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The impact of emotion valence and scarcity on the price-quality effect

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The impact of emotions on price-quality perceptions has been widely debated but remains insufficiently understood. We conducted four studies exploring how emotional valence and scarcity perception influence the price-quality effect. Study 1 revealed that positive emotion enhances the price-quality effect, while negative emotion has no significant influence on the relationship. Study 2 and Study 3 further demonstrated that individuals in a positive emotion rely more heavily on price when evaluating quality compared to those in a negative emotion. Study 4 found that the sense of scarcity moderated the relationship between emotional valence and the price-quality effect. These findings contribute to a deeper understanding of price-quality judgments and shed light on how the sense of scarcity influences the relationship between emotion and the price-quality effect in contemporary contexts.

Keywords Price-quality effect, Positive emotion, Negative emotion, Sense of scarcity

Decades of marketing literature have highlighted the tendency to use price as a basis for judging product quality, a phenomenon known as the price-quality effect[1,2]. For consumers consciously evaluating quality, relying on price as a heuristic is a cognitively efficient strategy[3]. Substantial research has investigated the price-quality tendency, exploring factors that either hinder or facilitate it[4]. Recent studies have also explored the impact of consumer beliefs and recognition on the price-quality tendency[5,6].

Actually, price is not always a good indicator of quality. Imkamp (2018) found that only 4% of the variance in price could be attributed to quality difference[7]. Instead, subjective factors such as attitude and affect play a more significant role in shaping consumers' price-quality judgments[3,8]. Emotion, which refers to a generalized feeling that influences actions, is an internal and subjective state associated with evaluative and cognitive process[9]. Previous studies have examined the effect of emotion on perception, reasoning, and social judgment[10,11].

Studies in consumer psychology also have explored the relationship between emotion and consumer behavior, such as product satisfaction, brand loyalty, and preferences[12,13]. However, research specifically addressing how the valence of emotions influences price-quality judgments remains limited. This study aims to deepen the theoretical understanding of the role of emotional valence in price-quality judgments by exploring the nuanced mechanisms through which emotions interact with situational factors, such as the perception of scarcity. The findings can contribute to a more comprehensive understanding of the dynamic interplay between emotional states and psychological constructs. They can also offer practical insights for both consumers and marketers.

Over the past few years, research on the impact of emotion on perception, reasoning, and social judgment in consumer behavior has grown significantly[14,15]. Consumption emotion refers to the set of emotional responses elicited specifically during product usage or consumption experiences, such as joy, anger, fear and others[16]. Positive emotionality encompasses traits of extraversion, which tend to promote positive emotional experiences, whereas negative emotionality is associated with neurotic traits, fostering negative emotional experiences. Studies have shown that consumers experiencing positive emotions are more likely to rely on heuristic process (e.g., focusing on the price of a product), while those in a negative emotional state tend to engage in more systematic elaboration processing (focusing on the intrinsic characteristics of the product) when making purchasing decisions[17,18].

According to the dominant processing theory, dominant processing is a direct, advantageous, and highly accessible process in the brain for current tasks[10]. This dominant cognitive processing has been likened to a "traffic light" effect, with positive emotions acting as green lights that allow advantageous cognitive processing to proceed normally, while negative emotions act as red lights that hinder dominant processing[19]. A study also provides evidence that positive emotions facilitate dominant cognitive processing in consumers, while negative emotions hinder it[20]. Consumers commonly adopt dominant processing by using prices to judge product quality[21]. Again, from the perspective of the broaden-and-build theory of emotions, positive emotions have a significant impact on individuals' attentional scope. Fredrickson (2001) suggests that positive emotions can

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broaden individuals' attentional scope and enhance their cognitive flexibility, while negative emotions can narrow individuals' attentional scope[22]. Therefore, it can be inferred that individuals in a positive emotional state may be more likely to pay attention to price as a cue for quality judgment, while negative emotions may reduce the likelihood of individuals using price to judge quality. In summary, individuals in a positive emotional state are more likely to use price as a cue for quality judgment and tend to make decisions using simple and fast heuristic processing. We propose the first hypothesis:

Hypothesis 1 *Consumers in a positive emotion are more likely to rely on price in judging quality than those who in a negative emotion.*

We proposed that the relationship between emotional valence and price-quality judgment would be moderated by the perception of scarcity. The sense of scarcity is a psychological state in which individuals' needs and desires are not met due to the perceived or actual lack of resources[23,24]. As a ubiquitous phenomenon, the sense of scarcity has a significant impact on individuals' emotions, cognition, and behavior[25]. Scarcity perception, as a situational factor, imposes cognitive constraints on individuals, thereby promoting reliance on heuristic processing[26,27]. Observing the consumption behavior of individuals under scarcity using eye-tracking technology, results show that individuals spend more time on price-related information and less time on other information[28,29].

