

Study on the Impact Factors of Online Reviews on Female Consumers' Purchase Intention Coding and Refinement based on Grounded Theory

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Abstract

In order to explore the influence factors of online reviews on female consumers' purchase intention, this paper selects the Tmall flagship store of UNIQLO and pehchaolin as a case study, and takes Strauss grounded theory method on exploratory study. Through three encoding process of open encoding, encoding, select the encoding, this paper acquires five primary category: "Information Characteristics", "Involvement", "Trust Propensity", "Product Identity", "Value Realization" five main categories, and puts forward the core concept of the characteristics and function. Finally, this paper structures a hierarchical conceptual model of the influence factors of online reviews on female consumers' purchase intention, which bases on the story line of "phenomenon—scene—action—result".

Keywords

Online Review, Female Consumers, Purchasing intention, Influence factor, Grounded Theory.

1. Introduction

A consumer is usually a natural person who purchases or direct acceptance behavior to meet needs. And in the face of products or services, consumers will naturally produce a series of decision making process. At the same time, Scholars have proposed that only when consumers have the value perception of the product attributes, will there be a willingness to buy it. Due to the gender characteristics of female consumers, there are obvious differences in the product cognition and purchase decisions, therefore, it is necessary to study the influence factors of female consumers' purchase intention.

Online review is one of the most important forms of public praise, usually it displays information as text. In recent years, it appears a variety of manifestations. The main content includes personal information about the product or brand. Research on online reviews, the most is to explore the impact of online reviews on consumers' psychology and behavior. With the impact of online shopping to the traditional purchase form, the study of online reviews will be more in-depth.

On the research direction of public praise, researchers mainly explore the source and destination of public praise. Some hold the view that public praise is the final result of the game between the expected value and perceived value of the consumer, and the other take public praise as the reference factor of the consumer's purchase intention or purchase decision. However, the same as online review, with the development of the network, the new forms of expression and characteristics and the interaction of public praise urges the researchers to do in-depth study of online review.

Therefore, this paper focuses on exploring the relationship between online reviews and female consumers' purchase intention. Through the encoding and abstracting of cross cases and grounded theory, this paper explores the influence factors, structures a hierarchical conceptual model of the influence factors of online reviews on female consumers' purchase intention and provides some enlightenment to enterprises.

2. Related research review

2.1 Related research review

Currently, there are three representative models in the study of online reviews and consumer purchase intention. In marketing, public praise and online reviews play an important role in purchasing intention. According to the attribution theory, people have a certain influence on their own attitudes and behaviors. Chatterjee combines the view of marketing field of public praise or with attribution theory, exploring the influence degree of customer on public praise or online reviews in the whole process from acceptance to the final decision. And proposing the attribution model of online reviews influence on customer, as shown in figure 1.

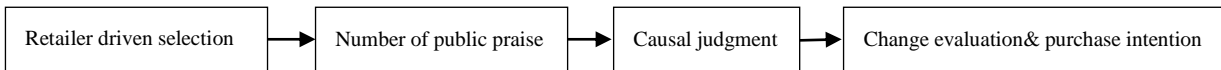


Fig.1. The attribution model of online reviews influence on customer

Because of the existence of the uncertainty of public praise or the authenticity of online reviews, the judgment and decision relied on this information will produce certain risks or unexpected costs. Therefore, based on the Williamson's transaction cost economics theory and Berger and Calabrese's uncertainty reduction theory, Hu takes reviewers 'quality, reviewers 'exposure, product range and time to market as the main influence factors of online consumer reviews, then proposing the affecting factors model of the degree of influence, as shown in figure 2.

