The Effect of Price Discrimination on Fairness Perception and Online Hotel Reservation Intention

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Abstract: In light of the development of online travel agencies (OTAs), the rules of the entire tourism industry have changed. Due to the ease of finding information and comparing products, consumers can choose a hotel not only by room type, but also by rate, according to their preferences. The purpose of this study was to explore the effect of price discrimination on the fairness perception toward reservation intentions. The interaction effects of the brand familiarity and the type of consumers on the fairness perception were also examined. The study used an experimental design, with 2 price discriminations × 2 brand familiarities × 2 regulatory focuses, on a total of 320 valid subjects. The results showed that advantaged-price discriminations had higher fairness perceptions than equal-price discriminations, and that higher fairness perceptions had higher reservation intentions. The interaction effect of brand familiarity showed no significant impact on the fairness perceptions, while the regulatory focus had a mitigating effect on the price discrimination and on the fairness perceptions. This study provides insights into the relationship between online price discrimination and tourism, and it contributes to the literature on hospitality. It also provides the managerial implications for online hotels in developing pricing strategies.

Keywords: online hotel booking; fairness perception; price discrimination; brand familiarity; regulatory focus

1. Introduction

The advancements in internet technology have changed the traditional rules of the entire tourism industry. As an example, Taiwan’s internet penetration is 92.6% in 2020 [1] and the internet has become a source of travel information [2]. Online travel agencies (OTAs) such as Agoda.com, Booking.com, Hotels.com, etc., are the most commonly used online booking platforms for consumers purchasing hotel accommodation products [3]. Consumers can browse information on various accommodation options using OTA platforms, and they can also order via these platforms [4]. The ease of finding information and comparing products using OTA platforms has made consumers more diversified in choosing hotel reservations for planning their own travel [5].

Taiwanese individuals exhibit distinct preferences when selecting hotels through online platforms, primarily the younger and well-educated demographic (aged below 45), who are accustomed to making online bookings [6,7]. Young, single individuals often prefer to book accommodation individually, in contrast to traditional Taiwanese families, where the booking decisions are typically dominated by males (fathers) [6]. Given the strong sense of Taiwanese identity and pride, marketing strategies heavily rely on brand perception among Taiwanese consumers, who have become increasingly brand-conscious [1,6]. Hence, a personalized marketing strategy through social media platforms, such as the local bulletin board system (BBS), becomes vital. PPT, one of the influential BBS platforms, holds considerable dominance. Luxury hotel brands are especially valued as
social status symbols by Taiwanese consumers. Moreover, male consumers tend to prioritize the brand reputation, whereas female consumers are relatively more price-sensitive. In general, however, if Taiwanese people tend to believe that the hotel price is acceptable and good value for the price, this will enhance the reservation intention [8].

Online booking websites offer different prices for the same hotels. On top of that, one hotel will generally offer two or more prices for the same room type. For example, there are fast booking rates, non-refundable room rates, and refunded room rates before check-in. Consumers can not only choose the hotel and room type according to their preferences, but also the room rate according to their needs. When consumers face different price situations, they will compare and evaluate the situations, to determine whether they are reasonably fair [9]. Equity theory suggests that fairness is obtained when the benefit (output) to price (input) ratio is psychologically balanced, with peers as the referent [10–12]. Moreover, consumers shape their notions of fairness not only on the outcome, but also on whether the process was reasonable, acceptable, and just [13]. Some studies have shown that perceived unfairness leads to distrust and diminished purchase intentions [12,14–16]. Therefore, fairness perceptions have become important in the pricing practices of online booking websites, as they will affect a consumer’s intention to make a reservation.

Campbell’s research [14] found that price fairness plays an important role in building a brand’s reputation, because it fosters consumer trust. When consumers are exposed to a brand many times, they accumulate knowledge about that brand’s characteristics, and become familiar with it [17,18]. Brand familiarity has been deemed critical as a varying evaluation of price, based on a consumer’s knowledge of a brand. Consumers with a high brand familiarity will be less impacted by the price of a product, compared to a less familiar consumer [8], as they have more extensive knowledge about that brand, which, in turn, helps to establish the price perception of that brand [19]. The study by Shehryar and Hunt [20] exhibited the same findings, wherein familiar buyers were more tolerant of price unfairness, and they had a higher willingness to buy in an unfair price situation. Interestingly, however, brand familiarity did not significantly affect the fairness of a price situation. Similar findings were presented by Son and Jin [21], where a high brand familiarity significantly moderated the perceived price fairness, which, in turn, affected consumers’ willingness to purchase a product. Previous studies have focused primarily on how brand familiarity impacts the perceived price, and the moderating effect of brand familiarity on the perceived price and purchase intention. In the online hotel booking context, however, the manner in which brand familiarity impacts the fairness perceptions of price discrimination is not well understood.

