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# Cross-cultural examination of the effects of promotional framing on consumers' responses: A comparison of China and Pakistan

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### ABSTRACT

Although extensive studies have focused on the impact of different types of sales promotions on consumers' responses, few studies examined the effects of online sales promotional framing on consumers' responses from cross-cultural perspective. Therefore, this study explored how cross-cultural differences moderated the effects of buy one get one free and buy two get fifty percent off promotion on consumer responses across China (lower uncertainty avoidance) and Pakistan (higher uncertainty avoidance). Based on the promotional framing effect theory, an empirical investigation across these two countries revealed that people with higher uncertainty avoidance (vs. lower uncertainty avoidance) prefer buy one get one free to buy two get fifty percent off promotion. Buy one get one free will lead to higher consumer perceived quality and purchase intention than buy two get fifty percent off promotion in both Pakistan and China, while the impact of buy one get one free and buy two get fifty percent off on perceived risk, perceived quality, perceived value and purchase intention are significantly larger in Pakistan than in China. In addition, the study verified the negative perceived risk-perceived value link, positive perceived quality-perceived value link and positive perceived value-purchase intention link from cross-cultural investigated data. The study provides new insights into the effects of online sales promotions on consumers' responses considering cultural differences. Our findings have implications for multinational corporate managers to design appropriate online sales promotions strategies.

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## 1. Introduction

Sales promotions as important tools for marketers to boost sales are being increasingly studied by scholars (Chaharsoughi & Yasory, 2012). Sales promotions can be edited as various types in different ways leading to different consumer responses (e.g., Crespo-Almendros, Del Barrio-García & Alcántara-Pilar, 2015; Pacheco & Rahman, 2015), which is defined as promotional framing. Buy one get one free and buy two get fifty percent off promotion, standing for value adding and value increasing promotion respectively (Gilbert & Jackaria, 2002), are very common used both under online and offline environment. To our knowledge, few studies clearly and systematically compared these two representative types of sales promotions under online environment, although there are some relevant studies under traditional environment. For instance, Sinha and Smith (2000) have studied the impacts of 50% off, buy one get one free and buy

two get 50% off promotion on transaction value, considering the effects of stock-up characteristic and price level of the products. Based on the study of Sinha and Smith (2000), Li, Sun and Wang (2007) further compared the impacts of 50% off and buy one get one free promotion on consumer perceptions of value, also examining the moderating effects of stock-up characteristic and consumable nature of the products. In addition, Lowe (2010) explored the moderating effect of perceived performance risk on the impact of extra free product promotions (e.g., buy one get one free) and price discounts promotion (e.g., 50% off) on consumer transaction value and purchase intention. Based on Lowe (2010) study, Shen (2014) examined how perceived fit between a line/brand extension and its parent brand moderates the effects of buy one get one free and 50% off promotion on consumer transaction value and purchase intention. From above literature review, we know that the effects of promotional framing on consumers' responses are widely studied. However, 50% off and buy one get one free are generally supposed to have same unit cost but not mathematically equivalent absolute costs. Thus, we propose that buy one get one free and buy two get fifty percent off, equivalent in both total and unit costs, are more worthy to be explored. Compared with traditional shopping channels, online shopping

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information is asymmetric, anonymous and virtual (McKnight, Choudhury & Kacmar, 2002), which would increase consumers' uncertainty and risk of online shopping and then lead to different consumers' responses to online sales promotions (Chatterjee, 2011; Crespo-Almendros & Del Barrio-García, 2014; Crespo-Almendros et al., 2015). Therefore, we will examine the effects of these two sales promotions on consumers' responses (perceived risk, perceived quality, perceived value and purchase intention) under online environment to fill the research gap of online promotional framing.

Different cultures can lead to different consumer cognitive processes and behaviors (Aaker, 2000; Lalwani & Shavitt, 2013), which is often regarded as the important factor to study the effects of sales promotions on consumers' responses (e.g., Chaharsoughi & Yasory, 2012; Choi & Kim, 2008; Lee, Jeon, Li & Park, 2015). Uncertainty avoidance, as one of the cultural dimensions, is the extent to which people feel threatened by unknown or ambiguous situations (Hofstede, 2001). We propose that under the online shopping environment characterized by perceived risk and uncertainty (Gefen, Karahanna & Straub, 2003), buy one get one free and buy two get fifty percent off promotion may cause different consumer perceived risk and uncertainty avoidance due to different description framing, thus we argue that consumers with different cultural factor of uncertainty avoidance will influence consumers' evaluation of online sales promotions. In this paper, we will check the effects of online sales promotional framing on consumers' responses in China and Pakistan, since the score level of uncertainty avoidance between China and Pakistan is very different (Hofstede, 2001).

This research has two purposes. First, we empirically compare the effects of buy one get one free vs. buy two get fifty percent off promotion on consumers' responses (perceived risk, perceived quality, perceived value and purchase intention) under online environment between China and Pakistan. Second, we examine the relationships among perceived risk, perceived quality, perceived value and purchase intention in two countries to extend the existing research literatures.

In the following part of this paper, we first present a conceptual framework regarding promotional framing and cultural differences between China and Pakistan. Subsequently, we propose the hypotheses and model of this paper. Next, we explain the method and show the results. Finally, we summarize the conclusions, and discuss the implications and limitations of our research findings.

