

# Study on Consumers' Preference of Remanufactured Products

Mingxuan Hu\*

School of economics and management, Xi'dian University, Shaanxi 710100, China

\*735062124@qq.com

## Abstract

The study combs the research results of domestic and foreign consumers' remanufactured product purchase intentions, and use questionnaires to investigate the factors of Chinese consumers' purchase preference of remanufactured products. The research results find that: except social psychology and risk perception, all the other factors can positively increase the purchase intention, including purchase intention, product perception, value perception, trust perception, interest perception, and consumer attitudes. After this conclusions of this study, we also give some reasonable suggestions to the government and enterprise, which intend to increase the consumers' purchasing intentions and expand the remanufacturing market.

## Keywords

Consumer Preference; Remanufactured Products.

## 1. Introduction

Nowadays, China is still in the initial development stage of remanufacturing. Consumers generally have low awareness of remanufactured products which lead to less purchase behavior. In addition to policy guidance and marketization, consumers' acceptance and willingness to purchase remanufactured products promotes the development of the remanufacturing industry. The key link. When consumers are faced with the choice of new and remanufactured products, they always make decisions about their consumption behavior based on the principle of maximum utility. Different consumers have differences in personal cognition, environmental awareness, quality assurance, brand marketing, and other factors. , And thus have different preferences for remanufactured products. From the perspective of consumers, this chapter analyzes the factors that influence consumers to purchase remanufactured products in the form of collecting questionnaires, and proposes reference recommendations based on the conclusions of the survey.

In this chapter, we will focus on the following issues:

- (1) What are the key factors that affect consumers' preference for purchasing remanufactured mobile phones?
- (2) What is the priority and importance of these preference factors?

## 2. Model Construction

Through literature and theoretical research, this chapter divides the factors that consumers consider when purchasing remanufactured products into internal factors and external factors. The internal factors revolve around the three dimensions of cognitive factors, perceptual factors, and consumer buying attitudes; The factors revolve around the five latitudes of brand, price, quality assurance, publicity, and environmental protection. Obtain consumers' true understanding and preference for remanufactured products in the form of questionnaires.

## 2.1. Independent Variables and Research Hypotheses of the Conceptual Model of Internal Factors

### 1. Cognitive factors

#### 1) Product awareness.

Product awareness refers to the individual's understanding of remanufactured products. Consumers' awareness of product characteristics and attributes plays a key role in evaluating products. Due to the late start of my country's remanufacturing industry, consumers have a low level of awareness of remanufactured products, and there are serious misunderstandings. Most consumers have not heard of or don't know much about remanufactured products. They are easy to confuse remanufactured products with "second-hand" and "refurbished" products. This leads to negative comments on remanufactured products by consumers and severely inhibits consumption. Buyers' desire to buy. Consumers who have a high level of awareness of the concept of "remanufacturing" are more likely to correctly understand the attributes and characteristics of remanufactured products, and are more likely to accept remanufactured products. Consumers have a more comprehensive understanding of the functions, characteristics and attributes of remanufactured products. The easier it is to accept remanufactured products, the greater the willingness to buy remanufactured products.

H1: Consumers' product awareness of remanufactured products is positively correlated with their purchase intentions.

#### 2) Value perception.

While meeting consumer demand, remanufactured electronic products can save resources and reduce electronic waste pollution, and have important economic and environmental values. The production process of remanufactured products determines the attributes of its environmentally friendly products. Purchasing remanufactured products is a green consumer behavior, and the results of the behavior can also have a positive impact on the protection of the ecological environment. The conveyer of remanufactured products is a kind of "green and environmental protection" values, and consumers' recognition of this value positively promotes consumers' willingness to buy remanufactured products.

H2: Consumers' perception of the value of remanufactured products is positively correlated with their purchase intention.

