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IDENTIFICATION AND INTERPRETATION OF THE IMPORTANCE OF CUSTOMER SERVICE SATISFACTION FACTORS

Abstract

Customer satisfaction is shaped by their experience over the whole supplier - customer relation cycle, i.e., throughout a pre-transactional, transactional and post-transactional phase, respectively. Customer service is the process that unites all three phases. Therefore planning efficient customer service should be based on the priorities which customers value most in the process and which have the strongest impact on their satisfaction. The literature and practice indicate at least two ways which allow one to establish customer-perceived significance of market offerings' attributes. However, each way leads to a different customer's reality and supports different managerial decisions. Understanding of those alternative ways enables decision-makers to take more appropriate steps and consequently achieve higher levels of customer satisfaction. In this article, we attempt to uncover the implications of alternative procedures to identify customer perceived importance of market offering aspects: stated importance and derived importance. We verify our claims using the data from an exploratory study of personal insulin pumps users.

Key words: derived importance, stated importance, customer service satisfaction, personal insulin pump user

1. Introduction

While searching for a key to customer satisfaction, many researchers became convinced that it is to be found within a customer relationship cycle, which reaches far beyond the transaction episode. As a matter of fact, it stretches from customers' pre-transactional experience and decisions to the post-transactional

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experience of enjoying the purchased offering. The whole landscape of customer relationship can be successfully planned and controlled using the process of customer service, which is an integral part of the seller's total product. Customer service directly influences perceived quality, both in its functional (processual) as well as technical (expected outcomes) dimensions [Grönroos 1998]. Shaping customer satisfaction through effective customer experience management requires from planners a well-thought emphasis on those areas, which seem to impact customers' attitudes the most. It follows from this that managers must be able to correctly assign priorities and focus their attention and effort on issues, which are believed to have a most significant influence on customer satisfaction.

In the following article, the authors intend to argue for the existence of at least two routes leading to the knowledge about customer-perceived importance of different aspects of a total product. The first one leads through customers' conscious knowledge and their explicit statements, the other one requires analysis of customers' pattern of response to survey questions, which uncovers hidden and unconscious relationships between an offering's evaluation and offering-related level of satisfaction. In authors' opinion, both routes touch upon different realities, and bring potentially valuable observations, provided the collected data are correctly interpreted. The authors' propositions are supported with empirical observations collected during a study conducted on a sample of personal insulin pump users.

2. Customer service satisfaction

Customer service is commonly considered to be one of the key elements of a company's strategy. It is, however, difficult to find a universally acknowledged definition of customer service in the marketing literature. Customer service is context-dependent, and different industries tends to focus on either "soft" elements of seller-buyer relationships or tangible effectiveness indicators of buyer-supplier cooperation. Generally speaking, customer service is responsible for delivering a promised offering to the customer in such a way, that at least his or her expectations are met with respect to the time and place of delivery as well as information and activities provided by the seller. It is often emphasized by various researchers that customer service is hardly an isolated episode, rather it is a process which encompasses preparatory (pre-transactional) activities, the actual act of delivery (transaction), and customer support (post-transactional stage). Delta Associates' consultants suggest that during the process of customer service, a company should deliver the offering to the customer honestly, allowing effective (in terms of timely and exhaustive information as well as time, effort, and cost) access to the company's offering, and ensuring that the contact with the seller to is both pleasant and satisfactory [Christopher 2011,p.31-32]. The above

discussion suggests that the effectiveness of the customer service process should be measured by recording and evaluating the level of customer satisfaction with different aspects of the process.

Having conducted a thorough literature study and field research, Giese and Cote concluded that customer satisfaction is a synthetic, affective response of varied intensity to given aspects of purchase and/or consumption (use) of a product. It refers to a certain point in time, and has a finite lifespan [Giese 2000]. From the psychological perspective, satisfaction is a complex process, which encompasses affective and cognitive components. Marketing researchers and scholars usually follow the Expectations Disconfirmation Paradigm, which derives the feeling of satisfaction from the comparison of one's pre-purchase expectations, and the experience with the product purchase and/or use. This paradigm is often supplemented with the "importance" variable, which reflects customers' perceived significance of different product attributes considered in the satisfaction measurement [Kanning 2009]. Thus the level of customer satisfaction is conceptualized as a function of a given set of attributes making up a market offering, each having different degree of significance for buyers and users. There is a common consensus – which seems both intuitively and empirically appropriate – that customers attach different importance to various offering components, therefore those components weigh differently on the level of overall satisfaction with the offering.

