

# Study on the Impact of Online and Offline Cross Experience on Consumers' Shopping Channel Choice

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**Abstract:** With the booming development of the Internet and mobile devices, there has been a huge shift in consumer attitudes and consumption patterns. Consumers nowadays perfectly combine rational consumption and emotional life, and are prudent and cautious in their consumption, consciously weighing their consumption choices. In the era of mobile Internet, online and offline channels are cross-fertilised, and consumers tend to search and compare online and offline to make decisions on purchasing channels. This paper empirically analyses the data using questionnaire survey method and structural equation modeling, and the analysis results show that: online and offline cross-experience has a significant positive effect on shopping channel choice intention; online and offline cross-experience has a significant positive effect on structural assurance; structural assurance positively affects shopping channel choice intention; structural assurance mediates between online and offline cross-experience and consumers' shopping channel choice intention; online and offline cross-experience has a positive effect on consumer empowerment; consumer empowerment positively affects consumers' willingness to choose shopping channels; consumer empowerment mediates the relationship between online and offline cross-experience and consumers' willingness to choose shopping channels; channel consistency positively moderates the relationship between structural assurance, consumer empowerment and consumers' willingness to choose shopping channels.

**Keywords:** Online and offline Cross Experience; Structural Assurance; Consumer Empowerment; Channel Consistency; Willingness to Choose Channels.

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## 1. Introduction

In the era of mobile Internet, online and offline channels are cross-fertilized, and consumers tend to search, compare, and buy online and offline, so the study of online and offline cross-experience is of great significance to consumers' channel choice. A large number of existing studies have divided customer experience into different dimensions for analysis, and few scholars have divided online and offline cross-experience. In addition, in the era of high-speed information dissemination, consumers obtain product information from different channels, which generates structural assurance and consumer empowerment. Throughout the literature on structural assurance and consumer empowerment, it is not difficult to find that there are fewer studies on structural assurance and consumer empowerment as the mediating variables of experience and channel choice. Meanwhile, from the existing research results, channel consistency also affects consumers' channel choice in shopping, but less literature studies this moderating variable. Therefore, this study will sort out previous scholars' research as a basis to construct a theoretical research model, based on the stimulus-organism-response theory and the theory of planned behavior, combining theory and empirical evidence, measuring online and offline cross-experience through sensory cross-experience, action cross-experience and social cross-experience, exploring the influence of consumers' cross-experience on their channel choice intention during shopping, and at the same time, exploring consumers' mediating role of structural assurance and consumer empowerment, and the moderating role of channel consistency.

## 2. Literature Review and Research Hypotheses

Chen et al. (2019) have empirically analyzed the transferability of consumers' experience and behavior between physical and virtual channels and validated their model. Yang et al. (2020) have constructed a research model integrating perceived value theory and technology acceptance model based on the analysis of O2O business characteristics. They propose that cross-channel integration of experience and information has a significant impact on consumers' use of O2O commerce. In another study, Qiu and Wang (2012) suggest that retailers should pay equal attention to online and offline channels to achieve coordinated development. Wang (2021) pointed out that with the rapid development of internet technology and the increase in mobile internet users, it is possible for customers to shop across multiple channels. Retail enterprises should combine online services with offline experiences to build experiential marketing models.

In summary, the provision of online and offline channels has an impact on consumers' shopping behaviors. Currently, online channels offer convenience, speed, low prices, and high cost-effectiveness, while offline channels provide personalized services and experiences within stores. This study defines cross-channel experience as consumers' integration of online and offline channels during the purchase of products or services. Consumers engage in cross-channel searches and comparisons to create a more comprehensive and personalized consumer experience.

The dimension division of online and offline crossover experience is as follows: this study follows the dimension division of customer experience by scholars. Schmitt (1999) divided experience into five dimensions: sensation, thinking, relevance, emotion, and action; Pine and Gilmore (1998)

divided customer experience into two dimensions: customer participation and customer relevance to experience; Barbu et al. (2021) divided customer experience into five dimensions: cognitive experience, emotional experience, social experience, physical experience, and sensory experience; Li Yanxing (2015) divided customer experience on shopping websites into two dimensions: cognitive experience and emotional experience based on immersion theory. Wang Fang (2021) combined customer experience theory to divide customer experience into three dimensions: sensory experience, action experience, and social experience. Based on the views of Schmitt (1999), Wang Fang (2021), and others, this article divided online and offline crossover experience of customers into three dimensions: sensory crossover experience, action crossover experience, and social crossover experience.

Chen et al. (2021) have verified the partial mediating role of perceived value and risk in the relationship between online and offline interactive experiences and consumers' purchase intentions by constructing structural equation models. Currently, few scholars have used structural assurance and consumer empowerment as mediating variables to explore the impact mechanism of online and offline crossover experiences on consumers' willingness to choose shopping channels. For consumers, channel consistency is very important, as it supports consumers in conducting value exchange between channels and affects consumers' information processing when evaluating channels. However, few studies have explored the moderating effect of channel consistency on structural assurance, consumer empowerment, and the willingness to choose shopping channels.

