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## Research Article

# Revenue management in the context of movie theaters: Is it fair?

Received (in revised form): 10th September 2014

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**ABSTRACT** Certain industry characteristics (for example, a relatively fixed capacity, varying and uncertain demand, and perishable inventories) are a prerequisite for a successful implementation of revenue management (RM) practices. Although movie theaters have these characteristics, they have failed to try RM as a pricing strategy. The current study examines the joint impact of five potential RM practices (that is, rate fences) and framing effects (surcharge versus discount) on consumers' price fairness perceptions. Several rate fences (morning-versus-noon, weekday-versus-weekend and time-of-booking-based pricing) received relatively high fairness ratings, whereas location-based and popularity-based pricing were perceived as less fair. In addition, framing ticket prices as a discount rather than a surcharge significantly improved customers' price fairness perceptions. The findings of this study provide guidance for movie theater operators in their pursuit of optimal pricing. *Journal of Revenue and Pricing Management* (2015) **14**, 72–83. doi:10.1057/rpm.2014.30; published online 17 October 2014

**Keywords:** revenue management; pricing; perceived fairness; movie theater

## INTRODUCTION

In today's competitive market place, companies face various operational dilemmas in an effort to meet their customers' needs. One way to cope with such issues is to implement revenue management (RM). RM is common in many capacity-constrained industries such as airlines (Smith *et al*, 1992), hotels (Hanks *et al*, 1992) and car rentals (Carroll and Grimes, 1995). RM can be effective for companies facing unpredictable market demand and high fixed costs.

The success of RM has encouraged other industries such as theme parks (Heo and Lee, 2009) and non-profit organizations (Metters and Vargas, 1999) to adopt the technique to boost their bottom line. In this article, the authors argue that the movie theater industry might benefit from implementing RM in order to combat falling revenues. According to the Motion Picture Association for America (MPAA, 2012), the total box office revenues in 2011 dropped 4 per cent from 2010 to an estimated US\$10.2 billion, and

the total number of moviegoers slipped by 5 per cent. The brick and mortar movie theater industry continues to be challenged by technology-driven options such as DVDs, pay-per-view channels, satellite and cable TV, and other online viewing features (Hulkower, 2012).

In order to effectively compete in today's entertainment environment, movie theaters need to revamp their traditional pricing schemes. Responding to the changing needs of the market, movie theaters might want to consider adopting RM practices. The purpose of this study is to examine consumers' reactions to such a pricing strategy. In addition, the authors are interested in understanding how various framing effects (surcharge versus discount) and fencing strategies (for example, differential pricing based on the time of the day) influence consumers' price fairness perceptions. The findings of this study will provide movie industry practitioners with useful insight into their pricing.

## LITERATURE REVIEW

### RM in the movie industry

RM is the practice of maximizing profits from the sale of perishable assets, such as airline seats, by controlling prices and inventories (Lieberman, 1993). Carroll and Grimes (1995) argue that RM has been widely adopted in the airline, hotel and rental car industries (as cited in Kimes and Wirtz, 2003), but has only recently gained attention by spa, golf and theme park industries (Kimes *et al.*, 1998; Kimes, 2000; Heo and Lee, 2009). In order to apply RM effectively, the industry needs to be characterized by perishable products, fixed capacities, distinct customer segments and ability for price discrimination (Kimes and Wirtz, 2003). Similar to the hotel industry, movie theaters have a relatively fixed capacity, varying levels of uncertain demand, perishable inventories, high fixed costs and segmentable markets. These characteristics make movie theaters a suitable candidate for RM.

Prior research shows that RM consists of two strategic levers: variable pricing and duration

control (Kimes and Chase, 1998; Kimes and Wirtz, 2003). Different industries apply different combinations of these levers (Kimes and Chase, 1998). Kimes and Chase (1998) developed a positioning map for RM based on the industry's typical pricing and duration control mechanisms (see Table 1). In order to successfully implement RM, the industry should appear in Quadrant 2. Indeed, hotels and airlines (located in Quadrant 2) employ variable pricing for services with a predictable duration (Kimes and Wirtz, 2003). Conversely, movie theaters typically charge a fixed price for a movie (Kimes and Chase, 1998).

