The Influence of Multi-Channel Pricing Strategy on Price Fairness and Customer Confusion

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Multi-channel retailers face the challenge of coordinating marketing variables across their channels. In this respect, one of the main issues arising is whether to differentiate or integrate prices. Our study examines the impact of three multi-channel price differentiation instruments on perceived price fairness, customer confusion, and their consequences. In a scenario-based online experiment, we use a 2 x 2 x 2 between-subjects design and manipulate product price differentiation, online promotion and online shipping fees. The results indicate that price differentiation has an impact on fairness evaluations and customer confusion. Product price differentiation and online promotion are perceived as more unfair and lead to more confusion than price parity. Price fairness perceptions of shipping fees depend on product price differentiation. Customers perceive shipping fees as fairer than no shipping fees when prices are cheaper online but perceive shipping fees as less fair when prices are integrated. These results suggest that customers expect a consistent consideration of channel cost advantages and disadvantages and that shipping fees might serve as a cue for customers to consider the retailer's channel costs. We further show that price fairness and customer confusion mediate effects of pricing instruments (in particular online promotion) on attitudinal and behavioral consequences.

Keywords: multi-channel; channel integration; price differentiation; price fairness; customer confusion

Introduction

One of the most important developments in the past decade has been the implementation of new distribution channels by retailers (Verhoef, Kannan, and Inman 2015). However, the adoption of additional channels has given rise to novel challenges (see Neslin et al. 2006 for a comprehensive overview). For multi-channel retailers, setting a pricing strategy across multiple channels is of crucial concern (Neslin et al. 2006; Wolk and Ebling 2010). Specifically, multi-channel retailers must decide whether to integrate prices (i.e. same prices in both channels for identical products) or differentiate prices (i.e. differing prices in both channels for identical products). While the literature often recommends a higher degree of overall channel integration (e.g., Verhoef, Kannan, and Inman 2015), the implementation of price parity in all channels comes with hurdles. Specifically, multi-channel retailers are faced with higher costs in their offline channel than in their online channel. To account for these costs, uniform prices across channels have to be higher than the pure-online retailers' prices, putting multi-channel retailers at a competitive disadvantage in the online channel (Unterhuber 2015). While price differentiation appears to be the more economical solution, retailers need to strike a careful balance between consumer perceptions of channel integration and profitability considerations. In this context, they have to consider consumer's perception of price fairness and the risk of causing customer confusion.

Multi-channel retailers can exert price differentiation through different instruments such as product price differentiation (base price without discounts or fees) or price promotions. Furthermore, they have to decide whether to charge shipping fees online and if so, consider the interplay of cheaper online prices and shipping fees on price differentiation. With our study, we want to investigate the impact of different pricing instruments on consumer perceptions and their consequences. We thereby include product price differentiation, online pro-

motion and online shipping fees. Our research extends prior studies by revealing the differential effects of these pricing instruments, or the combination thereof, on consumer perception and behavior. Secondly, while existing studies mostly investigate the effects of multi-channel price integration on price fairness (e.g. Choi and Mattila 2009; Fassnacht and Unterhuber 2016), we also examine effects on customer confusion. While some theoretical studies have alluded to the possibility of customer confusion, no empirical study has investigated customer confusion in this context. Thirdly, we analyze the role of confusion and fairness as mediators between pricing instruments and important consequences, such as attitude and behavior. Specifically, our study seeks to answer the following questions:

- How do customers perceive distinct differentiation instruments in terms of price fairness and customer confusion?
- How are customer confusion and price unfairness related? And how do they mediate effects of pricing instruments on attitude and behavior?

By analyzing these effects, we also shed light on the possibility of differentiation through specific instruments. In practice, many retailers use price differentiation instruments but lack an understanding of how these specific tools (or combinations thereof) influence consumer behavior. The results of this study deliver important implications for retailers to adjust their pricing strategy.