### 2. Perceived factors

#### 1) Trust perception.

Trust perception refers to the comprehensive consideration of the brand, quality and promotion methods of the product before consumers purchase a product, and consumers personally prejudice their trust in the product and make behavioral decisions. When consumers use electronic products, the brand of the product will indirectly affect the consumer's purchase decision. Consumers generally believe that "big brands" are trustworthy, especially this kind of remanufactured products. Furthermore, consumers' trust in a product also comes from the "word-of-mouth" effect between friends and family members. In previous empirical studies, it was concluded that two-thirds of respondents purchased a product for the first time. Will seek the opinions of those around you. Consumers combine the recommendations of others with their own cognition, which ultimately affects their purchase intentions for remanufactured products.

H3: Consumers' perception of trust in remanufactured products is positively correlated with purchase intention.

#### 2) Perceived benefits.

The most direct factor that affects the purchase decision of consumers is the degree of benefits brought to consumers by the purchase behavior. If the purchase behavior of consumers can

meet the needs of consumers, then the product will bring benefits to consumers Perception. First of all, the price of remanufactured products is generally lower than that of new products, which can bring savings to consumers while also satisfying consumers' demand for the use of the product. This is also the most intuitive perception of the benefits of remanufactured products. Secondly, remanufactured products are environmentally friendly products, and purchasing remanufactured products is a green environmental behavior. Consumers' environmental behaviors can reduce the waste of social resources and reduce the generation of waste, which is of positive significance for the entire society. Therefore, the greater the consumer's perception of the benefits of remanufactured products, the stronger the consumer's willingness to buy.

H4: Consumers' perception of the benefits of remanufactured products is positively correlated with their purchase intentions.

### 3) Risk perception.

Remanufacturing in my country is in the early stage of development, and consumers will inevitably have concerns about remanufactured products. From the quality of the recycling source and the manufacturers that undertake it, from the core parts to the processing technology, consumers will be unpredictable worries. As consumers' perception of the risks of remanufactured products comes from their ignorance of remanufactured products, It is believed that the quality of remanufactured products is unknown and the after-sales service is unknown. These unknown things have their inevitable risks, which will not only cause waste of resources and time, but even delay the journey of things. It is not difficult to understand that when consumers feel the risk of the product is greater, their purchase intention will be greatly weakened.

H5: Consumers' risk perception of remanufactured products is negatively correlated with their willingness to buy.

### 4) Social psychology.

The penetration rate of remanufactured products in our country is low. Consumers often associate "second-hand products" with "remanufactured products", and among the values that prevail in our society, people have inherent values such as "buying new and not buying old". The concept is that remanufactured products are old products. At the same time, there are consumers who believe that buying remanufactured products will lose face in front of friends, especially in college groups, although this trend is not uncommon in today's consumer market. However, people's rising environmental protection concepts are constantly contending with this social psychology.

H6: Consumers' psycho-social perceptions are negatively correlated with purchase intentions.

### 3. Consumer buying attitude

Kotler defines attitude as an individual's long-term and lasting liking or dislike for a certain thing or idea, as well as the perception of behavioral intentions. Domestic scholar Sun Yu believes that people's evaluation and behavior of things on the basis of their own values and ethics Will is attitude. Strobl's research believes that attitude is an intermediate variable between cognition and behavior, and the individual's cognition level guides the formation of attitude, and attitude further affects the occurrence of behavior. Although consumer attitudes do not represent behaviors themselves, the positive attitudes that consumers have towards products will surely guide purchase intentions and decision-making behaviors.

H7: Consumers' buying attitude is positively correlated with their willingness to buy.

## 2.2. Definition and Measurement of Variables

### 1. Internal factors

Through the combing of the previous literature and the summary of the predecessors, combined with the actual situation, this article will measure the variables from four latitudes, namely cognitive factors, perceptual factors, purchase attitudes and purchase intentions. By defining the four dimensions and in each latitude The relevant constituent factors are expanded below, and based on the existing mature scales and summarized, combined with the actual situation of the research, the final measurement scales that conform to the variables of this article are set, as shown in Table 1.

