

INDIAN INSTITUTE OF MANAGEMENT KOZHIKODE  
04<sup>th</sup> International Conference on Marketing, Technology & Society 2020



## Effect of personalized pricing on online consumer behavior

Jensolin Abitha Kumari J<sup>1</sup>  
Dr Preeti R Gotmare<sup>2</sup>  
Dr Geetha M<sup>3</sup>

### Abstract

The study examined the role of price fairness of personalized pricing based on purchase history in an experimental setting to understand the purchase intention of online consumers. The results showed consumers perception of price fairness impact purchase intention. Consumers who perceive advantageous inequity consider the personalized pricing fair and have an intent to buy the product. While consumers who perceive disadvantageous inequity perceive personalized price to be unfair, but still consider to purchase the product and have expressed intent to purchase.

**Keywords:** Personalized pricing, purchase intention, inequity aversion, price discrimination, price fairness

### Introduction

The notion of price fairness of any product play an important role in economics and marketing research (Rotemberg, 2011; Xia et al., 2004). Factors determining customers price fairness perceptions include: consumers perception of retailers cost, consumers prior experience with the goods and services or the retailer, competitor pricing, cultural differences and social norms among consumers in setting the prices, techniques used to set price, customer loyalty to the retailer and inter personal price difference (Darke and Dahl, 2003; Bolton et al., 2000;). Interpersonal price comparison is vital in determining the notion of discriminatory pricing in the modern, multi-channel, online, social and mobile platforms (Richards et al, 2016). Hence in this study we will focus on finding out how inter personal price comparison act as method in determining customer's perception of personalized pricing. Investigation of how interpersonal price differences affect customer perception of personalized price and price inequity will be studied. In addition, how price differences can be mitigated and how this perception of price inequity affect the system of discriminatory pricing of products in an online store will be explored.

### 2. Literature Review

The conceptual model is developed from self-centered inequity aversion theory (Richards et al., 2016). Utility model developed by Fehr and Schmidt (1999), insists agents have an inherent aversion towards inequity which can be advantageous inequity (AI) or disadvantageous inequity (DI). AI occurs when utility is reduced while consumers experience personal benefits greater than others and DI occurs when utility is reduced when consumers experience personal benefits lesser than other. This notion of self-centered inequity aversion can be applied to consumer products market transactions. When the notion of inequity aversion is more self-centered, then discriminatory pricing might succeed (Liukonyte et al., 2015). In self-centered inequity aversion model used in market transactions, fairness has no symmetry and is relative and one sided unlike the model of Fehr and Schmidt (1999). Even though there are no clear model in literature that explains the outcome depending on the basis of utility maximizing, it is beneficial to base the study based on parameterizing customers' preference of price fairness as it will help in developing a model by maintaining a stable price discrimination policy in comparison to consumer purchase behavior.

<sup>1</sup> Research Scholar , Department of Management, Central University of Tamil Nadu  
Thiruvavur, Tamil Nadu, India Email: [jensolin18@students.cutn.ac.in](mailto:jensolin18@students.cutn.ac.in)

<sup>2</sup> Assistant Professor, Department of Management, Central University of Tamil Nadu  
Thiruvavur, Tamil Nadu, India. Email: [preetigotmare@cutn.ac.in](mailto:preetigotmare@cutn.ac.in)

<sup>3</sup> Associate Professor, Indian Institute of Management Kozhikode , Kerala, India. Email: [mgeetha@iimk.ac.in](mailto:mgeetha@iimk.ac.in)

### 3. Research Methodology

The methodology adopted from Richards et al., (2016) examined consumers price fairness perception and purchase behavior. Pricing environment such as purely price-posted which is seller determined, or price-discovery which is seller–buyer negotiated were used for study (Richards et al., 2016). Theory of self-interested inequity aversion was tested using within- and between-subjects design. Post graduate business school students from a large central university participated in this study. The study involved a 2 (price fairness: fair vs. unfair)  $\times$  2 (inequity with reference to reference price: advantaged vs. disadvantaged) between-subject experimental design. The subjects were engaged in a sequence of market transactions in which they tracked the deal price displayed for a comparatively well understood consumer good from leading ecommerce stores in India. The experiment happened in a lab setting and finally a survey to record the intent of buy and price fairness based on deal price displayed in online store for consumer good was conducted.

Each experimental session consisted of 3 sections: (1) practice round for treatment specific experiment; (2) actual treatment specific experiment; (3) Survey session. The participants were randomly assigned to price posted treatment or price discovery treatment group.

In practice round, each participant was given a price for a consumer durable (Television) product and asked their purchase intention. There was no restriction on each participant discussing with another on the price they received. As risk aversion could be a confounding factor while estimating inequity aversion, participants risk preference was elicited (Andersen, et al., 2008). Inorder to control risk aversion, lottery-choice method (Holt and Laury, 2002) and store choices (Yonezawa and Richards, 2014) were adopted and individual participants risk preference were used as control parameter in the empirical model.

