



Consumer Price Perception and Reaction to Price Promotion in Online Shopping

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Authors' contributions

This work was carried out in collaboration among all authors. All authors have contributed in collecting price-related literature and wrote different price-related issues. All authors read and approved the final manuscript.

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ABSTRACT

Aims: Many observations and studies have pointed out that due to the economic downturn and fierce competition in the online market, online retailers must think about how to use effective price promotion strategies to attract consumers' attention and further stimulate their purchase intention. At present, online retailers still use the price promotion strategies used by offline retailers in formulating price promotion strategies. However, the Internet provides consumers with the benefit of being able to quickly search for price information when shopping online, resulting in a substantial reduction in the cost of searching for price information for consumers. In this case, the influence of these price promotion strategies may be weakened or even ineffective; and the provision of this

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benefit may also affect consumers' cognition, attitude, and behavior toward online retailers' price promotions. Therefore, this study intends to explore consumers' perception, processing, and search behavior for online price information.

Methodology: A review of the literature of price-related articles was selected for analysis, including the level of acceptance level, type and quantity of external and internal reference prices and advertising reference prices, to understand concurrently how retailers formulated their price communication strategies to influence the perception of consumer price online and offline.

Conclusion: This research proposes the countermeasures for on-line retailers when formulating price communication strategies, and provides the academic community with an in-depth understanding of consumers' attitudes and behavior patterns towards on-line price information.

Keywords: Online price perception; pricing strategy; advertised reference price; online shopping; offline shopping.

1. INTRODUCTION

Many observations and studies have pointed out that one of the main reasons consumers shop online is because of price considerations [1,2,3,4,5,6,7]. Forrester Research's report also shows that nearly 35% of online shoppers finally give up buying from an online retail store because they hope to find a lower price. Therefore, online retailers hope to use price promotion strategies to influence online shoppers' price perception and judgment, reduce online shoppers' search intentions for price information, and thus increase online shoppers' willingness to purchase [4,5,7,8, 9,10].

However, at present, online retailers are still at a loss in formulating price promotion strategies [9,11]. Many online retailers directly apply price promotion strategies used by offline retailers, including the use of advertised reference prices (ARP) to match sales prices, price-matching refund policies, and other price construction methods. These price promotion strategies have a certain effect on off-line retailers because they effectively affect consumers' price perception and search for price information through the lowest price signaling [6,12,13,14,15]. However, unlike the offline shopping environment, the Internet provides consumers with the benefit of being able to quickly search for price information provided by various online retailers when shopping online [16]. The benefits of online shopping greatly reduce consumers' search costs for price information. In this case, the influence of these price promotion strategies may therefore be weakened or even ineffective [17]. The provision of this benefit may also affect consumers' perception, attitude and behavior towards online retailers' price promotions.

Jacoby and Olson pointed out that in order to understand the overall response to prices, we

need to deeply explore consumers' perception and processing behaviors of consumers on price information in depth [18]. Therefore, when online retailers formulate effective price communication strategies, they must first understand how online shoppers perceive the price and promotional information and how it makes sense to these shoppers. When online retailers formulate price promotion models, they must understand consumers' attitudes and behaviors in searching for price information when shopping online [8]. Hence, this research intends to review consumers' perception, processing, and search behavior of on-line price information; consumers' attitudes and reactions to on-line retailers' price promotion models; and the interaction between consumer characteristics and these issues.

It is expected that the review of consumer price perception and reaction to price promotion related articles will help online retailers gain a deeper understanding of pricing, and may effectively formulate price communication strategies to influence online shoppers' price perception and judgment. This review also hopes to provide academia with an understanding of the role that online prices play in consumers' online shopping decisions.

2. LITERATURE REVIEW AND PROPOSITION

Consumer price perception refers to the psychological process of how price information is understood and given meaning by consumers [18]. Consumers' perception of store prices is one of the important considerations in determining their information search, store selection, and purchase decisions [13]. Similarly, consumers' awareness of the prices offered by online retailers will affect whether consumers decide to place an order at a certain online retail

store or click on other websites to search for more price information. In online shopping, consumers believe that online retailers have lower operating and transaction costs than traditional retailers [19]. In addition, the Internet provides consumers with an easy, convenient and fast search for price information, making product prices more transparent than ever [2]. These factors lead consumers to believe that the prices of products offered by online retailers are lower than those offered by traditional retailers. Therefore, we propose the following.