As mentioned above, positive emotions facilitate dominant cognitive processing in consumers[20]. However, individuals with high perceptions of scarcity experience cognitive constraints. As a result, regardless of whether they are in a positive or negative emotional state, their price-quality judgments remain at a similar level due to limited cognitive resources. In contrast, under low scarcity perception, individuals retain sufficient cognitive resources, which can be enhanced by positive emotions. Consequently, individuals in different emotional states may rely more on heuristic processing influenced by their scarcity mindset, leading their product quality judgments to depend more heavily on price. Based on this reasoning, we propose the second hypothesis:

Hypothesis 2 *Scarcity perception moderates the relationship between emotional valence and the price-quality effect. Specifically, for individuals with high scarcity perception, there is no significant difference in the price-quality effect judgment between emotional valences. In contrast, for individuals with low scarcity perception, the price-quality judgment effect of positive emotions is significantly higher than that of individuals in a negative emotional state.*

Four studies were conducted to test the hypotheses. Study 1 explored the link between emotion and the price-quality effect using a self-reported questionnaire survey. Study 2 primed emotions and measured the correlation between prices and subjective product quality evaluation. Study 3 replicated Study 2, with the measurement of price-quality replaced with high-low price products. Study 4 examined the moderating effect of scarcity perception using a between-subjects experimental design. All procedures performed were in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. The study protocol was reviewed and approved by the Ethics Committee of the Central University of Finance and Economics.

Study 1

The primary aim of Study 1 was to explore the link between emotion and the price-quality effect (hypothesis 1) using a self-reported questionnaire survey.

Method

Participants

We recruited participants via Credamo which is an online platform, whose data reliability has been well-validated in previous studies[27]. The sample included 298 people (91 men). The mean age of the participants was 30.29 years ($SD = 11.17$). Participants received a gift (keychain) for their participation.

Procedure

The study was conducted using a questionnaire survey. First, participants assessed their current emotional state by completing the PANAS scale; Next, they completed the price-quality relationship scale to evaluate their tendency to judge quality based on price. Finally, participants provided demographic information at the end of the questionnaire, including gender, age, marital status income level and educational background.

Measurements

*Positive/negative affect scale.*The 18-item positive/negative affect scale developed by Chinese scholars were used to measure emotion valence[30]. The scale contains 9 positive emotions (active, happy) and 9 negative emotions (shame, guilt). Participants rated the items on a 5-point Likert scale ranging from 1 (very mild) to 5 (very strong). The Cronbach's alpha was 0.91 in the present study.

Price-quality effect scale. A 4-item, 7- point scale was use to measure the price-quality judgments tendency[31]. An example item is " Generally speaking, the higher the price of a product, the higher the quality" and " the old saying, 'You get what you pay for' holds true for most products.". The items anchored by 1 = Strongly Disagree and 7 = Strongly Agree. The Cronbach's alpha was 0.91 in the present study.

Results

Descriptive statistics and correlations are shown in the Table 1. The results revealed a positive correlation between positive emotions and price-quality judgment ($r = 0.13$, $p < 0.01$). However, there was no relationship between negative emotions and price-quality judgment ($r = 0.07$, $p = 0.21$).

Furthermore, we conducted a regression analysis to explore the effect of positive and negative emotions on trust after controlling for gender, marriage, and education. The results demonstrated that positive emotion was a significant predictor of the price-quality effect ($\beta = 0.13$, $t[296] = 2.31$, $p < 0.05$, 95%CI = [0.01, 0.27]). However, negative emotion did not significantly predict the price-quality effect ($t[296] = 1.27$, $p = 0.21$).

Discussion

The present study provided preliminary evidence that only positive emotion was associated with price-quality judgment. However, as it was a correlational study, we could not establish a causal link. We would conduct an experimental study in the second study to replicate the results.

