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A N N A L E S  
UNIVERSITATIS MARIAE CURIE-SKŁODOWSKA  
LUBLIN – POLONIA

VOL. XLIX, 3

SECTIO H

2015

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*Price Fairness Perception in Online and Offline Environment  
– the Same or Different?*

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Percepcja uczciwości cen w środowisku online i offline – taka sama czy inna?

**Keywords:** price fairness, price perception, reference price, durable goods.

**Słowa kluczowe:** uczciwość cenowa, percepcja cen, cena odniesienia, dobra trwałego użytku.

**JEL Code:** M31

## Introduction

There is no doubt that the widespread access to the Internet has changed the conditions of cooperation between sellers and buyers. One of many important issues is more accessible information about products and services. Such a change significantly helps consumers to find themselves in the market and make more deliberate choices. Noting the importance of price in the decision-making process, the author focuses on the issue of price fairness perception. The purpose of the publication is the attempt to answer the following research questions:

RQ1: What role has the perceived fair price in shaping of the reference price?

RQ2: What factors may change the price fairness perception in online environment?

The analysis of national scientific publications leads to the conclusion that consumer goods have been widely discussed in the literature, while durable goods are rarely of interest to the authors of marketing publications. Moreover, the issue of

price perception is generally not a common topic of Polish research, in contrast with the achievements of foreign research literature.

1. Price perception – theoretical background

Price perception has long been studied in marketing and economic literature. It is generally agreed upon that a customer’s perception of price can be evaluated in two ways; it either increases or decreases customer satisfaction, which in turn leads to significant behavior (Srikanjanarak *et al.*, 2009, p. 81). Bolton *et al.* (2010, p. 564) note that a fundamental contribution of consumer research to the issue of pricing is the discovery that price perceptions are as much a matter of psychology as of economics. A large proportion of such research has demonstrated how simple framing manipulations can influence the perceived value or affordability of a product. Some authors note that if a vendor’s inferred profits are equal to a consumer’s perceptions of customer value, equity is believed to exist; however, if the customer believes that the provider’s profit margin is unreasonable, the perceived absence of distributive justice will lead to a perception of price unfairness (Rondan-Cataluna, Martin-Ruiz, 2011, p. 246). Xia *et al.* (2004, p. 3) define price fairness as “a consumer’s assessment and associated emotions of whether the difference (or lack of difference) between a seller’s price and the price of a comparative other party is reasonable, acceptable, or justifiable”. Since price evaluations are based on comparative judgments, price fairness perceptions are evoked by price comparisons (Xia, Monroe, 2010, p. 885).

Previously, fairness has been defined as a judgment of whether an outcome and/ or the process to reach an outcome are reasonable, acceptable, or just (Bolton *et al.*, 2003). Diller (2008) claims that both theoretical and empirical findings show that the subjectively perceived fairness obviously represents a multi-dimensional construct (Figure 1). In the author’s opinion, elements taken into account by Diller relate more to the B2B market, but undoubtedly majority of them also fits to the B2C market.

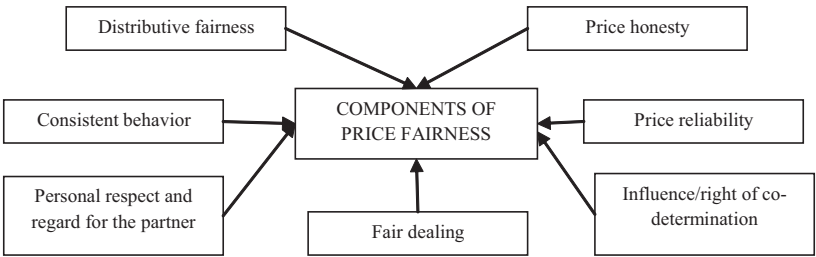


Figure 1. Components of price fairness

Source: Diller, 2008, p. 354

Researchers note that recent evidence suggest that consumers have mental schemas against which they judge price fairness. Important factors in such schemas of price fairness include: estimations of cost, knowledge of competitors' prices, and awareness of marketing strategies. Moreover, in addition to these market factors and personal considerations of value for money, it would seem that principles of equity (or so-called distributive justice) also play a part in such schemas of price fairness (Rondan-Catalun, Martin-Ruiz, 2011, p. 245). It is also worth paying attention to the view that the perception of price fairness is significantly related with the customer response behaviors and emotions (Ahmat *et al.*, 2011, p. 23). In other publications, authors suggest that among the factors that drive perceptions of fair prices are the following: reference prices, the costs of the seller, a self-interest bias and the perceived motive of the seller, equality in income or scale (Gielissen *et al.*, 2008). Past literatures suggest that factors influencing price fairness perception could be looked into by means of two broad aspects which are knowledge and experience. Knowledge means an expertise and skills acquired by a person or a group of people through theoretical or practical understanding of a subject. Customers developed a reference or expected price based on their knowledge of market prices and previous transactions (Ahmat *et al.*, 2011, p. 25). Undoubtedly negative reactions occur when customers feel that they have been unfairly treated and these perceptions of price unfairness have the potential to have significant adverse effects on customer satisfaction and subsequent consumer behavior. From a consumer's perspective, price inequity can be either advantaged (i.e., a price is lower than the reference price) or disadvantaged (i.e., a price is higher than the reference price). However, both advantaged and disadvantaged price inequities can lead to perceptions of unfairness (Jin *et al.*, 2014, p. 831).