Although movie theaters have a huge potential to apply variable pricing strategies, they tend to limit themselves to simple discrimination schemes. Discount prices are typically offered for seniors, students, children and veterans. These discounts, however, are offered uniformly for all movies and during all show times (Orbach and Einav, 2007). Some industry practitioners argue that variable pricing in the context of movie theaters is too complex, and it might cause confusion in the minds of customers (Litman, 1998). Conversely, many RM experts (for example, Kimes and Chase, 1998; Kimes and Wirtz, 2003) suggest that movie theaters need to adopt variable pricing strategies based on seat location or time of the show.

**Table 1:** Typical pricing and duration positioning of selected service industries

	Price	
	Fixed	Variable
<i>Duration</i>		
Predictable	Quadrant 1 Movie Theaters Stadiums/Arenas Convention Centers	Quadrant 2 Hotels Airlines Rental Cars Cruise Lines
Unpredictable	Quadrant 3 Restaurants Golf Courses	Quadrant 4 Continuing Care Hospitals

Note: This framework is adopted from Kimes and Chase (1998).

### Perceived price fairness

Perceived price fairness can be defined as ‘a customer’s assessment and associated emotions of whether the difference (or lack of difference) between the seller’s price and the price of a comparative other party is reasonable, acceptable, or justifiable’ (Xia *et al*, 2004, p. 3). The principle of dual entitlement (Kahneman *et al*, 1986) is a common theoretical framework in price fairness research (Bolton *et al*, 2003), including fairness perceptions associated with RM practices (Wirtz and Kimes, 2007). Accordingly, the current study adopts the principle of dual entitlement to explore consumers’ price fairness perceptions of RM in the movie industry.

The principle of dual entitlement implies that perceived fairness is governed by the belief that service providers are entitled to a reference profit and customers are entitled to a reference price (Kahneman *et al*, 1986; Bolton *et al*, 2003). This principle further suggests that perceived unfairness occurs when a price is increased (that is, a violation of the reference price) such that a service provider increases the profit (that is, violating the reference profit), but that an increased price is perceived as fair when it maintains the provider’s existing level of profit (Kahneman *et al*, 1986; Campbell, 1999). In other words, an increase in price is perceived as fair if it is because of a cost increase, but perceived as unfair if the increase is not justifiable (Kahneman *et al*, 1986; Wirtz and Kimes, 2007). For example, if a movie theater increases its ticket prices for no specific reasons, customers might think that the transaction is unfair. Conversely, if the cost of utilities goes up, then customers are more likely to perceive the price increase as fair. Extending the principle of dual entitlement, Bolton *et al* (2003) examine the impact of various types of costs on fairness perceptions. They find that consumers failed to consider many types of costs and that not all cost increases were perceived as equally fair.

If the principle of the dual entitlement holds true, most pricing strategies behind RM should be considered as unfair (that is, unrelated to the increased costs of running the business) (Kimes and Wirtz, 2003). However, there are several

avenues to avoid customer backlash (Thaler, 1985). One method is to attach restrictions to discounted prices so that higher prices, with fewer restrictions, seem fair by comparison (Kimes, 1994). For example, a hotel may set restrictions for discounted prices such as booking ahead of time, minimum length of time requirements and cancellation penalties (Kimes, 1994). These types of restriction are called ‘rate fences’.

### Rate fences

When various prices are applied for essentially the same service, customers tend to compare the price they paid with their previous transactions and with prices paid by other customers (Martins and Monroe, 1994; Chen *et al*, 1998; Bolton *et al*, 2003; Kimes and Wirtz, 2003). Accordingly, it is critical that the reasons for the varying price levels are easily understood (Homans, 1961; Lynn, 1990; Kimes and Wirtz, 2003).