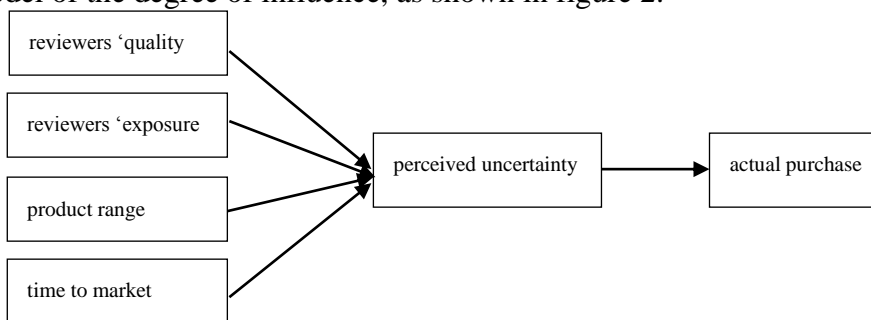


Fig.2. The affecting factors model of the degree of influence

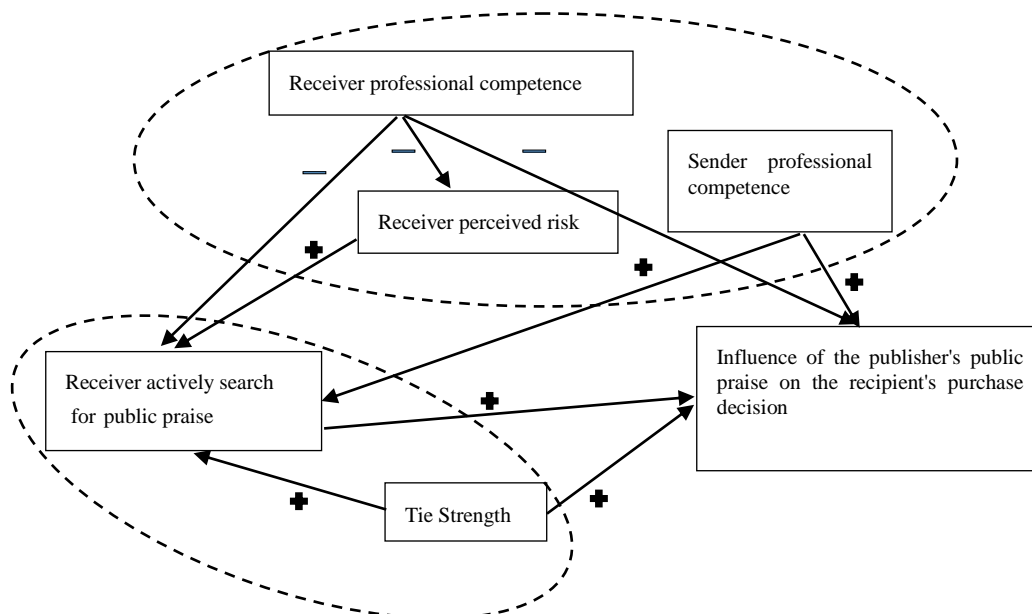


Fig.3. the two factor influence model of receiver purchase willingness and decision-making on the publishers' personal reputation

The audience's feelings and professional level restrict public praise and online reviews. Therefore, from the two aspects of interpersonal factor and not interpersonal factor, Bansal and Voyer explore the effects of the recipients' purchase intention and decision on the personal reputation of publisher, and put forward the two factor influence model of receiver purchase willingness and decision-making on the publishers' personal reputation, as shown in figure 3.

2.2 Research Perspective

This paper is based on the above three research model and prospect theory which hold people tend to be more sensitive than income in the face of loss. So this paper also discusses the influence of online reviews on emotional change and rational change of the receiving party, but apart from the two factor influence model of receiver purchase willingness and decision-making on the publishers' personal reputation, this article only studies the effect of online comment on consumer purchase intention. And according to the characteristics of emotional appeal is often more obvious in female consumers, so this paper mainly explores the purchase intention of female consumers to online reviews.

3. Research design

3.1 Research method

In this study, a case study was conducted via using the coding and refining of grounded theory. This is because: first, grounded theory requests representative case to do in-depth research. And it is a scientific qualitative research method through systematic encoding, inducting and abstracting of the original data to form theory. Thus, this paper is based on a large number of online reviews, selects representative comments of female consumers as data sources and third-order encodes original data to seek and reveal the influencing factors of online reviews on female consumer purchase intention. This is a typical process from the phenomenon to generating theory, which applies grounded theory. Second, the use of multi case study method can form a Mutual Corroboration between cases, which can reduce the deviation of the results for the researcher's subjective feelings or experience and improves the accuracy of the results. Moreover, the multi case study has a positive effect on revealing the relationship between the various phenomena (Elsbach, 2010).

