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Factors Influencing Consumers' Intentions to Switch to Live Commerce From Push-Pull-Mooring Perspective

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ABSTRACT

Conventional e-commerce retailers are less advantageous in attracting online consumers than streamers in live commerce. In China, live commerce has gradually become the mainstream sales channel. Based on the push-pull-mooring model of migration theory, this study aims to identify the reasons that urge online consumers to switch from shopping on conventional e-commerce to live commerce, as well as the potential obstacles of such a switch. About 306 Chinese consumers with conventional e-commerce and live-stream shopping experience participated in this study. The results indicate that live commerce's attractiveness has the greatest impact on consumers' willingness to switch to live commerce, followed by dissatisfaction with conventional e-commerce, while switching costs has no significant effect. Low interactivity most greatly impacts dissatisfaction with conventional e-commerce, while streamers' charisma greatly impacts on live commerce's attractiveness, and low familiarity impacts switching costs. The authors analyze the data by gender and occupation to yield additional findings.

KEYWORDS

Attractiveness of Live Commerce, Charisma of Streamers, Low Familiarity, Lower Interactivity, PPM, Switching Intention

INTRODUCTION

With the development of information technology, live commerce is transforming the online shopping experience by providing a new model in which retailers, influencers, or celebrities sell goods via online video streaming (Guo et al., 2022; Zheng et al., 2023). Streamers can display products in real time, helping to reduce consumers' uncertainty and to obtain more comprehensive information regarding products with less time and effort (Xu et al., 2020). Live commerce is now gaining widespread attention worldwide. Many e-commerce sites or social networking service platforms such as Amazon, Taobao, Instagram, and YouTube, have added "live streaming" features to their platforms (Chen et al., 2020).

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In 2020, Walmart started using TikTok to launch live commerce in the United States (Wang et al., 2022). A number of international brands, including Guess, Clarks, and Anna Sui, use live streaming to attract the younger generation to their brands (i.e., fashion shows) (Hu & Chaudhry, 2020). Chong et al. (2022) have pointed out that live commerce may be the future of e-commerce.

Compared with conventional text-to-image shopping, the advantages of live commerce are significant (Qian & Yang, 2020). First, live commerce is richer in regard to interaction, consumer immersion, and shopping experience, whereas conventional e-commerce platforms mainly use text and images to showcase goods (Cui et al., 2022). Second, live-streaming teams bargain with manufacturers or brands in advance so that the price appears cheaper in live-streaming, reducing consumers' time of price comparison among different online retailers (Li & Ku, 2018). Third, the live-streaming team controls the products' quality, saving consumers' product selection time (Chen et al., 2022). Fourth, when explaining product features, streamers often bring their own knowledge and understanding of the products, prompting consumers to buy the goods, resulting in a higher conversion rate for live commerce (Chen et al., 2020). According to a recent report by McKinsey & Company, the conversion rate for live-streaming e-commerce is about 30%, which is 10 times higher than that of conventional e-commerce (Arora et al., 2021).

In China, live commerce has transformed the retail industry and established itself as a major sales channel in less than five years. Most e-commerce platforms and social networks in China offer live-streaming rooms where products can be sold (Chen et al., 2020; Lu & Chen, 2021). In the period between 2017 and 2020, the live commerce market in China experienced a compound annual growth rate of more than 280% (Arora et al., 2021). Moreover, the live commerce market surpassed 1.2 trillion yuan (US$195 billion) at the end of 2020, and it will exceed 4.9 trillion yuan (US$772 billion) by 2023 (Statista, 2021). According to the China Internet Network Information Center (CNNIC) report, 700 million Chinese Internet users have watched a live stream. Among them, 460 million have purchased goods via live stream, accounting for 45% of all Chinese netizens (CNNIC, 2022). Therefore, nearly half of the Internet users in China are using live streaming for shopping. In contrast, conventional e-commerce platforms are gradually losing their popularity. Consumers who shop only on conventional e-commerce platforms decreased from 71% in 2018 to 27% in 2021 (CNNIC, 2022). Therefore, excluding the newly added netizens, more than 100 million online consumers have switched from traditional e-commerce to live commerce. In a recent survey by Alix Partners, two-thirds of surveyed Chinese online consumers said they have bought products via livestream (Arora et al., 2021). Thus, it is crucial for researchers and online retailers to find out the reasons that online consumers' shopping habits have shifted.

Previous research on live streaming has investigated consumers' behavior influenced by platform factors, including IT affordances (Sun et al., 2019), user interface design, and the gift-giving feature (Lu et al., 2018). The factors that influence live streaming depend on mutual relationships (Chen et al., 2020; Guo et al., 2021), interpersonal factors (Chen et al., 2021), or the perceptions of consumers, including perceived value (Wongkitrungrueng & Assarut, 2020) and streamer credibility (Park & Lin, 2020). Although some research has discussed what influences consumers' willingness to engage in live shopping, little is known about what influences shoppers' switching behaviors from traditional e-commerce to live shopping. This study aims to fill this knowledge gap by adopting the push-pull-mooring (PPM) model to find out the main reasons that drive online consumers to switch from shopping on conventional e-commerce to live commerce as well as the potential obstacles of such a switch. To reach this purpose, we address the following research question: What factors affect online consumers' switching from conventional e-commerce to live commerce?

Switching between online services is the act of ceasing or substantially reducing online service use by a user while replacing all or a substantial portion of it with an alternative (Hou & Shiau, 2020). According to Ye and Potter (2011), switching intention refers to a partial reduction in the quantity or quality of a particular information technology product that is used. Research by Chang et al. (2014) indicates that switching between social networks is more about changing focus than about switching platforms completely. Based on prior studies, in the context of the coexistence of conventional e-commerce and live commerce, we define switching intention as consumers' increased use of live commerce and gradually decreased use of conventional e-commerce. Hence, if consumers' switching intentions are high, they are more likely to use live commerce than conventional e-commerce.

PPM was applied as the theoretical basis of this study for three reasons. First, there have been many studies that confirm the robustness and efficiency of PPM when it comes to studying consumer switching behavior (Chang et al., 2014; Hsieh et al., 2012; Jung et al., 2017; Lin & Huang, 2014). Second, unlike some theories with fixed variables, because the PPM has no fixed variables, researchers can explore the key factors affecting migration behavior in accordance with the context of the study (Lin et al., 2021; Xu et al., 2014). PPM provides a comprehensive analytical framework to explain the intrinsic and extrinsic factors that influence decision-making and to reveal the potential barriers that hinder switching behaviors. Third, few studies have applied PPM to explore why consumers switch from e-commerce platforms to live-stream shopping.

This study contributes to the existing live commerce and service switching literature by examining the key factors behind such decisions. Specifically, our study extends the PPM to a live commerce context and systematically analyzes corresponding factors from the perspective of push, pull, and mooring forces. The findings are expected to provide streamers and retailers with a better understanding of consumers' needs to improve and optimize their offerings.

THEORETICAL BACKGROUND AND HYPOTHESES DEVELOPMENT

Live Commerce

Live commerce is a novel type of e-commerce embedding real-time video into commerce activities (Cai & Wohn, 2019). There are three main types of platforms, including live commerce (Chen et al., 2020). The first type is the e-commerce platforms that integrate live-streaming features, such as Taobao Live and JD Live. The second type is the live-streaming platforms combined with commercial activities, such as Liveme and Huya. The third type is the social media platforms that integrate commerce activities, such as Facebook Live and Douyin Live.

The popularity of live streaming in China has increased in recent years. Particularly after the onset of the coronavirus pandemic, an increasing number of merchants and brands are interacting and building relationships with consumers (Sun et al., 2019). An iResearch report indicated that live commerce generated $300 billion in China in 2021, which accounted for 11.7% of the country's total online retail market (iResearch, 2021).

Previous studies on live commerce primarily focus on two aspects. First, a number of researchers have examined consumers' motivations for shopping (e.g., Cai & Wohn, 2019; Xu & Ye, 2020) as the first step toward understanding consumer behavior; consumers' engagement in live commerce (e.g., Sun et al., 2019; Wongkitrungrueng & Assarut, 2020); trust building (e.g., Chen et al., 2020; Guo et al., 2021), interpersonal factors (e.g., Chen et al., 2021), and consumers' perceived value (e.g., Cui et al., 2022); purchase intention or impulse purchasing (e.g., Chen et al., 2020; Cui et al., 2022; Ma et al., 2022; Xu et al., 2020; Zhang et al., 2021); and actual behaviors in live commerce (e.g., Wongkitrungrueng & Assarut, 2020).

Second, from the perspective of the platform, researchers have studied the impact of IT features, contextual cues in live commerce (Sun et al., 2019), and user interface design (Lu et al., 2018). Although some research has discussed factors that influence consumers' decisions to engage in live shopping, there remains a lack of research on why consumers switch from shopping on e-commerce platforms to engaging in live commerce. This paper enriches the current live commerce literature by further considering the main factors affecting online consumers' willingness to switch to live-stream shopping. If conventional e-commerce retailers do not understand the main factors affecting consumers' switching, they may not know how to improve the shortcomings of conventional e-commerce.