## 2. Perceived fair price as a reference price – case of durable goods

The concept of reference price was introduced to marketing by Monroe (1970), the inspiration for that idea was Helson's (1964) adaptation-level theory according to which stimuli are judged with respect to internal norms. These norms represent the aggregate effect of past and present stimulation (East *et al.*, 2008, p. 194). This theory, as applied in a pricing context, posits that in a purchase situation, the buyer holds an internalized adaptation level price for a particular product in the given product category. This adaptation level price becomes the frame of reference for evaluating actual prices of products in an evoked or consideration set. Thus, buyers do not judge each actual price separately, but they rather compare each price with their reference price or adaptation level (Oh, 2003, p. 388). According to Falkowski and Mackiewicz (2015, p. 9), reference price is of crucial importance for assessing the product attractiveness both in case of price reductions and price increases. Waniowski (2013, p. 388, 399) argues that the perception of price information is shaped by their specificity. As opposed to information about points of sale, methods of promotion and product features, price

information also contains the numbers which are particularly difficult to remember. Due to the poor knowledge of prices, prices are crucial for the assessment of the price reference level.

Two types of reference prices are distinguished – internal reference price (consumers call on their memory of past prices they paid or encountered) and external reference price (price which is formed during the shopping occasion itself, based on prices observed) (Mazumdar *et al.*, 2005, p. 84). By reviewing the literature, it is possible to find many different alternative definitions of the term *reference price*. Generalizing, reference prices are formed from experience of previous prices either through purchase (i.e. paying the price) or observation. In other words, reference prices are standards against which the purchase price of a product is judged. This issue is worth paying attention to because of common consumers’ propensity to evaluate products and to make purchase decisions by comparing prices against an internal standard, which is usually referred to as *reference price* (Bruno *et al.*, 2012, p. 640). According to Jin *et al.* (2014, p. 831), the perception of fairness is an inevitable consequence of comparison. When evaluating prices, customers use different comparative references, including another person, a class of people, an organization, or themselves in relation to their own experiences from an earlier point in time.

In 2014, the author implemented her own study using PAPI method. The research sample amounted to 418 households, quota sampling method was implemented (units were selected to sample based on household size criterion), and the respondents were people responsible for the purchase of durable goods in their household. This study suggests that the price perceived by consumers as fair (reasonable) in the largest extent serves as a reference price (Figure 2). No other price level plays such an important role in the process of shaping the reference price. The author deliberately did not give respondents the definition of a fair price, since the goal is to take their individual interpretation into account. For each consumer a different price may be perceived as fair. It is impossible to establish a universal level of prices considered as fair.

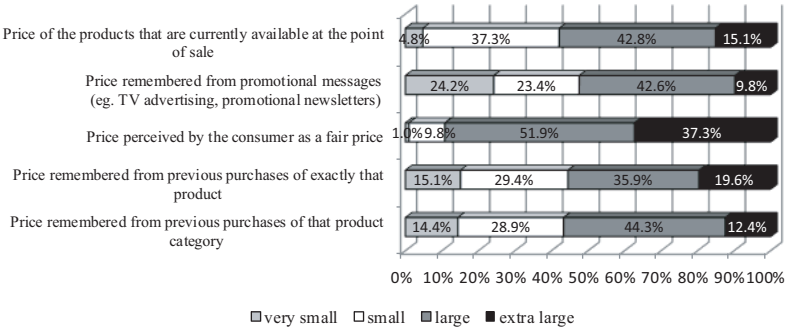


Figure 2. Forms of reference price in case of durable goods

Note: The question was: To what extent the price levels of durable goods are the reference price (price to which you compare the price of the product that you are interested in)?  
Source: own study

Next step of the author’s analysis was to identify segments of consumers according to the reference price criterion. For this purpose, the author has applied Principal Components Analysis<sup>1</sup> (Table 1). It is easy to notice that two of three extracted factors are consistent with the classification of the reference price – internal (first factor) and external (second factor). The fact that customers who base reference price on perceived fair price create a separate (third) factor is highly important. According to the author, it confirms a great importance of perceived fair price in the process of formulating reference prices in the consumers’ minds.