Study 2

We adopted an alternative method for measuring the price-quality effect by calculating the correlation coefficient between product price and subjective quality evaluation. Additionally, emotional states were experimentally manipulated, with a neutral emotion group serving as the control group. This approach aimed to explore the relationship between different types of emotions and the price-quality effect.

Method

Participants experiment design

This study used G*Power to calculate the sample size. The expected effect size was $f^2 = 0.25$, with a statistical power of 0.80. The results indicated that a total of 102 participants were needed. A total of 116 participants were randomly recruited from the credamo platform in present study (59 males), with an average age of 24.15 years ($SD = 7.00$). They were randomly assigned to positive or negative emotion group as a between-subjects factorial design. All the participants were thanked and given 10 CNY (1.5 USD) after they finished the experiment.

Procedure

The participants were randomly assigned to positive or negative emotion groups in a between-subjects factorial design. Participants completed a paper questionnaire that asked them to rate "To what extent do you feel happy/sad?" on a nine-point scale (1 = not at all; 9 = very) to determine baseline emotion. We then asked participants to recall and write about a happy/sad day they had experienced[32]. Participants were provided 10 min and asked to report as many details as possible. At the end of the task, the participants were asked to rate how happy or sad they felt at the moment as a manipulation check.

Manipulation

Price-Quality Judgment. Following a previous study, we told the participants that the purpose of the present study was to explore their perception of quality, given specific information about a product[21,33]. Participants were told that they would be shown some information about several computer mice and would then be asked to predict and report the quality of additional brands.

We provided sufficient time for the participants to view ten types of computer mice. We provided relevant information, including name, price, applicable scenarios, and quality (on a 1–10 scale). The purpose of this step was to familiarize participants with the various brands' prices and quality to provide a rough baseline. In addition, this step could reduce wild guesses by the participants. We then provided another ten anonymous computer mice and asked the participants to evaluate their quality on a 1–10 scale. Finally, participants viewed a table of information on 30 computer mice and then rated the quality of ten anonymous computer mice based on their price. The correlation between the price and subjective quality estimates was calculated as the dependent variable. The average price-subjective quality correlation across all participants was 0.59.

Results

Preliminary analyses

The manipulation check indicated that participants in the positive emotion group ($M = 6.75$, $SD = 1.43$) were significantly happier than they were in the pretest rating ($M = 6.25$, $SD = 1.22$, $t[55] = 2.04$, $p < 0.05$). Similarly, participants in the negative emotion group ($M = 6.28$, $SD = 1.59$) reported significantly higher level of sadness

	M(*SD*)	1	2	3	4	5	6
Gender	----	1					
Marriage	----	0.01	1				
Education	----	− 0.06	− 0.12	1			
Positive emotion	3.18(1.01)	− 0.06	0.01	0.02	1		
Negative emotion	2.34(0.98)	− 0.08	− 0.00	− 0.00	− 0.13	1	
Price-quality	4.14(0.97)	0.03	− 0.01	− 0.01	0.13**	0.07	1

Table 1. Descriptive statistics and correlation ($n = 298$).

than they did in the pretest ($M = 5.58$, $SD = 1.64$, $t[59] = 2.51$, $p = 0.01$). These results indicated that the manipulation was successful.

Differences in price-quality judgment

We calculated the average correlation between price and subjective quality ratings for each participant. The results of the independent sample t-test showed that the average correlation between price and quality for participants in the positive emotion group ($M = 0.52$, $SD = 0.21$) was significantly higher than that for those in the negative emotion group ($M = 0.43$, $SD = 0.14$, $t[114] = 2.84$, $p < 0.001$, 95%CI = [0.076, 0.425], $d = 0.51$; Fig. 1).

Discussion

These findings indicated that priming positive or negative emotions affected price-quality judgments, as predicted. Participants in a positive emotion perceived the association between price and quality as significantly closer than those in a negative emotion.

We manipulated the participants' emotions in laboratory and the findings indicated that priming positive or negative emotions affect price-quality judgment, as predicted. Participants in a positive emotion perceived the association between price and quality as significantly closer than those who in a negative emotion. Next, we try to employ a more another manipulation way to explore how different emotions affect their price-quality perception in Study 3.

Study 3

Study 3 employed an alternative research paradigm for the price-quality effect to further examine the relationship between emotional valence and the price-quality effect. It explored whether individuals' evaluations of high-priced versus low-priced product quality differ under different types of emotional states.