Theoretical Background and Research Hypotheses

Price discrimination allows firms to segment customers with respect to their willingness to pay by setting differing prices for the same product or service (Phlips 1983). In an ideal scenario, each customer pays the exact amount reflecting their maximum willingness to pay according to their preferences (Jain and Srivastava 2000; Phlips 1983). Channel-based price differentiation builds on customers different channel preferences. Distinct prices are set for the

same product in different channels and consumers can select their favored channel-price combination (Wolk and Ebling 2010).

Due to the novelty of the topic, extant literature on channel-based price differentiation features a strong focus on theoretical contributions assessing the favorability of different strategies for multi-channel retailers (e.g., Grewal et al. 2010; Neslin et al. 2006; Neslin and Shankar 2009; Zhang 2009; Zhang et al. 2010). While some studies recognize price differentiation across sales channels as a possibility to increase profits (e.g., Yoo and Lee 2011; Zhang et al. 2010), other research points towards possible negative effects, such as confusion or unfairness perceptions (e.g., Neslin and Shankar 2009). For example, Neslin et al. (2006) and Neslin and Shankar (2009) note that product price disparity could entail negative consumer reactions such as customer confusion, unfairness perceptions or switching behavior, yet recognize the possibility of price differentiation via shipping fees or promotions (Neslin and Shankar 2009). Using an analytical approach, Kauffman et al. (2009) suggest that higher levels of customer channel migration call for more integrated prices. Other studies stress that directing customers towards specific channels through price differentiation could increase profitability (Myers et al. 2004; Neslin and Shankar 2009). Similarly, Zhang (2009) and Zhang et al. (2010) view differential pricing as a means to increase sales volume in one channel or redirect customers to the other channel. They suggest setting prices according to the cost structure in channels. Yoo and Lee (2011) similarly conclude that differential pricing is more profitable for multi-channel retailers. Observational research on the status quo of multi-channel pricing in practice finds that prices are usually higher offline than online, but market, product category and retailer characteristics influence the pricing strategy (e.g., Wolk and Ebling 2010). Recently, empirical research on consumer behavior in the context of multi-channel pricing has emerged (e.g., Choi and Mattila 2009; Fassnacht and Unterhuber 2016; Vogel and Paul 2015). These studies focus on the negative effects of price differentiation on perceived price unfairness, but

also show that perceptions depend on the price frame, beliefs about industry standard and which channel features the higher price (Choi and Mattila 2009; Fassnacht and Unterhuber 2016). Vogel and Paul (2015) are the first to investigate different price differentiation instruments focusing on promotional tools and service fees in a telecommunication services context.

To summarize, the aforementioned studies have provided some important insights into the effects of channel-based price differentiation. However, empirical research is required to understand the perception of different instruments that multi-channel retailers use to differentiate prices.

Effects of Price Differentiation on Price Fairness

Price unfairness can be defined as the evaluation of a price as unacceptable, unreasonable or unjustifiable. Consumers perceive price unfairness when confronted with different prices for an identical item (Xia, Monroe, and Cox 2004). This applies when retailers set different prices for the same product across their channels.

The literature offers several theoretical explanations for price unfairness perceptions in multi-channel buying situations. Firstly, according to equity theory, consumers evaluate the outcome-input ratio of transactions. These are considered to be just when the input does not differ significantly from the outcome (Adams 1965). For differentiated pricing to be perceived as fair, a higher input (money paid) demands a higher outcome provided by the firm, such as added value to the item or to the purchase in the specific channel. Customers are believed to consider the firm's point of view as well (Campbell 1999). In general, they agree that firms are entitled to reasonable profit as much as consumers are entitled to a reasonable price. This is called the dual entitlement principle. Applied to cross channel price differentiation, if costs

are believed to be higher in one channel, higher prices in this channel can be viewed as justifiable (Kahneman, Knetsch, and Thaler 1986).

