

REVIEW ARTICLE

RESEARCH ON THE INFLUENCE OF PRODUCT INFORMATION ON CONSUMERS' WILLINGNESS TO SHOP ONLINE

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ABSTRACT

In this paper, ELM is used to divide clues into two types: central-path clues and edge-path clues. And considers the influence of gender and perceived information persuasion level on the influence of product information on consumers' online shopping intentions. This article uses scenario simulation experimental methods to develop consumers' online shopping willingness to purchase products. Our research shows that: information anchors significantly affect consumers' online shopping intentions; gender and perceived-information persuasion level can positively moderate the influence of information anchors on consumers' online shopping intentions.

KEYWORDS

Product information, central path clues, edge path clues, elaboration likelihood model (ELM), consumers online shopping intentions

1. INTRODUCTION

In actual judgment and decision-making, the anchor point is not only a specific value, but text clues, picture clues, video clues, and others become the basis for decision-making. In this process, the anchor point triggers the anchoring effect, prompting individuals to produce biased results. In particular, their research on the influence of the anchoring effect on consumers' purchase intention focuses on using price as an anchor. The product information involves complex and comprehensive clues about product quality, function, guarantee and service. There are many factors that affect a consumers' willingness to buy—for example, product brand, word of mouth, service, etc.(Lu and Zhuang, 2021). However, there is less research literature on multiple factors.

The elaboration likelihood model (ELM) model was proposed by Petty and Cacioppo in 1979. It can help explain how the generation of consumers' online shopping intention is based on the evaluation of the most important information or on marginal cues of the product and describes the information processing path (Kotler and Keller, 2016). Shahab et al. (2021) pointed out that several constructs have not been utilized with ELM, but they can certainly be used in the context of new technologies. For example, telepresence, perceived augmentation quality, esthetic, entertainment, personal innovativeness, novelty seeking, consumer inspiration, nostalgia and wow-effect. In the context of online shopping, consumers' purchase intention is more dependent on the perception of product cues.

Therefore, the product information can be divided into two categories by using the ELM model. The first type of product information is the text clues with a high degree of detail, namely the central path clues. The second type of product information is visual cues with low level of detail of important product information, namely edge path cues (Su, 2022). This paper believes that consumers of different genders have different perceptions of product information and decision-making mechanisms, and the level of perceived information persuasion will stimulate consumers to different degrees of purchase intention. Therefore, this paper proposes that gender and the level of perceived information persuasion will moderate the relationship between product information and online shopping intention. This study enriches the research topics of consumer purchases and enriches the research of ELM model in the field of marketing.

2. THEORETICAL BACKGROUND ANALYSIS AND RESEARCH HYPOTHESES

In the online shopping environment, it is difficult for consumers to truly understand the real experience of products, and to a greater extent rely on product information to make purchase decisions. Situational factors, information-content value and representation have a significant positive impact on a consumer's sense of pleasure and arousal and have a significant impact on consumer purchase intentions through perceived value and trust (Guo et al., 2021). In addition, the order of presentation of information and the magnitude of the presentation of information can trigger the occurrence of anchoring effects, it affects

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subsequent consumers' willingness to buy products (Cho et al., 2017). There are differences in the presentation of product feature information, and consumers take different information processing paths, which eventually leads to different behavioral responses. Mead and Hardesty (2018) prove that the unique design of web pages can attract the attention of consumers and generate positive attitudes, thus influence the occurrence of consumer decisions.

Therefore, the following assumptions are made:

H1: Product information have a significant positive impact on consumers' online-shopping intentions. Compared with central path clues, edge path clues have a more significant positive impact on consumer online-shopping intentions.

There are differences in the perception of products and purchase decision-making mechanisms between male and female consumers. Chen Haobo's (2021) study found that, compared with female consumers, the efficiency and convenience of experience of e-commerce websites has a stronger impact on male consumers' online-shopping intentions, and the obstacles encountered in the search and payment process have a weaker impact on male consumers' online-shopping intentions. In addition, male consumers are more likely to make rational decisions than female consumers in online shopping. Male consumers make purchasing decisions based on rational purchasing decision-making mechanisms, while female consumers use more intuitive decision-making mechanisms (Feng and Zheng, 2019). The following assumptions are made:

H2: Product information can have different effects on online-shopping intentions of male consumers and female consumers. Compared with males, female consumers show greater differences in their willingness to shop online.

