

# “Combining Attitudinal and Transaction-Specific Measures in Latent Constructs”

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## ARTICLE INFO

Robert E. Sibley (2007). Combining Attitudinal and Transaction-Specific Measures in Latent Constructs. *Innovative Marketing* , 3(4)

## RELEASED ON

Thursday, 24 January 2008

## JOURNAL

"Innovative Marketing "

## FOUNDER

LLC “Consulting Publishing Company “Business Perspectives”



NUMBER OF REFERENCES

0



NUMBER OF FIGURES

0



NUMBER OF TABLES

0

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## Combining attitudinal and transaction-specific measures in latent constructs

### Abstract

Services are distinct from products and have characteristics that make them riskier and harder to evaluate for customers. Research has shown that strong customer service is likely to lead to higher customer satisfaction and, presumably, greater profits. The foremost measurement instrument for service quality is the SERVQUAL scale (Parasuraman, Zeithaml & Berry, 1988) which, despite criticism, has been widely used for nearly 20 years. This article examines SERVQUAL; looks at the theoretical underpinnings regarding the relationship between service quality and customer satisfaction; identifies an innovative, integrative solution; and posits a model to test this solution with real-world data from the health-care services industry.

Two research hypotheses are presented; both are supported. The results are innovative for both researchers and practitioners, as well. For researchers, these results better define – and order – the latent (that is, not directly observable) variables service quality and customer satisfaction, bringing increased clarity. Practitioners can focus on identifying transaction-specific programs that meet key customer needs and, by meeting or exceeding customer expectations, they can build an attitude of customer satisfaction that should lead to more profitable business results.

**Keywords:** services marketing, SERVQUAL, customer satisfaction, service quality.

### Introduction

The similarities and differences between products and services have been debated by marketing scholars for decades. Despite some efforts to blur the distinctions between products and services (see, for example, Gultinan, 1987), most marketing scholars have tended to accept the characterization of services marketing as a distinct branch of marketing. Murray (1991) classifies services (versus products) as: (1) requiring less outright purchase; (2) requiring the use of more personal sources of information; (3) having higher confidence in those personal sources of information; and (4) offering less direct trial of the potential purchase. Of more help in research settings, however, is the classic taxonomy of the characteristics of services summarized succinctly by Zeithaml, Parasuraman & Berry (1985), who note that services (as opposed to products) tend to be: (1) intangible; (2) simultaneously produced and consumed; (3) non-standardized; (4) able to be evaluated only after purchase and consumption; and (5) riskier.

Risk may be defined as consumer uncertainty about loss or gain in particular transaction components (Zeithaml et al., 1985). Jacoby & Kaplan (1972) set forth what is now a widely accepted conceptualization of risk identifying six dimensions: (1) financial; (2) performance; (3) social; (4) psychological; (5) safety; and (6) time and/or convenience loss. The characteristics of services suggest a strong degree of prepurchase uncertainty (Murray & Schlacter, 1990), which leads not only to consumer difficulty in evaluating service quality – which may heighten

risk – but also to difficulty in evaluating customer satisfaction. This, in turn, has led to a bitter debate over the relationship between perceived the latent variables service quality and customer satisfaction – and which construct antecedes which.

### 1. Purpose

This article examines SERVQUAL (Parasuraman et al., 1988), the leading methodology in evaluating service quality; looks at the theoretical underpinnings regarding the relationship between service quality and customer satisfaction; identifies an innovative, integrative solution; and posits a model to test this solution with real-world data from the health-care services industry. One of the main questions dividing researchers appears to be whether service quality is an attitude or a transaction-specific measure. The answer to this question likely determines the order of the constructs. If service quality is an attitude, then customer satisfaction antecedes service quality; if service quality is a transaction-specific measure, then service quality antecedes satisfaction.

The purpose of this study is to test a proposed synthesis of these points of view which suggests that satisfaction and perceived service quality can be examined meaningfully from both transaction-specific and global, or attitudinal, perspectives. The proposed model suggests that transaction-specific measures of service quality (that is, meeting or exceeding consumer expectations on specific tasks) lead to a transaction-specific measure of consumer satisfaction with this performance which leads, in turn, to an attitude of customer satisfaction.

The expected contribution from this research is to test with real-world data a formal model that, if

supported, would synthesize two heretofore irreconcilable points of view among scholars in the services marketing milieu. This innovative solution providing evidence that transaction-specific measures should antecede attitudinal measures would be helpful for scholars by more clearly defining – and distinguishing different types of – customer satisfaction and service quality. Moreover, practitioners would find it easier to design and implement through discrete programs to discover – and meet (or exceed) – customers' needs that will build a long-term, enduring attitude of customer satisfaction.

## 2. SERVQUAL

As the services marketing tide began to rise in the early 1980s, researchers struggled with how to measure service quality (Grapentine, 1999). In a groundbreaking work, Parasuraman et al. (1985) presented a conceptual framework that identified five service quality gaps. In terms of the measurement of service quality, it is the fifth of these gaps – the so-called P-E gap between what consumers think that companies actually do offer (perceived service) and what the consumer thinks they should offer (expected service) – that has been of most interest (Coulthard, 2004). Three years later, the trio introduced SERVQUAL, a 22-item scale for measuring customer perceptions of service quality.