Method

Participants

The sample size was calculated using G*Power. A 2 (emotion: positive vs. negative) × 2 (product price: high vs. low) between-subjects experimental design was employed. Analysis of variance (ANOVA) was used for statistical analysis. The expected effect size was moderate with $f^2 = 0.25$, and the statistical power was set at 0.80. The calculation indicated that a total of 158 participants were needed.We randomly recruited 194 participants (68 males) with an average age of 24.25 years ($SD = 5.01$) from credamo platform. The participants were randomly assigned to groups in a 2 × 2 (emotion: positive vs. negative; price: high vs. low) between-subjects experimental design. Participants received 20 yuan (approximately 3 USD) for participation after they finished the task.

Procedure

Similar to Study 2, participants first answered two questions about their current emotional state, assessing the pleasantness and arousal levels of their emotions on a 9-point Likert scale. Next, participants were asked to recall a specific event that made them happy or unhappy and describe the event in detail, including their feelings (e.g., "Please recall a moment in your life that made you happy and describe the event and your feelings in detail"). After this, participants completed the emotion assessment questions again to measure and evaluate the aroused emotions.

They then underwent the manipulation of both the dependent and independent variables as outlined below. Following the experimental procedure, participants were placed in a shopping scenario and asked to review information about three alarm clock products[21]. The information included a simple slogan, a fictitious brand name (all sourced from product listings on Taobao), and the retail price. Detailed information is provided in Appendix 5. The scenario included two baseline alarm clocks priced at 69 CNY and 79 CNY, respectively. The third was a target alarm clock, priced at 89 CNY in the high-price condition and 59 CNY in the low-price

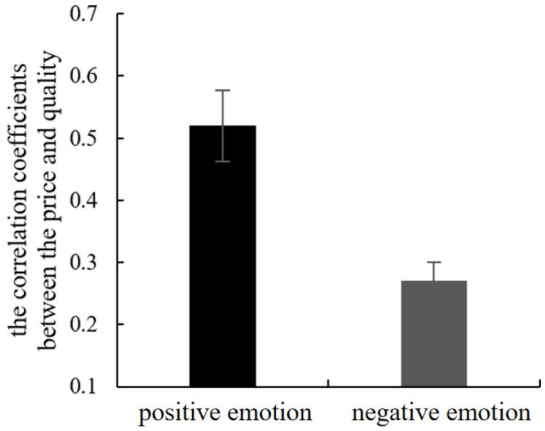

Fig. 1. Impact of emotional valence on the price-quality effect in Study 2.

Fig. 2. Experimental materials in Study 3 (left: high-price group; right: low-price group).

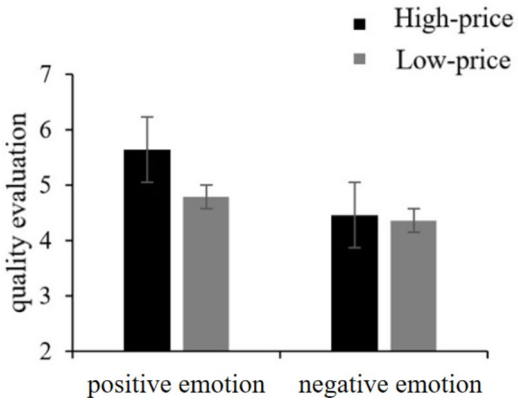

Fig. 3. Interaction between emotional valence and price in Study 3.

condition. Participants were then required to indicate the retail price of the third alarm clock to confirm their awareness of the price and ensure they paid attention to the task.

We manipulated price-quality judgment using the salience of price, following a previous study[21]. The participants viewed information on three types of alarm clocks: the target brand and two other brands. Baseline price information was provided. We used fictitious names for the target brands and obtained product attributes, including prices, from an online retailer (Tmall). The participants were randomly assigned to high- or low-priced conditions (Fig. 2).

The baseline prices of the two groups of products were 69 CNY and 79 CNY. The only information that varied according to price conditions was the price of the target product (the third item in Fig. 2). The price of the target clock in the high-price group was 89 CNY, and that in the low-price group was 59 CNY. Finally, we measured price-quality judgment by asking the respondents to rate the target brand on quality (1 = very low; 9 = very high). A comparison of mean quality ratings across high- and low-price conditions revealed the extent to which participants made price-quality judgments.

