

Enterprise Product Information Disclosure Strategy Considering Consumer Network Reviews

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Abstract: Due to the information asymmetry between enterprises and consumers, enterprises can influence consumers' decision by controlling the disclosure of product information. At the same time, with the advent of the Internet Age, the Internet has become an important platform for people to communicate. Online commentary also has a significant impact on consumers' purchasing decisions. This paper constructs a model hypothesis for the information disclosure of products from the two dimensions of quality and matching of disclosure information, and considers the enterprise product information disclosure strategy of consumer network reviews. The effect function of the product quality on the consumer utility and the utility function of the matching degree for the consumer are respectively established, and then the two functions are compared and compared. The study found that for niche products, the mismatch cost is large, and the matching degree information should be selected. For mainstream products, the mismatch cost is small, and the quality information should be disclosed.

1. Introduction

According to the 42nd Statistical Report on China's Internet Development Status released by China Internet Network Information Center (CNNIC) in Beijing, as of June 30, 2018, the number of Internet users in China has reached 802 million, and the Internet penetration rate is 57.7%. It can be seen that with the development of science and technology, China's network coverage has also expanded significantly, the connection speed has been continuously improved, and the use cost has continued to decrease. The Internet will further penetrate into various industries and further integrate with various industries. Based on the high integration of the Internet in all aspects of people's lives, many online platforms have emerged. These platforms allow consumers to comment on the products or services provided by major companies and companies online for online supervision. However, due to the geographical and temporal limitations of the Internet, the virtual nature of online transactions has arisen, and information asymmetry in online transactions has emerged one after another. The existence of information asymmetry makes it impossible for consumers and enterprises to achieve the same product information. Therefore, for consumers after purchasing the experience product, the difference of product information will greatly reduce the desire to re-purchase, which leads to the decrease of the company's profit rate, then the decision of the company for product information disclosure is crucial.

Analysis of the existing data on mainstream products and niche products currently on the market shows that for most mainstream products, companies are more willing to disclose product quality information, that is, highlight the quality advantages of products, such as most durable goods, For example, refrigerators, air conditioners, etc., the quality of products is the most important purchase basis for consumers; for most niche products, companies are more willing to disclose information on product matching, that is, highlight the high demand for products. For example, most of the

mobile phones on the market are complicated in function, which brings a lot of inconvenience to the use of elderly users. Therefore, the design of the old mobile phone has a large button and the sound collection design of the earpiece matches the needs of the elderly. It can be seen that for different user needs, there should be products with different matching degrees.

So far, scholars at home and abroad have conducted fruitful research on the impact of online reviews on consumer purchasing decisions and the impact of product information disclosure in different dimensions on consumer purchasing decisions. However, for the two main players in the market, namely, enterprises and consumers, most of the above research is based on the perspective of making consumers the most effective. In contrast, when the network is prevalent, it is exposed to online comments. It is not known how to modify the disclosure of information about its products. In view of this, this paper will mainly focus on combining the two different information sources of product information revealed by consumers on the network and product information disclosed by the company under the premise of network commenting, and solving the problem by establishing a consumer utility model. Researching what information should be disclosed by companies targeting different types of products can increase consumer purchasing effectiveness.

2. Literature review

2.1 The impact of online commentary on consumer purchasing decisions

Domestic scholar Liu Jiagang[1]used the situational experiment to analyze the impact of corporate public information on consumer behavior by using the structural equation model. The research found that the two types of public information variables, positive information and negative information, have a full mediating effect. Xie Yan[2]through the network evaluation of the questionnaire survey of the consumer purchase decision process, the results, online reviews will participate in every stage of consumer purchase behavior and become an important reference factor for consumers, and absolutely Most consumers will make online comment feedback in their post-purchase behavior, and these online comments will become an important reference and influence factor for other consumers in the purchase behavior, thus forming an information cycle. The importance of review content and the reference value evaluation results show that among the many contents of online reviews, the quality of goods is still the most concerned by consumers, and the most important content in online reviews. At the same time, more than 80% of respondents think that they are in online reviews. The content of the quality of the goods is the most informative. All the above studies have shown that consumers' online comments on the Internet have an important impact on consumer psychology, which affects consumers' decision-making behavior and thus affects corporate profits. However, these studies focus on the impact of consumer reviews on consumer behavior, and little on the impact of consumer decisions on firms.