3. Stated versus derived importance

Stated importance is defined as an explicit respondent's statement referring to the degree of an attribute's perceived importance. Typical techniques used for identifying stated importance usually include rating, and ranking scales. There are other scales commonly considered as better, though more difficult to use effectively. These include for instance: constant sum scales, Q-sort, paired comparisons, and Maximum Difference Scaling (MaxDiff). They allow researchers to eliminate the fundamental problem associated with stated importance, that is low variability of importance scores within a given set of attributes. Regardless of the technique used to identify stated importance, the assumption of the concept's validity requires satisfying the following conditions [Stark, Scholder 2011]:

- a. factors regarded by the respondent as important should be salient enough to him/her;
- b. the respondent should be sincere with himself/herself;
- c. the respondent should be sincere with the researcher and avoid responding in a socially desirable way;
- d. the respondent should be capable of rational evaluation of the object of study.

Research conducted over the last several decades by cognitive psychologists suggest that the listed assumptions about respondents in many cases are overly optimistic [Nisbett 2007]. After all, respondents may not be completely aware of the things they are asked about by surveyors. One way to minimize the negative influence of individual’s imperfect cognitive processes on identifying the importance attached to different attributes of an offering is by uncovering hidden patterns of respondents’ responses. This objective can be achieved by putting the concept of derived importance into practice.

Technically speaking, derived importance is a statistical expression of a relation between the offering’s attributes (predictive variables) and the overall satisfaction with the offering (a criterion variable). It reflects the magnitude (through the strength of covariance) and the direction with which offering’s attributes change together with the overall satisfaction. To express this statistical relation, researchers usually use either bivariate correlation or multiple regression (standardized regression coefficient β). Sometimes the product of the correlation and the β coefficients are used. Table 1 offers a comparison of the concepts of stated importance, and derived importance.

Table 1. Stated importance versus derived importance.

	Stated importance	Derived importance
Advantages	<ul style="list-style-type: none"> - offers face validity; - offers easy measurement and interpretation; - allows identification of relative importance of offering’s attributes for a single customer, and an offering’s strong and weak points vis-à-vis a competitor’s; 	<ul style="list-style-type: none"> - allows relative impact of an offering’s attributes (individually and collectively) on overall satisfaction with the offering; - does not require the dual-question approach, only rating of attributes; - points to key drivers of satisfaction; - offers high predictive power;
Limitations	<ul style="list-style-type: none"> - respondents tend to regard all attributes as equally important; - rating scales (most often used) offer very low discriminant power (in case of ranking scales discriminant power is much higher, however, these types of scales are rarely used for practical reasons); - requires the dual-question approach (i.e. rating of attributes, and stating importance of each attribute); - bias toward attributes perceived as socially desirable; - low predictive power; 	<ul style="list-style-type: none"> - regression coefficients are difficult to interpret due to ordinal scales usually used for measurement; - halo effect; - impossible to identify importance of attributes for a single respondent; - dependent on sample size; - coefficients tend to be unstable (their magnitude, direction, and statistical significance) due to multicollinearity and model identification (adding or removing a variable changes coefficients in regression models); - sensitive to length of scales and violation of normal distribution assumption (correlation);

Selected sources: R. Chu, *Stated-importance Versus Derived-importance Customer Satisfaction Measurement*, “Journal of Services Marketing” Vol. 16/4, 2002; K. Chrzan, J. Kavecansky... 2010, op. cit.