Although a retailer's online and offline channels can differ in terms of service level and costs, we argue that consumers will not always actively consider these differences if they are not communicated. When they are communicated, research shows that this can have a positive effect: Grewal, Hadesty and Iyer (2004) have demonstrated that cost-based communication can have a positive influence on fairness perceptions. Even when they do, research has also shown that consumers tend to underestimate costs in general (Bolton, Warlop, and Alba 2003). When there seems to be no explanation for differences in prices, price unfairness perceptions are more likely. As unfairness perceptions can even occur in spite of consumers' chance to take advantage of cheaper prices (Ordóñez, Conolly, and Coughlan 2000), we derive the following for differing product prices:

H1: Product price differentiation across channels is perceived as more unfair than harmonization across channels (same product prices in both channels).

Promotions offer a percentage-off or a cents-off discount to a product base price. They are limited to a specific time frame (DelVecchio, Krishnan, and Smith 2007). Studies have shown the positive effects of promotions on purchasing rates in singular channels (e.g., DelVecchio, Krishnan, and Smith 2007). However, the arguments relating to price differentiation in multichannel systems should also hold for an exclusive promotional offer in the online channel only. As online promotions are usually not cost-caused, customers might perceive cross-channel price differentiation as unfair. When there seems to be no explanation for differences in prices, price unfairness is more likely to occur. Moreover, the time restriction of a promotion serves as an ultimatum to purchase in this channel immediately or not obtain the lower price

at all, so that consumers with differing channel preferences may feel that the decision is imposed (Neslin and Shankar 2009). We thus hypothesize:

H2: Price differentiation across channels through online promotions is perceived as more unfair than harmonization across channels (no promotion in both channels).

Shipping fees have traditionally been studied for the online channel. While some studies suggest that free shipping increases order incidence (e.g., Lewis 2006), research on partitioned prices shows that the separate disclosure of surcharges (such as shipping fees) can increase purchase intent as compared to aggregated prices (e.g., Greenleaf et al. 2016). Yet, how online shipping fees of a multi-channel retailer are perceived might also depend on the retailer's use of other differentiation instruments. When shipping fees are disclosed, we argue this serves as a cue for consumers leading them to consider the channel-specific costs of the retailer. Though the consumers' cost assumptions might underestimate real costs, customers mostly assume that the offline channel comes with higher costs (Unterhuber 2015). If they consider these assumptions, they might find shipping fees fair for differentiated prices because they understand the charge as costs of delivery and the price differentiation as a result of diverging channel costs. On the other hand, they might feel shipping for uniform prices is unfair because when the firm does not pass on the cost advantage of the online channel it should not pass on the cost of delivery to the customer either. We hypothesize:

H3: For uniform product prices, shipping fees are perceived as more unfair than no shipping fees, whereas for differentiated product prices no shipping fees are perceived as more unfair.

Effects of Price Differentiation on Customer Confusion

Price differentiation does not solely influence price unfairness perceptions, but might also lead to feelings of confusion (Neslin and Shankar 2009). Customer confusion hereby is "an

uncomfortable state of mind … which negatively affects consumers' information processing and decision-making abilities" (Walsh 1999, 24). Customer confusion has been found to result in negative consumer reactions such as dissatisfaction, purchase abandonment or an overall unfavorable attitude towards the retailer (Mitchell and Papavassiliou 1999; Mitchell, Walsh, and Yamin 2005).

The customer confusion phenomenon has often been researched in relation to assortment size (e.g. Diehl and Poynor 2010) and has been viewed as resulting from cognitive overload (Malhotra 1984). Cognitive overload occurs where consumers are confronted with more information than they can accurately process. Moreover, overload confusion can occur when customers receive new information that does not coincide with present knowledge (Walsh and Mitchell 2010). This transfers to price information as well. When multi-channel retailers differentiate product prices across channels or add new price components (for example, promotion or shipping fees) in one channel, the consumer has to integrate and re-evaluate the price information received from both channels to adequately compare all products and purchasing options. This hinders the easy comparability of alternatives across channels and can lead to cognitive overload. We thus hypothesize:

H4: Product price differentiation across channels leads to more confusion than harmonization across channels (same product prices in both channels).

H5: Price differentiation across channels through online promotions leads to more confusion than harmonization across channels (no promotion in both channels).

H6: Price differentiation across channels through online shipping fees leads to more confusion than harmonization across channels (no shipping fees).