2.2 Research on the Impact of Corporate Information Disclosure on Consumers' Purchase Decisions

Foreign scholar Arrow [3]proposed "information paradox", he believes that only consumers can use information to know the value of information, and once consumers understand its content, a considerable part of them are reluctant. Make a purchase. This shows that the company's information disclosure affects consumers' purchasing behavior, which further has an important impact on the company. Bearde, William, and Shimp [4]pointed out that when consumers are not sure about the quality and performance of a product, they can increase their awareness of the product through price, warranty, and other information, reduce perceived risk, and increase perception. value. The above research illustrates the impact of corporate information disclosure on consumers' perceptions and thus their purchasing decisions. However, these studies mainly study the impact of corporate information disclosure on consumer behavior, and do not focus on the fact that consumer decision-making in turn affects the information disclosure behavior of enterprises. This is the main research of this paper.

2.3 Two Dimensions of Product Information Disclosure

Yu Liping et al [5] found that: consumer---site relationship, online comment number, online comment quality and consumer online purchase intention are positively related, online review recipient professional ability, online comment reception Involvement and online review recipients are significantly correlated with perceived risk. Ji Guojun et al [6] research and analysis that the disclosure threshold of quality information under different disclosure methods is related to disclosure cost, cross-price elasticity, potential demand of channels, etc., and the greater the disclosure cost, the more the motivation for quality disclosure small. Wang Xiaotong et al [7] found that the quality of comments (including the sender's objectivity, description integrity, product feature richness, etc.), the number of comments with graphs, perceived risk will positively influence consumers' purchasing decisions; Dependency patterns also affect consumer adoption rates, and those with higher anxiety scores tend to be more susceptible to commentary and require more comments to help make purchase decisions. The above research mainly focuses on product quality information and matching information to reveal the impact of information disclosure on these dimensions on consumers.

In summary, online commentary has an important impact on consumers' shopping decisions, and because of the existence of asymmetric information, corporate information disclosure is crucial, affecting not only consumer behavior, but also corporate decision-making. However, domestic and foreign scholars mainly study the impact of online commentary on consumer decision-making, and do not consider how consumer behavior affects corporate information disclosure, and we will study the information provided by consumer network reviews from the perspective of quality and matching. Enterprise product information disclosure strategy.

3. Theoretical modeling

3.1 Model assumptions and establishment

Many studies have proven that product quality information will have an impact on consumers' purchasing decisions. For example, Ji Guojun, Hu Limei et al. [8] show that the asymmetry of quality information between enterprises and consumers leads to weaker willingness of consumers to pay, and may even lead to market failure. There are also many studies that prove that different product matching degrees will have different effects on consumers. For example, Eric K. Clemons, Guodong (Gordon) Gao, and Lorin M. Hitt [9] show that companies offering targeted products that make consumers react to extreme reactions will make growth faster.

According to the questionnaire survey, 84.7% of the 85 questionnaires reached a medium-to-high level of familiarity with online reviews. Consumers believe that the need for the existence of online reviews reaches 90.6%. Among them, 91.76% of consumers pay attention to the comment function. The main reason is to reduce the risk of purchase. The main reason is to prevent misunderstanding of products; support decision-making and guide consumption. When the favorable rate of consumer objects reaches 98% and above, 78.82% of consumers will increase their desire to purchase. When the rate of bad reviews of commodities reached more than 1%, 97.65% of consumers chose to abandon consumer behavior. In addition, 10.59% of consumers are affected by online reviews at any time. It can be seen that online reviews have a certain driving effect on consumers' purchasing decisions. However, when researching the impact of corporate product information disclosure, many studies will miss the influencing factors of online network reviews to consumers' purchase decisions, and only conduct a single study from product quality or product matching. Product quality and product matching are compared between two dimensions. Therefore, this article will use some of the factors in the online review to reflect the consumer's expected quality of the product through other consumers' online reviews. The variables of this model are shown in Table 1.

The model of this paper will solve the impact function $a(q)$ and the matching degree of the product quality for the consumer's utility $u' = v - (1-x)t - p$, and compare the product quality and matching degree respectively. The amount of increase in consumer utility generated by a change within a unit, the threshold is obtained, and the company's disclosure decision in the corresponding

situation is obtained.

Table 1 Model parameters and meanings

v	Consumers' highest willingness to pay
p	price
x	matching degree, $x \in (0,1)$
t	Single customer's mismatch cost
q	quality, $q \in (0,1)$
q_0	quality, $q_0 \in (0,1)$
$a(q)$	Utility impact function on quality
u	Consumer utility

In fact, consumers generally like high quality and high matching products, but they may give different degrees of decisive influence on different qualities and different matching dimensions. Therefore, assuming there are homogeneous consumers in the market (can be seen as having only one consumer), they have the same willingness to purchase v for the product. The unit line segment is used to indicate the relative distance between the consumer's preference and the product. The consumer's mismatch cost at the relative distance $(1-x) \in (0, 1)$ is $t(1-x)$.

