EXAMINING PRICE PERCEPTION AND THE RELATIONSHIPS AMONG ITS DIMENSIONS VIA STRUCTURAL EQUATION MODELING: A RESEARCH ON TURKISH CONSUMERS

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ABSTRACT: Price is one of the most important marketplace cues that consumers use in their decision making. It is widely known that consumers react differently to price. Many researchers have noted that price has a complex structure. According to Lichtenstein et al (1993), there are multidimensional aspects of price cues and suggested several dimensions. The purpose of this study is to examine price perception and the relationships among its dimensions. In order to achieve this aim, a field research was conducted on sports shoe consumers in Turkey. 638 consumers voluntarily participated the survey. According to the findings, some of the relationships among the dimensions of price perception were significant. Besides, it was revealed that the most exploratory dimensions of price perception were value consciousness and price consciousness.

KEYWORDS: Price Perception, Sports Shoe Consumers, Structural Equation Modeling

INTRODUCTION

There are many variables that affect consumers' decision making. Price is among one of them and has a complex structure. Most of the consumers react differently to price. Price perception, known as the process of price interpretation and valuation of products or services by consumers, has attracted many researchers for years. Most of the studies have investigated the impact of price on product evaluation and considered the price as unidimensional. However, some studies asserted that price might have more than one role on making purchasing decision (Lichtenstein et al., 1988; Lichtenstein et al., 1990; Lichtenstein et al., 1993; Jin et al, 2003; Sternquist et al., 2004). Consumers' price perception happens to realize over a course of time. Accordingly, consumer obtains the price information visually or auditorily, interprets this information, and gathers some results. While having a specific remark, consumer may possesses some approaches or develop new approaches via the experience or learning of purchases in the past. In this context, consumer follows this process even when preferring a specific brand (Okumuş, 2003:50).

According to the literature, price perception is considered on multidimensional base. The dimensions of price perception may change in terms of the roles that price plays on consumers' buying behavior. If price positively affects the buying decisions of consumers, then the positive role of price is mentioned. If it affects negatively, then the negative role of price is mentioned. In order to explicitly understand consumers' price perception, it is important to examine the dimensions of price perception and the relationships among these dimensions. Because this examination may provide significant and practical implications for businesses seeking a strategy that can give them the largest chance of reaching their pricing goals.
Several studies in the literature have focused on the issue of consumers' price perception (Herrmann et al., 2007; Munnukka, 2008; Moore & Carpenter, 2008; Palazon & Delgado, 2009; Byun & Sterququist, 2010; Steenhuis et al., 2011; Meng, 2011). Especially, some scholars conducted their researches on different consumer groups from different countries. For example, Moore et al. (2003) compared consumer perceptions of price in Poland and USA. They found similarities between the two groups' perception of price. Sterinquist et al., (2004) examined the price perceptions of Korean and Chinese consumers. Their study found that both Korean and Chinese consumers perceive price as multidimensional. Watchavesringkan et al, (2008) examined the measurement invariance of consumers’ price perception scales cross-culturally with samples drawn from four Eastern Asian countries. Their findings indicated that the consumers’ price perception scale appears to be useful in Eastern Asian cultures. Meng & Nasco (2009) applied price perception model to American, Chinese and Japanese cultures and compared the price perception constructs across three cultures using equivalent instruments. Their study provided some rationale for international retailers to develop different pricing and promotional strategies when expanding their business into these cultures.

In the marketing literature, there are limited numbers of studies associated with price perception originated from Turkey. Thus, the current research is aimed to discuss the price perception from the view-point of Turkish consumers. Moreover, most of the studies mentioned above were designed solely to conduct on students. However, respondents of the current research consist of the consumer groups who have different demographic characteristics.

Furthermore, past studies revealed that price perception is more important if the product is homogeneous and the consumer has shopping experience (Bettman, 1973; Rao & Monroe, 1988; Okumuş, 2003). Along with this study, price perception is evaluated in the context of a heterogeneous product type and this makes a modest contribution to the existing body of knowledge within the field. In this regard, the current research seeks to examine Turkish consumers' price perception and the relations among the dimensions of price perception.

