



MEASURING VALUE ALONG THE SUPPLY CHAIN: A STUDY ON WHITE GOODS SECTOR

TEDARİK ZİNCİRİ İÇERİSİNDE DEĞER ÖLÇÜMÜ: BEYAZ EŞYA SEKTÖRÜ
ÜZERİNE BİR ÇALIŞMA

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Abstract

Perval scale was constructed in the literature as a measure of consumers' perceived value for the retail industry. The study aims to generate a scale for measuring the perceived value of white goods customers in Turkey over the Perval scale, which is studied for several sectors in the literature. To understand the customer preferences of durable-goods consumers, we use the Perval scale that is highly studied in the literature as a basis for many sectors except white goods. Another goal of this study is to generate a survey to measure the perceived value of white goods' customers, eventually to be named as WhitePerval. The outline of this survey generation process begins with examining the literature of Perceived Value, Consumption Values and Perval scale and continues with the adoption process of Perval over white goods customers. Qualitative research design is used to clarify our research construct. For that purpose, content analysis and a survey design on the construct, validity and reliability analysis are also studied for WhitePerval. The adopted WhitePerval scale can be extended to cover perceived value measurement for all types of home appliance products and may also be an input for other models in other countries.

Keywords: Perval, Durable Goods, Perceived Value, Customer Satisfaction, Supply Chain

Öz

Perval ölçeği perakende literatüründe ve endüstride tüketicilerde oluşan algılanan değeri ölçmek için geliştirilmiştir. Literatürde PERVAL ölçeği birçok sektör için incelenmiştir. Bu çalışma, Türkiye'de beyaz eşya müşterilerinin Perval ölçeğine göre algılanmış değerlerini ölçmek için bir ölçek oluşturulmasını amaçlamaktadır. Bu çalışmanın bir diğer amacı, Beyaz eşya müşterilerinin algılanan değerini ölçmek için, tamamlandığında WhitePerval olarak anılacak bir anket oluşturmaktır. Bu anket oluşturma sürecinin yol haritası, Algılanan Değer, Tüketim Değerleri ve Perval ölçeği literatürü incelenerek başlamaktadır. Uzman görüşlerinden başlayarak istatistiksel analizlere kadar anketimizin oluşturulma süreçlerindeki her adım detaylı bir şekilde açıklanmaktadır. Ayrıca, araştırmamızın yapısını güçlendirmek için nitel araştırma yöntemleri kullanılmıştır. Bu amaçla, yeni anketimiz WhitePerval için geçerlilik ve güvenilirlik analizleri de incelenmektedir. Oluşturulan WhitePerval ölçeği, her tür ev eşyası ürünü için algılanan değer ölçümünü kapsayacak şekilde genişletilebilir ve aynı zamanda literatürde diğer modellere de girdi olarak kullanılabilir. Öte yandan bu ölçek, algılanan değeri ölçmek için özel gereksinimleri olan diğer ülkelerde ampirik olarak test edilmelidir.

Anahtar Kelimeler: Perval, Beyaz Eşya, Algılanan Kalite, Ev Aletleri, Tedarik Zinciri

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1. INTRODUCTION

Durable goods, known as white goods are important products that everyone needs to use in daily-life. As with all products, here also understanding customers' preferences is a key factor of success. It is obvious that a retail customer is value-driven, so the managers should learn what customer value is and where to focus the attention to succeed and gain advantage in the market (Woodruff, 1997, p. 142). The companies are looking for ways of value-creation. We can find a wide literature for value-creation construct and we see this concept many times in organizations' objectives and mission statements. It is a key factor for long-term success, the only thing that matters in the new 'quality' focused business world is to deliver customer value. On the other hand, there is quite few research which has examined the value construct solely and also there is not any widely used value measure in the retail environment where the products are evaluated before the purchase by customers. (Sweeney & Soutar, 2001, p. 203) This research aims to identify the customer preferences before and at the purchase of durable goods. There are many studies that adopt existing scales into new sectors and reach successful results in the literature, an example is extension of the service quality concept into the area of automobile aftersales quality resulting in the AutoServQual scale. (Gencer and Akkucuk, 2017, p. 120). In this study, the Perceived Value Scale (to be abbreviated as Perval) will be used and expanded to understand customer preferences. The original items provided by Sweeney and Soutar (2011, pp. 213-214) will be expanded through the utilization of multiple focus groups and triangulation techniques to find the common elements which will form the WhitePerval scale.

