can enhance the trust of the elderly and reduce their concerns. 26.2% and 12.3% of the elderly are concerned about after-sales service and logistics delivery issues. This indicates that providing stable and reliable after-sales service and logistics services is crucial for increasing the willingness of older people to participate. Platforms may consider working with reputable logistics companies to ensure that goods are delivered in a timely and safe manner. At the same time, establishing a sound after-sales service system, including a convenient return and exchange process and effective customer service, can further enhance the trust and satisfaction of the elderly.

4. Conclusions

This study conducted an in-depth analysis of the current situation and influencing factors of Chinese seniors' participation in online live-streaming shopping through questionnaires. The findings suggest a high level of participation in online shopping among the elderly in China, but there are still some elderly who do not participate for a variety of reasons. The majority of the elderly (87.4%) participated in live-streaming shopping, indicating that this emerging shopping model has gradually been accepted and used by the elderly. The factors influencing elderly people's participation in live-streaming shopping include gender, education level, monthly income, residence status, city of residence, and type of live-streaming platform, among which education level and monthly income have a significant impact on participation. The elderly who do not participate in live-streaming

shopping are mainly due to the complexity of the operation process, the aversion to the sales pitches of the hosts, the time-consuming cost of watching live-streams, the mismatch of goods, the inability to guarantee quality, privacy and economic risks, after-sales service and logistics delivery problems, etc. To increase the participation of the elderly, it is recommended that live-streaming platforms take the following measures: simplify the operation process and optimize the user experience; Strengthen product quality control and increase transparency; Establish a reliable after-sales service system; Provide stable logistics services.

This study provides a new perspective for understanding the behavior of older people participating in online live-streaming shopping and offers valuable references for research and practice in related fields. Future research could further explore the impact of factors such as different cultural backgrounds and policy support on the participation of the elderly in online live-streaming shopping, and how to further improve the quality of life and satisfaction of the elderly population by designing age-friendly platforms, enhancing user experience, strengthening data security and social support.

Project

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