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Research on the Impact of Merchant Response Attribution on Consumer Purchase Intention and the Moderating Role of Review Page Valence

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ABSTRACT

Online product reviews and merchant responses significantly influence consumer purchase behavior, particularly when negative reviews are involved. However, previous research has primarily focused on one specific review, ignoring the textual context in which the review and merchant's response appear. This study explores how the overall perception of consumers on a review page (whether negative or positive reviews dominate) and the merchant's response strategy (internal vs. external attribution) affect consumers' purchase intention. Using a 2×2 experimental design, the study found that, compared to external attribution, merchant's response with internal attribution significantly reduces consumer risk perception, which in turn lowers the negative impact on purchase intentions. Additionally, when consumer's overall perception to evaluation page is negative, compared with external attribution, the negative effect of the merchant's internal attribution response on the consumer's purchase intention will be weakened. This study enriches the theoretical framework on online reviews and offers practical guidance for merchants on how to respond to negative reviews.

KEYWORDS

online product reviews; merchant response strategy; consumer purchase behavior

1 Introduction

Word-of-mouth is an important reference for consumer purchasing decisions. With the rapid development of e-commerce, online product and service reviews significantly affect consumer risk perception or brand trust, especially when a product gets negative reviews. Because the negative reviews will lead to heightened perceived risks, thereby lowering purchase intention (Wang Tian, 2016).

When faced with negative reviews, merchants will adopt various strategies, such as economic compensation or apologies, but the most noticeable strategy is the online response. Previous studies have shown that different response strategies, such as ignoring, apologizing, rejecting, or explaining, will affect consumer risk perception and purchase intention. For instance, Zhang Qian(2016) found that rejection responses heighten consumer perceived risk, while apologies, explanations effectively reduce perceived risk.

However, existing studies mainly focus on the effectiveness of merchant responses to a specific review, neglecting the environment in which the review appears. In actual online shopping scenarios, consumers are exposed to multiple reviews, and a negative review can have different effects depending on its context. A significant factor influencing consumer decision-making is the comparison of the positive and negative reviews' number on a review page. Purnawirawan et al. (2012) found that when reviews are overwhelmingly positive or negative, the review page provide consumers with strong decision-making cues, affecting their purchasing decisions. This paper addresses the lack of research on the context of reviews, particularly focusing on how the positive and negative reviews' number on a review page impacts the relationship between merchant responses to a negative review and consumers decision-making.

2 Theoretical Basis and Research Hypotheses

2.1 Service Recovery Theory

Service recovery theory examines how merchant can regain consumer trust when encounter service failure. It suggests that while service failures may be inevitable, effective recovery actions can alleviate consumer dissatisfaction and enhance brand loyalty. In online reviews, merchant responses to negative reviews represent direct service recovery, potentially reducing consumer risk perception by explaining the issue and offering solutions. (Zhang Qian, 2016)

2.2 The Impact of Merchant Responses on Consumer Purchase Intentions

When consumers browse online product reviews, merchant's responses can be seen as a signal that merchant put attention to customers' feedback. Yuan Wenjuan (2011) have a research on hotel reviews and found that online feedback can increase hotel sales. believes that when consumers see others are mistreated, they will imagine similar emotions experience themselves. Therefore, the merchant's response to negative reviews can influence potential consumers' purchase intentions.

When encounter with negative reviews, the length, content characteristics, attitude of merchant's responses can significantly impact consumers' brand impression and purchasing decisions (Yuan Wenjuan, 2011). Scholars have conducted extensive research on merchant's response strategies. For example, Li Hong&Zhang Cui, (2013) explored the impact of whether a merchant apologizes and the attribution of responsibility on consumers' product attitudes. Tao Xiaobo (2013) proposed that rational and emotional feedback strategies of merchants will influence consumers' purchase decisions. Wang Tian (2016) examined four types of merchant responses: "No response, simple apology, internal attribution explanation, and external attribution explanation," and their effects on consumers' purchase intentions.

