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Exploring the effects of online customer reviews, regulatory focus, and product type on purchase intention: Perceived justice as a moderator

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ABSTRACT

This study aims to investigate the effects of online customer reviews, regulatory focus, and product type on purchase intention, as well as the effect of whether purchase intention is moderated by perceived justice. Experiment 1 compares the effects of regulatory fit and regulatory non-fit on purchase intention after a consumer is exposed to online customer reviews. Experiment 2 examines whether product type (i.e. 'search goods' versus 'experience goods') moderates the relationship between regulatory fit (or non-fit) and purchase intention for a consumer who has been exposed to online customer reviews. Additionally, in Experiment 2, the moderating role of perceived justice in the link between regulatory fit (or non-fit) and purchase intention is explored. The findings of Experiment 1 indicate that regulatory fit has a more significant effect on purchase intention than the non-fit condition. The results of Experiment 2 also confirm that regardless of regulatory fit, consumers have a lower purchase intention for search goods than for experience goods after exposure to negative online customer reviews. Finally, this study reveals that consumers with high perceived justice demonstrate higher purchase intention compared with consumers with lower perceived justice, regardless of regulatory fit effect or product type.

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1. Introduction

With the busy lifestyle of modern consumers and the popularity of the Internet and smartphones, the total number of online shoppers is increasing every year. According to a survey conducted by the Nielsen Company in April 2015, willingness to use digital retailing options is highest in countries that are still developing their digital infrastructure, particularly in the Asia-Pacific (60% on average), Latin America (60%), and Africa/Middle East regions (59%). By contrast, such willingness trails in Europe (45%) and North America (52%). In addition, an online survey conducted by MasterCard in May 2015 suggests that Taiwan's e-commerce market is booming. Up to 77.6% of Taiwanese people use the Internet to shop, and 94.6% of these people have engaged in Internet shopping over the past three months (MasterCard Company, 2015). This is the third-highest ratio in the Asia-Pacific region (MasterCard Company, 2015). This means that consumers in Asia-Pacific markets have a

stronger tendency towards online shopping, particularly in Taiwan.

When consumers purchase products on the Internet, they often refer to reviews left by individuals who have previously purchased the product to guide their buying decisions (Cheung, Lee, & Rabjohn, 2008; Elwalda, Lu, & Ali, 2016; Liang, 2016). Mudambi and Schuff (2010) have proposed that online customer reviews are a form of electronic word of mouth (eWOM) in the form of user-generated content that is posted on e-vendor or third-party websites. Online customer reviews are an important source of product information (Huang, Chen, Yen, & Tran, 2015) and help businesses obtain critical insights about consumers' attitudes (Dellarocas, Zhang, & Awad, 2007).

Furthermore, eWOM has different effects on consumers' purchase intention, depending on the characteristics of the person receiving the information (Gilly, Graham, Wolfinbarger, & Yale, 1998). Higgins (1997) has noted that individuals can be segmented into two different motivational orientations: promotion-focused and prevention-focused. Consumers with a promotion focus are particularly sensitive to the presence or absence of positive outcomes, whereas consumers with a prevention focus are particularly sensitive to the presence or absence of

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negative outcomes. People will experience regulatory fit when they adopt goal pursuit strategies or engage in activities that sustain their regulatory orientation (Avnet & Higgins, 2006). Additionally, Ludolph and Schulz (2015) confirmed that regulatory fit improves the effectiveness of health messages. For these reasons, the present study seeks to explore the effect of regulatory fit or non-fit on purchase intention in the context of positive and negative online customer reviews.

Numerous researchers (e.g. Jiménez & Mendoza, 2013; Lee & Shin, 2014; Lu, Chang, & Chang, 2014) have indicated that the type of product under scrutiny affects consumers' purchase intention. Peterson, Balasubramanian, and Bronnenberg (1997), for example, divided online products into two types: 'search products' and 'experience products'. The authors proposed that search products are those that can be assessed using information obtained externally. Experience goods, however, are those which must be tested personally by the user. Consumers believe online reviews to be more trustworthy when they contain detailed information about a search product. By contrast, consumers determine the trustworthiness of a review for experience products by measuring the level of reviewer agreement with the content of the review (Jiménez & Mendoza, 2013). Consistent with the findings of Jiménez and Mendoza (2013), the present study uses the product classification method of Peterson et al. (1997) to divide online products into search products and experience products. This study aims to examine the effect of regulatory fit or non-fit on purchase intention and whether such an effect depends on the product type (search goods or experience goods) after reading online customer reviews.

We also acknowledge that there is a low probability of providing services with zero errors (Bitner, Booms, & Tetreault, 1990) and that providing high-quality services and meeting customer demands is critical to the success of a business, particularly when competition is fierce (Webster & Sundaram, 1998). If a service failure occurs, enterprises should listen carefully to the needs expressed by consumers and implement effective service recovery strategies. When done properly, this allows enterprises to establish positive goodwill, customer loyalty, and repurchase intention (Kelley & Davis, 1994). Although service recovery actions are a damage control measure implemented only after a customer expresses dissatisfaction, proper handling enhances customer repurchase intention (Gilly, 1987). Many researchers have used perceived justice theory to examine the extent to which customer satisfaction (Alexander & Ruderman, 1987; Chang, Lai, & Hsu, 2012; Clemmer & Schneider, 1996; Fu, Ju, & Hsu, 2015) and post-purchase intentions (Abbas & Hamdy, 2015; Kuo & Wu, 2012; Wu, 2013) change after a service failure occurs and a service recovery attempt is made. Perceived justice theory encompasses three dimensions: procedural justice, interactional justice, and distributive justice (Blodgett & Tax, 1993). These three dimensions are useful in measuring consumers' perceptions after a service recovery effort. Effective service recovery in response to failures will generate positive eWOM (Maxham III, 2001) and maintain customer loyalty regardless of the type of failure (Kelley, Hoffman, & Davis, 1993). Furthermore, when consumers seek out online reviews, a positive image will be formed in their minds, and this will lead to the possibility of increased purchase intention. Additionally, Sparks, So, and Bradley (2016) confirmed that potential consumers will generate more positive inferences about a service provider's level of trustworthiness and concern for its customers when the service provider responds to customer complaints on third party websites. Specifically, consumers that perceived effective recovery efforts also could also experience high confidence in the product or firm, and their willingness to buy could increase. Most of the previous literature has focused on parties that encountered service failures, but rarely has it explored the perceptions, attitudes, and purchase intention of

third parties. According to the research of Wan, Chan, and Su (2011), a service failure that affects a new customer will influence an observing customer's service evaluation. This issue, therefore, is a critical one for a firm's management. This study also explores the moderating effects of perceived justice on the links between regulatory fit (or non-fit) and purchase intention after conducting service recovery in service failure situations.

2. Research framework and hypothesis development

2.1. Research framework and hypothesis development of Experiment 1

As shown in Fig. 1, Experiment 1 examines the effect of regulatory fit or non-fit on purchase intention when promotion-focused consumers and prevention-focused consumers receive either positive or negative online customer reviews.

Online customer reviews have become a key source of information on the Internet for customers (Kostyra, Reiner, Natter, & Klapper, 2016). Nowadays consumers view online customer reviews as guidance when they purchase products on the Internet (Jiménez & Mendoza, 2013). Consumers also may be affected by either positive or negative reviews, or both (Bonabeau, 2004; Kamakura, Basuroy, & Boatwright, 2006). However, Kumashiro, Rusbult, Finkenauer, and Stocker (2007) indicated that consumers with different regulatory mode orientations have dissimilar concerns and different information processing patterns. In other words, regulatory focus affects the effectiveness of persuasive messages (Sasaki & Hayashi, 2015). Lee and Koo (2015) also proposed that the consumer regulatory mode orientation clearly elucidates the conditions under which positive and negative online customer reviews have a matching positive or negative effect on consumer judgments.