P1: For the same product, consumers will think that the price of the product offered by the online retailer will be lower than that of the offline retailer.

In consumers' price cognition, price consciousness dominates consumers' sensitivity to product price differences and plays the decisive role in consumers' purchasing decisions [7,9,20,21,22]. Highly price-conscious consumers are usually very sensitive to product prices or price differences. Price plays a negative role in the purchasing decisions of such consumers [23]. If they knew that the price of products that they intend to purchase has recently increased, they would not purchase such products; unless other incentives or reasons are present.

Previous research findings have pointed out that one of the main reasons consumers shop online is because of lower prices [24]. Price is one of the most important indicators for online shoppers to differentiate products and services. Consumers are interested in online shopping because the Internet offers the possibility of quick price comparisons. According to these arguments, online shoppers should be a group of higher price conscious consumers. However, recent studies have indicated that Internet shoppers are less price conscious than non-Internet shoppers [25]. Consumers do not shop online to find the best deal; they are looking for products that meet their needs [26]. While Van den Poel and Lenuis (1999) explored consumers' acceptance of online channels, they found that lower prices was not one of the factors for consumers to relieve their online shopping risks [27]. Online shoppers rarely click on different websites for the price factor. Even less than 10% of online shoppers are so-called bargain hunters and low-price hunters. Based on these findings, we can overturn previous observations and propose that consumers who shop online should be less price-conscious.

P2: For the same product, consumers are less price conscious when shopping online than when shopping in offline stores.

Another important variable related to consumer price perception is price acceptability. Price acceptability means that consumers evaluate and judge a marked price based on the price range they are willing to accept [23]. This acceptable price range contains two facets: the degree of acceptable price (price upper and lower bounds) and its interval (the gap between the price upper and lower bounds). When the price of a product marked by a retailer exceeds the upper limit of the consumer's acceptable price range, consumers will think that the marked price is unreasonable or that the product belongs to another category. And when the marked price is lower than the lower limit of consumers' acceptable price, consumers will think that the quality of the product may be defective or the source of the product may be faulty. Consumers are unwilling to accept, pay, and purchase the product under these circumstances. If the marked price is between the upper and lower limits (that is, the price is in the same range), consumers will think that the marked price is reasonable and they are willing to pay and buy.

One of the reasons why consumers have acceptable price ranges is that the price of the same product can vary depending on the brand, time, place of purchase, and promotions. In this case, consumers form an acceptable range for the price of the product because they are exposed to changes in the market price of the product. Rao and Sieben (1992) found that consumers' knowledge of product price fluctuations affects consumers' price acceptance [28]. When consumers' knowledge increases, the upper and lower limits of consumers' price acceptance will first increase and then decrease. Consumers with higher and lower knowledge of price changes will have a narrower price acceptance range.

In online shopping, the Internet provides the possibility for consumers to easily search and compare prices. Therefore, online shoppers may have better price knowledge than in the case of offline shopping. Based on this, we can speculate that for the same product, consumers will have a narrower price acceptance range and lower upper and lower limits of the price acceptance range when shopping online than when shopping offline. Therefore, we propose the following.

P3: For the same product, consumers have a narrower price acceptance range when shopping online than when shopping offline.

P4: For the same product, consumers have lower upper and lower limits of the price acceptance range when shopping online than when shopping offline.

During cognitive processing of consumer price information, consumers may compare the retailer's marked sale price with a reference price. Reference price refers to any price or price-related information consumers use to judge the rationality of the price to which they are exposed [22]. Reference prices can generally be divided into internal reference prices and external reference prices. The internal reference price refers to the price or price-related information stored in the consumer's memory; the external reference price is the price information that the consumer contacts and encounters at the point-of-purchase. The external reference price includes advertising reference price (ARP), manufacturer's suggested retail price (MSRP), or any price information provided by retailers to consumers for reference. In the process of consumer price judgment and processing, if the sales price marked by the retailer is much higher than the consumer's reference price, consumers may think that the sales price is unreasonable and will not accept it; conversely, if the sales price is lower than the consumer's reference price, the consumer may consider the sales price reasonable and accept it. Retailers often use or manipulate external reference prices to influence consumers' price perception and judgment [4,29,30,31].

