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Quantitative Analysis of the Consumer Perceived Value Deviation

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Abstract

Consumers perceive the value of durable goods in the consumption process at two different points of time. The perceived value based on first impressions influences their buying behavior. In the subsequent utilization phase consumers form a new value judgment that affects the repurchase behavior. Conversely, the survey methods to represent the pre-purchase and post-purchase value judgment are not sufficiently discussed in the literature. Especially, there is a need to investigate by which elements the perceived value is described. In this sense, a survey instrument was developed that can be used at both time points to asses the deviation of pre-purchase and post-purchase value judgments. A structural equation model has been compiled and was checked for validity and reliability. The use of statistical methods allows revealing significant differences between the two product values. The results have implications for the design of products and the development process.

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Keywords: perceived quality; product value judgment; perceived value

1. Introduction

1.1. Motivation

Consumers perceive the value of durable goods in the consumption process at two different points of time. First, they form a judgment about the value of a product immediately before purchasing, which decides on the choice of a particular product from a set of similar products. In the subsequent utilization phase consumers refine their value judgment that affects the repurchase behavior. At both points of time, the perceived quality of the product has a decisive influence on the perceived product value, which is influenced by the sum of product quality characteristics [1, 2]. The reason for the individual perceptions of the same product is mainly due to the different preferences at different points of the purchasing process [3]. Before purchasing a product, the Consumer Perceived Value (CPV) is determined by factors including the choice of alternatives: "Purchase means choosing" [4]. In dealing with alternatives, strengths or weaknesses of the product compared to similar products have an impact on the CPV [5]. In addition, the consumers' perception is influenced by the experience already gained with similar products [6]. After purchase or during the utilization phase the CPV of the selected product changes. In the utilization phase, consumers evaluate the gained experiences. Furthermore, consumers notice new product characteristics that they could not assess or evaluate sufficiently before purchasing. An example of such a product characteristic is the comfort or the reliability of a product over a longer period. After purchase, consumers asses the product more emotionally than before purchase [7]. Companies need to understand the assessment and the reasons of the CPV deviation. Thereby, companies can try to improve the CPV through performance leadership and accepted high costs. Thereafter they strive to reduce costs keeping the high product value, for example by standardization. Alternatively, companies can initially attempt to reduce costs accepting a low CPV through cost leadership. Only then, the aim is to increase the CPV by differentiation in for example perceived quality, keeping the low costs. The analysis of the CPV deviation enables companies to focus on the concerned product elements during the product development. Therefore, the active influence of the CPVs contributes to an efficient implementation of an integrated and

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user-oriented product development. In recent publications pre-purchase and post-purchase product value are considered only separately [8, 9]. To determine the CPV of durable goods, an appropriate assessment tool is necessary, which can be used at both points of time to determine the systematic deviation of pre-purchase and post-purchase value judgments.

1.2. Mechanisms to increase the consumer perceived value

To understand and to be able to predict consumers' choices it must be known how they perceive products. One stated hypothesis is that consumers perceive products as bundles of quality attributes with connected attribute performances [4]. On the one hand, the benefits of an attribute result from the degree to which it is assessed as useful for the satisfaction of needs and on the other hand, whether the product-specific, perceived attribute performance has a perceptible difference in benefits compared to alternative products [10, 11]. The product value can be increased by two mechanisms: either by reducing the cost to the consumer or just by an increase in product deliverables, so the benefits [12]. However, it must be ensured that this value is also perceived as such by the consumer [12], which means, the manufacturer must have an idea of the product value from the consumer's perspective. To design a general instrument for measuring the value of the product before and after the purchase, the trade-off between benefits and costs, as shown in Fig. 1, is the conceptual framework for the scale [13–15]. In accordance with the literature, this cognitive-rational approach should be extended to emotional, so-called hedonic elements [16, 17].

Fig. 1. Trade-off between benefits and costs as the conceptual framework

1.3. Research questions in the context of perceived value

In the context of the consumer's perceived value judgment, the following research questions emerge:

1. By which elements is the CPV described?
2. How can the CPV deviation over time be analyzed statistically?
3. How can companies use the knowledge about the CPV and its deviations for further product developments?

The following chapter presents the methodology applied to answer these research questions.

2. Applied methodology to analyze the consumer perceived value statistically

In order to evaluate the deviation of pre-purchase and post-purchase value judgment, a valid and reliable measuring instrument is needed. To achieve this objective and to answer the research questions, the CPV construct needs to be designed and structural equation models needs to be created.

2.1. Step 1: Designing the CPV construct

Sanchez-Fernandez et al. suggest using a multidimensional construct for the conceptualization of the elements of the consumer's perceived product value [18]. According to this view, the product value is related to an aggregation of elements [19]. Furthermore, it is necessary to specify the dimensions of benefits and costs with corresponding elements. Treacy and Wiersema emphasize the key question, which must be taken into account for the creation of a measuring instrument: "What are the dimensions of value that customers care about?" [20]. The objective is to create a universally applicable item catalog. Consequently, a weighted additive combination of the elements seems suitable. This methodology ensures that no important aspects of the CPV will be ignored and follows the multidimensional view of the construct. Furthermore, the additive model takes into account the cognitive balancing trade-off between benefits and cost [21] and is preferred to a multiplicative model in the form of a ratio of benefits to costs [22]. First, all influencing benefit and cost elements must be examined and identified in order to deliver such an equation.

In the following, item sets are developed that query the identified elements of the CPV individually [23]. The outcome is a multiple-item scale, which contains the complete CPV construct [14, 19]. Thus, it is possible to determine the elements in which the product value perceptions have changed by comparing the results of the pre-purchase to the post-purchase judgment. Fig. 2 shows the derived cost-benefit model, which sets the framework for this item generation.

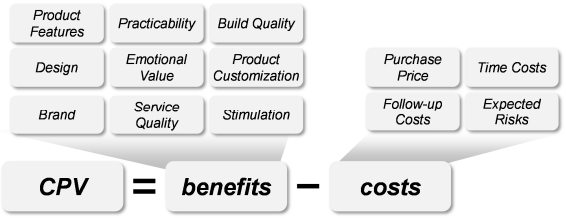

Fig. 2. The CPV construct with the corresponding elements as concept for the measuring instrument

The importance of individual product attributes for the overall value judgment changes after purchasing. The individual elements are considered unequally relevant and thus effect the final judgment unequally weighted, depending on the product category and on the individual. Interactions between the elements are considered as well [23, 24].

In most cases, the consumer has difficulties to estimate the comprehensive product value prior to purchase. In accordance with the selected CPV model the calculation instruction, as shown in equation (1), is used to evaluate the CPV, where n stands for the number of benefit elements and m represents the number of cost elements. The coefficient x is used to weight the corresponding element relating to the consumer's preferences. According to an item rating scale in the questionnaire between 1 and 7, CPVs in the range between 6 and -6 are possible, as the maximum value of an element can be 7 and the minimum value can be 1. The formation of the