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How social comparison influences reference price formation in a service context

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ABSTRACT

What is the influence on reference price when the source of price information is anonymous versus social? This article investigates the formation of reference prices given an observed sequence of past prices in a service context. An experimental study suggests that, considering the same price information, if the source is social (i.e., the prices paid by colleagues), then consumers want to pay less. More specifically, social comparison changes the way individuals weigh information, attributing more importance to the lowest historical prices and to the range in price variations.

1. Introduction

Imagine you want to book a hotel room. Some weeks in advance, you check prices on the Internet. Because of dynamic pricing practices, you are accustomed to seeing variability every time you check for a price. To judge whether the offered price is a "fair deal", you recall past prices you might have seen or paid for this or a similar service. Alternately, friends or colleagues may have informed you of how much they paid for the same hotel. The amount you or others have observed/paid in the past influences your reference price, which can be considered the basis to judge the deal you are offered.

Research over the last 30 years corroborates that reference points dramatically affect people's decisions. According to psychologists (Lewin, Dembo, Festinger, & Sears, 1944; Siegel, 1957), reference points are often defined as the decision maker's status quo or as an expectation. Kahneman and Tversky (1979) transferred the concept of reference dependence from psychology to behavioral economics, explaining that people frame outcomes as gains or losses relative to relevant

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reference points. The relevant literature examines the effect of reference points in the price domain, that is, on reference prices (Briesch, Lakshman, Tridib, & Raj, 1997; Mazumdar, Raj, & Sinha, 2005), and the topic relates to research on new pricing mechanisms, such as bidding behavior (Wolk & Spann, 2008) and pay-what-you want pricing (Johnson & Cui, 2013).

Two main conceptualization models are available on reference price. The most common is that reference prices are predictive price expectations. This model, named the expectation-based reference price, is derived from adaptation theory (Helson, 1964) and implies that people judge a stimulus in relation to the level to which they have adapted (Mazumdar et al., 2005). In a second model, reference price is a normative price, that is, the price considered as fair for the seller to charge (Bolton, Warlop, & Alba, 2003; Campbell, 1999). Both economic and social components have been shown to affect evaluations of price fairness. The conceptualization used generally depends on the market, customer group, and product/service involved.

The way people form their reference price becomes particularly relevant in contexts where favorable conditions for price discrimination occur, as consumers can easily pay a different price for the same product or service. Accordingly, price comparison is a consequence of dynamic pricing or price discrimination. Although several studies suggest that time-based pricing strategies tend to be accepted by consumers, price discrimination may be perceived as unfair if standard conventions are violated (Huang, Chang, & Yi-Hsuan Chen, 2005; Wirtz & Kimes, 2007). Social comparison theory (Van den Bos, Wilke, Lind, & Vermunt, 1998) offers a potential underpinning for some of these results and highlights a possible threat for the acceptability of these pricing strategies. The awareness that another similar consumer paid a lower price appears to be a particularly potent source of perceived unfairness (Haws & Bearden, 2006), a factor that may reduce the reference price.

Research has not revealed a direct elicitation of reference prices in a time-based pricing context between different sources of information. Thus, our goal is to determine if the source of information of past prices, whether social (i.e., prices that friends or colleagues have paid for a similar product or service in the past) or anonymous (i.e., market prices the individual has observed in the past), can influence the formation of the reference price in its normative conceptualization. This study creates several scenarios where different prices for the same service (a hotel room reservation) become available, seeking to elicit the impact of past price information on reference prices. More precisely, Section 2 discusses the theoretical underpinning of the research hypotheses. Section 3 then uses an experimental setting to investigate whether the same price sequence can produce a different reference price depending on the source of information (social or anonymous) and how individuals attribute weights to past information that can predict the reference price. Finally, Section 4 discusses the results and their managerial implications.

2. Background

2.1. Reference price and social comparison

All price evaluations evoke some form of comparative judgments (Xia, Monroe, & Cox, 2004). This perspective relates to the general idea that much of people's understanding of themselves is not context-free but rather is based on similarities within their environment. People compare what others from a similar social group paid for the same service or product, especially when prices vary across consumers and lack transparency. This social comparison process is likely to substantially affect reference prices.

Social comparison is important for evaluating fairness as a means of distributive justice (Van den Bos et al., 1998). Because it is difficult to gain an accurate appraisal by comparing dissimilar others, social comparison is largely directed towards a referent group (Festinger, 1954). When people compare their outcomes with similar peers, shared attributes do not help them to make an evaluation. For this reason, people tend often to focus on information that supports the dissimilarities. In other words, people experience greater satisfaction from a purchase if they paid less than a peer. These concepts of downward social comparison and upward social comparison have solid roots. Wills (1981) introduced the concept of downward social comparison to identify situations where people look at others who are worse off to increase their own sense of well-being. With respect to upward social comparison, people compare themselves with those who are better off so as to belong to a superior group (Collins, 1996).

In contexts where social comparison is strong, the comparison of dissimilarities is amplified, thereby increasing sensitivity toward unfairness and loss aversion (Xia et al., 2004). Social justice literature also notes that the fairness of a process affects the way by which people self-evaluate (Brockner et al., 2003). Among the three motives of self-evaluation (Sedikides, 1993), two have been found to be particularly impactful when people look badly by social comparison. These two motives are self-enhancement (Wood, 1989) and self-assessment (Oliver & Swan, 1989). In particular, Scholl, Cooper, and McKenna (1987) show how other's pay can be a relevant part of pay dissatisfaction, involving appraisals of inequity and injustice. Thus, even when a consumer pays the reference price, information that another customer paid less leads to perceptions of unfairness.

Other consumers' prices are generally considered an unequivocal standard for what focal consumers deserve to pay. Ashworth and McShane (2012) show that paying more than another consumer enhances reactions of unfairness by making the violation of what is deserved especially salient and disrespectful. In other words, paying more than a *peer* is interpreted as a personal affront.