Rate fences are designed to allow customers to segment themselves into appropriate rate categories based on their willingness to pay for their preferences (Hanks *et al*, 1992; Kimes and Wirtz, 2003). Properly designed rate fences can help service providers offer lower prices to customers who are willing to accept certain restrictions on their purchase (Kimes and Wirtz, 2003). In the movie industry, weekday/weekend pricing is commonly used as a rate fence. In general, moviegoers have strong preferences for Friday shows compared with Monday shows (Orbach and Einav, 2007). Accordingly, movie theaters typically charge higher prices for weekend shows than for weekday shows (Orbach and Einav, 2007). It thus seems that weekday customers tend to be price sensitive customers, whereas weekend customers are more willing to pay higher prices. Therefore, offering differential prices ensures that less price sensitive customers (that is, weekend customers) do not take advantage of discounted rates aimed at more price sensitive customers (that is, weekday customers).

With an understanding of rate fences in the airline and hotel industries, consumers might be more willing to accept RM in other

segments of the service industry (Kimes and Wirtz, 2003; Choi and Mattila, 2004). Fundamentally, service providers can use two types of rate fences, physical and non-physical, to customize their prices (Hanks *et al*, 1992; Kimes and Wirtz, 2002). Physical rate fences include location, furnishings and presence of amenities or a view, whereas non-physical rate fences involve the time of consumption, transaction characteristics, buyer characteristics and controlled availability (Dolan and Simon, 1996; Kimes and Wirtz, 2002). In the context of restaurants, Kimes and Wirtz (2002) measure customers' perceived fairness with five types of rate fences: differential lunch/dinner pricing, weekday/weekend pricing, time-of-day pricing, table location pricing and two-for-one coupons. Kimes and Wirtz (2003) further explore customers' perceived fairness in the golf industry with six types of rate fences: time-of-day pricing, varying price levels, two-for-one coupons, time-of-booking pricing, reservation fee/no-show fee and tee time interval pricing. Most of the rate fences explored are found to be acceptable, thus implying that other service segments might be able to implement RM without negative customer reactions (Kimes and Wirtz, 2002).

The current study develops five rate fences for the movie theater industry. They include two time-based rate fences (morning-versus-noon and weekday-versus-weekend), a time-of-booking-

based fence, a popularity-based rate fence (higher price for blockbuster movies) and a location-based rate fence (seat location). By measuring moviegoers' perceived fairness on these five types of rate fences, the current study provides movie theater operators with some useful pricing guidelines.

### Framing effect

In addition to rate fences, the authors want to investigate what is the best way to present (that is, frame) the prices. On the basis of the prospect theory (Kahneman and Tversky, 1979), Tversky and Kahneman (1981) demonstrate systematic reversals of preference when the same problem is presented in different ways, the so-called framing effect. In the Asian disease problem (Tversky and Kahneman, 1981; see Table 2), participants were asked to imagine that 'the United States is preparing for an outbreak of an unusual Asian disease that is expected to kill 600 people'. Then, participants were given either two positively framed options (Programs A and B) or two negatively framed options (Programs C and D). In the positively framed condition, 72 per cent of participants selected Program A. In the negatively framed condition, on the other hand, 78 per cent of participants chose Program D as a preferable option. These results indicate that

**Table 2:** Asian disease problem

<i>Cover story</i>	
<i>Imagine that the United States is preparing for an outbreak of an unusual Asian disease that is expected to kill 600 people. Two alternative programs to combat the disease have been proposed. Scientific estimates of the consequences of the programs are as follows:</i>	
<i>Positive frame</i>	<i>Negative frame</i>
If Program A is adopted, exactly 200 people will be saved	If Program C is adopted, exactly 400 people will die
If Program B is adopted, there is a 1 in 3 probability that all 600 people will be saved and a 2 in 3 probability that no people will be saved	If Program D is adopted, there is a 1 in 3 probability that nobody will die and a 2 in 3 probability that all 600 will die

Source: Tversky and Kahneman (1981).

the change in the decision frame between the two groups of participants produced a preference reversal, although A and C are identical, as are B and D. Individuals are likely to be risk seeking when confronted with negatively framed problems and risk averse when presented with positively framed problems (Tversky and Kahneman, 1981; Gonzalez *et al*, 2005). In sum, the framing effect suggests that people's choices are contingent on whether the problem is framed positively (in terms of gains) versus negatively (in terms of losses) (Tversky and Kahneman, 1981).