3.2 Theoretical sampling and data collection

According to the multi case study for typical cases of the requirements, this paper combines old online comments with new one and increases age information, pictures, purchase advisory comments, additional comments and reply from the seller and other factors. According to the purchase intention of female consumers, this paper mainly select clothing and cosmetics categories. And in accordance with the 2016 eleven Tmall sales charts, this paper finally this paper selects the Tmall flagship store of UNIQLO and Pehchaolin as a case study. The selected product categories, monthly sales amount and evaluation and other factors can be saw with table 1.

Table1. Product Categories, Monthly Sales Amount, Evaluation and so on

Brand	Sequence Number	Product Name	Monthly Sales Amount	Evaluation	Attention Quantity	Product Quantity
UNIQLO	1	Down vest	2883	17730	887.5 million	1694
	2	Wool coat	3533	3312		
	3	Dress shirt (long sleeve)	6919	1999		
	4	Printed Dress (long sleeve)	2100	728		
	5	Printed T-shirt(short sleeve)	5621	1980		
	6	No rims bra (soft)	5221	12589		
	7	Round collar T-shirt(short sleeve)	7746	2300		
	8	Tight trousers	5381	1132		
	9	Vest (2 pieces)	1152	6871		
Pehchaolin	10	Xiaoquexing Hydrating Mask	57248	257467	327.3 million	99
	11	Herbal whitening sunscreen lotion	4731	99646		

	12	Foam Cleanser	12037	220835		
	13	Toner	23060	254711		
	14	Cream	6047	64375		
	15	Ultra Hydrating Fluid	5620	65720		
	16	Eye cream	2795	25950		

Source: according to the research data

In accordance with the label of "explosion of a single product" and "selling goods", this paper selects 16 kinds of products, and extracts and summarizes 1037345 comments information of the Tmall flagship store. Finally, according to the category, user level, review time, comments` browse quantity, additional comments and reply to the seller, this paper polymerizes and gets 508 analysis of samples. The specific information collected template samples in the table 2.

Table 2. The specific information collected template samples

Comment type	User ID	User level	Product Name	Comment Time	Comment	Browse Volume	Point Praise	Comment Volume	Picture/ Additional Comments	Displays	Seller Reply
Picture	Liu**1	TMALL T4 Master	Printed T-shirt (short sleeve)	17.02.09	My husband 175cm 73 kg, I am 170cm 63kg wear M	4485	2	4	1picture	1	0
Picture	His**c at	Non member	Printed T-shirt (short sleeve)	17.02.12	With a friend buy 2 ahhhh absolutely like it ~ wait for the coming of summer ~	1416	2	6	2picture	0	1
Picture	9***j	TMALL T2 Master	Printed T-shirt (short sleeve)	17.02.09	Friend recommendation So cute ! I like it.	4336	9	1	1picture	2	0

Source: according to the research data

4. Data analysis

Coding is the most important part of the qualitative research method, which is based on the definition of data. At the same time, in the process of encoding of any theory identified from the original data will remain open (Camez, 2009). The coding should reflect the authenticity of the original data, but also refine concept based on the original data the formation. In this paper, the data encoding process is carried out under the Strauss's grounded theory, and strictly abide by the Strauss coding procedures. Specific coding methods are as follows:

4.1 Open Coding

Open coding needs to get through three process of labeled, conceptualized and classified. Labeling takes original data into order number on the purchase of female consumers` elements. And researcher codes each number statement, then extract the initial concept from the code. When researcher get concept from first, and the result is used as a template concept, then compare the concept of template code with the others. The concept which is different with initial concept will be added in concept template. Then the researcher continues to compare, iteration, until the final completion of the conceptualization of the code. Finally, according to the attributes and dimensions of these concepts, the researcher gets some initial categories.