The model tackled five dimensions of perceived service quality: (1) tangibles (physical facilities, equipment, appearance of personnel – key to providing customers cues for the difficult task of evaluating intangible services; see Donthu & Sibley 1994 for a fuller discussion); (2) reliability (ability to perform the promised service); (3) responsiveness (willingness to help customers and to do so promptly); (4) assurance (knowledge and courtesy of employees; cf. Donthu & Sibley 1994); and (5) empathy (caring, individualized attention to customers). As Sureshchandar, Rajendran & Kamalanabhan (2001, p. 113) note, the SERVQUAL scale seeks to define service quality “as the degree of discrepancy between customers' normative expectations for the service and their perceptions of the service performance”.

SERVQUAL has been subjected to a great deal of evaluation and criticism, beginning early on with Carman (1990), who disputed not only the effectiveness of the SERVQUAL scale, but the entire notion of the expectations-performance gap. SERVQUAL has been widely debated on methodological grounds (e.g., Teas, 1993; Iacobucci, Grayson & Ostrum, 1994; Smith, 1995; Van Dyke, Kappelman & Prybutok, 1997; Caruana, Ewing & Ramaseshan, 2000; Brady, Cronin & Brand, 2002; Page & Spreng, 2002; Saravanan & Rao, 2007), but

there also have been conceptual objections, notably by Gronroos (2001), who suggested a completely different, and more qualitative, conceptualization.

Researchers (Carman, 1990; Cronin & Taylor, 1992; Zhou, 2004) also have argued that the objective measure of service quality would be more helpful than the P-E gap measure; that SERVQUAL's five dimensions are imprecise (e.g., Teas, 1993; Gounaris, 2005) and incomplete (see Sureshchandar et al., 2001 for a review; also, Sureshchandar et al., 2002; Coulthard, 2004; Saravanan & Rao, 2007); and that there is too much “process orientation” (Gronroos, 1990, 2001; Coulthard, 2004; Kang & James, 2004), or focus on the processes of service delivery rather than the technical outcomes of the service encounter.

Nevertheless, while there has been some tinkering with its structure (e.g., Parasuraman et al., 1994a), SERVQUAL has been widely used for nearly 20 years and, despite the criticisms noted above, its popularity does not seem to be subsiding. Just in the last few years, SERVQUAL has been used in evaluating (perceived) service quality in internal marketing within a global services firm (Frost & Kumar, 2000) and in a range of worldwide milieus including: automobile services (Saravanan & Rao, 2007); banking (Sureshchandar, Rajendran & Anantharaman, 2002; Prabhakaran & Satya, 2003; Baumann, Burton, Elliot & Kehr, 2007); electronic commerce (Alzola & Robaina, 2005); green grocers (Eastwood, Brooker & Smith, 2005); higher education (Arambewela & Hall, 2006; Petruzzellis, D'Uggento & Romanazzi, 2006; Sahu, 2006); hospitals (Rohini & Mahadevappa, 2006); insurance (Gayathri, Vinaya & Lakshmisha, 2006; Tsoukatos & Rand, 2007); local government services (Sullivan & Estes, 2007); retail stores (Gaur & Agrawal, 2006); and even service in maritime ports (Ugboma, Ogwude, Ugboma & Nnadi, 2007) and ocean freight shipping (Durvasula, Lysonski & Mehta, 1999).

SERVQUAL remains robust for two primary reasons: (1) beginning with the work of Dawkins & Reichheld (1990), researchers have found empirical support for the conceptually appealing idea that better customer service leads to more profits (Srivastava, 1992; Anderson, Fornell & Lehmann, 1994; Reichheld, 1996; Jones & Suh, 2000; Olorunniwo, Hsu & Udo, 2006); and (2) researchers have failed to develop measurement scales (notably Cronin & Taylor, 1994; Parasuraman, Zeithaml & Berry, 1994b; Teas & DeCarlo, 2004) that are either more generalizable across a range of services settings or are more methodologically sound.

### 3. The relationship between service quality and customer satisfaction

Apart from the methodological objections, the primary theoretical confusion appears to be about the relationship between perceived service quality and customer satisfaction. A fundamental question dividing researchers is as follows: Is service quality an attitude or a transaction-specific measure? The answer to this question likely determines the answer to another important question: the order of the variables. If service quality is an attitude, then customer satisfaction antecedes service quality; if service quality is a transaction-specific measure, then service quality antecedes customer satisfaction.

Zeithaml et al. (1985), holding that service quality is an attitude, developed gap theory – examining the gap between consumer expectations about performance and perceived actual performance – which led to the SERVQUAL scale, as delineated above. Bitner (1990), agreeing with Zeithaml et al. (1985), introduced the expectation disconfirmation paradigm and argued that customer satisfaction is a determinant of service quality. This school of thought was further buttressed by Bolton & Drew (1991), whose longitudinal panel analysis showed that service changes over time affect service quality evaluations in the long run.

On the other hand, Cronin & Taylor (1992) suggested that service quality (which they characterized as a transaction-specific measure) preceded customer satisfaction (which they conceptualized, in turn, as preceding purchase intent), arguing that service quality has less effect on purchase intent than satisfaction does. Rejecting Parasuraman et al.'s (1985) gap theory as theoretically and empirically unsupported, Cronin & Taylor (1994) offered, instead, the SERVPERF scale, contending that “the marketing literature appears to offer considerable support for the superiority of simple performance based measures of service quality” (p. 56).

