

Fresh New Retail Online and Offline Synergistic Marketing Fit - An Investigation of the Mechanism of Influence on Consumers' Willingness to Buy

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Abstract:

Under the background of the big data era, the rise of the new fresh food retail industry, more and more enterprises have adopted the online and offline collaborative marketing business model, this online and offline synergistic new retail model to meet the new generation of consumer groups on personalization, convenience and diversification of the higher requirements. However, the rapid development of online channels, its competitive relationship with offline channels is becoming more prominent, which brings challenges for the retail industry to promote multi-channel collaborative retail services. Therefore, based on the situation of fresh new retail online and offline collaborative marketing fit how to influence the consumer's purchase intention has become the focus of this paper. This paper takes the fresh food new retail industry as the research object, proposes the influence factor model between online and offline collaborative marketing fit and purchase intention, and verifies the influence relationship among the four factors of online and offline collaborative marketing fit, customer trust, perceived risk, and purchase intention through the questionnaire and with the help of structural equation modelling. The final results show that: online-offline collaborative marketing fit has a positive effect on purchase intention; online-offline collaborative marketing fit affects purchase intention through the mediation of perceived risk; online-offline collaborative marketing fit affects purchase intention through the mediation of customer trust; online-offline collaborative marketing fit affects purchase intention through the chain mediation of perceived risk and customer trust. The findings of this paper imply that online-offline collaborative marketing fit is important for the multi-channel development of the new retail industry, which will also provide a reference basis for the new retail industry to co-ordinate the planning of online-offline collaborative marketing.

Keywords:

Fresh Food New Retail, Online-Offline Collaborative Marketing Fit, Purchase Intention, Customer Trust, Perceived Risk

1. Introduction

1.1. Background

In recent years, generation z, which is defined as the post-90s and post-00s born in 1995-2009 by the perspective of time, is becoming the main consumer force. Data shows that as of 2019, the active user scale of China's generation z group reached 275 million [1], which are the aborigines of the Internet, have been exposed to Internet technology since the beginning of cognition, and have been embracing the emerging industry that pushes forward at a high speed, with a natural dependence on the Internet. They have the characteristics of focusing on experience, distinctive personality, high self-esteem, eager to be recognised, and having individuality but also being influenced by the outside world [1]. According to the survey information of Avery Consulting, 59.2% of China's post 80, 90 fresh food e-commerce users buy fresh food online in 2021. The reason is that it is more convenient to buy online, eliminating the need to go to shops to purchase time, and they are willing to try a variety of forms of purchasing goods i.e. online plus offline.

Under the support of the Internet, fresh food e-commerce is booming, according to the survey information of Avery Consulting, the transaction scale of China's fresh food e-commerce in 2015-2023 grew from 49.7 billion yuan to 1,197.1 billion yuan, and the proportion of online retail of fresh food in 2016-2020 also increased from 2.8% to 14.6% [2]. This shows that the development of fresh food e-commerce is fast and has great potential. In addition to the single online sales, more and more fresh food retailers have developed the online and offline marketing model, the integration of multiple marketing channels can strengthen the cumulative effect of the channels and improve the sales level of each channel [3]. After that, many fresh food retailers, such as Boxmart Fresh Life, Baiguoyuan, Yonghui Life, have developed the online and offline synergistic marketing model.

This type of sales method can attract a large number of customers and increase the level of sales due to its convenience. However, due to the greater convenience of Internet shopping, users may be more easily attracted to online sales channels, resulting in a decrease in the number of customers in traditional offline sales channels, which may ultimately lead to a decrease in the total sales revenue. [4] Consistency of messages [5] and marketing strategies [6] largely affects the behaviour of users in channel migration, due to the problems of land grabbing by enterprises, blind investment of resources, over-imitation of marketing models, and high costs. The problems have led to the challenges being faced by fresh food retailers who have developed collaborative offline and online marketing models.

1.2. Research Objectives and Significance

In terms of theoretical significance, this paper aims to combine the development of the Internet and the consumer background, discusses the influence mechanism of online and offline collaborative marketing fit on customers' purchase intention, and examines it through the empirical analysis method of structural equation modeling, to enrich the research on how online and offline collaborative marketing of fresh food new retail affects customers' purchase intention.

In terms of practical significance, on the basis of proposing and testing the model, this paper tries to use the model to analyze the online and offline collaborative marketing mode in reality, to help guide the relevant enterprises to improve the degree

of online and offline collaborative marketing fit, in order to achieve the improvement of customers' trust and perceptual experience and to enhance their purchase intention, and to achieve the transformation and upgrading of fresh food retail enterprises.