CONCEPTUAL BACKGROUND

According to Lichtenstein et al. (1993), price perception of consumers has seven dimensions; price-quality association, prestige sensitivity, price consciousness, value consciousness, price mavenism, sale proneness and coupon proneness. Since coupons are not commonly used in the Turkish market, coupon proneness was excluded in this study. These dimensions are explained in detail below.

**Price-Quality Association**

Price-quality association is described as the generalized belief across product categories that the level of the price cue is related positively to the quality level of the product (Lichtenstein et al., 1993:236). The relation between price and perceived quality is a heuristic property. This relationship provides consumers with the opportunity of using a property such as price in order to make an evaluation about a product’s quality. Many variables such as total duration of the research, perceived risk related to purchases, frequency of purchases, and price level of product class might mediate the price-quality association. For instance, if
consumers are more experienced and have more product information, then they become less inclined towards price-quality inference (Meng, 2011; Jin and Sternquist, 2003).

**Prestige Sensitivity**

Prestige sensitivity is described as favorable perceptions of the price cue based on feelings of prominence and status that higher prices signal to other people about the purchaser (Lichtenstein et al., 1993:236). Prestige sensitivity can be viewed as the tendency to refer to other consumers or being sensitive to the referrals made by other consumers based on the price level (McGowan and Sternquist, 1998). In addition, consumers with high prestige sensitivity may buy expensive goods not because of quality perceptions per se, but because of the perception that others may perceive them as socially positive because of the high price (Bao and Mandrick, 2004:708).

**Price Consciousness**

For some consumers, price perception may become prominent with their consciousness towards price. The concept of price consciousness has been used by many researchers with plenty of cognitive conditions associated with price. Price consciousness is described as the degree to which the consumer focuses exclusively on paying low prices. This description is parallel with the definitions made by some researchers (Lichtenstein et al., 1993:235; Jin and Sternquist, 2003:650). Price consciousness often takes place in the competitive retail circle. It is stated that the development of price consciousness is referred to the buyer’s behaviors during the economic recession conditions. Most people believe that the behavior of lower price search exists among people during conditions worse than that of an economic recession (Moore et al., 2003).

**Value Consciousness**

Consumers compare the benefits acquired corresponding to the price paid, which results in the perception of value. For some consumers, price perception may be characterized as being related to the congeniality of the price paid for the quality received in a purchasing transaction. Value consciousness is seen as the price paid for the quality received. If consumers consider price as a monetary sacrifice then they will be more conscious about the value. Many researchers define the concept of value to be consistent with this point of view. As a result, value consciousness reflects the concern for price paid relative to quality received (Jin and Sternquist, 2003; Lichtenstein et al., 1993:235; Zeithaml, 1988; Meng and Nasco, 2009:507; McGowan and Sternquist, 1998; Varki and Colgate, 2001).

**Price Mavenism**

Price perception may be affected by the intention of consumers to be informed about the prices in order for them to transfer the information about the prices to others. Some consumers may transfer their own market information because of their intention of having information about the market (Meng and Nasco, 2009; Lichtenstein et al., 1993). For some consumers, the sensitivity towards the price may reflect the intention of being a price maven. Price mavenism is defined as the degree to which an individual is a source for price information for many kinds of products and places to shop for the lowest prices, initiates discussions with consumers, and responds to requests from consumers for marketplace price information (Lichtenstein et al., 1993:235).
Sale Proneness

It is observed that the introduction of sales price with a reference price increases value perceptions. More positive evaluations about the price arise from the discount in the purchasing price and this comprises a negative situation since the consumers’ price perceptions will reflect the sale proneness. Sale proneness simply indicates the consumers’ trend towards the products and services in sale. This concept is produced with the concept of tendency toward promotions used in order to explain the strong reactions of consumers to various promotions. Sale proneness is associated with the tendency toward promotions as it is also related to the price discount. Generally, sale proneness refers to an increased tendency to respond to a purchase offer because the sale form in which the price is presented positively affects purchase evaluations. In this respect, sale proneness means an increasing trend in responding to the tender offer as a result of the form of sale, in which the price affects purchase evaluations positively. In other words, the form of sale triggers the purchases and since the product is on sale, it is purchased (Lichtenstein et al., 1990; Lichtenstein et al., 1993:235; Moore et al., 2003; Jin and Sternquist, 2003).