**Table 1.** The questions

Scale	No.	items	Reference
Product awareness	A1	I know that remanufactured product has the same quantities as a new one.	Hongjiao Liu(2009), Ferrer(2006), Brucks(1985)
	A2	I know the price of the remanufactured product is lower than a new one.	
	A3	I know that remanufactured products have quality guarantee and standardized after-sales service.	
	A4	I know that buying remanufactured products can save energy, reduce costs, and protect the environment.	
Value perception	B1	I am a environmentally conscious person.	Stern(1994), Dunl1p&V1n Liere(2000)
	B2	I suppose everyone is responsibility to help solve the environmental problems	
	B3	We should buy environmentally friendly products as much as possible	
Trust perception	C1	The quality of remanufactured products manufactured by well-known company is trustworthy	Fe1therm1n&P1vlou(2013)
	C2	When someone famous is endorsing the remanufactured product that you think it is trustworthy	
	C3	When a friend recommends buying remanufactured electronic products, it means that the quality of remanufactured products is trustworthy.	
	C4	When the launch of remanufactured electronic products is supported by relevant government policies, it means that it is	

		trustworthy.	
Interest perception	D1	Buying remanufactured electronic products can meet your needs for electronic products.	Minghua Jiang (2003), Yufang Jin(2005), Hongchun Zhou(2008)
	D2	Buying remanufactured electronic products can save my money.	
	D3	Buying remanufactured electronic products means making a contribution to environmental protection in some way.	
Risk perception	E1	Remanufactured electronic products will be networking more often.	Fe1therm1n&P1vlou(2013)
	E2	Repairing remanufactured products will incur unnecessary repair costs and repair time.	
	E3	Remanufactured products are not safe enough.	
Social psychology	F1	Buying remanufactured products will lose face in front of your friends.	Zhenmin Wu(2012), Jighy1su(2014)
	F2	It's important to by a new one.	
attitude	G1	Buying remanufactured products is a good choice.	Berger(1989), Jooyoung(2007)
	G2	More people will choose remanufactured products.	
	G3	The future development situation of remanufactured electronic products will get better and better.	
Intention	H1	I'm willing to buy a remanufactured product.	Fishbein&1jzen(1975), Dodds(1991), Jianying Feng (2006)
	H2	I will recommend my friends to buy a remanufactured product.	

2. External factors

Based on the existing research literature on the factors influencing consumers' preference for remanufactured products, it mainly Including factors such as product type, quality, price discount, brand, remanufacturer identity, sales channels, advertising, green attributes, seller reputation, after-sales warranty strength, and buyer's social attributes, we take the above 11 factors as the influence Sources of attributes that make mobile phone consumer preferences. Then, through the definition of remanufactured mobile phones, some of the influencing factors are filtered out, and finally the external factors of marketing consumers' preference for remanufactured products are focused on: brand, price, quality assurance, government support and publicity, advertising, and product environmental protection. To study in all aspects.

## 2.3. Questionnaire Design and Validity Analysis

### 2.3.1. Questionnaire Design

By reading relevant literature, learning and applying the techniques of designing questionnaires on consumer behavior influencing factors, following the methods and principles provided by the questionnaire design teaching materials, and determining each potential structure according to the influencing variables established in the article and its operational definitions And expand the interpretation of the measurement indicators that can be easily understood, and design the questionnaire of consumers' willingness to buy remanufactured electronic products.

One of the principles and methods of questionnaire design is to design an initial questionnaire and conduct a pre-survey. The main purpose is to analyze the readability, reliability, and validity of the questionnaire through the pre-survey. At present, Chinese consumers have a low level of awareness of remanufactured products. In order to ensure that participants can better understand and fill in the questionnaire, at the beginning of the questionnaire, the consumers who participated in the questionnaire were introduced to the concept of remanufactured mobile phones. The attributes and level of the questionnaire are explained in detail, and the questions set are also explained to reduce the influence of irrelevant factors on the questionnaire filling.