Furthermore, when it comes to online room-booking platforms, it is essential to consider consumer behavior when implementing a price discrimination strategy, in addition to building brand familiarity. Grewal et al. [22] emphasized that pricing discrimination based on consumer characteristics has a significant impact on trust, fairness perceptions, and the willingness to buy. Previous research has indicated that the application of regulatory focus theory to marketing can explain consumer behaviors [23]. From a regulatory focus angle, Higgins [24] argued that consumers pay attention to the outcome that they receive (positive or negative). Promotion-focus-type consumers will be more attentive to positive outcomes, and the benefits they receive, while prevention-focus-type consumers are concerned with the negative outcomes that can be avoided. In recent years, marketing scholars have begun to use regulatory focus theory in several aspects of marketing; however, its application in a pricing strategy, such as price discrimination, is still very rare. Most studies have applied this theory to explain consumer decisions regarding product or service selection [25–28]. The concept of regulatory focus is becoming very useful, because it provides a better understanding of consumer behavior, enabling marketers to tailor their methods to target specific market segments [29].

Previous studies on pricing on online booking platforms related to fairness and purchase intention have typically focused on the perceived price, price-related attributes, pricing and revenue, dynamic pricing, and pricing and satisfaction [8,30–33]. Few studies
have discussed price discrimination and fairness in the context of brand familiarity and a regulatory focus situation. These two variables are important predictors in determining pricing strategies, because they can reveal consumer reactions to pricing [8,20,21,34]. Therefore, this study aimed to explore how price discrimination influences fairness perceptions and reservation intentions for online hotel booking, in the context of brand familiarity and a regulatory focus situation. By exploring these relationships, this study intends to provide valuable insights into pricing strategies for online booking operators, and contribute to the existing literature on consumer behavior in the online travel industry.

2. Literature Review

2.1. Fairness Perception

The equity theory proposed by Adams [10] has been widely used to define the concept of fairness perception. According to the theory, the concept is defined as a relationship between an individual’s contribution (input) and reward (output), and it compares this ratio with another individual’s ratio. Fairness is obtained when the perceived input and output ratio is psychologically balanced, with a peer’s ratio as a referent. Consumers form fairness perceptions based on whether or not an outcome or process is reasonable, acceptable, or just [13]. The research by Huppertz et al. [11] showed that fair perceptions happen when the perceived quality is equal to the price paid by a customer, which, in turn, creates satisfaction for them. If there is an imbalance between the value and the price, there will be a sense of unfairness and discomfort, or dissatisfaction [35].

Furthermore, when a consumer buys a product or service, they will judge the fairness based on their psychological feelings [12], and on whether the process of interacting with the product or service will provide them with benefits or losses, in terms of the results, processes, and interactions [36]. The outcome of a transaction is, consequently, very subjective [14,37], and it is compared explicitly (such as with a competitor or another person) or implicitly (such as with an experience or time) [38] by the purchasing individual, as is the effort required to acquire the product or service [39]. Further, a consumer’s cognitive sense of fairness is affected by the price of a product, which, in turn, affects their purchase intention [12,37].

This study applied equity theory to consumers’ online reservation choices. When consumers choose to book rooms online, they make that decision based on the value and price discrimination and conditions they have obtained. Referring to the research by Clemmer and Schneider [36], fairness perception is defined as the process of choosing an online room reservation, and evaluating whether that choice is reasonable and acceptable. If it is perceived as unfair, it means that the online booking prices and conditions obtained by consumers are disadvantaged, unreasonable, and unacceptable, and so they will not choose to book rooms.

2.2. Price Discrimination and Fairness Perception

Price discrimination is defined as different prices being set for the same products or services, to target consumers with different levels of affordability and demand intensity [40]. A company can set different prices according to its market demand, time, space, and consumers’ needs and preferences, in order to maximize benefits and profits. The development of the internet has increased the efficient operational abilities of companies and, consequently, the price of products has been reduced. Although this condition allows internet operators to move toward competitive pricing, the development of big data has enabled them to formulate pricing strategies, such as price discrimination and price dynamics (individual-level price discrimination), more intelligently [33].

A consumer’s cognitive perception of the equity of a price is affected by pricing strategies, and it is also related to transaction prices [41,42]. Price discrimination may lead to fair or unfair price perceptions, because the perception of fairness is an integral determinant of a consumer’s price perception and price acceptability [13]. Xia et al. [19] argued that consumers’ fairness perceptions of prices constitute their judgments of the
value they will obtain based on what they spend. Consumers rely on a seller’s price and a reference group’s price (which could be a competitor’s price, or the price paid by another consumer) to judge whether the difference between them is reasonable, acceptable, and a fair measure of reference. Price comparisons will lead consumers into three pricing situations [19]: (1) advantaged (when consumers have more benefits than costs, and better comparisons to their referents); (2) disadvantaged (when consumers have fewer benefits than costs, and worse comparisons to their referents); and (3) equal (when consumers’ costs and benefits are equal, with equal comparisons to their referents). An equal-price situation will not trigger an unfairness perception, but advantaged and disadvantaged situations may lead to unfairness perceptions [19].

The pricing strategy set by an enterprise will determine a customer’s perception of price equity, and the pricing of a product also affects a consumer’s fairness perception [43]. Price discrimination based on the features of a purchase, and the time of a purchase, has a significant impact on the price equity. For example, a hotel booking website could set two types of prices: a non-refundable lower price, and a refundable original price. The first pricing situation may offer a consumer an advantage compared to the second situation, on the condition that there is no cancellation. However, if there is a cancellation, the second pricing situation would be seen as reasonable and fair, or equal. Being in an advantaged-pricing situation, a consumer will feel a greater sense of fairness, compared to the disadvantaged situation [44] but, according to Lastner et al., the advantaged-pricing situation would mitigate that sense of fairness when referent consumers obtain a better price [39].