## 2. Conceptual framework

### 2.1. Promotional framing

Sales promotions are defined as a variety of short-term incentives which can encourage consumers to buy products or service quickly (Kotler, 2009). Gilbert and Jackaria (2002) divided sales promotions into value adding promotions (e.g., premiums, lucky draw, demonstration) and value increasing promotions (e.g., price deal and coupons). There exist many types of sales promotions, and different sales promotion presentations may have different effects on consumers' responses (e.g., Choi & Mattila, 2014; Pacheco & Rahman, 2015; McKechnie, Devlin, Ennew & Smith, 2012), which is called promotional framing. Framing effect theory indicates that the same information with different presentations could make consumers produce different understanding (Kühberger, 1995). A large body of studies have focused on the effects of promotional framing on consumer responses under traditional environment (e.g., Choi & Mattila, 2014; McKechnie et al., 2012; Pacheco & Rahman, 2015). Compared with offline consumers, online consumers will face with higher

shopping risk (Xiao, 2010). Consequently, some scholars turned attention to the online sales promotions and found the promotional framing effects under online environment (Chatterjee, 2011; Crespo-Almendros et al., 2015; Crespo-Almendros & Del Barrio-García, 2014). For instance, Crespo-Almendros et al. (2015) compared the different effects of online monetary and non-monetary promotions on consumer purchase intention, and indicated that monetary promotions are preferred for novice web users, while non-monetary promotions are preferred for expert web users. Chatterjee (2011) also examined the online promotional framing effects by comparing three online promotions presented as reducing shipping surcharge, reducing base product price and reducing all-inclusive price on consumer deal value.

Buy one get one free and buy two get fifty percent off are very common used under online and offline environment, which have the same promotional savings in both total and unit costs but different in presentation. Little light was shed on the effects of buy one get one free vs. buy two get fifty percent off on consumers' responses under online environment, although there are many similar studies conducted under offline environment (e.g., Li et al., 2007; Lowe, 2010; Shen, 2014; Sinha & Smith, 2000). Hence, this paper will examine the impact of promotional framing (buy one get one free vs. buy two get fifty percent off) on consumers' responses under online environment to fill the research gap.

### 2.2. Cultural differences between China and Pakistan

Culture is the homogeneity of characteristics of norms, values and institutions distinguishing human groups (Eisingerich & Rubera, 2010). Culture only exists by comparison, and there are five dimensions to measure cross-cultural differences: uncertainty avoidance (UAI), individualism/collectivism (IDV), power distance (PDI), masculinity/femininity (MAS) and long-term orientation (LTO) (Hofstede, 2001). Uncertainty avoidance is the extent to which people feel threatened by unknown or ambiguous situations, from which their beliefs and institutions try to shelter (Hofstede, 2001). Individualism/collectivism is to describe how people care about individual interests or collective interests (Hofstede, 2001). People pay more attention to themselves and their families in individualist societies. In contrast, people would place more weight on group goals in collectivist societies (Hofstede, 2001). Power distance is the extent to which the members of a country accept the power which is distributed unequally (Hofstede, 2001). Masculinity emphasizes achievement and success, while femininity emphasizes life quality and cares for others (Hofstede, 2001). Long-term orientation is the extent to which the members of a country pay attention to the pragmatic future-oriented perspective or conventional historical short-term perspective (Hofstede, 2001).

In most cases, consumer behaviors are affected by cultural self-construal (Aaker, 2000; Lalwani & Shavitt, 2013). Hofstede's (2001) investigation on cultural dimensions showed following results: uncertainty avoidance (China = 30 vs. Pakistan = 70), individualism/collectivism (China = 20 vs. Pakistan = 14), power distance (China = 80 vs. Pakistan = 55), masculinity/femininity (China = 66 vs. Pakistan = 50), long-term orientation (China = 118 vs. Pakistan with no score available), from which salient cultural difference between China and Pakistan is uncertainty avoidance. The different score of uncertainty avoidance indicated that Chinese are adaptable with ambiguity and uncertain risk, but Pakistani are more inclined to avoid risk and rely on price information to judge product quality (Zhou, Su & Bao, 2002). We argue that the cultural difference of uncertainty avoidance between China and Pakistan would influence how consumers evaluate online sales promotions.

### 2.3. Cultural differences and promotional framing

Many studies have manifested that cultural differences will affect consumer persuasion processes, attitudes, preferences and behaviors (e.g., Aaker, 2000; Smith et al., 2013). There existed some research focusing on the cross-cultural study (e.g., Chaharsoughi and Yasory, 2012; Moon, Chadee & Tikoo, 2008; Smith et al., 2013). In particular, some scholars have examined cross-cultural studies about sales promotional framing. For example, Lee et al. (2015) compared two scarcity message types (limited-time vs. limited-quantity) on consumer online impulse buying in China and Korea. Meanwhile, Choi and Kim (2008) examined the effects of “scratch and save” promotions on consumer responses in Korea and Canada, but they did not compare the effects of different promotional descriptions on consumers. Moreover, Huff and Alden (1999) tested a model explaining consumers’ attitudes toward and use of coupons and sweepstakes with data from China, Thailand and Malaysia, but they used a survey study rather than an experiment study to manipulate these two sales promotions into the same promotional saving level. Based on the above literature reviews of cross-cultural studies, there existed some studies exploring the effects of sales promotions on consumers, but few studies did cross-cultural studies on online sales promotions with same promotional savings. Accordingly, we conduct the cross-cultural investigation in China and Pakistan using an experiment study to compare the impact of buy one get one free and buy two get fifty percent off promotion on consumers’ responses under online environment.

## 3. Hypotheses development

### 3.1. Cross-cultural differences on the impact of promotional framing on perceived risk

According to framing effect theory, different sales promotion presentations may generate different effects on consumers’ perceptions (e.g., Crespo-Almendros et al., 2015; Pacheco & Rahman, 2015). Buy one get one free promotion means that after buying one product, consumers will get another product for free. This type of sales promotion stands for value adding promotion, and perceived quality of the product does not decrease because of no price decrease, since the price acts as a pivotal signal of product quality (Lalwani & Shavitt, 2013; Rao & Monroe, 1989). Moreover, the additional free product would add consumers’ value. Meanwhile, buy two get fifty percent off promotion means that when consumers buy two products at a time, e-retailers will offer consumers fifty percent off discount based on the original price. This sales promotion will reduce consumers’ cost, which is regarded as value increasing promotion. Based on the price-quality relationship using price cues to judge product quality (Lalwani & Shavitt, 2013; Rao & Monroe, 1989), the discounted price will probably reduce consumers’ perceived quality of the products, which will increase consumers’ evaluation of uncertainty of the product function performance. Thereby, we propose that buy two get fifty percent off will lead consumers to generate higher perceived risk than buy one get one free promotion.

