Article

Do Discounts in Ticket Prices Induce Sustainable Profit to Performing Arts Suppliers?

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Abstract: This study investigates the effect of price promotions for musicals on consumer perception of fairness toward other similar musicals and the role of consumer involvement in performing arts as a moderating variable. A threshold regression estimation which was performed using data from a survey on South Korean consumers showed a decrease in consumers' fairness perception once they became aware of discounts on similar performing arts and, consequently, a decrease in their intent to purchase tickets at regular prices. The results also showed that the samples can be split into low- and high-involvement groups, with the effect of fairness perception on purchase intention statistically significant for both groups, however, larger for the high-involvement group; the high-involvement group is expected to consume more performing arts products than the low-involvement group. These results imply that consumer perception of unfairness regarding ticket price discounts may negatively affect the long-term profits of performing arts suppliers.

Keywords: performing arts; long-term profit; price promotion; fairness perception; purchase intention

1. Introduction

During the last decades in South Korea, ticket sales for performing arts have grown, fueled by continual economic growth and government policies supporting domestic leisure activities. The sales increased from 190 billion Korean Won in 2003 to 748 billion Korean Won in 2016, representing a 293% increase [1]. The number of performing arts suppliers also increased during this period. Thus, the competition in the market intensified, with increased sales promotions through discounts on ticket prices. Previous studies have shown that South Korean consumers have a relatively high price elasticity for performing arts [2–4]. Colbert [5] and Lin [6] suggest that differentiated pricing is essential for some groups to consume arts products.

How would consumers feel if after they purchase a ticket for a musical, they find discounted prices for similar musicals? South Korean musicals are often similar in terms of ticket prices, venue size, quality of actors, and overseas popularity. They are also similar in that most of them are licensed after they were imported from the West End or Broadway. In the digital era, consumers can easily access the market information about a product and its substitutes. Some consumers disregard the discount information for musicals thinking that the one they chose is different from those being compared. Others may consider the price paid unfair if they feel that the chosen musical is similar to the ones offered at a discount.

Negative perceptions of price fairness may result in reduced intention to purchase tickets at cover prices, as suggested by previous studies [7–10], that is to say, consumers may be less willing to purchase tickets at regular prices if the discount promotions for similar performing arts products create the perception that regular prices are unfair. Consumers who perceive price unfairness may spread
negative word-of-mouth information in addition to resisting purchases, and therefore negatively affect the sustainable long-term profits of suppliers [11–15].

Perceived unfairness can have a larger impact on the purchase intention of those more involved with performing arts, as suggested by previous studies. Gotlieb et al. [16] argued that personal involvement does affect consumer responses to supplier pricing. Mayer and Avila [17] showed that the greater the relevance of a product or service to consumers, the stronger is the perception of price unfairness. Thus, higher consumer involvement in performing arts may create a relatively stronger perception of price unfairness, and therefore lead to a relatively higher decrease in purchase intention.

This study addresses two research questions about consumer price fairness and its effect on performing arts ticket purchase intention. First, we test whether price promotions for similar musicals affects consumer fairness perception, as well as test the respondents’ perceived unfairness effect on their intent to purchase tickets at regular prices. Secondly, we test whether the level of consumer involvement in performing arts affects the nexus between perceived fairness and purchase intention. Specifically, we test whether the perception of price unfairness has a relatively larger impact on the purchase intention of the high-involvement group. This study uses data from a survey of South Korean consumers.

The study makes two primary contributions to the literature. To the best of our knowledge, this is the first study to investigate how price discounts of similar products affect consumer perception of price fairness and purchase intention. For this investigation, we focus on purchasing performing arts tickets. Secondly, we show how consumers’ involvement in performing arts products affects their perceived unfairness and subsequent purchasing intention. Prior research on the interaction between consumers’ perceived price fairness and involvement in products is lacking in the literature.

The remainder of this paper is organized as follows. Section 2 presents theoretical discussions and hypotheses. Section 3 explains the research methodology, survey design and procedure, and collected data. Section 4 presents our empirical results. Section 5 discusses the implication of the results, and Section 6 concludes the paper.