Chang and Chou (2008) showed that the attitudes and behavioral intentions of consumers with different regulatory foci (i.e. promotion and prevention focus) are affected differently by different message types. Specifically, consumers with promotion goals are more sensitive to gains (i.e. positive orientation), whereas consumers with prevention goals are more sensitive to losses (i.e. negative orientation) (Aaker & Lee, 2006; Lee & Koo, 2015). Thus, different goals trigger the selective identification and the placement of trust in information that assists people in achieving their goals. Consumers experience fit when they adopt goal pursuit strategies or engage in activities that are consistent with their regulatory orientation (Avnet & Higgins, 2006). When consumers' behavior helps them achieve regulatory fit, it produces positive feelings, thereby strengthening their preceding behavior (Hong & Lee, 2008). Additionally, some researchers (e.g. Ashraf & Thongpapanl, 2015; Ashraf, Razzaque, & Thongpapanl, 2016; Hsu & Chen, 2014) have found that when consumers experience fit, they have a favorable attitude towards products and a higher intention to make a purchase. Specifically, when consumers experienced fit, they became more engaged (Higgins, Idson, Freitas, Spiegel, & Molden, 2003); they have a perception of feeling right, which in turn affects subsequent product judgments (Malaviya & Sternthal, 2009) and purchase intention (Ashraf & Thongpapanl, 2015). In contrast, consumers' experience of regulatory misfit has been confirmed to promote less favorable attitudes (Lee & Aaker, 2004), and reduce consumers' willingness to pay (Avnet & Higgins, 2006). In summary, regulatory fit is not only a magnifier of consumers' attitudes, but also an intensifier of behavioral intentions. Based on the above discussion, the following hypotheses are constructed:

H1. The regulatory fit significantly affects consumer purchase

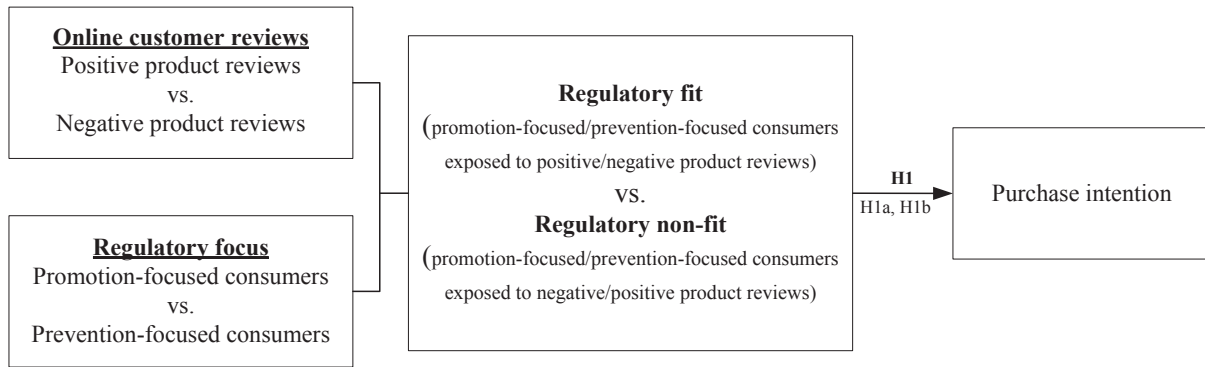


Fig. 1. Research framework of Experiment 1.

intention.

H1a. When promotion-focused consumers are exposed to positive product reviews (i.e. regulatory fit), they have significantly stronger purchase intention than they do when exposed to negative product reviews (i.e. regulatory non-fit).

H1b. When prevention-focused consumers are exposed to negative product reviews (i.e. regulatory fit), they have significantly lower purchase intention than they do when receiving positive product reviews (i.e. regulatory non-fit).

2.2. Research framework and hypothesis development of Experiment 2

As shown in Fig. 2, Experiment 2 examines the effect of regulatory fit or non-fit on purchase intention, as well as whether the effect is moderated by perceived justice, after consumers are randomly assigned online customer reviews about either search goods or experience goods.

According to the results of prior research, consumers are influenced by both positive and negative consumer reviews. When

compared to positive reviews, the negative reviews have stronger influence (Bonabeau, 2004; Kamakura et al., 2006; Levin, Schneider, & Gaeth, 1998). Cui, Lui, and Guo (2012) obtained the same qualitative result, showing that negative consumer reviews have a stronger influence on purchase intention than positive reviews.

In addition to the content of online customer reviews, the type of product under review also affects consumers' purchase intention (Lee & Shin, 2014; Lu et al., 2014). Mudambi and Schuff (2010) suggested that online customer reviews particularly help for search- rather than experience-based goods. When compared to the reviews for experience goods, the reviews for search goods are more objective, and consumers can more easily assess the authenticity of the review (Hsieh, Chiu, & Chiang, 2005). Lu et al. (2014) suggested that, compared to experience goods, when search goods are recommended, consumers have highly positive attitudes toward them. The reason is that when product reviews are related to search goods, consumers can easily use these reviews to judge the product quality, which in turn drives purchase intention. Based on the above discussion, the following hypothesis is put forward:

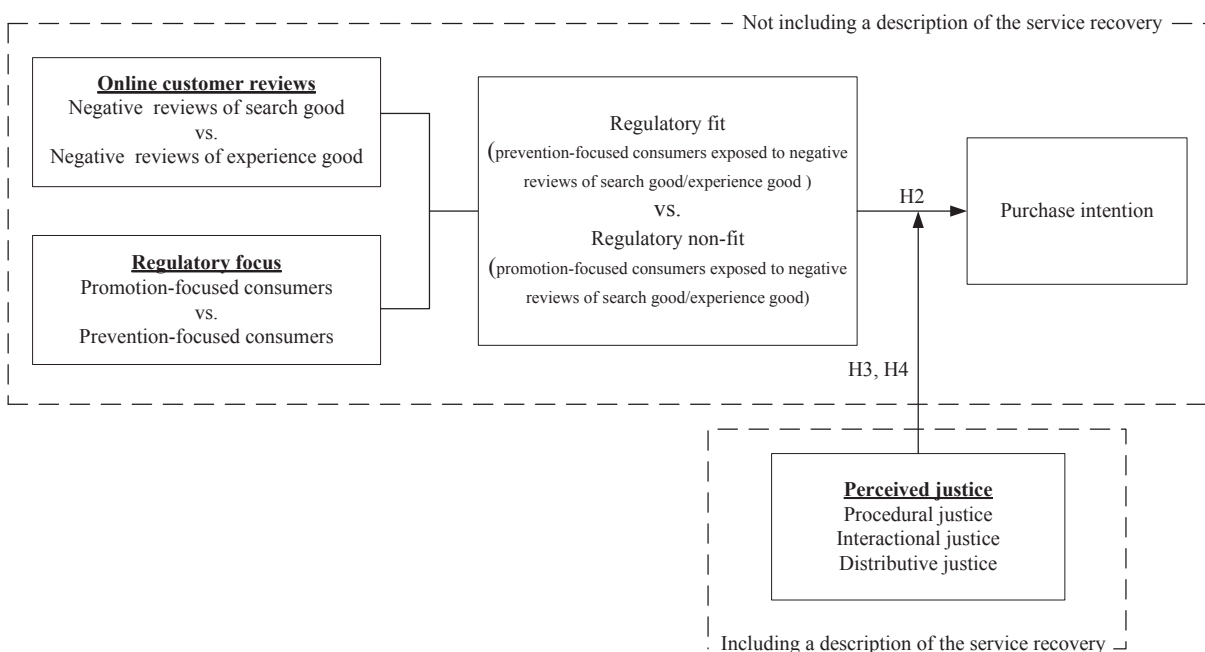


Fig. 2. Research framework for Experiment 2.

H2. Regardless of the type of regulatory focus, consumers who are exposed to negative reviews of search goods have significantly lower purchase intention toward that product than those who are exposed to negative reviews of experience goods.

In addition, given the low probability of providing service with zero errors (Bitner et al., 1990), in the event of service failure, companies can offer compensation to the customer in the hopes of attaining the advantages of market differentiation, improving their ability to compete with similar companies (Kelley & Davis, 1994). Many researchers have used perceived justice theory to examine the extent to which customer satisfaction changes after experiencing service failure and service recovery (Bies & Shapiro, 1987; Chang et al., 2012; Clemmer & Schneider, 1996). As Blodgett, Hill, and Tax (1997) have indicated, perceived justice theory encompasses three dimensions: procedural justice, interactional justice, and distributive justice. Procedural justice has been upheld when the party providing the product or service handles decisions, procedures, and standards in a way that is consistent with ethical and moral principles. Interactional justice has been upheld when the party providing the product or service deals with service failures in accordance with the attitudes and behaviors the customer expects of them. Distributive justice has been upheld when the party providing the product or service adequately compensates customers in the event of a service failure. These three dimensions are commonly used to measure consumer perception after service recovery.

Service recovery is crucial to the party providing the product or service. If procedures to manage service failure take too long, they will fail to improve customer satisfaction. In fact, satisfaction will be even lower than it was before the implementation of service recovery (Maister, 1985). Bitner et al. (1990) have noted that if the service recovery proceeds as anticipated, with company representatives and customers treating each other with mutual respect, service satisfaction will improve and the consumer's evaluation of the company and future purchase intention will also improve (see also Blodgett & Tax, 1993). Kelley and Davis (1994) have argued that after a service failure, the party providing the product or service must give customers compensation of a similar value to the injuries and losses perceived by the customer. If they do not do so, customers will be dissatisfied, thus reducing repurchase intention. Therefore, when service recovery is done well, it improves a customer's positive evaluation of service firms (Boshoff, 1999). This will improve customer repurchase intention even though such measures were taken to correct customer dissatisfaction after a negative event (Gilly, 1987). Additionally, Ding and Lii (2016) found that a positive perception of the justice of online service recovery efforts can create customer satisfaction and trust, and in turn, generate positive electronic word-of-mouth, which increases repurchase intention.

Regarding online complaint behaviors and company responses, Lee and Song (2010) suggested that the company may restore its positive image if it responds with the offer of an apology, compensation, or corrective action. Their study also found that companies with an accommodative response to online complaints were more likely to be positively evaluated than those which did not make any response. Additionally, Sparks et al. (2016) confirmed that when a customer complains online, a statement that the service problem has already been resolved will cause potential consumers to draw more positive inferences about the company's level of trustworthiness and concern for its customers.