1.3. Research Content

This paper defines the background and purpose of the study, combs through the literature related to online and offline collaborative marketing and the influence mechanism of consumers' willingness to buy, based on which, four variables of online and offline collaborative marketing fit, customers' willingness to buy, customers' trust, and perceived risk, and related hypotheses are proposed and a model is established, then questionnaires and surveys are designed, and the reliability and validity tests and descriptive statistical analyses are conducted, and a validated factor analysis structural equation model is applied to explain the influence mechanism of online and offline collaborative marketing fit on customers' willingness to buy. A validated factor analysis structural equation model was used to explain the influence mechanism of online-offline collaborative marketing fit on customers' purchase intention, and conclusions and recommendations were drawn.

1.4. Structure and Methodology

1.4.1. Structure

The research idea of this paper is shown below (Figure 1):

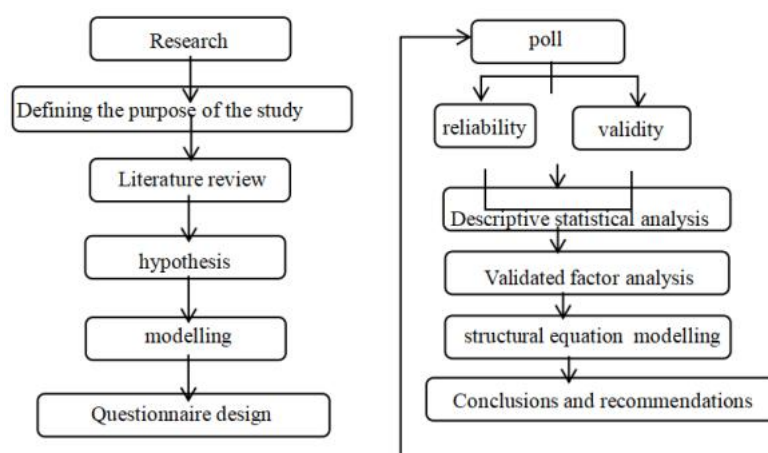


Figure 1. Technology roadmap.

1.4.2. Research Methodology

Literature survey method: review related literature to understand and sort out the existing theoretical studies on online-offline collaborative marketing fit, perceived risk, customer trust, and purchase intention, to provide a basis for subsequent research.

Questionnaire survey method: read the literature, adopt the mature test scale of the above four variables, combine the actual situation of online and offline collaborative marketing of fresh new retail, prepare the questionnaire, and collect the questionnaire information by distributing the questionnaire online, and summarise and organize the questionnaire data to complete the pre-processing.

Statistical analysis method: data were processed using SPSS 23.0 and AMOS 22.0 to complete reliability and validity tests, descriptive statistical analysis, validation

factor analysis, and structural equation modeling. The validity of the hypothesized model was tested.

1.5. Contribution

This investigation proposes a theoretical model of the impact between online-offline synergistic marketing fit, customer purchase intention, customer trust and perceived risk, enriching the influencing factors on customer purchase intention in fresh food new retail. Faced with the problem of both competition and synergy between online and offline channels, companies need to clarify **how to** reduce customer migration due to inter-channel competition **through the fit of online and offline channels**, so as to play a synergistic effect and simultaneously increase the level of sales of each channel to achieve revenue enhancement.

This paper explores the influence mechanism of online and offline collaborative marketing on customers' purchase intention, which can provide certain theoretical support for online and offline collaborative marketing of fresh food new retail.

2. Theoretical Foundations

In January 2016, Box Ma Fresh Life, an innovative retail business integrating supermarkets, catering, logistics and apps, which was first invested by Alibaba, was officially launched, opening up a new retail business of fresh produce.

2.1. The effect of online-offline collaborative marketing fit on purchase intention

Mcgoldrick and Collions in 2007 investigated the attitudes and usage preferences of three marketing channels, namely offline brick-and-mortar shops, online internet shops and catalogue shops, of multichannel retailers and found that there is a mutually reinforcing effect among different channels, thus confirming the existence of synergy among multichannels [7]. Wang Xuhui and Zhang Qilin in 2013 constructed four types of online-offline synergistic marketing strategies, namely channel separation, channel synergy, channel integration and channel parallelism, using Suning as the research object [8].

Online-offline synergistic marketing fit refers to the degree to which consumers perceive similarity between the marketing strategies implemented by a multichannel retailer's online e-store and its offline brick-and-mortar shops [9]. Willingness to buy refers to the consumer's monetary income Consumers' willingness to buy a product at the market equilibrium price of the product. It is found that willingness to buy is the likelihood that a consumer may purchase a certain product, which is influenced by a variety of factors [10]. Yu Yue and Chen Weishan in 2017, combined with the characteristics of online shopping, proposed that the willingness to buy is the possibility of customers' purchase intention after visiting the online online shop of a retail enterprise, fully familiarising themselves with the product information, and experiencing the enterprise's services [11]. It can be seen that customers' online purchase intention has an influence mechanism.

