

# THE EFFECTS OF BUYER IDENTIFICATION AND PURCHASE TIMING ON CONSUMERS' PERCEPTIONS OF TRUST, PRICE FAIRNESS, AND REPURCHASE INTENTIONS

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The ease of use and commercial feasibility of Internet-enabled technologies for price segmentation have found increased managerial applications as well as a concurrent rise in questions about fairness and legality. We examine the role of two price segmentation tactics and assess their effects on consumer perceptions of trust, fairness of the price differences, and repurchase intentions using two studies. We find that consumers report lower levels of trust, price fairness, and repurchase intentions when Internet-enabled buyer identification techniques are used (as compared to purchase timing tactics) to segment consumer markets. Our experimental results also suggest that the difference between these two tactics is more pronounced when firms do not provide an explanation for the price differences. The results also indicate that the size of the price difference has a significant effect on trust, fairness, and willingness to buy.

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## INTRODUCTION

Consider the consumer outcry in the case of Amazon.com, when the firm tried to charge different prices to different consumers for the same DVD products (Rosencrance, 2000a, 2000b). The firm had offered the same DVDs to different consumers at 30%, 35%, and 40% of the manufacturer's suggested retail price as part of, as the firm maintained, a "price testing" plan (Baker, Lin, Marn, & Zawada, 2001; Rosencrance, 2000b). However, consumers had a different view, judging from their postings on a DVD chat room, *DVD Talk Forum*. Here, online shoppers identified differences in the prices for the DVD copy of the movie, *Men in Black*, as being dependent on factors such as the Internet browser used for price search, the Internet service provider address used by a customer, and whether a consumer was a repeat or first-time customer (Rosencrance, 2000a).

The Amazon.com case provides a clear indication that perceived fairness as well as consumer perceptions of trust are important issues whenever a firm charges different prices to different consumers. Internet technologies have made it much easier for firms to collect various data on their customers, including identification through registrations, logins, and other means. Moreover, such technologies also enable costless changes to price menus and, therefore, firms can react faster to competitive, seasonal, demand, and other considerations when pricing their products and services over the Internet (Brynjolfsson & Smith, 2000). While much has been written about the advantages of buyer identification, Internet data collection, and dynamic pricing, literature on how consumers react to such strategies is only evolving. Charging different prices for essentially the same product or service as in dynamic pricing, even though under the legal ambit of fair trading, evoke concerns about fairness and trust when such strategies are evaluated from the customer's perspective (Garbarino & Lee, 2003; Weiss & Malhotra, 2001).

However, fairness and trust considerations may be greatly amplified only for products and services that consumers perceive to be the same and for which the firm's communication is unclear. Firms charging different prices to consumers based on different usage, or based on different levels/types of benefits, feature

enhancements, or other rational principles of differentiation, may not encounter the same severe reactions of unfairness and distrust. Besides, the framing effects induced by the firm's communications, or lack of it, may also contribute to perceptions of fairness and trust (Tversky & Kahneman, 1981). For example, it is less likely that consumers who do not get a senior citizen discount would perceive a firm's charging a higher price to them as particularly unfair or untrustworthy.

Given this backdrop of Internet strategies and the prior literature on fairness and trust, we explore the various situations in which consumers would evaluate prices charged by Internet-based firms as unfair. Of the various Internet price segmentation tactics identified in Iyer, Miyazaki, Grewal, and Giordano (2002), we isolate the impacts of the tactics of *buyer identification* and *purchase timing* on consumer evaluations of trust, fairness, and repurchase intentions. We further examine whether the negative effects of these two tactics on perceptions of trust, fairness, and repurchase intentions are moderated by the size of the price difference and the firm's explanation for the price difference. The major contribution of this paper is the evaluation of consumer perceptions regarding the relative fairness of the two segment-based tactics of buyer identification and purchase timing. The results and discussions have important implications for the managerial use of such tactics for pricing products and services over the Internet.

## RESEARCH HYPOTHESES

### *Internet Segment-Based Pricing Tactics*

*Buyer identification* pricing variations emanate from a firm's attempts to offer prices based on a customer's past preferences. Various Internet-enabling technologies, such as cookies, user logins, and membership, are used to identify consumers and track their purchase and/or visit histories (Iyer et al., 2002). Various Internet firms such as Dell.com and Costco.com use site usage information and/or user logins. Through user registrations, firms can provide lower prices to members as compared to nonmembers. On the other hand, a number of retailers (e.g., Blockbuster) are more likely to offer price promotions to less-frequent customers to enhance their usage. The most common

form of *purchase timing* variations are demand-based pricing schemes, as in the yield management pricing principles followed by the airline and hotel industries. In these industries, firms identify different consumers on the basis of the timing of their purchase decisions, with early buyers assumed to be more sensitive to price as compared to later ones.

In this research, we are interested in consumers' perceptions of trust, price fairness, and repurchase intentions when they are faced with either one of two identification strategies (favoring existing users versus new users) or a purchase timing segmentation tactic. For these tactics, consumers are charged different prices based on either their prior clickstream history or the timing of their purchase. While using past behaviors (existing users or new users), as in price strategies based on clickstream data, is a relatively new tactic made more convenient by the Internet, purchase timing has been used widely as a segmentation tactic in yield management pricing within the airline industry. Consumers are therefore quite familiar with the purchase timing segmentation tactic used by firms.