As to customer types, Sasaki and Hayashi (2015) stated that promotion-focused consumers are focused on the presence or absence of positive outcomes, whereas prevention-focused consumers are focused on the presence or absence of negative

outcomes. Thus, consumers pursue outcomes that fit their regulatory goals and that facilitate maintenance of their regulatory focus (Higgins et al., 2003). Specifically, promotion-focused consumers adopt an 'eagerness' strategy to attain their goals, and in contrast, prevention-focused consumers adopt a 'vigilance' strategy (Higgins, 2000). In other words, promotion-focused consumers experience regulatory fit when they think of what they would gain if they choose an option, whereas prevention-focused consumers experience regulatory fit when they think of what they would lose if they do not choose an option (Lee & Aaker, 2004). In short, as indicated by Labroo and Lee (2006), the experience of regulatory fit causes higher evaluations of a target object, and also greater purchase intention. Following this rationale, it is thus anticipated that promotion- (prevention) focused consumers with a higher perceived justice (whether procedural, interactional, or distributive justice) will result in purchase intention than those with a lower perceived justice. Thus, based on the discussion above, the following hypotheses are constructed:

H3. A promotion-focused consumer who perceives a high level of justice (procedural justice, interactional justice, or distributive justice) will have higher purchase intention than a promotion-focused consumer who perceives a lower level of justice, regardless of exposure to negative reviews for search goods or experience goods (which constitute a regulatory non-fit for the promotion-focused consumer).

H4. A prevention-focused consumer who perceives a high level of justice (procedural justice, interactional justice, or distributive justice) will have higher purchase intention than a promotion-focused consumer who perceives a lower level of justice regardless of exposure to negative reviews for search goods or experience goods (a condition which constitutes a regulatory fit for the prevention-focused consumer).

3. Method

3.1. Experiment 1

3.1.1. Participants and data collection

The participants in Experiment 1 were undergraduate students at the Chinese Culture University in Taiwan with frequent and early exposure to Internet technology, selected through convenience sampling from 21st March 2015 to 21st April 2015. The members of Generation Y (age: 18–29) are the Internet generation (Issa & Isaia, 2016), having used digital technology from a very young age, and they are thus very familiar with it (Hasbullah et al., 2016). They have recently graduated (or will soon graduate) from college and joined the workforce, shaping the economy of the future. It is critical to understand the use of technology and digital devices by these consumers. In particular, several studies have found that a large proportion of online consumers are young adults (Horrigan, 2008; Lim, Sia, Lee, & Benbasat, 2006), and undergraduate students are recognized as making up a large proportion of all Internet shoppers (Kim, Ferrin, & Rao, 2009; Pavlou & Fygenson, 2006). Bolton et al. (2013) indicated that these digital natives are either recent entrants to the workforce or are students and are the most visually sophisticated and tech-savvy generation. Thus, this study used Generation Y as the target audience for our survey.

The questionnaire of Experiment 1 was designed with two versions, differing in the content of product reviews. These product reviews do not indicate a specific product type, and are just a general product review (see Table 1).

The questionnaire of Experiment 1 was self-administered. Researchers first gave instructions to participants regarding the

Table 1
Questionnaire description for Experiment 1.

Questionnaire	A	B
Part 1	Basic demographic information	
Part 2	Regulatory focus scale	
Part 3	Positive product reviews (Not including a specific product type)	Negative product reviews (Not including a specific product type)
	Purchase intention scale	

appropriate way to fill out the questionnaire, after which the questionnaires were completed by the participants. Participants were first invited to provide demographic information and to complete the regulatory focus scale. Participants were then randomly assigned to either the positive product reviews condition or the negative product reviews condition. Finally, all participants were invited to complete the purchase intention scale. The process with instructions and completion is estimated to have taken about 10 min.

We recovered a total of 242 questionnaires (positive product reviews: 126 copies; negative product reviews: 116 copies). There were 11 invalid copies of positive product reviews, leaving 115 valid positive product reviews, for an effective response rate of 91%. Of these valid positive product review responses, 61 belonged to promotion-focused customers and 54 belonged to prevention-focused customers. There were 15 invalid copies of negative product reviews, leaving 101 valid negative product reviews, for an effective response rate of 87%. Of these valid negative product review responses, 51 belonged to promotion-focused customers and 50 belonged to prevention-focused customers. As indicated by Gay and Diehl (1992), for experimental research, 30 subjects for each condition is often cited as the minimum. Thus, the sample size of each condition in Experiment 1 is adequate.

3.1.2. The operational definitions and measures of the constructs in Experiment 1

3.1.2.1. Regulatory focus scale. Higgins (1997) suggested that consumers generally come from one of two motivational orientations: promotion-focused and prevention-focused. Consumers with a promotion focus are particularly sensitive to the presence or absence of positive outcomes (which constitute a regulatory fit), whereas consumers with a prevention focus are particularly sensitive to the presence or absence of negative outcomes (which constitute a regulatory fit).

The regulatory focus scale consists of eighteen items, with nine items that measure promotion focus and nine items that measure prevention focus. This scale was adapted from Lockwood, Jordan, and Kunda (2002). In the present study, all scales were scored by participants using a seven-point Likert scale (with 1 = strongly disagree and 7 = strongly agree).

Orientation of regulatory focus was analyzed using the questionnaire results. The average score for items indicating promotion focus and the average score for items indicating prevention focus were compared, with higher scores revealing the participant's orientation. If the means were equal, the questionnaire was considered invalid.

3.1.2.2. Online customer reviews. Online customer reviews reveal the experiences and feelings of consumers after they use a product, and can exert a strong influence depending on the preferences of the reader (Chen & Xie, 2008). Furthermore, according to the results of the focus group interview, Lee, Park, and Han (2008) found that consumers generally read about six to eight reviews when they make an online purchase. Thus, this study also used six positive and six negative product reviews to serve as material for online customer reviews (see Table 2; refer to Lee & Shin, 2014).

3.1.2.3. Purchase intention scale. Purchase intention is used to evaluate the possibility of buying a product. Higher purchase intention denotes an increased willingness to purchase the product. The purchase intention scale consists of the following three items: (1) I plan to buy the product in the future; (2) I intend to buy the product in the future; and (3) I predict I would buy the product in the future (adapted from Chen & Barnes, 2007).

3.1.3. Pretest of Experiment 1

The pretest aimed to identify the online customer reviews that were perceived by participants as being positive or negative. Namely, participants were invited to read online customer reviews and to identify them as either positive or negative.

A total of 32 valid questionnaires were collected. The results derived from paired samples *t*-test revealed that the participants exposed to the positive reviews perceived a greater average number of positive reviews than negative ($M_{\text{positive reviews}} = 6.62 > M_{\text{negative reviews}} = 1.50$, $t = 34.812$, $p < 0.001$). In contrast, participants exposed to the negative reviews perceived the average number of negative reviews to be greater than the number of positive reviews ($M_{\text{negative reviews}} = 6.59 > M_{\text{positive reviews}} = 1.50$, $t = 35.246$, $p < 0.001$). In addition, this study used 61 valid questionnaires to examine the reliability of the survey questionnaire. All variables had a Cronbach's α of greater than 0.70. This suggests that the questionnaires used in Experiment 1 have a high degree of reliability.

3.2. Experiment 2

3.2.1. Participants and data collection

The participants in Experiment 2 were also undergraduate students at the Chinese Culture University in Taiwan with frequent and early exposure to Internet technology, selected through convenience sampling from 1st May 2015 to the end of May 2015. The questionnaire description for Experiment 2 is presented in Table 3.

The questionnaire of Experiment 2 was self-administered. Researchers first gave instructions to participants regarding the appropriate way to fill out the questionnaire, after which the questionnaires were completed by the participants. Participants were first invited to fill out the demographic information section and then to complete the regulatory focus checks, which were the same as those used in Experiment 1. They were then asked to fill out a purchase intention scale after reading negative reviews for clothing products. Participants then filled out a perceived justice scale and a purchase intention scale after they read negative reviews of clothes with descriptions of effective service recovery in response to service failure. The participants were randomly assigned to reviews covering procedural justice, interactional justice, or distributive justice. Then participants were invited to fill out a purchase intention scale after they read negative reviews for a restaurant. Finally, participants completed another perceived justice scale and another purchase intention scale after they read negative reviews of a restaurant with descriptions of effective service recovery in response to service failure. The participants were randomly assigned to read reviews showing procedural justice, interactional justice, or distributive justice. The process with

Table 2
Online customer reviews for Experiment 1.

Positive product reviews	<p>The product is absolutely flawless and the packaging is also very beautiful.</p> <p>The product is the same as was shown in the images online, and the quality of the manufacturing materials was also great.</p> <p>Got the product after 24 h, very fast.</p> <p>All purchase processes were satisfactory. I will recommend this store to my friends.</p> <p>The salesperson was friendly and very patient when answering my questions.</p> <p>The reimbursement process was efficient.</p>
Negative product reviews	<p>There were stains on the product and the packaging was broken.</p> <p>The product is a far cry from the images shown online, and the quality of the manufacturing materials is awful.</p> <p>I paid for the product one month ago but I have not received the product yet.</p> <p>The products that the store sent are not the ones I purchased.</p> <p>The salesperson was unfriendly and impatient when answering my questions.</p> <p>I sent the products back to the store over a month ago but I have not yet received my reimbursement.</p>

Table 3
Questionnaire description for Experiment 2.