Meanwhile, online shopping would increase consumer perceived risk (Jing, Zhou & Lv, 2006). Perceived risk is the consumers’ subjective evaluation, which is composed of the uncertainty of unfavorable outcomes and the possible consequences of a loss (Bauer, 1960). Based on the study of Hofstede (2001), the score level of uncertainty avoidance is higher in Pakistan than in China. The different levels of uncertainty avoidance would result in different levels of risk perception (Bontempo, Bottom & Weber, 1997). That is, consumers with higher uncertainty avoidance score will perceive higher levels of perceived risk than consumers with

lower uncertainty avoidance score under online environment (Xiao, 2010). As above noted, we have inferred that buy two get fifty percent off will lead consumers to generate higher perceived risk than buy one get one free promotion. Accordingly, we propose that the difference in perceived risk level of buy two get fifty percent off and buy one get one free will be enlarged in Pakistan with higher uncertainty avoidance level. Thus, we propose the following hypothesis:

H1: The difference of perceived risk from buy one get one free vs. buy two get fifty percent off promotion will be significantly larger in Pakistan than in China.

### 3.2. Cross-cultural differences on the impact of promotional framing on perceived quality

Perceived quality, existing as the consumers’ evaluation of an entity or service about its overall superiority or excellence (Zeithaml, 1988), is susceptible to sales promotions to a certain extent (e.g., Buil, de Chernatony & Martínez, 2013). Buil et al. (2013) indicated that monetary promotions have negative impact on perceived quality and non-monetary promotions positively affect perceived quality. Based on the price-quality relationship, consumers will evaluate the products’ perceived quality according to price, especially when internal cues or other cues are not obvious (Lalwani and Shavitt, 2013; Rao & Monroe, 1989). Thus, we propose that consumer perceived quality of the product in buy one get one free promotion will not decrease because of no price decrease. In contrast, consumer perceived quality of the product will tend to decrease in buy two get fifty percent off promotion. Consequently, consumers will perceive lower perceived quality from buy two get fifty percent off than that of buy one get one free promotion.

Some previous research indicated that consumers with different national culture will have different understanding of price-quality relationship (e.g., Jo and Sarigollu, 2007; Lalwani & Shavitt, 2013). For instance, Jo and Sarigollu (2007) verified that consumers with an interdependent self-construal in Japan have a greater tendency to use price to judge product quality than those in Australians who have an independent self-construal. People with interdependent self-construal tend to be more risk averse, choosing less risky alternatives than people with independent self-construal (Hamilton & Biehal, 2005). To some extent, risk aversion accelerates the tendency to rely on price to judge quality (Zhou et al., 2002). Meanwhile, Hofstede (2001) indicated that people with high uncertainty avoidance, tending to be risk averse, are more likely to feel threatened by uncertain situations and try to avoid uncertainty. Thus, the difference of uncertainty avoidance between Pakistan and China, reflecting the different aversion to risk, will result in different tendency to use price to judge quality. Consumers with higher uncertainty avoidance in Pakistan will more rely on price-quality relationship than those in China, especially under online environment characterized by its asymmetric, anonymous and virtual information. Thereby, the perceived quality difference between buy one get one free and buy two get fifty percent off promotion will be enlarged in Pakistan because of higher uncertainty avoidance level. Accordingly, we propose the following hypothesis:

H2: The difference of perceived quality from buy one get one free vs. buy two get fifty percent off promotion will be significantly larger in Pakistan than in China.

### 3.3. The relationship between perceived risk and perceived value

Perceived value is defined as customers’ overall evaluation of product utility comparing perceived gains and perceived losses (Zeithaml, 1988). For a better understanding of perceived value, Thaler (1985) divided perceived value into acquisition value and

transaction value, depending on the final price and customers' perceived savings respectively (Thaler, 1985). In this paper, we will examine the influence of whole perceived value rather than acquisition value and transaction value. Past research considered perceived risk as an important factor to influence perceived value (e.g., Chang & Tseng, 2013). Meanwhile, Snoj, Pisman Korda and Mumel (2004) verified the negative relationship between perceived risk and perceived value. Thus, we propose the following hypothesis:

H3: Perceived risk negatively influences perceived value.

### 3.4. The relationship between perceived quality and perceived value

Perceived value is a key concept in marketing, and many scholars focus on its antecedents and consequences (e.g., Vieira, 2013). Monroe (1990) indicated that perceived value is the ratio of perceived benefits and perceived sacrifices, and they found positive relationship between perceived quality and perceived value. Meanwhile, Milfelner, Snoj and Pisman Korda (2011) examined the relationship between perceived quality and perceived value, demonstrating that perceived quality positively influences perceived value. Similar conclusion can see the study of Agarwal and Teas (2004). In addition, Vieira (2013) also indicated that perceived quality influences perceived value. Thus, we propose the following hypothesis:

H4: Perceived quality positively influences perceived value.