2. Theory and Hypotheses

2.1. Fairness Perception

Xia et al. [18] defined price fairness as the consumers’ assessment and associated emotions based on whether the difference between the price of a product or service and that offered by a comparable party is perceived as reasonable, acceptable, or justifiable. Price fairness is a reference-dependent concept, with the reference transaction serving as a yardstick to evaluate the price fairness of a given transaction. The reference price is defined as the cost that a consumer expects to pay or considers reasonable for particular goods or services. This concept is used to analyze the consumers’ responses to the price when making a purchase [19–21].

Previous studies have suggested that fairness perception involves another effect in addition to the comparison between current and reference prices. Kahneman et al. [12,22] showed that under the dual entitlement principle, consumers evaluate price fairness by evaluating the fairness of the method or process the sellers use to set prices. The fact that consumers are influenced by their perception of this process shows that they are concerned with procedural justice [23].

Most previous studies on fairness perception, such as Martins [13] and Maxwell [24], have analyzed the consumer perceptions of price fairness from the perspective of perceived differences between the reference and current prices.

First, this study measures the consumers’ initial perception of the fairness of a musical’s regular prices. Then, the study considers the information on regular prices and discounts for a comparison group of musicals and examines whether the respondents conspicuously experience a disadvantaged inequality resulting in a decreased intent to attend their preferred musical shows.
2.2. Reference Price

Tereyağğolu et al. [25] argued that a reference price drives the consumer choice in the performing arts. The reference price takes two forms, internal reference price and external reference price [26]. The internal reference price is based on an individual’s memory [27], whereas the external price is based on the purchasing environment [26]. Major [28] emphasized that consumers prefer the external reference price to the internal mainly because at the point of purchase, the external reference prices are more recent and salient than the past prices, and the customers may not be sufficiently aware of the past prices of each product brand and category. Rajendran and Tellis [29] stated that the external reference price has a greater impact on consumer decisions than the internal reference price. Also, Mazumdar et al. [30] insisted that a “was–now” approach is more effective when a consumer chooses an internal reference price, whereas, the “compare at” approach is more suitable for a consumer choosing an external reference price.

The internal reference price can have a stronger impact when the loyalty of consumers is high, brand sampling is low, and/or purchase frequency is high, because frequent and repetitive purchase of the same brand enable them to recall the brand price better. Major [28] further suggested that when external reference prices are not available or salient, consumers may estimate price fairness using the internal reference prices.

With regards to consumer responses to discounts on performing arts events, some individuals may not recall the previous prices for musicals. Additionally, musicals consumption may be less frequent than the consumption of other general goods and services. Thus, an external reference price is a more appropriate tool for this experiment. In this study, the discounts for comparable groups of musicals will be the external reference prices.

2.3. Transaction Similarity

Transaction similarity is a moderating variable for the perception of price fairness [31] because it is associated with the selection of a reference price. Xia and Monroe [32] insisted that a consumer choosing a reference price is likely to select the price that he or she believes others have paid in a similar transaction. They suggested that the product, promotion, deal period, and deal site of similar transactions are the moderating variables when consumers use a reference price to evaluate actual prices, and this in turn influences the perceived price fairness in a given situation. When a consumer selects the price paid by others in similar transactions as the reference price, the perceived price fairness level varies depending on the situation at which the similar transactions took place. However, for a caveat, if the features of two transactions are not similar, even when the price of the current transaction is perceived unfair as compared with the price of the reference transaction, the degree of perceived unfairness is reduced [33–35].

Therefore, we provided the survey participants with two groups of musicals, a base group and a comparison group. Both groups were licensed Western musicals and similar in running length, ticket price, and venue size.

2.4. Involvement

Individuals highly involved with an issue are likely to hold stronger opinions on the issue, such that their opinion may subsequently influence their future behavior [36]. Researchers have used various involvement models to examine the behavioral consistency and developments found in certain leisure activities [37–44]. However, a few studies have examined how such involvement affects participation in performing arts; two such studies are Catterall et al. [45] and Hume and Mort [46].