2. METHODOLOGY

Perceived value has been a strategic necessity for customers and producers since the 1990s, as all the players in the economy are looking for novel methods to attain and expand competitive advantage (Woodruff, 1997, p. 139). Zeithaml (1988, p.14) has stated that perceived value need to be regarded as a "consumer's overall assessment of the utility of a product (or service) based on perceptions of what is received and what is given." In other words this was a comparison of a service or product's 'give' and 'get' components. Here, in our study, according to focus group results, we added a question also about price-quality balance. The most known such definition of value is the trade off or ratio between price and quality, which is named as value-for-money conceptualization.

It is obvious that price and quality have several and different impacts on perceived value when the subject is money. Zeithaml (1988, p.11) studied that for some consumers value is perceived when the price is low, whereas the others perceive value while the quality and price are balanced, which we tried to measure by questions about both terms. Thus, the components of perceived value should be weighted differentially for different customers (Zeithaml 1988, p. 10). We see that there are also authors who suggest to view value as a trade-off between only price and quality but this a very simplistic opinion (Bolton & Drew, 1991, pp. 4-6). Porter (1990, p. 83) was one of them who stated about providing "superior value to the buyer in terms of product quality, special features, or after-sale service." On the other hand, the satisfaction may be directly related with the use of the product whereas the perceived value can be emerged without the service or product being used or bought (Sweeney & Soutar, 2001, p. 206). New concepts such as customer centricity have also been widely discussed in the literature and the fundamental issues and challenges facing a firm trying to become a customer centric firm have been provided in the literature (Shah et al. 2006, p. 113). Within this view, from a customer's viewpoint a company presents and distributes a plethora of services produced from its own resources (Clulow, Barry, and

Gerstman 2007, p. 22). Besides to be regarded as a notable and laudable; this improvement of a company strategy to be product-centric, this idea still promotes that the perceived value of a product or service may be mostly predetermined, controlled, and communicated while the service is encountered (Helkkula et al. 2012, 60).

Perval Scale has also been used recently in research ranging from investigation of purchase prices in mobile apps (Hsu & Lin, 2015, p. 47); tourist perceived value, relationship to satisfaction, and behavioral intentions in Croatian town of Dubrovnik (Pandza, 2015, p. 123); user acceptance of wearable devices (Yang et. al, 2016, p. 256); and examination of the effect of corporate social responsibility activities on customers' perceived price fairness (Habel et. al, 2016, p. 85). Perceived Value is also affected from the new era in the social world. People are more online than they were yesterday, and the companies are looking for ways to adapt their marketing strategies to the new era (Gencer, 2015, p. 11). When it comes to making purchase decisions, customers do not depend on the advertisements as they did previously and it is essential for companies to get into the habit of interacting with consumers in the terrain of social media (Toker et. al, 2016, p. 346). It is a must for companies to adopt themselves to technological developments (Aydemir, 2013, p. 61). The number of friends on Facebook or the number of people followed in Twitter may be considered as a sign of how intensely the teenagers use the social media tools(Akkucuk, 2016, p. 6). Furthermore Akkucuk and Esmaili (2016 p. 4) argue that customers regard well-known branded products as having more quality. All organizations have to understand their customers and to measure the level of perceived value created is a prerequisite for organizations to be successful. After examining the literature of Perceived Value, Consumption Value is the next subject.

Consumption Values

Sheth, Newman & Gross (1991, pp. 159-170) focuses their theory on consumption values. Explaining how the consumers' decision to buy or not to buy a particular product, besides their selection of one product type over another, and the selection of a specific brand over another. Also they add that, the theory can be applied to choices that involve a full range of product types including services, durable goods, consumer non-durables, and industrial products. They find five values affecting consumer choice behavior.

- a-) Epistemic Value
- b-) Emotional Value
- c-) Social Value
- d-) Conditional Value
- e-) Functional Value

Sheth et al. (1991, pp. 159-170) states that consumption value dimensions effect choices of the customers and these choices are functions of the multiple consumption value dimensions. They suggested five dimensions and their work provides the best foundation in variety of fields in terms of value construct extension as it was validated and discussed by other researchers (Sweeney & Soutar, 2001, pp. 207-209). Our study focuses on durable goods, and we try to understand the factors that influence the decision of white-goods customers.