Online-Offline Collaborative Marketing Has an Impact on Purchase Intentions. by constructing a research model of multichannel retailers' channel collaborative performance, Jin found that the basic attributes of online websites, marketing methods and the reputation of offline brick-and-mortar shops significantly affect the customer satisfaction of multichannel retailers' online channels [12]. Multi-channel retailers promote the integration of online and offline channels, which can save the cost of

channel construction, improve the retailer's operation ability and marketing ability, and then effectively improve the enterprise's service level and customer purchase intention. [13]

Multi-channel synergistic marketing, i.e., when there is a high degree of marketing fit between online online shops and offline brick-and-mortar shops, can significantly improve the business performance of an enterprise, enable the enterprise to fully utilise its existing strengths, as well as save the search cost of consumers, reduce their perceived risk, enhance their trust, and then increase the willingness to purchase in that enterprise. Based on this, the following hypotheses are proposed:

H1: Online-offline collaborative marketing fit has a positive effect on purchase intention.

2.2. Mediating role of perceived risk

Perceived risk refers to consumers' perceptions of uncertainty about possible negative impacts in fresh produce purchasing decisions [14]. Ueland et al. in 2012 showed that perceived risk significantly weakens consumers' willingness to purchase online[15]. Chen Fuji argues that consumers will reduce their purchases if they perceive a website to be risky in terms of payment and disclosure of personal information . [16]

Although the development of e-commerce has been more mature and gradually applied in many fields, consumers are still concerned about personal privacy and transaction security, especially in the fresh food e-commerce environment, users are more worried about the quality of fresh produce, and these risks will have a certain negative impact on users' willingness to purchase fresh products. Based on this, the following hypothesis is proposed:

H2: Offline-Offline Collaborative Marketing Fit Influences Purchase Intentions through the Mediating Role of Perceived Risk.

2.3. Mediating role of customer trust

Customer trust is a kind of affirmation of consumers to the honesty and reliability of sales staff, and is the fundamental guarantee of establishing friendly relations with customers. Expanding to the online channel means trusting the merchant's entire online transaction environment, including the transaction platform, the transaction object, the platform norms and the transaction technology [17]. Multi-channel retailers adopting the strategy of channel convergence can positively affect purchase intention by influencing customer trust [18] . Lin Bingkun et al. in 2016 suggested that customer trust plays an important mediating role in the study of product strategy fit and promotion strategy fit on synergistic performance .

Customer trust is the basis for the stable development of the relationship between the enterprise and the customer, which directly affects the customer's willingness to buy. Offline trust can enhance online purchase confidence and stimulate purchase desire. The more experienced consumers shopping in physical shops have a stronger sense of trust when they shop online, the greater the chance of purchase. Based on this, the following hypotheses are proposed:

H3: Online-Offline Collaborative Marketing Fit Influences Purchase Intention through the Mediating Role of Customer Trust.

2.4. Perceived risk, chain mediation of customer trust

From the theory of perceived risk it can be seen that consumers in the process of online shopping due to the inability to intuitively feel the products and services, facing the ambiguity of the transaction results, resulting in enhanced risk perception, which has an impact on customer trust, and relates to the online shopping behaviour can be successfully achieved. Perceived risk reduction offline and online can not only enhance customer trust offline, but also enhance online customer trust. The study found that the higher consumers' trust in a retailer's offline brick-and-mortar shop, the stronger their confidence in that retailer's online purchases [19] .

Offline and online experiences of products, services, environment, and customer interactions can give customers an intuitive perception of the retailer, which is used to develop customer trust and influence consumers' willingness to purchase the retailer's goods. Therefore, when a retailer engages in online-offline collaborative marketing, the deeper the consumer's understanding of the merchant, the lower the perceived risk, and the higher the trust in the merchant, which in turn enhances their willingness to purchase. Based on this, the following hypotheses are proposed:

H4: Offline-Online Collaborative Marketing Fit Influences Purchase Intentions through the Chain Mediation of Perceived Risk and Customer Trust.

2.5. Theoretical modelling

The above theoretical analyses are synthesised to propose a theoretical model for this study, which explores the mechanism of the influence of online-offline collaborative marketing fit on customers' willingness to buy. Among them, customer trust and perceived risk play a mediating role in the influence mechanism of online-offline collaborative marketing fit on purchase intention, and there is a chain mediating role between perceived risk and customer trust between online-offline collaborative marketing fit and purchase intention.