Meanwhile, if sellers intend to embrace live commerce and expand it as a new marketing channel, their business will gain new opportunities to grow.

Population Migration and PPM

Population migration is the movement of people from one place to another with intentions of settling in a new geographic region, permanently or temporarily (Lee, 1966). A permanent migrant is one who leaves their birthplace permanently, whereas a temporary migrant is one who leaves their birthplace and works elsewhere for a short period and returns. The same applies in cyberspace, where users may switch service providers and become more active. Even if they still have accounts with their previous service providers, they eventually stop using those platforms (Hou et al., 2011). In this study, users can be considered permanent migrants if they switch from traditional e-commerce to live e-commerce and rarely use their previous shopping platforms after migration; meanwhile, users who are more active in live shopping, but use traditional e-commerce less frequently can be considered temporary migrants. In this study, both permanent and temporary migration of consumers to live shopping can be considered as switching.

The theoretical basis of PPM originates from population migration theory (Lee, 1966), in which migration is viewed as the result of the combined effects of the push forces from the origin and the pull forces from the destination (Bogue, 1959). Lee (1966) posited the push-pull model to represent migration's push and pull factors. Push factors are influences that drive or force individuals to leave their place of origin (Stimson & Minnery, 1998), whereas pull factors are those that attract individuals to a particular place or, in this context, to use a particular service or product (Jung et al., 2017). Moon (1995) extended the push-pull model to incorporate "mooring" and thereby proposed the PPM model. Mooring forces refer to the personal and social factors that may prompt migrants to leave their places of origin or to keep them there.

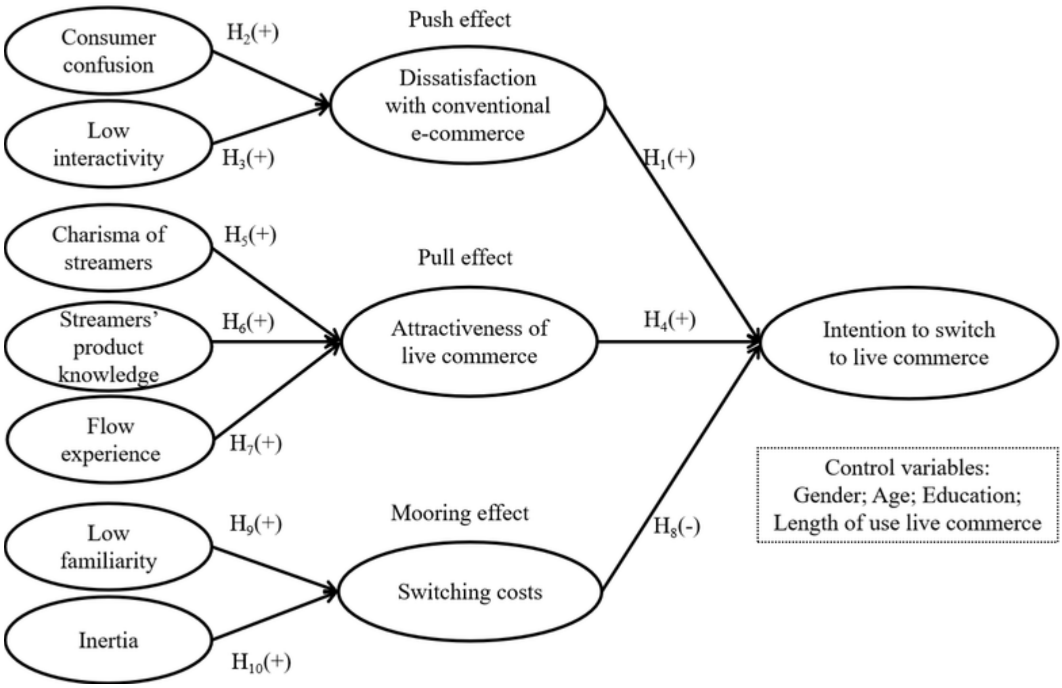
PPM is a flexible and useful framework, as it can be extended to test empirically according to service switching contexts (Lin et al., 2021). For instance, Chang et al. (2014) employed the PPM model to examine factors influencing online users switching from a current social network service provider to another; these researchers found that push (dissatisfaction and regret), pull (alternative attractiveness), and mooring (switching costs) were all factors in users' decisions to switch providers. Tang & Chen (2020) applied PPM to discuss brand microblog users' unfollowing motivations, finding that push (dissatisfaction with information quality, dissatisfaction with service quality, and brand unfit), pull (alternative attractiveness), and mooring (perceived unfollowing costs) affects these users' decisions. Hou et al. (2011) investigated PPM to understand online gamers' intention to switch between games, finding that push (low service satisfaction, low enjoyment), pull (alternative attractiveness), and mooring (switching costs, social relationship) were all factors affecting these users' decisions.

Although previous work based on PPM provides valuable insights into consumer switching, scant research has elucidated the phenomenon of switching from conventional e-commerce to live commerce. Based on extant literature, in this study, dissatisfaction with conventional e-commerce, the attractiveness of live commerce, and switching costs are chosen as key factors of push, pull, and mooring effects. Moreover, Xu et al. (2014) suggested that authors need to consider the research context's unique characteristics to determine the factors of push, pull, and mooring forces. Thus, in this study, we also discussed the antecedent variables that affect dissatisfaction with conventional e-commerce (push effect), attractiveness of live commerce (pull effect), and switching costs (mooring effect). Our research model is shown in Figure 1.

Push Effect

A push factor is usually defined as an influence that drives or forces people to leave their places of origin in a PPM framework (Moon, 1995). In the literature on information systems, the push effect mainly includes negative views of service providers, such as service failure and pricing strategies (Bansal et al., 2005). These factors contributed to low user satisfaction (Lin et al., 2021). Previous

Figure 1. Conceptual Model



research has demonstrated that dissatisfaction plays a major role in users' switching behavior (e.g., Bansal et al., 2005; Chi et al., 2021; Chang et al., 2014; Tang & Chen, 2020). In this study, we believe that when consumers are dissatisfied with an e-commerce shopping experience, they may consider switching to purchasing through live commerce. Therefore, the following hypothesis is proposed:

H_1: Dissatisfaction with conventional e-commerce positively stimulates consumers' intention to switch to live commerce.

Given extant literature and our research context, consumer confusion and low interactivity are considered antecedent variables for the push effect (i.e., dissatisfaction with conventional e-commerce). Consumer confusion refers to consumers' failure to establish accurate interpretations of all or several aspects of a product or service when evaluating information during the decision-making process (Shiu, 2021). In the conventional e-commerce context, sellers mainly use pictures and text to display product features, prices, and use to consumers. Thus, consumers must browse numerous web pages, and if many stores provide similar goods, they often need to spend a great deal of time screening and comparing before placing an order. This process may cause consumer confusion in buying a product. Walsh and Mitchell (2010) pointed out that consumers are often confused when similar products are promoted at the same time as such promotions increase the overall evaluation costs for consumers, negatively impacting their decision-making process. In the e-tourism context, Sharma et al. (2022) found that when consumers face information confusion (e.g., similarity, overload, ambiguity, and over-choice), they require more time to make choices. Such confusion could lead to delayed decision-making or the abandonment of purchase intentions.

In this study, we propose that when exposed to a wide variety of products and promotions in the e-commerce environment, consumers may face choice overload and such an increase in the difficulty to make decisions will likely generate negative feelings toward the purchasing channels. If confusion is encountered at a sufficient frequency, consumers are likely to become dissatisfied with the conventional e-commerce channel. Given this context, we propose the following:

H_2: Consumer confusion about conventional e-commerce positively affects consumers' dissatisfaction with conventional e-commerce.

Interactivity refers to the degree to which users feel the presence of the other party and, in doing so, form an interpersonal connection with them—either through a social or a technological environment (Zhao & Lu, 2012). In conventional e-commerce, the social nature of shopping is relatively weak. Consumers primarily communicate about products through two channels—namely, reading reviews from other buyers and using an online customer service through a chat box. Their questions about products may not be answered promptly and effectively. Websites with low interactivity tend to be less compelling, decreasing the likelihood of conscious engagement on the part of users and thereby reducing their perceived value of and satisfaction with the website (Hoffman & Novak, 2009). In addition, consumers are able to exchange information and emotions in real time through real-time interaction; this type of experience further builds a solid interpersonal relationship between streamers and consumers (Zhang et al., 2022).