Results

Preliminary analyses

The manipulation check showed that participants in the positive emotion group ($M = 7.10$, $SD = 1.53$) were significantly happier than those in the pretest rating ($M = 6.79$, $SD = 1.71$, $t[98] = 2.10$, $p < 0.05$). Similarly, those in the negative emotion group ($M = 6.33$, $SD = 1.56$) were significantly sadder than pretest ($M = 4.74$, $SD = 1.81$, $t[94] = 8.60$, $p < 0.01$). These results indicated that the manipulation was successful.

ANCOVA

A 2 × 2 (emotion: positive vs. negative; price: high vs. low) between-subjects analysis of variance (ANOVA) was conducted to explore the effect of emotion on price-quality judgment (Fig. 3). After controlling for gender, age, and education level, the results revealed a significant interaction between emotional valence and price($F[1, 186] = 4.75$, $p < 0.03$, $\eta^2 = 0.03$). A simple effects analysis revealed that participants in a positive emotion believed that the quality of high-priced products ($M = 5.64$, $SD = 1.07$) was significantly higher than that of low-priced products ($M = 4.78$, $SD = 0.92$, $t[(97] = 4.34$, $p < 0.001$, 95%CI = [0.47, 1.26]). However, participants in a negative emotion exhibited no significant differences in the quality evaluation of high- ($M = 4.46$, $SD = 1.22$) and low-priced products ($M = 4.36$, $SD = 1.03$, $t[93] = 0.46$, $p = 0.64$).

Discussion

The current study has demonstrated a significant interaction between positive emotion and price levels. Specifically, individuals experiencing positive emotion tend to perceive a stronger correlation between price and

quality, whereas negative emotion does not seem to exert a similar effect. In Study 4 next, additional methods of emotional valence manipulation will be employed, and the individual's level of scarcity perception will be measured to further investigate the moderating role of scarcity perception in the relationship between emotional valence and the price-quality effect.

Study 4

Building on the first three studies, this research aims to further explore the boundaries of the impact of emotions on the price-quality effect, specifically examining the moderating role of individuals' perceived scarcity.

Method

Participants and experiments design Using G*Power to calculate sample size, a one-factor (emotion: positive vs. negative) between-subjects experimental design is employed, while measuring participants' sense of scarcity and judgments of price-quality effect. With an expected moderate effect size of $f^2 = 0.25$ and a statistical power of 0.80, the calculation indicates that a total of 82 participants are needed. A total of 123 participants were recruited in this study (51 males) from Credamo Platform. The mean age of the participants was 22.84 years ($SD = 2.29$). All participants were randomly assigned to the positive emotion group and the negative emotion group.

Procedure

Participants were randomly assigned to positive or negative emotion groups. Each participant completed an emotion questionnaire as a pretest in a private room. We employed an emotion-priming paradigm[9]. We asked the participants to listen to a piece of happy or sad music while waiting. The happy group listened to the "Wild Dance of the Golden Snake", which is a classical and cheerful rhythm that is always played at major Chinese festivals. The melody of this music is high-spirited and enthusiastic, which creates a jubilant atmosphere. The sad group listened to "The Moon Over a Fountain", which is considered a masterpiece of traditional Chinese music. The music has a desolate artistic conception and a sad tune, which creates a sad atmosphere. The priming time was set 5 min.

While listening to the music, the participants were asked to write the name of the song, occasions on which the song is played, and any associated thoughts. The participants were asked to indicate how happy and how sad they felt at the moment on a nine-point scale (1 = not at all; 9 = extremely). Finally, the participants were asked to complete the economic experience scale, price-quality effect scale, and related demographic variables.

Measurements

The six-item socioeconomic experience scale was used to measure the sense of scarcity[34]. An example item was "My family usually had enough money for things when I was growing up." Cronbach's alpha for the scale was 0.91 in the present study. The measurement of the price-quality scale was the same as in Study 1.

Results

Preliminary analyses

The results demonstrated that participants were happier after positive emotion priming ($M_{before} = 5.51$, $SD_{before} = 1.67$; $M_{after} = 6.32$, $SD_{after} = 1.38$, $t[61] = -4.00$, $p < 0.001$, 95%CI = [−1.21, −0.40]) sadder after negative emotion priming ($M_{before} = 4.37$, $SD_{before} = 1.24$; $M_{after} = 4.95$, $SD_{after} = 1.32$, $t[60] = -2.75$, $p < 0.001$, 95%CI = [−0.99, −0.16]), indicating that the manipulation was successful.