Based on this, the design content of the questionnaire consists of two parts: one is the basic information characteristics of consumers, that is, the consumer's age, education, gender, income, etc.; the second part is the main part of the questionnaire, including consumers' internal factors and external factors. Considering factors, the internal factor measurement variables are divided into seven parts: product perception, value perception, trust perception, benefit perception, risk perception, social psychology, and consumer attitudes. This part adopts the Likert five-point scale. In tabular form, the numbers 1-5 respectively represent the five criteria from very disagreement to very agree; external factors are mainly to consider the focus and discount range of consumers when purchasing remanufactured products.

### 2.3.2. Pre-analysis of the Questionnaire

After the initial completion of the questionnaire design, in order to monitor the feasibility and rationality of the questionnaire scale part, first select a small number of samples to test the questionnaire.

#### 1. Reliability test

The purpose of reliability analysis is to test the reliability of the questionnaire, that is, the answers of the subjects are reliable and the items in the questionnaire have good correlation. According to Baron, when the Cronbach's  $\alpha$  coefficient of the total scale is higher than 0.8 and the Cronbach's  $\alpha$  coefficient of the subscale is higher than 0.6, the scale of each variable is reliable.

In this paper, SPSS 22.0 is used to analyze the reliability of the questionnaire. Through the Cronbach's  $\alpha$  coefficient test of each scale and its inclusion factors, the Cronbach's  $\alpha$  coefficient values of the scale are all above 0.8, indicating that the scale has good reliability. And the Cronbach's  $\alpha$  coefficient value of each subscale is about 0.7 or above, indicating that the reliability of the subscale is good. The overall results show that the scale data has good reliability, that is, the data has good reliability and authenticity, and is suitable for in-depth analysis. The specific Cronbach's  $\alpha$  coefficient is shown in Table 2.

**Table 2.** Reliability test

Scale	Subscale	Cronbach's alpha	items	Cronbach's alpha	items
Cognitive factors	Product awareness	0.773	4	0.801	7
	Value perception	0.827	3		
Perceptual factors	Trust perception	0.826	4	0.823	12
	Interest perception	0.699	3		
	Risk perception	0.896	3		
	Social psychology	0.856	2		
attitude	attitude	0.922	3	0.922	3
Intention	Intention	0.915	2	0.915	2

**2. Validity test**

The purpose of validity analysis is to detect the degree of concept embodied in the design scale. At present, the validity of the test scale mainly adopts factor analysis, which examines the dimensional structure of the scale by extracting the common factors of the measurement items. In this paper, the variables in the scale are grouped according to cognitive factors, perceptual factors and buying attitudes, and exploratory factor analysis is carried out respectively.

Firstly, KMO and Bartlett's sphere test were performed on each scale, and the KMO values of each scale were all above 0.5 and the significance values in the Bartlett's sphere test were all lower than 0.05. The results show that each scale is suitable for factor analysis. (Since there are only two questions about purchase intention, the KMO value will be 0.5).

By using the principal component analysis method and the maximum variance rotation method to perform factor analysis on each scale, it is found that two factors are extracted from the cognitive factors. The load coefficient values of the two factors including the item items are both above 0.5, which are suitable for retention. In the perceptual factors, four factors are extracted, and the four factors including the load factor value of the item are all above 0.5, which are all suitable for retention. Finally, a factor is extracted from the purchase attitude and purchase intention, and the load coefficient values of the included items are all above 0.9, and each item is suitable for retention. The overall results show that each dimension is basically the same as the preset dimension and has good validity. It shows that the data has good validity and distinguishability, and is suitable for dimensional analysis.

**3. Data Analysis and Hypothesis Testing**

After analyzing the reliability and validity of the questionnaire, the final formal questionnaire was determined. However, since the research object of this article is remanufactured products, remanufactured products are in the infancy stage in my country, and consumers have insufficient awareness of remanufactured products. Acceptance is also relatively low, but in order to ensure the diversification of respondents' academic qualifications, age, income, etc., I chose to use the form of questionnaire stars to focus on the communication methods of classmates, family and friends, and forums to ensure that the survey targets. In this study, a total of 218 questionnaires were returned. After excluding invalid questionnaires, there were 201 questionnaires. The effective response rate of the questionnaires was 92.2%.