Based on this evidence, we propose that when the perceived interactivity of e-commerce platforms decreases, consumers' dissatisfaction with the channel increases. Specifically,when consumers are provided with many options yet are unable to communicate with the seller in real time to gain support in the decision-making process, their satisfaction with e-commerce is reduced. In this regard, we propose the following hypothesis:

H_3: Low interactivity of conventional e-commerce positively impact consumers' dissatisfaction with conventional e-commerce.

Pull Effect

In the PPM framework, the push factors refer to the forces that attract migrants to a new destination (Bansal et al., 2005). In the literature of on information systems, alternative attractiveness is widely acknowledged as a pull factor of PPM (e.g., Chang et al., 2014; Jung et al., 2017; Tang & Chen, 2020). The attractiveness of a given option refers to the expectation that a consumer will be satisfied with the option (Chang et al., 2014). Here, the attractiveness of live commerce was defined as the expected satisfaction with using the channel. Thus, higher expected satisfaction with a live-stream purchase indicates that the channel has a higher level of attractiveness. Jones et al. (2000) pointed out that when the attractiveness of the alternative option was high, consumers' willingness to switch to that option tended to increase. Chi et al. (2021) found that alternative attractiveness positively influenced travelers' switch intentions.

In the context of this study, when consumers expect that the alternative channel (live streaming) will generate more value and satisfaction than the conventional e-commerce, the attractiveness of the alternative channel increases, influencing their preferences and motivating them to consider switching to the alternative option. The higher attractiveness of live commerce stimulates stronger switching intention. This leads us to propose the following hypothesis:

H_4: Attractiveness of live commerce positively affects consumers' intention to switch to live commerce.

Viewers and streamers are the key participants in live commerce (Zheng et al., 2023). Previous studies demonstrated that their characteristics influenced viewers' watching and purchasing behavior. For streamers, the streamer's expertise and attractiveness are two important characteristics influencing viewers' purchase intentions (Guo et al., 2022; Liao et al., 2022; Zheng et al., 2023). For viewers, flow is an essential viewer experience that motivates their engagement in live commerce (Chen & Lin, 2018; Kim & Kim, 2022; Li & Peng, 2021). Thus, in this study, we consider factors from streamers' and viewers' characteristics influencing live commerce attractiveness. Hence, this study discussed streamers' charisma, product knowledge, and flow experience as necessary antecedent variables of live commerce attractiveness.

The charisma of the streamers refers to their appeal regarding their appearance, humor, and personal qualities that might generate a halo effect and thereby influence the audience's perception of the product or service. In communication studies, opinion leader theory often emphasizes the guiding effect of the salesperson's characteristics (such as intelligence, ambition, efficiency, and reliability) on consumer behavior (Freberg et al., 2011). Xu et al. (2020) pointed out that attractive streamers are more successful at changing consumers' attitudes and beliefs regarding a product than their unattractive counterparts; thus, this characteristic guides online consumption.

In the context of this research, we expect that streamers with attractive personalities or unique characteristics will gain more attention from consumers, and streamers with a distinct style are more likely to attract distinct consumers. Therefore, consumers choose to trust the streamers to whom they are attracted and prefer the products they promote. Hence, we hypothesized as follows:

H_5: The charisma of the streamers positively affects the attractiveness of live commerce.

Product knowledge refers to a consumer's understanding, familiarity, and professional knowledge of a product based on past experience (Suh & Chang, 2006). Streamers' product knowledge refers to their in-depth understanding of products, including product features and functions and their ability to answer questions in a timely manner during the live stream (Chen et al., 2020). Consumers are more willing to seek recommendations and advice from a source with a high level of expertise (Ladhari et al., 2020). Szymanski (1988) found that sellers with rich product knowledge were more likely to gain consumers' trust regarding the product and could, therefore, more effectively satisfy their needs. Valente and Pumpuang (2007) proposed that the influence of opinion leaders is permeable, and leaders' viewpoints were found to influence consumers' attitudes, beliefs, and motivations.

In this research, we assume that when streamers possess more in-depth knowledge regarding products and apply that knowledge to persuade consumers to make purchases, consumers are more likely to prefer live commerce as a purchase channel. Hence, the following is our proposal:

H_6: Streamers' product knowledge positively affects the attractiveness of live commerce.

Flow experience refers to the experience that people feel when they are deeply engaged (Csikszentmihalyi, 2008). Skadberg et al. (2005) indicated that the characteristics of flow experience include complete immersion, focused attention, and enjoyable experience. Cui et al. (2022) concluded that the flow experience enhanced the viewers' hedonic value in the online shopping experience by adding a dimension of immersion. Moreover, Li and Peng (2021) found that flow experience can increase audiences' emotional attachment to streamers. In tourism management research, people were more likely to respond positively to a website and learn more from it when experiencing flow (Skadberg et al., 2005).

For the present research, we predict that when the live stream provides consumers with a sense of immersion, the flow might be experienced, and in that flow, consumers are more likely to purchase the product. Based on the discussion above, the following hypothesis is proposed:

H_7: Flow experience positively affects the attractiveness of live commerce.

Mooring Effect

Although the push and pull effects significantly affect migrants, they may not leave their current place when a mooring force exists (Lee et al., 2016). Mooring refers to constraints in the migration decision—primarily time and switching costs (Moon, 1995). Mooring can create a locking effect, causing potential migrants to avoid migration eventually. A previous study found switching costs to be a significant mooring factor (Bansal et al., 2005; Chang et al.,2019; Hou et al., 2011; Jung et al., 2017; Lai et al., 2012; Tang & Chen, 2020). Switching costs refer to the costs associated with giving up existing products/services and switching to other providers (Cheng et al., 2019; Sun et al., 2017). Switching costs include physical, artificial, and informational costs as well as costs associated with psychological investments (Klemperer, 1995). Bansal et al. (2005) confirmed that when switching costs were low, consumers were more likely to switch to other services. In addition, Chang et al. (2014) noted that increased switching costs directly reduced willingness to switch, thereby reducing users' switching behaviors.

In the context of this research, we believe that when consumers perceive that the cost of switching from e-commerce to a live-streaming channel is high, they are less likely to switch, regardless of the higher value or satisfaction provided by live commerce. Thus, we hypothesize the following:

H_8: Switching costs negatively affect consumers' intentions to switch to live commerce.

Moreover, as live streaming is an emerging social commerce channel, consumers may not be familiar with the live commerce shopping process; they may avoid it owing to a lack of familiarity. Familiarity refers to individuals' understanding of prior experiences and is an important source of information that defines behaviors (Rothaermel & Sugiyama, 2001). Past studies have considered familiarity the primary method of explaining social behavior and suggested that it decreases complexity in making decisions (Hajli et al., 2017). Familiarity with an online platform means that individuals understand the procedures of the platform, such as how to interact with the information and other users (Gefen et al., 2003). Rothaermel and Sugiyama (2001) found that when members had higher familiarity with and affinity toward social networking platforms, they spent less time and energy searching for alternative information. Black (2001) demonstrated that when users lack familiarity and experience with the Internet, their perceived risk of the Internet increases.

Compared with existing e-commerce channels (such as Taobao), consumers unfamiliar with—and therefore distrustful of—live commerce face higher switching costs. This leads to the following hypothesis:

H_9: Low familiarity with live commerce has a positive impact on switching costs.

According to the status quo bias theory, inertia refers to individuals' resistance to change despite the superiority of other alternatives (Samuelson & Zeckhauser, 1988). McMullan (2005) defined inertia as the tendency to continue to purchase products or services to which the consumer is accustomed rather than seeking other options and diversifying experiences. Lin and Huang (2014) discovered that inertia negatively affected individuals' intentions to use new technologies, creating barriers that hinder successful applications. Polites and Karahanna (2012) found that inertia made users less receptive to new systems.

In this study, the extended use of original e-commerce platforms generates a consumption habit, and such inertia increases the difficulty consumers face when switching from the current purchasing channel to live-stream shopping, which, in turn, incurs higher switching costs. Thus, we hypothesize the following:

H_{10}: Inertia positively affects switching costs.

In addition to the three forces of PPM that may affect consumers' switching intentions, some control variables are also discussed in this study. Previous studies confirmed that demographic variables such as gender, age, and education have been consistently verified to influence users' service-switching intentions (Chi et al., 2021; Cheng et al.,2019; Tang & Chen, 2020). Moreover, length of use or prior experience is used to assess the level of users' engagement in live commerce (Gao et al., 2021). Wang et al. (2019) indicated that users' length of use significantly affects their switching behavior. Chen et al. (2020) found that prior experience was an effective determinant of consumers' purchase intention in live commerce. We expect that the level of engagement may affect consumers' switching intention. Therefore, in this study, gender, age, education, and length of use are included in the research model as control variables.