Effects of Price Differentiation on Attitudinal and Behavioral Consequences

While perceived price fairness has been the focus of attention in the price differentiation literature, some of the more recent studies have also investigated some attitudinal and behavioral consequences (e.g. Fassnacht and Unterhuber 2016; Vogel and Paul 2015). For example, Fassnacht and Unterhuber (2016) find that price differentiation directly and significantly increases negative word of mouth and decreases purchase intention. We therefore assume a direct effect of price differentiation on consumers' behavior where we distinguish between an immediate reaction, abandonment of the purchase and long-term consequences such as attitude towards the retailer and patronage intentions. Although we expect negative effects for product price differentiation and online promotion, the direction of the effect is not as clear for shipping fees. Thus, we deduce the following general hypothesis, which we test for each of the price differentiation instruments (without proposing a direction):

H7: Price differentiation across channels influences purchase abandonment, attitude towards the retailer and patronage intentions.

Mediating Roles of Price Fairness on Customer Confusion

When retailers differentiate prices across channels, confusion can stem from the customer being unable to understand the reason for diverging price information (see 2.2). This can directly influence perceptions of price fairness. Furthermore, consumers might resent the cognitive effort needed to process additional information (Garaus and Wagner 2016) such as different prices or new price components. This could translate into unfairness perceptions as well. Therefore, we hypothesize that price fairness will also be influenced by customers' feelings of confusion. We hereby assume a mediation through confusion. Hence, we put forward the following hypothesis:

H8: The effect of price differentiation on price fairness is mediated via confusion.

Price unfairness and confusion are associated with negative consumer reactions. Perceived price unfairness has been proved to reduce customer satisfaction and repurchase intentions (Vogel and Paul 2015) and bolster negative word of mouth (Fassnacht and Unterhuber 2016). Similarly, customer confusion was found to evoke dissatisfaction, purchase postponement or an overall unfavorable attitude towards the retailer (Walsh and Mitchell 2010). We therefore assume that the hypothesized effect of price differentiation on short and long-term consequences will be mediated via perceived price unfairness and customer confusion. Thus, we derive:

H9: The effect of price differentiation across channels on purchase abandonment, attitude towards the retailer and patronage intentions is mediated via price fairness.

H10: The effect of price differentiation across channels on purchase abandonment, attitude towards the retailer and patronage intentions is mediated via confusion.

To provide an overview, Figure 1 depicts the conceptual model.

[Figure 1 near here]

Figure 1: Conceptual model.

Empirical Study

Method

To test our hypotheses, we use a scenario-based online experiment with a 2 (product price differentiation: cheaper online vs. uniform) x 2 (online promotion: with promotion vs. without promotion) x 2 (online shipping fees: with shipping fees vs. without shipping fees) between subjects design. The respondents are assigned randomly to one of eight treatments.

We used illustrations and texts to introduce a fictional furniture retailer featuring an offline and an online channel. We chose a furniture retailer because retailers in this industry commonly use the three pricing instruments and shipping fees are often high. The introductive text asked respondents to imagine planning the purchase of a cupboard at the furniture retailer. It specified that respondents could purchase in the store or online and that they were able to transport the cupboard with their car should they decide to buy in the store. The respondents were then asked to proceed to the channels of the retailer where they should choose their favored product and the channel via which they would purchase it. The respondents initially saw a selection of eight distinct cupboards in the offline channel. Then, they moved on to the online channel, where they saw the same products. Every cupboard came with a picture, product description (such as color and size) and price information. While the offline price was the same in all scenarios, the pricing instruments differed in the online channel. For product price differentiation, the product prices were lower than the offline price. For online promotion, a disclaimer informed respondents of a discount given at the time of purchase. Likewise, a disclaimer notified respondents about shipping fees. The following table details the scenarios for an exemplary price of one specific cupboard; prices vary accordingly for all cupboards.