This paper believes that when faced with negative reviews, merchants who adopt proactive response measures will positively affect potential consumers' purchase decisions. However, the attribution of cause of service failure can affect whether consumers perceive the merchant as responsible. According to attribution theory, when individuals attribute the cause of negative outcomes to themselves, they convey a sense of responsibility to others (Forbes et al., 2005). Therefore, when merchants attribute the problem to themselves (internal attribution) in response to negative reviews, consumers will perceive the merchant as more responsible, which enhances their purchase intention. In contrast, attributing the problem to other factors (external attribution) makes consumers perceive the merchant as lacking responsibility, which lowers their purchase intention. Based on this analysis, we propose that:

H1: The way merchants respond to negative reviews influences consumers' purchase intention. Internal attribution response are more likely to increase consumer purchase intention compared to external attribution response.

2.3 The Mediating Effect of Consumer Perceived Risk

Consumer perceived risk refers to the subjective assessment of potential uncertainty and loss that consumers make during the decision-making process. Zhu(2016) points out that individuals have subjective perceptions of certain things—they will anticipate the potential risk before some events happen. Perceived risk affects consumers' purchasing decisions. When consumers make a decision about purchasing a product or service, the greater uncertainty of the consequences they care about, the higher the perceived risk (Forsythe & Shi, 2004).

In an online shopping environment, where consumers cannot physically interact with the product and experience, uncertainty is higher, and thus the perceived risk also increases. Jin Miao et al. (2005) argue that online retailers' inadequate pre-sale and post-sale services and lack of guarantees create risks that lead to consumer perceived risks, which in turn lower consumer purchase decisions.

In this study, we focus on how merchants can reduce consumers' perceived risk by responding to negative reviews. When merchants adopt an internal attribution response strategy (e.g. admitting that the fault is due to their own actions and promising improvements), it demonstrates the merchant's sense of responsibility and sincerity in solving problems. From an empathy perspective, potential consumers will believe that if a similar service failure occurs, they will receive effective compensation for their losses.

As a result, this reduces consumers' perceived risk and increases purchase intention. However, if the merchant adopts an external attribution response strategy, consumers may perceive that if a similar situation occurs, the merchant will shift the responsibility to external factors, and their interests may not be protected, which will lower their purchase intention. Based on the above discussion, we propose that:

H2: Consumer perceived risk mediates the relationship between merchant response strategy to negative reviews and consumer purchase intention.

2.4 The Moderating Effect of Review Page Valence

In real-world online shopping environments, consumers typically refer to multiple reviews rather than just one. Therefore, the understanding formed after processing multiple review pieces ultimately affects consumers' purchasing decisions. Purnawirawan et al. (2012) found that, compared to a neutral mix of reviews (i.e., a balance of positive and negative reviews), when positive reviews or negative reviews are overwhelmingly in the majority, consumers perceive the review information as more valuable and influential.

Therefore, this paper argues that the effectiveness of a merchant's response to a specific negative review is influenced by the ratio of positive to negative reviews on the page. When negative reviews dominate on the page, it gives consumers an overall perception of negative review valence, which weakens the effect of the merchant's response in reducing consumers' risk perception, ultimately lowering their purchase intention. When positive reviews dominate, it gives consumers an overall perception of positive review valence, which strengthens the effect of the merchant's response in reducing consumers' risk perception, ultimately increasing their purchase intention. Based on this, the following hypothesis is proposed:

H3: The perception of review valence on the review page moderates the relationship between merchant's responses and consumer risk perception. When the review page gives consumers an overall negative review valence perception (i.e., negative reviews are in the majority), it weakens the effect of the merchant's response in reducing consumers' risk perception, thus lowering purchase intention.

When the review page gives consumers an overall positive review valence perception (i.e., positive reviews are in the majority), it strengthens the effect of the merchant's response in reducing consumers' risk perception, thus increasing purchase intention.