Based on the above four assumptions, the theoretical model is constructed as follows (Figure 2):

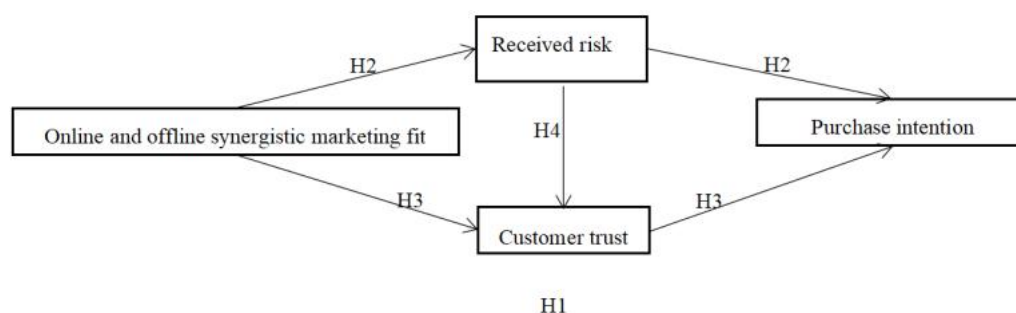


Figure 2. Theoretical model diagram.

3. Research Design and Data Collection

3.1. Variable Measurement and Questionnaire Design

This questionnaire, in addition to soliciting the respondents' gender, age, education, income level, whether they have had the experience of purchasing fresh food in both offline and online shops in the last six months as well as the fresh food retailers that they often choose to have both online and offline shops, measures the latent variables set by the above model, with a total of 27 questions (variables), and the question

contexts are set for the fresh food new retail industry, with the specific question items as shown in Table 1.

Table 1. *Specific topics.*

dimension (math.)	Measurement items
Online and offline synergistic marketing fit	Prices are clearly labelled in both online and offline shops
	The same number of product brands in the online and offline shops
	Consistent description of product presentation in online and offline shops
	Consistent price tags for the same products in online and offline shops
	Similar cost of the same product in online and offline shops
	Similar discounts on the same products in offline and online shops
	Online and offline shops have similar prices for speciality fresh produce
	Price levels are largely similar in online and offline shops
	The online and offline shops have the same range of promotional items for the event.
	Similar frequency of promotions in online and offline shops
	Same promotion time for the same product in online and offline shops
	The same promotion for the same product in both online and offline shops
	Same discounts on the same products in online and offline shops
Customer trust	Fresh food retailing is something to believe in
	Fresh food retailing is very competitive
	Product service and commitment are trustworthy
	Fresh food retailers focus on both their own and their customers' interests
Perceived risk	Freshness is not guaranteed in online shops
	Online internet shops can't guarantee privacy and security
	Online internet shops do not deliver products on time
	The product range in online internet shops does not meet the demand
	Returns and exchanges can take a long time in online shops
	Product selection in online shops takes a long time
Willingness to buy	Strong desire to buy from fresh food retailers
	Consider purchasing products at a fresh food retailer
	Happy to buy products from fresh food retailers

This form of online and offline collaborative marketing fit is mainly adapted from the scale compiled by B.K. Lin with 14 questions (B.K. Lin,2016). Gu Yung trust is mainly adapted from the scale compiled by Hassanein & Head, with 4 questions, (Hassanein&Head.2007) [20]. Perceived risk was mainly adapted from the scale compiled by Han & Kin with 6 questions (Han&Kim,2016) [21] . Willingness to buy mainly used the scale developed by Dodds with 3 questions (Dodds,1991) [22] .

3.2. Data Collection

In this study, the questionnaire was designed using the website "Questionnaire Star", and widely distributed on major social software and Questionnaire Star's website to survey consumers of fresh food new retailers of different age groups, income levels, and educational levels. A total of 134 questionnaires were distributed, excluding 2 invalid questionnaires, leaving 132 questionnaires, and the recovery rate of valid questionnaires was about 98.5%.

The returned questionnaires were carefully screened for data rigor and accuracy.

The following three criteria were used to exclude invalid questionnaires from this study: (1) Excluding questionnaires with too much similarity in responses to different variables (e.g., “Strongly Agree” or “Strongly Disagree”). (2) Excluding

questionnaires with too short response times. (3) Excluding questionnaires with no experience of multi-channel shopping at the same fresh food retailer.

4. Empirical Results and Analysis

4.1. Descriptive Statistical Analyses

The sample of this study is mainly through most of the consumers who use fresh food new retail, this sampling method invites people of different age groups, education and income levels to participate in the research, which in turn helps to increase the external validity of the findings. After recruiting the participants, we introduced the purpose of the research to the participants and promised the confidentiality of the survey. Through the professional online survey platform Questionstar, the questionnaires were distributed on 11 August 2023, and as of 25 August, we collected a total of 134 questionnaires, of which 132 were still usable after eliminating questionnaires with highly consistent answer options and too short answer times.

4.1.1. Descriptive statistical analysis of demographic characteristics

In the final valid sample, 59.09 percent of the participants were male and 40.91 per cent were female; the participants came from different educational levels, including high school and below (29.55 per cent), undergraduate or specialist (55.3 per cent), and postgraduate/doctoral and above (15.15 per cent); and among them, the ages were below 18, 18-24, 25-34, 35-44, and 45-64 years old, 65 years old and above were 11.36%, 31.82%, 27.27%, 19.7%, 5.3%, and 4.55% of the sample, respectively; among the participants, the monthly income of less than 4,000 yuan accounted for 24.24%, the monthly income of 4,000-8,000 yuan accounted for 56.06%, the monthly income of 8,000-12,000 yuan accounted for 15.15%, and the monthly income of more than 12,000 yuan accounted for 4.55 per cent.