Table 1: Overview of scenarios

[Table 1 near here]

Measures

We used items from existing scales to measure constructs. The items for price fairness were based on Bolton, Keh and Alba (2010) and Xia, Kukar-Kinney and Monroe (2010). To measure customer confusion, we included items measuring affective confusion by Garaus and Wagner (2016), Iyengar and Lepper (2000) and Diehl and Poynor (2010) as well as items pertaining to cognitive confusion adapted from Heitmann, Lehmann and Hermann (2007). We used our own items for purchase abandonment. A scale based on Spears and Singh (2004)

was used for the attitude towards the retailer. For patronage intentions, we adapted a scale from Emrich, Paul and Rudolph (2015). The constructs were measured using seven-point Likert scales. The scales ranged from totally disagree to totally agree, except for the semantic differential measuring attitude towards the retailer. The complete item list is included in the appendix.

Sample

A random sample was drawn in a major European country, yielding 319 usable questionnaires. There were 206 female and 113 male respondents. The average age of the sample was 28.2 years. The gender and age distribution of respondents is comparable across all scenarios. For each scenario, we generated between 36 and 45 completed questionnaires, which allows for a conservative testing of the hypotheses.

Results

To determine internal consistency of the scales, we performed a reliability test. Cronbachs alpha exceeded the level of 0.7 for all constructs, thus indicating an adequate reliability (Loewenthal 2001; see appendix for detailed values). A factor analysis confirmed the discriminant validity of the constructs. A realism check indicated that respondents perceived the scenarios as mostly realistic (M = 5,55). For the following analyses, we calculated sum scores for the variables. ANOVAs and the PROCESS script (Hayes 2017) were used to analyze the effects of the pricing instruments.

For price fairness, we find a marginally significant main effect for product price differentiation ($F(1,319) = 3.07$, $p = .081$), and a significant effect for online promotion ($F(1,319) = 5.887$, $p = .016$) integration. Means for product price differentiation show that the uniform condition was perceived as fairer than the differentiated condition ($M_{uniform} = 5.00$, SD = 1.14

> $M_{cheaper\text{-}online}$ = 4.76, SD = 1.20). For online promotion, we find that prices without promotion were perceived as fairer than prices including an online promotion ($M_{without\text{-}promotion}$ = 5.04, SD = 1.15 > $M_{with\text{-}promotion}$ = 4.72, SD = 1.18). H1 is marginally supported and H2 fully supported. The main effect of shipping fees is not significant (F(1,319) = 0.02; p = .900). However, we find an interaction for product price differentiation and shipping fees (F(1,319) = 4.024, p = .046). When prices are differentiated, shipping fees are perceived as fairer than no shipping fees ($M_{online\text{-}cheaper\ x\ with\text{-}shipping\text{-}fees}$ = 4.89, SD = 1.10 > $M_{online\text{-}cheaper\ x\ without\text{-}shipping\text{-}fees}$ = 4.64, SD = 1.30); when prices are uniform, no shipping fees are perceived as fairer than shipping fees ($M_{uniform\ x\ with\text{-}shipping\text{-}fees}$ = 4.87, SD = 1.15 < $M_{uniform\ x\ without\text{-}shipping\text{-}fees}$ = 5.12, SD = 1.12). The interaction effect is shown in Figure 2. H3 is supported.

[Figure 2 near here]

Figure 2: Interaction of product price differentiation and shipping fees

For customer confusion, we find a marginally significant main effect for product price differentiation (F(1,319) = 3.545, p = .061; $M_{uniform}$ = 2.48, SD = 1.16 < $M_{cheaper\text{-}online}$ = 2.74, SD = 1.29) and a significant effect for online promotion (F(1,319) = 9.943, p=.002; $M_{without\text{-}promotion}$ = 2.39, SD = 1.12 < $M_{with\text{-}promotion}$ = 2.82, SD = 1.31) integration. No significant effect is detected for shipping fees (F(1,319) = .079; p = .779) and no further interactions were found. Thus, H4 is partially and H5 fully supported. H6 is rejected.