Kimes and Wirtz (2003) categorize rate fences into two frames: a discount and a surcharge. In RM practice, customers should evaluate a rate framed as a discount (that is, positive framing) more favorably than a rate presented as a surcharge (that is, negative framing), even if the final price is the same (Kimes and Wirtz, 2003). For example, a movie theater may decide to charge an extra \$2 for movies after 14:00. They thus can frame 'past 14:00' tickets as a \$2 surcharge or frame 'before 14:00' tickets as a \$2 discount. On the basis of the 'framing effect', even if the two situations are economically equivalent, customers should evaluate the \$2 discount more favorably. In this study, the authors explore the impact of framing on the perceived fairness of different rate fences in the movie theater industry. Specifically, the current study examines whether framing the five rate fences as a discount rather than a surcharge enhances moviegoers' perceived price fairness.

## METHOD

The current research employs a 5 (five rate fences) × 2 (frame: discount, surcharge) mixed design, with rate fences as a within-subjects factor and framing as a between-subjects factor. Using a convenience sampling approach, the data were collected at 'Megabox', the largest movie theater in Seoul, South Korea. According to Theatrical Market Statistics (KOFIC, 2013), 'Megabox' has a total of 16 screens including five 3D screens and total 3786 seats. Self-administered intercept

surveys were randomly distributed to customers who were waiting to watch movies. The final sample was 229; 51.1 per cent were male; 59.4 per cent were aged between 20 and 29 years; and 28.4 per cent between 30 and 39. With regard to education levels, 12.2 per cent of the respondents had a high school degree, 75.6 per cent had either 2- or 4-year college degrees, and 12.2 per cent had earned graduate degrees.

On the basis of prior RM research (for example, Kimes and Wirtz, 2003; Wirtz and Kimes, 2007; Choi and Mattila, 2009), a scenario-based survey was created. Five different scenarios were developed (see Table 3). Treating the rate fence conditions as a within-subject factor was deemed appropriate given our interest in predicting pricing effects in a non-laboratory setting (Greenwald, 1976). To rule out carry-over effects, the order of the five rate fences was counterbalanced. Each respondent was randomly assigned to one price frame (that is, between-subjects factor).

### Time-based pricing (morning-versus-noon)

In order to maximize their revenues, many movie theaters use differential pricing based on the show time. In this study, the authors used 11:00 as a cut-off point: differential morning and noon pricing. Such a cut-off point is typical in South Korea. Respondents were presented with either the discount or the surcharge scenario (the surcharge condition is presented in parentheses).

Imagine that you plan to go to the movie next week. The movie theater has two sets of prices: If the show is before (after) 11:00 a.m., you pay 30 percent less (more) than if it is shown (before) 11:00 a.m.

### Time-based pricing (weekday-versus-weekend)

Previous research has shown that the number of moviegoers on an average weekend day is approximately 3.5 times higher than that of