The sample population data is shown in Table 2.

Table 2. Demographic information of the respondents.

options (as in computer software settings)		n	Percentage (%)
distinguishing between the sexes	male	78	59.09
	women	54	40.91
academic qualifications	High school and below	39	29.55
	Undergraduate/Specialist	73	55.3
	Postgraduate/Doctorate and above	20	15.15
(a person's) age	Below 18	15	11.36
	18-24	42	31.82
	25-34	36	27.27
	35-44	26	19.7
	45-64	7	5.3
	65 and above	6	4.55
Monthly income level	Less than 4000	32	24.24
	4000 to 8000	74	56.06
	8000 to 12000	20	15.15
	12,000 or more	6	4.55
add up the total		132	100

In addition to this basic demographic information, the questionnaire also collected the number of users of both online and offline fresh food retail shops frequently

chosen by the participants, such as Boxmart Fresh Life, Park Park, and Yonghui Supermarket, etc., of which Boxmart Fresh Life had the highest number of users among the respondents at 73, with Park Park in the second place and Yonghui Supermarket in the third place. The above information is summarised in Table 3.

Table 3. Other demographic information of the respondents.

Retail Store Name	usage (i.e. number of users)
Freshippo	73
Pupu Supermarket	66
Yonghui Superstores	62
Pagoda	49
Suning Vegetable Market	17
the rest	17

4.1.2. Descriptive statistical analysis of variables

The latent variables were offline-online collaborative marketing fit, customer trust, perceived risk, and purchase intention. All latent variables were measured using multiple items with the number of observed variables being 14, 4, 6, and 3, respectively, and each item was measured using a 5-point Likert-type scale. The internal consistency coefficients were tested to be 0.954, 0.892, 0.824, 0.866, and all the Cronbach alpha coefficients were greater than 0.8. The above reliabilities indicate that the questionnaire has a good reliability, and is credible for the measurement of all latent variables. The specific information is shown in Table 4.

Table 4. Reliability analysis for each latent variable.

latent variable	Number of observed variables	Cronbach's alpha coefficient
Online and offline synergistic marketing fit	14	0.954
Customer trust	4	0.892
Perceived risk	6	0.824
willingness to buy	3	0.866

Next, descriptive analysis statistics and correlation analysis were conducted for each variable. Pearson correlation analysis found that perceived risk had the highest mean value of 3.438, the second most influential factor was willingness to buy with a mean value of 2.722, the third most influential factor with a mean value of 2.708 was co-marketing fit, and the mean value of customer trust was 2.676. The correlation coefficient values of co-marketing fit and customer trust, perceived risk, and willingness to buy showed significance. The correlation coefficient value between co-marketing fit and customer trust is significant, specifically, the correlation coefficient value between co-marketing fit and customer trust is 0.880 and is significant at the 0.01 level, thus indicating that there is a significant positive correlation between co-marketing fit and customer trust, which is in line with the daily cognition, i.e., the higher the degree of marketing fit between online and offline marketing, the higher the customer trust. The correlation coefficient between collaborative marketing fit and perceived risk is -0.727 and shows a significance of 0.01 level, which indicates that there is a significant negative correlation between collaborative marketing fit and perceived risk, i.e., the higher the degree of online and offline marketing fit, the lower the perceived risk, which is in line with the daily cognition. The correlation coefficient between collaborative marketing fit and customer willingness is 0.821, and shows a significance of 0.01 level, which indicates that there is a significant positive

correlation between collaborative marketing fit and purchase willingness, i.e., the higher the degree of online and offline marketing fit, the higher the purchase willingness will be.

The results of this descriptive analysis prepared the next step of inferential statistical analysis as a basis for discussion of the analysis. The specific results are presented in Table 5.

Table 5. *Correlation analysis.*

	average value	(statistics) standard deviation	Collaborative marketing fit	Customer trust	Perceived risk	willingness to buy
Collaborative marketing fit	2.708	1.096	1			
Customer trust	2.676	1.158	0.880**	1		
Perceived risk	3.438	0.932	-0.727**	-0.724**	1	
willingness to buy	2.722	1.121	0.821**	0.848**	-0.729**	1
* p<0.05 ** p<0.01						

4.2. Structural Equation Modelling

The main application of this study adopted the two-step structural equation modelling approach recommended by Anderson and Gerbing. A validation factor analysis was first conducted to validate our measurement model. Structural equation modelling was then conducted to test the relationships between the latent variables. All analyses were conducted using AMOS software, following the sequence of validation factor analysis and homoscedasticity test, structural equation modelling path analysis, and mediation effect analysis to conduct the study, focusing on indicators such as loading coefficients, cumulative variance explained, and p-values to validate the hypotheses.