With regard to attitudinal and behavioral consequences, we find a significant effect only for online promotion on purchase abandonment (F(1,319) = 5.674, p = .018; $M_{without\text{-}promotion}$ = 2.59, SD = 1.38 < $M_{with\text{-}promotion}$ = 2.96, SD = 1.48). We also find a significant effect for online promotion on attitude towards the retailer (F(1,319) = 6.979, p=.009; $M_{without\text{-}promotion}$= 4.60, SD = 1.19 > $M_{with\text{-}promotion}$ = 4.24, SD = 1.25) and on patronage intentions (F(1,319) = 12.171, p = .001; $M_{without\text{-}promotion}$ = 4.19, SD = 1.21 > $M_{with\text{-}promotion}$ = 3.68, SD = 1.36). We

have not found significant effects for product price differentiation and shipping fees. Thus, H7 is partly confirmed with regard to online promotion.

For the analysis of the predicted mediation effects we use the PROCESS script by Hayes (2017). The significance of the indirect effects was assessed using a bootstrapping procedure which computed 5,000 samples of indirect effects. With regard to the mediation effect of customer confusion on price fairness, we find a significant full mediation (insignificant direct effect) for online promotion (-.1105; bootstrap interval: -.2072; -.0448). H8 is partially supported. For the mediation effect of price fairness on consequences, we find significant effects for online promotion on abandonment (.0733; bootstrap interval: .0192; .1774) with a full mediation via price fairness, and partial mediations on attitude (-.0910; bootstrap interval: -.1900; -.0226), and patronage intentions (-.1071; bootstrap interval: -.2163; -.0253), respectively. With view to the mediation effect of customer confusion on consequences, we reveal significant effects for online promotion on abandonment (.2696; bootstrap interval: .1006; .4721) with a full mediation via customer confusion, and partial mediations on attitude (-.0919; bootstrap interval: -.1888; -.0318) and patronage intentions (-.1191; bootstrap interval: -.2308; -.0425). Although we found no significant main effect for product price differentiation on purchase abandonment, we did find a significant indirect effect of product price differentiation on purchase abandonment via price fairness (.0589; bootstrap interval: .0014; .1535). We did not find such effects for shipping fees. H9 and H10 are partially supported.

Discussion

Using an experimental approach, this study aims to uncover the effects of price integration on customer confusion and price fairness, and to examine the differential impact of pricing instruments. The results indicate that price integration has an impact on fairness evaluations and

confusion. Firstly, in line with our expectations, product price differentiation and online promotion were perceived as more unfair than uniform pricing. This shows that unfairness perceptions can arise even if the customer has the possibility to take advantage of cheaper prices. This corroborates the findings of similar research such as Choi and Mattila (2009) and Fassnacht and Unterhuber (2016). Secondly, we revealed an interaction effect for product price differentiation and shipping fees, suggesting that consumers prefer no shipping fees when product prices are uniform and accept shipping fees in the online channel when product prices are lower online. This could be due to the consumer's perception that firms should consistently pass on channel cost advantages (lower online price) and disadvantages (shipping fees) to customers. Here, shipping fees can serve as a cue that makes customers aware of different cost structures in the online and offline channels. Subsequently, they may feel that equal online prices are not an adequate representation of the costs for the online channel. Thirdly, we found that product price differentiation and online promotions lead to more confusion, but shipping fees do not. This could be due to the fact that consumers compare prices rather at a product level than at an aggregated level (Greenleaf et al., 2016). Hence, confusion from price differentiation most likely occurs at the time of product comparison rather than when shipping fees are added. We also tested for an interaction of product price differentiation and shipping fees on confusion but did not find a significant effect. Fourthly, we found direct effects of online promotion on attitudinal and behavioral consequences, and that price fairness and customer confusion mediate the effect of an online promotion on negative consumer reactions. We also found that the effect of online promotion on price fairness is mediated via customer confusion. The reason for the strong impact of online promotions might be that customers cannot link them to any channel-based cost structures and hence fail to understand the reason for distinct promotional strategies between channels. Fifthly, as a general finding, price fairness perceptions, attitude towards the retailer and patronage intentions were highest when no

instrument was used at all (integrated prices without promotion and shipping fees).