**Table 3. Validity test**

Scale	Subscale	index	Load factor	Variance contribution rate	KMO	Bartlett sphericity test		
						Bangla	df	sig.
Cognitive factors	Product awareness	Q5-1	0.763	33.659%	0.721	189.255	21	0.000
		Q5-2	0.775					
		Q5-3	0.769					
		Q5-4	0.710					
	Value perception	Q6-1	0.741	32.618%				
		Q6-2	0.904					
Q6-3		0.887						
Perceptual factors	Trust perception	Q7-1	0.745	25.745%	0.746	425.909	66	0.000
		Q7-2	0.676					
		Q7-3	0.812					
		Q7-4	0.861					
	Interest perception	Q8-1	0.501	21.208%				
		Q8-2	0.916					
		Q8-3	0.550					
	Risk perception	Q9-1	0.886	16.050%				
		Q9-2	0.922					
		Q9-3	0.863					
Social psychology	Q10-1	0.907	13.114%					
	Q10-2	0.884						
attitude	attitude	Q11-1	0.905	86.500%	0.690	167.951	3	0.000
		Q11-2	0.965					
		Q11-3	0.920					
Intention	Intention	Q12-1	0.960	92.173%	0.500	83.885	1	0.000
		Q12-2	0.960					

### 3.1. Descriptive Statistical Analysis of Samples

Based on the collected data, a comparative analysis of the differences in the basic information of the surveyed was conducted. Among the 201 valid questionnaires collected, the proportions of men and women were 43.8% and 56.2%, respectively. This shows that the gender ratio is relatively balanced; in terms of education level, The population with higher education (undergraduate, master’s degree and above) accounted for 82.1%; in terms of age, the age group of the respondents was concentrated in the 20-30 years old, that is, the post-80s and post-90s accounted for a relatively large proportion; In terms of disposable income, the sample is concentrated in the range of 1,000-6,000 yuan. It can be seen from the sample data that the group surveyed in this survey shows the characteristics of young and highly educated socialization, with the highest proportion of students. Because young people with a high degree of education are more receptive to new things, they also have a better understanding of remanufactured products. This conclusion is similar to the previous research conclusions, there is no particularity, can represent the overall characteristics to a certain extent, and can be used for empirical analysis.



### 3.2. Reliability Analysis

The reliability analysis of the formal questionnaire is shown in Table 4. The Cronb1ch's 1lph1 coefficient of each variable of the scale of this study is between 0.795-0.905, indicating that the scale has good reliability, and the Cronb1ch's alpha coefficient of each subscale is located at 0.758- 0.905, indicating that the reliability of the subscale is also good, indicating that the various measurement items of the scale have good internal inconsistencies with each variable. The overall result shows that the scale data has good reliability, namely The data has good reliability and authenticity and is suitable for in-depth analysis.

**Table 4.** Reliability analysis

Scale	Subscale	Cronb1ch's alpha	Number of items	Cronbach's alpha	Number of items
Cognitive factors	Product awareness	0.758	4	0.795	7
	Value perception	0.826	3		
Perceptual factors	Trust perception	0.843	4	0.852	12
	Interest perception	0.812	3		
	Risk perception	0.860	3		
	Social psychology	0.781	2		
attitude	attitude	0.878	3	0.878	3
Intention	Intention	0.905	2	0.905	2

### 3.3. Validity Analysis

The validity analysis is shown in Table 5. It can be obtained that the KMO value of each scale is above 0.7, and the significance value in the B1rtlett sphere test is all lower than 0.05. Therefore, the questionnaire and the empirical data can be convergent validity And discriminative validity test (since there are only two questions about purchase intention, the KMO value will be 0.5).