### 3.5. The relationship between perceived value and purchase intention

Purchase intention, as the strength of consumer's subjective intention to get some brand or service (Jiang & Dong, 2003), is critical for companies. Prior research indicates that perceived value is the very important factor to influence purchase intention (Zeithaml, 1988). Some scholars even considered perceived value as the most important predictor of repeat purchase intention (e.g., Parasuraman & Grewal, 2000). Meanwhile, Wu, Chen, Chen and Cheng (2014) verified that perceived value positively affects online repeat purchase intention. Moreover, Chang and Tseng (2013) explored the relationship between perceived value and purchase intention under online environment, and they found the positive perceived value-purchase intention link. Thus, we propose the following hypothesis:

H5: Perceived value positively influences purchase intention.

### 3.6. Cross-cultural differences on the impact of promotional framing on perceived value

In our study, we mainly focus on the moderating effects of culture on consumers' responses including perceived risk, perceived quality, perceived value and purchase intention to online sales promotional framing between China and Pakistan. Thus we continue exploring the effects of cross-cultural differences on the impacts of promotional framing on consumer perceived value and purchase intention respectively.

On one hand, as above H1 inferred, buy two get fifty percent off promotion leads consumers to generate higher perceived risk than buy one get one free promotion, and the difference of perceived risk between these two sales promotions is enlarged in Pakistan with higher uncertainty avoidance score than in China with lower uncertainty avoidance score. Meanwhile, perceived risk will negatively influence perceived value according H3. Thus, the difference of perceived value from buy one get one free and buy two get fifty percent off promotion is enlarged in Pakistan than in China because of negative perceived value-perceived risk link. On the other hand, H2 proposed that buy two get fifty percent off promotion leads consumers to generate lower perceived quality

than buy one get one free promotion, and the difference of perceived quality between these two sales promotions is enlarged in Pakistan than in China. And H4 stated that perceived quality positively influences perceived value. Thus, the difference of perceived value from buy one get one free and buy two get fifty percent off promotion is enlarged in Pakistan than in China because of positive perceived quality-perceived value link. According to the above two sided reasons, we propose the following hypothesis:

H6: The difference of perceived value from buy one get one free vs. buy two get fifty percent off promotion will be significantly larger in Pakistan than in China.

### 3.7. Cross-cultural differences on the impact of promotional framing on purchase intention

Purchase intention is positively influenced by perceived value (H5). As above inferred, buy one get one free promotion will lead to higher consumer perceived value than buy two get fifty percent off (H6), so consumers will have higher purchase intention from buy one get one free promotion than buy two get fifty percent off promotion. And H6 also stated that the difference of perceived value between buy one get one free and buy two get fifty percent off is enlarged in Pakistan than in China, so the purchase intention difference between these two sales promotions also will be enlarged in Pakistan than in China because of positive perceived value-purchase intention link. In addition, buy two get fifty percent off promotion will lead to higher perceived risk than buy one get one free promotion according to H1 mentioned. As we know, if consumers perceive high perceived risk under online environment, they will decrease their purchase intention (Mansour, Kooli & Utama, 2014), so the difference of purchase intention between buy one get one free and buy two get fifty percent off promotion will be influenced by perceived risk. Thus, cultural difference of uncertainty avoidance score will moderate the impact of sales promotional framing on purchase intention. That is, Pakistani with higher uncertainty avoidance score will enlarge the purchase intention difference between buy one get one free and buy two get fifty percent off promotion. Therefore, we propose the following hypothesis:

H7: The difference of purchase intention from buy one get one free vs. buy two get fifty percent off promotion will be significantly larger in Pakistan than in China.

These seven hypotheses above are reflected in three paths in Fig. 1, a promotional framing driving path (promotional framing-perceived risk, promotional framing-perceived quality, promotional framing-perceived value and promotional framing-purchase intention), a perceived risk and perceived quality driving path (perceived risk-perceived value, perceived quality-perceived value) and a perceived value driving path (perceived value-purchase intention). Overall, the promotional framing driving path hypotheses expect higher effects in Pakistan than in China, and the perceived risk, perceived quality and perceived value driving paths hypotheses just propose the relationships among perceived risk, perceived quality, perceived value and purchase intention. The proposed hypotheses with these three paths are shown in Fig. 1.

## 4. Research method

### 4.1. Experimental design

To examine the effects of promotional framing on consumers' responses in different countries, we chose China and Pakistan as target countries because of salient difference in uncertainty avoidance (China=30, Pakistan=70) according to Hofstede (2001). We conduct a 2 (promotional framing: buy one get one

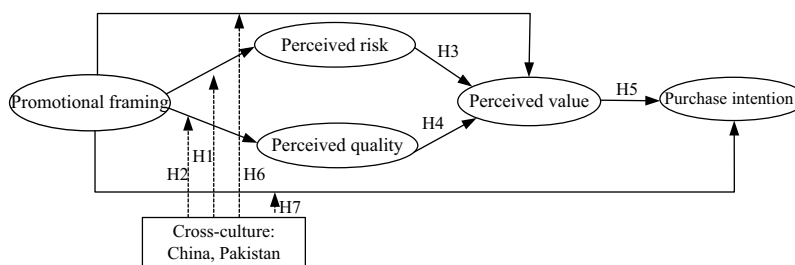


Fig. 1. Conceptual model.

free, buy two get fifty percent off)  $\times$  2 (Cross-culture: China, Pakistan) between-subjects factorial design experiment. Consistent with Xiao (2010) research, we chose clothing as the stimulus, because clothing companies often use sales promotions to attract consumers under online environment. In line with some previous research (e.g., Xiao, 2010), our study also uses university students as our experimental subjects, because they are sensitive to the promotional activities and they are the major group of online shopping in China and Pakistan, which can represent China and Pakistan online shoppers. Meanwhile, we attempt to avoid disturbing effects of current brand by employing virtual brand. The questionnaire was translated into Chinese language and English language by back translation method (Brislin, 1970), and the questionnaire has two versions, Mandarin and English used by China and Pakistan respectively. We asked two Pakistani marketing PhD students, two native Chinese marketing PhD students and two Chinese masters of English language to help us complete the inter-translation in order to make sure the correct translation of our questionnaire. Respondents are asked to read a short scenario about the online clothing promotion activity and then complete manipulation checks and answer the scales that measured perceived risk, perceived quality, perceived value and purchase intention. Demographic variables (e.g., age, sex, grade, online shopping frequency) questions were asked at the last section of the questionnaire.