3. FINDINGS

To understand the customer preferences of durable-goods consumers, we will use the Perval scale as a basis. Despite, the social aspects of service consumption were not taken into

account in most unidimensional measures of customer perceived value, some value frameworks which focus on multidimensional benefit oriented side include social value besides their other constructs including conditional, epistemic, functional and emotional value (Sheth et. al, 1991, pp. 161-165). On the other hand, Sweeney and Soutar, (2001, pp. 206-209) talks about social value as an association that users of the service combine with their social group and social value includes a variety of aspects such as pursuit of social class membership, expression of personality, social self-concept, identification and social image. There are many studied customer perceived value measures which have been tested by several researchers in a variety of business areas but Perval is the one which examines the value as a linear process, in before, at the time and after he service consumption process as a whole experience by Sweeney and Soutar (2001, pp. 208-210). They used Perval scale of 19 items, with 4 dimensions to determine the customers' perceptions of the value of a durable product for customers. The four dimensions are:

- 1-) Quality
- 2-) Emotional
- 3-) Price
- 4-) Social

As said above, the model was based on a literature survey on the related work done by previous researchers. On the basis of the literature these dimensions can be integrated to our study as the same four dimensions which come from the literature studies about the perceived value and consumption choices of durable goods. This paper studies to understand the dimensions from the focus groups' results. Ultimately, we will see these phenomena from the customers' perspective. The aim of our study is to understand and show the customer preferences of durable goods consumers, to reach this goal, we need a qualitative research design named as exploratory research which will calibrate the Perval scale to our study and, examine the perceived value of durable goods customers.

Exploratory studies; besides focus group interviews, include individual depth interviews, participant observation, critical incident technique(CIT), cognitive mapping, verbal protocol analysis, and case study methods. Focus group studies create synergy and group interaction which creates a sum that is greater than the individual ideas. These results explains the explicit use of focus group studies o produce data in qualitative studies. As a result focus group study was the selection. In this study, accordingly with the goals of the research, two focus groups were organized in order to collect opinions about the construct. As commonality increases the efficiency of the focus groups; experience, expertise, consumption patterns, lifestyle or the age of the group members may be common characteristics of the group members o get the advantage of stemming from the factors of commonality.

Morgan (1997) states that for a focus group the range of 6 to 10 is the rule of thumb while there are many suggestions in the literature about the number of people in focus groups changing from minimum 5 to maximum 10 people. Where to stop the focus group study is another subject in focus groups and the right time is the time of saturation defines the time when additional data collection no longer creates new results.

Accordingly with the ideas above, we formed two focus groups, which consisted of 6 and 7 people. The first 6 people were business professionals and married, ranged between 31-39 ages, who was already bought a white-goods and using in their home. The second focus group of 7 people was the Ph.D students in Boğaziçi University, aged between 25-36, and

consisting both married and unmarried ones. The advantage for these group is that each person, even each respondent uses white-goods in his/her home, and can supply ideas about the perceived value of these products. The first group consisted of 3 females and 3 males, whereas the second group consisted of 5 females and 2 males. As a moderator, the researcher with his professor attended both groups and recorded the group discussion where the topics of these academic study were under discussion. They were very careful about not to bias the responses of the participants. They did not involve with discussions and also did not give any information about their own sense. They tried to let the participants to explain their ideas freely. As explained above, the meetings were tape recorded, and these records were used for scale development through content analyses. During these focus group studies, following open ended questions were used:

1-) Explain the factors that affect your decision of buying a durable goods product? Try to describe your preferences?

2-) Have you ever bought a white-goods product or have you ever been in the shopping process of a white-goods product?

3-) What do you think about the energy consumption issue of these products?

4-) What is the priority of the energy consumption level of products, in your decision?

4. DISCUSSION

The data was collected by the researcher as a tape-record, and then decoded by noting each idea on a paper. The questionnaire of this study was developed by these variables which were coming from the group members voices about the components of customer perceptions about durable goods, and to generate hypotheses that will be tested quantitatively. Furthermore, a detailed understanding was crucial for making use of the ideas generated from these focus group studies. As a milestone in focus group studies Morgan (1997) states that neither the individual nor the group generates a separable unit for analysis. Instead, a balance between the two is a must to acknowledge the interactivity between these two units of analysis. Three common ways for coding is known in the literature to transcript focus group results: to note (a) whether each individual person talked about a given code, (b) whether each groups' records contain a given code (c) total mentions of a given code. The best method is descriptive counting to especially understand the frequency in such academic studies to compare the codes' relative importance. Drawing and verifying the data after the steps of data reduction and data display is used to find the overlapping codes.