While the growing literature on e-commerce has emphasized the importance of building trust in online transactions, much of the focus on trust has been on its importance in obtaining consumer business over the Internet and on its role in reducing consumer concerns over privacy and perceived transaction risks (Chen & Dhillon, 2003; Urban, Sultan, & Qualls, 2000). Specific Internet tactics, such as collecting and using consumer identity information, have obvious privacy ramifications, but the use of such tactics may also negatively affect consumer trust and, thus, consumer intentions to repurchase from the firm. One key dimension of trust is benevolence trust, i.e., the consumer's perceptions and evaluations of the firm's willingness to act in a way that benefits the consumer (Singh & Sirdeshmukh, 2000). Consumers would not trust firms that appear to be using consumer identity information solely for their own profits, despite stated intentions of benefiting the consumer. Thus, consumers are less likely to trust firms using the buyer identification strategy, *ceteris paribus*, unless there is other evidence or actions that assure consumers that such strategy benefits them as well.

On the other hand, the tactic of charging different prices based on purchase timing may not affect either of the two major dimensions of trust identified in recent literature—benevolence trust and competence trust (Singh & Sirdeshmukh, 2000). Consumers may identify such a tactic as consonant with industry norms. Consistent with norm theory, purchase timing is likely to be viewed as mostly fair, and consumer perceptions of trust and repurchase intentions should be fairly high (Kahneman & Miller, 1986).

When firms use a purchase timing segmentation strategy, we expect that consumers will make internal attributions regarding price differences across customer segments. They are likely to make attributions about the locus of causality or responsibility (e.g., Folkes, 1988; Folkes & Kotsos, 1986). Customers would likely attempt to determine whether the cause of the price difference is due to the company or because of themselves. When the firm is viewed as being responsible, repurchase is negatively affected. However, if the product was unavailable or the firm was unreceptive to the consumer at an earlier time and price, the higher current price would likely be attributed to the firm. But if the firm is not viewed as being responsible, repurchase is not influenced (e.g., Folkes, Koletsky, & Graham, 1987). That is, consumers are expected to more likely make attributions like, "I guess I deserve to pay more since I waited too long to make the purchase." These internal attributions are expected to have limited negative effects on perceptions of trust, price fairness, and repurchase intentions as these attributions have little to do with the firm's strategy or the value of the offer.

When firms use an identification segmentation tactic, we expect that consumers are likely to attribute price differences to an external cause (i.e., the firm) and not to themselves. Consumers are expected to make attributions like, "The firm charged me more so that it can maintain its high profit level." These external attributions are more likely to be negative and should lessen consumer perceptions of trust, price fairness, and repurchase intentions. Furthermore, consumers are likely to view charging higher prices to repeat users to be inconsistent with their norms as compared

to providing higher prices to a new user. As such, we expect the following<sup>1</sup>:

**H1:** Consumer perceptions of trust, price fairness, and repurchase intentions will be higher when a purchase timing segmentation tactic is used than identification favoring existing customers which in turn is likely to be higher than identification favoring new customers.

Purchase Timing > Identification Favoring Existing Customers > Identification Favoring New Customers

## STUDY 1: METHODOLOGY

Recent studies on consumer evaluations of price fairness have employed elaborate experimental research methods (Bolton, Warlop, & Alba, 2003; Campbell, 1999a). The experimental method used in this study employed a between-subjects factorial design, with measures of trust, price fairness, and repurchase intentions being the dependent variables. Each subject was exposed to one of three Internet segment-based pricing tactics (buyer identification favoring a frequent buyer, buyer identification favoring a new buyer, and purchase timing). Fifty-three student subjects participated in the experiment.

### Procedure

Similar to previous research on price fairness (e.g., Kahneman, Knetsch, & Thaler, 1986; Bolton et al., 2003), we used a survey-based experimental approach. We felt that such an approach reduces the difficulties associated with the observation or enactment of Internet-based pricing tactics in the field, such as ethical considerations, and the managerial undesirability of intentionally imposing some of these tactics. Furthermore, scenarios (versus retrospective self-reports) reduce biases from memory lapses, rationalization tendencies, and consistency factors.

<sup>1</sup> It is important to state that a test of attributions has not been conducted here. It is possible that spontaneous profit attributions occur when a buyer identification tactic is employed while these attributions are only triggered when coupled with a cost explanation when using a purchase timing segmentation tactic. We thank an anonymous reviewer for suggesting this possibility. We have noted that a test of attributions is warranted. Finally, the attributions used to guide H1 are all for price increases and may not be appropriate for price decreases.

Participants read a brief scenario (as in the Appendix A) that described a situation where they were buying a ticket for a vacation at a higher price than what a friend had paid. They realize that they are paying a higher price due to either buying the ticket later (timing) or due to being either a frequent flyer or a new user (identification). Prior to reading the scenario, they responded to three general trust items adapted from Gefen (2000) ( $\alpha = 0.83$ ). The specific items were:

- Even if not monitored, I'd trust Internet retailers to do the job right.
- I think Internet retailers are credible.
- I believe that Internet retailers are reliable.

After reading the scenario, respondents were asked to answer a number of questions. They responded to a more specific three-item trust scale adapted from Gefen (2000):

- Even if not monitored, I'd trust \_\_\_\_\_ (major Internet travel agency) to do the job right.
- I think \_\_\_\_\_ is a credible Internet retailer.
- I believe that \_\_\_\_\_ is a reliable Internet retailer.

All three items were measured using seven-point scales from strongly disagree to strongly agree. The reliability for this scale, as measured by Cronbach's  $\alpha$ , was 0.85.

Respondents also completed a three-item scale assessing their price fairness perceptions. This scale was based on past research (Grewal & Baker, 1994) and asked them to indicate:

- How fair was your ticket price? (1 for Very Unfair to 7 for Very Fair).
- The price that you were charged for your ticket represents a fair price (1 for Strongly Disagree to 7 for Strongly Agree).
- How acceptable was it to you that the major airline charged you more than your friend? (1 for Very Unacceptable and 7 for Very Acceptable).