Boulding, Kalra, Staellin & Zeithaml (1993) also argued for a transaction-specific measure. They introduced a process model of service quality which indicated that only perceptions of performance directly influenced service quality – incompatible with the disconfirmation paradigm and gap analysis of service quality, an approach supported by Lee, Lee & Yoo (2000), who also concluded that “service quality is an antecedent of satisfaction” (p. 217). Cronin & Taylor (1994), who used purchase intent as an outcome variable, found that satisfaction exerted a stronger effect than did service on this outcome variable, findings later supported by Jones & Suh (2000) and Olorunniwo et al. (2006), who used repurchase intentions as an outcome variable and

found that satisfaction was a stronger driver of repurchase than was service quality. Cronin & Taylor (1994), though, reasoned that this was due to satisfaction being a short-term transaction-specific measure while service quality (as measured by their SERVPERF scale) was a long-term attitudinal measure, whereas Jones & Suh (2000) distinguished transaction-specific satisfaction and “overall” (or attitudinal) satisfaction.

While Dabholkar (1993) had questioned whether (and, if so, how) satisfaction and service quality were different constructs, Teas (1993) suggested that much of the confusion is based around whether the measures are attitudes (i.e., enduring, global judgments) or transaction-specific measures – and which is which. While Parasuraman et al. (1988) posit a transaction-specific measure of satisfaction anteceding a global, attitudinal measure of service quality, well-established consumer research (cf., Churchill & Surprenant, 1982; Oliver, 1989) suggests the opposite directional effect; that is, quality (in these studies, product quality) antecedes consumer satisfaction.

In an underappreciated – and untested – contribution, Teas (1993) sees this as laying the framework for resolution of this measurement specification confusion. He suggests there are two *types* of a single construct: short-term, transaction-specific and longer-term, attitudinal types. Moreover, he would specify “perceived transaction-specific quality as the transaction-specific performance component of contemporary consumer satisfaction models. This implies that transaction-specific satisfaction is a function of perceived transaction-specific performance quality.” (Teas, 1993, p. 30). Under these conditions, he concludes, transaction-specific satisfaction also could be conceptualized as a predictor of a perceived attitudinal satisfaction measure.

### 4. Proposed model and research hypotheses

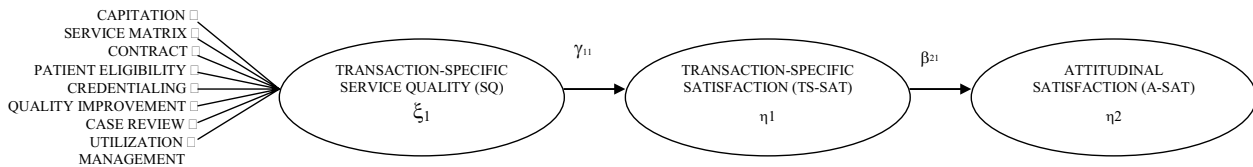
The proposed model (Figure 1) adopts the Teas's (1993) notion that what is being confounded here is not constructs (e.g., service quality and customer satisfaction) but, rather, the types of constructs (short-term, transaction-specific types of constructs versus longer-term, attitudinal types of constructs).

It is the author's contention that higher levels of perceived transaction-specific service quality will lead to transaction-specific customer satisfaction (the Gamma 1,1 linkage). Thus,

*H1. The greater the level of transaction-specific service quality perceived by the customer, the higher the level of transaction-specific satisfaction the customer will experience.*

Moreover, higher levels of customer transaction-specific satisfaction will produce a stronger, long-term, attitudinal measure of satisfaction (the Beta 2,1 linkage). Consequently,

*H2. The greater the level of transaction-specific satisfaction the customer experiences, the stronger the attitudinal measure of satisfaction is.*



**Fig. 1. Proposed path model of the relationship between transaction-specific and attitudinal latent variables**

3. Specify the domain of the construct.
4. Generate sample items and scales.
5. Collect data.
6. Evaluate measurement properties of scales.

The first four of these steps are not merely sequential, but also are iterative. In the case of each of the three variables in this study, the previous heuristic was followed. Thus, there are three latent (that is, not directly observable) variables that must be operationalized; Ksi-1, the exogenous variable, customer-perceived transaction-specific service quality (SQ); Eta-1, the endogenous variable, transaction-specific customer satisfaction (TS-SAT); and Eta-2, the outcome (and also endogenous) variable, attitudinal customer satisfaction (A-SAT). This study was part of a larger research project in the managed health-care industry undertaken to gauge various aspects of relationships between primary medical groups (that is, retail health-care providers also known as PMGs) and Health Maintenance Organizations (HMOs) that contract with the PMGs. After generating sample ideas, the author conducted interviews with physicians that practice in PMGs and experts in trade and industry associations to refine not only scale items, but the number and type of dimensions involved in transaction-specific measures of service quality. Further refinement of scale items occurred after an empirical evaluation process.

These efforts yielded eight dimensions of transaction-specific service quality (SQ): (1) capitation (reimbursement payments from the HMO to the PMG); (2) the patient-care service matrix; (3) contract administration; (4) patient eligibility issues; (5) credentialing; (6) quality improvement; (7) case review processes and procedures; and (8) resource utilization management. A 25-item scale was developed with capitation, credentialing, and service matrix having four items each; patient eligibility, quality improve-

## 5. Operationalization of the variables

Churchill, in his seminal 1979 treatise, has promulgated a widely accepted procedure for developing measures for marketing constructs. He recommends the following multiple-step process:

1. Review extant literature.
2. Discuss concepts with academic experts and practitioners.

ment, and case review three each; and two items each for contract and utilization management.

Customer satisfaction has a long tradition of importance not only in the services marketing literature (stretching back at least to Parasuraman et al., 1985), but also in the consumer marketing milieu (e.g., Oliver, 1981). Wilson (1995, p. 338), had a perceptive insight: “Buyers need to satisfy their partner’s business needs or they risk becoming marginalized.” Note the implicit assumption that satisfaction of needs is transactional, while “becoming marginalized” suggests a more enduring, attitudinal issue. Following the same Churchill (1979) protocols for scale development, the author developed an eight-item scale for transaction-specific customer satisfaction (TS-SAT).