By using the principal component analysis method and the maximum variance rotation method to perform factor analysis on each scale, it is found that two factors are extracted from the cognitive factors. The load coefficient values of the two factors including the item items are both above 0.5, which are suitable for retention. In the perceptual factors, four factors are extracted, and the four factors including the load factor value of the item are all above 0.5, which are all suitable for retention. Finally, a factor is extracted from the purchase attitude and purchase intention, and the load coefficient values of the included items are all above 0.9, and each item is suitable for retention. The overall results show that the scale data have good validity. It shows that the data has good validity and distinguishability, and is suitable for dimensional analysis.

### 3.4. Hypothesis Test Results and Analysis

Through correlation analysis of product perception, value perception, trust perception, benefit perception, risk perception, social psychology, purchase attitude and purchase intention, the results shown in Table 6 are obtained. At a significant level of 0.01, it can be seen that product perception, value perception, trust perception, interest perception, purchase attitude and purchase intention have a significant positive correlation, that is, H1: consumer perception of remanufactured products It is positively correlated with purchase intention, H2: consumers' perception of the value of remanufactured products is positively correlated with purchase intention, H3: consumers' perception of trust in remanufactured products is positively correlated with purchase intention, H4: consumers' perception of remanufactured products The degree of interest perception is positively correlated with purchase intention. H7:

Consumers’ buying attitude is positively correlated with purchase intention, and both have been verified.

**Table 5.** Validity analysis

Scale	Subscale	index	Load factor	Variance contribution rate	KMO	Bartlett sphericity test		
						Bangla	df	sig.
Cognitive factors	Product awareness	Q5-1	0.813	33.309%	0.730	528.263	21	0.000
		Q5-2	0.724					
		Q5-3	0.813					
		Q5-4	0.593					
	Value perception	Q6-1	0.731	32.558%				
		Q6-2	0.910					
Q6-3		0.877						
Perceptual factors	Trust perception	Q7-1	0.645	21.733%	0.823	1155.227	66	0.000
		Q7-2	0.775					
		Q7-3	0.828					
		Q7-4	0.750					
	Interest perception	Q8-1	0.749	19.773%				
		Q8-2	0.863					
		Q8-3	0.744					
	Risk perception	Q9-1	0.834	19.707%				
		Q9-2	0.899					
		Q9-3	0.843					
Social psychology	Q10-1	0.892	14.167%					
	Q10-2	0.847						
attitude	attitude	Q11-1	0.863	80.487%	0.725	327.120	3	0.000
		Q11-2	0.920					
		Q11-3	0.908					
Intention	Intention	Q12-1	0.956	91.324%	0.500	228.101	1	0.000
		Q12-2	0.956					

And this analysis result verifies that risk perception, social psychology and purchase intention do not have a significant positive correlation, namely H5: consumers’ perception of risk of remanufactured products is negatively correlated with purchase intention, H6: consumers’ social psychological perception The negative correlation with purchase intention has also been verified.

**Table 6.** Related analysis

	Product awareness	Value perception	Trust perception	Interest perception	Risk perception	Social psychology	attitude	Intention
Product awareness	1							
Value perception	0.384**	1						
Trust perception	0.567**	0.498**	1					
Interest perception	0.598**	0.561**	0.661**	1				
Risk perception	0.138*	0.212**	0.265**	0.262**	1			
Social psychology	0.066	0.064	0.239**	0.106	0.397**	1		
attitude	0.529**	0.390**	0.587**	0.675**	0.251**	0.110	1	
Intention	0.445**	0.363**	0.508**	0.547**	0.052	0.079	0.745**	1

Ps.\*p<0.05;\*\*p<0.01.

### 3.5. Analysis of External Factors

#### 1. Analysis of consumer preference factors

It can be seen from Table 7 that among the 201 people who filled out the questionnaire, the percentages of the quality assurance, brand, and price of the remanufactured product that consumers are most concerned about when purchasing remanufactured products are 91.0%, 82.6%, and 82.1 %. Although the environmental protection of products is not a priority factor when consumers buy products, the percentage of cases accounted for 45.8%, which shows that consumers' environmental awareness is also increasing. Only a few people will value government support and advertising.

