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Consumer response to online/offline price differentiation

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A B S T R A C T

This research explores the impact of channel-based price discrimination on key consumer reactions. Three experimental studies provide evidence that price differentiation with lower online prices is feasible. Results indicate the effects observed depend on the size of the price difference and differ between product categories. The studies provide evidence on the interplay of two central cognitive effects when facing channel-based price differences: (a) implicit assumptions on higher costs running a conventional store which may justify differing prices versus (b) a general negative attitude towards price discrimination. Moreover, we show actively communicating additional value provided offline fosters acceptance of price discrimination.

1. Introduction

Multi-channel retailing has become a popular business model (Wind and Mahajan, 2002). Many large retailers such as Walmart, Target or Staples pursue a multi-channel strategy using both conventional retail stores and the Internet to sell their merchandise (Zhang, 2009). Additionally, pricing has become an indispensable tool for retailers (Ahmetoglu et al., 2014). Therefore, pricing in the context of multiple channels has become an important issue for retailers (Sotgiu and Ancarani, 2004; Wolk and Ebling, 2010; Paul and Beckmann, 2012). In concrete, multi-channel retailers face the challenge whether to price products at parity across channels or to sell the same product at different prices in each channel. Recent empirical studies on retailer's pricing behavior across channels show conflicting results (Homburg et al., 2014). While some reveal similar prices between multi-channel retailers' online and offline channels (Flores and Sun, 2014), others indicate that up to 60 percent of multi-channel retailers engage in channel-based price differentiation and that this trend is increasing (Wolk and Ebling, 2010). While most theorists acknowledge channel-based price differentiation as an opportunity to increase profits (e.g., Yoo and Lee, 2011; Zhang et al., 2010; Yan, 2008; Zettelmeyer, 2000), many practitioners fear needing to explain differential prices to consumers and negative consumer reactions and therefore keep prices similar across channels (Asheraft, 2001; Pan et al., 2004; Homburg et al., 2014). Although fear of negative consumer reaction to channel-based price discrimination may seem reasonable, especially against the background of the changing retail environment with increase in price transparency through technological innovations such as barcode scanners and price comparison Apps, sufficient evidence has not been provided. To provide a solid basis for multi-channel retailers to decide on whether to differentiate prices across channels or not, research is warranted to deeper investigate the interaction of channel-based price differentiation and consumer behavior (Paul and Beckmann, 2012; Flores and Sun, 2014; Homburg et al., 2014). The present research aims at filling this gap in the retail research literature.

This research examines perceptions of price fairness across channels, consequences of these perceptions and the cognitive effects behind. In concrete, the purposes of this research are: (1) to explore how the direction of the price difference, the size of the price difference and product category impact consumers' perception of fairness, purchase intention and intention to word-of-mouth (WOM), (2) to investigate how consumers′ implicit assumptions on the costs of a good to the seller in the different channels influence their perception of and reaction to channel-based price differentiation, and (3) to explore whether an explanation of the price difference can help foster consumer acceptance. Implications for pricing products across channels to optimize profits without causing a counter-fire by consumers are discussed. Table 1 provides an overview of the research outline.

2. Literature review

Price discrimination allows segmenting customers according to their willingness to pay by charging different prices for the same

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Table 1
Overview of research outline.

	Focus	Product of study	Dependent measures	Hypotheses tested
Study 1	Effect of size and direction of price difference	T-shirt (look-and-feel)	Price fairness, WOM	H1a, c, d, f
Study 2	Effect of size and direction of price difference Role of the seller's costs in the different channels	MP3 player (quasi-commodity)	Price fairness, WOM, purchase intention	H1a–f, H2
Study 3	Effect of size of price difference Positive effect of explaining the price difference	Sofa (quasi-commodity)	Price fairness, WOM, purchase intention	H1d–f, H3
Cross-study comparison	Comparison of Study 1 and Study 2 results for product category effects	Look-and-feel vs. quasi-commodity	Price fairness, WOM	H4

WOM = word-of-mouth.

or similar products (Phlips, 1989). It has been categorized into three different types depending on the ability to extract consumer surplus (Pigou, 1960). Channel-based price differentiation is a form of second-degree price discrimination. Different prices are charged for the same product in the offline and online channel and consumers are allowed to self-select their preferred channel-price combination (Wolk and Ebling, 2010; Cuellar and Brunamonti, 2014).