METHODOLOGY

Measurements

To ensure face validity in live commerce, the measurement items were modified slightly from previous studies. For push factors, items measuring dissatisfaction with conventional e-commerce (DS) and inertia (IE) were modified from Lin and Huang (2014). The measurement of consumer confusion (CC) was developed by Wang and Shukla (2013). Measurements of low interactivity (LI) were adapted from Lu et al. (2010). For pull factors, items measuring the charisma of streamers were modified from Rivera (1994). In Suh and Chang (2006), streamers' product knowledge (PK) items were derived. The scale for flow experience (FE) was adapted from Animesh et al. (2011). The measurement method for the attractiveness of live commerce (ATT) was taken from Chuah et al. (2017). For mooring factors, to measure lower familiarity (LF), items were adapted from Sánchez-Franco and Roldán (2014). The measurement of switching costs (SC) was developed by Bansal et al. (2005). Finally, items related to intention to switch to live commerce (SI) items were adapted from Lin and Huang (2014). Each item was rated on a scale of 1–7, where 7 represents strongly agree with the statement, and 1 represents strongly disagree with the statement.

Because the respondents of this study were Chinese consumers, the questionnaire (table 8) was written in Chinese. Back translation was used to complete English-Chinese and Chinese-English translations, ensuring content accuracy (Tang et al., 2022). We then invited five professors in the area of social commerce in universities to examine whether the statements in the questionnaire reflect the constructs being measured. The final measurement items used in this study were presented in the Appendix.

Data Collection

A non-probabilistic sampling procedure (i.e., convenience sampling) was used to collect the data. Data were collected on Wenjuan (www.wenjuan.com), one of the most popular online survey providers in China, which is equivalent to Western platforms such as Qualtrics and SurveyMonkey. According to a report by CNNIC (2022), more than 716 million Internet users in China watch live streams, making China the world's largest live commerce market. Previous studies (e.g., Shiau & Luo, 2012) indicated the advantages of an online survey approach include cost efficiency, fast response time, and the ability to reach a wide population of consumers. A pilot study with 30 respondents was carried out before the formal survey to check the reliability and validity of the measurement items. To ensure that respondents have experience with conventional e-commerce and live commerce, two screening questions were provided at the beginning of the questionnaire:

- Have you ever used e-commerce platforms for shopping?
- Have you ever shopped via live commerce?

Only those who answered “Yes” were invited to complete the online survey. The data were collected between January 13 and February 28, 2022. To eliminate the invalid questionnaires, we followed the rules suggested by previous studies (Lindell & Whitney, 2001; Wu et al., 2017). First, the time spent completing the survey can be used as a benchmark. It was estimated that filling out the questionnaire can be completed within 5–10 minutes. Responses from participants who spent less than 3 minutes to complete the questionnaire were considered invalid. Second, if all responses were identical (only 1 or 7) within the same construct, they were considered invalid. Third, a reversed item was used to check participants who did not answer the questionnaire carefully. Fourth, Wenjuan, the online survey platform, can be used to exclude duplicate IP addresses. After data cleaning, we collected 306 samples with a valid rate of 85.5%.

The profiles of these valid respondents are summarized in Table 1. Among them, 61% were female participants, and 57% were between the ages of 21 and 30. Approximately 76% of the respondents have bachelor’s degrees or above. Live streaming is watched by 54% of respondents less than half a year, and live commerce is watched by 23% more than five times per week. The average amount spent on such platforms per month is more than 200 RMB per participant. Among China’s live-streaming platforms, Douyin has the most users, with about 61% of those sampled using it. Taobao Live ranked second, with about 59% using this platform. The most frequently watched live-streaming contents are daily necessities (64%), food (51%), and beauty products (41%).

Common Method Variance

The common method variance (CMV) may lead to measurement errors when data are collected from a single source at a single time point (Podsakoff et al., 2003). In this study, two methods were used to detect CMV. First, we used program control during the data collection phase. The order of questions was counterbalanced with demographic questions at the end of the questionnaire to reduce respondents’ apprehension concerns. Second, a statistical analysis method was introduced. Harman’s single-factor test was used to check for the presence of CMV in this study (Podsakoff et al., 2003). According to Harman’s single-factor test results, the explanatory power of the first factor is 42%, which is less than 50%. Therefore, CMV is not significant in this study (Shiau & Luo, 2012).

DATA ANALYSIS AND RESULTS

Measurement Model

The partial least squares structural equation modeling (PLS-SEM) method was used to examine the measurement and structural models in this study. The reasons for choosing PLS-SEM are threefold. First, covariance-based structural equation modeling (CB-SEM) requires stricter assumptions related to the normal distribution of the data, whereas PLS-SEM is less restrictive regarding the distribution of variables (Shiau et al., 2019). In this study, the data distribution may lack normality owing to the convenient sampling method used to collect data. Second, when the research model is complex, PLS-SEM is more appropriate than CB-SEM (Hair et al., 2017). In this study, based on PPM, we propose a complex research model, including 11 variables and 10 hypotheses, to explore the main reasons why users switch to live shopping. Third, the PLS-SEM technique is better suited for studies where the goal of the study is to conduct exploratory research (Gefen et al., 2011). Using PPM in live commerce, we examined consumers’ switching intentions in this new context and explored the underlying mechanisms. This study extended PPM to live commerce and explored the underlying mechanism of consumers’ switching intention in this new context. Hence, in this study, SmartPLS 3 is considered an appropriate tool.

We examined the reliability and validity of the construct measures before testing the hypotheses. As shown in Table 2, we found both the Cronbach’s alpha and composite reliability values of each construct exceeded 0.7, suggesting that all the constructs were reliable. All latent constructs have

Table 1. Demographic Profile of the Respondents (N = 306)

Characteristic	Count	Percentage
Gender		
Male	120	39
Female	186	61
Age		
Under 20	22	7
21–30	174	57
31–40	30	10
41–50	39	13
Above 51	41	13
Education		
High school	74	24
Bachelor	164	54
Master or above	68	22
Occupation		
Students	147	48
Employed	86	28
Unemployed	55	18
Others	18	6
Length of use of live commerce		
< 6 months	166	54
6 months to a year	66	22
> 1 year	74	24
Frequency of use of live commerce per week		
< 5 times	237	77
6-10 times	42	14
> 10 times	27	9
Amount spent on live commerce per month		
< 200 RMB	171	56
201–1,000 RMB	80	26
1,000 RMB	55	18
Live-streaming platform		
Douyin	187	61
Taobao Live	182	59
Pinduoduo	70	23
Facebook	20	7
Instagram	16	5
Other	15	5
Popular live-streaming content		
Daily necessities	197	64
Food	156	51
Cosmetics	126	41
Clothing	102	33

Table 2. Reliability and Convergent Validity Analysis

Constructs	Mean	SD	Cronbach's a	AVE	C.R.
DS	3.73	1.836	0.945	0.901	0.965
ATT	4.45	1.751	0.905	0.841	0.941
SC	4.54	1.742	0.894	0.825	0.934
CC	4.67	1.609	0.943	0.661	0.951
LI	4.38	1.720	0.924	0.868	0.952
CH	4.47	1.762	0.917	0.752	0.938
PK	4.41	1.727	0.909	0.846	0.943
FE	4.27	1.816	0.945	0.820	0.958
LF	4.24	1.863	0.950	0.908	0.967
IE	5.09	1.695	0.961	0.894	0.971
SI	3.98	1.839	0.939	0.844	0.956

Notes: ATT: attractiveness of live commerce; CC: consumer confusion; CH: charisma of streamers; FE: flow experience; IE: inertia; LI: low interactivity; DS: dissatisfaction with the conventional e-commerce; PK: streamers' product knowledge; SC: switching costs; LF: lower familiarity; SI: intention to switch to live commerce

factor loadings greater than 0.7, indicating good convergent validity. Regarding discriminant validity, we found that the least square root of AVE was 0.813, which was greater than the correlation between any two constructs (Chin, 1998; see Table 3), and all factor loadings were larger than cross-loadings, indicating good discriminant validity. In addition, as shown in Table 4, the Heterotrait-Monotrait Ratio (HTMT) is another effective method for assessing discriminant validity (Henseler et al., 2015). This study's maximum HTMT value was 0.771 (<0.9), indicating satisfactory discriminant validity for all constructs.

