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Replication

A meta-analysis of price change fairness perceptions

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ABSTRACT

The dual entitlement principle suggests that price change motives influence price fairness perceptions. A meta-analysis replicates this finding, and shows that the negative effect of unjustified motives is stronger than the positive effect of cost-justified motives; motive effects are independent of the magnitude of the price change; and price fairness is explained better by price changes than by motives. The relationship between price change and price fairness follows a cubic function, indicating satiation effects for high price changes.

1. Introduction

The dual entitlement principle suggests that price changes are related to price fairness perceptions, and these judgments depend on the motive of price change (Kahneman, Knetsch, & Thaler, 1986a, 1986b): a cost-justified price increase is considered fair, but profit-driven price increases are considered unfair. Many studies in the marketing area have looked at the relationship between price changes, price change motives, and price fairness perceptions. While the effects of motives and the direction of the price change effect have been supported in many studies, several questions remain unanswered regarding the relationship between these three variables. First, is the magnitude of the effects of cost-justified and unjustified motives the same? Second, do price change motive effects interact with price change magnitude effects? Third, what is the major driver of price fairness: the motives or the magnitude of price change? And fourth, what is the relationship between price change magnitude and price fairness? These questions have implications both for theory (i.e., the dual entitlement principle) and managerial practice (i.e. advice on how to maintain or increase price fairness perceptions). We conduct a meta-analysis that extends the dual entitlement principle and shows how price changes, price change motives, and price fairness perceptions are related.

2. Method

2.1. Study retrieval and coding

For this meta-analysis, we selected studies that provide price fairness responses of consumers towards a requested or paid price for a product (service or good) that is presented with a comparison price for the same product, indicating a price change.

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To identify relevant studies, we (1) examined and applied an ancestry tree search on several review articles on price fairness (e.g., Xia, Monroe, & Cox, 2004); (2) performed a keyword search of electronic databases and an Internet search on *Google Scholar* using "price (un)fairness", "(un)fairness of price", "(un)fairness in pricing", and "(un)fair price" (and variations of word spellings) as keywords; (3) performed a manual search of journal outlets that turned out to be major sources for articles dealing with perceived price fairness; and (4) examined references in an article once it was identified. To be included, a study must report the price a consumer paid and the comparison price for the same product as well as the mean value of fairness perception indicated by a consumer who is confronted with both prices. To ensure measurement comparability, we excluded studies that measured concepts different from consumers' perceived price fairness or captured price fairness in a way that could not be used as a measure for our analysis (e.g., by categorical variables that make no clear distinction between judgments of fairness and unfairness). Our final dataset is based on 33 manuscripts, containing 54 independent samples (see appendix). Two coders independently coded the mean values and all independent variables described in Table 1. The set of independent variables contains in addition to price change and price change motives several other major variables that supposedly influence price fairness perceptions and that could be coded from the studies. Coding consistency was high (97%), and inconsistencies were resolved by discussion. In total, we analyzed 261 mean values of price fairness perceptions.

2.2. Analytic procedure

We model the mean price fairness perception values as a function of the independent variables described in Table 1. The price fairness perception variable is standardized with a range from 0 to 100, with 100 corresponding to the maximum value of the respective price fairness scale, 50 corresponding to the mean value, and 0 corresponding to the minimum of the scale.

We start with an analysis of the functional form of the price change effect (linear, quadratic, or polynomial). We run OLS regression with price change as linear term, then we add a quadratic term and see if that accounts for additional variance. If it does, we add price change to the power of three to see if it adds variance. We stop when adding a successive power term fails to add variance accounted for. We next add the motive variables to see how much additional variance they account for. We then add all

Table 1
Variables used in the regression model.

Variable	Description and coding	Function/rationale for inclusion	Data description
Price fairness perception	Mean price fairness perception value, standardized to a range of 0 to 100, based on scale length.	Dependent variable	Mean = 53.923, SD = 16.939, min = 15.714, max = 90.750
Price change	Percentage of price difference between price paid/requested and comparison price, in relation to comparison price. Positive values indicate a price change that signals disadvantage and negative values indicate a price change that signals advantage.	Tests the functional form describing the relationship between price changes and price fairness perceptions.	Mean = 12.003, SD = 32.972, min = −62.857, max = 100
Cost-justified motive	Indicates price changes that are explained by cost increases.	Dual entitlement theory suggests that sellers are entitled to fair profit and that cost-driven price increases are perceived to be fair, while merely profit-driven price increases are considered unfair (Kahneman et al., 1986b).	0 = no (247)[a], 1 = yes (14)
Unjustified motive	Indicates price changes that are explained by profit increases.		0 = no (249), 1 = yes (12)
Distributive justice	Indicates whether distributive or procedural justice was measured.	Price fairness perceptions can differ depending on whether they refer to the pricing procedure or the price itself.	0 = procedural (33), 1 = distributive (228)
Service	Indicates whether the product is a service or a good.	Consumers tend to be more receptive to a service price increase than a goods' price increase (Bolton & Alba, 2006).	0 = goods (174), 1 = service (87)
Price	Indicates the absolute price that is paid or requested for a product in US$. Prices in other currencies were converted to US$. For additional robustness tests, we also calculated an inflation-adjusted price.	The just noticeable difference of price changes depends on the absolute value of the price paid (Weber, 1834). Because most changes in our study are price increases, they will less likely be noticed for high absolute prices, and hence perceived price fairness will less likely decline the higher the absolute price.	Mean = 665.988, SD = 3040.857, median = 74.870, min = .650, max = 20,990
Timing	Indicates whether the comparison price differed across time, indicating timing-based price discrimination (e.g., early vs. late booking).	Price fairness perceptions can depend on the price discrimination practice applied. In particular, price discrimination relative to other consumers triggers stronger negative fairness judgments than seller or time differences (Haws & Bearden, 2006).	0 = no (158), 1 = yes (103)
Seller	Indicates whether the comparison price differed across sellers/retailers, indicating seller-based price differences.		0 = no (218), 1 = yes (43)
Price variation	Indicates whether the comparison price differed across customers, indicating customer/target group price discrimination (e.g., different prices for new vs. established customers).		0 = no (173), 1 = yes (88)
U.S.	Indicates whether the study was conducted with US consumers or consumers from other countries.	Price fairness perceptions and evaluations differ across countries and depend on individualism (Bolton, Keh, & Alba, 2010).	0 = other countries (124), 1 = US consumers (137)

[a] Figure in brackets indicates number of means.