

Analysis of Influencing Factors of Purchase Decision for Online Consumption of Clothes

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Abstract. From the perspective of different consumer groups, this paper discusses the key influential factors of online clothing purchase decision-making, it chooses a professional platform what is named 'Wenjuanxing' for data collection. On the basis of the key influencing factors of the online clothing purchase decision obtained by factor analysis, then the consumer groups are classified by cluster analysis. This article uses factor analysis to determine the six factors that have the greatest impact on consumers' online clothing purchases; secondly, different consumer groups are in the different degree of concern about the key factors; finally, the paper puts suggestions forward countermeasures to further improve the network operators clothing sales.

Introduction

With the development of Internet technology, e-commerce has gradually emerged and penetrated into every aspect of people's lives. Domestic and foreign scholars have studied the traditional theory of consumer behavior, and have gradually penetrated into other social fields. Compared with traditional marketing methods, the rise of online marketing has brought new opportunities for enterprise development. Although the time for the rise of online clothing consumption is short, he gradually takes up more market share in the apparel industry with his own advantages. In addition, with the development of the national economy, most consumers have more disposable funds than ever before, and their consumption power and demand for clothing are rapidly increasing.

The paper intends to study the key influencing factors of online clothing purchase decision from the perspective of different consumer groups. Through factor analysis and cluster analysis of consumer groups, determine the key factors that influence consumers to make online clothing purchase decisions. The paper intends to screen out the key influencing factors from many factors affecting the purchase decision of online clothing, and to some extent overcome the previous research on single or a small number of influencing factors, making the research results more reasonable.

Literature Review

The e-commerce boom has made online purchase a new form of consumption that is increasingly relevant to people's lives, and more and more consumers are paying attention to online consumption. Experts and scholars do not have the same view on online purchase decisions. Thomas R, Martin B (2016)'s research focuses on the extent to which online reviews influence consumers' online buying decisions, and reliable online reviews have a positive impact on the formation of purchasing decisions [1].

In the research on the influence of different factors on online purchase decision, it was found that Zuo Xiuping and Zhu Changchun (2014) found through empirical analysis that Consumer demand, consumer spending habits, product quality, seller service quality and transaction costs have a positive impact on consumers' online purchasing decisions, while perceived risk has a negative impact [2]. Jacek C, and Aleksandra G. (2016) argue that the level of effort of merchants in terms of buyer privacy protection affects consumers' online spending intentions [3]. Wang Juan (2015)

believes that merchant creditworthiness, communication ability and purchase are positively related; payment security is a negative factor.[4] Guo Gongxing (2013) found that other consumers' positive reviews of goods have a positive impact on buyers [5]. Reichheld & Schefter (2000) found that the smooth distribution of logistics will directly affect the online consumers to make online purchase decisions [6]. The conclusions are conducive to a more in-depth study of the online consumer decision-making process.

Due to the virtual nature of the online trading environment, the risk of online clothing purchase is much greater than the traditional clothing purchase. As a new sales channel, online clothing marketing has developed with the development of e-commerce. The potential of the online clothing market is gradually being tapped in China. Kong Xiangmei, Xu Xiangge (2008) believes that the online clothing market has great potential as an emerging market model. In the network marketing environment, the key factors affecting consumers to make online clothing purchases are more new features due to traditional after-sales, price, quality and other factors [7]. Kong Weicheng, Li Qi, Jiang Sufen et al (2011) believe that retailer characteristics are the most important factors affecting the behavior of online clothing consumers, followed by factors related to marketing factors and perceived risks [8]. Hu Zuguang (2013) found that the cost of online clothing transactions has a significant positive effect on consumers' online clothing purchase decisions [9]. Therefore, in the analysis of the influencing factors of online clothing consumption decision-making, this paper will analyze the three aspects of individual, environment and marketing.

Methodology and Data

In order to facilitate the comparison of more critical factors, the questionnaire is in the form of a Likert scale. This paper studies the consumption of online clothing in Xi'an, Shanxi Province, China, and collected 458 questionnaires with the help of questionnaire stars. A total of 458 documents were issued, including 398 valid questionnaires, and the questionnaire recovery rate was 87%.