Laurent and Kapferer [47] developed a scale using the multidimensional aspects of involvement. This scale is called the consumer involvement profile (CIP) scale, and it is considered to be a milestone in the measurement of consumer involvement. McIntyre [40] modified the CIP scale, to develop a multidimensional measure comprised of attraction, self-expression, and centrality. Here, attraction
refers to how important the activity is to an individual and the satisfaction he or she gains from it. Self-expression refers to issues related to the activity, self-identity, and the extent to which an individual is associated with the activity of others, i.e., social identity. The third dimension, centrality, refers to the extent to which a person’s life and friendship center on the activity. We used McIntyre’s scale to measure the respondents’ involvement in performing arts.

2.5. Hypotheses

A consumer perceives unfairness if the price offered for a chosen show is higher than the reference price. Thus, when the respondents are aware of discounts for similar shows, their fairness perception of regular prices of the selected musical decreases. Thus, we have our first hypothesis (H1):

Hypothesis 1 (H1). The awareness of discounts for similar musicals will decrease the respondents’ fairness perception of the regular price of the show that they would like to attend.

Kahneman et al. [22] regarded fairness as a community norm for members, and they indicated that sellers who violate this norm will be penalized. When buyers perceive unfairness in a price, the sellers may face negative consequences such as complaints, lower customer purchase intention, and interrupted transactions [11,13,14]. Furthermore, customers may spread negative word-of-mouth information. They might even sue the suppliers or retaliate in other ways. Thus, if consumers who are wanting to buy a musical ticket perceive unfairness in the show’s regular prices, their purchase intention would decrease. Thus, we have our second hypothesis (H2):

Hypothesis 2 (H2). The perception of unfairness in the regular prices of a ticket from the awareness of discounts on similar shows has a negative effect on the buyer’s purchase intention.

Our third hypothesis (H3) assesses whether the respondents’ involvement in performing arts affects the relationship between perceived fairness and purchase intention:

Hypothesis 3 (H3). The effect of perceived fairness on the purchase intention of those with a lower level of involvement in performing arts differs from the effect on the purchase intention of those with a higher level of involvement.

3. Methods and Material

3.1. Estimation Methodology

We use the threshold regression introduced by Hansen [48] for our estimation. In this method, the sample data are not split according to some predetermined rule, but we can determine the segment to which an observation belongs. This approach contrasts the previous approaches that normally impose an a priori restriction by taking an average or predetermined point. The method tests how the change in fairness perception affects the change in purchase intention and checks the segments in terms of level of involvement. Using the segmented regressions separated by breakpoints, we quantify the changes in response function of a varying influential factor and interpret the breakpoint as a critical or threshold value.

We start with the following standard regression model:

$$\Delta \Pi_i = \delta \Delta FP_i + \beta'X_i + \epsilon_i,$$  \hspace{1cm} (1)

where, $\Delta \Pi$ is the change in purchase intention; $\Delta FP$ indicates the change in perception of fairness; $X$ is a set of exogenous variables including a constant term; $i$ represents the respondent indicator, $i = 1, 2, \ldots, N$; and $\epsilon$ is the error term. A normal step in empirical analysis using the model is to
determine whether the coefficient $\delta$ is statistically significant and stable when the model is estimated on appropriately selected subsamples.

Now, assume that a certain involvement level changes the shape of the relationship between $\Delta FP$ and $\Delta PI$. The regression model would then become piecewise linear with regard to the different segments, and this calls for a more flexible specification to accommodate the interaction segments. In this case, the level appropriate to split the sample needs to be decided. If the segments in the relationship are considered, Equation (1) can be rewritten as

$$
\Delta PI_i = \delta_1 \Delta FP_i d(q_i \leq q^*) + \delta_2 \Delta FP_i d(q_i > q^*) + \beta_1 X_i d(q_i \leq q^*) + \beta_2 X_i d(q_i > q^*) + \epsilon_i,
$$

(2)

where, $d(.)$ is an indicator function with value 1 when the argument in parentheses is valid and 0 otherwise, and $q_i$ is the exogenous segment variable (involvement level) used to split the data into different groups.