It is important to emphasize that stated, and derived importance constitute in fact an attempt to measure two different realities. They should not be regarded as alternative approaches [Myers 1977]. In essence, derived importance is a measure of determination, where the determinant should satisfy two assumptions: (1) it must be important in the sense of "weighty, momentous, of great consequence, significance, or value" [Myers 1977], and (2) it must change systematically together with the criterion variable. Theoretically, derived importance satisfies both assumptions ^[1], stated importance only the first one. For this reason, juxtaposing both measures of importance in the so-called dual importance diagram [Grigoroudis 2003] is questionable.

Many researchers lean towards rejecting stated importance, and substituting it with derived importance, arguing against low credibility of the former, rooted in cognitive imperfection and bounded rationality of individuals. However, Chrzan i Kavecansky [Chrzan 2010] convincingly argue against treating both approaches as alternatives, where one is superior to the other. As a matter of fact, they are different methods of reaching different realities of individuals. Each method brings different knowledge, useful only when the researcher realizes which reality he or she is trying to understand, and how this reality is associated with consumer behavior.

4. Different importance measures, different realities

It follows from the earlier discussion that stated importance and derived importance address two different customers' realities – the consciously expressed reality of how “things ought to be”, as well as the hidden, only partly realized reality. In his now classic textbooks, Kotler [Kotler 2009] persistently points to the fact that consumer research should not be restricted only to studying the openly articulated, for the explicit is not always truly important. Very often it is the unstated that turns out to be important. The reality of stated satisfaction factors, readily shared with the researcher by consumers due to its mental accessibility, seems to resemble the hygiene factors of Hertzberg's two-factor theory, or the “must-bes” of Kano's model. Low performance in this area tends to lead to customer dissatisfaction, however, no range of investment will boost customer satisfaction. On the other hand, the reality of derived satisfaction factors resemble Hertzberg's motivators or Kano's attractive requirements, which often remain unstated, even subconscious, nevertheless they are responsible for more than proportionate increase in customer satisfaction levels.

Researchers differ in their preference for the way derived importance should be identified. The review of accessible literature and research practices may

¹ Measurement errors and response biases can - and very often do – undermine the second assumption.

suggest that the method of choice is multiple regression. It appears to be able to provide with importance coefficients unburdened with multicollinearity. Yet, considering limitations of the method, as well as rather unrealistic expectations of the lack of interactions among offering's attributes in real life, the choice of bivariate correlation seems more appropriate [Paternoster 2010]. In such a case, coefficients are affected by multicollinearity, but that is what one would expect. It is difficult to imagine an offering which attributes or internal processes are free from mutual interactions, whose direction is sometimes difficult to predict (and usually it is bilateral). Moreover, correlation analysis offers a less "foggy" picture, free from multicollinearity paradoxes of regression models (e.g. positive coefficients become negative after a variable is added or removed from the model). Thus using correlation analysis, derived importance of attributes can be expressed in terms of correlation coefficients (e.g. Pearson's or Spearman's, depending on measurement level and sample size). These coefficients can later be turned into easier to interpret coefficients of determination (r^2), after the assumptions about the probable direction of the relation have been made.

5. Importance analysis of customer service attributes – a study of personal insulin pump users

To identify factors perceived as important for customer service satisfaction in the context of purchase and usage of personal insulin pumps, the authors together with one of their master's degree student^[2], designed and conducted a study on a sample of 50 purposively selected diabetics – users of personal insulin pumps manufactured and serviced by one of leading producer of this type of equipment. Subjects were selected on the basis of their active involvement in the insulin pump purchase. The reasons for the industry selection were lack of research in this area, and personal experience with the industry of one of the authors. Data was collected using an internet survey. For the purpose of the study, customer service was defined in terms of a number of customer service attributes associated with pre-transactional, transactional and post-transactional stages of the service process (see table 2). The measurement was performed using seven-point satisfaction scale, which addressed overall customer experience with the manufacturer as well as satisfaction with each single customer service attribute. Moreover, respondents were also requested to rate their perceived importance of each customer service attribute using a stated importance seven-point rating scale. Table 2 presents stated, and derived importance scores, generated using the collected data.

² Authors wish to express gratitude to Dawid Wilczewski, MA for collecting empirical data used in the process of writing this article.