As a type of information aimed at persuading consumers to make purchasing decisions, relevant product information clues can have an impact on consumers' willingness to purchase online. Wang and Li (2021) believe that the online-shopping environment is affected by a variety of factors, and that knowledge and information sharing in consumer participation behavior affects consumers' perceived respect and expected quality. Moreover, consumers' perceived image value, perceived entertainment value, and perceived social value of published content can significantly affect brand attitudes and can promote purchase intentions (Chen et al, 2021).

H3: There are differences in the persuasion level of product information perceived by different consumers. The higher the persuasion level of product information perceived by consumers, the higher the purchase intention of consumers.

3. EXPERIMENTAL PROCESSES

3.1 Experimental Design

(1) Pre-experiments

The experimental product was the HUAWEI Mate Pad. The two experimental materials that were sorted out were scored by 30 subjects in the form of questionnaires and interviews to rate the details of important product information. The level of detail of important product information was measured using a Likert 7-level scale. The results show that central path clues of the same type of product have significantly higher levels of important information than the edge path cues (mean=1.53, $t=-3.94$, $p<0.05$), the two types of product information were successfully manipulated.

(2) Formal experiments

The subjects selected were college students. In the formal experiment, 160 subjects were randomly divided into two groups, and the number of subjects in each group was controlled at 1:1. Before filling out the questionnaire, the subjects were informed of the purpose and requirements of the experiment. According to the requirements and purposes of the experiment, after excluding invalid data, the number of valid persons in the first group was 68, and the number of valid persons in the second group was 61.

3.2 Variable Measurement

In this paper, domestic and foreign maturity scales and methods were adopted to measure variables with 7-level Likert scale. Through reliability and validity analysis, the questionnaire and each variable have good internal consistency. The detailed description is given in Table 1 below:

In this paper, the discriminant validity was evaluated by comparing the square root of the mean extracted variance and the absolute value of the correlation coefficient. The correlation coefficient between consumer purchase intention and perceived persuasion level is 0.349, which is less than the square root of the average extracted variance value of the variable 0.718. This reflects a strong discriminant validity of the scale.

4. DATA ANALYSIS AND HYPOTHESIS TEST

4.1 Regression Analysis

This paper converts categorical variables into dummy variables (central path clues =1, edge path clues=0; male=1, female=0). The continuous moderating variables that need to be multiplied are centralized. We added a control variable age to Model 1; we added a control variable age

Table 1: Variable measurement of the influence of product information on consumers' online-shopping intentions

| Variable | | Variable measurement | Source | Cronbach's α | AVE | CR |
|---|------------------------|---|--|---------------------|-------|-------|
| Perceived Information Persuasion Level | The central path clues | The product information is complete. | (1) Li et al. (2021) (2) Kotler and Keller (2016) | 0.782 | 0.566 | 0.793 |
| | | The product information is accurate. | | | | |
| | | The product information is timely. | | | | |
| | The edge path cues | Images showing the product are attractive. | | | | |
| | | Images presentation can make the product more familiar. | | | | |
| | | Images presentation can elicit positive attitudes. | | | | |
| Consumers' willingness to purchase online | | I might buy this product. | (1) Sun et al. (2019) | 0.808 | 0.516 | 0.806 |
| | | I tend to buy products from this brand. | | | | |
| | | I will prioritize this product if needed. | | | | |
| | | I may recommend this product to others. | | | | |

and independent variable product information to Model 2; we added a moderator gender and perceived-information persuasion level based on Model 2; we added all variables to Model 6. The regression results of each model are shown in the Table 2.

4.2 Analysis of the Main Effect of Product Information

Model 2 regression results show that product information have a significant negative impact on consumers' online-shopping intentions ($\beta=-0.252, p<0.01$). That is, when product information is the edge path clues, the consumer's willingness to shop online is higher. Through an independent sample T-test, we can see that consumer online-shopping intentions under the condition of the central path clues are 4.497, and consumer online shopping intentions are 5.066 under the effect of the edge path cues—both are higher than the median of 4 and in an above-average level. Among these, the observed value of the t statistic is -2.834, and the corresponding two-sided probability P value is 0.005, less than significance level 0.05. It can be considered that there is a significant difference in the online shopping intentions of consumers under the two path clues conditions. And so, we accept hypotheses H1.