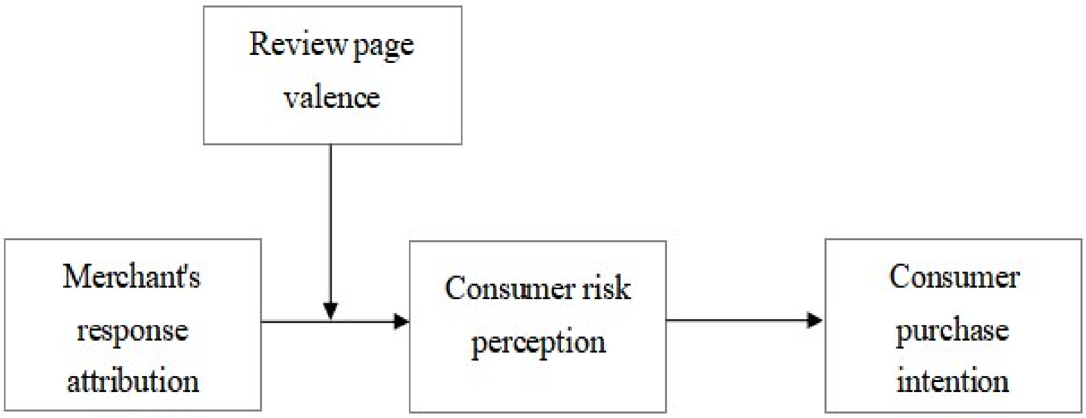

Figure 1 Research model

3 Research Design, Experimental Process, and Data Analysis

This study used a 2×2 between-subjects experimental design to examine the impact of merchant's responses on consumers' purchase intention, as well as the moderating effect of review page valence and the mediation mechanism.

3.1 Sample Description

A total of 126 questionnaires were randomly distributed through the online survey platform "Wenjuanxing", and 93 valid responses were received (with a valid response rate of 73.8%). Among the participants, 37 were male, 56 were female, with an average age of 27.

3.2 Experimental Process

The experiment simulates an online fruit shopping environment. After entering the questionnaire, each participant views experimental images containing 7 reviews, along with the merchant's response to the last review.

The reviews cover two dimensions: fruit quality (freshness and taste) and service quality (packaging and delivery). Based on the number of negative reviews, the situation will be divided into two conditions: one where negative review dominate (4 negative reviews, 3 positive reviews), and one where positive review dominate (5 positive reviews, 2 negative reviews).

In all experimental images, the last review is set as a negative review, and the merchant's response below the negative review will be designed from two perspectives: internal attribution (admitting the problem is caused by the merchant) and external attribution (blaming external factors such as logistics or weather). Based on these experimental materials, 4 experimental conditions were created, and each participant was randomly assigned to only one condition.

After browsing the experimental material page, the participants completed a questionnaire using a 7-point Likert scale. The questionnaire first asked participants whether they think negative reviews dominated the review page they viewed, and whether the merchant's response to the negative reviews was based on internal or external attribution, to verify whether the experimental materials successfully activated the participants' relevant cognition. Then, participants were asked to fill out the consumer perceived risk scale and purchase intention scale (Li Yao & Fang Heyuan, 2020). To avoid biases caused by product attributes (hedonic and utilitarian) in participants' cognition and decision-making, product attributes were also measured (Chen Rui et al., 2017). Finally, demographic information such as age, gender, and education level of the participants was collected.