Regression analysis

To test the potential moderating mechanism of perception of scarcity in the relationship between emotion and price-quality effect, we conducted a moderation analysis with emotion as the independent variable(happy coded 0 and sad coded 1), price-quality judgement as the dependent variable and perception of scarcity as the moderating variable using Process 3.5.

The results of moderation analysis revealed a significant interaction effect between emotion valence and price-quality judgment, $\beta = -0.30$, $t = -2.24$, $p < 0.05$, 95%CI = [− 0.57 − 0.04]. The results of simple slope showed that for those who experience a low sense of scarcity, emotions have no significant predictive effect on the price-quality effect, $\beta = -0.01$, $t = -0.08$, $p = 0.93$. However, for individuals with high perception of scarcity, emotions significantly negatively predict their price-quality judgments, $\beta = -0.72$, $t = -3.31$, $p < 0.01$, 95%CI = [− 1.16, − 0.29]. The results mean that the higher the negative emotion, the less likely people are to rely on price to judge quality, which supports Hypothesis 2.

A simple slope test using the Johnson-Neyman method revealed that when individuals experiencing low perception of scarcity(1.25 to 3.24), the 95% bootstrap confidence intervals (CI) for the slope include zero, indicating that the simple slope is not significant. However, when individuals have a high perception of scarcity (3.25 to 6), the 95% bootstrap confidence intervals for the slope do not include zero, indicating a significant simple slope. See Fig. 4 for details.

Discussion

We manipulated individual's emotion state in the present study and measured the scarcity by instruments to explore the boundary between emotion and price-quality judgement. The current study found that when people in scarcity state, individuals both in positive and negative emotion have a higher price-quality judgement. However, to those who in a lower sense of scarcity, people in positive emotion have a significantly high price-quality judgment than those in the negative emotion state.

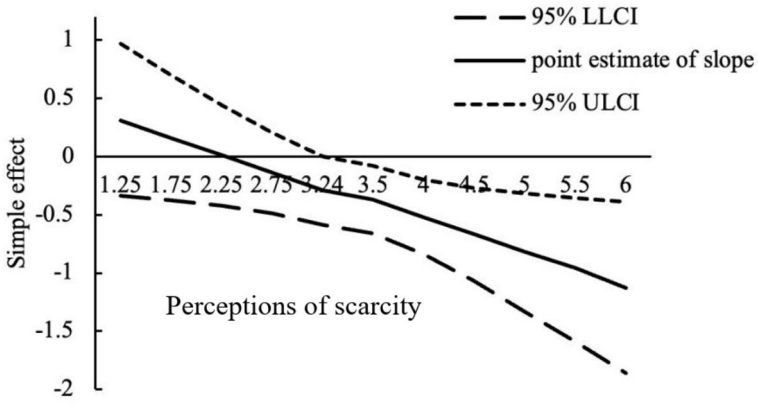

Fig. 4. Simple slope plot of the moderating effect of perceptions of scarcity perception on the relationship between emotion and the price-quality effect in Study 4.

General discussion

To explore the effect of emotion on price-quality judgment, we conducted four studies with different paradigms. Study 1 showed that positive emotion had a significant positive association with price-quality judgment. Studies 2 and 3 revealed a relationship between emotion and price-quality judgment. Moreover, the sense of scarcity moderated the influence of emotion on the price-quality effect. These results have several theoretical and practical implications.

Theoretical contributions

First, this study extends the understanding of the positive role of negative emotion. In contrast to previous studies that revealed the negative influence of negative emotion, some studies have recently focused on how negative emotion positively affects individual behavior in social interaction[35]. Analyses with measured and manipulated emotions demonstrated that individuals in a negative emotional state are less reliant on the price of a product to judge its quality, which is conducive to reducing their irrational consumption and plays a positive role in their consumption decision-making. The results are consistent with the "traffic light" effect. The association between price and quality was more easily evoked, as prices indicated a "Go" signal for participants in positive emotions. These results are consistent with previous studies showing that individuals in a positive emotion always rely on stereotypes in making judgments and decisions[36]. Bodenhasuen (1994) argued that individuals in a positive emotion judge information based on length rather than content[37].