According to the above studies, the cost of price discrimination set by a hotel booking website could be equal, advantaged, or disadvantaged with respect to the fairness perceptions of consumers. Since it is uncommon for a hotel booking website to set a price higher than its normal price for payment in advance, this study assumed two types of pricing situations when consumers book rooms online: (1) an advantaged price, referring to a lower but non-refundable price, and (2) an equal price, referring to a normal but refundable price. As inferred from the studies by Campbell [44] and Lastner et al. [39], consumers in advantaged-pricing situations will have greater perceptions of cognitive fairness, compared to those in equal-pricing situations. Therefore, this research constructed the following research hypothesis:

Hypothesis 1 (H1). Price discrimination on a hotel booking website will significantly influence consumers’ fairness perceptions; specifically, consumers are expected to perceive greater fairness in an advantaged-price situation, compared to an equal-price situation.

2.3. Brand Familiarity and Fairness Perception

Brand familiarity refers to the number of brand-related experiences accumulated in a consumer’s memory [17]. It is the sum of the time spent understanding the brand-related information actively interacted with, and obtained by, consumers [45]. When consumers come into contact with a brand through sight, hearing, and thought, that brand can more clearly be remembered, as the brand becomes more familiar. Campbell and Keller [46] pointed out that the difference between familiar and unfamiliar brands lies in the knowledge of a brand stored in a customer’s memory, and the various associations that a customer has with familiar brands. When consumers can only evaluate a product with limited information, they often tend to use brand familiarity as the basis for evaluation and reference when purchasing that product.

Biswas’ study [8] on the relationship between reference price perception and brand familiarity showed that brand familiarity moderates customers’ perceptions of reference prices as relative to purchase intentions. When the brand familiarity is high, customers’ perceptions of reference prices are low. Consumers use reference prices (previous experiences) to evaluate the fairness of a product or service, because they have a better understanding about that product’s attributes and price structure [47]. Therefore, consumers with a high
brand familiarity will perceive high prices as fair, as they do not rely on the price alone, but also rely on product attributes. From a fairness perception point of view, Biswas’s [8] findings concluded that a greater brand familiarity will lower the fairness perception differences and, in turn, affect higher purchase intentions [17,48–50].

Based on the above discussion, a consumer tends to use brand familiarity for evaluation if there is limited information about a hotel. As Biswas [8] mentioned, a higher brand familiarity produces fewer differences in fairness perceptions; therefore, the authors proposed a second hypothesis, as follows:

**Hypothesis 2 (H2).** Brand familiarity moderates the price discrimination effect on fairness perceptions.

The more familiar a consumer is, the smaller the difference in fairness perception will be.

2.4. Regulatory Focus and Fairness Perception

The regulatory focus theory proposed by Higgins [51] has been widely used in psychology and marketing to explain consumer behavior [23]. The regulatory focus theory [24,51] is based on the self-regulation of an individual when chasing his or her goals. The theory divides consumers into two types of orientation: promotion and prevention. Consumers with a promotion focus will pay attention to positive results or outcomes, and they will set their hopes and desires as their goals, and pay attention to what they obtain. On the contrary, consumers with a prevention focus will pay attention to negative consequences, and the failure that can be avoided, and they will pursue no loss as their goal. In the moment of decision-making, people evaluate and judge according to whether they have a promotion focus or a prevention focus [52]. Furthermore, Ghiassaleh et al. [53] stated that consumers with a promotion focus tends to view the decision-making environment as relatively benign, and they are more willing to take risks and seize opportunities to ensure their own progress, whereas consumers with a prevention focus perceive the decision-making environment as relatively threatening, and tend to take a risk-averse and cautious approach. Lee and Aaker [54] found that promotion-focus consumers tends to view the decision-making environment as relatively benign, and they are more willing to take risks and seize opportunities to ensure their own progress, whereas consumers with a prevention focus perceive the decision-making environment as relatively threatening, and tend to take a risk-averse and cautious approach. Lee and Aaker [54] found that promotion-focus consumers are more influenced by gains, in terms of the framed messages given, whereas prevention-focus consumers are more convinced by losses.

Costa et al. [34] found that a regulatory focus has an impact on price assessment. When assigning the price of a product or service, prevention-focus consumers tend to avoid undesirable outcomes, and make decisions that provide them with a sense of security [28]. Additionally, they perceive a higher price as more unfair, compared to promotion-focus consumers. This is because prevention-focus consumers are sensitive to potential negative consequences, and they see higher prices as having detrimental effects on them, by reducing their available resources. Consequently, they may feel that they have a lack of funds for other needs [34].

In explaining the relationship between regulatory focus and fairness perception, Cropanzano et al. [35] used a process-and-outcome approach. An event is deemed fair if it has an appropriate process and a favorable outcome. The results showed that promotion-focus consumers pay more attention to outcomes than processes, whereas prevention-focus consumers emphasize both, in order to obtain a high fairness perceptions. This happens because prevention-focus consumers take a risk-averse and cautious approach [53]. When booking a hotel, the processes and purchase motivations (goals) are important aspects for fairness perceptions. For example, when consumers look for a hotel room and face price discrimination (different prices for the same room), prevention-focus people will look carefully, in detail, for information about the situation [28,56], the benefits and cost, and the booking process (whether it is efficient, and if there are any specific terms of payment or other processes), and they will compare it with their referent, to avoid failure and loss. These individuals tend to pay attention to details and concrete information. Promotion-focus people will simply look at the benefits and cost as their purchase motivations, because
they tend to find global information to help them decide \cite{28,56}. If it is a better offer than, or equal to, the referent, then promotion-focus people will see it as fair, without considering the booking process.