The key feature of the model is that it allows for distinct segments. Once the split point $q^*$ is estimated from the data, the involvement level ($q_i$) determines the two possible segments that a respondent could belong to. The model allows for the data to determine the segment that an observation belongs to. The marginal impact of fairness perception and other exogenous variables is specific to the segment. One can perform least squares (LS) estimation via the concentration proposed by Hansen [48] to obtain the model coefficients.

In particular, for any given $q^*$, since Equation (2) is linear in $\delta$ and $\beta$, we can use LS estimation to obtain the slope estimates, regression residuals, and sum of squared residuals $SSE(q^*)$. Then, by definition, LS estimators $\hat{\delta}$, $\hat{\beta}$, and $\hat{q}^*$ jointly minimize $SSE(q^*)$. If $S_n(q^*)$ is a function of $SSE(q^*)$, since $S_n(q^*)$ takes on less than $n$ distinct values, $S_n(q^*)$ can be defined uniquely as

$$
\hat{q}^* = \arg\min_{\hat{q} \in \Gamma_n} S_n(\hat{q}),
$$

(3)

where, $\Gamma_n = \Gamma \cap \{q_1, \ldots, q_n\}$; this requires less than $n$ functional evaluations. The slope estimates can be computed from $\hat{\delta} = \hat{\delta}(\hat{q}^*)$ and $\hat{\beta} = \hat{\beta}(\hat{q}^*)$. To test the hypothesis $H_0 : q^* = q_0$, the standard approach is to use the likelihood ratio (LR) statistic under the auxiliary assumption that $\epsilon_i$ is i.i.d. $N(0, \sigma^2)$. Now, assume that

$$
LR_n(q^*) = n \frac{S_n(q^*)}{S_n(\hat{q}^*)}.
$$

(4)

The LR test of $H_0$ is to reject for large values of $LR_n(q_0)$.

To test for the null hypothesis of no threshold against the alternative of having a threshold, Hansen [48,49] suggested a heteroskedasticity-consistent Lagrange multiplier (LM) test. However, under the null hypothesis of linearity, the threshold parameter $q^*$ is not identified. Thus, Hansen [48,49] also proposed a bootstrapping technique to simulate the asymptotic distribution of the LR test and showed that the bootstrap analog produces asymptotically correct $p$-values. We used the Gauss code provided by Hansen for estimation.

### 3.2. Experimental Design

During online or offline shopping, consumers may come across discounted tickets for a performing arts event after having already purchased a ticket for a similar event. On the survey, consumers were asked to consider a case of purchasing tickets for a musical. Table 1 presents the details of the experiment.

The survey that participants received provided them with information about two musicals (the base group), *Wicked* and *Ghost*, which were playing in South Korea at the time of the survey. The information included the venue size, performers, concepts, and price for each class of seats. The respondents were asked to select one of the musicals and a class of seats. The degree of perceived price fairness and purchasing intent was then elicited through a five-point Likert scale to assess the
respondents’ views on the cover prices. This was before they knew about the price promotions for similar musicals. Next, the participants were provided information on similar shows (the comparison group) Rebecca, Scarlet Pimpernel, Bonnie and Clyde, and Joseph and the Amazing Technicolor Dreamcoat, which were also playing at that the time of the survey, with discount promotions. The information included the venue size, performers, concepts, regular price for each class of seats, and the discounted rate. The details are presented in Table 2.