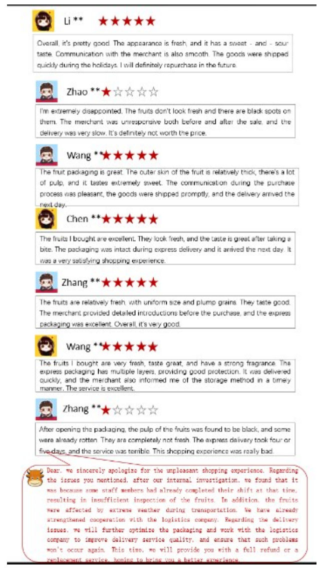

Figure 2 Positive evaluation × internal attribution response

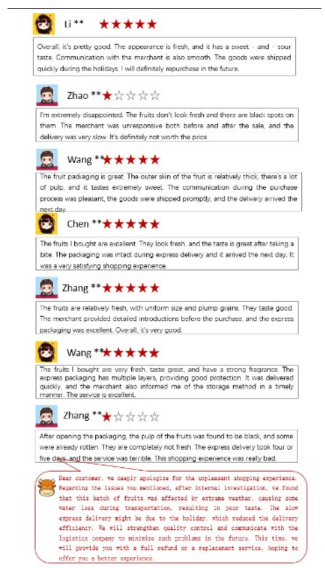

Figure 3 Positive evaluation × external attribution response

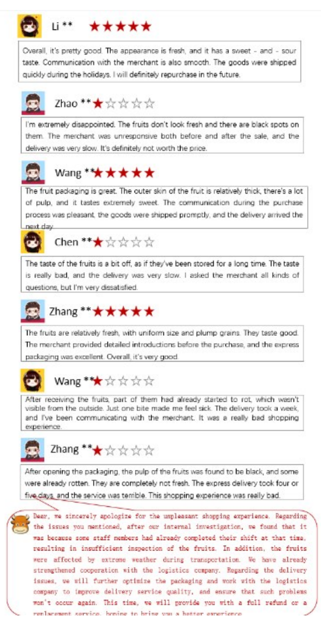

Figure 4 Negative evaluation × internal attribution response

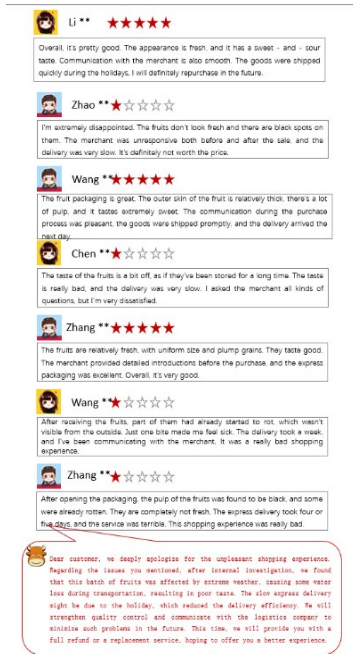

Figure 5 Negative evaluation × external attribution response

3.3 Data Analysis

The data were analyzed using SPSS 26. First, a one-sample t-test was used to verify whether participates' awareness related to the review valence and merchant response attribution were successfully activated. The results showed significant differences between positive reviews (M=1.6, SD=1.07) and negative reviews (M=6, SD=1.26) (t=-17.4, $p < 0.05$), and also between internal attribution (M=2.41, SD=0.92) and external attribution (M=5, SD=1.21) (t=-11.52, $p < 0.05$).

Next, a one-way analysis of variance (ANOVA) was conducted to test the impact of merchant's response attribution on consumer purchase intention. The analysis showed that merchant's response attribution significantly influenced consumer purchase intention ($F(1, 87) = 8.98$, $p < 0.05$, $\eta^2 = 0.94$). The difference of estimated purchase intention mean between internal attribution responses and external attribution responses was 0.97, with a 95% confidence interval from 0.33 to 1.62. Therefore, internal attribution responses were more likely to enhance consumer purchase intention than external attribution responses. Hypothesis 1 is supported.

Next, regression analysis was conducted using the SPSS macro-PROCESS (Model 4) to test the mediating effect of consumer perceived risk. The results showed that, when consumer perceived risk was dependent variable, merchant's response attribution had a significant effect on perceived risk (β=1.15, $p < 0.05$). When purchase intention was dependent variable, merchant's response attribution did not significantly affect purchase intention ($p > 0.05$), but perceived risk had a significant effect on purchase intention (β=-0.61, $p < 0.05$). Thus, perceived risk fully mediated the relationship between merchant's response attribution and consumer purchase intention. Hypothesis 2 is supported.

Finally, regression analysis was further conducted using the SPSS macro-PROCESS (Model 7) to test the moderating effect of review page valence. The results showed that the interaction between merchant's response attribution and review page valence significantly affected consumer perceived risk ($p < 0.05$). In the scenario where positive reviews dominated (valence = 0), the mediating effect of perceived risk on consumer purchase intention was -0.16, with a 95% confidence interval of [-0.59, 0.23]. In the scenario where negative reviews dominated (valence = 1), the mediating effect of perceived risk on consumer purchase intention was -0.89, with a 95% confidence interval of [-1.33, -0.5]. Therefore, merchant's response attribution moderated the mediating effect of review page valence on the relationship between perceived risk and consumer purchase intention. Hypothesis 3 is supported.