#### 3.1. Manipulation Checks

First, subjects were asked to pick the price from a list to verify if the subject paid attention to the price they received during practice round. Second, an open ended question prompting to write the rational for perception of price fairness was asked and reference price they had for the product. Responses were coded whether personalized price was greater or lesser or equal to reference price.

#### 3.2. Price-posted (PP) treatment, Price-discovery (PD) treatment and Survey Questionnaire

The participants were allowed to choose from the price list they would prefer to buy and make only one purchase decision during the entire experiment. They were not given an opportunity to negotiate in PP treated while opportunity to negotiate was given in PD treatment. After making purchase decision, the subjects were asked to assess price fairness using a survey. A survey to measure consumer price fairness perception, in/equity aversion, purchase intention was administered. All the items were measured on a five point Likert scale with strongly agree (5), somewhat agree (4), neutral (3), somewhat disagree (2), or strongly disagree (1). Measures for price fairness (3 items) were adopted from Xia et al., 2004. Scale for in/equity aversion (2 items) was adopted from Richards et al., (2016). Measure for purchase intention (5 items) under various scenarios like unfair, fair, advantageous inequity and disadvantageous inequity were adopted from Richards et al., (2016). The following hypothesis were tested.

**H<sub>1</sub>:** Price fairness perception of personalized pricing impact consumers purchase intention

**H<sub>2</sub>:** Consumers who perceive advantageous inequity in personalized pricing have high purchase intention

**H<sub>3</sub>:** Consumers who perceive disadvantageous inequity in personalized pricing have lower purchase intention

#### 3.3. Results and discussion

On an average, the participants assessed fairness as generally neutral for the offered prices with mean = 2.734 and neutral ranking = 3. Participants found the price offered to be fair than unfair. Actually, around 54% of responses by the subjects for the consumer durable good was assessed to be either fair or slightly fair. The influence of price fairness is important because perception of fairness and inequity impact online consumer purchase decisions. Out of the participants who perceive that price offered was slightly unfair or unfair which is close to 40% of total respondents, but 64% choose to buy the product, while most of the respondents 85% who perceived the price to be generally fair or fair choose to buy. This clearly shows,

fairness perceptions impact consumer's purchase decision. Each of the 3 experiments consisted 45 student participants. The analysis of the items showed all items had high reliability score with Cronbach's alpha coefficients above the recommended level of 0.7. The results using SEM is given below table 1.

Table 1: SEM Results

Hypotheses	t-value	p-value	Results
H <sub>1</sub> : Price fairness perception → Purchase intention	6.066	0.000	Supported
H <sub>2</sub> : Perceived advantageous inequity → (+) Purchase intention	2.472	0.013	Supported
H <sub>3</sub> : Perceived disadvantageous inequity → (-) Purchase intention	2.439	0.015	Supported

Note: t-value should be greater than 1.96 (positive or negative) to be significant at < 0.05.

#### 4. Conclusion

This study contributes to pricing literature by studying the effect of interpersonal price comparison on customer perception of personalized pricing, and purchase intent. Theoretically this study add on to the growing body of consumer perception of price discrimination and price fairness judgment literature. Consumers perceive personalized pricing based on purchase history as fair as observed by other existing studies. While this research has some significant contributions, it has its limitations too. For instance, it did not consider the role of involvement of consumers on personalized pricing which may have affected the perception of fairness.

#### 5. References:

1. Anderson, E. T., & Simester, D. I. (2008). Research note—does demand fall when customers perceive that prices are unfair? The case of premium pricing for large sizes. *Marketing Science*, 27(3), 492-500.
2. Bolton, G. E., & Ockenfels, A. (2000). ERC: A theory of equity, reciprocity, and competition. *American economic review*, 90(1), 166-193.
3. Darke, P. R., & Dahl, D. W. (2003). Fairness and discounts: The subjective value of a bargain. *Journal of Consumer psychology*, 13(3), 328-338.
4. Fehr, E., & Schmidt, K. M. (1999). A theory of fairness, competition, and cooperation. *The quarterly journal of economics*, 114(3), 817-868.
5. Holt, C. A., & Laury, S. K. (2002). Risk aversion and incentive effects. *American economic review*, 92(5), 1644-1655.
6. Liaukonyte, J., Richards, T. J., Kaiser, H. M., & Rickard, B. J. (2015). Under-contribution to generic advertising due to self-interested inequity aversion. *European Review of Agricultural Economics*, 42(3), 473-497.
7. Richards, T. J., Liaukonyte, J., & Streletskaya, N. A. (2016). Personalized pricing and price fairness. *International Journal of Industrial Organization*, 44, 138-153.
8. Rotemberg, J. J. (2011). Fair pricing. *Journal of the European Economic Association*, 9(5), 952-981.
9. Xia, L., Monroe, K. B., & Cox, J. L. (2004). The price is unfair! A conceptual framework of price fairness perceptions. *Journal of marketing*, 68(4), 1-15.
10. Yonezawa, K., & Richards, T. J. (2016). Risk Aversion and Preference for Store Price Format. *Journal of Agronomy, aS.z., Zdcultural and Resource Economics*, 425-443.