(1) Online and offline cross-experience and consumers' willingness to choose shopping channels

Before shopping, consumers search for products online and offline, compare product information, and interact with retailers. This dual-channel behavior generates online and offline crossover experience. Menon (2002) pointed out that to some extent, the experience-rich environment provided greater stimulation. Consumers who lack stimulation or desire high-level stimulation would prefer traditional retail environments. In contrast, consumers who were already overstimulated or seek low-level stimulation would prefer a calmer online shopping environment. Schlosser (2003) proposed that the experience clues obtained by consumers after experiencing can form consideration sets for themselves, and then made decisions on shopping channel choices. Balasubramanian (2005) suggested that consumers' pursuit of experience would affect their willingness to choose channels, and the rich, multi-sensory information display in traditional retail channels would promote consumers to collect and process information. Melero (2016) pointed out that the omni-channel strategy integrates a series of channel combinations, providing multiple touchpoints for customers, which was conducive to strengthening customer experience, thereby improving channel performance. Enterprises can reshape customer experience by integrating various touchpoints across channels. In existing literature, qualitative analysis shows that customer experience, regardless of its type, has an impact on consumers' willingness to choose channels. Based on the above analysis, the following hypothesis is proposed:

H1: The cross-experience of online and offline has a positive impact on the willingness to choose shopping channels.

(2) Online and offline crossover experience and structural

assurance

Structural assurance refers to the extent to which customers perceive the existence of systems and mechanisms that promote transaction success, which can establish customer trust and reduce perceived risk. McCole et al. (2019) proposed that structural assurance referred to various structures or elements that exist in the online environment, which can eliminate risks in online experiences, because the transaction relationship between suppliers and customers does not exist in vacuum. In the context of purchasing or decision-making scenarios, institutional backgrounds often determine the satisfaction and trust of previous experiences. Sanchez-Loor et al. (2022) have verified that lower structural assurance strengthens the negative impact of negative personal experiences on repurchase behavior. Xie Qinghong et al. (2015) have explored the changes in consumers' overall trust levels in retail brands after experiencing online, and constructed a model that includes the impact mechanism of factors such as offline trust, structural assurance, flow experience, and perceived consistency on the integration of online and offline trust.

When purchasing online, there are certain quality risks, such as receiving substandard or fake products, due to the inability to directly experience the physical product, while offline purchasing allows consumers to directly experience the product and avoid these problems. Therefore, in the online and offline cross-experience, consumers need to pay attention to comparing the product quality and after-sales service of different channels, strengthening the structural guarantee related to the product based on experience, and choosing a reliable shopping method to ensure product quality. Based on the above analysis, the following hypotheses are proposed:

H2: Online and offline cross-experience has a positive impact on structural assurance.

(3) Online and Offline Cross-Experience and Consumer Empowerment

Consumer empowerment refers to the extent to which consumers perceive to be empowered, enriched, and strengthened by consumer power or empowerment through information provision or institutional arrangements. Zhang et al. (2018) proposed that retailers provide consumers with an opportunity to learn about products and services, and then the customers choose how they want to purchase them, and that these changes are viewed as an increase in the customer's level of control and choice of products purchased, with a correspondingly promotes customer empowerment. Mishra et al. (2019) proposed that retailers improve and optimize the shopping experience to allow customers to control their product choices during the shopping process, which creates a virtuous cycle of reciprocity, which then promotes customer empowerment. Chen et al. (2022) verified that quality of experience is positively correlated with consumer empowerment, and that the quality of experience describes what happens when the consumers engage and interact in physical environments, customer peers, and relevant service providers, how they emotionally evaluate relevant experiences. Zhou Mengke (2021) argued that there are three main avenues for consumer self-empowerment: consumer autonomy, diversification of purchasing channels, and experiential consumption.

Synthesizing the above scholars' related research, this paper argues that online and offline cross-experience will have a positive impact on consumer empowerment. Online and offline cross-experience gives consumers more choices

and the freedom to choose the purchase method that suits them, thus improving the autonomy of purchase decisions; online and offline cross-experience allows consumers to obtain more comprehensive and accurate product information, thus improving their right to know and their ability to choose; through online and offline cross-experience, consumers can evaluate the products at any time and any place and share their usage tips and purchase experiences with other consumers, thus improving their right to evaluation. share their own usage tips and purchase experience, thus improving their evaluation right. Based on the above analysis, the following hypotheses are proposed:

H3: Online and offline cross-experience has a positive impact on consumer empowerment.

(4)Structural Assurance Mediates the Relationship Between online and offline Cross-Experience and Consumers' Willingness to Choose Shopping Channels

McKnight et al. (2002) pointed out that in the online channel shopping environment, structural assurance includes laws (e.g., consumer protection laws) and technology (e.g., security authentication technology, U-shield of e-banks of the same kind), etc., to ensure the security of online channel transactions, so that it seems that the structural assurance not only enhances the trust between the participants, but also reduces the risk perceived by consumers. Zhao Ling et al. (2009) studied virtual community trust in C2C e-commerce, and the empirical findings showed that trust among community members is positively influenced by perceived similarity, trust propensity, structural assurance and familiarity, etc. Sparks et al. (2011) pointed out that trust helps merchants to build up a good image in the minds of consumers and suppresses customers' perceived risk concerns, thereby positively motivating them to take advantage of their trust. concerns, thus positively motivating customer shopping intention generation.Scholars such as Fang (2014) [23] pointed out that satisfaction and trust were often found to be key determinants of intention.

Summarizing the relevant studies of the above scholars, this paper argues that structural assurance positively affects consumers' willingness to choose a channel. On the one hand, if a channel provides better structural guarantees, such as product return guarantee, payment security guarantee, delivery guarantee, etc., consumers will feel more confident and secure in choosing that channel, thus enhancing their willingness to use it. On the other hand, a channel that lacks structural guarantees may make consumers feel uneasy, which may reduce their willingness to use the channel. For example, if an e-commerce platform does not have a well-developed refund mechanism, consumers may worry that their purchases will not be received as expected or that there are problems with the quality, and thus choose other e-commerce platforms with better structural guarantees. Based on the above analysis, the following hypothesis is proposed:

H4: Structural assurance positively influences consumers' willingness to choose shopping channels.