Price discrimination has been extensively discussed in marketing and economics literature across various contexts (e.g., Elmaghraby and Keskinocak, 2003; Wu et al., 2012) and its importance for retailers has increased with technological developments (Grewal and Compeau, 1999). However, existing research on permanent price discrimination across sales channels is limited. Generally, researchers have studied channel-based price differentiation from three different perspectives: Theoretical research assessing optimal retailer behavior, observational research studying how retailers behave today and empirical research exploring consumer behavior towards practices of channel-based price differentiation (Fassnacht and Unterhuber, 2015). This research studies channel-based price differentiation from consumers′ point of view, therefore our literature review focuses on this stream of research.

Choi and Mattila (2009) show that price differentiation is perceived less fair than uniform if it is not considered a norm independent of the price frame, meaning the relative positioning of prices. On the other hand, fairness perception towards uniform versus differential pricing was found to depend on price frame if price differentiation is considered a norm. While with a positive price frame (lower price compared to similar offers) price differentiation did not cause lower fairness perception than uniform pricing, a neutral or negative price frame lead to reduced fairness perception with differentiated prices. The authors find these results for hotel bookings. Choi et al. (2009) also studied effects of channel-based price differentiation in the hotel industry focusing on price frame as a central variable. The point out that if prices are lower or equal to the uniform pricing condition, price differentiation does not affect ethicality evaluation and purchase intention. However, this changes if at least one of the prices is higher in the price differentiation condition. Paul and Beckmann (2012) studied online discount, online promotion, online clearance and service fee as different routes to pursue channel-based price differentiation. The authors found a positive relation between price differentiation and customer retention through perceived value and a negative impact on retention through price unfairness perception. Charging a service fee in the conventional store thereby particularly increased unfairness. Furthermore, the authors provide evidence that costs should be around 5% lower when selling online for price differentiation with lower online prices to be profitable.

To summarize, researchers have provided first valuable insights on consumer perception towards channel-based price differentiation, however, to fully understand how consumers act in an encounter with channel-based price differentiation, further research is needed. Researchers need to more specifically explore what makes consumers accept channel-based price differentiation. Questions such as the role of product category and size of the price difference discussed in this research have not found consideration in the literature so far. Past research did not study physical but only service goods, nor has the effect of different sizes of price difference been investigated. Moreover, the cognitive effects lying behind consumer behavior in an encounter with channel-based price differentiation have not been studied sufficiently so far. First insights were gained on the role of norm perception and price frame, but consumers' perception of the seller′s costs in the different channels has not found consideration yet. Furthermore, past research identified focused mainly on price fairness or unfairness, but comes short on studying consumer reactions such as self-protective measures or revenge (e.g., Choi and Mattila, 2009; Choi et al., 2009; Paul and Beckmann, 2012). Finally, potential options for retailers to foster acceptance of channel-based price differentiation have not found consideration.

3. Research hypotheses

Diverse research has shown that consumers perceive price discrimination unfair (e.g. Darke and Dahl, 2003; Anderson and Simester, 2008; Wu et al., 2012). Also channel-based price differentiation is likely to evoke a feeling of unfairness in consumers′ minds (Choi and Mattila, 2009). If consumers accept price differences however, this is primarily in conditions where costs differ (Garbarino and Lee, 2003). The costs of a good to the seller are expected to play an important role during fairness evaluations (Bearden et al., 2003; Thaler, 1985, as cited by Bolton et al. (2003)). Consumers tend to evaluate prices according to the cost-plus rule (Bearden et al., 2003; Thaler, 1985). In the multi-channel retail environment, selling online is associated with lower costs than selling offline. Theorists usually assume that the online channel provides cost advantages in their models (e.g., Anderson et al., 1997; Ratchford, 2009; Zhang et al., 2010) and consumers expect a fair price for a product to be lower on the Internet (Jensen et al., 2003). The fact they value conventional stores of higher functionality than online shops (Wolk and Ebling, 2010) gives another reason to believe that they consider conventional stores of higher costs to the seller than an online shop. Therefore, we expect the interplay between the negative effects of price discrimination in general and a positive or negative effect through pricing the channels according to or against costs to affect consumer fairness perception in an encounter with channel-based price differentiation. Equity theory supports this proposition. Equity theory suggests exchange relationships are considered fair if the observed outcome-input ratios do not significantly differ from each other (Adams, 1963, 1965; Homans, 1961). Therefore, in case of the multi-channel retail environment a higher price (outcome) in one channel needs to be reflected by a higher input for the retailer in