The attitudinal customer satisfaction construct is well-developed in several areas of marketing and, prior to that, in psychology (e.g., Rusbult, 1980). However, the author still followed the Churchill (1979) heuristic to avoid the rampant construct confounding discussed earlier. In the end, a 6-item scale for attitudinal customer satisfaction (A-SAT) was assembled from Rusbult (1980), Oliver (1981), and Rust & Zahorick (1993), modified for use in a business-to-business environment (since this was a study about business “partners”, the Primary Medical Groups and HMOs), as piloted by Anderson & Narus (1984).

## 6. Research methodology

**6.1. Research design.** The research design was a national cross-sectional field survey of the entire SIC Code for PMGs, yielding a sample size of 1994. The survey instrument was a pen-and-paper questionnaire employing Likert-type items to operationalize the three variables previously discussed. The proposed model laid out above, is a path analysis model and it was evaluated through LISREL, a leading structural equation modeling technique. Struc-

tural equation modeling not only allows the researcher to distinguish direct, indirect, and total effects of one variable on another (Bollen, 1989), but it has the ability to represent latent (that is, not directly observable) variables, which service quality and satisfaction (in both its transaction-specific and attitudinal varieties) indisputably are.

Joreskog & Sorbom (1978), who developed LISREL, note that it is superior to multiple regression analysis when: (1) the observed variables contain measurement errors and the relationship of interest is among the latent variables; and (2) important explanatory variables have not been observed and are considered to be omitted variables. Therefore, structural equation modeling was the appropriate analytical methodology given that: (1) the variables of interest are latent variables; (2) even the directly observed "indicator" variables comprising the latent variables were measured with Likert-type scale items, meaning there was almost certainly measurement error present (e.g., Babbie 1989); and (3) as a field study of latent constructs, it was virtually impossible to rule out all other possible explanatory variables (Babbie, 1989).

**6.2. Pretest.** A pretest of the proposed survey instrument was fielded to a convenience sample of 50 PMG respondents. Measure purification was undertaken through a determination of scale reliability, which was assessed according to Cronbach's alpha coefficient (Cronbach, 1951). The scales were adjudged using a cut-off of .70 (Nunnally, 1978), which has become a generally accepted standard for basic research. The variable transaction-specific perceived service quality (SQ) returned Cronbach's alpha scores above .90 on seven of its eight dimensions. An examination of the eighth dimension, Service Matrix, found one outlier item. This item was deleted and the Cronbach's alpha score for this scale jumped from .325 to .933. Thus, the Service Matrix subset was reduced to three items and the SQ variable, as a whole, to 24 items.

The eight-item scale for transaction-specific customer satisfaction (TS-SAT) registered a robust alpha of .971 and was retained in toto. The attitudinal customer satisfaction (A-SAT) variable returned a mediocre alpha of .60, but the deletion of two items yielded a workable four-item scale with a reliability of .938.

Once tested for reliability, the proposed scales were examined for validity through principal components factor analysis (PCA). The analysis technique was a Kaiser normalization with listwise deletion of missing values and a VARIMAX orthogonal rotation of the factor matrix. Only factors exhibiting simple structure were retained. Well established criteria

(Green, 1978) suggest that items with a loading of .30 or more on two or more factors or a loading of less than .40 on any one do not exhibit simple structure and should be deleted. This resulted in dropping two more items from the SQ scale (one each from the Credentialing and Case Review subscales), leaving 22 items with none of the eight dimensions having fewer than two scale items. Also dropped were two of the eight items on the TS-SAT scale, leaving six items. The four-item A-SAT scale needed no further adjustment.

**6.3. The field study.** Only 17 of the 1994 surveys (less than 0.9%) were returned as undeliverable, so the SIC list was adjudged to be both current and relevant. This first wave returned 168 responses. A second wave of surveys was sent out after three months and 215 responses were received for a total of 383 responses. Of these, 47 responses (2.4%) had to be discarded as unusable, leaving a sample of 336 respondents reporting on 468 relationships. While the net response rate was 17.0% after discarding the unusable responses, it could be argued that the effective response rate was 468 (relationships) out of 1977, or 23.7%.

## 7. Results

Joreskog & Sorbom (2001) demonstrate that the polychoric correlation matrix is more appropriate than the covariance matrix when researchers employ Likert-type scale items. This matrix was computed and used for the LISREL analysis. In the original model, the Adjusted Goodness of Fit Index (AGFI) was .86; not bad, but below the preferred measure of .90 (Joreskog & Sorbom, 2001). Also, the Minimum Fit Function Chi-Square produced values superior to those for both saturated (all model paths constrained) and independence (all model paths free) models. On the other hand, this same fit function produced a P-value = 0, leading us to reject the null hypothesis. Unfortunately, the null hypothesis in LISREL analysis is that the covariance structure of the X and Y measures in the population is statistically equal to the covariance structure of the estimated model parameters (Joreskog & Sorbom, 2001). Thus, unlike virtually all other statistical analysis of data, we do not want to reject the null hypothesis. Also, the Root Mean Square Residual (RMR) of .069 is marginal.

LISREL includes a diagnostic tool called modification indices that suggest paths in the model that could be freed to be estimated by the software that might produce a better fit with the data. However this tool must be utilized in accordance with theory (Joreskog & Sorbom, 2001); indiscriminate path freeing stoops to the level of data snooping and may make the resultant model difficult to interpret.