#### 4.2. Sampling and data collection

We issued 700 questionnaires in classes, which consisted of 350 questionnaires in December 2013 in China (Chengdu, Southwest Jiaotong University) and 350 questionnaires in February 2014 in Pakistan (Karachi, PAF-KIET University). Participants are randomly assigned to one of the four conditions, who participated in exchange for course credit. We choose participants who had online shopping experience as our useful respondents (Byoungcho, Jin Yong & Jiyoung, 2008). In the end, we get 504 valid questionnaires after discarding of non-useful and incomplete questionnaires, 253 from China and 251 from Pakistan. In China sample, 53.4% are buy one get one free condition questionnaires and the age of the respondents tended to be young (mean age = 23.4, 41.1% are male and 58.9% are female), while in Pakistan sample, 51.0% are buy one get one free condition questionnaires and most of the respondents are male which can accurately represent Pakistan university students gender ratio (mean age = 25.6, 67.7% are male and 32.3% are female). Our respondents consisted of undergraduate (China = 57.7%, Pakistan = 41.4%) and postgraduate students (China = 42.3% and Pakistan = 58.6%). Our two sets of data sample characteristics with young age and high education can represent China and Pakistan online shoppers.

#### 4.3. Measurement

All measures we adopted are existing scales from previous research. We adopt four items to measure perceived risk (China, Cronbach's alpha = 0.774; Pakistan, Cronbach's alpha = 0.718) from the scales of Jing et al. (2006). We employ the scales of Jiang and Dong (2003) to measure perceived quality with three items (China, Cronbach's alpha = 0.792; Pakistan, Cronbach's alpha = 0.705) and purchase intention with two items (China, Cronbach's alpha = 0.830,  $r = 0.711$ ; Pakistan, Cronbach's alpha = 0.831,  $r = 0.722$ ). We measure perceived value with two items referred from Thaler (1985) (China, Cronbach's alpha = 0.824,  $r = 0.701$ ; Pakistan, Cronbach's alpha = 0.838,  $r = 0.721$ ). According to Hofstede (2001), we use four items to measure uncertainty avoidance (China, Cronbach's alpha = 0.732; Pakistan, Cronbach's alpha = 0.711). The Cronbach's Alphas for all scales were higher than the acceptable value of 0.7 in both Chinese and Pakistani samples (Nunnally, 1978), and the Pearson's correlation coefficients of the two-item scales of purchase intention and perceived value were above 0.7, demonstrating that all the measures have adequate internal consistency. All the measurement items used five-point Likert scales ("1 = completely disagree", "5 = completely agree").

### 5. Results

#### 5.1. Manipulation checks

Consistent with our hypotheses, we successfully performed a manipulation check of uncertainty avoidance, indicating that the average score of uncertainty avoidance in Pakistan is significantly higher than that in China ( $M_C = 3.697$ ,  $M_P = 4.174$ ;  $F = 107.424$ ,  $p < 0.001$ ). Meanwhile, based on the assumption that buy one get one free promotion would add consumers' benefits and buy two get fifty percent off promotion would reduce consumers' cost, we examine the consumers' perception of these two promotions with one item. The results indicate that most subjects choose the option of "adding the benefit" under the condition of buy one get one free promotion, while most subjects choose the option of "decreasing the cost" under the condition of buy two get fifty percent off promotion. The chi-square test results are significant ( $\chi^2(1) = 7.599$ ,  $p < 0.05$ ). Thus, our two manipulation checks are both successful.

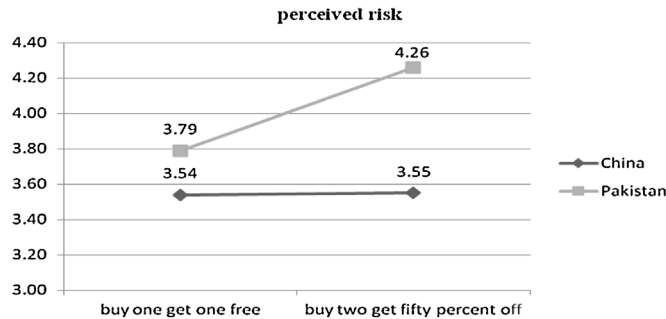
#### 5.2. Tests of hypotheses

According to Baron and Kenny (1986), we tested H1, H2, H6 and H7 using  $2 \times 2$  ANOVA analysis method by SPSS16.0 software.

Firstly, we use promotional type (buy one get one free and buy two get fifty percent off) and culture (China and Pakistan) as independent variables, perceived risk as the dependent variable to

**Table 1**  
Analysis of variance (ANOVA) results: perceived risk.

| Source              | Dependent variable | Type III sum of squares | df     | Mean square | F      | Sig.   |       |
|---------------------|--------------------|-------------------------|--------|-------------|--------|--------|-------|
| Promotion × culture | Perceived risk     | 6.794                   | 1      | 6.794       | 21.624 | 0.000  |       |
| Promotion           | China              | Perceived risk          | 0.012  | 1           | 0.012  | 0.034  | 0.855 |
|                     | Pakistan           | Perceived risk          | 14.396 | 1           | 14.396 | 56.115 | 0.000 |



**Fig. 2.** The moderating effect of culture on the impact of promotional framing on perceived risk.

test H1, and the ANOVA analysis shows a promotional framing × cross-culture interaction effect on perceived risk in all data ( $F=21.624, p < 0.001$ ). Subsequently, we do the ANOVA analysis using the data of China and Pakistan respectively. Results from Pakistan data reveal a significant effect of the promotional framing on perceived risk ( $F=56.115, p < 0.001$ ), however, the results are not significant in China data ( $F=0.034, p > 0.05$ ) (See Table 1).