The questionnaire firstly combines the self-control marketing factors of the enterprise itself. Based on the 4P and 4C marketing theories and based on the research conclusions of a large number of literatures, the 26 factors that influence consumers to make clothing network purchase decisions are determined. Include: Business service efficiency, Diversified clothing styles, Logistics speed, Great shop structure, Clothing delivery speed, Logistics information, Delivery service, Payment security, Packing, Details, Protection, Sale, After Service, Smoothness, Simplicity, Diversification of payment methods, Great web design, Quality, Personalized service, Sales volume, Brand, Price, fashion style, Offline Shops, Shipping fee, Seller location

Factor Analysis

The paper first carried out the Cronbach' α coefficient reliability test on the sample data. The reliability coefficient value is 0.972 greater than 0.9, no adjustment is needed. The paper used principal component analysis for validity testing, and then performed KMO (Kaiser-Meyer-Olkin) test and Bartlett Test of Sphericity to test 26 factors. The data obtained by the test: KMO value is 0.948, the statistics of the Bartley sphericity test approximates the chi-square value of 4424.708, and the corresponding probability P value is approximately 0, indicating that the factors selected in this analysis can be factor analysis.

The characteristic root λ_j of the correlation coefficient matrix, the variance contribution rate w_j , and the cumulative variance contribution rate W are obtained by using SPSS20.0. The factor analysis factor is divided into three major factors by factor analysis.

Table 1. Total variance explained

Factors	Initial Eigenvalues			Rotating Square Sum Loading		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	15.465	59.480	59.481	6.936	26.679	26.679
2	1.696	6.522	66.003	5.816	22.369	49.048
3	1.051	4.044	70.047	5.460	20.999	70.047

Define factors as seller factor, logistics factor, and online store factor based on the rotated factor load matrix. The variance contribution rates of the three common factors are not much different, and consumers will consider three factors equally when making purchasing decisions.

$$\omega_j = w_j / W \tag{1}$$

$$F_i = \sum_{j=1}^3 p_{ij} \cdot \omega_j, \quad \forall i = 1, 2 \dots 26 \tag{2}$$

According to Table 1 and the weight calculation Eq. 1 considering the variance contribution rate w_j and the cumulative variance contribution rate W of the three common factors, $\omega_1=0.381, \omega_2=0.319, \omega_3=0.300$ can be obtained.

From the Eq. 2, a comprehensive score of 26 influencing factors can be obtained, where p_{ij} represents the rotational load of the i original variable on the j Cofactor, and F_i represents the comprehensive evaluation score of each factor.

Table 2. Ranking of factors influencing online clothing purchase decision

Variables	F	Round	Variables	F	Round
Business service efficiency	0.538	1	Diversified clothing styles	0.492	14
Logistics speed	0.535	2	Great shop structure	0.483	15
Clothing delivery speed	0.526	3	Diversification of payment methods	0.477	16
Logistics information	0.525	4	Great web design	0.46	17
Delivery service	0.523	5	Quality	0.459	18
Payment security	0.518	6	Personalized service	0.455	19
Packing	0.516	7	Sales volume	0.452	20
Details	0.512	8	Brand	0.452	21
Protection	0.512	9	Price	0.443	22
Sale	0.507	10	fashion style	0.442	23
After Service	0.499	11	Offline Shops	0.385	24
Smoothness	0.499	12	Shipping fee	0.352	25
Simplicity	0.496	13	Seller location	0.327	26

Due to the limited sample space, the paper can't select all the influencing factors for analysis, so the top eight influencing factors are selected according to the ranking in Table 2: packaging, business service efficiency, delivery speed, logistics information, delivery attitude, logistics speed, payment security, and details.

The comprehensive evaluation score F can better reflect the influence of each factor on consumers' decision to make online clothing purchases. The larger the F value, the greater the impact on the online clothing purchase decision.

Cluster Analysis

Then, the data is first standardized, and the original data of the eight factors are standardized by the Z-score method to eliminate the dimensional relationship between the variables. According to the K-means algorithm, the data of eight variables normalized by the Z-score method are clustered and analyzed, and three different types of online clothing consumer groups are obtained.