**Table 7.** Factors of buying a remanufactured product

	frequency	%	% Of cases
brand	166	24.5%	82.6%
price	165	24.3%	82.1%
Quality assurance	183	27.0%	91.0%
Government support and advocacy	47	6.9%	23.4%
Advertising	25	3.7%	12.4%
Product environmental protection	92	13.6%	45.8%
Total	678	100.0%	337.3%

#### 2. Analysis of consumer preference for discount coefficients

As can be seen from Table 8, assuming that consumers will buy an electronic product with a market value of 10,000 yuan, 74.1% of consumers believe that when the discount factor is 60%-40%, they will choose to buy remanufactured products.

**Table 8.** The price of costumer choosing

	frequency	%
4000-5000	80	39.8
5000-6000	69	34.3
6000-7000	33	16.4
7000-8000	14	7.0
8000-9000	5	2.5

## 4. Conclusions and Countermeasures

### 4.1. Conclusions

Intrinsic factors: consumer cognition factors, perception factors, and purchasing attitude have a significant impact on the purchase intention of remanufactured products. First of all, product cognition and environmental values in cognitive factors have a positive impact on the purchase intention of remanufactured products. The remanufacturing industry is at the beginning of its development in my country. Consumers have insufficient understanding of remanufactured products, and low awareness has led to low evaluations. Consumers' purchase possibilities for remanufactured products have also decreased; when the environmental awareness is high After consumers are aware of the environmental value of remanufacturing, their environmental values can positively affect their purchasing behavior. Second, perception factors have a significant impact on consumers' willingness to purchase remanufactured products. Among them, the perception of trust has a positive influence on the purchase intention of remanufactured products. Consumers' trust perception of remanufactured products will also increase due to the recommendation of people around them, big-name products, etc. When the degree of trust perception is higher, Consumers' willingness to buy is also stronger. Benefit perception positively affects the willingness to purchase remanufactured products. Consumers' perception of the personal benefits brought about by the low-price advantages of remanufactured products and the social environmental benefits brought about by the "green" attributes can effectively increase the purchase possibility of consumers. Risk perception has a negative impact on the willingness to purchase remanufactured products. Different from other green environmental protection products, remanufactured products are derived from the reproduction of waste products. Consumers will inevitably worry about whether remanufactured products are compliant with regulations and their quality standards. Some consumers believe that remanufactured products may have safety risks and cause The personal privacy of consumers is leaked, which increases consumers' perceived risk and reduces their willingness to purchase remanufactured products. Social psychology has a negative impact on the willingness to purchase remanufactured products. The popularity of remanufacturing concepts in my country is low. Consumers often mistakenly believe that remanufactured products are "second-hand" products, worrying that they will be ridiculed by people around them when purchasing remanufactured products, and The inherent concept is more serious, which reduces the willingness to buy remanufactured products. When consumers have positive comments on remanufactured products, they tend to have a higher willingness to buy.

In terms of external factors, in the context of consumers buying remanufactured products, the "brand" attribute largely affects consumers' choice of remanufactured products; the higher the degree of after-sales service and quality assurance of remanufactured products, The more they are favored by consumers, the easier it is to be chosen by consumers; the price discount of remanufactured products is a greater advantage over new products, which can save consumers unnecessary expenditures. There is no doubt that consumers are extremely concerned about

the price of remanufactured products. The higher the price discount, the more sensitive consumers are, and the higher the probability of purchasing behavior.

## 4.2. Countermeasures

### 1) Government

First, the government should establish corresponding laws and regulations, conduct unified certification of remanufactured products, and affix uniform labels to remanufactured products for compulsory certification, so that remanufactured products are open and transparent, and are completely separated from new products, and increase investment Related public service advertisements popularize consumers' knowledge of remanufactured products and guide consumers to correct consumption concepts.