The important role of reference prices in consumer price perception and purchase decisions has been widely discussed and confirmed [4,10,29,30,32,33,34]. Different from offline shopping, the Internet provides an environment where online shoppers can easily obtain price and product information. The Internet also provides the possibility for online shoppers to compare the price information provided by various online retailers to find the lowest price. These characteristics of online shopping indirectly show that for the same product, the type and quantity of external reference price information that consumers contact when shopping online will be different from offline shopping. Therefore, we can reasonably speculate that the reference prices used by consumers in the online price evaluation

process are different in type and quantity from those when shopping in offline stores. And even if consumers use the same reference prices when shopping online and offline, the degree to which consumers rely on these reference prices should also be different. Therefore, we propose the following.

P5: For the same product, the type and quantity of external reference prices used by consumers in online shopping will be different from those in offline shopping.

P6: Even if consumers use the same reference prices when shopping online and offline, the extent to which consumers rely on these reference prices will vary.

Sinha (2000) indicated that because price information is easy to obtain and compare in the online shopping environment, the cost structure of products is becoming increasingly transparent (cost transparency) [2]. From another perspective, consumers may rely more on the price information they obtain on the Internet as reference prices when shopping online. This type of price information is more real-time than the internal reference price and is more likely to reflect the purchase cost of the online retailer. Therefore, this study proposes:

P7: Compared to internal reference prices, online shoppers rely more on the price information they obtain on the Internet as the basis for their reference prices.

Previous research has indicated that the type and amount of reference prices consumers use vary with product characteristics [4,33,35]. For example, in the category of frequently purchased products, consumers are more familiar with the price changes and promotions of this product, so consumers tend to use the internal reference price as the basis for evaluating the retailer's marked price. In contrast, for product categories that are purchased infrequently, consumers are less likely to recall or recall product price information. In this case, consumers are more inclined to use easily obtained external reference prices as the basis for price judgment.

The influence of product purchase frequency on consumer reference price usage may be less significant in the context of online shopping. As mentioned earlier, the Internet makes it easy for consumers to obtain relevant and real time price information. In this case, consumers may simply

rely on the price information provided by the Internet as a reference price for nonrecurring purchases. For frequently purchased products, consumers may no longer rely on their internal reference prices as the basis for judging prices because the Internet provides more immediate product price information. On the basis of the above arguments, we can propose the following.

P8: The types and quantities of reference prices that consumers use when shopping online do not vary with the frequency of product purchase.

When offline retailers use price promotion, they often use a higher price information with the actual promotion price to influence consumers' price perception and purchase intention. Because consumers may use the higher price information in this advertisement as the basis for their evaluation of the promotional price, this higher price information is called the advertising reference price (ARP). The use of advertising reference prices and their impact on consumer price perception and purchasing decisions has been extensively discussed [4,36,37,38,39,40]. According to Della Bitta et al. (1981) and the US Federal Trade Commission (1986), there are three main types of advertising reference price: (1) manufacturer's suggested retail price, and (2) regular or previous price (3) the competitor's price [41,42]. One of the reasons why the advertising reference price is influential is that when consumers have no way of judging the message conveyed by the promotional price or other reference price information is not easy to obtain, consumers will use the immediately available advertising reference price as their basis for determining the promotional price. However, in online shopping, with the ease of obtaining price information and the existence of price comparison websites, the effectiveness of advertising reference prices displayed in traditional retail stores may be weakened or even nonexistent in the online shopping environment. Therefore, this study proposes:

P9: The influence of advertising reference price on consumers' price perception, value perception and purchase intention in traditional retail stores is greater than that in online retail stores. That is, compared to traditional retail stores, consumers are less likely to rely on advertised reference prices as the basis for their price judgments.

The virtual world contains infinite information that can be obtained instantly. As a result, incredible

and various price information on the Web has changed our perception, attitude, and purchase behavior. This research aims to summarize price-related literature and how price issues such as price acceptance range, the type and quantity of reference prices, internal and external reference prices, and APR, play on consumers' price perception and attitude and how consumers perceive differently when they shop online and offline.

3. METHODOLOGY

This is a mini-review article that focuses on the consumer price perception and reaction to price promotion either online or offline were included in the review first. Then, research papers with related terms such as price acceptance range, the type and quantity of reference prices, internal and external reference prices, and APR were mainly selected to review in this article. The time frame of selected articles was quite wide-ranged from the 1980s to the most recent 2022.

4. CONCLUSION

In this review, online retailers can gain a deeper understanding of how consumers process online price information and react to price promotions through this discussion and propositions. Therefore, online retailers could be better positioned to understand how price-related issues affect consumer perception and then be able to effectively formulate price communication strategies to influence online shoppers' perception and judgment.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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