Moreover, SRMR can represent the model fit for PLS-SEM (Henseler et al., 2015). The acceptable threshold for SRMR is <0.08. In this study, the SRMR value is 0.045; hence, our model satisfies the requirement. Furthermore, we also checked multicollinearity through the variation inflation factor

Table 3. Fornell-Larcker Criterion Results

Construct	ATT	CC	CH	FE	IE	LI	DS	PK	SC	UF	SI
ATT	**0.917**										
CC	0.518	**0.813**									
CH	0.705	0.483	**0.867**								
FE	0.689	0.498	0.812	**0.906**							
IE	0.267	0.343	0.315	0.287	**0.946**						
LI	0.498	0.603	0.521	0.524	0.178	**0.932**					
DS	0.439	0.544	0.451	0.510	0.019	0.587	**0.949**				
PK	0.653	0.474	0.779	0.767	0.289	0.559	0.483	**0.920**			
SC	0.218	0.509	0.250	0.224	0.421	0.415	0.287	0.271	**0.908**		
LF	0.088	0.449	0.196	0.262	0.388	0.324	0.303	0.207	0.542	**0.953**	
SI	0.701	0.430	0.720	0.773	0.197	0.580	0.589	0.686	0.180	0.193	**0.919**

Notes: Diagonal elements in bold are the square root of AVE

Table 4. HTMT Results

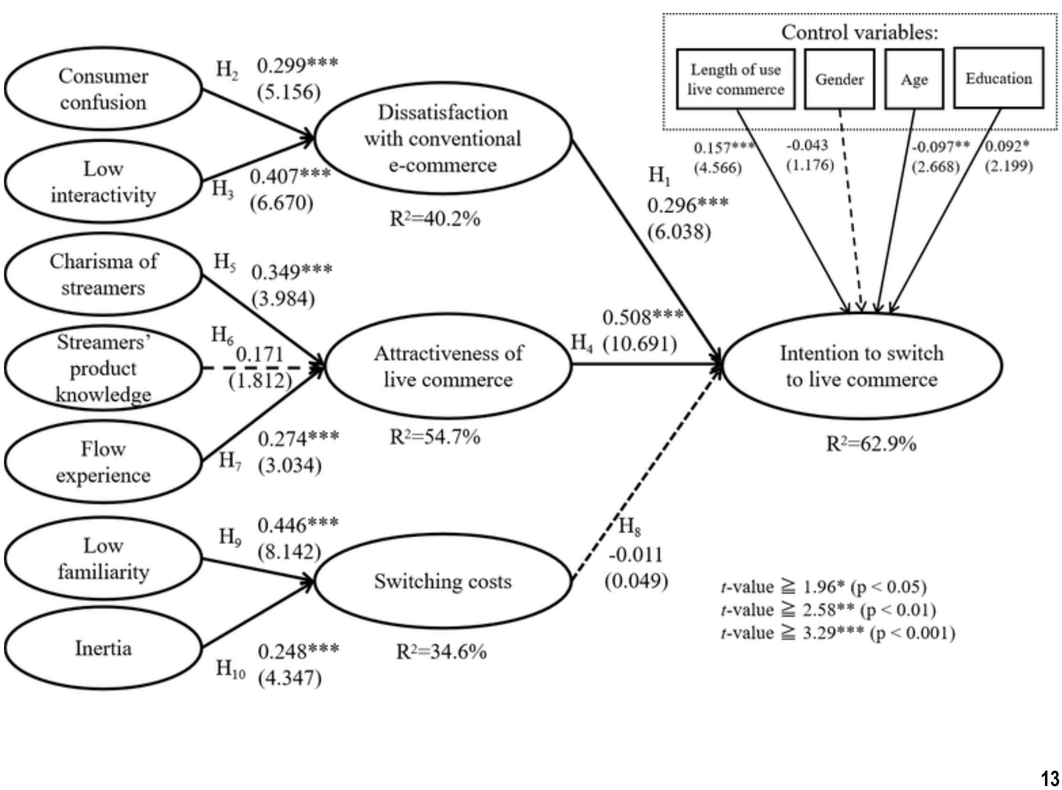
Construct	ATT	CH	DS	FE	IE	LF	LI	PK	SC	SI
ATT										
CH	0.771									
DS	0.471	0.480								
FE	0.743	0.769	0.541							
IE	0.291	0.341	0.034	0.301						
LF	0.095	0.212	0.320	0.278	0.406					
LI	0.543	0.563	0.628	0.562	0.191	0.347				
PK	0.718	0.750	0.518	0.726	0.311	0.223	0.610			
SC	0.243	0.278	0.315	0.243	0.453	0.588	0.456	0.301		
SI	0.758	0.670	0.625	0.721	0.207	0.206	0.624	0.742	0.198	
CC	0.560	0.517	0.567	0.521	0.367	0.476	0.640	0.508	0.560	0.448

(VIF). All of these measurements were lower than 3.12, which is below the threshold value of 5, suggesting that the collinearity in the research data is not a problem (Hair et al., 2017).

Structural Model

To estimate path coefficient significance, a bootstrapping method with a resampling size of 5,000 was used. Figure 2 presents the results of the structural model analysis, including path coefficients

Figure 2. Results of Path Analysis



and R^2. In this study, eight hypotheses were supported; however, H6 and H8 were not supported. R^2 values are another important indicator of path model predictive power; about 40% of the variance of dissatisfaction with conventional e-commerce is explained by consumer confusion and low interactivity ($R^2 = 0.402$). Approximately 55% of the variance of the attractiveness of live-streaming commerce is explained by the charisma of streamers and flow experience ($R^2 = 0.547$). Moreover, lower familiarity and inertia explain 35% of switching costs ($R^2 = 0.346$), and 63% of intention to switch to live commerce is explained by dissatisfaction with conventional e-commerce and the attractiveness of live commerce.

Stone-Geisser's Q^2 value can be used to indicate the predictive relevance of the research model (Hair et al., 2017). According to Hair et al. (2017), Q^2 values of 0.02, 0.15, and 0.35 represent small, medium, and large predictive relevance, respectively. The Q^2 values of all endogenous variables in this study are over 0.28. The results of Q^2 values are shown in Table 5.

Hypotheses Testing

Among three factors that influence the consumers' intention to switch to live commerce, the most influential factor is the attractiveness of live commerce ($\beta = 0.508$, *t*-value = 10.691). The second is dissatisfaction with conventional e-commerce ($\beta = 0.296$, *t*-value = 6.038); however, the effect of switching costs ($\beta = -0.011$, *t*-value = 0.049) is not significant. Hence, H1 and H4 are supported, whereas H8 is not supported. Regarding the antecedents of dissatisfaction with the conventional e-commerce, we found that both consumer confusion ($\beta = 0.299$, *t*-value = 5.156) and low interactivity ($\beta = 0.407$, *t*-value = 6.670) have positive effects on dissatisfaction with conventional e-commerce. Hence, H2 and H3 are supported. Furthermore, among three factors that influence the attractiveness of live commerce, the most influential factor is the charisma of streamers ($\beta = 0.349$, *t*-value = 3.984), and the second is flow experience ($\beta = 0.274$, *t*-value = 3.034); however, streamer product knowledge does not have an impact ($\beta = 0.171$, *t*-value = 1.812). Hence, H5 and H7 are supported, whereas H6 is not supported. Regarding the antecedents of switching cost, we found that both low familiarity ($\beta = 0.446$, *t*-value = 8.142) and inertia ($\beta = 0.248$, *t*-value = 4.347) have positive effects on switching cost. Hence, H9 and H10 are supported. Table 6 shows the results of the path analysis.

Regarding control variables, length of using live commerce, age, and education positively affect their intention to switch to live commerce. However, we found that gender does not have a significant effect on consumers' switching intentions.

The results of the mediation effect test are shown in Table 7. We found that dissatisfaction with conventional e-commerce (DS) and attractiveness of live commerce (ATT) were partially mediated by push factors and consumers' intention to switch to live commerce (SI). For instance, a streamer's product knowledge (PK) on SI (direct effect = 0.398, *t*-value = 6.895); (indirect effect = 0.289, LLCI = 0.206, ULCI = 0.372). However, switching cost (SC) does not have a significant mediating effect on mooring factors and SI, for instance, inertia (IE) and SI (direct effect = 0.154, *t*-value = 2.043; indirect effect = 0.050, LLCI = -0.014, ULCI = 0.118).