**Table 3:** Operationalization of experimental conditions

<i>Rate fences</i>	<i>Operationalization</i>	<i>Frame</i>
Time-based pricing (morning/noon)	A 30 per cent price difference between low-demand times (before 11:00) and high-demand times (after 11:00)	<i>Discount:</i> A 30 per cent lower price before 11:00 <i>Surcharge:</i> A 30 per cent higher price after 11:00
Time-based pricing (weekday/weekend)	A 10 per cent price difference between low-demand times (weekdays) and high-demand times (weekends)	<i>Discount:</i> A 10 per cent lower price for weekdays <i>Surcharge:</i> A 10 per cent higher price for weekends
Time-of-booking-based pricing	A 10 per cent price difference between a day's tickets and advance booking tickets	<i>Discount:</i> A 10 per cent lower price for advance booking <i>Surcharge:</i> A 10 per cent higher price for a day ticket
Popularity-based pricing	A 10 per cent price difference between low-demand movies (ranked below No. 4 in box-office ranking) and high-demand movies (ranked between No. 1 and No. 3)	<i>Discount:</i> A 10 per cent lower price for low-demand movies <i>Surcharge:</i> A 10 per cent higher price for high-demand movies
Location-based pricing	A 10 per cent price difference between the front rows and the middle and back rows	<i>Discount:</i> A 10 per cent lower price for the front row seats <i>Surcharge:</i> A 10 per cent higher price for the middle and back row seats

moviegoers on a weekday (Orbach and Einav, 2007). Accordingly, most movie theaters in South Korea implement a differential weekday-versus-weekend pricing strategy. In the United States, Cinemark, the third largest circuit in the United States, charges a \$0.25–\$0.50 premium for weekend shows in some of its locations (Orbach and Einav, 2007). The current study, thus, contrasts customer perceptions of weekday-versus-weekend pricing across the two framing conditions (surcharge condition in parentheses).

A movie theater offers different ticket prices for weekdays and weekends. If you watch a show on a weekday (weekend), you pay 10 percent less (more) than if you watch a show on a weekend (weekday).

### Time-of-booking pricing

The main purpose of time-of-booking-based pricing is to forecast demand (Heo and Lee, 2009). Chiang *et al* (2007) show that the accuracy of forecasting has a direct impact on RM performance. Although moviegoers can buy tickets online, movie theaters typically fail to reward customers for their advance purchases. In this article, the authors argue that movie theaters should initiate time-of-booking pricing in order to more efficiently manage their seat inventories. To that end, the current study examines consumers' perceptions of advance purchases across the two framing conditions.

You purchased a ticket 2 days in advance through the Internet (just purchased a



ticket). At the box office, you happen to meet your friend who just purchased a ticket (had purchased an advance ticket online 2 days ago) for the same movie. After a brief discussion, you find out that the price you paid is 10 percent less (more) than the price your friend paid.

### Popularity-based pricing

Box-office rankings reflect people's overall preferences (that is, demand) toward a particular movie, and this indicator is measured based on the number of tickets sold (MPAA, 2012). Although movie theaters have the ability to vary their ticket prices based on the popularity of the movie, they tend to apply uniform pricing (Orbach and Einav, 2007). In this study, the authors investigate consumers' reactions to differential pricing based on the movie's Blockbuster performance (the surcharge condition is presented in parentheses).

A movie theater offers two sets of prices based on the movie's box-office ranking. The ticket price for movies that are ranked below No.4 (between No.1 to No.3) is 10 percent cheaper (more expensive) than for movies that are ranked between No.1 to No.3 (below No.4).

### Location-based pricing

Most sport stadiums and live theaters charge different prices based on a seat location (Wirtz and Kimes, 2007). However, movie theaters have not yet applied such a pricing strategy. In general, moviegoers prefer seats in the middle and back rows over those in the front row, because sitting in the front row requires them to look up at a painful angle that easily leads to neck strain. The current study, thus, examines the impact of the seat location on consumers' reactions to movie ticket pricing (the surcharge condition is presented in parentheses).

A movie theater offers a 10 percent discount (surcharge) for seats located in the

front rows (seats in the middle and back rows) than seats in the middle and back rows (seats in the front rows).

For each of the scenarios, perceived fairness was measured via a 2-item scale adopted from Campbell (1999) ('How do you perceive this pricing scheme?' and 'Are you willing to recommend theater management to start/continue practicing this pricing scheme?';  $r = 0.87$ ). In addition, the authors collected demographic data such as gender, age, education level and frequency of going to the movies.