To summarize, online and offline cross-experience not only has a direct effect on consumers' willingness to choose shopping channels, but also has an indirect effect through structural assurance, so the following research hypotheses are proposed:

H5: Structural assurance mediates the relationship between online and offline cross-experience and consumers' willingness to choose a shopping channel.

(5)The mediating role of consumer empowerment between

online and offline cross-experience and consumers' willingness to choose shopping channels

Zhang et al. (2018) verified that consumer empowerment influences consumers' perceived trust and satisfaction with their shopping experience based on the Stimulus-Organism-Response (S-O-R) framework, which positively affects consumer patronage.Auh et al. (2019) proposed that consumer empowerment contributes to a positive consumer experience, and that a positive experience with positive emotions affects customer satisfaction, which in turn has an impact on consumer channel choice.Scholars such as Flavián (2020) proposed that shifting control from the retailer to the consumer during the purchase decision process makes the consumer more confident to shop smart, and that this feeling of smart shopping on the part of the consumer affects their satisfaction, which triggers long term connection with the retailer.Goraya et al. (2022) pointed out that consumer empowerment mediates the relationship between channel integration and consumers' willingness to patronize online or offline stores.

Synthesizing the relevant studies of the above scholars, this paper argues that consumer empowerment positively affects channel choice intention. First, consumer empowerment makes it easier for consumers to access and compare channel information. In the traditional consumption mode, consumers need to go to physical stores or through media advertisements to learn about product information, but with the development of network technology, consumers can obtain product information and make comparisons and evaluations at any time and any place through Internet search, social media, etc., so that they can make channel choice decisions more conveniently. Second, consumer empowerment makes consumers pay more attention to the quality and service level of channels. As consumers have more choices and control, they will pay more attention to the quality and service level of channels, such as logistics and distribution time, after-sales service, return and exchange policy, etc., so as to make more rational and accurate judgment on channel selection. Finally, consumer empowerment has changed the competitive landscape of channels. Traditionally, large retailers or manufacturers tend to have more say, but with the strengthening of consumer empowerment, consumers are demanding more and more on channel quality and service level, which makes small merchants and emerging channels also have the opportunity to emerge in the market, thus providing consumers with more diversified choices. Based on the above analysis, the following hypothesis is proposed:

H6: Consumer empowerment positively affects consumers' willingness to choose shopping channels.

To summarize, online and offline cross-experience not only has a direct effect on consumers' channel choice intention, but may also have an indirect effect through consumer empowerment, so the following research hypotheses are proposed:

H7: Consumer empowerment mediates the relationship between online and offline cross-experience and consumers' willingness to choose shopping channels.

(6) The moderating role of channel consistency

Channel consistency refers to consumers' perceived consistency in terms of brand image, product information, and service quality presented by a company under multiple sales channels.Lee et al. (2019) proposed that consumer-perceived channel consistency is important because it supports consumers' exchange of value between channels and

influences the processing of information when consumers evaluate channels. Swoboda et al. (2021) proposed that offline-to-online integration services provide knowledge and convenience about offline and online channels; online-to-offline integration services show no link to offline channels, i.e., purchase intention depends on the perceived quality of the online product. Higher levels of consumers' online shopping experience reduced mediated paths, while higher levels of channel consistency moderated them both positively and negatively. Gao Wei et al. (2019) proposed that both omnichannel consistency and seamlessness positively moderated the relationship between omnichannel shopping experience and brand loyalty.

Synthesizing the relevant studies of the above scholars, this paper argues that channel consistency affects the relationship between structural assurance, consumer empowerment, and channel choice intention. In an omni-channel environment, when a high degree of consistency is maintained among channels, each channel can provide consumers with the same products, services, information, etc. In this omni-channel environment that maintains a high degree of consistency,

consumers perceive the same structural assurances and consumer empowerment in any channel, so consumers are more likely to develop channel choice intentions. On the contrary, if the consistency between channels is low, the consumers' shopping experience in different channels will be different, the synergistic effect between channels will be weakened, and the consumers' perceived structural assurance and consumer empowerment will be different, which will lead to consumers' less willingness to make a choice of shopping channels. Based on the above analysis, the following hypotheses are proposed:

H8: Channel consistency positively moderates the relationship between structural assurance and consumers' willingness to shop channel choice.

H9: Channel consistency positively regulates the relationship between consumer empowerment and consumers' willingness to choose shopping channels.

Therefore, based on the research hypotheses proposed above, the following research hypothesis model can be established, as shown in Figure 1.

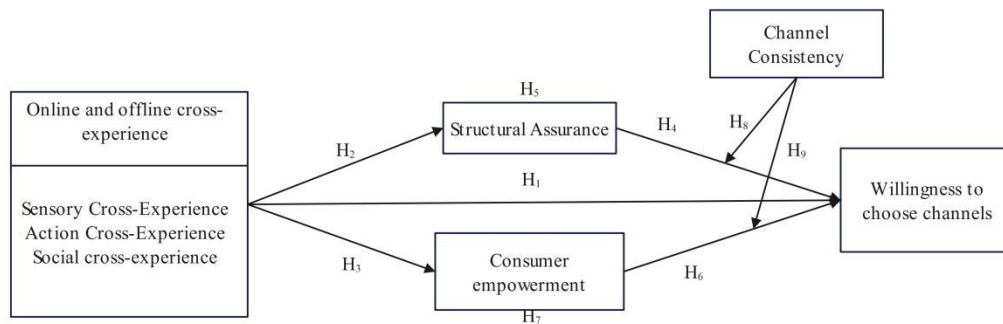


Figure 1. Conceptual model diagram

### 3. Method

The main variables of the questionnaire survey are sensory cross-experience, action cross-experience, social cross-experience, structural assurance, consumer empowerment, channel consistency, and channel choice willingness, and a total of 21 question items are compiled based on the literature (Appendix 1), and each item is scored on a 5-point Likert scale. According to the characteristics of the questionnaire and the research background, this paper targets consumers who have had online shopping experience in the last few years, and for this type of survey respondents, the questionnaire is distributed in WeChat, QQ, microblogging and other online