Table. 2. Stated importance and derived importance of service satisfaction factors – personal insulin pump users

Attributes of customer service – personal insulin pumps	Stated importance index	Derived importance
Payment convenience	117	.52**
Terms of payment	116	.52**
Terms of warranty	115	.44**
Support in obtaining purchasing cost refund	114	.32*
Timeliness of order completion	114	.43**
Product repair and maintenance services	114	.33*
Speed of order completion	114	.41**
Solving product use problems	113	.31*
Usefulness of educational materials	112	.67**
Completeness of order completion	112	.59**
Ease of submitting orders	112	.49**
Personnel commitment/willingness to help	111	.53**
Firm's commitment to diabetes care	110	.52**
Usefulness of informational material	110	.58**
Usefulness of training programs	110	.54**
Personnel's politeness	108	.72**
Knowledgeability of personnel	106	.73**
Customer service department performance	105	.49**
Web site	104	.25 (SI)
Call center	101	.2 (SI)
Availability of personnel	99	.73**
Availability of training programs	94	.44**
*p<0.05; **p<0.01; SI – statistically insignificant		

Source: Own elaboration using PASW Statistics 18

The table above offers a ranking list of customer service attributes. The attributes are listed in order of their stated importance score. Derived importance coefficients (Spearman's rank-order correlation) are listed to the right of the stated importance score. They reflect the relation between overall satisfaction and the satisfaction with each customer service attribute. Correlation coefficients above 0.7 (strong relation) have been shaded. The outcome of stated importance analysis confirms the common experience of researchers'. The importance indices look „flat” and offer very weak discrimination power. To strengthen the discrimination power, the authors decided to use an importance index instead of average scores. The index has

been built by multiplying scale's numerical values (from -3 to +3, where -3 stands for "completely unimportant", and +3 stands for "very important") by the frequency of responses.

The table contents analysis shows a major discrepancy between both types of importance measures. The results confirm researchers' experience and serve as an empirical proof for the argument of respondents' limited self-knowledge within the area of key satisfaction factors. Respondents tend to consciously attach more importance to "hard" aspects of customer service, whereas subconsciously they emphasize the "soft" attributes. Using rating scales, respondents assign similar weight to many attributes, however, they still tend to regard as more important such attributes as: payment convenience, terms of payment, and terms of warranty. They consciously attached less importance to "human" aspects of the customer service process: availability, politeness, and knowledgeability of the personnel. It is noteworthy, that the latter group seems in fact to exert strong influence on customer service satisfaction. Especially interesting is the case of availability of the personnel. With the correlation coefficient of 0.73, it heads the list of derived importance factors (together with knowledgeability of the personnel), whereas according to the stated importance index, it is a last but one attribute on the attribute importance list.

6. Managerial implications and research limitations

For many decades consumer behavior researchers have warned about the danger of relying exclusively on consumers' conscious statements, especially concerning the importance of product or service offerings' attributes and their impact on customer satisfaction. The authors' study of personal insulin pump users confirms the argument that stated importance and derived importance refer to two different realities. The reality of stated importance addresses customers' conscious expectations and points to those aspects of the total offering which constitute the acceptable minimum in the eyes of consumers. This minimum level is a prerequisite for offering's market success, but it does not that the power to influence customer satisfaction. The analysis of subconscious response patterns brings the answer to the questions what really makes customers satisfied. Very often, the subconsciously voted for satisfaction drivers are consciously underappreciated by customers. It follows from this that to maximize customer satisfaction, marketers should not rely on the articulated, which also turn out to be the unreliable. Rather, they should look for the satisfaction drivers by analyzing the customers reality bypassing their conscious input. One way to do it is by using the concept of derived importance.

The study referred to in the article is based on a relatively small and purposive sample, drawn from an industry which may not share many characteristics with other large consumer industries. Although the research results confirm the authors and most researchers' experience, the problem requires further study, preferably using larger, random samples, within mass market industries. Also, a further analysis of both concepts of stated, and derived importance seems necessary, so that they can be successfully used by market practitioners in their daily operations.

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