PURPOSE OF THE STUDY AND HYPOTHESES

The main purpose of this study is to examine price perception and the relationships among its dimensions. Additionally, it is also aimed to reveal to what extent these dimensions explain the concept of price perception. Accordingly, the hypotheses are as below;

H1: There is significant relationship between price quality association and prestige sensitivity.
H2: There is significant relationship between price quality association and price consciousness.
H3: There is significant relationship between price quality association and value consciousness.
H4: There is significant relationship between price quality association and price mavenism.
H5: There is significant relationship between price quality association and sale proneness.
H6: There is significant relationship between prestige sensitivity and price consciousness.
H7: There is significant relationship between prestige sensitivity and value consciousness.
H8: There is significant relationship between prestige sensitivity and price mavenism.
H9: There is significant relationship between prestige sensitivity and sale proneness.
H10: There is significant relationship between price consciousness and value consciousness.
H11: There is significant relationship between price consciousness and value consciousness.
H12: There is significant relationship between price consciousness and sale proneness.
H13: There is significant relationship between value consciousness and price mavenism.
H14: There is significant relationship between value consciousness and sale proneness.
H15: There is significant relationship between price mavenism and sale proneness.

METHODOLOGY

Sample and Data Collection

The population of the research includes all of the sports shoe consumers in Turkey. The research was limited with the sample because of certain restrictions such as time, cost and difficulty to reach all the population. Since there was no sample framework for sports shoe consumers, the convenience sampling method was preferred as a sampling method. Data were gathered via online survey using related web page (www.docs.google.com) over two months period. 638 consumers voluntarily participated in the survey.
Product Preference

In this research, sports shoe was selected as a product category. As a matter of fact that there are some reasons for preferring sport shoe consumers. Many people in Turkey wear at least one sports shoe brand and their level of awareness and interest towards this product are relatively high. Sports shoes have been becoming indispensable for Turkish consumers; especially for the young ones. Moreover, sport shoes do not only provide functional values but they are also able to provide psychological benefits. Last but not least, just as other group of consumers, sports shoe consumers are believed to take into account the price of the product in their decision making.

Measures

The questionnaire consisted of two sections. In the first section, there were demographic questions for the respondents. In the second section, there were scales for measuring the study constructs. Respondents were asked to rate the multi-items using a five-point Likert type scale (1=Strongly Disagree ; 5=Strongly Agree). The scales for the dimensions of price perception were taken from Lichteinstein et al (1990) and Lichteinstein et al (1993).

Analysis

The hypotheses were tested by structural equation modeling.

RESULTS

Sample Profile

Descriptive statistics for the sample showed that most of the participants were female (53.1 %), single (77.1 %), under 30 years old (82.9 %), university graduates (60.8 %), students and private sector employees (56.9 %) and the consumers whose income level was under 2000 Turkish Lira (76.4%).

Measurement Model

Primarily, the first-order confirmatory factor analysis was executed for each dimension that comprised price perception. The reliability of the dimensions were calculated with Composite Reliability (CR), Average Variance Extracted (AVE), and Cronbach’s alpha (α) coefficients. Confirmatory factor analysis and the reliability results of scales are presented in Table 1.