Griggs (1987) states that, to make the data more meaningful the only strategy is data reduction. The importance of this step comes from the risk of losing critical data. The only purpose of this step is to create a manageable data. The result should not ignore the important data, or throwing it away. Here, the aim is to bring the data in a manageable position. The data reduction process is done by the guides of such academic studies about data reduction techniques. Validity and reliability analysis can only be done after the items were grouped in terms of sharing similar patterns, thus the needed step was data display before the verification. We are using qualitative research design to clarify our research construct. For that purpose, content analysis and a survey design on the construct are what follow. Validity and Reliability Analysis are coming after. The content analysis steps on research constructs are followed according to Zimmer and Golden's (1988) study. The results of open ended questions are transcribed into the following table with the name of the themes-unsorted and number of occurrences (frequency).

Table 1. First Categorization

| Theme | Frequency |
|--|------------------|
| Consistent Brand Quality | 12 |
| Product Design | 7 |
| Long Life-Time | 6 |
| Aftersales for performing consistently | 14 |
| Production Country | 3 |
| Ease-of-Use | 4 |
| Product Brand Unity Pleasure | 3 |
| Feeling relaxed about using | 7 |
| Pleasure Given by High Quality | 10 |
| Energy Efficiency | 7 |
| Reasonably Priced | 5 |
| Offers value for money | 6 |
| Aftersales Prices | 4 |
| Social Acceptance | 7 |
| Social Status | 4 |
| Word of Mouth | 7 |
| Logo Design | 3 |
| Other People | 6 |
| Personal Familiarity | 8 |
| Energy Label | 7 |
| Energy Efficiency Class | 5 |
| Environmental Consciousness | 11 |
| Environmental Image of the Brand | 6 |
| Decision Making Sequence | 8 |
| Store Environment | 7 |
| Salesforce Assesment | 10 |
| Facility Layout | 6 |
| Dealer Reliability | 4 |
| Dealer Location | 6 |
| Gender of Decision-Maker | 8 |
| | 201 |

Table 2. Second Categorization

| Theme | Frequency |
|--|------------------|
| Consistent Brand Quality | 11 |
| Product Design | 7 |
| Long Life-Time | 7 |
| Aftersales for performing consistently | 12 |
| Production Country | 3 |
| Ease-of-Use | 5 |
| Product Brand Unity Pleasure | 3 |
| Feeling relaxed about using | 8 |
| Pleasure Given by High Quality | 9 |
| Energy Efficiency | 8 |
| Reasonably Priced | 5 |
| Offers value for money | 7 |
| Aftersales Prices | 5 |
| Social Acceptance | 7 |
| Social Status | 6 |
| Word of Mouth | 6 |
| Logo Design | 5 |
| Other People | 4 |
| Personal Familiarity | 8 |
| Energy Label | 7 |
| Energy Efficiency Class | 6 |
| Environmental Consciousness | 10 |
| Environmental Image of the Brand | 7 |
| Decision Making Sequence | 6 |
| Store Environment | 8 |
| Salesforce Assesment | 6 |
| Facility Layout | 7 |
| Dealer Reliability | 5 |
| Dealer Location | 8 |
| Gender of Decision-Maker | 5 |
| | 201 |

After the researcher who is also an expert in white goods sales categorized the results from two focus groups, it was necessary to use a second expert who is a regional manager of a major appliance manufacturer in Turkey. We will refer to this expert as the second sorter who was given the duty to categorize of both focus group results. It is important to note that both the researcher and the second sorter analyzed both focus group results. They conducted the categorization process independently but their categorizations include both focus groups.

In qualitative research, when there are multiple sources certain triangulation techniques may be necessary in order to come to a consensus. One of the methods that we can use to triangulate multiple sources is pattern matching. According to Mills et. al, (2010) '*Pattern matching* is the comparison of two patterns to determine whether they match (i.e., that they are the same) or do not match (i.e., that they differ).' In this case the categorizations of both sorters were compared to find the themes that appear in both sorters' analysis by pattern matching method. The results are shown in Table 3.