## RESULTS

A  $\chi^2$  test was first conducted to check whether participants were randomly assigned to the experimental conditions (Kimes and Wirtz, 2003). The results for the framing manipulations indicate that all demographic profiles (that is, gender, age, frequency of movie-going and educational level) were independent of the framing manipulation (that is, all of the tests had  $P$ -value greater than 0.05). Therefore, the subject allocation to the experimental condition was random.

### Rate fences

The data were analyzed in a 5 (rate fences: morning-versus-noon, weekday-versus-weekend, time-of-booking, popularity-based and location-based)  $\times 2$  (frame: discount, surcharge) mixed design ANOVA, with rate fences as a within-subjects factor and framing as a between-subjects factor. A significant main effect for rate fences was observed, suggesting that perceived fairness differed across the rate fence conditions ( $F = 76.65$ ,  $P < 0.001$ ). An examination of the cell means shows that the participants perceived differential pricing between morning and noon shows as reasonably fair (mean = 4.45; see Table 4). In addition, Bonferroni corrected *post-hoc* tests indicate that fairness perceptions of this rate fence (that is, morning-versus-noon pricing) are significantly higher than any of the other four rate fences

**Table 4:** Summary findings

	Frame	N	Mean (SD)	Overall mean (SD)
Time-based pricing (morning/noon)	Discount	115	4.97 (1.51)	4.45(1.64) <sup>a</sup>
	Surcharge	114	3.91* (1.59)	
Time-based pricing (weekday/weekend)	Discount	115	4.36 (1.81)	4.04(1.77) <sup>b</sup>
	Surcharge	114	3.71* (1.67)	
Time-of-booking pricing	Discount	115	5.16 (1.45)	4.09(1.95) <sup>b</sup>
	Surcharge	114	3.00* (1.77)	
Popularity-based pricing	Discount	115	2.74 (1.58)	2.36(1.50) <sup>c</sup>
	Surcharge	114	1.96* (1.29)	
Location-based pricing	Discount	115	3.56 (1.94)	3.60(1.76) <sup>d</sup>
	Surcharge	114	3.64 (1.55)	

<sup>a,b,c,d</sup>The mean difference is significant at  $P < 0.05$ , two-tailed.

\*The difference between the two framing conditions is significant at  $P < 0.05$ , two-tailed.

(all comparisons  $P < 0.05$ ). Moreover, the study participants considered both weekday-versus-weekend pricing (mean = 4.04) and time-of-booking pricing (mean = 4.09) as moderately acceptable. The *post-hoc* tests revealed that there is no significant difference in fairness perceptions between these two rate fences ( $P > 0.05$ ). However, these two rate fences (that is, weekday-versus-weekend pricing and time-of-booking pricing) are perceived significantly fairer than popularity-based pricing and location-based pricing, respectively (all comparisons  $P < 0.05$ ). The results also indicate that location-based pricing was perceived as moderately unfair (mean = 3.60). Yet, this rate fence was perceived significantly fairer than popularity-based pricing ( $P < 0.05$ ). Finally, the study participants rated popularity-based pricing as the most unfair practice among the five rate fences (mean = 2.36).

### Framing

As expected, there was a significant main effect of framing on fairness perceptions. Specifically, respondents viewed discount framing (mean =