Table 1. Reference price in the case of durable goods – factor analysis

The rotation of matrix components <sup>a</sup>			
	Component		
	1	2	3
Price remembered from previous purchases of exactly that product	0.890		
Price remembered from previous purchases of that product category	0.873		
Price remembered from promotional messages (e.g. TV advertising, promotional newsletters)		0.858	
Price of the products that are currently available at the point of sale		0.689	
Price perceived by the consumer as a fair price			0.966

Note: Extraction method: Analysis of a column-row-components. Rotation method: Varimax with Kaiser normalization.

a.Rotation reached convergence in 4 iterations.

Identified factors explain the 77.7% variance of the results.

Source: own study

It is worth noting that, although reference price is treated as a precise point by most researchers, it may be possible that consumers actually have price zones in mind. Such an idea was presented by Kalyanaram and Little (1994). These authors estimate a latitude of acceptance around the reference price. This is a zone in which the customer is indifferent to deviations between the observed price and the reference price. In their paper, the authors refer to the asymmetric price response effect which suggests differential responses to prices above and below the reference prices. Deepening of this approach is the Oh’s study, wherein the author claims that buyers’ comparison of actual price against their internally held reference price seems to affect their subsequent judgments about price, quality and value. Buyers tend to interpret actual price as less expensive when they think they paid less than what they thought would be a fair or market price. In contrast, paying less than a fair or market price elicited higher quality perceptions (Oh, 2003, p. 397). It is possible to distinguish positive and negative price unfairness. When the first type occurs (that is, potential gain for the consumer), the perceived value is more significantly affected by price than by perceived quality; conversely, when the so-called negative price unfairness occurs (that is potential loss for the consumer), the perceived value is more signif-

<sup>1</sup> This method is also called factor analysis.

icantly influenced by perceived quality than by perceived price (Rondan-Cataluna, Martin-Ruiz, 2011, p. 246). According to Jin *et al.* (2014, p. 818), this sense of price unfairness can result in negative word of mouth, decreases in purchase intentions, increased switching and complaining behavior, or even customer revenge. Without a doubt no firm can afford to ignore these negative consequences of price unfairness. Some researchers pay attention to recommended seller's reaction when buyers' major concern is the actual price difference – the seller may control the potential damage by offering a refund, an additional reward (monetary or gift), or another form of compensation. However, when unfairness perceptions are accompanied with strong negative emotions, financial compensation may be insufficient. The seller needs to offer a venue that allows buyers to vent their negative emotions. Instead of having consumers spread such negative word of mouth to their social network or beyond, marketers can set up a forum, such as an online discussion board monitored by the firm, to redirect such feelings and to give the firm an opportunity to explain themselves, and offer compensation (Xia *et al.*, 2004, p. 9).

### **3. Some implications for price fairness in online environment**

As Garbarino and Maxwell (2010, p. 1066) note, the Internet has facilitated information flow for both buyers and sellers. Buyers can find information about products with an ease that has never been possible before. Sellers also benefit from new-found information on consumers' price sensitivity and preferences. One of the important advantages of the Internet is that it provides a way for firms to move from fixed prices to variable pricing (Kung *et al.*, 2002, p. 280).

Dissemination of online sales channels does not eliminate the traditional way of shopping. For this reason, special attention should be given to the prices in the various sales channels. Otherwise, an observant client will see the differences in treatment of customers depending on selected purchase channel. Price inconsistency across multiple channels might induce perceptions of unfairness, resulting in lower fairness perceptions than cross-channel price consistency. Because perceived unfairness is a considerable cause for customer defections, research examining the effect of cross-channel pricing strategy on fairness perceptions is warranted (Choi, Mattila, 2009, p. 38). According to Ratchford (2009), greater price transparency leads to lower prices. It results from ease-low cost price comparisons at different stores, aggregation of vendors in one place, and the availability of price-comparing mechanisms of different suppliers. Despite the increased price transparency, price differentiation occurs on the Internet. Researchers claim that it results from the diversity of the reputation of sellers, the cost of search listings by customers themselves and the offers diversification. The diversity of the cost of searching for information made by customers affect their cognitive abilities and experience in the use of the Internet, etc. (Doligalski, 2013, p. 65). Discriminatory pricing is a common firm practice in

today's market. While helping to increase profit by taking advantage of the market situation, such price variations also risk inducing a sense of price unfairness (Jin *et al.*, 2014, p. 818). In recent years, dynamic pricing of non-perishable products, typically sold at fixed prices, has also become increasingly common in online retailing. Personalization of online prices is becoming quite prevalent as the technology rapidly advances. Dynamic pricing allows firms to price-discriminate even at an individual level so as to maximize the capture of consumer surplus (Weisstein *et al.*, 2013, p. 501). Although dynamic pricing may prove beneficial to online businesses, managers must pay close attention to issues of pricing fairness and the potentially negative effects of differential pricing on brand (Kung *et al.*, 2002, p. 280).