This paper gets 508 samples from the Tmall flagship store of UNIQLO and Pehchaolin, and takes comment sentence as the basic unit. To the greatest extent to avoid the impact of individual factors on the encoding results, this study adopts small group encoding, first label of the original data (Y_X), and the open numbering sequence encoding is brand number (U: UNIQLO, B: Pehchaolin) – product number - reviewer number –statement number. For example, U-1-1-1, refers to UNIQLO - first kinds of products - first reviewers - first sentence in the comments. According to this method, this paper acquires a total of 673 numbered sample sentences, 180 primary codes, 89 codes, 40 concepts. As shown in table 3.

Table 3. Example of code to concept formation (Sort by original data)

Part of the original data (code number and paragraph number)	Primary Code	Code	Concepts
Things are very good, quality and color better than I thought, cheap and practical, like it, my mother said this good, 100points(picture)(y1)(U-1-1-1)	YY1(y1 quality and color better than I thought	Y1 Psychological expectation comparison	C1 Expected value
.....
cheap and practical, like it(picture)(y22)(U-1-13-2)	YY23(y22) cheap and practical	Y23 Cost performance	C6 Perceived value
.....
my mother said this good, 100points(picture)(y54)(U-3-7-3)	YY49(y54) my mother said this good	Y49 Other opinions	C11 Other opinions
.....
During the Spring Festival, it was sent to second days. Thanks for the SF express, thank UNIQLO. The coat color slightly darker than the picture a little thick, long sleeves, not slim, loose and elegant style, love. (additional comments)(y78)(U-5-5-1)	YY62(y78) Experience value	Y62 Experience value	C20 Experience value
.....
The second day of the two colors I can wear the number of broken number (manual goodbye), so that it must be quick to see! UNIQLO shirt to ninety-nine dollars will soon no code.....(picture& additional comments)(y113)(U-7-8-2)	YY85(y113)shocked	Y85 Soul shock	C27 Soul shock
.....
Ready to wear a couple of boyfriend from future(picture)(y156)(U-8-11-1)	YY97(y156)Emotional appeal	Y97 Emotional appeal	C32 Emotional appeal
.....
Probably to buy a ring bra?(additional comments)(y245)(U-9-8-2)	YY153(y245)Competitive comparison	Y153 Competitive comparison	C36 Competitive comparison
.....
Always unable to grab(y344)(B-2-11-3)	YY177(y344) unable to grab	Y177 Scarcity	C39 Scarcity
.....
Sum	180 primary codes	89 codes	40 concepts

Source: according to the research data

Finally, in the 508 samples, according to the attributes and dimensions, comparing 40 concepts, finally this paper extracts the initial category of 19. As shown in table 4.

Table 4. Open coding categorization

Number	category	Initial concepts(part)
1	Other opinions	Active recommendation; Target population; Specification review
2	Product attributes	Discussion on the use of the product; Other uses ;Purchase age
3	Scarcity	Limited purchase; Advance deposit
4	Event activity	Full fanqie; praise back; gifts promotions; Time discount
5	Professional ability	Trial report; Cost performance
6	Emotional appeal	Seeking praise; self-identity; satisfaction evaluation
7	Information judgment	Price; Quality of comment
8	Risk perception	Product defect; customer service problem
9	Abnormal buying behavior	Impulse buying; repeat purchase; ego perception
10	Exclusive brand loyalty	Experiential value; sole recommendation; hedonic value
11	Individual characteristics	Pregnant women; lactation; sensitive muscle
12	Competitive comparison	Competitive product description; competitive analysis
13	Perceived value	Spiritual shock; attitude; performance
14	Expected value	Online and offline comparison; psychological expectation
15	Spiritual value	Attitude display; Mental Echo

16	Review quantity	Monthly purchase volume; cumulative number of comments
17	Critics rank	Non member; Tmall T1 master; Tmall T2 master
18	Comment form	Image; review; business reply; interaction with the buyer
19	Comment text	Personal experience sharing; Similar display

Source: according to the research data

4.2 Axial Coding

The Axial Coding by judging the initial causal hierarchical relationship between categories, finally extracts 19 initial categories through comparing and iterating. This paper sum up information characteristics, involvement, trust propensity, product identity and value realization are 5 main categories. As shown in table 5.