Table 1 Results of the Moderating Mediating Effect

Regression Equation		Fit Index		Regression Coefficient Significance		
Outcome Variable	Predictor Variable	R^2	F	β	95%CI	t
Perceived Risk	Response Attribution	0.68	26.36	0.26	[-0.35,0.87]	0.85
	Evaluation Valence			2.03	[1.36,2.69]	6.05
	Valence × Attribution			1.21	[0.33,2.1]	2.74
Purchase Intention	Response Attribution	0.52	15.32	-0.27	[-0.79,0.25]	-1.05
	Perceived Risk			-0.61	[-0.76,-0.46]	-8.01

4 Conclusion and Discussion

The impact of online product reviews and merchant's response on consumer purchase decisions has been widely studied. However, previous research has mostly focused on examining the effects of a single review and merchant response, neglecting the textual context of the review's location on the page. This study explores how the number of negative and positive reviews on a given page influences consumer perception of review valence, and how merchant response attribution affects consumer purchase decisions in different review contexts. This study found that, compared to pages with a majority of positive reviews, when negative reviews dominate the page, merchant internal attribution has a weaker negative impact on consumer purchase intention than external attribution. This finding further enriches research on online review environmental factors and provides a new perspective on understanding how merchant response strategies affect consumer purchase decisions in complex review contexts.

The conclusions of this study are more aligned with the real-world online shopping environment, where consumers often refer to multiple reviews. Therefore, this research also provides some practical guidance for merchants on how to respond to negative reviews, suggesting that merchants should consider the overall review valence of the review page when responding to specific negative reviews. However, online review environmental factors are complex and multidimensional. In addition to the perception of review page's valence influenced by the ratio of positive to negative reviews, factors such as the sequence of positive and negative reviews and the emotional tone of the review content also affect consumers' overall perception of the review page's valence. Future research could further consider the comprehensive impact of multiple environmental factors on consumer purchase decisions, continuing to enrich the research on online reviews.

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References

[1] Forbes L. P., Kelley S. W., & Hoffman K. D. Typology of e-commerce retail failures and recovery strategies[J]. Journal of Services Marketing, 2005, 19(5), 280-292.

[2] Forsythe S. M., & Shi B. Consumer patronage and risk perceptions in Internet shopping[J]. Journal of Business Research, 2004, 56(11), 867-875.

[3] Purnawirawan N., Pelsmacker P. D., & Dens N. Balance and Sequence in Online Reviews: How Perceived Usefulness Affects Attitudes and Intentions[J]. Journal of Interactive Marketing, 2012, 26(4).

[4] Zhu Q. The Impact of Characteristics of B2C Retailer on Purchasing Intention—Based on TAM Model[J]. Open Journal of Business and Management, 2016, 04(4), 784-798.

[5] Chen Rui, Chen Huihui, & Zheng Yuhuang. The influence of nostalgia on consumption decisions of hedonic goods and real goods[J]. Nankai Management Review, 2017, 20(6), 140-149.

[6] Jing Miao, Wang Fanghua, & Zhou Ying. Research on the dynamic model of consumers' perceived risk of online purchasing behavior[J]. Industrial Engineering and Management, 2005, (6), 28-32.

[7] Li Hong, & Zhang Cui. Content analysis based on negative reviews of domestic e-commerce websites[J]. Electronic Commerce, 2013, (7), 12-13,23.

[8] Yao Li & Heyuan Fang. The effect of perceived risk on impulsive online shopping behavior: the mediating effect of brand relationship quality [J]. Commercial Economic Research, 2020, (9), 80-83.

[9] Tao Xiaobo. Research on feedback strategy of negative evaluation information in C2C network retail environment[J]. Journal of Beijing Technology and Business University (Social Sciences), 2013, 28(1), 70-74.

[10] Wang Tian. Study on the impact of C2C merchants' negative evaluation responses on potential consumers' purchase intention[D]. 2016, Harbin Institute of Technology.

[11] Yuan Wenjuan. An empirical study of management feedback for online user reviews[D]. 2011, Harbin Institute of Technology.

[12] Zhang Qian. The effect of merchant response on first purchase intention[D]. 2016, Wuhan Textile University.