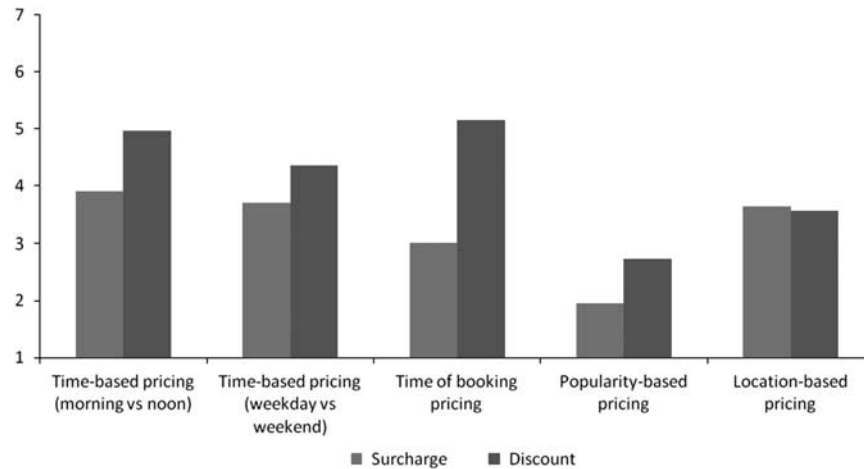
4.20) as significantly fairer than surcharge framing (mean = 3.23,  $F = 49.30$ ,  $P < 0.001$ ). These results indicate that when implementing RM, movie theaters should frame price differentials as discounts rather than surcharges.

### Rate fences × framing interaction

The results indicate a significant interaction effect between rate fences and framing ( $F = 19.03$ ,  $P < 0.001$ ). To probe this interaction, the authors conducted a series of simple effects tests, comparing the difference between surcharge and discount framings for each of the five types of rate fences (see Figure 1).

A discount frame resulted in significantly higher fairness perceptions than a surcharge frame for four of the five fence conditions; morning-versus-noon pricing ( $M_{\text{discount}} = 4.97$ ,  $M_{\text{surcharge}} = 3.91$ ,  $F = 32.25$ ,  $P < 0.001$ ); weekday-versus-weekend pricing ( $M_{\text{discount}} = 4.36$ ,  $M_{\text{surcharge}} = 3.71$ ,  $F = 8.68$ ,  $P < 0.01$ ); time-of-booking pricing ( $M_{\text{discount}} = 5.16$ ,  $M_{\text{surcharge}} = 3.00$ ,  $F = 104.95$ ,  $P < 0.001$ ); popularity-based pricing ( $M_{\text{discount}} = 2.74$ ,  $M_{\text{surcharge}} = 1.96$ ,  $F = 18.00$ ,  $P < 0.001$ ).





**Figure 1:** Rate fences  $\times$  framing interaction.

However, in the location-based fence condition, fairness perceptions did not vary across the two frames ( $M_{\text{discount}} = 3.56$ ,  $M_{\text{surcharge}} = 3.64$ ,  $F = 0.01$ ,  $P > 0.05$ ). This might indicate that moviegoers view seat location as a core part of a movie theater's value proposition. Therefore, they evaluate 'seats in the middle and back rows' and 'seats in the front row' situations as economically unequivalent (that is, different transactions). This finding suggests that movie theaters might be able to charge different prices for the same movie, based on seat location without experiencing customers' backlash.

## DISCUSSION AND IMPLICATIONS

RM has been successfully implemented in the hotel, airline and rental car industries for more than three decades (Kimes and Wirtz, 2003). Although movie theaters have a potential for applying RM, they tend to limit themselves to discrimination schemes (Orbach and Einav, 2007). To gain some initial insight into consumers' reactions to RM in the context of movie theaters, the current study crossed framing (discount versus surcharge) with five types of rate fences. The results indicate that morning-versus-evening pricing, weekday-versus-

weekend pricing and time-of-booking pricing were perceived as fair. Conversely, charging extra for premium seats or Blockbuster movies was perceived an unfair practice. *Post-hoc* tests revealed that fairness perceptions of all the five rate fences were significantly different from each other except for weekday-versus-weekend pricing versus time-of-booking pricing. Drawing on behavioral economics, the current study also examined whether framing RM pricing practices as discounts rather than surcharges influences moviegoers' fairness perceptions. Our findings indicate that framing RM as a discount rather than a surcharge has a positive impact on customers' fairness perceptions in four of the five rate fence conditions (morning-versus-noon, weekday-versus-weekend, time-of-booking and popularity-based pricing). These results are congruent with the framing effect (Tversky and Kahneman, 1981) in that people react to a particular choice based on whether the problem is framed as a gain versus as a loss.