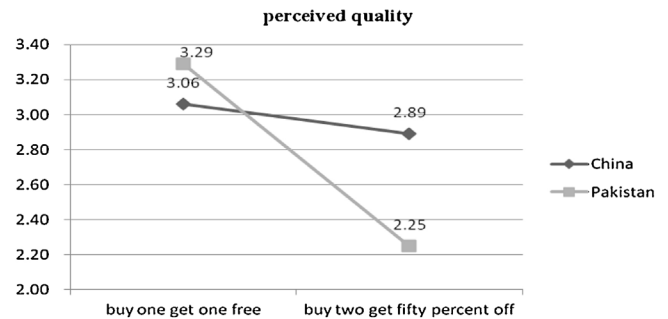
As shown in Fig. 2, the difference of perceived risk between buy one get one free and buy two get fifty percent off is significantly larger in Pakistan ( $\Delta M_1 = 4.26 - 3.79 = 0.47$ ) than in China ( $\Delta M_2 = 3.55 - 3.54 = 0.01$ ), supporting hypothesis H1.

Consistent with above procedure, we conduct the 2×2 ANOVA analysis using promotional type (buy one get one free and buy two get fifty percent off) and culture (China and Pakistan) as independent variables, perceived quality as the dependent variable to test H2. As Table 2 shows, the promotional framing × cross-culture interaction effect on perceived quality is significant ( $F=54.703, p < 0.001$ ). Next, we conduct the ANOVA analysis using the data of China and Pakistan respectively. The effects of promotional framing on perceived quality are significant both in China ( $F=4.606, p < 0.05$ ) and Pakistan ( $F=147.851, p < 0.001$ ). From Fig. 3, the difference of perceived quality from buy one get one free vs. buy two get fifty percent off is significantly larger in Pakistan ( $\Delta M_1 = 3.29 - 2.25 = 1.04$ ) than in China ( $\Delta M_2 = 3.06 - 2.89 = 0.17$ ). Thus, H2 is supported.

Similarly, we run the 2 × 2 ANOVA analysis to test H6. As Table 3 shows, the promotional framing × cross-culture interaction effect on perceived value is significant ( $F=53.231, p < 0.001$ ). Next, we run the ANOVA analysis using the data of China and Pakistan respectively. The effect of promotional framing on perceived value is significant in Pakistan ( $F=94.346, p < 0.00$ ), but not significant in China ( $F=0.297, p > 0.05$ ). From Fig. 4, the difference of perceived value from buy one get one free vs. buy two get fifty percent off is

**Table 2**  
Analysis of variance (ANOVA) results: perceived quality.

| Source              | Dependent variable | Type III sum of squares | df     | Mean square | F      | Sig.    |       |
|---------------------|--------------------|-------------------------|--------|-------------|--------|---------|-------|
| Promotion × culture | Perceived quality  | 23.524                  | 1      | 23.524      | 54.703 | 0.000   |       |
| Promotion           | China              | Perceived quality       | 1.861  | 1           | 1.861  | 4.606   | 0.033 |
|                     | Pakistan           | Perceived quality       | 67.470 | 1           | 67.470 | 147.851 | 0.000 |



**Fig. 3.** The moderating effect of culture on the impact of promotional framing on perceived quality.

significantly larger in Pakistan ( $\Delta M_1 = 3.41 - 2.37 = 1.04$ ) than in China ( $\Delta M_2 = 3.21 - 3.17 = 0.04$ ). Thus, H6 is supported.

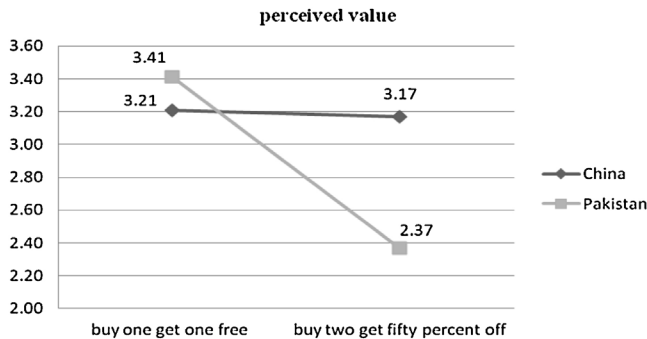
We run the 2 × 2 ANOVA analysis to test H7. As Table 4 shows, the promotional framing × cross-culture interaction effect on purchase intention is significant ( $F=22.367, p < 0.001$ ). Next, we run the ANOVA analysis using the data of China and Pakistan respectively. The effects of promotional framing on purchase intention are significant both in China ( $F=4.610, p < 0.05$ ) and Pakistan ( $F=64.310, p < 0.001$ ). From Fig. 5, the difference of purchase intention from buy one get one free vs. buy two get fifty percent off is significantly larger in Pakistan ( $\Delta M_1 = 2.90 - 2.00 = 0.90$ ) than in China ( $\Delta M_2 = 3.13 - 2.92 = 0.21$ ). Thus, H7 is supported.

We run the regression analyses to test hypotheses of H3, H4 and H5. Firstly, using perceived risk to be the independent variable, perceived value to be the dependent variable in the combined data, the results show that perceived risk significantly negatively influences perceived value ( $F=22.239, \beta = -0.206, p < 0.001$ ) (See Table 5). Next, we separate the data in two parts: China data and Pakistan data. Analysis results in Table 5 show a significant influence of perceived risk on perceived value both in China ( $F=5.576, p < 0.05$ ) and Pakistan ( $F=7.292, p < 0.05$ ). Thus, H3 is supported.