In summary, it is obvious that when consumers with a prevention focus choose to book a room in a price-discriminat situation, they will set a lower price as their referent, choose a “no loss” approach, and pursue the avoidance of failure; hence, the differences in this type of consumer’s fairness perceptions will be smaller, compared to those of a promotion-focus consumer. Therefore, a third research hypothesis was constructed, as follows:

**Hypothesis 3 (H3).** A regulatory focus moderates the price discrimination effect on fairness perceptions. When consumers have a prevention focus, the differences in fairness perceptions will be smaller, compared to those of consumers with a promotion focus.

2.5. Reservation Intention and Fairness Perception

Reservation intention in hospitality has a similar definition to purchase intention (as it relates to products). With respect to a hotel booking website, the reservation intention is defined as the intention to order a room \cite{57}. Purchase intention is a subjective feeling a consumer has about a product, and it can be used to predict that consumer’s behavior \cite{58,59}, and assess the likelihood of their buying decision \cite{60}.

In the price equity literature, consumers’ fairness perceptions of price are claimed to affect their purchase intentions \cite{61}. Consumers’ purchase intentions will be subject to their final judgment results—whether the purchases are reasonable and acceptable—as a basis for measuring equity \cite{19,62}. Furthermore, Schmidt et al. \cite{63} pointed out that price fairness has a positive impact on a consumer’s satisfaction and purchase intention. In consumers’ minds, the more positive their fairness perceptions are about the price, the higher their purchase intentions will be \cite{64,65}. On the contrary, consumers’ feelings about unfairness will affect their levels of satisfaction and purchase intentions \cite{46}.

In summary, from a price equity point of view, a consumer’s fairness perception about price will affect their purchase intention (reservation intention in hospitality) and satisfaction. Therefore, this study inferred a fourth hypothesis, as follows:

**Hypothesis 4 (H4).** When choosing to book a room online, the higher a consumer’s fairness perception, the higher their reservation intention.

3. Materials and Methods

3.1. Research Framework

This study explored the impact of price discrimination on fairness perceptions and reservation intentions with regard to consumers choosing to book rooms on hotel booking websites. Brand familiarity and a regulatory focus were used as the moderating variables to explore the impact of price discrimination on fairness perceptions and reservation intentions. The research framework of this study is presented in Figure 1.
3.2. Experimental Design and Procedure

The research used the following experimental design: 2 (price discrimination: equal price (refundable)/advantaged price (non-refundable)) \times 2 (brand familiarity: familiar/unfamiliar) \times 2 (regulatory focus: promotion/prevention). The study included a total of eight groups of experimental design combinations, as presented in Table 1.

Table 1. Experimental groups.

<table>
<thead>
<tr>
<th>Experimental Groups</th>
<th>Price Discrimination</th>
<th>Brand Familiarity</th>
<th>Regulatory Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td>equal price (refundable)</td>
<td>familiar</td>
<td>promotion</td>
</tr>
<tr>
<td>Group 2</td>
<td>equal price (refundable)</td>
<td>familiar</td>
<td>prevention</td>
</tr>
<tr>
<td>Group 3</td>
<td>equal price (refundable)</td>
<td>unfamiliar</td>
<td>promotion</td>
</tr>
<tr>
<td>Group 4</td>
<td>equal price (refundable)</td>
<td>unfamiliar</td>
<td>prevention</td>
</tr>
<tr>
<td>Group 5</td>
<td>advantaged price (non-refundable)</td>
<td>familiar</td>
<td>promotion</td>
</tr>
<tr>
<td>Group 6</td>
<td>advantaged price (non-refundable)</td>
<td>unfamiliar</td>
<td>prevention</td>
</tr>
<tr>
<td>Group 7</td>
<td>advantaged price (non-refundable)</td>
<td>unfamiliar</td>
<td>promotion</td>
</tr>
<tr>
<td>Group 8</td>
<td>advantaged price (non-refundable)</td>
<td>unfamiliar</td>
<td>prevention</td>
</tr>
</tbody>
</table>

This study referred to the actual design of online hotel booking websites. The experimental design was divided into three parts. The first part was related to the personal consumption experience, such as the booking experience, the time and frequency of participation, the cost of each booking, and the user experience. Subjects with no online booking experience did not meet the research criteria, and thus were not able to continue to answer the questionnaire. The second part included basic information about the subjects, such as their gender, education, and employment. The third part was related to the online booking situation and the booking decision-making. Before the experiment, the subjects were asked to imagine and respond to an event or situation that happened to them, and it was assumed that they travelled regularly each year. For the current year, the subjects and their relatives and friends had planned to stay in a hotel. The experimental situation was then interfered with by regulatory focus situations. Next, the screen displayed the contents of a hotel reservation website, including the hotel name (for the brand familiarity manipulation), basic room information, original price and online reservation price (for
the price discrimination manipulation), reservation instructions, and other information (see Figure 2a, b for the experimental sample). After the subjects had read the contents, they began to answer the brand familiarity and price discrimination questions. Finally, the subjects answered questions about fairness perceptions and reservation intentions. After completing the questionnaire, the participants provided their email addresses to facilitate contact, and they received movie tickets and supermarket gift vouchers as rewards for completing the questionnaire.