channels, and the data is collected in the form of random interviews in offline shopping malls, which can make up for the insufficiency of the limited access to information in a single channel by combining the online and offline channels, and at the same time ensure that questionnaire data The combination of online and offline channels can make up for the limited information obtained from a single channel, and at the same time ensure that the questionnaire data is broad and more targeted. The data collection lasted for two months, with 475 questionnaires collected and 425 valid questionnaires obtained after screening. Some statistical information of the sample is shown in Table 1.

Table 1. Descriptive statistics of the sample

| Gender         |            | Age            |            | Educational background                |            | Average monthly disposable income |            |
|----------------|------------|----------------|------------|---------------------------------------|------------|-----------------------------------|------------|
| categorization | percentage | categorization | percentage | categorization                        | percentage | categorization                    | percentage |
| male           | 43.1%      | Under 18       | 0.2%       | High school, junior college and below | 5.9%       | Under 3000                        | 19.1%      |
|                |            | 18—25          | 35.5%      | post-secondary                        | 8.2%       | 3001—4500                         | 10.4%      |
|                |            | 26—31          | 27.3%      | bachelor's degree                     | 61.2%      | 4501—6000                         | 19.1%      |
|                |            | 32—37          | 23.3%      |                                       |            |                                   |            |
|                |            | 38—43          | 3.8%       |                                       |            |                                   |            |
| female         | 56.9%      | 44—49          | 4%         | Master's degree                       | 24.7%      | Over 6000                         | 51.5%      |
|                |            | 50—55          | 1.9%       |                                       |            |                                   |            |
|                |            | Over 55        | 4%         |                                       |            |                                   |            |

## 4. Results

### (1) Reliability and validity analysis

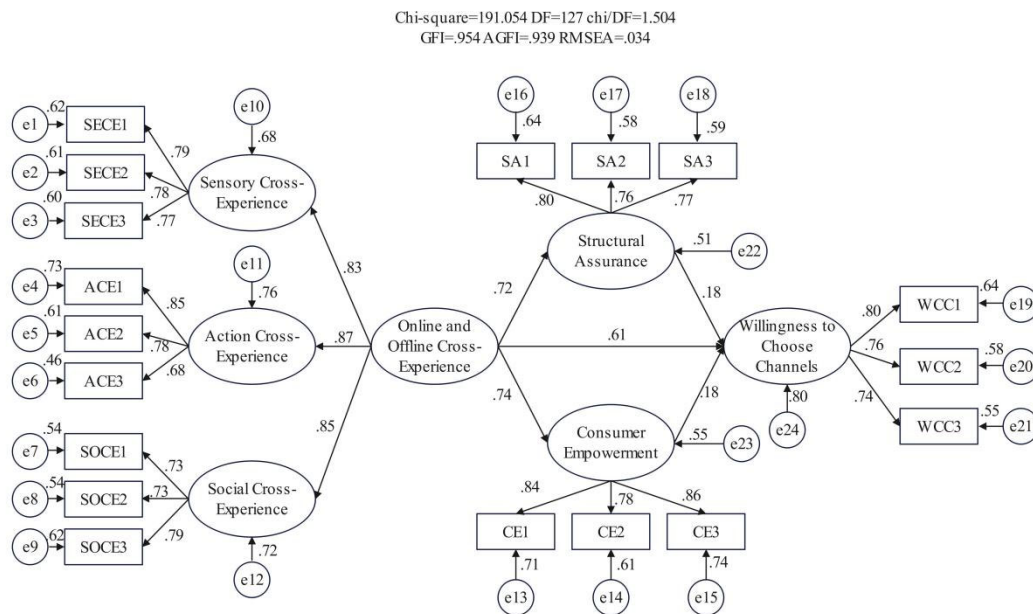
In this study, SPSS 22.0 software was used to measure the reliability of online and offline cross-experience (sensory cross-experience, action cross-experience, and social cross-experience), structural assurance, consumer empowerment, channel consistency, and channel choice willingness, and Cronbach's  $\alpha$  coefficients were used as benchmarks, with Cronbach's  $\alpha$  coefficients of the specific measurement questions items of the research variables being 0.824, 0.812, 0.797, 0.819, 0.866, 0.759, and 0.808, all of which are greater than the standard value of 0.7, and it can be considered that the reliability of the scale designed in this study is good.

The validity of the measurement scale was tested by validated factor analysis using Amos 24.0 software, and the  $\chi^2/df$  of this study was 1.600 ( $1 < 1.600 < 3$ ), indicating an appropriate fit.  $GFI = 0.946 > 0.8$ ,  $AGFI = 0.926 > 0.8$ ,  $NFI =$

$0.942 > 0.9$ ,  $TLI = 0.971 > 0.9$ ,  $CFI = 0.977 > 0.9$ ,  $RMR = 0.028 < 0.05$ , and  $RMSEA = 0.038 < 0.08$ . Taken together, the coefficients of each of the measures in this paper meet the criteria of the study, which indicates that the model has a good overall fit. In addition, the AVE of each variable is higher than 0.5, the CR is higher than 0.7, and the square root of the AVE of each variable is greater than the absolute value of the correlation coefficient between the variable and other variables, indicating that each variable has a good differentiation validity, aggregation validity and goodness of fit.