Table 1. Scale items, first-order and second order measurement model: Cfa results

<table>
<thead>
<tr>
<th>Scale/Items</th>
<th>First-Order Model</th>
<th>Second-Order Model</th>
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<tbody>
<tr>
<td></td>
<td>Factor Loading</td>
<td>Factor Loading</td>
</tr>
<tr>
<td>Price-Quality Association (C.R.=0.81 ; AVE= 0.59 ; α=0.80)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PQ1- (Generally speaking, the higher the price of a product, the higher the quality)</td>
<td>0.75</td>
<td>0.74</td>
</tr>
<tr>
<td>PQ2- (You always have to pay a bit more for the best)</td>
<td>0.68</td>
<td>0.66</td>
</tr>
<tr>
<td>PQ3- (The price of a product is a good indicator of its quality.)</td>
<td>0.84</td>
<td>0.86</td>
</tr>
<tr>
<td>Prestige Sensitivity (C.R.=0.88 ; AVE= 0.56 ; α=0.88)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PS1- (Buying a high priced brand makes me feel good about myself.)</td>
<td>0.71</td>
<td>0.68</td>
</tr>
<tr>
<td>PS2- (I think others make judgments about me by the kinds of products and brands I buy)</td>
<td>0.64</td>
<td>0.65</td>
</tr>
<tr>
<td>PS3- (Your friends will think you are cheap if you consistently buy the lowest priced version of a product.)</td>
<td>0.75</td>
<td>0.77</td>
</tr>
<tr>
<td>PS4- (Even for a relatively inexpensive product, I think that buying a costly brand is impressive.)</td>
<td>0.83</td>
<td>0.83</td>
</tr>
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</table>
Accordingly, it was observed that the factor loadings of the six dimensions were greater than 0.40. The reliability coefficients of the dimensions were over the acceptable values. Considering the fit statistics, the measurement model provided acceptable fit ($\chi^2 = 1085.553$; $df = 308$; $\chi^2/df = 3.52$; GFI = 0.88; AGFI = 0.86; TLI = 0.90; CFI = 0.91; RMSEA = 0.063). It could be inferred that the measurement model enhanced the convergent validity since both fit statistics and factor loadings were within the acceptable ranges.
The extent to which the dimensions represented (explained) the price perception was calculated with the second-order confirmatory factor analysis. As a result of the analysis, the dimensions that explained the price perception best were value consciousness (0.92), price consciousness (0.90), and sales proneness (0.90), respectively (Table 1). For price quality association and prestige sensitivity dimensions, a significant level of explanatoriness could not be obtained.

Discriminant validity was used in order to test whether the dimensions of price perceptions (price/quality association, prestige sensitivity, price consciousness, value consciousness, price mavenism and sales proneness) in the measurement model were really different from each other. Discriminant validity was tested by using Chi-square differences between the Model 1, where correlations fixed at 1, and the Model 2, where correlations were free (Bagozzi et al, 1991).

The results of discriminant validity are given in Table 2.

<table>
<thead>
<tr>
<th>Models</th>
<th>$\chi^2$</th>
<th>Df</th>
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<tbody>
<tr>
<td>Model 1 (Correlations fixed at 1)</td>
<td>1965.057</td>
<td>323</td>
</tr>
<tr>
<td>Model 2 (Correlations free)</td>
<td>1085.553</td>
<td>308</td>
</tr>
<tr>
<td>$\Delta \chi^2$</td>
<td>879.504</td>
<td></td>
</tr>
<tr>
<td>$\Delta$ Df</td>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

Discriminant validity was provided whether the chi-square value of the unconstrained (free) model was significantly lower than the fixed one. According to $\chi^2$ distribution table, the critical value of 15 degrees of freedom was 24.996. Thus, the critical value ($\chi^2(15) > 24.996$) indicated that discriminant validity was obtained.

**Structural Model and Hypotheses Testing**

Structural model is shown in Figure 1.

![Figure 1. Structural Model](image)

Results of the hypotheses testing, and correlation and covariance values between the constructs are indicated in Table 3.
According to Table 4, there were no statistically significant relations between price quality association and price consciousness (p:0.528), price quality association and value consciousness (p:0.724), price quality association and price mavenism (p:0.135), price quality association and sales proneness (p:0.283). Therefore, H2, H3, H4 and H5 were rejected. Furthermore, there was no statistically significant relations between prestige sensitivity and value consciousness (p:0.486). Thus, H7 was rejected, as well. Other hypotheses of the research (H1, H6, H8, H9, H10, H11, H12, H13, H14, H15) were supported.