**Table 1. Details of experiment.**

| Item | Content |
|------|---------|
| **Information on the base group of musicals** | Musicals: Wicked, Ghost. Information provided: poster, theater, performance period, price for each class of seats, performers, and concept of musical. |
| **Ticket price** | Which of the two musicals do you want to watch? Please select one musical and a class of seats. The following questions are related to your opinion on the price of the musical you chose to watch. Please mark your choice on the following five-point Likert scale. (1) I think the ticket price for the musical I chose is fair. (2) I want to purchase the ticket for the musical I chose at the cover price. (1: strongly disagree, 2: disagree, 3: not sure, 4: agree, 5: strongly agree). |
| **Information on the comparison group of musicals** | Musicals: Rebecca, Scarlet Pimpernel, Bonnie and Clyde, Joseph and the Amazing Technicolor Dreamcoat. Information provided: poster, theater, performance period, price for each class of seats, performers, and concept of musical. |
| **Ticket price and promotion rate.** | You have information on the discount rates of the comparison group of musicals. Please mark your choice on the following five-point Likert scale for the musical you chose in the base group of musicals. (1) I think the ticket price for the musical I chose is fair. (2) I want to purchase the ticket for the musical I chose at the cover price. (1: strongly disagree, 2: disagree, 3: not sure, 4: agree, 5: strongly agree). |
| **Question on involvement** | Please mark on a seven-point Likert scale from “strongly disagree” to “strongly agree” for each of the following descriptions. Watching performing arts (1) is important in my life, (2) is a useful experience, (3) is a special activity for me, and (4) is of worth to me. |

**Table 2. Price of each class of seats for six musicals (unit: Korean won in thousands).**

|        | Base Group |        |        | Base Group |        |        |
|--------|------------|--------|--------|------------|--------|--------|
|        | Wicked     | Ghost  | Rebecca| Scarlet Pimpernel | Bonnie and Clyde | Joseph Amazing |
| **Class of seats** | | | | | | |
| VIP    | 140        | 130    | 130    | 130        | 120    | 130    |
| R      | 110        | 110    | 110    | 110        | 100    | 110    |
| S      | 90         | 90     | 80     | 80         | 80     | 90     |
| A      | 70         | 60     | 50     | 50         | 60     | 70     |
| **Theater** | Charlotte theater | D Cube Art Center | LG Arts Center | LG Arts Center | Choong-mu Hall | Charlotte theater |
| **Venue size** | 1154      | 1242   | 1103   | 1103       | 809    | 1154   |

Note: The venue size was measured by the number of seats. Source: Official websites of musicals and theaters.
Since the experimental results depend on the similarity of transactions, we pointed out the similarities between the base and the comparison group of musicals. From the input of 10 specialists in performing arts in South Korea, we used the following four terms to capture the similarities between the two groups of musicals: status as licensed Western musicals, running length, ticket price, and venue size. First, we selected the two groups of musicals from among the licensed Western musicals showing in South Korea. A “licensed” Western musical is defined as a Western show remade with Korean lyrics and performers. The six musicals chosen for the study were all “hits” overseas, and they had been remade for a Korean audience with famous South Korean performers appearing. Secondly, all the musicals had premiered in South Korea in 2013 and had similar running length. Third, all of them played in “grand musical theaters,” which are similar in terms of venue size, as shown in Table 2. Finally, the price ranges of the six musicals were similar. We provided the respondents with information on the price of each class of seats for the musicals as well as the comparison group’s discounts. The discount rates were 20% for Rebecca, 50% for Scarlet Pimpernel, 50% for Bonnie and Clyde, and 40% for Joseph and the Amazing Technicolor Dreamcoat. Since the discount rates were based on the distribution channels and class of seats, and hence differed, we quoted the largest discount rates for each class and each show.

In South Korea, producers usually give discounts in the third quarter, after they assess their ticket sales up to the second-quarter. Discounts are usually not given in the last quarter, when there is a natural surge in ticket sales from people grabbing their final opportunity to see a licensed musical. As the average running length of the comparison group of musicals was eight weeks, the survey respondents were told that the discount period would commence after the halfway point of the running length, or at around four weeks. In addition, discounts are usually provided through specialized channels, such as email coupons, selected credit card companies via official ticket distributors, or cell phone messages from Internet discount malls. The respondents were given the discount terms and asked to evaluate the price fairness and purchase intention for the base musicals on a Likert scale.