Subsequently, using perceived quality as the independent variable, perceived value as the dependent variable, regression analysis results show that perceived quality significantly positively influences perceived value ( $F=77.041, \beta = 0.365, p < 0.001$ ). Next, we also separate the data in two parts: China data and Pakistan data. The results in Table 6 reveal that perceived quality significantly influences perceived value both in China ( $F=39.311, p < 0.001$ ) and Pakistan ( $F=32.929, p < 0.001$ ). Thus, H4 is supported (See Table 6).

**Table 3**  
Analysis of variance (ANOVA) results: perceived value.

| Source              | Dependent variable | Type III sum of squares | df     | Mean square | F      | Sig.  |
|---------------------|--------------------|-------------------------|--------|-------------|--------|-------|
| Promotion × culture | Perceived value    | 30.826                  | 1      | 30.826      | 53.231 | 0.000 |
| Promotion           | China              | Perceived value         | 0.132  | 0.132       | 0.297  | 0.586 |
|                     | Pakistan           | Perceived value         | 67.366 | 67.366      | 94.346 | 0.000 |



**Fig. 4.** The moderating effect of culture on the impact of promotional framing on perceived value.

Lastly, using perceived value as the independent variable, purchase intention as the dependent variable, we do the regression analysis using the combined data. The results are shown in Table 7, indicating that perceived value significantly positively influences purchase intention ( $F=74.018$ ,  $\beta=0.358$ ,  $p<0.001$ ). Next, we separate the data in two parts: China data and Pakistan data. From the results in Table 7, we know that perceived value significantly influences purchase intention both in China ( $F=35.490$ ,  $p<0.001$ ) and Pakistan ( $F=27.158$ ,  $p<0.001$ ). Thus, H5 is supported (See Table 7).

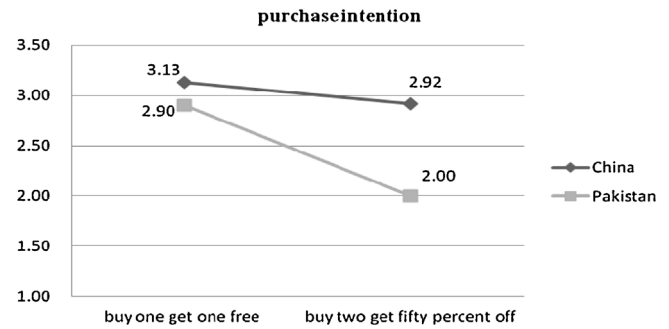
**6. Discussion**

*6.1. Theoretical implications*

Following the downstream of prior research, we sought to explore whether consumers with different cultural backgrounds will have different responses to online sales promotional framing. In our empirical study, we collected data from China and Pakistan to investigate the moderating effects of culture on consumers' responses (perceived risk, perceived quality, perceived value and purchase intention) under online environment. Our empirical study verified the moderating effects and indicated that the difference of perceived risk, perceived quality, perceived value and purchase intention from buy one get one free and buy two get fifty percent off will be significantly larger in Pakistan than in China (H1, H2, H6 and H7). Meanwhile, our study examined the relationships in perceived risk-perceived value, perceived quality-perceived value and perceived value-purchase intention links. Results verified the negative perceived risk-perceived value link (H3) and positive perceived quality-perceived value link (H4) and positive perceived value-purchase intention link (H5) both in Pakistan and China.

**Table 4**  
Analysis of variance (ANOVA) results: purchase intention.

| Source              | Dependent variable | Type III sum of squares | df     | Mean square | F      | Sig.  |
|---------------------|--------------------|-------------------------|--------|-------------|--------|-------|
| Promotion × culture | Purchase intention | 14.885                  | 1      | 14.885      | 22.367 | 0.000 |
| Promotion           | China              | Purchase intention      | 2.574  | 2.574       | 4.610  | 0.033 |
|                     | Pakistan           | Purchase intention      | 49.737 | 49.737      | 64.310 | 0.000 |



**Fig. 5.** The moderating effect of culture on the impact of promotional framing on purchase intention.

We found that buy one get one free promotion will lead to higher consumer perceived quality, higher perceived value, higher purchase intention and lower perceived risk than buy two get fifty percent off promotion in Pakistan, but the different impacts of online promotional framing on perceived risk and perceived value are not significant in China while the differences in consumer perceived quality and purchase intention influenced by promotional framing are significant. There are two reasons to explain these results. On the one hand, compared with Pakistani, Chinese consumers have lower score of uncertainty avoidance, which leads to lower perceived risk (Xiao, 2010), thus the perceived risk of these two sales promotions could not reach statistical significance. On the other hand, different consumers' past online experience will result in different responses to same promotions (Crespo-Almendros et al., 2015), leading to different results between Pakistan and China. Future research needs to verify these findings to make it safe to use.

Our findings contribute to the cross-cultural study about the effects of promotional framing on consumers' responses. To our knowledge, our study is the first to compare the effects of two types of sales promotions on consumers' responses under online environment considering the moderator of cultural differences between China (lower uncertainty avoidance) and Pakistan (higher uncertainty avoidance). Although Sinha and Smith (2000) compared the effect of buy one get one free promotion and buy two get fifty percent off on transaction value, they did not examine it in online and cross-cultural environment. Meanwhile, the cross-cultural studies of Choi and Kim (2008) and Huff and Alden (1999) are to some extent similar with our study, but they did not investigate the effects of online sales promotions with same promotional savings on consumers. Therefore, our research findings cumulatively contribute to cross-cultural research literatures.