### (2) Structural equation modeling analysis

Based on the theoretical model of this paper, the second-order factor model of the influence of online and offline cross-experience on consumers' willingness to choose shopping channels is constructed through the use of Amos 24.0, which contains four latent variables: online and offline cross-experience, structural assurance, consumer empowerment, and willingness to choose channels, as shown in Figure 2.



**Figure 2.** Structural equation modeling diagram

The model fitting indexes all meet the requirements,  $CMIN/DF=1.504 < 3$ ,  $GFI=0.954 > 0.9$ ,  $AGFI=0.939 > 0.9$ ,  $NFI=0.954 > 0.9$ ,  $IFI=0.984 > 0.9$ ,  $CFI=0.984 > 0.9$ ,

$RMSEA=0.034 < 0.08$ , and thus the path coefficients of the model can be further analyzed, as shown in Table 3.

**Table 3.** Structural equation modeling results

|  | Unstandardized coefficient | Standardized coefficient | S.E.  | T      | P     |
|--|----------------------------|--------------------------|-------|--------|-------|
| Online and offline cross-experience → Structural assurance           | 0.877                      | 0.716                    | 0.081 | 10.809 | ***   |
| Online and offline cross-experience → Consumer empowerment           | 0.954                      | 0.741                    | 0.083 | 11.560 | ***   |
| Online and offline cross-experience → Sensory cross-experience       | 1                          | 0.826                    |       |        |       |
| Online and offline cross-experience → Action cross-experience        | 0.881                      | 0.869                    | 0.079 | 11.085 | ***   |
| Online and offline cross-experience → Social cross-experience        | 1.014                      | 0.847                    | 0.085 | 11.902 | ***   |
| Structural assurance → Willingness to choose channels                | 0.168                      | 0.179                    | 0.062 | 2.705  | 0.007 |
| Consumer empowerment → Willingness to choose channels                | 0.163                      | 0.183                    | 0.060 | 2.705  | 0.007 |
| Online and offline cross-experience → Willingness to choose channels | 0.703                      | 0.613                    | 0.115 | 6.105  | ***   |

As Table 3 shows, Online and offline cross-experience has a positive influence on consumers' willingness to choose channels, so H1 is accepted ( $\beta=0.613$ ;  $p<0.001$ ). Online and offline cross-experience has a positive influence on consumers' structural assurance, so H2 is accepted ( $\beta=0.716$ ;  $p<0.001$ ). The link between structural assurance and the consumers' willingness to choose channels is also positive, so H3 is also accepted ( $\beta=0.179$ ;  $p<0.01$ ). Online and offline cross-experience is positively linked with the consumer empowerment, therefore H5 is validated ( $\beta=0.741$ ;  $p<0.001$ ). Consumer empowerment is positively associated with consumers' willingness to choose channels, so H6 is validated ( $\beta=0.183$ ;  $p<0.01$ ).

### (3) Mediation effects test

This study examines the mediating role of structural assurance and consumer empowerment through Bootstrap method, the mediating role played by structural assurance between online and offline cross-experience and consumers' willingness to choose shopping channels is shown in Table 4, and the confidence intervals of both methods do not contain 0, which indicates that structural assurance partially mediates the mediating role between online and offline cross experience and consumers' willingness to choose shopping channels, the The size of the mediating effect is 0.144, accounting for 16.49%, indicating that H4 is supported.

**Table 4.** Testing of the mediating role of structural assurance in the relationship between online and offline cross-experience and consumers' willingness to choose shopping channels

| Variable Relationships  |                  | Point Estimates | Product of two coefficients |        | Bootstrap(95% confidence interval) |                 |                   |              |
|---|------------------|-----------------|-----------------------------|--------|------------------------------------|-----------------|-------------------|--------------|
|   |                  |                 |                             |        | Bias-Corrected percentile method   |                 | Percentile method |              |
|   |                  |                 |                             |        | Standard Error                     | Threshold Value | Lower Bounds      | Upper Bounds |
| Online and offline cross-experience- Willingness to choose channels | Total Effects    | 0.873           | 0.035                       | 24.943 | 0.796                              | 0.934           | 0.801             | 0.938        |
|   | Direct Effects   | 0.729           | 0.083                       | 8.783  | 0.561                              | 0.890           | 0.562             | 0.861        |
|   | Indirect Effects | 0.144           | 0.063                       | 2.286  | 0.023                              | 0.276           | 0.020             | 0.274        |

The mediating role played by consumer empowerment between online and offline cross-experience and consumers' willingness to choose shopping channels is shown in Table 5, and the confidence intervals of both methods do not contain 0, which indicates that consumer empowerment plays a

partially mediating role between online and offline cross-experience and consumers' willingness to choose shopping channels, and the magnitude of the mediating effect is 0.152, accounting for 17.43% of the total, indicating that H7 is supported.