Figure 2. Sample of the experimental design: (a) the experimental situation for a consumer with a prevention focus, a lack of brand familiarity, and an advantaged price discrimination situation; and (b) the experimental design for a consumer with a promotion focus, brand familiarity, and an equal price discrimination situation.
3.3. Sample

As its subject, the study focused on individuals who used online hotel booking websites to book rooms. The data were collected via the distribution of questionnaires using Google Forms (https://lihi1.cc/ZwTxC) (accessed on 25 May 2020) randomly on various platforms, including the PPT bulletin board system (the largest bulletin board system in Taiwan), Facebook, Instagram, and other social networking sites. Movie tickets and supermarket vouchers were provided as gifts, to encourage the sample to complete the questionnaire. Out of the 400 participants who completed the questionnaire, 320 responses were valid, and the effective response rate was 80%. The study employed an independent sample design, assigning 40 participants to each experimental group from the pool of valid questionnaires.

Of the total respondents, 65% were female. The largest age group was 21–30 years old (51%), and most of the respondents had a university or college education (66%), and were employed in the service industry (37%). The participants booked their rooms primarily via Booking.com (43%) and Agoda.com (33%). The two highest online bookings-per-year categories among the sample were twice (31%) and once (29%), and the highest level-of-spending categories were approximately TWD 2000–3000 per booking (32%), and more than TWD 3000 per booking (30%). Most of the participants had two to four years of experience using hotel booking websites.

3.4. Measurement

This study referred to the definition of price discrimination put forth by Xia et al. [19], and it divided the price situations into advantaged-price situations and equal-price situations. Consumers considered the non-refundable price (TWD 5200) as an advantaged-price situation and the refundable price (TWD 7500) as an equal-price situation. The participants’ views about whether it was fair for them to use hotel booking websites were determined using a Likert scale (where 1 indicated strong disagreement, and 5 indicated strong agreement).

The brand familiarity variable referred to the definition put forth by Alba and Hutchinson [17], which states that the number of contact experiences with a brand accumulates in consumers’ memories. A pre-test was conducted, with reference to the evaluation of legal tourist hotels by the Tourism Bureau of the Taiwan Ministry of Communications [66], and ten hotels were selected in various countries and cities. The brand familiarity questions were assessed by adapting the five-point Likert scale (where 1 represented strong disagreement, and 5 represented strong agreement) that was used in the studies by Kent and Allen [67], and Lin and Cheng [68]. The pre-test had 38 participants, and the results showed that the “Fullon Hotel” had the highest level of familiarity (average = 4.10), and the “Wellspring by Silks” was the most unfamiliar hotel (average = 1.59). Therefore, in this study, the familiar hotel was the “Fullon Hotel”, and the unfamiliar hotel was the “Wellspring by Silks”.

The research used Higgins’ definition of regulatory focus [24,51], and we divided participants into two types of situations: a promotion focus, and a prevention focus. Lee and Aaker’s suggestion about framing situations [54] was applied to this research. A positive frame was used for a promotion-focus situation, and a negative frame was used for a prevention-focus situation.

The fairness perception measurements in this study were based on those used in the studies by Adams [69], Kahneman et al. [12], and Grewal et al. [22], and they were modified to match the situation. There were seven questions that used a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

The attributes of the reservation intention were similar to those of the purchase intention [57], and this study used the purchase intention to measure the possibility of a consumer purchase [60]. Some modifications were made to develop suitable questions for the study. There were four questions that used a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) to measure reserve intention. Details about the variables and operationalized items can be found in Table 2.
### Table 2. Research variables and measurements.

<table>
<thead>
<tr>
<th>Research Variables</th>
<th>Operationalized Items</th>
<th>Sources</th>
</tr>
</thead>
</table>
| Price Discrimination    | • Advantaged-price discrimination: “I think the price TWD 5200 non-refundable is a favorable price for me compared to the original price of TWD 7500”.  
  • Equal-price discrimination: “I think the price TWD 7500 refundable is fair enough to me, compared to the original TWD 7500”. |         |
| Brand Familiarity       | • Familiar with the brand:  
  1. I have a good impression of the promotional information and advertisements from the Fullon Hotel.  
  2. I have a good impression of the reservation-related information for the Fullon Hotel.  
  3. I have received information about the Fullon Hotel.  
  4. The information may come from other people’s discussions and comments (including on TV, on the radio, and as told by relatives and friends).  
  5. I know about the Fullon Hotel.  