4.3 The Moderating Effect of Gender

The regression results of Model 5 show that gender has a positive moderating effect on the negative impact of product information on consumers' online-shopping intentions ($\beta=0.195, p<0.05$), Model 6 shows the same results ($\beta=0.169, p<0.05$). Further analysis shows that, for females, the model can enhance the negative impact of product information on consumers' online-shopping intentions, males weaken the negative impact of product information on consumers' online shopping intentions. Therefore, we accept hypothesis H2.

4.4 The Moderating Effect of the Persuasion Level of Perceived Information

The regression results of Model 4 show that the level of perceived information persuasion has a positive moderating effect on the influence of product information on consumers' online-shopping intentions ($\beta=0.178, p<0.05$), Model 6 regression analysis also shows the same results ($\beta=0.180, p<0.05$). When consumers perceive the persuasion level of product information to be high, the negative impact of product information on consumer online-shopping intentions is weakened; when consumers perceive that the persuasion level of product information is low, the negative impact of product information on consumer online-shopping intentions is enhanced. We thus accept hypothesis H3.

5. CONCLUSIONS AND SUGGESTIONS

5.1 Main Conclusions

In order to study the influence of product information on consumer purchase intentions in the context of online shopping, we confirmed that product information significantly affects consumers' online shopping behavior through situational simulation experiment. Further, under the influence of the two types of product information, there are significant differences in consumers' willingness to purchase through online shopping. Further research shows that gender and perceived persuasion level have a positive moderating role in the influence of the product information on consumer purchase intentions. Compared with men, the two types of product information may have a larger perception difference for women, and the difference in online-shopping intention is also larger. Men are willing to spend more effort and energy to rationally analyze product information and make decisions. As for women, they are more dependent on product information, and they pay less effort and energy to make decisions quickly. When the persuasion level of consumers' perceived product information is high, the perceived value is high, and the consumers' willingness to shop online is high; otherwise, the consumers' willingness to shop online is low. The process of consumers perceiving and processing product information is accompanied by changes in emotions and attitudes, and edge path clues can trigger more positive attitudes of consumers, so consumers have a higher willingness to online-shopping intention.

5.2 Marketing Suggestions

Based on the conclusions of the experiment, the following marketing suggestions are put forward in a targeted manner: (1) Businesses should face up to the impact of product information on consumer purchase and choose the appropriate type of product information. (2) Design personalized and targeted product information according to the gender characteristics of consumers. (3) Pay attention to the quality of information and the tangible display level of products, improve the persuasion level of consumers' perception of information.

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| Table 2: Regression analysis results | | | | | | |
|--|---|----------|-----------|-----------|----------|-----------|
| Variable | Consumers' willingness to purchase online | | | | | |
| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 |
| age | 0.079 | 0.122 | 0.087 | 0.100 | 0.125 | 0.104 |
| Product information | | -0.264** | -0.314*** | -0.318*** | -0.265** | -0.318*** |
| gender | | | 0.058 | | 0.039 | 0.042 |
| perceived information persuasion level | | | 0.376*** | 0.426*** | | 0.414*** |
| Product information *gender | | | | | 0.195* | 0.169* |
| product formation*perceived information persuasion level | | | | 0.178* | | 0.180* |
| R-square | 0.006 | 0.074 | 0.213 | 0.238 | 0.114 | 0.269 |
| Adjusted R-square | -0.002 | 0.059 | 0.188 | 0.214 | 0.083 | 0.233 |
| F-value | 0.803 | 5.036** | 8.375*** | 9.696*** | 3.976** | 7.465*** |
| R-square change | 0.006 | 0.068 | 0.139 | .029 | 0.038 | 0.056 |
| F-value change | 0.803 | 9.216** | 10.940*** | 4.675* | 5.303* | 4.640* |

Note: *represents $p<0.05$, ** represents $p<0.01$, *** represents $p<0.001$, the coefficients are standardized values

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