The modification indices suggested eight associated error terms among the 22-item transaction-specific service quality (SQ) scale. Since the survey items

encompassing each pair of associated errors were not only measuring the same variable, but the same dimension of the variable, these paths were freed.

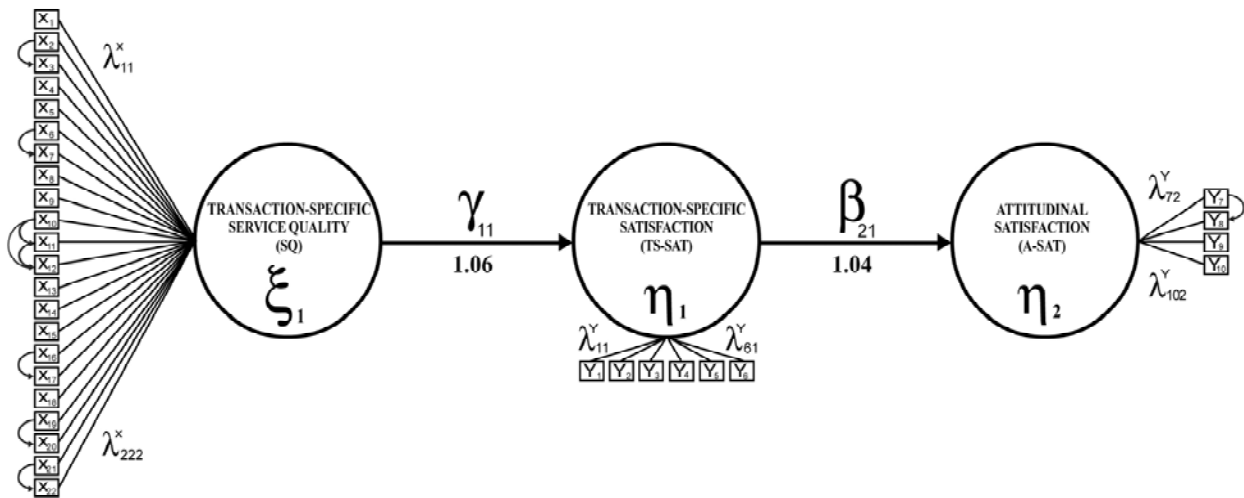


Fig. 2. Revised measurement model

A similar path was observed and freed in the attitudinal satisfaction (A-SAT) scale where, once again, associated errors within the construct were suggested. These nine theoretically defensible paths were freed and the model was recomputed. This revised model is illustrated in Figure 2.

Table 1. Summary of fit measures for the revised model

Fit measure	Value
Chi-square (P-value)	.023
Goodness of fit	.88
Adjusted goodness of fit (AGFI)	.87
Root mean square residual	.093*
Adjusted chi-square	1.08*
Critical N	474.38*
Normed fit index	.87
Comparative fit index	.99*
Incremental fit index	.99*

Note: \*These values surpass generally accepted standards for good model fit.

All 22 items (Lambda X 1,1 through Lambda X 22,1) across the eight dimensions of the transaction-specific service quality (SQ) scale were statistically significant at the .05 level. So, too, were the six items (Lambda Y 1,1 through Lambda Y 6,1) for the transaction-specific satisfaction scale (TS-SAT) and all four items (Lambda 7,2 through Lambda 10,2) comprising the attitudinal satisfaction scale (A-SAT). Furthermore, Gamma 1,1 – the linkage between transaction-specific service quality (SQ) and transaction-specific satisfaction (TS-SAT), and Beta 2,1 – the linkage between transaction-specific satisfaction (TS-SAT) and attitudinal satisfaction (A-

SAT) – also were statistically significant at the .05 level, with implications for the research hypotheses that are examined in the Discussion section, below.

This revised model converged in fewer iterations and provided a solution that indicated an improved fit between the data and the model, as summarized in Table 1.

Moreover, analysis of the squared multiple correlations indicated that the model is robust. Joreskog & Sorbom (2001) point out that squared multiple correlations for the structural equations can be used to judge how well the observed indicators measure the latent variables. While it is difficult to generate high squared multiple correlation values with the large number indicators for a latent variable such as SQ, all of the indicators for each of the three variables exceeded the accepted .30 benchmark (Bollen, 1989; Joreskog & Sorbom, 2001).

### Discussion

Research hypothesis number one posits a direct, positive effect from Ksi-1, transaction-specific perceived service quality (SQ), to Eta-1, transaction-specific customer satisfaction (TS-SAT), as represented in the model by the linkage labeled Gamma 1,1. More specifically:

*H1: The greater the level of transaction-specific service quality perceived by the customer, the higher the level of transaction-specific satisfaction the customer will experience.*

As shown in Figure 2, the estimated value for the Gamma 1,1 parameter was 1.06, the sign of the pa-

parameter value suggesting a positive effect. The standard error of the estimate was 0.08, yielding a t-value of 12.67, which is statistically significant at the .05 level (meaning there was a direct effect of Eta-1 on Eta-1). Thus, the effect of perceived transaction-specific service quality (SQ) on transaction-specific customer satisfaction (TS-SAT) was direct and positive, and it moved in the hypothesized direction. Consequently, we concluded that H1 was supported.