The reliability for the price fairness scale was quite high ( $\alpha = 0.88$ ). Respondents also indicated their repurchase intentions. A single item was used for this

TABLE 1

Study 1: Analysis of Covariance Results

CONDITION	POST-TRUST			PRICE FAIRNESS			REPURCHASE INTENTIONS		
	Df	F	p-VALUE	Df	F	p-VALUE	Df	F	p-VALUE
Covariate-pretrust	1	5.24	0.03	1	0.78	0.38	1	0.91	0.35
Tactic	2	8.62	0.00	2	21.55	0.00	2	26.59	0.00
Error	49			48			49		

purpose, “How likely are you to buy from \_\_\_\_\_ in the future?” on a seven-point scale ranging from Very Unlikely to Very Likely. Finally, participants completed a manipulation check.

## RESULTS

The manipulation worked as intended. Respondents recalled whether the price difference was due to the fact that they purchased the ticket closer to the vacation, because they were a frequent flyer of the airline, or that they were new to the airline ( $\chi^2 = 52.85$ ,  $p < .001$ ). To begin, a MANCOVA was run for the three dependent variables and the tactic independent variable. Prepurchase trust was used as a covariate. The interaction between the tactic manipulation and pre-purchase trust was not significant.<sup>2</sup> Thus, pre-purchase trust is appropriate to use as a covariate. The MANCOVA results suggested that univariate analyses were appropriate (Wilks' Lambda = 0.41,  $p < .01$ ). Table 1 displays the ANCOVA results while Table 2 contains the means ( $M$ ), standard deviations (S.D.), and sample sizes ( $N$ ) across conditions.

**Post-Purchase Trust.** The ANCOVA results partially support the effect of the Internet segment-based pricing tactic on post-purchase trust ( $F_{(2,49)} = 8.62$ ,  $p < .001$ ). Specifically, the identification tactic favoring a new flyer ( $M = 3.11$ ) resulted in lower perceptions of trust than the identification tactic favoring a frequent flyer ( $M = 4.48$ ,  $p < .01$ ). These results support H1. However, the purchase

timing result only had directionally higher perceptions of trust ( $M = 4.92$ ) compared to the identification tactic favoring a frequent flyer ( $M = 4.48$ ,  $p = .33$ ). Clearly, respondents view an Internet retailer using identification, favoring a new flyer, as a pricing tactic as less trustworthy than using purchase timing as a tactic. However, using buyer identification favoring frequent flyers does not have a significant negative impact on perceptions of trust compared to purchase timing.

**Fairness.** The ANCOVA results support the effect of the Internet segment-based pricing tactic on fairness ( $F_{(2,48)} = 21.55$ ,  $p < .001$ ). The identification tactic favoring a new flyer ( $M = 2.32$ ) was deemed significantly less fair than an identification tactic favoring a frequent flyer ( $M = 4.00$ ,  $p < .01$ ). Moreover, the purchase timing tactic ( $M = 5.13$ ) was deemed more fair than the identification tactic favoring a frequent flyer ( $4.00$ ,  $p < .01$ ). Clearly, respondents view an Internet retailer using either identification tactic as less fair than using purchase timing as a tactic.

**Repurchase Intentions.** The ANCOVA results support the effect of the Internet segment-based pricing tactic on repurchase intentions ( $F_{(2,49)} = 26.59$ ,  $p < .001$ ). Identification favoring a new flyer ( $M = 1.60$ ) had lower purchase intentions than identification favoring a frequent flyer ( $M = 3.74$ ,  $p < .01$ ). Furthermore, a purchase timing tactic ( $M = 5.15$ ) had higher repurchase intentions than an identification tactic favoring a frequent flyer ( $M = 3.74$ ,  $p < .01$ ). Respondents are less likely to repurchase from an Internet retailer using either identification tactic compared to a retailer using purchase timing as a tactic.

<sup>2</sup> It is important to note that all results are similar when the pretrust measure is not included as a covariate.

TABLE 2

Study 1: Descriptive Information

INTERNET TACTIC	POST-TRUST			FAIRNESS			REPURCHASE INTENTIONS		
	MEAN	S.D.	N	MEAN	S.D.	N	MEAN	S.D.	N
Timing	4.92	1.14	18	5.13	0.79	18	5.15	1.20	18
Identification favoring new flyer	3.11	1.58	17	2.32	1.31	17	1.60	1.06	17
Identification favoring frequent flyer	4.48	1.41	18	4.00	1.60	17	3.74	1.90	18

In summary, consumers have higher levels of trust, believe prices are fair, and are more likely to repurchase when sellers employ a purchase timing tactic as compared to either identification tactic. The only exception to this is when sellers employ a buyer identification tactic favoring a frequent flyer; in this case, trust is not significantly lower than when using purchase timing.

In a preliminary effort to address whether or not norm theory is applicable to these results, each respondent was given the following scenario and question to answer:

Assume a hotel is planning to charge consumers different prices based on either their past consumption with the hotel or the timing of their reservations. Which of these tactics for charging different prices to different consumers is most acceptable to you? (1) Based on Past Consumption to (7) Based on Reservation Timing

Results from this question indicate that subjects believe that charging higher prices based on timing is more acceptable than based on buyer identification ( $M = 4.60$ ,  $S.D. = 1.93$ ;  $p = .03$  in a test against 4). Further evaluation of the applicability of norm theory and an assessment of consumer attributions is warranted.

## STUDY 2

The extent to which negative attributions may contribute to consumer perceptions of trust, price fairness, and repurchase intentions may be moderated by the firm's provision of explanation for the price

changes as well as the magnitude of the price difference itself. These issues are traced in hypotheses H2 and H3 below.