In summary, the experiment sequence was as follows: (1) measure the initial perception of fairness and purchase intention based on the regular prices of the base group of musicals, (2) present information on the regular prices and the discount promotion for the comparison group of musicals, and (3) remeasure the perception of fairness and purchase intention based on the regular prices of the base group.

The respondents’ judgment on price fairness and purchase intention was measured using a five-point Likert-type scale ranging from “strongly disagree” to “strongly agree.” Their involvement with performing arts was measured using a multidimensional involvement model based on McIntyre [40] as follows: “Watching performing arts (1) is important in my life, (2) provides me with a useful experience, (3) is a special activity for me, and (4) is of worth to me.” The respondents were asked to report the information on a seven-point Likert-type scale ranging from “strongly disagree” to “strongly agree” for each item. For each respondent, the sum of the scales was used in the estimation.

3.3. Data Collection

We collected data through an experimental survey conducted from February 26 to March 5, 2014, in South Korea. The web-based survey was administered by the World Survey-Securetop, Inc., a third-party market research company. Questionnaires were distributed to a pre-established consumer panel of the company spread nationwide in proportion to the demographic characteristics of the South Korean population. To increase representativeness of the sample, we asked the research company to construct a well-distributed panel in terms of demographic characteristics. The company differentiated the panel into subgroups based on living area, gender, and age. The same number of respondents were selected randomly from each subgroup. If the respondents completed all questions, they received an incentive in the form of an online reserve fund that could be used for online shopping. The sample comprised 341 consumers over 20 years of age; 25 respondents were excluded owing to inconsistency and incompleteness of data. Table 3 summarizes the demographic characteristics of the participants.
Table 3. Demographic statistics of respondents.

| Variable          | n  | %   | Variable          | n  | %   |
|-------------------|----|-----|-------------------|----|-----|
| Gender            |    |     | Gender            |    |     |
| Male              | 161| 47.2| Female            | 180| 52.8|
| Age               |    |     | Age               |    |     |
| 20–29             | 95 | 27.9| 30–39             | 149| 43.7|
| 40–49             | 97 | 28.4|                  |    |     |
| Occupation        |    |     | Occupation        |    |     |
| Office worker     | 134| 39.3| Professional      | 64 | 18.8|
| Sales and service| 35 | 10.2| Student           | 61 | 17.9|
| Homemaker         | 28 | 8.2 | Homemaker         | 28 | 8.2 |
| Others            | 19 | 5.6 | Others            | 19 | 5.6 |
| Household Income  |    |     | Household Income  |    |     |
| under 3 Mw        | 108| 31.7| 3–under 5 Mw      | 119| 34.9|
| 5–under 7 Mw      | 65 | 19.0| over 7 Mw         | 49 | 14.4|
| Total             | 100| 100.0|                  |    |     |

Notes: 1. Household income is the income before tax, summing up all family members’ income. 2. Mw denotes million Korean won.

4. Results

A paired t-test was completed to check for significance of difference between the price fairness perception before and after supplying the discount information of similar musicals. The results are shown in Table 4. The average value of price fairness on the selected ticket was 2.64 before providing the information and 2.40 after providing the information. The difference between the two values was 0.24, with the p-value suggesting that the null hypothesis of no difference between the two values should be rejected. In other words, the degree of fairness perception decreases once the respondents become aware of discounts on similar shows. In addition, the Wilcoxon signed-rank test performed from the ordinal nature of the difference gave results that coincided with the t-test results. Thus, the results support H1, which states that the knowledge of price promotions for similar shows affects the perception of fairness of tickets at regular prices.

Table 4. Results of the paired t-test and Wilcoxon signed rank test.

|                      | Average before Acquiring Discount Information (A) | Average after Acquiring Discount Information (B) | Difference between the Two Values (A-B) | t Statistics (p-Value) | Wilcoxon Signed Rank Statistics (p-Value) |
|----------------------|--------------------------------------------------|----------------------------------------------|----------------------------------------|------------------------|----------------------------------------|
| Price fairness       | 2.64                                             | 2.40                                         | 0.24                                   | 5.18 ** (0.000)        | 2649 ** (0.000)                      |
| Purchase intention   | 2.62                                             | 2.23                                         | 0.39                                   | 7.67 ** (0.000)        | 4543 ** (0.000)                      |

Note: ** indicates p < 0.05.