Management Implications

The observed effects have direct implications for retail managers. Multi-channel retailers should pay careful attention to the implementation of the pricing instruments. Some combinations have stronger effects on price fairness and customer confusion than others. The results indicate that for shipping fees, retailers have to be aware of possible interactions with price variations in the online channel. Online shipping fees should therefore preferably be applied when the retailer offers lower prices through product price differentiation online. Furthermore, online promotions seem to have particularly strong effects on perceived price fairness, confusion and directly influences purchase abandonment, attitude and patronage intentions. Practitioners should keep in mind that promotions in only one channel might not be as beneficial. Multi-channel retailers also have to consider the profits for the possible combinations of instruments, weigh them against negative long-term effects for customers and investigate the accepted levels of differentiation for the instruments (see Fassnacht and Unterhuber 2016).

Theoretical Contribution

Our study extends prior multi-channel research in different ways. Firstly, this study contributes to the literature by investigating the combination of three different instruments. These were investigated separately in the past (e.g., Fassnacht and Unterhuber 2016; Lewis 2006), or did not include online shipping fees when investigated conjointly (e.g., Vogel and Paul 2015). In this context, the study sheds light on the potential of shipping fees to raise the customer's awareness of costs. Secondly, the study examines price fairness and customer confusion. Confusion has only been researched for singular channels, usually focusing on assortment (Walsh and Mitchell 2010). Our study considers multiple channels, providing an insight into confu-

sion resulting from different pricing strategies. Thirdly, our theoretical reasoning in combination with the results indicates that the consistency of considered channel cost advantages (lower costs online) and disadvantages (online shipping fees) positively influences price fairness, while pricing instruments without cost justification have negative effects on fairness, even when the customers might benefit from the price differentiation (online promotion). Hence, the study sheds more light on the relationship between communicated channel costs and the perceived fairness of price discrimination between channels.

Limitations and Future Research

Our study also has some limitations and venues for future research. Firstly, we studied only one product category (furniture). A systematic cross-category comparison could reveal whether the effects are generalizable across other industries such as fashion retail, for example. Furthermore, the effects could also depend on the specific level of each instrument (e.g. amount of promotion or shipping fees; Fassnacht and Unterhuber 2016). Further studies therefore should test for variations in levels of promotions and shipping fees. Additionally, our results supported mediation effects only for online promotion while the other instruments at least significantly influenced price fairness. We assume the effects on attitudinal and behavioral consequences are weaker (and thus not significant) because these dependent variables are more general and therefore influenced by further personal and situational constructs (see also Fassnacht and Unterhuber 2016). Further research should hence analyze the interplay between pricing instruments and further personal and situational variables. Finally, we also recommend future research to investigate the effects of price differentiation on consumer behavior and profitability conjointly.

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Appendix

Constructs	Items	Cronbach's alpha
Price Fairness	The retailer's handling of prices is …	0.869
	unfair.	
	just.	
	unacceptable.	
	unprofessional.	
	fair.	
Customer Confusion	I felt confused at the time of decision-making.	0.883
	It was frustrating to make the decision.	
	I felt irritated at the time of decision-making.	
	I felt annoyed at the time of decision-making.	
	I felt unnerved at the time of decision-making.	
	The decision was difficult to make.	
	It took time and effort to choose.	
	I concentrated a lot while making the choice.	
	Overall it was easy for me to choose.	
Purchase Abandonment	In a real purchasing situation, I would have postponed the purchase.	0.730
	In a real purchasing situation, I would have abandoned the purchase.	
	In a real purchasing situation, I would not have been able to choose.	
Attitude towards the Retailer	To which extent would you describe the retailer as …	0.920
	bad/good	
	negative/positive	
	unappealing/appealing	
	disappointing/satisfactory	
Patronage Intentions	I would recommend the retailer to someone who seeks my advice.	0.922
	I would consider the retailer as my first choice in the future.	
	I would encourage friends and relatives to purchase from the retailer.	
	I would say positive things about the retailer.	
Realism Check	It was very easy for me to imagine the purchase situation.	0.822
	It was very easy for me to put myself in the purchase situation.	

