Towards an Improved Understanding of Industrial Services: Quality Dimensions and Their Impact on Buyer-Seller Relationships

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Abstract

There is evidence in business practice that customer service is gaining increasing importance as a competitive parameter in manufacturing industries. A possible explanation for this phenomenon is that it is becoming increasingly difficult to create sustainable competitive advantage on the basis of superior products. Additional evidence for the increasing importance of services is the idea that markets tend to evolve through different stages with shifting dominant sources of competitive advantage. According to this idea, the sequence of sources of competitive advantage is technology, costs, quality, and services.

On the other hand, many marketers in industrial companies seem to lack familiarity with services. Industrial services also represent a neglected area in academic research. While research in services marketing has made significant progress in the last decade, the vast majority of this literature deals with consumer services.

The purpose of this article is to improve the understanding of the role of services in an industrial marketing context. We will analyze the effect of industrial services on key characteristics of the buyer-seller relationship including the customer’s trust, satisfaction, and commitment. More specifically, we will argue that, similar to consumer services marketing, quality is a key issue when considering industrial services. We will suggest and empirically validate a conceptualization of service quality in an industrial marketing setting. Based on this conceptualization we will analyze how different dimensions of industrial service quality affect the customer’s trust, satisfaction, and commitment, respectively.

Different terms for services provided by one company to another company have been applied in the literature (e.g., business to business services). We define industrial services as services provided by a manufacturing company to organizational customers.

An analysis of the relevant literature reveals essentially two things with respect to service quality in the context of industrial services. First, to the best of our knowledge, there is no research explicitly modeling the quality of industrial services. Second, there has been a variety of moderately successful attempts to adapt the SERVQUAL scale to...
professional services. Against this background, rather than using the SERVQUAL instrument for assessing industrial services' quality, we suggest a triangular model of industrial service quality involving a distinction between structural, process-related, and outcome-related aspects.

Structural quality refers to the relatively stable characteristics of the providers of services, of the tools and resources they have at their disposal, and of the physical and organizational settings in which they work. Thus, the concept of structural quality includes the human, physical, and financial resources that are needed to provide industrial services.

Process-related quality refers to the activities that go on between the provider of service and the customer. This quality dimension encompasses a technological as well as an interpersonal component. While the first subdimension is related to such things as the use of information technology during the service delivery process, the second subdimension contains for example the friendliness of the personnel providing industrial services.

Outcome-related quality refers to the result of the service delivery. Results may be technical (e.g., a machine working properly again) or attitudinal (e.g., a customer which is highly satisfied with the result of the service).

Our hypotheses relate the three independent variables (i.e., the three quality dimensions) to the customer’s trust, satisfaction, and commitment, respectively (dependent constructs). Based on theoretical reasoning, we expect first a positive link between the three quality dimensions and the customer’s trust in a supplier, second that all three quality dimensions have a positive impact on customer’s satisfaction in a supplier, third that the process-related quality and the outcome-related quality have a positive effect on the customer’s commitment.

Data for this study were collected in collaboration with the German Association of Machinery Companies and Original Equipment Manufacturers. A total of 1,600 persons in 1,300 firms were contacted initially. These respondents were identified by means of the association’s address list and they were asked to report on a specific supplier of industrial services. The respondents (especially persons who held senior positions in purchasing) were essentially free in selecting the supplier, for which they filled out the questionnaire. To create some variance on the quality of the relationship, however, we asked half of the respondent to report on the relationship with a supplier with whom they were highly satisfied whereas the other half was asked to report on a relationship with a moderate level of satisfaction. We received a total of 177 usable responses for a response rate of 11.1% - which seems acceptable given the experience of empirical studies in the German business-to-business sector. Our results indicate an uniformly high respondent competency.

Multi-item scales were used for each of the constructs included in our analysis. We followed standard psychometric scale development procedures. Scales for the study consisted of newly generated items and of items that had been used previously. When a new scale was developed, we were guided by the qualitative results from our field interviews – we conducted face-to-face interviews within 20 industrial companies prior
to the survey – and an extensive literature review. The psychometric quality of the measures was assessed using procedures suggested in the measurement literature. The analysis of the measures employs confirmatory factor analysis using LISREL 8. Two separate factor analysis were run for the independent (i.e., the three service quality dimensions) and the dependent constructs (i.e., the customer’s trust, satisfaction, and commitment) in our study. Our results indicate that each of the constructs has a reasonable degree of internal consistency between the corresponding indicators. Furthermore, our results suggest acceptable degrees of convergent and discriminant validity.

Hypotheses testing was carried out via multiple regression analysis. We analyzed a regression model for each of the three dependent constructs. Values for the constructs were computed by averaging across the corresponding indicators.

On an overall basis there is strong support for our theoretical reasoning. Seven out of the eight hypotheses were confirmed at least at the .05 level. More specifically, we observe strong effects of the different dimensions of industrial service quality on the customer’s trust and satisfaction, respectively. Furthermore, process-related quality has particularly strong impacts on the three constructs describing the relationship. Altogether, our findings provide clear evidence for the importance of delivering high quality service in industrial marketing.