We performed the same paired t-test and the Wilcoxon signed-rank test to determine the significance of change in purchase intention. The difference between the two values is 0.39, with the p-value suggesting that the null hypothesis of no difference between the two values should be rejected, meaning that the respondents’ purchase intentions decreased following the knowledge of discounts for similar shows.

The results of a regression where the dependent variable is the change in purchase intent (ΔPI), the independent variables are the change in fairness perception (ΔFP), and the respondents’ demographic variables are presented in Table 5. The dependent variable in this regression included integers, and therefore we used the Poisson model based on Equations (1) and (2). The results in terms of “no segment” show that the coefficient of ΔFP was statistically significant at the 1% level, suggesting that the decrease in perception of fairness decreases the purchasing intent for tickets at regular prices of the selected musicals. Thus, Hypothesis H2 is supported. Other demographic variables are not statistically significant at any conventional level.
Table 5. Results of threshold test and count data estimation.

| Distributional Method | Variables | Segments | Segments | Segments |
|------------------------|-----------|----------|----------|----------|
| Poisson                | Constant term | 0.149 | 0.42 | −0.101 | 0.17 | −0.392 | 0.33 |
|                       | Δ Fairness perception | 0.313 *** | 73.04 | 0.293 ** | 49.49 | 0.373 ** | 20.56 |
|                       | Sex | 0.063 | 0.72 | 0.070 | 0.70 | −0.023 | 0.02 |
|                       | Age | 0.005 | 1.12 | 0.005 | 0.87 | 0.004 | 0.08 |
|                       | Education | 0.001 | 0.00 | −0.007 | 0.03 | 0.006 | 0.00 |
|                       | Income | −0.014 | 0.12 | 0.000 | 0.00 | 0.003 | 0.01 |
|                       | AIC | 989.435 | 757.921 | 241.925 |
|                       | BIC | 1012.426 | 779.168 | 256.651 |
|                       | LR $\chi^2$ (p-value) | 76.18 (0.000) | 53.19 (0.000) | 20.03 (0.000) |
| Negative binomial     | Constant term | −0.183 | 0.20 | −0.134 | 0.09 | −0.426 | 0.13 |
|                       | Δ Fairness perception | 0.328 *** | 21.52 | 0.308 ** | 14.61 | 0.388 ** | 6.08 |
|                       | Sex | 0.066 | 0.24 | 0.075 | 0.23 | −0.018 | 0.00 |
|                       | Age | 0.005 | 0.38 | 0.005 | 0.31 | 0.003 | 0.01 |
|                       | Education | 0.000 | 0.00 | −0.012 | 0.02 | 0.011 | 0.00 |
|                       | Income | −0.018 | 0.06 | −0.002 | 0.00 | 0.006 | 0.01 |
|                       | AIC | 1375.338 | 1034.135 | 329.638 |
|                       | BIC | 1381.338 | 1055.383 | 344.365 |
|                       | LR $\chi^2$ (p-value) | 23.89 (0.000) | 16.33 (0.000) | 6.69 (0.000) |
| # of Observation | 341 | 255 | 86 |
| Estimated $q^*$ | 18 |
| LM (p-value) for the null of no segment | 9.93 (0.019) |
| LM (p-value) for the null of no segment for second sample split | 6.23 (0.123) |
| Number of bootstrap replications | 1000 |

Note: ** and *** indicates $p < 0.05$ and $p < 0.01$, respectively.