Secondly, due to the low level of consumer awareness of remanufactured products in my country, the government should actively play a role model of government agencies and take the lead in a targeted manner. For example, when governments at all levels purchase office supplies, they can give priority to buying remanufactured products, and lead consumers to buy remanufactured products.

### 2) Enterprise

The first is price discounts. It can be seen from the above conclusions that consumers value the discount factor of remanufactured products. The higher the discount factor, the more attractive the remanufactured products are to consumers. Remanufacturing companies should do their utmost to reduce costs and give the largest discounts to consumers. On the one hand, remanufacturing companies should standardize the management of all internal links, and under the premise of ensuring quality, they should effectively use their cost advantages to save costs for the company and benefit consumers; on the other hand, remanufacturing companies should increase investment in scientific research In the process of producing remanufactured products, more energy and materials are saved, and less waste is generated. This can reduce costs from the source, create profits for the enterprise, and enable consumers to enjoy greater price concessions. At the same time, the green environmental protection of remanufactured products will be improved to realize the "three harvests" of enterprises, consumers and environmental protection.

The second is corporate propaganda. When companies promote remanufactured products, they should emphasize the seriousness of the current environmental pollution and publicize the characteristics of remanufactured products that save energy and protect the environment. In the process of publicizing the environmental benefits of remanufactured products to consumers, companies can start from the recycling of remanufactured products and show consumers the remanufacturing process and re-sale process in a simple, understandable, open and transparent manner, so that consumers can Understand this process that can make waste products continue to "glow and heat", enhance consumers' trust in remanufactured products, and the importance of environmental protection values, so as to attract more consumers.

## References

- [1] Liu Hongjiao. Study on the Key Issues of Remanufacturing Logistics[D]. University of Science and Technology of China, 2009.
- [2] Wang Y, Hazen B T. Consumer Product Knowledge and Intention to Purchase Remanufactured Products[J]. International Journal of Production Economics, 2015, 181:460-469.
- [3] Feng Qiqian, Liu Bohai, Zheng Handong, Chen Yushuang, Song Qi. Pricing of remanufactured products based on customer cognitive value [A]. China Management Modernization Research Association, Fudan Management Award Foundation. The 15th (2020) ) Proceedings of the Annual Conference of Chinese Management Studies [C]. China Management Modernization Research

Association, Fudan Management Award Foundation: China Management Modernization Research Association, 2020:10.

- [4] Carmen, Tanner, Sybille, et al. Promoting sustainable consumption: Determinants of green purchases by Swiss consumers[J]. *Psychology & Marketing*, 2003.
- [5] Li Peijie. The enlightenment of public green consumption willingness and environmental protection cognitive deviation to environmental education[J]. *Environmental Education*, 2020(09): 44-47.
- [6] Yu Hongfeng. An Empirical Study on the Influencing Factors of Consumer Behavior of Environmentally Friendly Products[J]. *Shangxun*, 2019(17): 116-117.
- [7] Hou Rui. Research on the Influence of Green Consumer Behavior on Consumers' Subjective Well-being [D]. Yanbian University, 2019.
- [8] Liu Bo. Materialism, environmental awareness and the consumption logic of fast fashion brands[J]. *Human Geography*, 2019, 34(01): 99-105.
- [9] He Lingyun, Qiu Luyi. The relationship and boundary between consumer environmental awareness and government environmental regulations[J]. *Environmental Economic Research*, 2018, 3(04): 10-22.
- [10] Li Man. The influence of private brand introduction of green products on purchase intention--Analysis based on perception and trust [J]. *Modern Marketing (late issue)*, 2020(07): 84-85.
- [11] Chen Dingyi. An Empirical Study on Product Competitive Advantage of Remanufacturing Enterprises Based on Perceived Value Theory [D]. Beijing Jiaotong University, 2013.
- [12] Weelden E V, Mugge R, Bakker C. Paving the way towards circular consumption: exploring consumer acceptance of refurbished mobile phones in the Dutch market[J]. *Journal of Cleaner Production*, 2016, 113:743-754.