Research hypothesis number two posits a direct, positive effect from Eta-1, transaction-specific customer satisfaction (TS-SAT), to Eta-2, attitudinal customer satisfaction (A-SAT), as depicted in the model by the linkage labeled Beta 2,1, to wit:

*H2: The greater the level of transaction-specific satisfaction the customer experiences, the stronger the attitudinal measure of satisfaction is.*

As shown on the representation of the revised model in Figure 2, the estimated value for the Beta 2,1 parameter was 1.04, which also indicated a positive effect. The standard error of the estimate was 0.37, resulting in a t-value of 2.81, which was statistically significant at the .05 level (meaning there was a direct effect of Eta-1 on Eta-2). Thus, the effect of transaction-specific customer satisfaction (TS-SAT) on attitudinal customer satisfaction (A-SAT) was direct and positive, and it moved in the hypothesized direction. Consequently, we concluded that H2 was supported.

Results obtained in this study indicated that the measures of all three latent variables were significant and that the hypothesized relationships among the variables were not only statistically significant but operated in the direction that theory would suggest. The revised model was not only compared to saturated and independence models, but it also was compared to all other possible models with only these three latent variables. In other words, models were specified and run with the SQ, TS-SAT, and A-SAT variables in all possible orders and with the linkages between them first reversed directionally and then running both ways. In no case did any of these models converge.

This supports the concept that a firm engaging in services marketing can, by performing well in roles that are important to the customer, deliver high transaction-specific service quality for this service encounter. This leads to transaction-specific satisfaction on the part of the customer; that is, the customer is satisfied with the service provider (in SERVQUAL parlance, the services marketer has met customer expectations) for this

service encounter. Finally, as the high service quality and the resulting transaction-specific satisfaction continue in repeated service encounters over time, an enduring customer attitude of satisfaction with the service provider is developed.

There are implications arising from this study for both researchers and practitioners. For researchers, this study presents some real-world guidance with respect to a pair of well-established – though oft-confused – latent variables, service quality and satisfaction. Rather than confounding constructs, it is important to specify carefully which variety (transaction-specific or attitudinal) of the construct is the study domain. This could lead to less confusion among researchers and it also lends itself readily to more objective measurement than esoteric calculations of customer perceptions and expectations – and gaps between these hard-to-quantify concepts and what is actually delivered by the service provider.

For practitioners, the results of this study are remarkably pragmatic. The findings indicate that determining what factors are important to one's customers – and then delivering on those factors – is likely to build within one's customers a sense of satisfaction about how the supplier-partner meets its responsibilities within the relationship by how it handles the important aspects of the business relationship. There is further evidence that this, in turn, is likely to lead to a long-term, enduring attitude of satisfaction with the supplier-partner – and with the business relationship.

More work needs to be done in replicating and extending this study into other areas of the services marketing milieu. Further, while it is likely that new studies could be profitably informed by incorporating research that deals with attitude formation, durability, and dissolution, entirely too much of the underpinnings of our understanding of satisfaction, expectations, and perceptions still rests on research done in psychology or consumer behavior (origins acknowledged by Parasuraman et al., 1988, but see especially Duravasula et al., 1999; Gounaris, 2005). In addition, studies that incorporate the richness of comparison-level theory (cf., Thibault & Kelley, 1959; Rusbult, 1980; adapted into marketing by Crosby, Evans & Cowles, 1990 and Anderson & Narus, 1990) – which holds that a party will stay in a relationship only so long as the benefits of staying outweigh the costs of leaving when compared to the most attractive available alternative – likely would add to this hopefully revived discussion.