Second, this study enriches theoretical research on scarcity from a psychological perspective. A previous study showed that scarcity induced cognitive capacity, in which individuals focused on limited cues, such as price, and ignored other cues[38]. The present study demonstrated that participants in a negative emotion relied less on price to judge quality only in the absence of scarcity. However, participants with a high sense of scarcity were likely to have high price-quality judgments regardless of emotion. This is consistent with previous findings indicating that participants with small budgets, representing scarcity, were particularly sensitive to prices when recalling product-related information[28,39].

Practical implications

The findings of the present study also have significant practical implications for both consumers and producers. From the consumer's perspective, these findings can aid in making more rational consumption decisions. As previously mentioned, price alone can only account for 4% of the variance in quality, with the remaining 96% being attributed to other factors. Despite this, the phenomenon of irrational consumption decisions based on the belief that "you get what you pay for" often occurs. The results of the current study suggest that consumers should focus on the core features of a product rather than specific cues, and they should shop around for the best deal, particularly when in a positive emotion state. From a market perspective, price-quality judgments serve as important signals for pricing decisions. Economic models assume that prices rapidly approach long-term equilibrium under conditions of perfect competition[40,41]. Therefore, merchants can create a pleasant shopping atmosphere and keep consumers in a good emotion during the shopping process, which is beneficial to the sales of goods.

Limitation of the study

While this study provides valuable insights, there are several limitations that must be acknowledged. First, we only explored positive and negative emotional valence and did not examine specific emotions. According to the emotional motivation dimension model, emotional valence has significantly different effects on individuals' cognition, judgment, and behavior[42]. For instance, angry individuals tend to have intense approach motivation. Second, future studies should manipulate the different shopping channels (such as online and offline) in price-quality judgments. Similar to the previous study, the manipulation of price-quality judgment in current study used only limited information, such as price and appearance[43,44].However, when it comes to offline shopping, there are many more factors that can influence consumer's judgments of price-quality. On the other hand, with

online consumption, consumers tend to rely on comments, purchase times, questions, and answers to judge the quality of product with online consumption[45,46](Akron et al., 2021; Boyle & Lathrop, 2009). Recently, live broadcast marketing has provided a creative method of evaluating product quality[47] (Xie et al., 2019). The study lacks a comparison between online and offline shopping channels.

Agenda for future research

While this study offers valuable insights, several avenues for future research remain. First, future studies could investigate the impact of specific emotions, such as pride and panic, as well as more complex emotions like awe, on price-quality judgments. This could help to deepen our understanding of how various emotional states influence consumer decision-making processes in different contexts.

Second, an important aspect that was not addressed in the current study is the comparison between different shopping channels, specifically online and offline, in relation to price-quality judgments. Future research should manipulate these shopping environments to examine how individuals perceive and evaluate price and quality in each context. It would be valuable to explore whether consumers' price-quality judgments differ between online and offline settings and how other cues, such as product presentation or retailer reputation, might influence these perceptions in both contexts.

Moreover, future studies should consider the role of product characteristics, such as product type and specific attributes, in the relationship between emotion and price-quality judgments. For instance, does the type of product—whether experiential or utilitarian—affect how emotions impact the perceived price-value relationship? Understanding this could offer practical insights for marketers and retailers.

Finally, sociocultural factors also warrant further investigation. Cultural norms and social influences could play a significant role in shaping how individuals emotionally respond to price-quality judgments. Future research could explore how cultural differences influence the emotional processes involved in consumer decision-making and how these factors vary across different demographic groups.

Data availability

The data for the four studies are available at: https://osf.io/jb9r5/?view_only= 9 dc03c26cc734148b8910f31274 292c6.

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Author contributions

Zhao Na contributed conception and design of the study.Sun Yixin, Shi Minyang and Chen Yuxin organized the database and wrote some sections of the manuscript. Zhao Na performed the statistical analysis and wrote the first draft of the manuscript. All authors contributed to manuscript revision, reviewed the manuscript.

Declarations

Competing interests

The authors declare no competing interests.

Institutional review board statement

The studies involving human participants were reviewed and approved by Ethics Committee of the Central University of Finance and Economics (IRB20230423002).

Informed consent statement

The participants provided their written informed consent to participate in this study.

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