Customer Responses to Dynamic Pricing: Effects of Price Difference and Price Favorability

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This study investigates customer reactions to dynamic pricing (i.e., charging different prices for the same goods in different markets) and finds that customers show asymmetrical responses to an increase in price difference. Specifically, customers who pay a higher price show stronger intentions to switch stores, to complain, and to spread negative word-of-mouth when price difference gets larger, while an increase in price difference shows no effect on those who pay a lower price. In addition, negative emotions experienced by customers mediate the relationship between unfairness perception and behavioural responses. Results suggest that managers should exercise extra caution when introducing a relatively large price difference, and they should try to manage customers’ in-store emotional state to reduce the negative effects of dynamic pricing.

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EXTENDED ABSTRACT
Dynamic pricing, the practice of charging different prices for the same goods across different markets, is gaining popularity among practitioners (Levy et al., 2004; Sinha, 2000). Dynamic pricing can be perceived as an unfair means to acquire surplus from selected customers; and therefore, can potentially reduce customer trust and threaten the customer-firm relationship (Lii and Sy, 2009; Mattila and Choi, 2005). Moreover, unfairness perception leads to unfavorable behavioral responses, such as store switching, complaining, and negative word-of-mouth (Campbell, 1999; Homburg et al. 2005a; Schoefer and Diamantopoulos, 2008a; Xia et al., 2004).

RESEARCH QUESTIONS
This study identifies two factors that may influence perceived unfairness of dynamic pricing and consequent behavioral intentions, namely, magnitude of price difference and price favorability (i.e., paying a lower vs. a higher price). The first research question that this study attempts to address is: (1) would an increase in the magnitude of price difference show the same effect on customer reactions regardless of whether a lower price or a higher price is paid? If customer reactions are always linearly related to the amount of price difference, retailers may not need to worry too much when imposing a large price difference, because the negative responses from customers who pay high can be cancelled out by the positive responses from those who pay low, and hence the overall customer evaluations would remain unchanged. However, if the linear relationship does not hold, retailers would need to know where a stop line should be drawn. Our second research question is: (2) what are the mechanisms underlying cognitive processes (i.e., unfairness perception) being translated to behavioral responses? Understanding this issue would enable retailers to better cope with customers’ unfavorable responses and thus minimize negative consequences.

Effects of Magnitude of Price Difference.
When customers notice a discrepancy between a new price and its reference price, they will take into account the similarity between the two transactions to evaluate the price fairness (Xia et al., 2004). When the transactions are perceived to be highly similar, according to equity theory, perceived price unfairness is positively related to the magnitude of price difference (Homburg et al., 2005a). Hence, given the research context of this current study in which transaction similarity is perceived to be high, we expect a price to be judged as more unfair as the price difference increases. We also hypothesize a positive effect of magnitude of price difference on customer intentions for store switching, complaining, and negative word-of-mouth.

Effects of Price Favorability.
Many prior studies suggest that people react more positively when outcomes are relatively favorable rather than unfavorable and that favorable outcomes lead to less unfair perceptions and higher outcome satisfaction (Ambrose et al., 1991; Anderson and Patterson, 2008; Conlon, 1993; Diekmann et al., 1997). Hence, we hypothesize a negative effect of price favorability (favorable vs. unfavorable) on perceived price unfairness and behavioral intentions.

Interacting Effects between Price Difference and Price Favorability
Paying a price that is lower than the reference price is perceived as a gain. Conversely, paying a higher price is perceived as a loss. Prospect theory posits that people react differently to perceived gains versus losses and that, in general, people react more negatively to losses than they react positively to gains (Kahneman and Tversky, 1979). Prior studies on pricing have shown that customers are generally more sensitive to losses in price changes than to gains (Kalyanaram and Winer, 1995; Moon et al., 2006; Putler, 1992). In other words, if price changes are likely to have an impact only when the price difference is above a threshold, customers have a higher threshold for price decreases than price increases (Han, et al. 2001). Therefore, we hypothesize interacting effects between the magnitude of price difference and price favorability on perceived price fairness and behavioral intentions, and expect that the same increase in price difference will show a stronger effect on customer reactions when the price is unfavorable than when the price is favorable.

Role of Experienced Emotions.
The consequences of unfairness perception are not only behavioral but also emotional (O’Neill and Lambert, 2001; Schoefer and Diamantopoulos, 2008a). According to appraisal theory, unfairness perception is typically accompanied by negative emotions such as anger, annoyance, and discontentment (Schoefer and Diamantopoulos, 2008a, b). Bagozzi et al. (1999) suggest that emotions arising from a particular purchase situation may be more strongly associated with behavioral intentions than with cognitive evaluations of the situation. Therefore, we hypothesize that the experienced negative emotions mediate the relationship between perceived price unfairness and the behavior intentions.

METHOD
To test the above hypotheses, we employed a 2 (magnitude of price difference: small vs. large) X 2 (price favorability: paying a lower vs. higher price) between-subjects design. Respondents were local residents in Hong Kong and data were collected using street intercept techniques over a two-week period. Respondents were provided with a scenario in which they purchased biscuits from a store at Price 1, and during the same day they found out that a different store in the same supermarket chain was selling the same biscuits for Price 2. The two prices for the small-difference condition were US$3.00 and US$3.75, and for the large-difference condition US$3.00 and US$4.50. In
total, 207 respondents provided v, and the sample size for each condition ranged from 47 to 59. All measurement items utilized established and validated scales, although minor changes were made in some scales to suit the context of the study.

RESULTS

We first assessed the validity of measures using structural equation modeling (SEM), and then tested the hypotheses with MANOVA and ANOVA analyses, followed by mediation analysis using SEM. First, the overall model fit was satisfactory, and the measurement model demonstrated acceptable reliability, convergent validity, and discriminant validity. Second, a series of ANOVA analyses supported all the hypothesized main effects of difference magnitude and price favorability, and their interacting effects on store switching, complaining, and negative word-of-mouth. Inconsistent with our expectation, the interaction effect was not significant for unfairness perception. Finally, SEM mediation analysis indicated that negative emotions fully mediated the relationship between unfairness perception and store switching, between unfairness perception and complaining, and partially mediated the relationship between unfairness perception and negative world-of-mouth.

This study suggests that managers should exercise extra caution when introducing a relatively large price difference because customers are more sensitive to price increases. Also, managers should try to manage customers’ in-store emotional state, for instance, by arranging atmospheric elements in a store (i.e., color, lighting, music, scents, and store layout), to minimize the negative consequences of dynamic pricing.

REFERENCES