Questionnaire A		B	C
Part 1	Basic demographic information		
Part 2	Regulatory focus scale		
Part 3	Negative reviews of clothes		
	Purchase intention scale		
Part 4	Negative reviews of clothes with procedural justice	Negative reviews of clothes with interactional justice	Negative reviews of clothes with distributive justice
	Procedural justice scale	Interactional justice scale	Distributive justice scale
	Purchase intention scale		
Part 5	Negative reviews of restaurant		
	Purchase intention scale		
Part 6	Negative reviews of restaurant with procedural justice	Negative reviews of restaurant with interactional justice	Negative reviews of restaurant with distributive justice
	Procedural justice scale	Interactional justice scale	Distributive justice scale
	Purchase intention scale		

instructions and filling the questionnaire out is estimated to have taken about 15 min.

After that, we recovered a total of 442 questionnaires (149 copies of questionnaire A, 145 copies of questionnaire B, and 148 copies of questionnaire C). Questionnaire A had 15 invalid copies, leaving 134 valid copies, for an effective response rate of 90%. Questionnaire B had 14 invalid copies, leaving 131 valid copies, for an effective response rate of 90%. Questionnaire C had 18 invalid copies, yielding 130 valid copies, for an effective response rate of 88%. As indicated by Gay and Diehl (1992), for experimental research, 30 subjects for each condition is often cited as the minimum. Thus, the sample size of each condition in Experiment 2 is adequate.

3.2.2. The operational definitions and measures of the constructs in Experiment 2

3.2.2.1. Regulatory focus theory scale. Consistent with Experiment 1, the regulatory focus scale (from Lockwood et al., 2002) was also used in Experiment 2 to determine the type of regulatory focus for participants.

3.2.2.2. Product type and online customer reviews. According to the classification developed by Peterson et al. (1997), products that are bought and sold online can be classified into two types: search products and experience products. Experiment 2 used a classification system based on the work of Lovelock and Wirtz (2004), wherein clothes are regarded as search goods, and restaurants are regarded as experience goods. Furthermore, consistent with the method used in Experiment 1, the online customer reviews designed for this study consisted of six negative reviews for clothes (search goods) and six negative reviews for restaurants (experience goods). Each review covered three dimensions: procedural justice (PJ), interactional justice (IJ), and distributive justice (DJ) (see

Table 4; refer to Lee & Shin, 2014).

3.2.2.3. Perceived justice scale. To measure perceived justice, we adapted the scale developed by Colquitt (2001). The scale measures three dimensions: procedural justice, interactional justice, and distributive justice. The measure for procedural justice consists of the following seven items: (1) Were you able to express your views and feelings during the grievance procedures? (2) Did you have influence over the outcomes arrived at through the grievance procedures? (3) Were those procedures applied consistently? (4) Were the procedures free of bias? (5) Were the procedures based on accurate information? (6) Were you able to appeal the outcomes arrived at by the procedures? (7) Did the procedures uphold ethical and moral standards?

The scale for interactional justice consisted of the following four items: (1) Did they treat you in a polite manner? (2) Did they treat you with dignity? (3) Did they treat you with respect? (4) Did they refrain from improper remarks or comments?

The scale for distributive justice consisted of the following four items: (1) Did the outcome reflect what you deserved? (2) Were your outcomes appropriate given the experience you had? (3) Did your outcomes reflect a fair resolution? (4) Were your outcomes justified, given your problem?

Respondents were considered to have perceived a high or low level of justice based on the questionnaire results. The questionnaires were scored by first adding up the items for each of the three dimensions of perceived justice separately, and then by comparing the means of the three scores. If the average for a questionnaire was less than the total average across questionnaires, it was treated as a case of low perceived justice. By contrast, if the average was greater than the total average, it was counted as a case of high perceived justice.

Table 4
Online customer reviews for Experiment 2.

Type	Review contents
Negative reviews of clothes	<p>1. There were stains on the clothes and the packaging was broken. PJ: I called the customer service department and asked them to send me a new one. They promised me that they would and committed to resolving the issue. IJ: The customer service executive was very patient while listening to my complaints. They sincerely apologized to me and admitted to the company's negligence. DJ: In the end, the store sent new clothes for me just as I had asked. I was very satisfied with this outcome!</p> <p>2. The clothes were a far cry from the images shown online and the quality of the material was awful. PJ: I left a message for the customer service department asking them to give me a refund as soon as possible. The customer service representative promised they would do so. IJ: They were very polite when apologizing, and admitted their mistake. DJ: In the end, I returned the clothes and they gave me a refund right away. I was very satisfied with this outcome!</p> <p>3. I paid for the product one month ago but I have not yet received my clothes. PJ: I called the customer service department and asked them to send me my order in three days. They promised me that they would do so and committed to resolving the issue. IJ: The customer service executive was very patient while listening to my complaints. They sincerely apologized to me and admitted to the company's negligence. DJ: In the end, I received the clothes in three days as I had asked. I was very satisfied with this outcome!</p> <p>4. The clothes that the store sent were not the ones I purchased. PJ: I left a message for the customer service department, asking them to send me my order as soon as possible. They promised me that they would and committed to resolving the issue. IJ: They were very polite and apologized and admitted their mistake. DJ: I received the clothes quickly just as I had asked. I was very satisfied with this outcome!</p> <p>5. The salesperson was unfriendly and impatient when answering my questions. PJ: I called the customer service department, asking them to answer my questions again. IJ: The customer service representative was very patient when listening to my complaints. The representative explained that the person who I had originally spoken to is a part-time worker and had been reprimanded. They promised me that it would not happen again. DJ: After my complaints, the representative's answers to my questions were really clear and detailed. I was very satisfied with this outcome!</p> <p>6. I sent the clothes back to the store one month ago but have not yet received my refund. PJ: I called the customer service department, asking them to reimburse me. IJ: The customer service representative was very patient when listening to my complaints. The representative explained that I had called during their company trip, so they could not reply to the message immediately. DJ: In the end, I received the refund in three days just as I had asked. I was very satisfied with this outcome!</p>
Negative reviews of restaurant	<p>1. The waiter spilled food on my lap. I was really angry. PJ: I was very angry at the waiter and asked to speak to his manager. I wanted them to pay to have the clothes washed. The manager promised me that the issue would be resolved. IJ: The manager helped me clean up and apologized repeatedly. DJ: The manager told me that the meal would be free and gave me money to get my clothes cleaned. I was very satisfied with this outcome!</p> <p>2. I told the waiter I had not received my order after having ordered it three times, and after a long time I still had not received my food. PJ: I was very unhappy and asked to speak to their manager and the manager promised me that I would have the meal shortly. IJ: As I complained, the manager apologized to me politely and tried to calm me down. DJ: After I complained, I received my reorder, and the manager told me that the meal would be free. I was very satisfied with this outcome!</p> <p>3. The waiter's fingers touched my food. I felt very sick and wanted to get a new meal, but the waiter pretended not to hear. PJ: I was very angry at the waiter and asked to speak to his manager. The manager promised me that he would deliver another meal shortly and also committed to resolving the issue. IJ: As I complained, the manager apologized to me politely and tried to calm me down. DJ: After my complaints I received a new meal and the manager told me that the meal would be free. I was very satisfied with this outcome!</p> <p>4. The service was very slow today. Other guests enjoyed their meals even though they had arrived to the restaurant after me. PJ: I was very unhappy so I asked the waiter to deliver the meal and the waiter promised me that he would. IJ: As I complained, the manager apologized to me politely, then explained that their new employee wasn't used to his new job, which was why he took so long in bringing me my meal. The manager apologized to me again. DJ: After my complaints, not only did I receive my order, but I also received a piece of cake for free. I was very satisfied with this outcome!</p> <p>5. I had a good time with my friends tonight, but halfway through eating I found hair in the food. It was so gross. PJ: I was very angry at the waiter and asked for his manager, and requested delivery of a new meal. The manager promised me that he would resolve the issue. IJ: As I complained, the manager apologized to me politely and tried to calm me down. DJ: After my complaints I received a new meal, and the manager told me that the meal would be free. I was very satisfied with this outcome!</p> <p>6. Today the waiter brought me the wrong meal twice, and I was very unhappy. PJ: I was very unhappy and asked for his manager, and requested delivery of the meal quickly and the manager promised me that he would. IJ: As I complained, the manager apologized to me politely and tried to calm me down. DJ: After my complaints, I received my meal, and the manager told me that it would be free of charge. I was very satisfied with this outcome!</p>

3.2.2.4. Purchase intention scale. Purchase intention is measured by using three items: (1) I plan to buy the product (go to the restaurant) in the future; (2) I intend to buy the product (go to the restaurant) in the future; and (3) I predict that I would buy the product (go to the restaurant) in the future (adapted from [Chen & Barnes, 2007](#)).