## References

1. Alzola, L.M. & V.P. Robaina (2005). SERVQUAL: Its Applicability in Electronic Commerce B2C // *The Quality Management Journal*, 12 (4), pp. 46-57.
2. Anderson, E.W., C. Fornell & D.R. Lehmann (1994). Customer Satisfaction, Market Share, and Profitability: Findings from Sweden // *Journal of Marketing*, 58 (July), pp. 53-66.
3. Anderson, J.C. & J.A. Narus (1984). A Model of the Distributor's Perspective of Distributor-Manufacturer Working Relationships // *Journal of Marketing*, 48 (January), pp. 62-74.
4. Anderson, J.C. & J.A. Narus (1990). A Model of the Distributor Firm and Manufacturer Firm Working Partnerships // *Journal of Marketing*, 54 (January), pp. 42-58.
5. Arambewela, R. & J. Hall (2006). A Comparative Analysis of International Education Satisfaction Using SERVQUAL // *Journal of Services Research*, 6 (3), pp. 141-163.
6. Babbie, E. (1989). *The Practice of Social Research*, 5th Ed. Belmont, CA: Wadsworth Publishing.
7. Baumann, C., S. Burton, G. Elliott & H.M. Kehr (2007). Prediction of Attitude and Behavioural Intentions in Retail Banking // *International Journal of Bank Marketing*, 25 (3), pp. 102-116.
8. Bitner, M.J. (1990). Evaluating Service Encounters: The Effects of Physical Surroundings and Employee Responses // *Journal of Marketing*, 54 (April), pp. 89-93.
9. Bollen, K.A. (1989). *Structural Equations with Latent Variables*. New York: John Wiley & Sons.
10. Bolton, R.N. & J.H. Drew (1991). A Longitudinal Analysis of the Impact of Service Changes on Customer Attitudes // *Journal of Marketing*, 55 (January), pp. 1-9.
11. Boulding, W., A. Kalra, R. Staelin & V.A. Zeithaml (1993). A Dynamic Process Model of Service Quality: From Expectations to Behavioral Intentions // *Journal of Marketing Research*, 30 (February), pp. 7-27.
12. Brady, M.K., J.J. Cronin & R.R. Brand (2002). Performance-Only Measures of Service Quality: A Replication and Extension // *Journal of Business Research*, 55, pp. 17-31.
13. Carman, J.M. (1990). Consumer Perceptions of Service Quality: An Assessment of the SERVQUAL Dimensions // *Journal of Retailing*, 66 (1), pp. 33-55.
14. Caruana, A., M.T. Ewing & B. Ramaseshan (2000). Assessment of the Three-Column Format SERVQUAL: An Experimental Approach // *Journal of Business Research*, 49, pp. 57-65.
15. Churchill, G.A. (1979). A Paradigm for Developing Better Measures of Marketing Constructs // *Journal of Marketing Research*, 16 (February), pp. 64-73.
16. Churchill, G.A. & C. Surprenant (1982). An Investigation into the Determinants of Customer Satisfaction // *Journal of Marketing Research*, 19 (November), pp. 491-504.
17. Coulthard, L.J.M. (2004). Measuring Service Quality: A Review and Critique of Research Using SERVQUAL // *International Journal of Market Research*, 46 (4), pp. 479-497.
18. Cronbach, L.J. (1951). Coefficient Alpha and the Internal Structure of Tests // *Psychometrika*, 16 (September), pp. 297-334.
19. Cronin, J.J. & S.A. Taylor (1992). Measuring Service Quality: A Reexamination and Extension // *Journal of Marketing*, 56 (July), pp. 55-68.
20. Cronin, J.J. & S.A. Taylor (1994). SERVPERF Versus SERVQUAL: Reconciling Performance-Based and Perceptions-Minus-Expectations Measurement of Service Quality // *Journal of Marketing*, 58 (January), pp. 125-131.
21. Crosby, L.A., K.R. Evans & D. Cowles (1990). Relationship Quality in Services Selling: An Interpersonal Influence Perspective // *Journal of Marketing*, 54 (July), pp. 68-81.
22. Dabholkar, P.A. (1993) Customer Satisfaction and Service Quality: Two Constructs or One? // *Enhancing Knowledge Development in Marketing*, D.W. Cravens & P.R. Dickson, Eds., Vol. 4, pp. 10-18. Chicago: American Marketing Association.
23. Dawkins, P.M. & F.F. Reichheld (1990). Customer Retention as a Competitive Weapon. // *Directors & Boards*, 14 (Summer), pp. 42-47.
24. Donthu, N. & R.E. Sibley (1994). Differentiating HMOs Through Customer Retention Strategy: An Empirical Examination // *Proceedings of the Academy of Marketing Science*, pp. 183-187.
25. Durvasula, S., S. Lysonski & S.C. Mehta (1999). Testing the SERVQUAL Scale in the Business-to-Business Sector: The Case of Ocean Freight Shipping Service // *The Journal of Services Marketing*, 13 (2), pp. 132-150.
26. Eastwood, D.B., J.R. Brooker & J.D. Smith (2005). Developing Marketing Strategies for Green Grocers: An Application of SERVQUAL // *Agribusiness*, 21 (1), pp. 81-96.
27. Eng, T.Y. & O. Niininen (2005). An Integrative Approach to Diagnosing Service Quality of Public Parks // *The Journal of Services Marketing*, 19 (2), pp. 70-80.
28. Frost, F.A. & M. Kumar (2000). INTSERVQUAL – An Internal Adaptation of the GAP Model in a Large Service Organisation // *The Journal of Services Marketing*, 14 (5), pp. 358-377.
29. Gaur, S.S. & R. Agrawal (2006). Service Quality Measurement in Retail Store Context: A Review of Advances Made Using SERVQUAL and RSQS // *Marketing Review*, 6 (4), pp. 317-330.
30. Gayathri, H., M.C. Vinaya & K. Lakshmisha (2006). A Pilot Study on the Service Quality of Insurance Companies // *Journal of Services Research*, 5 (2), pp. 123-138.
31. Gounaris, S. (2005). Measuring Service Quality in B2B Services: An Evaluation of the SERVQUAL Scale Vis-à-vis the INDSERV Scale. // *The Journal of Services Marketing*, 19 (6/7), pp. 421-435.