**Table 5.** Testing of the mediating role between consumer empowerment online and offline cross-experience and consumers' willingness to choose shopping channels

| Variable Relationships  |                  | Point Estimates | Product of two coefficients |        | Bootstrap(95% confidence interval) |                 |                   |              |
|---|------------------|-----------------|-----------------------------|--------|------------------------------------|-----------------|-------------------|--------------|
|   |                  |                 |                             |        | Bias-Corrected percentile method   |                 | Percentile method |              |
|   |                  |                 |                             |        | Standard Error                     | Threshold Value | Lower Bounds      | Upper Bounds |
| Online and offline cross-experience- Willingness to choose channels | Total Effects    | 0.872           | 0.035                       | 24.914 | 0.796                              | 0.933           | 0.802             | 0.938        |
|   | Direct Effects   | 0.720           | 0.076                       | 9.474  | 0.565                              | 0.863           | 0.577             | 0.877        |
|   | Indirect Effects | 0.152           | 0.059                       | 2.576  | 0.038                              | 0.273           | 0.029             | 0.265        |

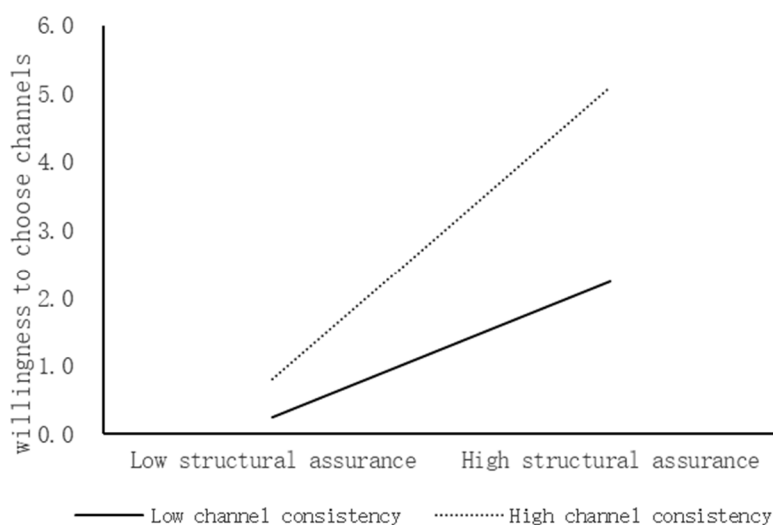
### (4) Moderating effects test

In this study, hierarchical regression analysis was conducted by SPSS 22.0 to test the relationship between channel consistency, structural assurance, consumer empowerment, and consumers' willingness to choose channels. According to the regression results of Model 4 in Table 6, the maximum variance inflation factor VIF value of the variables is less than the qualifying value of 10, which can indicate that there is no multicollinearity in Model 4; the D-W (Durbin-Watson test) value is 1.757, which is close to 2, which can indicate that there is no autocorrelation problem existing in Model 4. As can be seen from the results in Table 6, the standardized regression coefficient of the interaction term between structural assurance and channel consistency is 0.258 ( $P<0.001$ ), which means that structural assurance\*channel consistency and consumers' willingness to choose shopping channels are significantly correlated at the level of 0.001. The R2 has increased from 0.434 in Model 3

to 0.496 in Model 4, which indicates that the explanatory role of Model 4 is increasing. Therefore, channel consistency has a positive moderating role in the relationship between structural assurance and consumers' willingness to choose shopping channels, i.e., the higher the channel consistency, the stronger the positive influence of structural assurance on consumers' willingness to choose shopping channels, and hypothesis H8 passes the test. In order to be able to more conveniently and intuitively show the moderating effect of channel consistency in the relationship between structural assurance and consumers' willingness to choose shopping channels, from the regression equation of model 4, the maximum and minimum values are taken for the independent variable--structural assurance, and the moderating variable--the Channel consistency is divided into two dimensions, high channel consistency (mean plus one standard deviation) and low channel consistency (mean minus one standard deviation), and the moderating effect is plotted in Figure 3.

**Table 6.** Testing of the moderating effect of channel consistency on the relationship between structural assurance and consumers' willingness to choose shopping channels

| Variant                 | Willingness to choose channels         |  |  |  |           |
|-------------------------|--|--|--|--|-----------|
|                         | Model 1<br>Standardized<br>coefficient | Model 2<br>Standardized<br>coefficient | Model 3<br>Standardized<br>coefficient | Model 4<br>Standardized<br>coefficient |           |
| Control<br>Variables    | Gender                                 | 0.060                                  | 0.067                                  | 0.064                                  | 0.055     |
|                         | Age                                    | 0.219                                  | 0.145                                  | 0.14                                   | 0.127     |
|                         | Educational<br>background              | -0.015                                 | -0.015                                 | -0.012                                 | 0         |
|                         | Careers                                | -0.003                                 | -0.016                                 | -0.011                                 | -0.021    |
|                         | Average monthly<br>disposable income   | 0.226                                  | 0.137                                  | 0.117                                  | 0.135     |
|                         | Shopping frequency                     | 0.092                                  | 0.066                                  | 0.065                                  | 0.057     |
|                         | History of Online<br>Shopping          | 0.127                                  | 0.074                                  | 0.067                                  | 0.039     |
| Independent<br>Variable | Structural Assurance                   |  | 0.492***                               | 0.478***                               | 0.524***  |
| Moderator<br>Variable   | Channel<br>Consistency                 |  |  | 0.092***                               | 0.111***  |
| Interaction<br>Term     | SA*CC                                  |  |  |  | 0.258***  |
| Statistic               | R2                                     | 0.209                                  | 0.427                                  | 0.434                                  | 0.496     |
|                         | ΔR2                                    |  | 0.218                                  | 0.007                                  | 0.062     |
|                         | F                                      | 15.740***                              | 38.739***                              | 35.354***                              | 40.813*** |
|                         | VIF Max.                               | 2.080                                  | 2.116                                  | 2.175                                  | 2.181     |
|                         | D-W                                    |  |  | 1.757                                  |           |



**Figure 3.** Plot of the moderating effect of channel consistency on the relationship between structural assurance and consumers' willingness to choose shopping channels