Table 5. Predictive Relevance of the Research Model

Constructs	Q^2
DS	0.357
ATT	0.450
SC	0.282
SI	0.524

Table 6. Results of Path Analysis

Hypothesis	Coefficient	*t*-value	Support
H1: Dissatisfaction with conventional e-commerce->Switching intention to live commerce	0.296***	6.038	Yes
H2: Consumer confusion->Dissatisfaction with conventional e-commerce	0.299***	5.156	Yes
H3: Low interactivity->Dissatisfaction with conventional e-commerce	0.407***	6.670	Yes
H4: Attractiveness of live commerce->Switching intention to live commerce	0.508***	10.6911	Yes
H5: Charisma of streamers->Attractiveness of live commerce	0.349***	3.984	Yes
H6: Streamers' product knowledge->Attractiveness of live commerce	0.171	1.812	No
H7: Flow experience->Attractiveness of live commerce	0.274***	3.034	Yes
H8: Switching costs-> Switching intention to live commerce	-0.011	0.049	No
H9: Low familiarity ->Switching costs	0.466***	8.142	Yes
H10: Inertia ->Switching costs	0.248***	4.347	Yes

Table 7. Results of the Mediating Effect Test

Path	Total effect		Direct effect		Indirect effect		
	b	*t*-value	b	*t*-value	b	Bootstrap 95% CI	
						LLCI	ULCI
PK→ATT→SI	0.687	17.790	0.398	6.895	0.289	0.206	0.372
CC→DS→SI	0.434	7.271	0.158	2.212	0.275	0.196	0.355
PE→ATT→SI	0.774	26.150	0.554	9.759	0.220	0.143	0.301
IE→SC→SI	0.204	3.016	0.154	2.043	0.050	-0.014	0.118
LF→SC→SI	0.201	3.102	0.156	1.826	0.053	-0.061	0.134
LI→DS→SI	0.583	12.380	0.360	5.855	0.223	0.147	0.306
CH→ATT→SI	0.724	25.250	0.455	7.836	0.269	0.181	0.361

Notes: LLCI = lower limit of the confidence interval; ULCI = upper limit of the confidence interval

DISCUSSION AND IMPLICATIONS

Discussion of Findings

Regarding push factors, our results indicate that consumer confusion positively affected dissatisfaction with conventional e-commerce (supporting H2). The wide variety of products, discounts, and promotion schemes offered by e-commerce platforms overload consumers with information, reducing their decision-making ability. This finding echoed the results of a study by Walsh & Mitchell (2010). Low interactivity was also found to positively impact consumers' dissatisfaction with conventional e-commerce (supporting H3). When consumers had questions regarding the products/services provided by an e-commerce site and could not decide which product/service to choose among the alternatives owing to a lack of timely communication responses, their dissatisfaction with the platform increased. This finding was consistent with that of Hoffman and Novak (2009). Finally, dissatisfaction with the conventional purchasing channel was found to stimulate consumers' intentions to switch to live-streaming shopping (supporting H1), this was in accordance with Chang et al. (2014) as well as Yang and Peterson (2004).

Regarding pull factors, we found that the charisma of the streamers positively affected the attractiveness of live commerce (supporting H5), which mirrored Xu et al.'s (2020) findings. We also found that flow positively affected the attractiveness of live commerce (supporting H7), which was in line with the findings of Hoffman and Novak (1996). Moreover, the attractiveness of live commerce positively affected consumers' intentions to switch purchase channels. When live commerce was able to generate higher value and give consumers greater satisfaction than conventional e-commerce, consumers were more likely to consider switching to live-stream shopping. These findings were consistent with those of Chang et al. (2014) as well as Yang and Peterson (2004).

Regarding mooring factors, low familiarity with live-stream shopping was found to positively affect switching costs (supporting H9). Compared with conventional e-commerce platforms such as Taobao, live-stream shopping is an emerging channel. In addition to resistance to novelty, consumers' lack of familiarity with how the channel operates may create a sense of distrust, resulting in higher switching costs. This finding echoed that of Rothaermel and Sugiyama (2001). In addition, inertia was found to positively impact switching costs. The long-term use of a given e-commerce platform led to an inherent consumption habit (inertia), making consumers less willing to abandon their current system and switch to new channels; hence, their switching costs increased. This result was consistent with that of Lin and Huang (2014).

The findings of this study did not support two hypotheses (H6 and H8). Among factors that affected consumers' willingness to switch to live commerce, the impact of the attractiveness of live commerce was the greatest, followed by dissatisfaction with conventional e-commerce. In spite of this, switching costs had no statistically significant impact on switching intentions; hence, H8 was rejected. There are two likely reasons for this finding. First, compared with the attractiveness of live-stream shopping and dissatisfaction with conventional e-commerce, switching costs may be a necessary and acceptable condition. The entry barrier to live commerce is low, and all merchants and individuals are eligible to participate. Consumers can easily switch between different live broadcast platforms, and the switching cost between live broadcast rooms is very low (Wang et al., 2021). Second, these results could also have been affected by the moderating effect of the sample group. For this reason, the samples were divided into student (159) and nonstudent (147) groups for further hypotheses testing (Figures 3 and 4). We found that switching costs significantly affected the intention to switch for the nonstudent group ($t = 2.406$); however, the effect was not significant for the student group ($t = 0.891$). This finding confirms that the insignificant effect of switching costs was influenced by grouping.

Although some hypotheses were significant for both the student and nonstudent groups, the results of the path-coefficient comparison showed that significant differences remained between the groups. Hence, referring to the method proposed by Keil et al. (2000), we compared path coefficients with the same statistical significance to examine the differences in the results between the student and nonstudent groups. In accordance with the results of the comparison of path coefficients, we found that the constructs were significantly different between groups except in the case of inertia. For instance, the effects of consumer confusion ($t = 24.753$) and low interactivity ($t = 18.320$) on dissatisfaction with conventional purchase channels were statistically different between the groups. In other words, although both student and nonstudent consumers believed that consumer confusion and low interactivity affected dissatisfaction with conventional purchase channels, student consumers regarded the impact of consumer confusion as greater, while nonstudent consumers regarded the impact of low interactivity as greater. Regarding factors influencing live commerce's attractiveness, significant differences were observed in the charisma of streamers ($t = 17.904$) and flow experience ($t = 12.033$) between the student and nonstudent groups. The two groups' perceived impact of low familiarity was also significantly different ($t = 5.819$). In terms of factors that affected intention to switch to live commerce, there was a significant difference in dissatisfaction with conventional e-commerce ($t = 3.723$) and attractiveness of live commerce ($t = 7.526$) between the two groups.

Furthermore, it was found that streamers' product knowledge had no significant impact on the attractiveness of live commerce; hence, H6 was rejected. We speculated that this could be due to two

Figure 3. Results of Path Analysis (Nonstudent Group, N = 147)

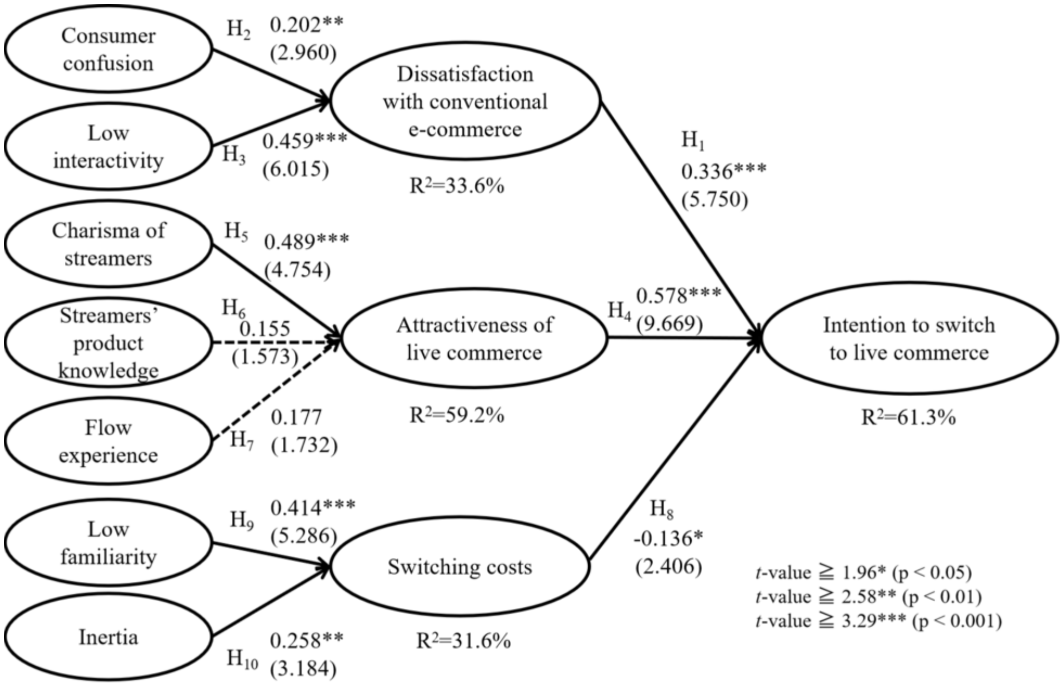
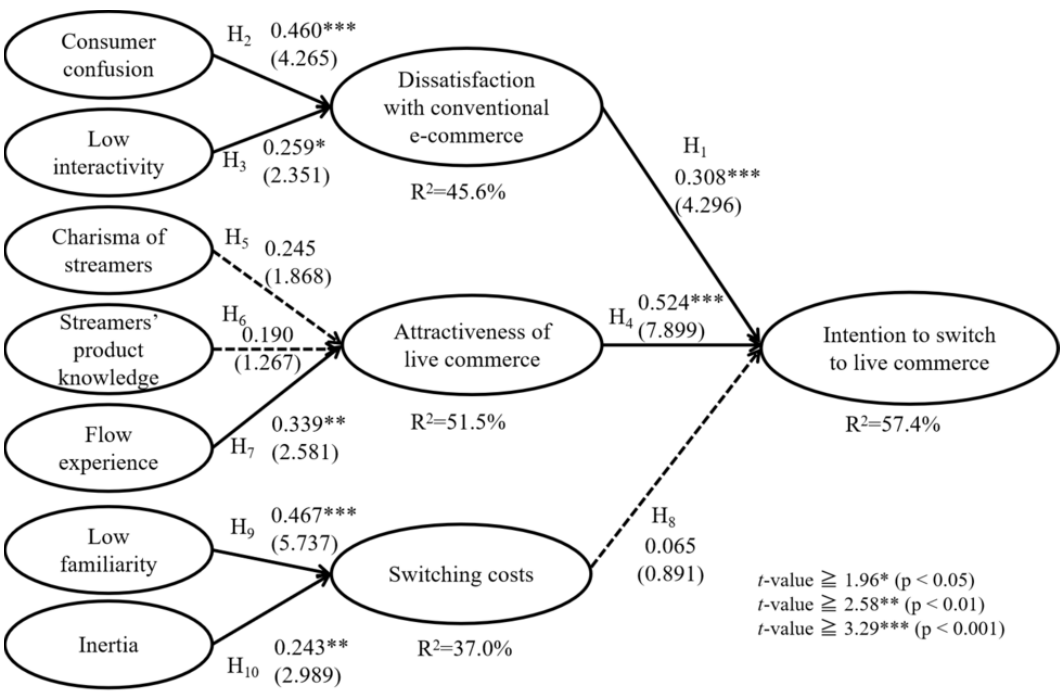