3.2.3. Pretest for Experiment 2

Before the formal study, a pretest was conducted to corroborate the reliability and content validity of the survey. The initial

instrument was pilot tested with a convenience sample. A total of 93 valid questionnaires were collected (30 valid A questionnaires, 31 valid B questionnaires, and 32 valid C questionnaires). Participants were requested to describe any difficulties they may have faced in the survey (e.g., ambiguous questions or terms) and also to state their opinion of the survey overall. Feedback and information from the pilot test were utilized to develop a final survey questionnaire. In addition, the Cronbach's α was calculated for measuring the internal consistency of the constructs. Results showed that Cronbach's α for all variables was greater than 0.70.

This indicates that the questionnaires for Experiment 2 also have a high degree of reliability. Besides, consistent with the procedure in [DeVellis \(2003\)](#), the items of the survey questionnaire were sent to a panel of experts to ensure content validity. The expert panel, including four marketing and information technology scholars, reviewed each item thoroughly and evaluated the representativeness and applicability of the measurement items toward the associated construct. The items of the survey questionnaire were modified based on the experts' constructive comments on them. The final measures obtained from both the pretest and experts' refinement were applied as indicator variables for Experiment 2.

4. Data analysis and results

The software "IBM SPSS (Statistical Product and Service Solutions) Statistics 20" was used to analyze the data. Specifically, descriptive statistical analysis was used to describe the gender (male/female) ratio of the sample, to understand the characteristics of the sample. Cronbach's α was used to measure the reliability of the questionnaire. The paired-sample t -test was also applied to test whether the online product reviews designed in this study were "positive" and "negative" (Experiment 1), as well as to compare whether the means had significant differences in the intention to purchase the search or experience goods under the condition of regulatory fit or non-fit (Experiment 2). Also, an independent sample t -test was used to compare whether the means had significant differences in the purchase intention under the condition of regulatory fit or non-fit (Experiment 1), as well as to explore whether the two groups of consumers with high or low perceived justice had significant differences in the intention to purchase the search or experience goods under the condition of regulatory fit or non-fit (Experiment 2).

4.1. Experiment 1

4.1.1. Sample for Experiment 1

Experiment 1 is a 2×2 design comprising positive product reviews versus negative product reviews and promotion-focused versus prevention-focused consumers. There were 61 observations for positive product reviews \times promotion-focused, 51 observations for positive product reviews \times prevention-focused, 51 observations for negative product reviews \times promotion-focused, and 50 observations for negative product reviews \times prevention-focused. A total of 53 men (46.1%) and 62 women (53.9%) answered the survey questionnaire for positive product reviews; a total of 48 men (47.5%) and 53 women (52.5%) answered for negative product review.

4.1.2. Reliability and validity analysis of Experiment 1

Cronbach's α for regulatory focus on the survey questionnaire of positive product reviews was 0.682, purchase intention was 0.962, and overall was 0.743. Cronbach's α for regulatory focus on the survey questionnaire for negative product reviews was 0.779, purchase intention was 0.845, and overall was 0.733. Cronbach's α for all variables for Experiment 1 was greater than 0.60. This suggests that the questionnaires in Experiment 1 have a high degree of reliability ([Nunnally, 1978](#)). Furthermore, the questionnaires adopted in Experiment 1 were developed using concepts from the literature review, with variables similar to those used in the previous literature in this area. The questionnaires are therefore valid measures that reflect the elements related to this topic.

4.1.3. Hypothesis testing of Experiment 1

4.1.3.1. Impact of regulatory fit or non-fit on purchase intention. The results of the paired sample t -test show that when participants

experience regulatory fit ($n = 111$), the mean for purchase intention is 3.53. When consumers have regulatory non-fit ($n = 105$), the mean for purchase intention is 2.96; $t = 2.124$, $p < 0.05$. These results confirm [Hypothesis 1](#).

4.1.3.2. Impact of regulatory fit or non-fit on purchase intention for promotion-focused consumers. The results of an independent sample t -test show that when promotion-focused participants experience regulatory fit ($n = 61$), the mean for purchase intention is significantly higher than for promotion-focused participants with regulatory non-fit ($n = 51$). The means for purchase intention are $M_{\text{regulatory fit}} = 5.02 > M_{\text{regulatory non-fit}} = 1.66$; $t = 15.814$, $p < 0.001$. These results confirm [Hypothesis 1a](#).

4.1.3.3. Impact of regulatory fit or non-fit on purchase intention for prevention-focused consumers. The results of an independent sample t -test show that when prevention-focused participants experience regulatory fit ($n = 50$), the mean for purchase intention is significantly lower than for the prevention-focused participants with regulatory non-fit ($n = 54$). The means for purchase intention are $M_{\text{regulatory fit}} = 1.67 > M_{\text{regulatory non-fit}} = 4.38$; $t = -10.158$, $p < 0.001$. These results confirm [Hypothesis 1b](#).

4.1.4. Discussion regarding Experiment 1

According to the results of this experiment, the regulatory fit effect has a significant influence on purchase intention when compared with non-fit conditions. These results are consistent with [Hong and Lee \(2008\)](#), who suggest that when an individual experiences regulatory fit, he experiences positive feelings, thereby strengthening purchase intention.

As for the polarity of the effect, it depends on the consumer's regulatory focus (i.e. a promotion focus or a prevention focus). When promotion-focused consumers are exposed to positive product reviews (i.e. regulatory fit), they have a significantly higher purchase intention than those who are exposed to negative product reviews (i.e. regulatory non-fit). When prevention-focused consumers are exposed to negative product reviews (i.e. regulatory fit) they have a significantly lower purchase intention than those who are exposed to positive product reviews (i.e. regulatory non-fit). These results are consistent with the evidence that [Lee and Aaker \(2004\)](#) provided, in that they support the notion that regulatory fit encourages individuals to pursue their goals, thereby affecting their behavioral intention.

4.2. Experiment 2

4.2.1. Sample of Experiment 2

Experiment 2 is a 2×2 factorial design, with negative reviews of search goods versus negative reviews of experience goods, and promotion-focused versus prevention-focused consumers. Experiment 2 does not include a description of service recovery. A total of 196 promotion-focused consumers and 199 prevention-focused consumers participated in the condition with negative reviews of search and experience goods.

In addition, Experiment 2 includes a description of the service recovery effort, so it is also a $2 \times 2 \times 3$ factorial design, with negative reviews of search goods versus negative reviews of experience goods, promotion-focused versus prevention-focused consumers, and procedural versus interactional versus distributive justice. A total of 68 promotion-focused consumers were exposed to negative reviews of search and experience goods under the procedural justice condition, while 58 promotion-focused consumers were exposed to negative reviews of search and experience goods with descriptions of interactional justice, and 70 promotion-focused consumers were exposed to negative reviews

of search and experience goods with descriptions of distributive justice. A total of 66 prevention-focused participants were exposed to negative reviews of search and experience goods with descriptions of procedural justice, while 73 prevention-focused participants were exposed to negative reviews of search and experience goods with descriptions of interactional justice, and 60 prevention-focus participants were exposed to negative reviews of search and experience goods with descriptions of distributive justice.

A total of 47 men (35.1%) and 87 women (64.9%) participated by filling out Questionnaire A, while a total of 62 men (47.3%) and 69 women (52.7%) completed Questionnaire B, and a total of 54 men (41.5%) and 76 women (58.5%) filled out Questionnaire C.

4.2.2. Reliability and validity analysis of Experiment 2

Cronbach's α for all variables in Experiment 2 is greater than 0.70. This shows that the questionnaires used in Experiment 2 have a high degree of reliability (Nunnally, 1978). Furthermore, the questionnaires used in Experiment 2 were developed using information obtained from the literature review, and the variables used here are similar to those used by researchers in the existing literature in this area.

4.2.3. Hypothesis testing of Experiment 2

With regard to the purchase intention of promotion-focused consumers with regulatory non-fit, the results of a paired sample *t*-test reveal that the mean score for intention to purchase search goods for the promotion-focused consumer with regulatory non-fit ($n = 196$) is significantly lower than the mean score for the intention to purchase 'experience goods' ($M_{\text{search goods}} = 1.66 < M_{\text{experience goods}} = 2.12$; $t = -6.542$, $p < 0.001$). In contrast, with regard to the purchase intention of prevention-focused consumers with regulatory fit, the results of a paired sample *t*-test reveal that prevention-focused consumers with regulatory fit ($n = 199$) have significantly lower purchase intention when it comes to search goods compared to experience goods ($M_{\text{search goods}} = 1.52 < M_{\text{experience goods}} = 1.70$; $t = -2.885$, $p < 0.010$). These results confirm Hypothesis 2.

In addition, in terms of the moderating roles of perceived justice after a service recovery effort in the condition of promotion-focused consumers with regulatory non-fit, the results of an independent sample *t*-test show that the promotion-focused consumer with regulatory non-fit and high levels of perceived justice of all three types (procedural, interactional, distributive justice) have higher purchase intention regardless of the product type when compared to the promotion-focused consumer with regulatory non-fit and low levels of perceived justice of all three types (procedural, interactional, distributive justice) (see Table 5).