Table 3. Consumer group classification

Factors	Consumer Groups		
	1	2	3
Business service efficiency	0.70167	-0.25176	-1.50613
Logistics speed	0.72131	-0.21150	-1.64765
Clothing delivery speed	0.75127	-0.32039	-1.50585
Logistics information	0.72189	-0.25595	-1.55599
Delivery service	0.75169	-0.33141	-1.48394
Payment security	0.72159	-0.26188	-1.54267
Packing	0.65449	-0.15260	-1.57756
Details	0.69355	-0.27527	-1.43321

Observing the final clustering results, the first category of consumer index is the best, the second category is the second, and the third category is the least ideal. The final class center value indicates that the three different consumer groups have different degrees of attention to the factors affecting each online clothing purchase decision. The larger the value of the variable, the more the consumer group pays more attention to this factor. As can be seen from Table 3, different consumer groups have significantly different levels of attention to the above eight influencing factors.

The first category of consumers attaches great importance to all eight factors: packaging, business service efficiency, delivery speed, logistics information, delivery attitude, logistics speed, payment security, and details. Explain that this type of consumer pays more attention to this factor in logistics. This type of consumer accounts for 48% of all samples. The second type of consumers are less concerned about the eight factors and may pay more attention to other factors. This type of consumer accounts for 35% of the total sample. The third category of consumers are also not concerned about the above related factors. Compared with the second category of consumers, they are less concerned and may pay more attention to other influencing factors. The third consumer group accounts for only 17% of the total sample.

Conclusions and Recommendations

In a word, the research on online clothing purchase decision is currently in its infancy in China. Through factor analysis, the refinement and induction of these 26 influencing factors determined that consumers are good at packaging, business service efficiency, delivery speed, logistics information, delivery attitude, logistics speed, payment security, and details. when making online clothing purchase decision. The eight influencing factors such as speed, payment security, and clothing introduction information are more concerned, which proves that logistics factors are important factors in the decision-making of online clothing purchase. The first category of consumers pays more attention to logistics factors, accounting for 48% of the total; The second category of consumers pays less attention to the logistics factors, accounting for 35% of the total; The third category of consumers is less sensitive to relevant factors in logistics, accounting for only 17% of the total.

Maintain a Good Reputation of the Store and Minimize the Perceived Risk of the Consumer

Payment security and buyer information protection are two factors that consumers pay very much attention to. Internet clothing consumers need to spend a lot of time to establish trust with merchants before they reach a deal with the merchant. Therefore, the store should abide by the principle of good faith, improve product quality, improve the security of trading methods, protect buyer information, etc., and constantly improve the reputation of the store and establish a good brand image.

Pay Attention to the Details of the Clothing Products

Pay attention to the details of the clothing products and make a detailed description of the clothing products as much as possible. When the merchants display the clothing products, the details of the clothing are photographed and the models are displayed in a multi-angle display of the characteristics of the clothing products; Describe the list of apparel fabrics, try-on reports, size sheets, and more. Secondly, merchants should have their own unique product description style, which can distinguish them from other stores and impress consumers.

Send Goods on Time to Improve the Quality of Logistics Services

Due to the particularity of online clothing consumption, the seller and the buyer are far apart, and it is necessary to use the logistics company to deliver the clothing products to the consumers. Then the merchant should issue the product in time, select the logistics company with fast delivery speed and the delivery staff's service attitude, and deliver the product to the consumer on time to reduce the waiting time of the consumer.

Improve the Quality of Merchant Services

Online stores should actively communicate with consumers to deal with quality issues or return issues in a timely manner. Merchants should carefully check whether the packaging is complete before shipping. After the consumer purchases the goods, the merchant should issue the goods in time to enable the consumers to receive the products as soon as possible.

Accurate Positioning and Reasonable Pricing

Because online clothing marketing has no major expenses such as store and personnel management, the sales cost has been greatly reduced. Because of the fierce competition in online clothing sales, consumers can easily compare the clothing of other online stores when they consume. This way consumers will be more sensitive to the price of the goods.

In short, when conducting online clothing marketing, merchants should pay more attention to customer experience, reduce consumers' perceived risks, actively classify customer groups, master more consumer information, and formulate reasonable and effective sales strategies.

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