Out of 201 categories identified, 167 categories are found to be matching with the researcher and the sorter. So, this shows a percentage of agreement of $167/201=0.84$ or %84. The categories are then grouped into the perceived value model accordingly with descriptions in the first section.

Table 3. Agreed Items

| Theme | Frequency |
|--|-----------|
| Consistent Brand Quality | 11 |
| Product Design | 4 |
| Long Life-Time | 6 |
| Aftersales for performing consistently | 10 |
| Production Country | 3 |
| Ease-of-Use | 4 |
| Product Brand Unity Pleasure | 3 |
| Feeling relaxed about using | 7 |
| Pleasure Given by High Quality | 9 |
| Energy Efficiency | 7 |
| Reasonably Priced | 5 |
| Offers value for money | 6 |
| Aftersales Prices | 4 |
| Social Acceptance | 7 |
| Social Status | 4 |
| Word of Mouth | 6 |
| Logo Design | 3 |
| Other People | 4 |
| Personal Familiarity | 6 |

| | |
|----------------------------------|-----|
| Energy Label | 7 |
| Energy Efficiency Class | 3 |
| Environmental Consciousness | 10 |
| Environmental Image of the Brand | 6 |
| Decision Making Sequence | 6 |
| Store Environment | 5 |
| Salesforce Assesment | 5 |
| Facility Layout | 5 |
| Dealer Reliability | 3 |
| Dealer Location | 3 |
| Gender of Decision-Maker | 5 |
| | 167 |

Table 4. First Independent Sorter Results

| Theme | Frequency |
|--|------------------|
| <u>Quality</u> | |
| Consistent Brand Quality | 8 |
| Product Design | 4 |
| Long Life-Time | 5 |
| Logo Design | 4 |
| Aftersales for performing consistently | 7 |
| Engineering | 3 |
| <u>Emotional</u> | |
| Ease-of-Use | 7 |
| Product Brand Unity Pleasure | 9 |
| Feeling relaxed about using | 5 |
| Environmental Consciousness | 7 |
| Pleasure Given by High Quality | 5 |
| <u>Price</u> | |
| Energy Efficiency Sensitivity | 7 |
| Reasonably Priced | 5 |
| Offers value for money | 6 |
| Aftersales Prices | 4 |
| <u>Social</u> | |

| | |
|-----------------------------------|-----|
| Social Acceptance | 7 |
| Production Country | 4 |
| Social Status | 4 |
| Other People | 6 |
| Personal Familiarity | 7 |
| <u>Energy Efficiency</u> | |
| Energy Label | 7 |
| Energy Efficiency Class | 3 |
| Environmental Image of the Brand | 6 |
| Decision Making Sequence | 6 |
| <u>Shopping Experience</u> | |
| Store Environment | 5 |
| Salesforce Assesment | 5 |
| Word of Mouth | 6 |
| Facility Layout | 5 |
| Dealer Reliability | 3 |
| Dealer Location | 2 |
| Gender of Decision-Maker | 5 |
| | 167 |

Table 5. Second Independent Sorter Results

| Theme | Frequency |
|--|------------------|
| <u>Quality</u> | |
| Consistent Brand Quality | 7 |
| Product Design | 4 |
| Long Life-Time | 6 |
| Aftersales for performing consistently | 8 |
| Engineering | 3 |
| Production Country | 4 |
| <u>Emotional</u> | |
| Ease-of-Use | 5 |
| Product Brand Unity Pleasure | 9 |
| Feeling relaxed about using | 7 |
| Pleasure Given by High Quality | 5 |

| | |
|-----------------------------------|-----|
| <u>Price</u> | |
| Energy Efficiency Sensitivity | 7 |
| Reasonably Priced | 5 |
| Offers value for money | 6 |
| Aftersales Prices | 4 |
| <u>Social</u> | |
| Social Acceptance | 7 |
| Social Status | 4 |
| Word of Mouth | 6 |
| Logo Design | 4 |
| Other People | 6 |
| Personal Familiarity | 5 |
| <u>Energy Efficiency</u> | |
| Energy Label | 7 |
| Energy Efficiency Class | 3 |
| Environmental Consciousness | 8 |
| Environmental Image of the Brand | 6 |
| Decision Making Sequence | 6 |
| <u>Shopping Experience</u> | |
| Store Environment | 5 |
| Salesforce Assesment | 5 |
| Facility Layout | 5 |
| Dealer Reliability | 3 |
| Dealer Location | 2 |
| Gender of Decision-Maker | 5 |
| | 167 |