**Table 5**  
The regression analysis of perceived risk and perceived value.

| Model         |                | Unstandardized coefficients |            | Standardized coefficients | t      | Sig.  |
|---------------|----------------|-----------------------------|------------|---------------------------|--------|-------|
|               |                | B                           | Std. error | $\beta$                   |        |       |
| Combined data | (Constant)     | 4.101                       | 0.227      |                           | 18.057 | 0.000 |
|               | Perceived risk | -0.279                      | 0.059      | -0.206                    | -4.716 | 0.000 |
| China         | (Constant)     | 3.762                       | 0.246      |                           | 15.293 | 0.000 |
|               | Perceived risk | -0.162                      | 0.068      | -0.147                    | -2.361 | 0.019 |
| Pakistan      | (Constant)     | 4.098                       | 0.449      |                           | 9.135  | 0.000 |
|               | Perceived risk | -0.299                      | 0.111      | -0.169                    | -2.700 | 0.007 |

**Table 6**  
The regression analysis of perceived quality and perceived value.

| Model         |                   | Unstandardized coefficients |            | Standardized coefficients | t      | Sig.  |
|---------------|-------------------|-----------------------------|------------|---------------------------|--------|-------|
|               |                   | B                           | Std. error | $\beta$                   |        |       |
| Combined data | (Constant)        | 1.861                       | 0.139      |                           | 13.339 | 0.000 |
|               | Perceived quality | 0.411                       | 0.047      | 0.365                     | 8.777  | 0.000 |
| China         | (Constant)        | 2.048                       | 0.186      |                           | 10.990 | 0.000 |
|               | Perceived quality | 0.383                       | 0.061      | 0.368                     | 6.270  | 0.000 |
| Pakistan      | (Constant)        | 1.794                       | 0.201      |                           | 8.910  | 0.000 |
|               | Perceived quality | 0.398                       | 0.069      | 0.342                     | 5.738  | 0.000 |

**Table 7**  
the regression analysis of perceived value and purchase intention.

| Model         |                 | Unstandardized coefficients |            | Standardized coefficients | t      | Sig.  |
|---------------|-----------------|-----------------------------|------------|---------------------------|--------|-------|
|               |                 | B                           | Std. error | $\beta$                   |        |       |
| Combined data | (Constant)      | 1.571                       | 0.142      |                           | 11.070 | 0.000 |
|               | Perceived value | 0.386                       | 0.045      | 0.358                     | 8.603  | 0.000 |
| China         | (Constant)      | 1.764                       | 0.217      |                           | 8.111  | 0.000 |
|               | Perceived value | 0.398                       | 0.067      | 0.352                     | 5.957  | 0.000 |
| Pakistan      | (Constant)      | 1.555                       | 0.183      |                           | 8.485  | 0.000 |
|               | Perceived value | 0.312                       | 0.060      | 0.314                     | 5.211  | 0.000 |

Our research also adds to the evidence to demonstrate the perceived risk-perceived value, perceived quality-perceived value and perceived value-purchase intention links from cross-cultural investigated data. Our results complement previous literature by examining the relationships in two cultures with different uncertainty avoidance score.

## 6.2. Managerial implications

Our research findings offer some practical implications for managers. From the results, we can get conclusions that different sales promotions, even with the same promotional savings, will take different perceptions and feelings to consumers and result in different consumers' responses (perceived risk, perceived quality, perceived value and purchase intention) in different countries, which should be seriously noticed and utilized by managers. According to our study, buy one get one free promotion is better than buy two get fifty percent off promotion both in China and Pakistan, because it takes higher perceived quality and purchase intention to consumers, which is to some extent consistent with the study of [Sinha and Smith \(2000\)](#) stating that buy one get one free promotion is better than buy two get fifty percent off promotion. Thus, when facing choices of buy one get one free and buy two get fifty percent off promotion, managers should choose buy one get one free promotion. According to our study, consumers

with different score of uncertainty avoidance deriving from different cultural background will have different perception of risk, resulting in different consumer behaviors. Specifically, consumers with higher uncertainty avoidance in Pakistan would not like these online sales promotions with higher consumer perceived risk and lower perceived quality, such as buy two get fifty percent off, thus companies should decrease the uncertainty of the promotions and improve their product quality perceptions. For example, they can launch more promotions with lower perceived risk such as coupon and free gift. Meanwhile, buy two get fifty percent off promotion will lead to lower consumer perceived quality and purchase intention in China. Thus, buy two get fifty percent off promotion is also not preferred by Chinese, and companies should pay more attention to their product quality and increase the credibility of the companies, and they should launch more promotions which will not lower consumer perceived quality. In conclusion, consumers with higher uncertainty avoidance are more sensitive to uncertain and risky promotions, and multinational corporations should consider cultural differences when adopting sales promotions strategies.

## 6.3. Limitations and future research

There are some limitations in our study. First, this study did a cross-cultural study between China and Pakistan, and the findings



may be suitable in these two countries, while other country managers should carefully utilize these findings, from which future research can extend our model in other countries, such as the USA with weak uncertainty avoidance and Korea with strong uncertainty avoidance (Hofstede, 2001). Second, we did not examine the influence of acquisition value and transaction value respectively on purchase intention instead of using whole perceived value in this study, but as Grewal, Monroe and Krishnan (1998) reported acquisition value and transaction value also have different influencing path coefficients on purchase intention. Third, we just analyzed the perceived risk-perceived value, perceived quality-perceived value and perceived value-purchase intention links, but did not analyze the mediating effect of perceived value. Finally, the use of university students as our experimental subjects makes the findings lack of full external validity although students as the online consumers representatives are appropriate for our study purpose and are also used by some previous studies (e.g., Xiao, 2010). Meanwhile, the fact that the sample size is not very big makes our findings lack of sufficiently representative, which should be considered by future research.

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