Specifically, the means for purchase intention for search goods are $M_{\text{low perceived justice}} = 2.78 < M_{\text{high perceived justice}} = 3.86$. The means for purchase intention for experience goods are $M_{\text{low perceived justice}} = 2.82 < M_{\text{high perceived justice}} = 4.02$. The means for purchase intention toward search goods are $M_{\text{low procedural justice}} = 2.82 < M_{\text{high procedural justice}} = 3.70$. The means for purchase intention toward experience goods are $M_{\text{low procedural justice}} = 3.00 < M_{\text{high procedural justice}} = 3.71$. Furthermore, the means for purchase intention for search goods are $M_{\text{low interactional justice}} = 2.00 < M_{\text{high interactional justice}} = 3.51$. The means for purchase intention for experience goods are $M_{\text{low interactional justice}} = 2.44 < M_{\text{high interactional justice}} = 3.93$. In addition, the means for purchase intention for search goods are $M_{\text{low distributive justice}} = 3.09 < M_{\text{high distributive justice}} = 4.32$. The means for purchase intention for experience goods are $M_{\text{low distributive justice}} = 3.10 < M_{\text{high distributive justice}} = 4.49$. These results confirm Hypothesis 3.

In terms of the moderating roles of perceived justice after a service recovery effort in the condition of prevention-focused consumers with regulatory fit, the results of an independent sample *t*-test show that prevention-focused consumers with regulatory fit and high levels of perceived justice (procedural, interactional, and distributive justice), regardless of the product type (search or experience goods), have higher purchase intention than prevention-focused consumers with regulatory fit and low levels of perceived justice (procedural, interactional, and? distributive justice) (see Table 6).

Specifically, the means for purchase intention for search goods are $M_{\text{low perceived justice}} = 2.36 < M_{\text{high perceived justice}} = 4.00$. The means for purchase intention for experience goods are $M_{\text{low perceived justice}} = 2.49 < M_{\text{high perceived justice}} = 4.20$. Furthermore, the means for purchase intention for search goods are $M_{\text{low procedural justice}} = 1.80 < M_{\text{high procedural justice}} = 3.38$. The means for purchase intention for experience goods are $M_{\text{low procedural justice}} = 2.26 < M_{\text{high procedural justice}} = 3.70$. In addition, the means for purchase intention for search goods are $M_{\text{low interactional justice}} = 2.00 < M_{\text{high interactional justice}} = 4.34$. The means for purchase intention for experience goods are $M_{\text{low interactional justice}} = 2.78 < M_{\text{high interactional justice}} = 4.35$. Additionally, the means for purchase intention for search goods are $M_{\text{low distributive justice}} = 2.51 < M_{\text{high distributive justice}} = 4.12$. The means for purchase intention for experience goods are $M_{\text{low distributive justice}} = 2.53 < M_{\text{high distributive justice}} = 4.58$. These results confirm Hypothesis 4.

4.2.4. Discussion regarding Experiment 2

4.2.4.1. Examination of scenarios excluding service recovery. According to the results shown above, when a promotion-focused consumer is exposed to negative reviews (an experience that constitutes regulatory non-fit) and when a prevention-focused consumer is exposed to negative reviews (a situation that constitutes regulatory fit), both have significantly lower intention to purchase search goods than they do for experience goods. Specifically, after being exposed to negative online customer reviews, consumers have lower purchase intention toward search goods than they do toward experience goods despite the occurrence of regulatory fit or non-fit. These results are consistent with the findings of Hsieh et al. (2005). It may be that online customer reviews of search goods are more objective, so the consumers reading the review are better able to assess the authenticity of the review and its applicability to the reader's own situation. In short, our results show that prevention-focused consumers with regulatory fit demonstrate lower purchase intention for both search products and experience products compared with the promotion-focused consumers with regulatory non-fit.

4.2.4.2. Results in scenarios including service recovery. In this sample of Generation Y (age: 18–29) participants in Taiwan, promotion-focused consumers with regulatory non-fit and a high level of perception of all three kinds of justice (procedural, interactional, and distributive justice) were found to have higher purchase intention regardless of the product type (search goods or experience goods) when compared to promotion-focused consumers with regulatory non-fit and a low level of perception of all three kinds of justice.

By contrast, prevention-focused consumers with regulatory fit and a high level of perception of justice had higher purchase intention regardless of the product types when compared to prevention-focused consumers with regulatory fit and a low level of perception of all three types of justice.

As it were, regardless of whether the consumer experiences were in regulatory fit or non-fit conditions and regardless of the

Table 5

The moderating effects of perceived justice for promotion-focused consumers with regulatory non-fit.

Promotion-focused (regulatory non-fit condition)		Means for purchase intention toward search goods (M)	t-value	p-value
Perceived justice	Low (n = 29)	2.78	−3.188	0.002**
	High (n = 167)	3.86		
Procedural justice	Low (n = 13)	2.82	−1.761	0.083
	High (n = 55)	3.70		
Interactional justice	Low (n = 5)	2.00	−1.920	0.006**
	High (n = 53)	3.51		
Distributive justice	Low (n = 11)	3.09	−2.233	0.029**
	High (n = 59)	4.32		
Promotion-focused (regulatory non-fit condition)		Means for purchase intention toward experience goods (M)	t-value	p-value
Perceived justice	Low (n = 36)	2.82	−4.910	0.000***
	High (n = 160)	4.02		
Procedural justice	Low (n = 10)	3.00	−1.605	0.127
	High (n = 58)	3.71		
Interactional justice	Low (n = 12)	2.44	−2.781	0.007**
	High (n = 46)	3.93		
Distributive justice	Low (n = 14)	3.10	−3.196	0.002**
	High (n = 56)	4.49		

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.**Table 6**

The moderating effects of perceived justice for prevention-focused consumers with regulatory fit.

Prevention-focused (regulatory fit condition)		Means for purchase intention toward search goods (M)	t-value	p-value
Perceived justice	Low (n = 34)	2.36	−5.267	0.000***
	High (n = 165)	4.00		
Procedural Justice	Low (n = 17)	1.80	−4.591	0.000***
	High (n = 49)	3.38		
Interactional justice	Low (n = 03)	2.00	−2.329	0.023*
	High (n = 70)	4.34		
Distributive justice	Low (n = 14)	2.51	−2.152	0.036*
	High (n = 46)	4.12		
Prevention-focused (regulatory fit condition)		Means for purchase intention toward experience goods (M)	t-value	p-value
Perceived justice	Low (n = 36)	2.49	−7.178	0.000***
	High (n = 163)	4.20		
Procedural justice	Low (n = 15)	2.29	−3.687	0.001***
	High (n = 51)	3.70		
Interactional justice	Low (n = 09)	2.78	−2.377	0.020*
	High (n = 64)	4.35		
Distributive justice	Low (n = 12)	2.53	−4.754	0.000***
	High (n = 48)	4.58		

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

product type, the results of this study indicate that consumers with higher levels of perceived justice demonstrated higher purchase intention compared with consumers with lower levels of perceived justice. The results are consistent with those of Boshoff (1999) and Gilly (1987), who compared enterprises that did not implement service recovery. They found that if an enterprise implements an appropriate service recovery process, it can build a good reputation and improve consumers' purchase intention, while also exerting a positive influence on potential consumers.

5. Conclusions

5.1. Impact of regulatory fit or non-fit on purchase intention

According to the results, regulatory fit has a significant influence on purchase intention, especially compared with non-fit conditions. The polarity of the effect depends on the consumer's type of focus (i.e. promotion focus or prevention focus). When promotion-focused consumers are exposed to positive product reviews (i.e. regulatory fit), their purchase intention tends to be higher than when they are exposed to negative product reviews (i.e. regulatory non-fit). When prevention-focused consumers are exposed to

negative product reviews (i.e. regulatory fit), their purchase intention tends to be significantly lower than when they are exposed to positive product reviews (i.e. regulatory non-fit).

5.2. Impact of regulatory fit on purchase intention for different product types

According to our results, both promotion-focused consumers who are exposed to negative reviews (i.e. regulatory non-fit) and prevention-focused consumers who are exposed to negative reviews (i.e. regulatory fit) show significantly lower purchase intention for search goods than they do for experience goods. In particular, regardless of the occurrence of regulatory fit or non-fit, exposure to negative online customer reviews leads to a lower purchase intention for search goods than for experience goods.

5.3. Moderating effects of perceived justice on the links between regulatory fit and non-fit and purchase intention

Promotion-focused consumers with regulatory non-fit and high levels of perceived justice for procedural, interactional, and distributive justice have higher purchase intention regardless of the

product type when compared to promotion-focused consumers with regulatory non-fit and low levels of perceived justice. By contrast, prevention-focused consumers with regulatory fit and high levels of perceived justice demonstrate higher purchase intention regardless of the product type when compared to prevention-focused consumers with regulatory fit and low levels of perceived justice (procedural, interactional, and distributive justice). Regardless of regulatory fit or product type, the results suggest that higher levels of perceived justice lead to higher purchase intention.