According to the data in the survey, when consumers know about products and brands through advertisements and other channels, they have a preference for products and brands. 60% of consumers' purchase decisions are not affected by online reviews. When only one party's preferences are formed in brands and products, 10.59% of consumers will not receive the impact of online reviews. It can be seen that the product signals revealed by the brand and products have a positive effect on the quality of the consumer's estimated product. In addition, the previous survey results also indicate that the deviation rate of the product information reflected in the comments also has a certain impact on consumer purchases. Therefore, this paper introduces variables such as comment quality signals. Assuming the relative distance between the quality and the product quality $q \in (0,1)$, consumers can generate their own expected quality for the product information based on the number of online comments and the quality signal of each comment before purchasing the product. Assume that the expected quality of the product [10], due to $q \in (0,1)$, and the greater the quality, the greater the utility of the consumer on quality, that is, when $q=1$, the maximum value is reached, and when q is larger, the perceived utility of the consumer The slower the increase. Therefore, this paper builds a quadratic function based on the previous literature. The function integrates to 1 on $(0,1)$, and the function image is shown below. From this, the consumer's utility function can be derived:

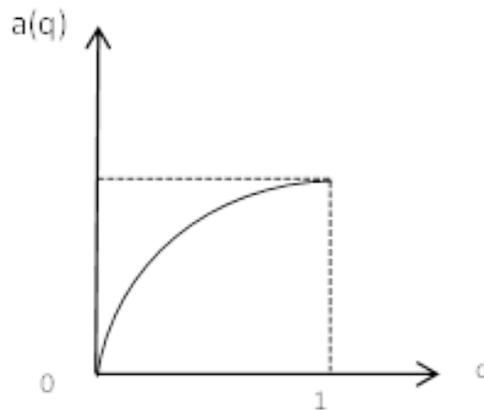


Figure 1 Function image

3.2 Model Solution

This paper considers the function of $a(q)$ to explore the degree to which each unit of q changes will bring quality effects to consumers, thus reflecting the extent to which product quality affects

the purchasing effectiveness of consumers. Therefore, (1) is obtained, that is, when the product matching degree is unchanged, considering the quality, the utility of the consumer increases whenever q is increased by one unit. Assume that the actual quality of the product meets the consumer's expected quality.

Deriving the utility function can determine the amount of change that can be applied to the consumer when each unit is changed, thereby reflecting the degree of influence of the product mismatch on the consumer's purchasing utility. That is, when the product quality does not change, considering the degree of matching, whenever the x is increased by one unit, the consumer's utility function will increase by t .

In order to study what kind of information should be disclosed by different companies for their own products, this paper has the following two situations:

(1) When $t > -2q_0 + \frac{8}{3}$, that is, the increase in the product matching degree when the consumer utility is greater than the product quality change by one unit increases the consumer utility, meaning that the larger the t , the greater the mismatch cost of the product, the product The greater the mismatch, when it is a niche product, the company should disclose the matching information of the product, thereby increasing the purchasing effect of the consumer and prompting the consumer to make purchasing decisions.

(2) When $t < -2q_0 + \frac{8}{3}$, that is, when the product quality changes by one unit, the increased consumer utility is greater than the product matching degree, and the increase in the consumer utility means that the smaller the t , the smaller the product mismatch cost, the product The greater the matching degree, that is, when it is the mainstream product, the enterprise should disclose the quality information of the product, thereby increasing the purchasing effect of the consumer and prompting the consumer to make purchasing decisions.

4. Conclusion

This paper considers the enterprise product information disclosure strategy of consumer network reviews, and constructs model hypotheses based on the quality and matching degree of disclosure information for product information disclosure. Suppose there are homogenous consumers in the market, respectively, to establish the impact function of product quality on consumer utility and the utility function of matching degree to consumers, and then the two functions are separately derivation and the results are compared.

The research shows that: (1) When the product quality is constant, we mainly investigate the matching dimension. When the standardized matching degree x is increased by one unit, the consumer's utility function will increase by t ; when the product matching degree is not Change, we mainly look at the quality dimension, whenever the q increases by one unit, the consumer's utility function will increase. (2) When the product is a niche product, its mismatch cost is large, and the matching degree information should be selected, and the greater the mismatch cost, the better the disclosure matching information; (3) when the product is the mainstream product, The mismatch cost is small, and the quality information should be disclosed, and the smaller the mismatch cost, the more favorable the disclosure matching information.

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