The current study provides several guidelines for movie theater operators for a successful implementation of RM. First, movie theaters need to establish RM systems and computerized reservation systems. These systems allow movie theater operators to accurately forecast demand, calculate available seats and improve operational efficiencies (Heo and Lee, 2009).

When movie theaters introduce various rate fences, it is important to make sure that customers easily understand the reasons for the varying price levels. To that end, movie theaters might want to offer customers information on their pricing practices. Choi and Mattila (2005) show that perceived fairness in RM is influenced by the type and amount of information given to customers. For example, offering information regarding various rate fences at the point of purchase would allow potential moviegoers an opportunity to consider their options.

Among the five rate fences, moviegoers perceived morning-versus-noon pricing as the most fair practice. As many movie theaters have already implemented morning-versus-noon pricing, it is possible that this pricing has evolved into a social norm. Thus, if a movie theater operator wants to start RM practices while minimizing customer backlash, applying a morning-versus-noon pricing would be a good starting point. In addition, many movie theaters currently use weekday-versus-weekend pricing, and our results provide additional evidence that such a rate fence is perceived as fair. Although our findings indicate that differential pricing based on the time-of-booking pricing is perceived as equally fair as weekday-versus-weekend pricing, very few movie theaters currently implement this type of pricing. We argue that movie theaters should encourage moviegoers to purchase their tickets in advance in order to accurately forecast demand, which, in turn, has a positive impact on the bottom-line (Chiang *et al.*, 2007; Heo and Lee, 2009). One possible way to encourage moviegoers to purchase their tickets in advance is using smart-phone applications (that is, mobile movie ticketing applications). According to Theatrical Market Statistics (MPAA, 2013), frequent moviegoers, compared with the general population, have a significantly higher share of ownership for technology products such as smart-phone or tablet. Introducing a mobile movie ticketing application would enable moviegoers to purchase tickets without time and space restrictions.

In addition, the findings suggest that moviegoers assume that movies should be uniformly priced regardless of the movie's popularity (that is, box-office ranking). However, a clever pricing policy might make this rate fence more acceptable. For example, first offering discounts for less popular movies could sensitize consumers to differential pricing. Once accepted, movie theaters might be able to charge premium prices for Blockbuster hits. Another possible way to charge premium prices for popular movies is to offer bundled ticket packages (Kimes, 1994). If a movie theater offers tickets with additional components such as a snack and a beverage, customers might consider the total package price, not the cost of each individual component. To attract more moviegoers to purchase bundled ticket packages, without a doubt, movie theater operators should expand food and beverage offerings (for example, partnering with restaurants and coffee chains). Finally, movie theater operators should frame their price differentials as discounts rather than surcharges. As our findings indicate, such a strategy has a positive impact on customers' fairness perceptions. For example, when presenting weekday-versus-weekend pricing, the movie theater operator should promote weekday tickets as discounts and weekend tickets as a norm.

## LIMITATIONS AND FUTURE RESEARCH

As with any research, the current study has several limitations. First, the study was conducted in South Korea, thus indicating that the results might not be generalizable to other countries. Kimes and Wirtz (2003) argue that Western customers tend to have a greater exposure to RM practices than Asian customers do. A future study should replicate our rate fences in a Western context such as the United States.

Second, the context was limited to movie theaters. Future research should compare the applicability of the proposed rate fences in other segments of the entertainment industry. For example, seat-based pricing and popularity-based

pricing are commonly implemented on Broadway. Finally, we did not examine psychological mechanisms that might explain the casual links from RM practices to customers' fairness perceptions. Further research should explore potential mediating variables. For example, it has been shown that customers' evaluations of pricing of services are partly based on whether the price meets social norms of equity, equality and need (Maxwell et al, 2009). This implies that social norm perceptions might serve as a mediator in a rate fences–fairness perceptions relationship.

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