Table 5. The main category of Axial Coding

Relationship category	Main category	Sub category	Relationship connotation
The relationship between consumer and external factors	Involvement	Other opinions	Game between consumers and external factors will directly affect the product involvement degree, there are four main factors: (1) the opinions of others depends on the relationship intimacy or recommended personal attributes which directly or indirectly affect the judgment; (2) product attributes and consumer attributes influence depth degree; (3) scarcity and events through the influence of emotions to create consumer involvement; 4 consumers' personally professional capacity directly affects the evaluation of all kinds of information.
		Product attributes	
		Scarcity	
		Event activity	
		Professional ability	
Consumer psychological change	Trust Propensity	Emotional appeal	The consumer's psychological change is determined by the depth of involvement, Emotional appeal directly to produce a product or brand preference, The different perspective of online reviews causes different acceptance of the products, Cognizing the level of risk directly influence the create of trust.
		Information judgment	
		Risk perception	
The relationship between consumers and products	Product Identity	Abnormal buying behavior	The relationship between the consumer and the brand depth from the following three dimensions: (1) extraordinary purchase behavior and exclusive brand loyalty will affect consumers' psychological change largely, easy to form impulse buying; (2) individual characteristics and brand image matching cause the trying buy; (3) the Integrity of information of competitive comparison affect choose.
		Exclusive brand loyalty	
		Individual characteristics	
		Competitive comparison	
Consumer and product matching results	Value Realization	Perceived value	The result of consumer and product matching is reflected by the degree of value realization of consumers: (1) consumers perceive the value of the product and its expected value of contrast; (2) products for consumers emotional touch.
		Expected value	
		Spiritual value	
Comparative results between consumers and information	Information Characteristics	Review quantity	The following four characteristics of online reviews will directly affect consumer judgment and psychological changes(1)how much comments on behalf of valid purchase amount;(2) level of commentators on behalf of the credibility of comment content;(3) comments form directly help consumers make judgments; (4) comment text content can be matched with individual characteristics, thus affecting the purchase intention.
		Critics rank	
		Comment form	
		Comment text	

Source: according to the research data

4.3 Selective Coding

Selective encoding based on the deep logic relation between vice category with main category, between the main categories formats a "core category", builds a conceptual model according to the logical relationship between "story line".

This paper creates a hierarchical conceptual model of the influence factors of online reviews on female consumers' purchase intention. Namely information characteristics of online reviews is taken as a direct point of purchase intention. The quality level of online reviews influences the involvement of product emotion and information access. Through the judgment of trust tendency on the involvement of information, two aspects of emotion and consciousness of the product identity is formatted. Finally, according to the direction of value realization, the story line of purchase behavior is built. According to the story line, this paper puts forward the core concept of the characteristics and function proposes a hierarchical conceptual model of the influence factors of online reviews on female consumers' purchase intention, which bases on the story line of "phenomenon—scene—action—result". As shown in figure 4.