4.2.1. Validated factor analysis and homogeneous variance test

According to the validation factor analysis, the model had a chi-square degrees of freedom ratio of χ^2 / df of $2.131 < 3$ and an RMSEA value of $0.093 < 0.1$, which indicated a good fit and that the measurement model was in good agreement with the data. Meanwhile, each measurement item had significant loading coefficients for its respective latent variable, which indicated that the measurement scales for each latent variable demonstrated high convergent validity. The CR values for each latent variable ranged from 0.827 to 0.954, all of which were greater than 0.8, indicating that the model had good measurement scales for each latent variable showed high convergent validity . The specific data are shown in Table 6.

Table 6. *Validity factor analysis.*

Measured items (variable)		latent variable	standard load ratio (Std. Estimate)	standard error (Std.Error)	T	P	CR	AVE
Online and offline synergistic marketing fit1	-->	Online and offline synergistic marketing fit	0.827				0.954	0.599
Online and	-->	Online and	0.744	0.08	10.002	***		

offline synergistic marketing fit2		offline synergistic marketing fit						
Online and offline synergistic marketing fit3	-->	Online and offline synergistic marketing fit	0.848	0.076	12.191	***		
Online and offline synergistic marketing fit4	-->	Online and offline synergistic marketing fit	0.775	0.078	10.62	***		
Online and offline synergistic marketing fit5	-->	Online and offline synergistic marketing fit	0.778	0.082	10.671	***		
Online and offline synergistic marketing fit6	-->	Online and offline synergistic marketing fit	0.762	0.08	10.353	***		
Online and offline synergistic marketing fit7	-->	Online and offline synergistic marketing fit	0.734	0.082	9.819	***		
Online and offline synergistic marketing fit8	-->	Online and offline synergistic marketing fit	0.791	0.084	10.948	***		
Online and offline synergistic marketing fit9	-->	Online and offline synergistic marketing fit	0.81	0.079	11.353	***		
Online and offline synergistic marketing fit 10	-->	Online and offline synergistic marketing fit	0.735	0.077	9.843	***		
Online and offline synergistic marketing fit11	-->	Online and offline synergistic marketing fit	0.738	0.077	9.903	***		
Online and offline synergistic marketing fit12	-->	Online and offline synergistic marketing fit	0.728	0.082	9.71	***		
Online and offline synergistic marketing fit13	-->	Online and offline synergistic marketing fit	0.747	0.081	10.061	***		
Online and offline synergistic marketing fit14	-->	Online and offline synergistic marketing fit	0.802	0.079	11.174	***		
Customer trust 1	-->	Customer trust	0.811				0.891	0.671
Customer trust 2	-->	Customer trust	0.837	0.093	11.541	***		
Customer trust	-->	Customer	0.842	0.086	11.638	***		

3		trust						
Customer trust 4	-->	Customer trust	0.787	0.091	10.548	***		
Perceived risk 1	-->	Perceived risk	0.578				0.827	0.446
Perceived risk 2	-->	Perceived risk	0.688	0.175	6.063	***		
Perceived risk 3	-->	Perceived risk	0.758	0.213	6.442	***		
Perceived risk 4	-->	Perceived risk	0.665	0.168	5.927	***		
Perceived risk 5	-->	Perceived risk	0.738	0.194	6.336	***		
Perceived risk 6	-->	Perceived risk	0.556	0.183	5.213	***		
Willingness to buy1	-->	willingness to buy	0.809				0.88	0.71
Willingness to buy2	-->	willingness to buy	0.799	0.11	10.495	***		
Willingness to buy3	-->	willingness to buy	0.916	0.094	12.73	***		

Meanwhile, from Table 7, it can be seen that: the KMO is 0.939, which is greater than 0.6, which meets the prerequisite requirements for principal component analysis, implying that the data can be used for principal component analysis research. As well as the data passed the Bartlett sphericity test ($p < 0.05$), which means that the research data is suitable for common method bias test.

Table 7. KMO and Bartlett's test.

KMO value		0.939
Bartlett Sphericity Check	approximate chi-square (math.)	2975.965
	df	351
	p-value	0.000

Next, the common method bias test was carried out, for the possible bias of the common method in this study, the Harman one-way test was used to carry out the homogeneous variance test, and the principal component analysis method was used to analyse all the items involved in the four latent variables involved in this paper, and to extract the factors with eigenvalues greater than 1. The data test results show that there are four factors with eigenvalues greater than 1, and the cumulative variance explained rate is 68.925%, and the variance explained rates of the four factors are 56.414%, 5.053%, 4.026%, and 3.431%, respectively, which pass the common method bias test. The specific data are shown in Table 8.