5. CONCLUSION

It is seen from the above two categorization tables, 31 themes are assigned to 6 categories in different ways. It is seen from the tables that 27 out of 31 themes are matched.

$$Z = \frac{k - E_k}{[np(1-p)]^{1/2}}$$

k: number of matches = 27

E_k : expected number of matches = 31/6

n: total number of items = 31

p: probability that two judges will assign a theme to the same category = 1/6

$$Z = \frac{(27 - 31/6)}{(31 * 1/6 * 5/6)^{1/2}} = 5,07$$

In this case, the Z score 5,07 exceeds a critical Z score of 2.33 (alpha = 1%). So it is realized that the result is significant.

For the reliability analysis following formula is used:

$$R = \frac{N * \text{Average Agreement}}{[1 + (N-1) * \text{Average Agreement}]}$$

N: Number of judges

$$R = \frac{(2 * 27/31)}{[1 + (2-1) * 27/31]}$$

$$R = 0,93$$

This result shows that reliability value 93% is higher than the minimum reliability value of 85%. So, this shows sufficient reliability level of analysis. To develop a scale, we have to talk about our sample first. The sampling method refers to way of selecting sample units. The most important point is to consider the decision of using a probability or a non-probability sample. In this research probability sample method has been chosen for the target population. Since the sampling method determined, a convenient sample size can be calculated. In addition, the confidence level should be specified. We had a size of sample as 77, which is higher than the minimum requirement of 30 for normal distribution.

In this part of the study, the researcher attempts to develop a scale to measure components of perceived value for white-goods products. Procedural framework suggested by Lundstrom and Lamont (1976, pp. 374-376) are used for that purpose. According to their framework methodological stages in the scale development process are as follows:

1. A definition of the construct to be scaled and the generation of statements for inclusion in an item pool
2. Selection of type of scaling procedure to be used
3. Reliability testing of scale properties.
4. Validation of final scale properties

In order to define research construct properly, a comprehensive literature review and focus group interview are conducted in previous sections. On the basis of these viewpoints and focus group interviews the components of perceived value in white-good products were defined to include quality, emotional, price, social, energy efficiency and shopping experience. The major components of the construct were operationalized to include the following factors:

- Quality dimension including consistent brand quality, product design, long life-time, aftersales for performing consistently, engineering and production country.

- Emotional dimension including ease of use, product brand unity pleasure, feeling relaxed about using, pleasure given by high-quality.

- Price dimension including energy efficiency sensitivity, reasonable pricing, offering value for money, aftersales pricing

- Social dimension including social acceptance, social status, word of mouth, logo design, other people, personal familiarity.

- Energy Efficiency dimension including energy label, energy efficiency class, environmental consciousness, environmental image of the brand, decision making sequence.

- Shopping Experience including the store environment, sales force assessment, facility layout, dealer reliability, dealer location and gender of decision maker.

Churchill (1979 pp. 66-72) suggests that, after the dimensions are identified, a pool of items need to be constructed for all dimensions. By a review of academic literature, going through the results of a focus group discussion and taking into consideration the Turkish cultural context, 31 statements were developed for scale design. Likert type scale and percentage rating scale were used for the same statements. The researcher preferred to use these scales in order to allow inclusion of a large number of diverse statements that are regarded as necessary for scale comprehensively and to enable consumers to understand quickly how to respond. The researcher prepared two questionnaires consisting of 31 questions.

Two reliability analyses are conducted for each scale. First, the entire items reliability test is conducted by computing coefficient alpha. The coefficient alphas of each scale are computed as follow:

i. Likert Summated Rating Scale

Reliability Coefficients

N of cases = 77

Alpha = 0.840

N of Items = 31

ii. Percentage Scale

Reliability Coefficients

N of cases = 77 N of Items = 31

Alpha = 0.852

The reliability coefficient of 70% or higher is considered as acceptable in most Social Science applications. Therefore, it can be assumed that both of the scales are reliable. It can also be said that Percentage scale is more reliable than Likert scale. Second, each dimensions reliability test is conducted by computing coefficient alphas. Multi-Trait Multi-Method Matrix is used for assessing the validity and reliability of the construct.