The results indicated that most of the relationships among the dimensions of price perception were significant and positive. For example, there was a significant and positive relationship between price quality association and prestige sensitivity. In this respect, the more sensitive the consumers were for quality, the more sensitive they were for prestige.

CONCLUSION

In this study, the concept of price perception and its dimensions were examined. The dimensions of price perception change according to the positive or negative roles that price plays on consumer’s buying behavior. For instance, if an increase in price causes the probability of consumers’ purchasing, then we can mention the positive role of price. Therefore, while price-quality association and prestige sensitivity establish the positive aspect of price perception, price consciousness, value consciousness, price mavenism, and sale proneness establish its negative aspect.

Firstly, the first-order confirmatory factor analysis was conducted for each dimension that comprises price perception. Then, validity and reliability of the dimensions were obtained. Whether or not these six dimensions forming the price perception are different from each other was determined by the analysis of discriminant validity. Finally, the relationships among these dimensions were tested with structural equation modeling.
In sum, there are no significant effects of price quality association on price consciousness, value consciousness, price mavenism, and sale proneness. Prestige sensitivity has significant impacts on all of the dimensions except for value consciousness. For example, when the sensitivity of sport shoe consumers to prestige increased, their consciousness towards price increased, and they became more sensitive to the sales discount. There are strong and positive relationships between price consciousness and value consciousness, and price consciousness and sales proneness. Thus, the higher price consciousness the consumers have, the higher their value consciousness and sales proneness become. Considering price mavenism, it can be said that when consumers’ information level on price increases, their sensitivity and consciousness towards the product’s value and sales discounts also increase.

The second-order confirmatory factor analysis was executed to determine to what extent these six dimensions explained the price perception. Hereunder, the dimensions that best explain the price perception of sports shoe consumers are respectively value consciousness (0.92), price consciousness (0.90), and sale proneness (0.90). For price quality association and prestige sensitivity dimensions, a significant level of explanatoriness could not be obtained. In this respect, we can state that consumers within the sample are highly sensitive to value, price and sales discount.

Price is a very important driver for consumers to make buying decisions. It will be helpful for businesses to know consumers’ price perceptions for realizing their pricing strategies. As part of the study, with very low estimate for prestige sensitivity (0.09) and price-quality association (0.03) that are positive aspects of price perception, it is revealed that Turkish sports shoe consumers in their buying decisions primarily consider economic reasons rather than psychological ones. Concordantly, it can be noted that consumers within the sample view price as something they have to give up for sports shoes.

LIMITATITIONS & SUGGESTIONS FOR FURTHER STUDIES

There are some limitations to this study. This research was conducted on sports shoe consumers and the data were collected through online survey. As in other online studies, the sample was limited to individuals that were willing to take the survey, which proves to be an important limitation. In addition, the answers’ reliability is questionable since the psychological situations and the conditions of the respondents at the time of taking the survey are unknown. Because the data were collected at once, the ignorance about consumers’ changing perception towards sports shoe brands creates another limitation to the study. The last limitation of the study is that the convenience sampling method was preferred in consideration of the difficulty in reaching the whole population. It is improbable for the sample to represent the population. Therefore, it seems unlikely to be able to generalize the results obtained from the study.

The findings of this study are expected to shed light on the forthcoming studies. Following this study, some suggestions may be proposed for further studies. It might cause differences in price perceptions if the product is simply in the convenience, shopping, specialty or unsought product category. Therefore, comparative researches can be conducted by choosing products from various product categories. In addition, future studies should be conducted in which both products and services are considered within the research. The price perceptions of consumers may be affected by their own cultures. Similar product or service groups can be
used to conduct intercultural researches to reveal in which way the price perception resembles and differentiates.

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