Figure 4. Results of Path Analysis (Student Group, N = 159)



reasons. First, streamers' product knowledge was not a sufficient or a necessary condition. Consumers who watch live-stream shopping channels may presume that the streamer should have corresponding product knowledge. Moreover, possessing a considerable understanding of the relevant products is a basic requirement for streamers.

Second, the effect of streamers' product knowledge was moderated by the sample group. To further examine the influence of the sample group, we divided the samples into male and female groups (Figures 5 and 6). It was found that the impact of streamers' product knowledge on the attractiveness of live commerce was not significant for the male group ($t = 0.584$), but was significant for the female group ($t = 2.649$), confirming that the rejection of the hypothesis was caused by the sample group. In other words, female consumers considered product knowledge an important factor and were likely to be attracted if the streamer was familiar with the products.

To explore the differences in significant hypotheses between the two groups, we followed the method proposed by Keil et al. (2000). We found that the effects of consumer confusion ($t = 18.636$) and low interactivity ($t = 10.685$) on dissatisfaction with conventional e-commerce were statistically different between the groups. In other words, although both male and female consumers believed that consumer confusion and low interactivity affected dissatisfaction with conventional e-commerce, male consumers regarded the impact of consumer confusion as greater. In contrast, female consumers regarded the impact of low interactivity as greater. In terms of factors that influenced the attractiveness of live commerce, there was a significant difference between charisma of streamers ($t = 12.793$) and flow experience ($t = 13.101$). The perceived impact of inertia ($t = 4.239$) and low familiarity ($t = 7.604$) on switching costs also differed significantly between the two groups. In terms of factors that influenced consumers' intention to switch to live commerce, there was a significant difference in dissatisfaction with conventional e-commerce ($t = 2.404$) and the attractiveness of live commerce ($t = 11.181$) between the two groups.

Figure 5. Results of Path Analysis (Male, N = 120)

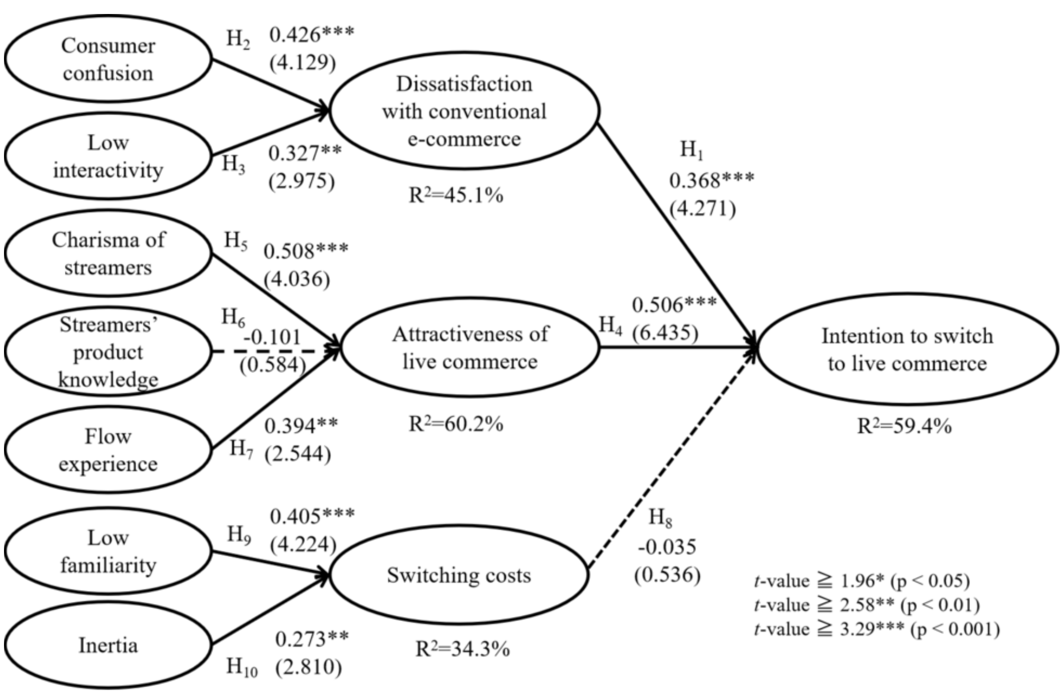
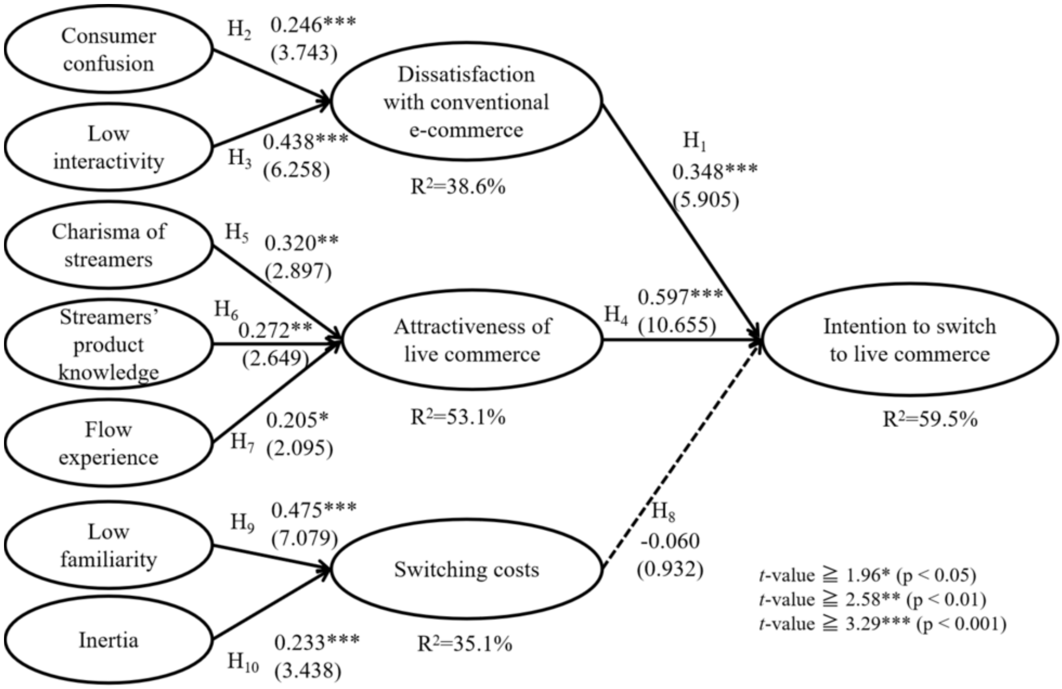


Figure 6. Results of Path Analysis (Female, N = 186)



Theoretical Contribution

This study contributes to the theoretical understanding of consumers' switching behavior in relation to live commerce in several ways. First, in the service-switching literature, few studies have explored the factors influencing consumers' intentions to switch from conventional e-commerce to live commerce. The findings of this study not only expand the research scope of consumers' service switching literature but also enrich studies regarding the internal mechanism behind consumers' switching behaviors in relation to live commerce.

Second, we extend PPM to live commerce. In previous studies, PPM has been verified as an important paradigm for understanding consumers' switching motivations and behaviors (Sun et al., 2017). It has been rare for PPM to be applied to exploring why consumers switch from e-commerce platforms to live-stream shopping. In this study, based on PPM, we constructed a comprehensive research model and systematically analyzed corresponding factors from the perspectives of push, pull, and mooring forces. Sellers and streamers can use the findings to improve and optimize their offerings by understanding consumers' real needs.