Table 6. MTMM Results

| LLikert | Quality | Likert Scale | | | | | Quality | Percentage ScaleIII | | | | |
|--------------------|---------|--------------|-------|--------|-------------------|---------------|---------|---------------------|-------|--------|-------------------|---------------|
| | | Emotional | Price | Social | Energy Efficiency | Shopping Exp. | | Emotional | Price | Social | Energy Efficiency | Shopping Exp. |
| QQuality | .535 | | | | | | | | | | | |
| EEmotional | .377 | .359 | | | | | | | | | | |
| PPrice | .625 | .435 | .532 | | | | | | | | | |
| SSocial | .226 | .481 | .307 | .711 | | | | | | | | |
| EEnergy Efficiency | .461 | .253 | .552 | .385 | 0.804 | | | | | | | |
| SShopping Exp. | .385 | .606 | .305 | .472 | 0.493 | .755 | | | | | | |
| PPercentage | | | | | | | | | | | | |
| QQuality | .513 | .037 | .111 | .070 | 0.138 | .090 | .568 | | | | | |
| EEmotional | .055 | .219 | .078 | .173 | 0.078 | .184 | .321 | .300 | | | | |
| PPrice | .096 | .045 | .202 | .070 | 0.139 | .081 | .664 | .409 | .512 | | | |
| SSocial | .019 | .047 | .028 | .209 | 0.053 | .064 | .286 | .524 | .329 | .727 | | |
| EEnergy Efficiency | .045 | .017 | .064 | .055 | 0.205 | .065 | .507 | .252 | .587 | .421 | .825 | |
| SShopping Exp. | .039 | .067 | .037 | .073 | 0.082 | .211 | .398 | .615 | .468 | .482 | .513 | .747 |

6. SUGGESTIONS

The goal of this study is to generate a scale for measuring the perceived value of white goods customers in Turkey over the Perval scale, which is studied for several sectors in the literature. We explained that durable goods, known as white goods are important products that everyone needs to use in daily-life. As with all products, here also understanding customers' preferences is a key factor of success. For this purpose, to understand the customer preferences of durable-goods consumers, the Perval scale is used which is highly studied in the literature as a basis for many sectors except white goods.

On the other hand, another goal of this study is to generate a survey to measure the perceived value of white goods' customers, eventually to be called WhitePerval. As explained above, survey generation process started by examining the literature of Perceived Value, Consumption Values and Perval scale. Then the related parts examined the adaptation process of Perval over white goods customers. This study explains each and every step in survey generation processes starting from expert interview until statistical analysis.

Qualitative research design is used to clarify our research construct. For that purpose, content analysis and a survey design on the construct, validity and reliability analysis are also studied for WhitePerval. Further studies should include experimental design about the results for Turkey. The aim of the experimental design would be to understand what determines the customers' perceived value about durable goods, especially white goods. The existing Perval gives information about the quality, emotional, price and social factors but, in today's world,

the energy efficiency and shopping experience factors also affects the customers' perceived value about white-good products.

Processing goal of understanding Perceived Value gives signals about purchasing behavior indirectly; so, it will be useful to understand what customers value for a better marketing and ultimately for more profitable sales. Previous research suggests that durable goods customers have perceived value in four dimensions, but by the experimental design, this study will seek information about what changed in twenty years, and what are the dimensions that should be added to these dimensions. High level of interactivity is demanded in a transactional operation such as purchasing white-goods. So, the hypothesis will be as follows:

H1: When processing goal is; understanding Perceived Value of durable good customers, energy efficiency and shopping experience are also included in Perceived Value measures.

In order to do the experiment, the participating respondents should be selected from white-good customers who have at least one previous experience on shopping for these items either for buying or information gathering. The experiment is performed by assigning some information and evaluation material to the respondents. After, redesigning the qualitative survey questions, we will make them filled with recent or potential white-good customers. The output of the MTMM method, will be a guideline to redesign the survey. In conclusion, in this experiment, new independent variables will be added to the existing PerVal scale as Energy Efficiency and Shopping Experience to better understand today's tendency of perceived value of white-good customers.