Higher price transparency in online environment is widely believed to benefit buyers at the expense of sellers (Soh *et al.*, 2006, p. 707). Regardless of the pricing policy in a particular company, the cost it bears is a major component of the price offered to customers. Then price transparency should be identified as a cost transparency. Researchers suggest a number of ways which cause a cost transparency increase in the online environment:

- Internet technology erodes the “risk premium” that sellers have been able to exact from wary buyers,
- the Internet makes a buyer's search more efficient,
- buyer-led pricing and reverse auctions allow consumers to see the *price floor* more easily than they can with traditional shopping,
- the Internet encourages highly rational shopping,
- the Internet demands that companies with varying prices reexamine their price structure and policy,
- the e-commerce paradigm that emphasized building a customer base over making profits is changing the way customers think about costs (Sinha, 2000, pp. 46–48).

According to Sinha (2000, p. 45) problems for companies connected with the increase of cost transparency usually take four forms:

- it severely impairs a seller's ability to obtain high margins;
- it turns products and service into commodities; as a result customers are faced with many options available to them in the internet stores and they behave as though only one factor matters in buying decision: price;
- it weakens customer loyalty to brands;
- it can damage companies' reputations by creating perception of price unfairness.

However, it is impossible to disagree with the statement that transparency goes both ways. If it is easy for buyers to compare prices on the Internet, it is relatively easy for companies to track buyers' behavior and adjust prices accordingly (Kung *et al.*, 2002, p. 280).



#### 4. Conclusions

Referring to research questions defined by the author it should be stated that:

- price perceived by consumers as a fair price to a very large extent serves as the reference price i.e. price at which the price for the product is analyzed. Among several price levels that can serve as a reference point, perceived fair price is the most important to the buyer. The importance of perceived fair prices was confirmed by Principal Components Analysis – consumers who base on this level of the reference price create a separate segment. It should be noted, however, that such a conclusion follows from the study of durable goods, thus extending the research subject to other categories of products should be considered as a suggestion of further research directions.

- main factor that may affect the perception of price fairness in the online environment is the increase of cost transparency and – consequently – the increase of price transparency.

The author is aware that in order to give a complete answer to the second research question research in the online environment should be carried out – and only then it would be reasonable to make comparisons. However, the intention of the author was to draw attention to one of the main factors influencing the perception of online prices – price transparency. The conclusions of the author related to this issue should be treated as a guide for further research.

Undoubtedly, the research method used by the author can affect the results of the study, as well as the category of products included in the study. Without a doubt, the research method used by the author can affect the results of the study, as well as the category of products included in the study. However, this was largely due to the research possibility that the researcher has had as well as her interest in durable goods (product category which is unpopular in the domestic literature).

Taking into account the natural propensity of consumers, it is worth paying attention to the role of perceived fair price in shaping the reference price when comparing prices. Despite the many benefits that the sellers have in the online environment, the issue of price transparency has a significant impact on the perception of, i.a. their honesty into the price setting. In many cases, the problem is not accepting a certain price by the buyer but having certainty that he or she is not cheated. Therefore, an even greater caution and prudence during price setting in online stores is recommended because now as never before buyers deserve to be called ‘smart shoppers’.



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### **Price Fairness Perception in Online and Offline Environment – the Same or Different?**

**Abstract.** The author studies the role of perceived fair price as a reference price. The purpose of the publication is to answer two research questions connected with price fairness perception. In the first part of this article the theoretical background of the price fairness perception is presented. In the second part the results of author's own research are shown. This quantitative research was realized in 2014 and concerned the durable goods. In the empirical part of paper, the author points out the importance of perceived fair price as a reference price. It is also stated that in the online environment the importance of perceptions of price fairness significantly increases due to greater price transparency in online sales channels.

### **Percepcja uczciwości cen w środowisku online i offline – taka sama czy inna?**

**Abstrakt.** Autorka przeanalizowała znaczenie ceny postrzeganej przez konsumentów jako uczciwej w pełnieniu przez nią roli ceny odniesienia tj. ceny, z którą porównywana jest cena konkretnego produktu. W pierwszej części artykułu zaprezentowane zostało tło teoretyczne zagadnienia percepcji uczciwości cen, natomiast w drugiej pokazano zbieżne z celem artykułu wyniki badań własnych. Badania zostały przeprowadzone w 2014 roku i były przedmiotowo zawężone do kategorii dóbr trwałego użytku. W części empirycznej autorka podkreśliła znaczenie ceny postrzeganej jako uczciwej w pełnieniu roli ceny odniesienia. Wskazano również na wzrost znaczenia kwestii percepcji uczciwości cen w środowisku online, wzrost wynikający z większej przejrzystości cen w internetowych kanałach sprzedaży.