Third, the effect of switching costs on consumers' intentions to switch to live commerce was insignificant; this finding differs from the results of many previous studies. Today, an increasing number of e-commerce and social networking platforms have begun to offer live-streaming functions. Switching costs may be a necessary condition, insufficient to hinder switching. Furthermore, when grouped testing was performed based on occupation, we found that switching costs significantly affected the switching intention for the nonstudent group; however, the effect was not significant for the student group. More studies should be conducted in the future to add additional perspective to the literature on consumers' switching behavior.

Managerial Implications

The total sample tests showed that the most important factor affecting consumers' intentions to switch to live commerce was the attractiveness of the live commerce channels, whereas the most important factor affecting such attractiveness was the charisma of streamers, followed by perceived flow experience. Our results indicate that increasing the attractiveness of live commerce stimulates consumers' switching intentions, while the key to this process is the streamer's charisma. Therefore, e-commerce businesses that intend to shift toward live streaming or individuals who are interested in or intend to engage in live commerce should focus on improving the charisma of their streamers. The channel's image should be enhanced by hiring presentable streamers. However, the streamers' knowledge and presentability are equally important. Practitioners should refer to the practices of successful streamers (such as "Lipstick King" Austin Li, who has the signature catchphrase "OMG, sisters, buy this!") and generate catchphrases or include jokes and humorous anecdotes to create uniquely engaging personalities with the aim of improving customer stickiness.

In terms of enhancing the flow experience, practitioners should enrich the content of the channel, create an enthusiastic mood, and provide a diversified product base rather than merely relying on beauty products and the 3Cs (computer, communication, and consumer electronics). In addition, live commerce can be made more entertaining by inviting political, commercial, and entertainment-based celebrities or by designing different themes (such as "learn while selling," "play while selling," and "sing while selling").

The results indicate that consumer confusion and low interactivity were positively correlated with dissatisfaction with conventional e-commerce, while the impact of low interactivity was greater. Consequently, conventional e-commerce platforms should establish a greater number of channels through which they can communicate with consumers and respond to their needs and inquiries in a timely, swift, and effective manner to keep consumers interested. For example, live-stream shopping channels typically offer pop-up windows and comment functions to allow consumers to ask questions and receive answers from the streamers during the streaming process. Similarly, e-commerce platforms should set up channels for customer groups to receive questions, and they should assign dedicated personnel to answer the questions received. Regarding consumer confusion, e-commerce platforms should better organize pages that display product information to enable consumers to search for information more easily. In addition, detailed photos should be provided for each product.

Although consumers may generally not be familiar with live commerce and may prefer to use conventional e-commerce platforms, we found that switching costs do not affect their intention to switch to live commerce. In other words, if consumers want to switch purchase channels, they can do so with low switching costs. In fact, during the research period, an increase in the number of platforms that shifted to live commerce (such as Taobao and Pinduoduo) was observed, and more merchants began live streaming. Therefore,we recommend that practitioners prepare for this transition as soon as possible.

Furthermore, this study also found that the influence of the examined factors differed by gender and occupation. Specifically, male and female consumers had different opinions on streamers' product knowledge, indicating that streamers focus on developing professional knowledge regarding the products in addition to their presentation skills when selling products that target female consumers. Streamers' charisma was found to have an impact among nonstudent participants, while students paid greater attention to their flow experiences. Therefore, we suggest that streamers add engaging content when targeting student consumers (such as "playing while selling") while focusing on immersive experiences (such as embedding short comedy skits) for such consumers.

LIMITATIONS AND FUTURE RESEARCH

This study has several limitations and provides a number of new research directions for future studies. First, we used a survey to collect data, and statistical findings may not provide a comprehensive picture of consumers' intentions to switch to live commerce. Future studies can integrate quantitative with qualitative research methods (e.g., interviews) to further discuss the findings of the survey results. Second, we primarily focused on Chinese users' intentions to switch to live commerce. Because of cultural differences, the findings of this study may not apply to other countries. Hence, future studies can extend the research scope by discussing intention to switch to live commerce in other cultural contexts. Third, our study respondents were experienced live-streaming shoppers. With the wider implementation of live commerce, future research could include inexperienced users and discuss their switching attitudes and behavior toward live commerce.

DISCLOSURE STATEMENT

There is no conflict of interest to declare from the author team.

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APPENDIX

Table 8. Questionnaire Items

Construct and Source	Items	Measure
Consumer confusion (CC) Wang and Shukla (2013)	CC1	Because of the great similarity of products sold by different merchants, it is often difficult to detect new features of products on e-commerce platforms.
	CC2	Some items look similar, and within conventional e-commerce platforms, it is difficult to determine whether they are made by the same manufacturer or not.
	CC3	Sometimes I want to buy a product seen in an advertisement, but cannot identify it clearly among scores of similar products from the e-commerce platforms.
	CC4	There are so many product brands to choose from in an e-commerce platform that I sometimes get confused.
	CC5	Because there are so many sellers in an e-commerce platform, it can sometimes be difficult to decide where to shop.
	CC6	Most products are very similar on e-commerce platforms and are, therefore, hard to distinguish.
	CC7	The information I get from the e-commerce platform is very vague, so it is hard to know whether these products can actually achieve what I want.
	CC8	When shopping on e-commerce platforms, I rarely feel sufficiently informed.
	CC9	When purchasing certain products on e-commerce platforms, I feel that product features are particularly important, and I often cannot get a positive answer from the platform.
	CC10	Products such as mobile phones have so many features that a comparison of different brands is barely possible.
Low interactivity (LI) Lu et al. (2010)	LI1	Through the use of conventional e-commerce purchase platforms: (1) I cannot effectively search for information that is interesting to me.
	LI2	(2) I cannot easily filter information that is useful to me.
	LI3	(3) I cannot speedily connect information that is meaningful to me.
Charisma of streamers (CH) Rivera (1994)	CH1	I feel the streamer has confidence.
	CH2	I feel the streamer is attractive.
	CH3	I feel the streamer is excellent.
	CH4	I feel the streamer is insightful.
	CH5	The streamer gave me a lot of surprises.
Streamers' product knowledge (PK) Suh and Chang (2006)	PK1	I feel the streamer is very knowledgeable about the products they sell.
	PK2	If I had to purchase the product today, I would need to gather very little information to make a wise decision.
	PK3	I feel the streamer is very confident that they can judge the quality of the product they sell.

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Table 8. Continued

Construct and Source	Items	Measure
Flow experience (FE) Animesh et al. (2011)	FE1	The interaction on live-streaming platforms can trigger my imagination.
	FE2	The interaction with the streamers fills me with curiosity.
	FE3	I find it fun to interact on live commerce platforms.
	FE4	When interacting with streamers, I forget about things around me.
	FE5	Interacting on live commerce platforms is a lot of fun.
Low familiarity (LF) Sánchez-Franco and Roldán (2014)	UF1	I am not familiar with live commerce.
	UF2	I am not familiar with the services offered by live commerce.
	UF3	In comparison with conventional e-commerce, I believe I am not familiar with live commerce.
Inertia (IE) Lin and Huang (2014)	IE1	Shopping using e-commerce platforms has become my habit.
	IE2	Shopping on e-commerce platforms seems like a natural thing to me.
	IE3	Shopping using e-commerce platforms has become a spontaneous habit.
	IE4	Using an e-commerce platform for shopping is obviously my main choice.
Dissatisfaction with conventional e-commerce (DS) Lin and Huang (2014)	LS1	Overall, using conventional e-commerce makes me feel unsatisfied.
	LS2	Overall, using conventional e-commerce makes me feel unpleased.
	LS3	Overall, using conventional e-commerce makes me feel not delighted.
Attractiveness of live commerce (ATT) Chuah et al. (2017)	ATT1	If you need to switch to using live commerce, live commerce has some attractive content and functions to choose from.
	ATT2	Compared with conventional e-commerce, live commerce would probably be the type I would be more satisfied with.
	ATT3	Compared with conventional e-commerce, live commerce would benefit me more.
Switching costs (SC) Bansal et al. (2005)	SC1	On the whole, I would spend a lot and lose a lot if I switched from e-commerce to live commerce.
	SC2	Generally speaking, the costs in time, money, effort, and aggravation to switch from e-commerce would be high.
	SC3	Considering everything, I think the costs to stop using e-commerce and start using live commerce would be high.
Intention to switch to live commerce (SI) Lin and Huang (2014)	SI1	I intend to continue using live commerce for shopping rather than discontinue its use.
	SI2	My intentions are to continue using live commerce rather than use conventional e-commerce.
	SI3	If I could, I would like to discontinue my use of conventional e-commerce for shopping.
	SI4	If I could, I would like to switch from conventional e-commerce to live commerce.

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