The “segments” in Table 5 give the threshold test results as well as the segment-specific estimates of the effect of $\Delta FP$ on $\Delta PI$. The LM statistics, along with their bootstrap $p$-values, indicate two segments in regression. The result suggests that the sample should be split into low- and high-involvement segments. The cut-off value of the split point $q^*$ occurs at 18. Note that the average of the sum of involvement scales was 16.24, with the standard deviation of 3.59, the minimum being 5 and the maximum being 24. For both segments, the impact of $\Delta FP$ on $\Delta PI$ was positive and statistically significant. However, the coefficient under the low-involvement segment ($q_i \leq q^*$) was smaller than that under the high-involvement segment ($q_i > q^*$), supporting H3. This finding suggests that perceived unfairness decreases the purchase intention for both segments, but the effect is significantly greater for the high-involvement than low-involvement segment.

We also tested for a second or third split point in the relationship. The results indicated only one split in the relationship, confirming the two segments are appropriate for the data. As indicated in Table 5, we tested the sensitivity of the results according to the distributional assumption by repeating the estimation using the negative binomial regression model. Although the results obtained are quantitatively slightly different, they are qualitatively identical. In addition, a sensitivity analysis performed by repeating the estimations using only some of the four involvement measures gave qualitatively unchanged results, although the results are not presented here for want of space.

5. Discussion

Performing arts suppliers have used price discounts to sell unsold tickets in competitive environments. An additional intention of discount could be to induce consumer habit formation through repeated viewing. This is consistent with Pine and Gilmore’s [50] assertion that a distinct characteristic of performing arts is that stable consumption can be achieved through consumer preferences formed by repeated viewing experiences. Our results suggest, however, that price lowering may lead to negative perceptions of price fairness. Unhappy consumers would spread negative word-of-mouth information and resist purchasing at regular prices [15]. Our results show that those
who perceived price unfairness after becoming aware of discounts on similar shows revealed decreased intention to purchase tickets at regular prices. Santos et al. [51] and Konuk [10] found similar consumer behavior in marketing.

We also found larger unfairness perception for people from the high-involvement group. The magnitudes of decrease in fairness perception and purchase intention are also larger for the high-involvement group, who might consume relatively more performing arts products. This is an interesting finding worthy of further discussion.

The results imply that long-term profits of performing arts suppliers will be negatively affected if they use price discounts without considering the possibility of consumers’ unfairness perception. This may result in decreased audiences for performing arts and/or increased demand for price discounts. In addition, if performing arts suppliers cannot address the perceived unfairness issue of the high-involvement group, the negative effect of consumers’ perceived unfairness will be amplified. Then, it would not be possible for the suppliers to continuously attract audiences to their musicals. In this case, the profit margins of the suppliers cannot be guaranteed in the long run. Therefore, our results imply that price lowering can damage the consumers’ perception of fairness on prices and reduce the long-term profits.

Shapiro et al. [35] insist that if the features of two transactions are not similar, even when consumers perceive the price of the current transaction as unfair as compared with the price of a reference transaction, the degree of perceived unfairness can be reduced. This suggests an important implication for those interpreting the results of this study. Suppliers need to differentiate the conditions on which a musical is promoted from those of comparable musicals. This could be done, for example, by giving an additional but simple time-consuming task to consumers to receive price promotions or by asking them to bring a coupon that can be saved with a small degree of attention and little trouble.

6. Conclusions

We investigated the responses of consumers facing the price promotion of similar musicals and the effects of respondents’ perceived unfairness on their intention to purchase performing arts tickets at regular prices. Our results show that the respondents’ unfairness perception increased on becoming aware of discounts on similar shows and their purchase intention decreased. Threshold regression results indicate that personal involvement in performing arts is important to the interaction between price fairness perception and purchase intention, and that the sample can be split into low- and high-involvement groups. For both groups, the impact of fairness perception on purchase intention was statistically significant, with a larger effect for the high-involvement group. Thus, the impact of unfairness perception on purchase intention is larger for the high-involvement group than the low-involvement group.

This study has limitations, mainly from the relatively small size of the sample and the one-country case study. Further studies with larger samples and more countries are necessary. Future studies should explore whether the results of this study can be generalized to other settings and populations or whether the results of this study represent a unique case.

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