Table 8. Principal component analysis.

name (of a thing)	Online and offline synergistic marketing fit	Customer trust	Perceived risk	willingness to buy
characteristic root	15.232	1.364	1.087	0.926
variance explained rate	56.41%	5.05%	4.03%	3.43%
Cumulative variance explained		68.93%		

4.2.2. Structural equation modelling path analysis

The above tests indicate the appropriateness of the measurement model, next the analysis using structural equation modelling is applied in order to test the relationship between the latent variables, in this study structural equation modelling is used to analyse the mediating effect of customer trust and perceived risk between online and offline collaborative marketing fit and purchase intention. The cardinality degree of freedom χ^2/df of this model is 2.131, this value is less than 3. The GFI value and RMSEA value are 0.722 and 0.093 respectively, which are in line with the judgement criteria, and from the above data, it can be shown that the measurement model is well fitted.

The path coefficients of each variable are shown in Figure 9. Firstly, there is a significant positive relationship between online-offline collaborative marketing fit and purchase intention, and online-offline collaborative marketing fit is significant on purchase intention at the $p < 0.0001$ level. Specifically, (1) the path coefficient $\beta = 0.840$ of the positive effect of online-offline collaborative marketing fit on purchase intention further indicates that when the online-offline collaborative marketing fit of enterprises increases, the purchase intention of consumers will increase, and the hypothesis H1 is valid. It can be seen that by increasing the degree of online and offline collaborative marketing fit fresh new retail enterprises can enhance the willingness to buy.

Secondly, the degree of online-offline collaborative marketing fit can affect customer trust and perceived risk to a certain extent and the coefficients of each path are significant at the $p < 0.0001$ level. Specifically: (1) the online-offline collaborative marketing fit has an inverse effect on perceived risk ($\beta = -0.833$), which further indicates that when the consumer's perceived risk increases, their purchase intention will decrease ($\beta = -0.139$), and the online-offline collaborative marketing fit has an indirect effect of 0.115787 through the specific effect of the perceived risk on the consumer's willingness to buy, indicating that the perceived risk of the online-online-offline collaborative marketing fit plays a significant role in the consumer's willingness to buy. The online-offline collaborative marketing fit has a mediating effect on consumers' purchase intention, assuming that H2 is valid. It can be seen that online and offline collaborative marketing fit improves consumers' purchase intention by reducing the perceived risk of fresh produce consumers. (2) The online-offline collaborative marketing fit has a positive effect on customer trust ($\beta = 0.866$), which further indicates that when consumers' trust in the enterprise increases, their purchase intention will also increase ($\beta = 1.376$), and the specific indirect effect of the online-offline collaborative marketing fit on consumers' purchase intention through customer trust is 1.191616, which indicates that the customer trust online-online-offline collaborative marketing fit has a mediating effect on consumers' purchase intention. Marketing fit plays a mediating effect on consumers' purchase intention, assuming that H3 is valid. It can be seen that the online-offline collaborative marketing fit increases the trust of fresh produce consumers to produce higher purchase intention.

Finally, online-offline collaborative marketing fit is chain-mediated to a certain extent on consumer purchase intention through perceived risk and customer trust. Specifically, (1) perceived risk has an inverse effect on customer trust ($\beta = -0.130$), which further indicates that customer trust decreases when perceived risk increases ($\beta = 1.376$), and online-offline collaborative marketing fit indirectly mediates the specific mediation effect of -0.17888 on customer trust through perceived risk,

leading to a decrease in purchase intention. It indicates that in fresh food new retail industry, perceived risk and customer trust will play a chain mediation effect on consumer purchase intention, and hypothesis H4 holds (Figure 3). It can be seen that fresh food new retail enterprises can improve customer trust by reducing consumers' perceived risk, and then enhance consumers' purchase intention.

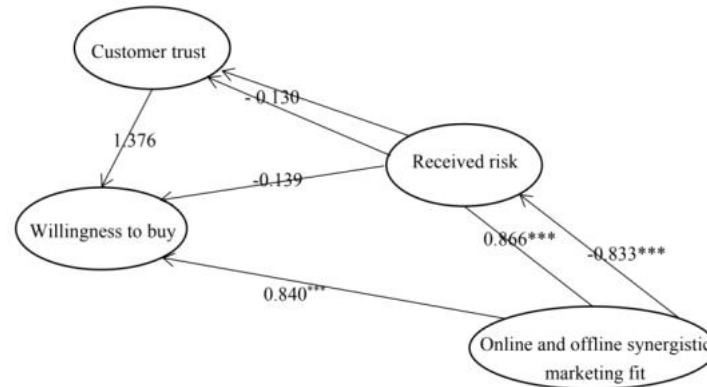


Figure 3. Path coefficient diagram.