According to the regression results of Model 4 in Table 7, the maximum variance inflation factor VIF value of the variables is less than the qualifying value of 10, which can indicate that there is no multicollinearity in Model 4; the D-W (Durbin-Watson test) value is 1.692, which is close to 2, which can indicate that there is no autocorrelation problem existing in Model 4. As can be seen from the results in Table 7, the standardized regression coefficient of the interaction term between consumer empowerment and channel consistency is 0.206 ( $P < 0.001$ ), which means that consumer empowerment \* channel consistency is significantly correlated with consumers' willingness to choose shopping channels at the level of 0.001. The R2 has increased from 0.486 in Model 3 to 0.527 in Model 4, which indicates that the explanatory role of Model 4 is increasing. Therefore,

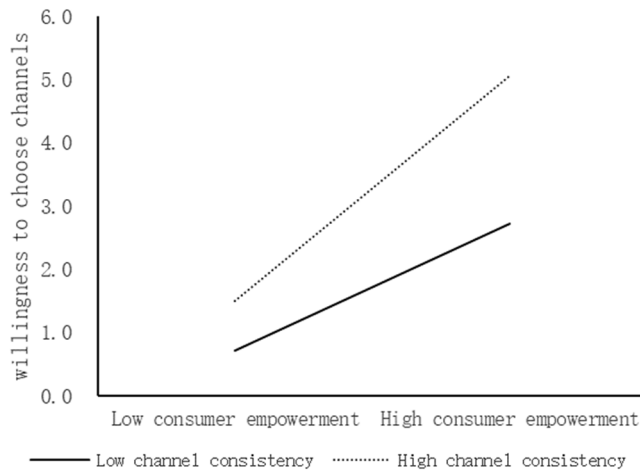
channel consistency has a positive moderating role in the relationship between consumer empowerment and consumers' willingness to choose shopping channels, i.e., the higher the channel consistency, the stronger the positive influence of consumer empowerment on consumers' willingness to choose shopping channels, and Hypothesis H9 passes the test. In order to be able to more conveniently and intuitively show the moderating effect of channel consistency in the relationship between consumer empowerment and consumers' willingness to choose shopping channels, from the regression equation of model 4, the maximum and minimum values are taken for the independent variable - consumer empowerment, and the moderating variable - channel consistency is divided into two dimensions. -Channel consistency is divided into two dimensions, high channel

consistency (mean plus one standard deviation) and low channel consistency (mean minus one standard deviation),

and the moderating effect is plotted in Figure 4.

**Table 7.** Test of the moderating effect of channel consistency on the relationship between consumer empowerment and consumers' willingness to choose shopping channels

| Variant                 |                                      | Willingness to choose channels         |  |  |  |
|-------------------------|--------------------------------------|--|--|--|--|
|                         |                                      | Model 1<br>Standardized<br>coefficient | Model 2<br>Standardized<br>coefficient | Model 3<br>Standardized<br>coefficient | Model 4<br>Standardized<br>coefficient |
| Control<br>Variables    | Gender                               | 0.060                                  | 0.055                                  | 0.052                                  | 0.042                                  |
|                         | Age                                  | 0.219                                  | 0.137                                  | 0.130                                  | 0.119                                  |
|                         | Educational<br>background            | -0.015                                 | 0.054                                  | 0.055                                  | 0.064                                  |
|                         | Careers                              | -0.003                                 | 0.029                                  | 0.034                                  | 0.028                                  |
|                         | Average monthly<br>disposable income | 0.226                                  | 0.181                                  | 0.157                                  | 0.129                                  |
|                         | Shopping frequency                   | 0.092                                  | 0.069                                  | 0.069                                  | 0.064                                  |
|                         | History of Online<br>Shopping        | 0.127                                  | 0.087                                  | 0.079                                  | 0.064                                  |
| Independent<br>Variable | Consumer<br>Empowerment              |  | 0.544***                               | 0.532***                               | 0.556***                               |
| Moderator<br>Variable   | Channel<br>Consistency               |  |  | 0.100***                               | 0.122***                               |
| Interaction<br>Term     | CE*CC                                |  |  |  | 0.206***                               |
| Statistic               | R2                                   | 0.209                                  | 0.478                                  | 0.486                                  | 0.527                                  |
|                         | ΔR2                                  |  | 0.269                                  | 0.008                                  | 0.041                                  |
|                         | F                                    | 15.740***                              | 47.532***                              | 43.609***                              | 46.043***                              |
|                         | VIF Max.                             | 2.080                                  | 2.087                                  | 2.156                                  | 2.176                                  |
|                         | D-W                                  |  |  | 1.692                                  |  |



**Figure 4.** Plot of the moderating effect of channel consistency on the relationship between consumer empowerment and consumers' willingness to choose shopping channels

## 5. Findings and Discussion

### (1) Research Conclusion

The research in this paper shows that online and offline cross-experience has a significant positive impact on consumers' willingness to choose shopping channels, and when consumers have a better online and offline cross-experience, the stronger channel choice intention is generated. Specifically, when retailers provide consumers with a good online and offline dual-channel experience, consumers can feel the advantages and disadvantages of different channels more deeply, which makes it easier for consumers to make a choice of shopping channels, i.e., it has a positive impact on

consumers' willingness to choose shopping channels. In addition, the data analysis in this paper found that the online and offline cross-experience is jointly influenced by three dimensions (sensory cross-experience, action cross-experience, and social cross-experience). Therefore, when improving consumers' online and offline cross-experience, retailers can start from the three dimensions proposed in this paper, and with the help of big data, provide consumers with good service attitude and appropriate product introduction in online and offline channels, do a good job in payment guarantee measures, after-sales service guarantee, delivery guarantee measures, provide consumers with more accurate personalized service, enhance consumers' experience in dual

channels, and further improve consumers' willingness to choose shopping channels. Further enhance consumers' willingness to choose shopping channels.