  • Unfamiliar with the brand:  
  1. I have a good impression of the promotional information and advertisements from the Wellspring by Silks.  
  2. I have a good impression of the reservation-related information for the Wellspring by Silks.  
  3. I have received information about the Wellspring by Silks.  
  4. The information may come from other people’s discussions and comments (including on TV, on the radio, and as told by relatives and friends).  
  5. I know about the Wellspring by Silks. | [67,68] |
| Regulator Focus         | • Promotion focus: “You want to achieve your travel goals and decide to book accommodation through an online booking website. You feel that you can get more and different information, and you will feel happy when you get the result!”  
  • Prevention focus: “In order to avoid unfavorable results when booking a room, you decide to book accommodation through an online booking website and avoid the negative feeling of loss!” |         |
| Fairness Perception     | 1. I think the price on the online booking site is fair, reasonable, and acceptable.  
  2. I think the price of the reservation is acceptable.  
  3. I think the online reservation is very cost-effective and booking this room at the price on the online reservation will bring me a pleasant feeling.  
  4. I feel that it is worthwhile to book a room online because it can meet my needs at a price I can accept.  
  5. I choose to book a room using a booking website and I will feel that my money is well spent.  
  6. The price of online booking matches the price I am willing to pay.  
  7. I feel that it is worthwhile to book this room on booking site, and so I am willing to pay the relative money to make a reservation. | [12,22,69] |
| Reservation Intention   | 1. I would consider using a booking website to book a hotel room.  
  2. I would continue to use booking sites for hotel reservations.  
  3. I would recommend using this booking site to my family and friends to book this hotel.  
  4. Overall, I will use this booking site to book this hotel. | [60] |

### 4. Results

#### 4.1. Manipulation Checks and Reliability and Validity

This study confirmed the effective manipulation of price discrimination, brand familiarity, and regulatory focus through manipulation checks [70]. The price discrimination manipulation checks for TWD 5200 (non-refundable) showed that this price was considered an advantaged price ($M_{\text{advantage}} = 4.93$ compared to $M_{\text{normal}} = 1.55$, $t = 32.937; p < 0.001$), and the checks for TWD 7500 showed that this was considered a normal price ($M_{\text{normal}} = 4.76$ compared
to $M_{\text{advantage}} = 1.55, t = -16.754; p < 0.013$). The results showed that the manipulation of price discrimination was successful.

When the experimental situation used the “Fullon Hotel”, with five items to measure, the participants’ perceptions of familiarity of the hotel brand had a mean value of 4.72, while the perceptions of familiarity for the “Wellspring by Silks” had a mean value of 2.15. The results of the mean difference tests were $M_{\text{difference}} = 2.57, t = 9.276; p < 0.001$. The results showed that the “Fullon Hotel” was considered a familiar brand, while the “Wellspring by Silks” was an unfamiliar brand.

The positive frame for the experimental situation was reflected through a promotion focus ($M_{\text{promotion}} = 4.83$ compared to $M_{\text{prevention}} = 1.45, t = 20.860; p < 0.001$), and the negative frame was presented as a prevention focus ($M_{\text{prevention}} = 4.90$ compared to $M_{\text{promotion}} = 1.34, t = -25.49; p < 0.001$). The results showed that the framing worked for the experimental situations.

The fairness perception and reservation intention variables were examined and measured for their reliability and validity. This study was primarily based on the evaluation criteria proposed by Hair et al. [71] for evaluating reliability and validity using the PLS-SEM model. Using this model, the reliability was measured by an indicator of reliability with an outer loading value greater than 0.7 (between 0.4 and 0.7 could be reserved, according to the context), and by an internal consistency reliability with a construct composite reliability (CR) value that was required to be greater than 0.7. The validity of the constructs was evaluated using convergent validity, with an average variation extraction (AVE) value that was greater than 0.5, and the discriminant validity, according to Fornell and Larcker [72], used the value of the square root of the AVE of each latent variable, which should have been larger than the correlation among the latent variables.

The fairness perception construct (F1–F7; see Figure 3) had an outer loading value between 0.714 and 0.89 (higher than 0.7), the CR value was 0.934, and the AVE value was 0.64. Table 3 shows the comparison of the square root of the AVE, and the correlations between the fairness perceptions and the reservation intentions. The results showed a higher AVE squared value than the correlation, and they met Fornell and Larcker’s criteria [72]. Therefore, the results showed good reliability and validity.

The reservation intention variables included four items (R1–R4; see Figure 3), with outer loading values of between 0.914 and 0.953 (higher than 0.7), with a CR value of 0.965 and an AVE value of 0.87. The result of the square root of the AVE and the correlations among the reservation intentions and fairness perceptions also met Fornell and Larcker’s criteria [72]. Therefore, the results showed good reliability and validity.

| Table 3. Correlation coefficient and discriminant validity of the potential facets. |
|------------------|-----------------|
| **Structure**    | **Fairness Perception** | **Reservation Intention** |
| Fairness perception | 0.802 *          |                         |
| Reservation intention | 0.795          | 0.932 *                 |

Note: * denotes the square root of the average variation extraction (AVE) of the potential facets.
4.2. Hypothesis Testing

In this study, PLS-SEM analysis was employed to examine the interactions among the variables, and to test the proposed hypotheses. The SmartPLS version 3.2.8 software package was used for the analyses, with bootstrapping, and the employment of 5000 resampling iterations to determine the significance level of the regression, as suggested by Hair et al. [71]. The path analysis is presented in Figure 3, and a concise summary is provided in Table 4.

Table 4. Summary of the path analysis.