4.2.3. Analysis of intermediation effects

The test results show that all three mediating effects are valid, specifically: (1) the mediating effect of the path "online and offline collaborative marketing collaborative marketing fit - perceived risk - purchase intention" is 0.1158, indicating that the effect of perceived risk as a mediating variable is valid, and the mediating effect is significant at the level of $p < 0.0001$. The mediation effect is statistically significant at $p < 0.0001$ level, and its indirect effect accounts for 5.8819% of the total effect. (2) The mediation effect of the path "online and offline marketing fit - customer trust - purchase intention" is 1.1916, indicating that the effect of customer trust as a mediating variable is established, the mediation effect is significant at $p < 0.0001$ level, statistically significant, and its indirect effect accounts for 60.5335% of the total effect. 60.5335%. (3) The mediating effect of the path "online and offline collaborative marketing fit - perceived risk - customer trust - purchase intention" is -0.1789, indicating that the mediating effect of the chain of perceived risk and customer trust is established, and its indirect effect accounts for the ratio of the total effect is -9.0870%. (4) The overall results show that the online and offline collaborative marketing fit, the degree of indirect effect is particularly important, the total indirect effect is 1.1285, the total effect is 1.9685, the total indirect effect accounted for the ratio of the total effect is 57.328413%. It can be seen that the mediation effect of these three paths are established, that is, the perceived risk of online and offline marketing fit on the consumer's willingness to buy plays a mediation effect, customer trust online and offline synergistic marketing fit on the consumer's willingness to buy plays a mediation effect, the perceived risk and customer trust will play a chain mediation effect of the consumer's willingness to buy is established. Specific data are shown in Table 9.

Table 9. Bootstrap test for mediator significance.

trails	Standardised indirect effect estimates	Percentage of total effect	95 per cent confidence interval	
			limit	lower limit
Offline-Online Collaborative Marketing Fit - Perceived Risk -	0.115787	5.881923	0.414	0.079

Purchase Intention				
Offline-Online Collaborative Marketing Fit - Customer Trust - Purchase Intention	1.191616	60.533507	0.627	0.354
Offline-Online Collaborative Marketing Fit - Perceived Risk - Customer Trust - Purchase Intention	-0.17888	-9.087016	0.14	0.017
Offline-Online Collaborative Marketing Fit - Purchase Intention	0.84	42.671587		
aggregate effect	1.968523	100		

5. Conclusions

5.1. Conclusions

With the development of the Internet and the popularity of electronic mobile devices, more and more enterprises in the fresh food new retail industry to take online and offline collaborative marketing business model, so the postgraduate fresh food new retail industry online and offline collaborative marketing fit on the marketing mechanism with the consumer's willingness to buy extraordinarily important, the conclusions of the study can be fresh food retail enterprises to provide guidance to promote the transformation and upgrading of enterprises.

This study shows that, in general, online-offline collaborative marketing fit, customer trust, and perceived risk affect consumers' purchase intention in the fresh food new retail industry. Among them, online-offline collaborative marketing fit is positively related to consumers' purchase intention, online-offline collaborative marketing fit has a mediating effect on consumers' purchase intention through customer trust and perceived risk, and at the same time, perceived risk has a chain mediating effect on consumers' purchase intention with customer trust. This suggests that in the contemporary fresh food retail industry, good online-offline collaborative marketing fit and customer trust, and low perceived risk can enhance consumers' willingness to buy, which in turn can increase the sales of fresh food retailers and realise the upgrading of enterprises in the context of the new fresh food retailing and big data era.

Based on the above conclusions, it is recommended that the fresh food retail industry improve the degree of online and offline collaborative marketing fit, such as unifying the types and prices of fresh food retailed online and offline, so as to enhance customer trust, reduce the perceived risk of consumers, and enhance the willingness of consumers to buy.

5.2. Future Work

The scope of the survey in this study is limited, i.e., this paper only samples users who use online and offline fresh food retailing in and around Sichuan Province, and this scope of the survey is extremely regional, which is unable to broadly illustrate the situation of fresh food new retailing consumers in other areas or regions or even around the world, and so the applicability of the results of this study is not strong enough. The sample size of this study is small, the sample size of this paper is 132,

the sample size is not large enough, the follow-up still need to add more samples, increase the sample size, and improve the accuracy of the conclusions.

(2) The questionnaire used still needs to be improved in terms of question design. The questionnaire is not clear enough in terms of question item designation, thus leading to bias in the respondents' understanding and answers, which in turn may affect the authenticity and accuracy of the results.

(3) The applicability of the model conclusions is limited. The background of the model is the fresh food new retail industry, and the design of the questionnaire and the model only considers the mechanism of the influence of the online and offline synergistic marketing fit of the fresh food new retail industry on consumers' purchase intention, so the conclusions of this nature have a limited scope of application.

Conflicts of Interest

The author declares that there is no conflict of interest regarding the publication of this article.

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