5.4. Managerial implications

In a competitive retail environment, retailers and manufacturers can add value and differentiate themselves in the market by providing digital tools to help consumers take control of their shopping experience, which could increase sales potential. Kostyra et al. (2016) have also found that increasing valence of those reviews has a positive effect on customer choice probability. Therefore, managers must be concerned with, and effectively manage, posts that appear on the Internet, regardless of whether the content represents shared experiences or information about merchandise. This is important because regardless of the consumer's characteristics, consumers will be affected by the online customer reviews that they are exposed to.

Furthermore, it is also recommended that management respond immediately to negative comments. The present study has found that the purchase intention of prevention-focused consumers with regulatory fit is greatly impacted by negative reviews (i.e. low purchase intention). Previous studies (Cheung et al., 2008; Cui et al., 2012) have also found that regardless of the consumer's characteristics, negative reviews have a stronger influence on purchase intention than positive reviews. Thus, this study recommends that online customer reviews be managed based on consumer characteristics. The metric for consumer characteristics can be used to determine whether consumers are promotion-focused or prevention-focused. Comment threads, however, can also serve as a way to develop a deeper understanding of consumer characteristics if a simple question is added at the bottom of each message, such as: "Do you agree with the above comment?"

In addition, context manipulation can be used to temporarily induce a consumer to be promotion-focused. For example, research shows that using a positive image or slogan can reinforce positive purchase intention (Higgins, 1997).

Moreover, results show that after reading negative online customer reviews, consumers have lower purchase intention for search goods than they do for experience goods, regardless of regulatory fit or non-fit. We therefore recommend that management pay attention to product type when dealing with negative events and reviews.

There is some good news about service failure: when handled properly, it will enhance consumers' perception and even help improve consumers' willingness to repurchase the product (Boshoff, 1999; Gilly, 1987). Thus, we suggest that enterprises focus on employee training in order to strengthen their ability to deal effectively with service failures.

Consumers with high perceptions of justice demonstrate higher purchase intention compared to consumers with low perceptions of justice, regardless of product type or regulatory fit or non-fit. Thus we recommend that enterprises pay more attention to the degree to which consumers perceive justice. The degree of a consumer's perceived level of justice can be measured using a questionnaire, but an enterprise can also take advantage of comment threads by placing a simple question at the bottom of each post asking consumers "Are you satisfied with the reparation provided

by this store in this situation?"

5.5. Limitations and directions for further research

The limitations of this study reveal opportunities for further lines of research. First, the generalizability of reported findings may be questionable, as this study had a convenience sample consisting of university students. In other words, this study population is quite homogeneous in terms of characteristics such as age and education, and may therefore not be comparable to the general population. Hence, future research with a representative or at least more varied sample would be reasonable.

Second, this study selected an approach to product classification (search goods versus experience goods) for designing online customer reviews. While this decision was made based on previous research, the generalizability of the conclusions is limited to these items. There are numerous approaches to product classification, and it is suggested that future research examine a different system of product classification to see whether the findings will differ from those presented here.

Third, in this study, clothes were selected to represent search goods, while restaurants were chosen to represent experience goods. As indicated by Lee and Shin (2014), this study only used one product for each product type, which leaves open the question of category-confound. However, while the product categories (clothes versus restaurants) were chosen based on the work of Lovelock and Wirtz (2004), some idiosyncratic properties of clothes and restaurants, which cannot be generalized to all search and experience goods, might have influenced the current findings. Thus, we suggest that future research use various products for each product type, which would ensure the generalizability of the present findings.

Finally, inherent characteristics of the online customer reviews were measured; however, as indicated by Casaló, Flavián, Guinaliú, and Ekinci (2015), other characteristics such as review length, writing style, and the online publication site also may influence the review's perceived usefulness. Thus, future research should consider these recommendations for increasing the generalizability of the present research findings.

References

- Aaker, J. L., & Lee, A. Y. (2006). Understanding regulatory fit. *Journal of Marketing Research*, 43(1), 15–19.
- Abbas, H. A., & Hamdy, H. I. (2015). Determinants of continuance intention factor in Kuwait communication market: Case study of Zain-Kuwait. *Computers in Human Behavior*, 49, 648–657.
- Alexander, S., & Ruderman, M. (1987). The role of procedural and distributive justice in organizational behavior. *Social Justice Research*, 1(2), 177–198.
- Ashraf, A. R., Razzaque, M. A., & Thongpapanl, N. T. (2016). The role of customer regulatory orientation and fit in online shopping across cultural contexts. *Journal of Business Research*, 69(12), 6040–6047.
- Ashraf, A. R., & Thongpapanl, N. T. (2015). Connecting with and converting shoppers into customers: Investigating the role of regulatory fit in the online customer's decision-making process. *Journal of Interactive Marketing*, 32, 13–25.
- Avnet, T., & Higgins, E. T. (2006). How regulatory fit affects value in consumer choices and opinions. *Journal of Marketing Research*, 43(1), 1–10.
- Bies, R. J., & Shapiro, D. L. (1987). Interactional fairness judgements: The influence of causal accounts. *Social Justice Research*, 1(2), 199–218.
- Bitner, M. J., Booms, B. H., & Tetreault, M. S. (1990). The service encounter: Diagnosing favorable and unfavorable incidents. *Journal of Marketing*, 54(1), 71–84.
- Blodgett, J. G., Hill, D. J., & Tax, S. S. (1997). The effects of distributive, procedural, and interactional justice on postcomplaint behavior. *Journal of Retailing*, 73(2), 185–210.
- Blodgett, J. G., & Tax, S. S. (1993). The effects of distributive and interactional justice on complainant's repatronage intention and negative word-of-mouth intention. *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior*, 6, 100–110.
- Bolton, R. N., Parasuraman, A., Hoefnagels, A., Migchels, N., Kabadayi, S., Gruber, T., et al. (2013). Understanding Generation Y and their use of social media: A review and research agenda. *Journal of Service Management*, 24(3), 245–267.
- Bonabeau, E. (2004). The perils of the imitation age. *Harvard Business Review*, 82(6), 99–104.