Tables

Table 1: Overview of scenarios.

Scenario	Offline Channel	Online Channel PPD	Online Channel Promotion	Online Channel Shipping fees
1	price at 399€	uniform (399€)	w/o promotion (-0€)	w/o shipping fees (+0€)
2		cheaper online (359€)	w/o promotion	w/o shipping fees
3		uniform	with promotion (-40€)	w/o shipping fees
4		cheaper online	with promotion	w/o shipping fees
5		uniform	w/o promotion	with shipping fees (+40€)
6		cheaper online	w/o promotion	with shipping fees
7		uniform	with promotion	with shipping fees
8		cheaper online	with promotion	with shipping fees

Note: PPD = product price differentiation

Figures

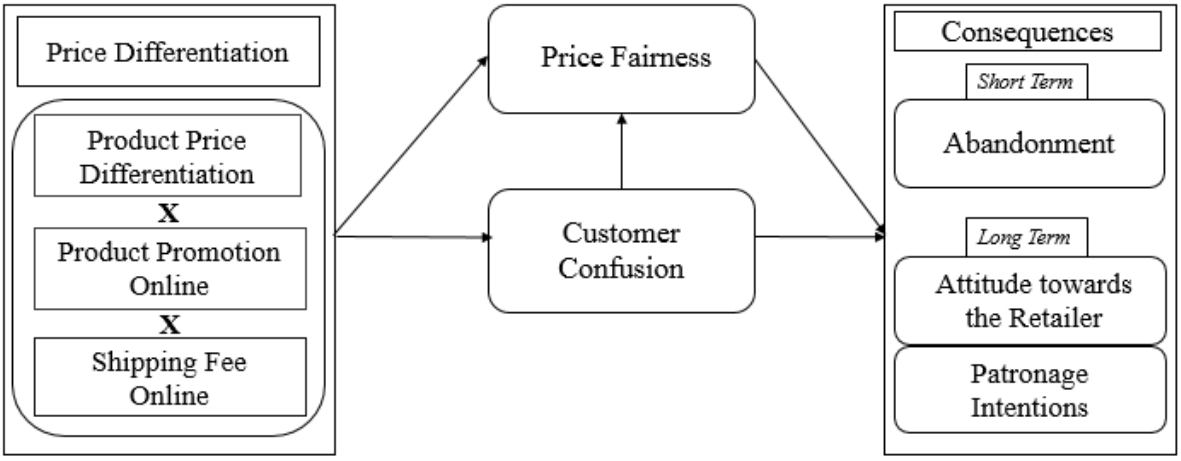

Figure 1: Conceptual model.

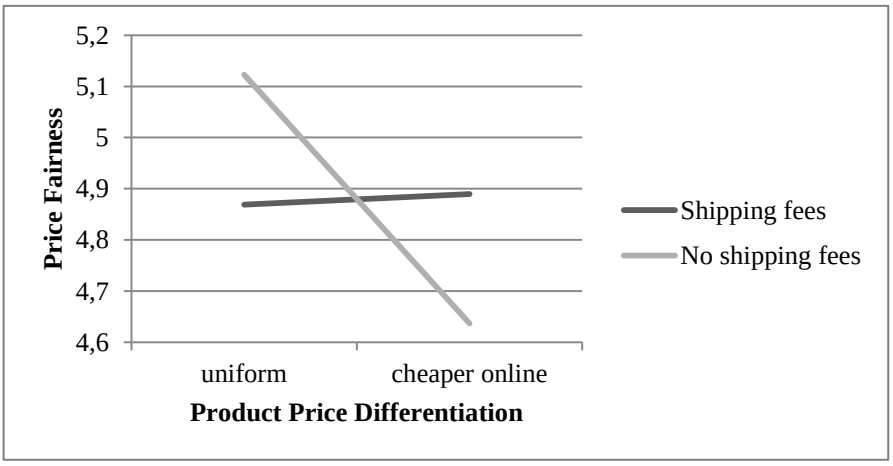

Figure 2: Interaction of product price differentiation and shipping fees.