REFERENCES

- Akkucuk, U., & Turan, C. (2016). Mobile Use and Online Preferences of the Millenials: A Study in Yalova. *Journal of Internet Banking and Commerce*, 21(1), 1.
- Akkucuk, U., & Esmaili, J. (2016). The impact of brands on consumer buying behavior: An empirical study on smartphone buyers. *International Journal of Research in Business and Social Science* (2147-4478), 5(4), 1-16.
- Aydemir, C. (2013). A survey aimed at E-commerce applications in firms operating in Diyarbakir organised industrial Zone. *International Journal of Business and Social Science*, 4(1).
- Bolton, R. N., & Drew, J. H. (1991). A longitudinal analysis of the impact of service changes on customer attitudes. *The Journal of Marketing*, 55(1) 1-9.
- Churchill Jr, G. A. (1979). A paradigm for developing better measures of marketing constructs. *Journal of marketing research*, 64-73.
- Clulow, V., Barry, C., & Gerstman, J. (2007). The resource-based view and value: the customer-based view of the firm. *Journal of European Industrial Training*, 31(1), 19-35.
- Gencer, Y. G. (2015). Relationship Between New Online-Socialized World And Organization Based Self Esteem. *The Online Journal of Communication and Media–October*, 1(4).
- Gencer, Y. G., & Akkucuk, U. (2017). Measuring Quality in Automobile Aftersales: AutoSERVQUAL Scale. *Amfiteatru Economic*, 19(44), 110-123.
- Griggs, S. (1987). Analysing qualitative data. *Journal of the Market Research Society*.

- Habel, J., Schons, L. M., Alavi, S., & Wieseke, J. (2016). Warm glow or extra charge? The ambivalent effect of corporate social responsibility activities on customers' perceived price fairness. *Journal of Marketing*, 80(1), 84-105.
- Helkkula, A., Kelleher, C., & Pihlström, M. (2012). Characterizing value as an experience: implications for service researchers and managers. *Journal of Service Research*, 15(1), 59-75.
- Hsu, C. L., & Lin, J. C. C. (2015). What drives purchase intention for paid mobile apps?—An expectation confirmation model with perceived value. *Electronic Commerce Research and Applications*, 14(1), 46-57.
- Lundstrom, W. J., & Lamont, L. M. (1976). The development of a scale to measure consumer discontent. *Journal of Marketing Research*, 373-381.
- Mills, A. J., Durepos, G. & Wiebe, E. (2010). *Encyclopedia of case study research* Thousand Oaks, CA: SAGE Publications Ltd doi: 10.4135/9781412957397
- Morgan, D. L. (1997). Qualitative research methods series, Vol. 16. Focus groups as qualitative research.
- Pandža Bajs, I. (2015). Tourist perceived value, relationship to satisfaction, and behavioral intentions: The example of the Croatian tourist destination Dubrovnik. *Journal of Travel Research*, 54(1), 122-134.
- Porter, M. E. (1990). The competitive advantage of nations. *Harvard Business Review*, (March-April), 73-91.
- Shah, D., Rust, R. T., Parasuraman, A., Staelin, R., & Day, G. S. (2006). The path to customer centricity. *Journal of service research*, 9(2), 113-124.
- Sheth, J. N., Newman, B. I., & Gross, B. L. (1991). Why we buy what we buy: A theory of consumption values. *Journal of business research*, 22(2), 159-170.
- Sweeney, J. C., & Soutar, G. N. (2001). Consumer perceived value: The development of a multiple item scale. *Journal of retailing*, 77(2), 203-220.
- Toker, A., Seraj, M., Kuscu, A., Yavuz, R., Koch, S., & Bisson, C. (2016). Social media adoption: A process-based approach. *Journal of Organizational Computing and Electronic Commerce*, 26(4), 344-363.
- Woodruff, R. B. (1997). Customer value: the next source for competitive advantage. *Journal of the academy of marketing science*, 25(2), 139-153.
- Yang, H., Yu, J., Zo, H., & Choi, M. (2016). User acceptance of wearable devices: An extended perspective of perceived value. *Telematics and Informatics*, 33(2), 256-269.
- Zeithaml, V. A. (1988). Consumer perceptions of price, quality, and value: a means-end model and synthesis of evidence. *The Journal of marketing*, 52(3), 2-22.
- Zimmer, M. R., & Golden, L. L. (1988). Impressions of retail stores: A content analysis of consume. *Journal of retailing*, 64(3), 265.