### *Moderating Role of Explanation for the Price Difference*

Firms have the option of indicating the reason for any price difference across consumers. Bolton et al. (2003) demonstrate that providing detailed information regarding costs could have a modest positive influence on consumers' ability to estimate profits. As such, consumers would like to know price differences are present as it enables them to better evaluate the goodness of the offer. When a firm uses a buyer identification segmentation tactic, we expect that providing a cost explanation for price differences should have a positive impact on consumer perceptions. In these instances, consumers are likely to discount the idea that the price differences are based on identification and instead attribute the differences to the stated costs. As such, the explanation should aid in enhancing consumer perceptions by reducing the strength of negative external attributions.

When firms use a purchase timing segmentation strategy, consumers are more likely to make negative external attributions and the cost explanation would actually have a negative impact. That is, when explanations are not offered, consumers are expected to make some internal attributions associated with the price differences and may not make negative external attributions. When the firm highlights price differences with a cost explanation, an individual may be

more likely to make negative external attributions about the firm. This is because attributions like, “The firm is charging me more now to keep its profits high,” are to be expected. As such, we posit the following two-way interaction between the type of segmentation tactic employed by the firm and whether or not a cost explanation is provided:

**H2:** When firms provide consumers with a cost explanation associated with price differences, the differences in perceptions of trust, price fairness, and repurchase intentions when firms use purchase timing versus an identification segmentation tactic are smaller than when no cost explanation is provided.

In summary, H2 qualifies H1 by noting the moderating role of cost explanations. Regardless of the price segmentation tactic used, the use of explanations based on cost increases are likely to make consumers more skeptical of the firm’s tactics and also shift any internal attributions to clearly external ones (i.e., to the firm). Thus, any blame is now shifted onto the firm, even in cases such as purchase timing, where consumers were more likely to blame themselves rather than the firm for the price difference. But, at the same time, cost explanations do serve to mitigate the adverse impacts of the external attribution, especially when the consumer may be predisposed to make a negative attribution (Campbell, 1999b). This is especially so in the case of price increases through buyer identification where, as posited in H1, consumers are more likely to make negative attributions.

Research by Bolton et al. (2003) has shown that consumer inferences of the firm’s profit motives are affected by whether they perceive the firm’s profits as being fair and the nature of the cost increase itself. Thus, while cost explanations play an important moderating role as noted in H2 above, we now turn to the examination of the magnitude of the price difference.

### ***The Role of the Size of the Price Difference***

Prior researchers have demonstrated that heuristic cues are likely to be used when price promotions (Grewal, Marmorstein, & Sharma, 1996; Hardesty & Bearden, 2003) or bonus pack promotions (Hardesty & Bearden, 2003) are large. Both Grewal et al. and Hardesty and Bearden showed that consumers use a

“good deal” heuristic when promotions are large. Consumers are likely to use these price differences to assess trust, price fairness, and repurchase intentions. Consumer perceptions of trust, price fairness, and repurchase intentions should be greater when there is a small price difference than when there is a large price difference. The following hypothesis is proposed:

**H3:** The size of the price difference will have a negative effect on perceptions of trust, price fairness, and repurchase intentions.

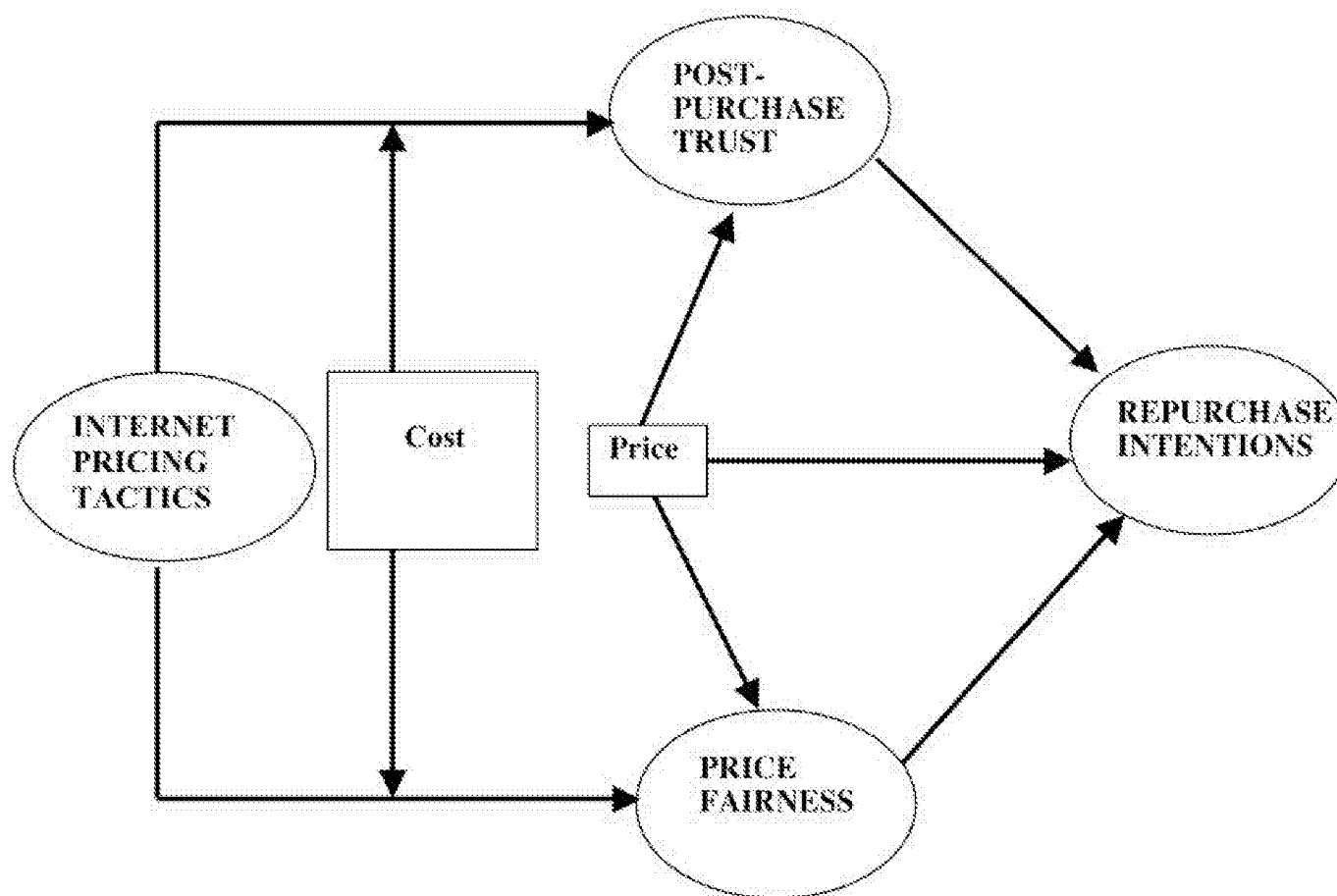
Each of the hypotheses is mapped in Figure 1. To test these hypotheses, we conducted a study by manipulating the price segmentation tactic used (buyer identification favoring a new flyer or purchase timing), cost explanations (provided or not provided), and the price difference (small or large). The buyer identification tactic favoring a new flyer was chosen. Note that this tactic was evaluated most negatively in Study 1. The next sections describe the study and results.