In addition, this paper examines the mediating effects of structural assurance and consumer empowerment through Bootstrap method, and the results show that structural assurance and consumer empowerment partially mediate the relationship between online and offline cross-experience and consumers' willingness to choose shopping channels. The results suggest that consumers engaging in higher quality online and offline cross-experiences increase structural assurance and consumer empowerment, and that higher structural assurance or consumer empowerment strengthens the relationship between consumers and retailers. The results are also suggesting to retailers that during the consumption process, consumers are no longer only concerned about the goods themselves, but also pay a lot of attention to the product

and service guarantees provided by the company, as well as their own control and decision-making power. Therefore, companies implementing dual-channel sales need to continue to improve the level of consumers' online and offline cross-experience, dig deeper into consumer demand, so that consumers perceive that their shopping environment is safe and reliable, so that the structural assurance of consumers continues to improve, and at the same time, it is also necessary to improve the quality of dual-channel channels and service levels, so that consumers are empowered to continue to improve, so that they can utilize the structural assurance and consumer empowerment to guide consumers to make channel choices. At the same time, it is also necessary to improve the quality and service level of dual-channels, so that consumer empowerment can be continuously improved, thus utilizing structural assurance and consumer empowerment to guide consumers in channel selection.

Appendix 1  
Measurement items and their sources

| Dimension (math.)                   | Meters  | Sources                                    |
|-------------------------------------|---|--|
| Sensory cross-experience(SECE)      | I think the store or platform provides great product information  | Chen et al.(2017)、<br>Pullman et al.(2003) |
|                                     | I find the store or platform's service attitude appealing   |  |
|                                     | I think the overall environment of the store or platform feels interesting  |  |
| Action cross-experience(ACE)        | I think the store or platform will help me deal with the problem quickly  | Pullman et al.(2003)                       |
|                                     | I think the store or platform can provide interactive services to solve my problems   |  |
|                                     | I think the store or platform delivers the product at the specified time  |  |
| Social cross-experience (SOCE)      | I'll be asking for other people's opinions about cross-experiencing the item online and offline   | Barbu et al.(2021)                         |
|                                     | I would recommend others to cross experience the item online and offline  |  |
|                                     | The crossover experience of the merchandise enhanced my identification with the brand   |  |
| Structural Assurance(SA)            | I think the service commitment of the store or platform can guarantee the quality of the goods  | Zhang et al.(2020)                         |
|                                     | I believe that the store or platform's payment practices protect payment security   |  |
|                                     | I think the rules of the store or platform protect consumers' rights  |  |
| Consumer Empowerment(CE)            | Talking to a salesperson or visiting a retailer's website can help me compare the price and quality of store merchandise with similar items in other stores | Mishra et al.(2022)                        |
|                                     | Through various social media outlets, retailers provide me with an opportunity to learn about other consumers' experiences/choices                          |  |
|                                     | I believe that the retailer has provided relevant information about the product, the brand and its use  |  |
| Channel Consistency(CC)             | I perceive that the services/functions of the store are the same offline and online   | Swoboda et al.(2021)                       |
|                                     | I found that the online store represents the company's offline store  |  |
|                                     | I found the company offline and online stores to be similar   |  |
| Willingness to choose channels(WCC) | I usually think of this channel when I want to buy a product  | Swoboda et al.(2021)                       |
|                                     | I usually choose this channel to buy products   |  |
|                                     | I have purchased products from this channel and would recommend them to relatives and friends   |  |

Finally, this paper tests the moderating effects through hierarchical regression analysis, and the results show that the interaction terms of structural assurance\*channel consistency and consumer empowerment\*channel consistency both have significant moderating effects on consumers' willingness to choose shopping channels. In an omni-channel environment, when a high degree of consistency is maintained among channels, each channel provides consumers with the same products, services, information, etc. In this omni-channel

environment that maintains a high degree of consistency, consumers perceive the same structural assurance and consumer empowerment in any channel, so consumers are more likely to make channel choice intentions. On the contrary, if the consistency between channels is low, the shopping experience of consumers in different channels will be different, the synergistic effect between channels will be weakened, and the structural assurance and consumer empowerment of consumers will be different, which will lead

to consumers being less likely to make a shopping channel choice. Therefore, when retailers implement omni-channel sales, they need to strengthen the assessment of the consistency between channels, strengthen the construction and management of channel consistency, and enhance the synergistic effect between channels, so as to improve the perceived consistency of consumers, which will in turn lead to the increasing willingness of consumers to make shopping channel choices.

#### (2) Research constraints

This study still has certain limitations. First of all, in terms of sample sampling, although this paper takes into account the consumer groups in different geographical areas and different occupations, the final empirical research sample is still dominated by company employees, and the random sampling of samples is not enough. In terms of sample size, due to the author's own research time and limited research energy, in the formal research stage, this paper only issued 500 questionnaires for sampling, although it meets the minimum sample size required by the data analysis software and statistical analysis, but in the current trend of big data, the sample size of this paper may be difficult to represent all consumer groups. Secondly, this paper adopts online and offline multi-channel distribution of questionnaires to collect sample data, the questionnaire is filled out mainly by relying on consumers to recall their previous shopping experience, and the results of the study may be potentially biased; in addition, this paper adopts the channel choice willingness to measure consumer channel choice, and diversified indexes can be adopted to measure consumer channel choice in the future.

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