<table>
<thead>
<tr>
<th>Path</th>
<th>Path Coefficient</th>
<th>t-Value</th>
<th>p-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price discrimination → fairness perception</td>
<td>0.248 ***</td>
<td>4.707</td>
<td>0.000</td>
</tr>
<tr>
<td>Brand familiarity → fairness perception</td>
<td>−0.158 ***</td>
<td>3.007</td>
<td>0.003</td>
</tr>
<tr>
<td>Regulatory focus → fairness perception</td>
<td>0.157 ***</td>
<td>3.003</td>
<td>0.003</td>
</tr>
<tr>
<td>Price discrimination × brand familiarity → fairness perception</td>
<td>−0.072</td>
<td>1.362</td>
<td>0.176</td>
</tr>
<tr>
<td>Price discrimination × regulatory focus → fairness perception</td>
<td>−0.085 *</td>
<td>1.660</td>
<td>0.095</td>
</tr>
<tr>
<td>Fairness perception → reservation intention</td>
<td>0.714 ***</td>
<td>35.087</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Note: * p < 0.1, ** p < 0.05, and *** p < 0.01.

The results showed that price discrimination had a positive significant impact on fairness perceptions ($\beta = 0.248, t = 4.707; p < 0.001$). Further analysis of the impact of the types of price discrimination on fairness perceptions showed that advantaged prices led to significantly higher fairness perceptions than equal prices ($M_{\text{advantaged}} = 3.43$ vs. $M_{\text{equal}} = 3.01$; $M_{\text{difference}} = 0.42, t = 4.707; p < 0.01$). The results supported H1: price discrimination will affect consumers’ fairness perceptions, and advantaged-price discrimination has higher fairness perceptions.

The direct effect of brand familiarity on fairness perceptions is significant, and it has an opposite direction ($\beta = −0.158; t = 3.007; p < 0.01$), which meant that the direct effect of brand familiarity was a reduction in fairness perceptions. Further analysis showed that brand familiarity was not significant in moderating the price discrimination effects on
fairness perceptions ($\beta = -0.072$, $t = 1.362; p > 0.1$). This meant that brand familiarity did not produce any effect to mitigate the price discrimination effects on fairness perceptions. Figure 4 shows the interaction between price discrimination and brand familiarity on fairness perceptions. When the participants were familiar with the hotel brand, there was a significant difference in the fairness perception ($M_{\text{advantaged}} = 3.66$ vs. $M_{\text{equal}} = 3.09$; $M_{\text{difference}} = 0.57$, $t = 3.216; p < 0.001$). However, when the participants were unfamiliar with the brand, there was no significant difference in the fairness perception ($M_{\text{advantaged}} = 3.21$ vs. $M_{\text{equal}} = 2.94$; $M_{\text{difference}} = 0.27$, $t = 1.613; p > 0.1$). Figure 4 demonstrates that a familiar brand exhibited a steeper slope compared to an unfamiliar one. The results indicated that price discrimination had a stronger effect on fairness perceptions in participants who were familiar with the brand. This finding contradicts Biswas’ findings [8], where a high level of brand familiarity reduced fairness perceptions. Therefore, H2 was not supported.

![Figure 4. Interaction diagram of brand familiarity and price discrimination on fairness perceptions.](image_url)

The regulatory focus had a significant impact on fairness perceptions ($\beta = 0.157$, $t = 3.003; p < 0.01$). The moderating effect of the regulatory focus on the relationship between price discrimination and fairness perceptions was also significant ($\beta = -0.085$, $t = 1.660; p < 0.1$), though it was in the opposite direction, meaning that the regulatory focus reduced the effect of price discrimination on fairness perceptions. In a further analysis (see Figure 5) of the promotion type, an advantaged price led to a significant difference in the mean fairness perception, compared to an equal price ($M_{\text{advantaged}} = 3.37$ vs. $M_{\text{equal}} = 2.78$; $M_{\text{difference}} = 0.59$, $t = 3.574; p < 0.001$). The analysis of the preventive type showed that an advantaged price also led to a significant difference in the mean fairness perception, compared to an equal price ($M_{\text{advantaged}} = 3.5$ vs. $M_{\text{equal}} = 3.25$; $M_{\text{difference}} = 0.25$, $t = 1.665; p < 0.1$). Figure 5 shows that the regulatory focus promotion type exhibited a steeper slope, compared to the prevention type, and a comparison of the difference in the mean fairness between the prevention type and the promotion type showed a high mean difference. The findings indicated that price discrimination had a stronger impact on participants with a promotion focus, compared to those with a prevention focus. The study demonstrated that the regulatory focus mitigated the effect of price discrimination on fairness perceptions, with prevention-focused consumers being less affected than promotion-focused consumers. Therefore, H3 was supported.
will be subject to the final judgment results as the basis of measuring fairness [19,62]. The price (refundable) situations. Additionally, it considered the influence of a consumer’s perceptions create higher purchase intentions. Therefore, H4 was supported.

5. Discussion and Implications

This study examined the impact of fairness perceptions on reservation intentions when consumers faced price discrimination in advantaged-price (non-refundable) and equal-price (refundable) situations. Additionally, it considered the influence of a consumer’s brand familiarity with a hotel, as well as different types of consumers, from a regulatory focus perspective. The results of the study confirmed that consumers’ fairness perceptions in an advantaged-price situation are higher than those in an equal-price discrimination situation. Consumers perceived that they received more value for the price they paid in the advantaged-price scenario, and this result was in accordance with the findings of Campbell [44] and Lastner [39], where consumers tended to perceive higher levels of fairness in advantaged-pricing situations. The direct effect of brand familiarity on consumers’ fairness perceptions was a significant negative impact. These findings aligned with those of Biswas [8], Shehryar and Hunt [20], and Son and Jin [21], where brand familiarity had a mitigating effect on price fairness perceptions. However, the interaction effect of the brand familiarity and price discrimination showed no significant impact on fairness perceptions. The moderating effect of brand familiarity was not significant, likely because of the ease with which consumers can find information about hotels on the internet [73], which would reduce the information asymmetry in offline markets. Prices are easy to compare when booking online. Hence, when consumers’ expectations of advantage prices are not attained, they will consider the pricing treatment to be unfair [61].