## **METHODOLOGY**

The experimental method used in this study is a  $2 \times 2 \times 2$  between-subjects factorial design, with measures of trust, price fairness, and repurchase intentions being the dependent variables. Each subject was exposed to one of two Internet segment-based pricing tactics (buyer identification favoring a new flyer or purchase timing). Two levels of price differences were also manipulated as the size of the price difference between the price charged to consumer A (\$300) and price charged to consumer B at a low level of \$330 vs. a high level of \$390. Finally, half of the subjects were given an explanation for the cost differences while the other half were not. Two hundred fifty-three student subjects participated in the experiment.

### ***Procedure***

The same procedures were followed as in Study 1. Participants read a brief scenario (see Appendix B) that described a situation where they were buying a ticket for a vacation at a higher price than what a friend had paid. They realize that they are paying a higher price due to either buying the ticket later (timing) or due to being a frequent flyer (identification). Some of the subjects were told the reason for the higher price was the fact that the price of fuel had increased



**FIGURE 1**

A Conceptual Overview of Internet Pricing Tactics, Trust, Price Fairness, and Repurchase Intentions

(presence versus absence of cost explanation). The price difference was manipulated at two levels. The same scales were used as in Study 1 and were again found to be reliable (pre-purchase trust  $\alpha = 0.82$ , post-purchase trust  $\alpha = 0.91$ , and price fairness perceptions  $\alpha = 0.94$ ). As in Study 1, a single item was used to assess repurchase intentions. Finally, participants completed manipulation checks.

## RESULTS

### *Manipulation Checks*

The manipulations worked as intended. To examine the price manipulation, we ran an ANOVA on the following item: "The profit that the major airline made on the sale of your ticket was" (Very Low to Very High on a seven-point scale). The results indicated that the price manipulation was significant

(Low = 4.29 vs. High = 5.44,  $F_{(1,239)} = 8.89$ ,  $p < .01$ ). We also asked respondents to indicate: "What was the price that you were charged for your ticket? \$ \_\_\_\_." ANOVA results again indicated that the price manipulation was significant (Low = \$332.47 vs. High = \$387.33,  $F_{(1,234)} = 639.47$ ,  $p < .001$ ). They correctly recalled whether the scenario involved providing a cost explanation or not ( $\chi^2 = 138.96$ ,  $p < .001$ ). Thus, the cost explanation manipulation was effective. Finally, they also recalled whether the price difference was due to the fact that they purchased the ticket closer to spring break or because they were a frequent flyer of the airline ( $\chi^2 = 109.44$ ,  $p < .001$ ).

### *MANCOVA Analysis*

A MANCOVA was run for the three dependent and independent variables. Prepurchase trust was used as a covariate. The interactions between the tactic



TABLE 3

Study 2: Analysis of Covariance Results

CONDITION	POST-TRUST			PRICE FAIRNESS			REPURCHASE INTENTIONS		
	Df	F	p-VALUE	Df	F	p-VALUE	Df	F	p-VALUE
Covariate-pretrust	1	33.12	0.00	1	7.71	0.00	1	4.39	0.03
Price	1	2.501	0.11	1	10.09	0.00	1	4.78	0.04
Cost	1	1.94	0.17	1	4.84	0.03	1	0.27	0.61
Tactic	1	72.77	0.00	1	285.25	0.00	1	117.07	0.00
Price * cost	1	.08	0.78	1	0.08	0.78	1	0.28	0.60
Price * tactic	1	.45	0.51	1	0.25	0.62	1	0.02	0.88
Cost * tactic	1	5.73	0.02	1	4.83	0.03	1	4.97	0.03
Price * cost * tactic	1	3.50	0.06	1	0.93	0.34	1	0.07	0.79
Error	242			244			242		

manipulation, cost manipulation, and price manipulation variables and prepurchase trust were not significant. Thus, prepurchase trust is appropriate to use as a covariate. The MANCOVA results suggested that univariate analyses were appropriate (Wilks' Lambda = 0.996,  $p < .05$ ). Table 3 contains the ANCOVA results and Table 4 displays the means, standard deviations, and sample sizes across conditions. The results indicate a significant Internet tactic by cost interaction (H2) and a significant main effect for price (H3).