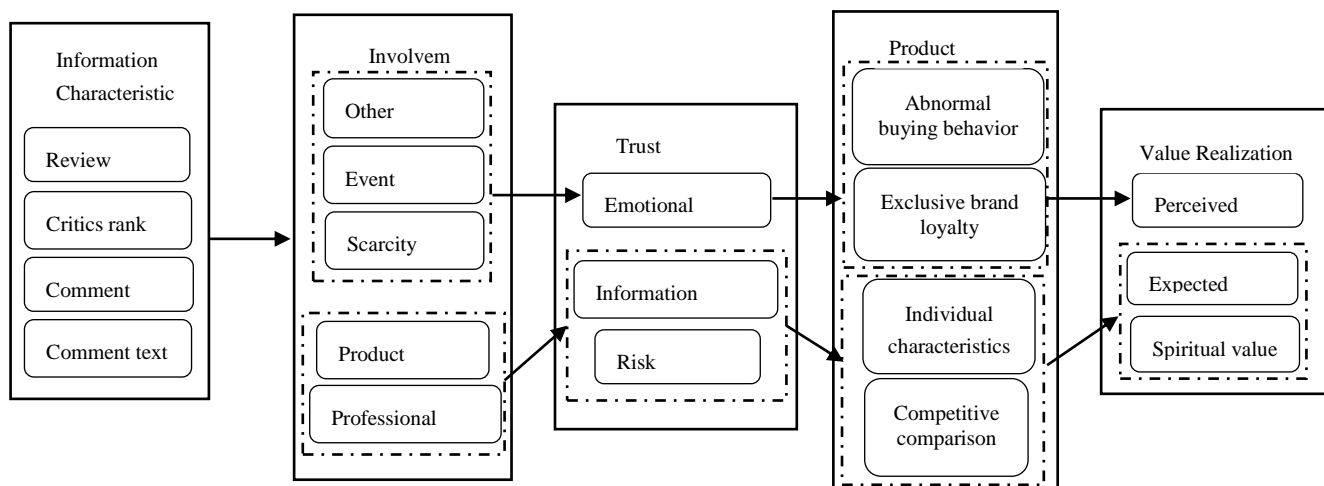


Fig.4. A hierarchical conceptual model of the influence factors of online reviews on female consumers' purchase intention

4.4 Theoretical saturation test

Based on real effective judgement on the research results, from the following 4 criteria: (1) The original data source credibility, reliability and validity;(2)Results formed from grounded methods whether or not there are some omission; (3) The conclusion of the study and experience have no difference; (4) The results of introspection. Based on the analysis of the remaining 68 sample information, comparing the hierarchical conceptual model of the influence factors of online reviews on female consumers' purchase intention, new category is not appeared. The results show that there are no ignored elements or relationships. As a result, the hierarchical conceptual model of the influence factors of online reviews on female consumers' purchase intention of Figure 4 shows is more saturated.

5. Conclusions and implications

5.1 Conclusion

On the basis of previous studies, this paper constructs a hierarchical conceptual model of the influence factors of female consumers' purchase intention. From the two aspects of influence of online reviews on perceptual and rational change of female consumers, according to the order five affecting factors on information characteristics, involvement, trust propensity, product identity and value realization, this paper explores the change process of female consumers' purchase intention.

The information characteristics is direct factors between consumer with online reviews, which is mainly from the four dimensions of the number of reviews, level, form and text content, and affect consumers' positive positioning of product quality, product information of the target group, as well as to product understanding. For example, Tmall's flagship store of Pehchaolin will top the purchase of the crowd by age class in the comments area, so that consumers are compared directly with the product groups, enhancing speed and accuracy of crawling online reviews information. The involvement is the primary result of matching consumer and information feature. The results are divided into two dimensions of emotional change and rational change, consumer purchase intention will usually change after weighing these two aspects, and the purchase intention of the degree or intensity is determined by the proportion of them. In-depth involvement will directly lead to strong changes in consumer psychology, and emotional appeal of products or comments will be appeared. Customers would format information authenticity judgment and uncertainty of risk perception according to the ratio of the product attributes and the personal characteristics. This process is the key level in the model. On the one hand, it may directly appear purchase intention due to the perceptual cognition, on the other hand, it may give in depth inquiry due to rational information. However, whether it is perceptual cognition or rational judgment, once the psychology is confirmed, it will directly produce product identity. At the same time, the depth of purchase intention will depend on the degree of realization of individual value expectation and the contrast of product utility.

5.2 Implications

In this paper, the research on female consumer online reviews for enterprises have the following three aspects: (1) As the basis of information characteristics, the enterprise should provide a good platform for the exchange of information online for consumers, between consumers and enterprises. Especially, for female consumers pay more attention to the details of perception, if company increase purchase of products and the comparison results of the data, it makes faster and more accurate for consumer purchase intention. (2) Although other people's opinions and events have a great role in promoting the purchase intention of consumers, the product publicity of enterprises should be based on objective reality, and it should be described clearly. The online review form of additional comments and pictures helps consumers to learn long-term effectiveness of the product and the quality of after-sales service, which will directly affect the existence of consumer purchase intention or not. (3) Although the online platform provides business and consumer interactive comment form, but its effect is far lower than the interactive communication between consumers, mainly because of the scarcity of enterprise concept and comments which directly reflect the enterprise's customer service quality. Therefore, enterprises should pay attention to consumer feedback. At the same time, the results of this study show that the proportion of perception is higher on the female consumer purchase intention, so enterprises should find more emotional demands of products and formulate the corresponding marketing strategy.

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