- Boshoff, C. (1999). Recovsat: An instrument to measure satisfaction with transaction specific service recovery. *Journal of Service Research*, 1(3), 236–249.
- Casaló, L. V., Flavián, C., Guinalíu, M., & Ekinci, Y. (2015). Avoiding the dark side of positive online consumer reviews: Enhancing reviews' usefulness for high risk-averse travelers. *Journal of Business Research*, 68(9), 1829–1835.
- Chang, C. C., & Chou, Y. J. (2008). Goal orientation and comparative valence in persuasion. *Journal of Advertising*, 37(1), 73–87.
- Chang, H. H., Lai, M. K., & Hsu, C. H. (2012). Recovery of online service: Perceived justice and transaction frequency. *Computers in Human Behavior*, 28(6), 2199–2208.
- Chen, Y. H., & Barnes, S. (2007). Initial trust and online buyer behaviour. *Industrial Management & Data Systems*, 107(1), 21–36.
- Chen, Y., & Xie, J. (2008). Online consumer review: Word-of-mouth as a new element of marketing communication mix. *Management Science*, 54(3), 477–491.
- Cheung, C. M. K., Lee, M. K. O., & Rabjohn, N. (2008). The impact of electronic word-of-mouth: The adoption of online opinions in online customer communities. *Internet Research*, 18(3), 229–247.
- Clemmer, E. C., & Schneider, B. (1996). Fair service. In T. A. Swartz, D. E. Bowen, & S. W. Brown (Eds.), *Advances in services marketing and management* (Vol. 5, pp. 109–126). Greenwich, CT: JAI Press.
- Colquitt, J. A. (2001). On the dimensionality of organizational justice: A construct validation of a measure. *Journal of Applied Psychology*, 86(3), 386.
- Cui, G., Lui, H. K., & Guo, X. (2012). The effect of online consumer reviews on new product sales. *International Journal of Electronic Commerce*, 17(1), 39–57.
- Dellarocas, C., Zhang, X. M., & Awad, N. F. (2007). Exploring the value of online product reviews in forecasting sales: The case of motion pictures. *Journal of Interactive Marketing*, 21(4), 23–45.
- DeVellis, R. F. (2003). *Scale development: Theory and applications* (2nd ed.). Newbury Park, CA: Sage.
- Ding, M. C., & Lii, Y. S. (2016). Handling online service recovery: Effects of perceived justice on online games. *Telematics and Informatics*, 33(4), 881–895.
- Elwalda, A., Lu, K., & Ali, M. (2016). Perceived derived attributes of online customer reviews. *Computers in Human Behavior*, 56, 306–319.
- Fu, J. R., Ju, P. H., & Hsu, C. W. (2015). Understanding why consumers engage in electronic word-of-mouth communication: Perspectives from theory of planned behavior and justice theory. *Electronic Commerce Research and Applications*, 14(6), 616–630.
- Gay, L. R., & Diehl, P. L. (1992). *Research methods for business and management*. New York: Macmillan.
- Gilly, M. C. (1987). Post complaint processes: From organizational responses to responses to repurchase behavior. *Journal of Consumer Affairs*, 21(2), 293–313.
- Gilly, M. C., Graham, J. L., Wolfenbarger, M. F., & Yale, L. J. (1998). A dyadic study of interpersonal information search. *Journal of Academy of Marketing Science*, 26(2), 83–100.
- Hasbullah, N. A., Osman, A., Abdullah, S., Salahuddin, S. N., Ramlee, N. F., & Soha, H. M. (2016). The relationship of attitude, subjective norm and website usability on consumer intention to purchase online: An evidence of Malaysian youth. *Procedia Economics and Finance*, 35, 493–502.
- Higgins, E. T. (1997). Beyond pleasure and pain. *American Psychologist*, 55(11), 1280–1300.
- Higgins, E. T. (2000). Making a good decision: Value from fit. *American Psychologists*, 55(11), 1217–1230.
- Higgins, E. T., Idson, L. C., Freitas, A. L., Spiegel, S., & Molden, D. C. (2003). Transfer of value from fit. *Journal of Personality and Social Psychology*, 84(6), 1140–1153.
- Hong, J., & Lee, A. Y. (2008). Be fit and be strong: Mastering self-regulation with regulatory fit. *Journal of Consumer Research*, 34(5), 682–695.
- Horrigan, J. B. (2008). *Online shopping: Internet users like the convenience but worry about the security of their financial information*. Washington, D.D.: Pew Internet & American Life Project.
- Hsieh, Y. C., Chiu, H. C., & Chiang, M. Y. (2005). Maintaining a committed online customer: A study across search-experience credence products. *Journal of Retailing*, 81(1), 75–82.
- Hsu, C. L., & Chen, M. C. (2014). Explaining consumer attitudes and purchase intentions toward organic food: Contributions from regulatory fit and consumer characteristics. *Food Quality and Preference*, 35(July), 6–13.
- Huang, A. H., Chen, K., Yen, D. C., & Tran, T. P. (2015). A study of factors that contribute to online review helpfulness. *Computers in Human Behavior*, 48, 17–27.
- Issa, T., & Isaias, P. (2016). Internet factors influencing generations Y and Z in Australia and Portugal: A practical study. *Information Processing & Management*, 52(4), 592–617.
- Jiménez, F. R., & Mendoza, N. A. (2013). Too popular to ignore: The influence of online reviews on purchase intentions of search and experience products. *Journal of Interactive Marketing*, 27(3), 226–235.
- Kamakura, W. A., Basuroy, S., & Boatwright, P. (2006). Is silence golden? An inquiry into the meaning of silence in professional product evaluations. *Quantitative Marketing and Economics*, 4(2), 119–141.
- Kelley, S. W., & Davis, M. A. (1994). Antecedents to customer expectations for service recovery. *Journal of Academy of Marketing Science*, 22(1), 52–61.
- Kelley, S. W., Hoffman, K. D., & Davis, M. A. (1993). A typology of retail failures and recoveries. *Journal of Retailing*, 69(4), 429–452.
- Kim, D. J., Ferrin, D. L., & Rao, H. R. (2009). Trust and satisfaction, two stepping stones for successful c-commerce relationships: A longitudinal exploration. *Information Systems Research*, 20, 237–257.
- Kostyra, D. S., Reiner, J., Natter, M., & Klapper, D. (2016). Decomposing the effects of online customer reviews on brand, price, and product attributes. *International Journal of Research in Marketing*, 33(1), 11–26.
- Kumashiro, M., Rusbult, C., Finkenauer, C., & Stocker, S. (2007). To think or to do: The impact of assessment and locomotion orientation on the Michelangelo phenomenon. *Journal of Social and Personal Relationships*, 24(4), 591–611.
- Kuo, Y. F., & Wu, C. M. (2012). Satisfaction and post-purchase intentions with service recovery of online shopping websites: Perspectives on perceived justice and emotions. *International Journal of Information Management*, 32(2), 127–138.
- Labroo, A. A., & Lee, A. Y. (2006). Between two brands: A goal fluency account of brand evaluation. *Journal of Marketing Research*, 43(3), 374–385.
- Lee, A. Y., & Aaker, J. L. (2004). Bringing the frame into focus: The influence of regulatory fit on processing fluency and persuasion. *Journal of Personality and Social Psychology*, 86(2), 205–218.
- Lee, K. T., & Koo, D. M. (2015). Evaluating right versus just evaluating online consumer reviews. *Computers in Human Behavior*, 45, 316–327.
- Lee, J., Park, D. H., & Han, I. (2008). The effect of negative online consumer reviews on product attitude: An information processing view. *Electronic Commerce Research and Applications*, 7(3), 341–352.
- Lee, E. J., & Shin, S. Y. (2014). When do consumers buy online product reviews: Effects of review quality, product type, and reviewer's photo. *Computers in Human Behavior*, 31, 356–366.
- Lee, Y. L., & Song, S. (2010). An empirical investigation of electronic word-of-mouth: Informational motive and corporate response strategy. *Computers in Human Behavior*, 26(5), 1073–1080.
- Levin, I. P., Schneider, S. L., & Gaeth, G. J. (1998). All frames are not created equal: A typology and critical analysis of framing effects. *Organizational Behavior and Human Decision Processes*, 76, 149–188.
- Liang, Y. (2016). Reading to make a decision or to reduce cognitive dissonance? The effect of selecting and reading online reviews from a post-decision context. *Computers in Human Behavior*, 64, 463–471.
- Lim, K. H., Sia, C. L., Lee, M. K. O., & Benbasat, I. (2006). Do I trust you online, and if so, will I buy? An empirical study of two trust-building strategies. *Journal of Management Information Systems*, 23, 233–266.
- Lockwood, P., Jordan, C. H., & Kunda, Z. (2002). Motivation by positive or negative role models: Regulatory focus determines who will best inspire us. *Journal of Personality and Social Psychology*, 83(4), 854–864.
- Lovelock, C., & Wirtz, J. (2004). *Service Marketing: People, technology, strategy* (5th ed.). Upper Saddle River, NJ: Pearson Prentice Hall.
- Lu, C., Chang, W. P., & Chang, H. H. (2014). Consumer attitudes toward blogger's sponsored recommendations and purchase intention: The effect of sponsorship type, product type, and brand awareness. *Computers in Human Behavior*, 34, 258–266.
- Ludolph, R., & Schulz, P. J. (2015). Does regulatory fit lead to more effective health communication? A systematic review. *Social Science & Medicine*, 128, 142–150.
- Maister, D. H. (1985). The psychology of waiting lines. In D. C. John, R. S. Michael, & F. S. Carol (Eds.), *The service encounter* (pp. 113–123). Lexington, MA: Lexington Books.
- Malaviya, P., & Sternthal, B. (2009). Parity product features can enhance or dilute brand evaluation: The influence of goal orientation and presentation format. *Journal of Consumer Research*, 36(1), 112–121.
- MasterCard Company. (2015). *The latest MasterCard online shopping behavior study*. Retrieved April, 11, 2016, from http://www.mastercard.com/tw/consumer/_assets/PDF/2015-05-20.pdf.
- Maxham, J. G., III (2001). Service recovery's influence on consumer satisfaction, positive word-of-mouth, and purchase intentions. *Journal of Business Research*, 54(1), 11–24.
- Mudambi, S. M., & Schuff, D. (2010). What makes a helpful online review? A study of customer reviews on Amazon.com. *MIS Quarterly*, 34(1), 185–200.
- Nielsen Company. (2015). *More than half of global consumers are willing to buy groceries online*. Retrieved March, 21, 2016, from <http://www.nielsen.com/ca/en/press-room/2015/more-than-half-of-global-consumers-are-willing-to-buy-groceries-online.html>.
- Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.). New York: McGraw-Hill.
- Pavlou, P. A., & Fygenson, M. (2006). Understanding and predicting electronic commerce adoption: An extension of the theory of planned behavior. *MIS Quarterly*, 30, 115–143.
- Peterson, R. A., Balasubramanian, S., & Bronnenberg, B. J. (1997). Exploring the implications of the internet for consumer marketing. *Journal of the Academy of Marketing Science*, 24(5), 329–346.
- Sasaki, H., & Hayashi, Y. (2015). Regulatory fit in framing strategy of parental persuasive messages to young children. *Journal of Applied Social Psychology*, 45(5), 253–262.
- Sparks, B. A., So, K. K. F., & Bradley, G. L. (2016). Responding to negative online reviews: The effects of hotel responses on customer inferences of trust and concern. *Tourism Management*, 53, 74–85.
- Wan, L. C., Chan, E. K. Y., & Su, L. (2011). When will customers care about service failures that happened to strangers? The role of personal similarity and regulatory focus and its implication on service evaluation. *International Journal of Hospitality Management*, 30, 213–220.
- Webster, C., & Sundaram, D. S. (1998). Service consumption criticality in failure recovery. *Journal of Business Research*, 41(2), 153–159.
- Wu, I. L. (2013). The antecedents of customer satisfaction and its link to complaint intentions in online shopping: An integration of justice, technology, and trust. *International Journal of Information Management*, 33(1), 166–176.