The regulatory effect has a significant positive direct effect on consumers’ fairness perceptions. However, the interaction effect of the regulatory focus and price discrimination showed a significant negative effect on fairness perceptions. The results showed that the moderating effect of the regulatory focus had a mitigating effect on price discrimination in fairness perceptions. Promotion-type consumers feel that price discrimination is fairer, compared to prevention-type consumers. As online booking provides an easy way to access information about hotels [73], prevention-type consumers more easily find detailed information, and are more cautious when booking, because they want to avoid any loss [28,56]. Hence, the fairness perceptions of prevention-type consumers will be reduced when facing price discrimination if they find different prices on different hotel websites [61].

In the online hotel booking process, consumers’ purchasing or reservation intentions will be subject to the final judgment results as the basis of measuring fairness [19,62]. The study found a higher degree of fairness perceptions in advantaged-price discrimination situations; therefore, an advantaged price has a higher probability of increasing a consumer’s reservation intention, compared to an equal-price discrimination situation.

Figure 5. Interaction diagram of the regulatory focus and price discrimination on fairness perceptions.

The results in Table 4 show that fairness perception had a positive significant effect on reservation intentions ($\beta = 0.795, t = 35.087; p < 0.001$). In the process of online booking, a higher degree of fairness perception produced a higher reservation intention. This finding supports the statement by both Bolton et al. [64] and Cronin et al. [65] that positive fairness perceptions create higher purchase intentions. Therefore, H4 was supported.
5.1. Theoretical Implications

This study has several theoretical implications. Firstly, the results of the study can enrich the current knowledge of how price discrimination affects purchase intentions in situations where consumers can easily access information that is different from a traditional price discrimination situation. The mediation of fairness perceptions in the study also enhanced Adams’ [44,69] theory of equity, as well as the application of the theory to an online marketing setting. Secondly, the findings presented a different perspective, compared to previous studies [8,20,21], regarding the moderating effect of a high brand familiarity on fairness perceptions in pricing. The study suggested that instead of mitigating price discrimination, the brand familiarity influenced consumers’ fairness perceptions. The study’s different online contexts, compared to previous, offline studies, may have resulted in varied consumer behavior toward brand familiarity. Thirdly, the study provides evidence to support the argument, presented by Higgins [51], that a regulatory focus can reduce price discrimination in an online context. These findings also enhance the findings of Lee et al. [56] and Pham and Chang [28] which, in an online context, suggested that prevention-focus consumers tend to search for detailed information, while promotion-focus consumers prioritize global information.

5.2. Managerial Implications

The results of this study have several managerial implications for hotels’ online booking platforms. As an advantaged price affects consumers’ fairness perceptions, online booking platforms can implement price discrimination by offering a range of advantaged prices that cater to different customers’ preferences and affordability levels. For example, a customer can choose alternative options that offer higher prices, but include additional services tailored to their individual preferences for the same room type. Given that brand familiarity does not lower fairness perceptions, and a prevention focus reduces fairness perceptions, effective communication about price discrimination becomes crucial. Price discrimination packages should be presented in a detailed and appealing manner.

6. Conclusions

The study results indicate that price discrimination can be implemented for Taiwanese consumers. Taiwan consumers’ perception of fairness will be higher when they receive more value for the price they paid. The study aligns with the research conducted by Lien et al. [6], which found that Taiwanese people commonly consider hotel prices in Taiwan to be acceptable and offering good value, thereby enhancing reservation intentions.

The online context may differ from the offline context, due to factors such as the brand familiarity and regulatory focus affecting fairness perception. For example, in Taiwan, Taiwanese consumers are brand-conscious. The ease of accessing information on many platforms renders brand familiarity insignificant. This finding contrasts with the research of Biswas [8], Shehryar and Hunt [20], and Son and Jin [21]. The same may apply to the mitigating effect of the regulatory focus. With the ease of comparing hotels’ information, consumers may be more conscious, and inclined to seek additional information before making a reservation.

There are some limitations to the study, such as the research participants, who were primarily aged 21–30 years (51% of the sample); thus, the results may lack generalizability. The research compared only two types of price discrimination, which are the most common practices on online hotel booking websites. Actual price discrimination elements in the hotel industry, such as the time, consumer type, and location when accessing the online platform may also be considered in future research.

The study exhibited an interesting finding: price discrimination had a stronger impact on the fairness perceptions of participants with a high brand familiarity, and a low brand familiarity had no significant effect. This finding contradicted the findings of Biswas [8], Shehryar and Hunt [20], and Son and Jin [21]. Further research on this issue could be an interesting topic when considering the different research contexts (online versus offline).
The possibility of easy access to information on online platforms could be used as one of the influencing variables.


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