**Post-Purchase Trust.** As predicted, we find support for H2 (tactic by cost explanation interaction)

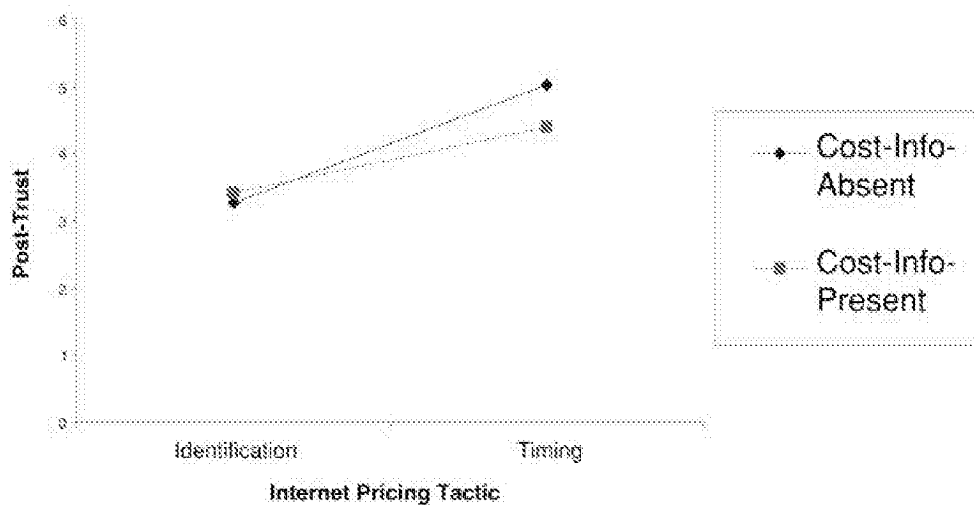
( $F_{(1,242)} = 5.73$ ,  $p < .05$ ). The results demonstrate that the effects of the Internet segment-based pricing tactic are reduced when a cost explanation is provided (Identification = 3.42 vs. Timing = 4.40) as compared to a cost explanation not being provided (Identification = 3.26 vs. Timing = 5.01). Figure 2 displays these results. The main effect of price had marginal support (Price (low) = 4.14 vs. Price (high) = 3.89 ( $F_{(1,240)} = 2.34$ ;  $p < .10$ , one-tailed)).

**Price Fairness and Repurchase Intentions.** For both of these variables, the two-way interaction between tactic and cost explanation was supported

TABLE 4

Study 2: Descriptive Information

PRICE	COST MOTIVE	INTERNET TACTIC	POST-TRUST			FAIRNESS			REPURCHASE INTENTIONS		
			MEAN	S.D.	N	MEAN	S.D.	N	MEAN	S.D.	N
Low	Absent	Timing	5.42	1.13	32	5.62	1.61	32	5.09	1.73	32
Low	Absent	Identification	3.18	1.38	29	2.33	1.31	30	2.53	1.50	30
Low	Present	Timing	4.43	1.22	35	4.71	1.22	35	4.69	1.64	35
Low	Present	Identification	3.64	1.53	35	2.46	1.14	35	2.94	1.68	35
High	Absent	Timing	4.64	1.38	28	4.78	1.58	29	4.79	1.45	29
High	Absent	Identification	3.19	1.50	30	1.97	1.11	30	2.07	1.39	30
High	Present	Timing	4.30	1.12	30	4.27	1.48	30	4.07	1.53	30
High	Present	Identification	3.33	1.42	32	1.97	1.14	32	2.47	1.74	30



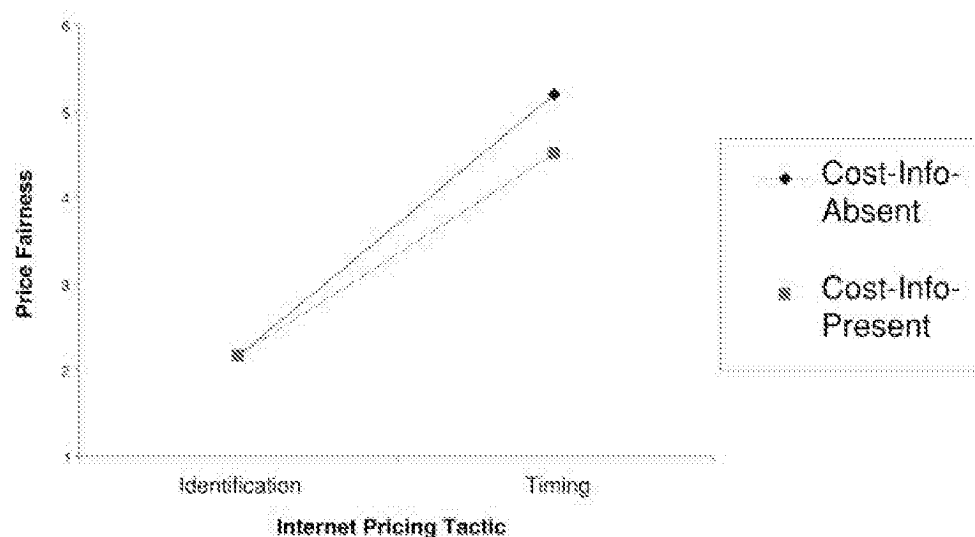
**FIGURE 2**

Internet Pricing Tactic by Cost Explanation Post-Trust

(see Figures 3 and 4). First, let us look at the results for perceived price fairness (Figure 3). The tactic by cost explanation interaction was supported: ( $F_{(1,244)} = 4.83, p < .05$ ). The results demonstrate that the effects of the Internet pricing tactic on perceived fairness are reduced when a cost explanation is provided (Identification = 2.18 vs. Timing = 4.50) as compared to a cost explanation not being provided (Identification = 2.18 vs. Timing = 5.20). Very similar results are found for repurchase intentions. The tactic by cost explanation interaction was supported:

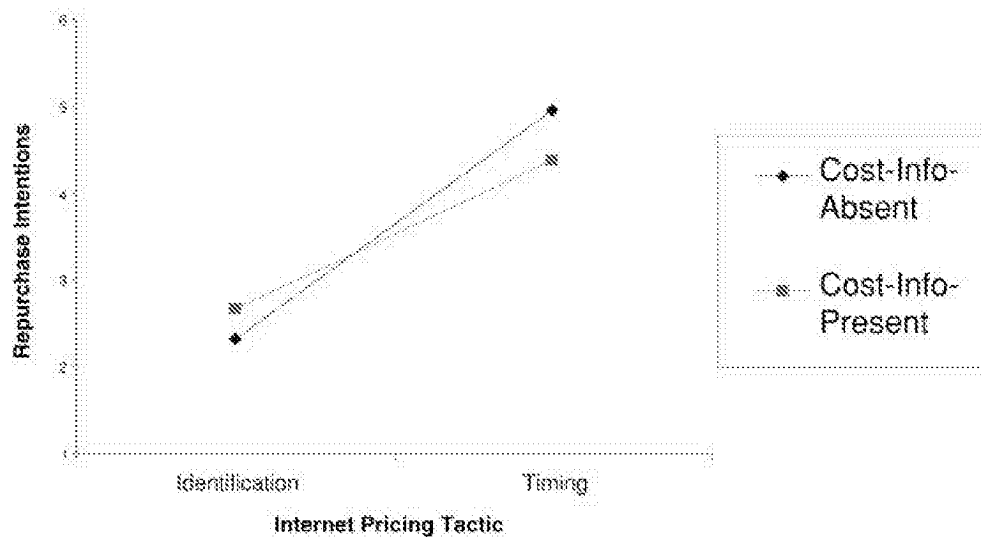
( $F_{(1,242)} = 4.97, p < .05$ ). The results demonstrate that the effects of the Internet pricing tactic on repurchase intentions are reduced when a cost explanation is provided (Identification = 2.67 vs. Timing = 4.39) as compared to a cost explanation not being provided (Identification = 2.33 vs. Timing = 4.94).

In addition, the main effect of price difference was supported for both variables. Greater price differences resulted in lower perceptions of price fairness (Low = 3.76 vs. High = 3.26,  $F_{(1,244)} = 10.09, p < .01$ )



**FIGURE 3**

Internet Pricing Tactic by Cost Explanation Perceived Price Fairness



**FIGURE 4**

Internet Pricing Tactic by Cost Explanation Repurchase Intentions

and repurchase intentions (Low = 3.80 vs. High = 3.36,  $F_{(1,242)} = 4.78$ ,  $p < .05$ ). One potential reason may be the fact that price tends to be a very strong driver of price fairness (or fairness in general) (see Grewal & Baker, 1994) and repurchase intentions (Grewal, Monroe, & Krishnan, 1998).

## DISCUSSION

Our findings suggest several substantive conclusions. It is clear that the specific tactic used for segmenting consumers on the basis of price does matter. In our studies, among the two price segmentation tactics manipulated, consumer perceptions of trust, price fairness, and repurchase intentions were more favorable to the firm when using a purchase timing tactic than when using buyer identification to offer different prices to different segments. This may be due to the greater precedence and, therefore greater acceptance, of price differences due to the timing of the purchase. In the context of the Internet, technology-enabled buyer identification, through cookies, registrations, and other methods, provide the firm with better understanding of consumer search behaviors and buying patterns. The use of these techniques to segment consumer markets goes beyond conventional segmentation that is dependent merely on costs, price sensitivity, or competition (Iyer et al., 2002; Nagle & Holden, 2002). However, the transparent use of buyer

identification as a segmentation tactic may only result in consumer disapproval and possible adverse reputation effects. Consumers charged a higher price could view the tactic as unfair, the firm as less trustworthy, and have lower repurchase intentions.

We must point out that our study 1 results suggest that Internet segmentation based on timing did not engender significantly higher post-purchase trust as compared to an identification favoring a frequent flyer (we do find significant differences in the fairness and repurchase intentions measures). Thus, the comparison of Internet segmentation based on timing versus usage needs further study. We feel that pricing tactics that are viewed as contrary to norms (or industry practice), such as charging a frequent customer more, is viewed as engendering less trust than a pricing tactic that is consistent with norms (or industry practice), e.g., charging a higher price for a ticket bought at shorter notice. Another limitation of this research is that the identification scenarios included information reminding subjects that the firm was tracking their personal information while the purchase timing scenarios did not. It is possible that this scenario difference may have also negatively contributed to consumer perceptions.

Our results indicate that the effect size differences in consumer perceptions of trust, price fairness, and repurchase intentions are greatly reduced when firms

provide explanations for price differences. Firms need not emphasize cost increases if the attributions being made by customers are likely internal as in the case of purchase timing. In instances where external attributions are likely prevalent as in the case of buyer identification, additional cost information is helpful. Firms should evaluate whether internal or external attributions are more likely, and when an explanation related to increased costs would be detrimental. When tactics are likely to result in negative external attributions regarding the firm, cost explanations help lessen the negative effects associated with the segmentation-based pricing tactic. Also, the specific cost justification provided by the firm also deserves more reflection and greater scrutiny.

Our results also show that consumers view larger price differences as more unfair. Part of this could be due to the perceived unfairness of the firm's profit expectations (Kahneman et al., 1986). Our manipulation check results suggest that respondents attributed higher levels of profit to the firm when the price differences were large. At another level, those charged with the higher price would be left feeling cheated by the firm.

In the past, consumer evaluation of price fairness has been noted in contexts other than the Internet. Here, our primary focus was on Internet-based pricing, where the impacts of price fairness may be more immediate and far-reaching due to the ability of the Internet to allow a higher degree of interactions between consumers. We specifically manipulate the impacts of different pricing tactics and the resulting differences in prices charged to consumers in an attempt to understand the relative fairness perceptions of these Internet segment-based pricing tactics. A major limitation of the research conducted here is the lack of a test of consumer attributions and norm theory. Future research is warranted which assesses consumer attributions and perceptions regarding the typicality of buyer identification and purchase timing. Future researchers could also use a multiple-item scale of repurchase intentions rather than resorting to a single-item measure as in our studies. While we have used only two examples of Internet-enabled price segmentation tactics, future research could explore consumer price fairness perceptions of other tactics as well, notably, usage-based pricing and

purchase quantity (Iyer et al., 2002). Future research also needs to explore the relative impacts of price segmentation tactics when used primarily as a discounting mechanism to clear merchandise as compared with optimizing the prices as well as profits charged based on consumer willingness to pay.

The above substantive results point to several managerial implications in the use of price segmentation tactics. First, consumers may deem tactics that are more the industry norm, such as the use of purchase timing as in the airline industry, as being fair. Firms innovating on the use of other price segmentation tactics should first research consumer perceptions of price fairness, trust, and repurchase intentions before implementing such tactics. Second, while the use of larger price differences across segments may stem from the discovery of non-overlapping segments, the unfairness perceptions of such price differences may be unavoidable. Hence, firms may have to use other forms of differentiation, such as product features, brand, or service levels, to justify larger price differences.

The results of the studies reported in this paper suggest that managers should be more conscious of consumer evaluations of their pricing tactics and judiciously apply each tactic so as to not enhance consumer perceptions of unfairness. By doing so, managers would be better able to balance their goals of effectively and efficiently serving each segment profitably, while keeping the adverse reputation impacts of price differences across segments to a minimum.

The real-time or dynamic use of buyer identification as a tactic to charge different prices to different consumer segments has received considerable press in recent times under the rubric of "dynamic pricing" or "flexible pricing" (Andrews, 1999; Friesen, 2003; Garbarino & Lee, 2003; Heun, 2001; Weiss & Mehrotra, 2001). The use of dynamic pricing in auctions and in B2B e-commerce has found wider acceptability than the use of such price segmentation and differentiation among other e-commerce consumer markets. Dynamic pricing has been noted to be especially useful for price optimization, transaction efficiency, and revenue management (Friesen, 2003; Heun, 2001; Kambil, Wilson, & Agarwal, 2002). This pricing tactic can be especially useful for optimal

price determination, as in auctions, or for products with more commodity-like and/or standardized features. Despite the increase in ease, efficiency, and commercial feasibility of dynamic pricing applications through the Internet, managers must be cautious in adopting and implementing dynamic pricing in contexts and situations where it may merely appear to be a case of online price discrimination or among consumer segments where the transparency of the tactic may call into question its fairness and trustworthiness and have adverse effects on perceptions of trust and repurchase intentions.

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## APPENDIX A

### EXAMPLES OF INTERNET PRICING SCENARIOS (STUDY 1)

#### ***Buyer Identification Favoring Frequent Flyer [New Flyer] Scenario***

Most Internet retailers, including Internet travel agents, use cookies and clickstream data to track customer visits to their sites. These Internet retailers collect information on who is visiting their site, when they visit, what Web pages they visit, and what they bought. You and a friend of yours at your college were planning an upcoming summer vacation. Both of you were interested in spending 5 nights at a popular beach resort on the East coast. Each of you went to \_\_\_\_\_ (name of major Internet travel agency) to research prices for an airline flight. Both of you decided on a major airline flight. You have never flown [are a frequent flyer] on this major airline while your friend is a frequent flyer [has never flown]

on this major airline. Your friend was charged \$300 for the airline ticket while you were charged \$330.

#### ***Purchase Timing Scenario***

You and a friend of yours at your college were planning an upcoming summer vacation. Both of you were interested in spending 5 nights at a popular beach resort on the East coast. Each of you went to \_\_\_\_\_ (name of major Internet travel agency) to research prices for an airline flight. Both of you decided on a major airline flight. Your friend purchased the ticket 2 months prior to summer vacation while you purchased the ticket 3 weeks before summer vacation. Your friend was charged \$300 for the airline ticket while you were charged \$330.

## APPENDIX B

### EXAMPLES OF INTERNET PRICING SCENARIOS (STUDY 2)

#### ***Buyer Identification, Low Price [High Price], Cost Explanation [No Cost Explanation] Scenario***

You and a friend of yours at your college were planning an upcoming Spring Break vacation. Both of you were interested in spending 5 nights at a popular beach resort on the East coast. Each of you went to \_\_\_\_\_ (name of major Internet travel agency) to research prices for an airline flight. Both of you decided on a major airline flight. You are a frequent flyer on this major airline while your friend has never flown on this major airline. Your friend was charged \$300 for the airline ticket while you were charged \$330 [\$390]. At the time of purchase, \_\_\_\_\_ (name of major Internet travel agency) and the major airline informed you that the price that you were charged was higher than usual due to cost increases associated with increased airline fuel costs [no cost explanation].

#### ***Purchase Timing, Low Price [High Price], Cost Explanation [No Cost Explanation] Scenario***

You and a friend of yours at your college were planning an upcoming Spring Break vacation. Both of you were interested in spending 5 nights at a popular beach resort on the East coast. Each of you went to \_\_\_\_\_ (name of major Internet travel agency) to research prices for an airline flight. Both of you decided on a major airline flight. Your friend purchased the ticket 2 months prior to Spring Break while you purchased the ticket 3 weeks before Spring Break. Your friend was charged \$300 for the airline ticket while you were charged \$330 [\$390]. At the time of purchase, \_\_\_\_\_ (name of major Internet travel agency) and the major airline informed you that the price that you were charged was higher than usual due to cost increases associated with increased airline fuel costs [no cost explanation].