32. Grapentine, T. (1999). The History and Future of Service Quality Assessment // *Marketing Research*, (Winter), pp. 5-20.
33. Green, P.E. (1978). *Analyzing Multivariate Data*. Hinsdale, IL: Dryden Press.
34. Gronroos, C. (1990). *Service Management and Marketing*. Lexington, MA: Lexington Books.
35. Gronroos, C. (2001). The Perceived Service Quality Concept—A Mistake? // *Managing Service Quality*, 11 (3) pp. 150-152.
36. Guiltinan, J.P. (1987). The Price of Bundling Services: A Normative Framework // *Journal of Marketing*, 51 (April), pp. 74-85.
37. Iacobucci, D., K.A. Grayson & A.L. Ostrom (1994). The Calculus of Service Quality and Consumer Satisfaction: Theoretical and Empirical Differentiation and Integration // *Advances in Services Marketing and Management*, T.A. Swartz, D.E. Bowen & S.W. Brown, Eds., pp. 1-68. Greenwich, CT: JAI Press.
38. Jacoby, L. & J.B. Kaplan (1972). The Components of Perceived Risk // *Proceedings of the Association of Consumer Research*.
39. Jones, M.A. & J. Suh (2000). Transaction-Specific Satisfaction and Overall Satisfaction: An Empirical Analysis // *The Journal of Services Marketing*, 14 (2), 147-159.
40. Joreskog, K.G. & D. Sorbom (1978). Structural Analysis of Covariance and Correlation Matrices // *Psychometrika*, 43 (December), pp. 443-477.
41. Joreskog, K.G. & D. Sorbom (2001). *LISREL 8: User's Reference Guide*. Chicago: Scientific Software International.
42. Kang, G.D. & J. James (2004). Service Quality Dimensions: An Examination of Gronroos's Service Quality Model // *Managing Service Quality*, 14 (4), pp. 266-277.
43. Lee, H., Y. Lee & D. Yoo (2000). The Determinants of Perceived Service Quality and its Relationship with Satisfaction // *The Journal of Services Marketing*, 14 (3), 217-231.
44. Murray, K.B. (1991). A Test of Services Marketing Theory: Consumer Information Acquisition Activities // *Journal of Marketing*, 55 (April), pp. 10-25.
45. Murray, K.B. & J.L. Schlacter (1990). The Impact of Services Versus Goods on Consumers' Assessment of Perceived Risk and Variability // *Journal of the Academy of Marketing Science*, 18 (Winter), pp. 51-65.
46. Nunnally, J.C. (1978). *Psychometric Theory*, 2nd Ed. New York: McGraw-Hill.
47. Oliver, R.L. (1981). Measurement and Evaluation of Satisfaction Processes in Retail Settings // *Journal of Retailing*, 57 (4), pp. 25-48.
48. Oliver, R.L. (1989). Processing of the Satisfaction Response in Consumption: A Suggested Framework and Research Propositions // *Journal of Consumer Satisfaction/Dissatisfaction and Complaining Behavior*, 2, pp. 1-16.
49. Olorunniwo, F., M.K. Hsu, G.J. Udo (2006). Service Quality, Customer Satisfaction, and Behavioral Intentions in the Service Factory // *The Journal of Services Marketing*, 20 (1), pp. 59-72.
50. Page, T.J. & R.A. Spreng (2002). Difference Scores Versus Direct Effects in Service Quality Measurement // *Journal of Service Research*, 4 (3), pp. 184-192.
51. Parasuraman, A., V.A. Zeithaml & L.L. Berry (1985). A Conceptual Model of Service Quality and its Implications for Future Research // *Journal of Marketing*, 49 (October), pp. 41-50.
52. Parasuraman, A., V.A. Zeithaml & L.L. Berry (1988). A Multiple Item Scale for Measuring Consumer Perceptions of Service Quality // *Journal of Retailing*, 64 (1), pp. 12-40.
53. Parasuraman, A., V.A. Zeithaml & L.L. Berry (1994a). Reassessment of Expectations as a Comparison Standard in Measuring Service Quality: Implications for Future Research // *Journal of Marketing*, 58 (January), pp. 111-124.
54. Parasuraman, A., V.A. Zeithaml & L.L. Berry (1994b). Alternative Scales for Measuring Service Quality: A Comparative Assessment Based Upon Psychometric and Diagnostic Criteria // *Journal of Retailing*, 70 (Fall), pp. 201-230.
55. Petruzzellis, L., A.M. D'Uggento & S. Romanazzi (2006). Student Satisfaction and Quality of Service in Italian Universities // *Managing Service Quality*, 16 (4), pp. 349-364.
56. Prabhakaran, S. & S. Satya (2003). An Insight into Service Attributes in the Banking Sector // *Journal of Services Research*, 3 (1) pp. 157-169.
57. Reichheld, F.F. (1996). *The Loyalty Effect: The Hidden Force Behind Growth, Profits, and Lasting Value*. Boston: Harvard Business School Press.
58. Rohini, R. & B. Mahadevappa (2006). Service Quality in Bangalore Hospitals – An Empirical Study // *Journal of Services Research*, 6 (1), pp. 59-81.
59. Rusbult, C.E. (1980). Satisfaction and Commitment in Friendships // *Representative Research in Social Psychology*, 11, pp. 96-105.
60. Rust, R.T. & A.J. Zahorik (1993). Customer Satisfaction, Customer Retention, and Market Share // *Journal of Retailing*, 69 (2), pp. 193-215.
61. Saravanan, R. & K.S.P. Rao (2007). Measurement of Service Quality from the Customer's Perspective: An Empirical Study // *Total Quality Management*, 18 (4), pp. 435-449.
62. Smith, A.M. (1995). Measuring Service Quality: Is SERVQUAL Now Redundant? // *Journal of Marketing Management*, 11, pp. 257-276.
63. Srivastava, R. (1992). Framework for Creating and Measuring Customer Value // Presented to the AMA Services Marketing Workshop.
64. Sullivan, B. & C. Estes (2007). Measuring Customer Service Quality in Local Government // *Public Manager*, 36 (1), pp. 37-39.

65. Sureshchandar, G.S., C. Rajendran & R.N. Anantharaman (2002). Determinants of Customer-Perceived Service Quality: A Confirmatory Factor Analysis Approach // *The Journal of Services Marketing*, 16 (1), pp. 9-32.
66. Sureshchandar, G.S., C. Rajendran & T.J. Kamalanabhan (2001). Customer Perceptions of Service Quality: A Critique // *Total Quality Management*, 12 (1), pp. 111-124.
67. Teas, R.K. (1993). Expectations, Performance Evaluation, and Consumers' Perceptions of Quality // *Journal of Marketing*, 57 (October), pp. 18-34.
68. Teas, R.K. & T.E. DeCarlo (2004). An Examination and Extension of the Zone-of-Tolerance Model: A Comparison to Performance-Based Models of Perceived Quality // *Journal of Service Research*, 6 (3), pp. 272-286.
69. Thibault, J.W. & H.H. Kelley (1959). *The Social Psychology of Groups*. New York: John Wiley & Sons.
70. Tsoukatos, E. & G.K. Rand (2007). Cultural Influences on Service Quality and Customer Satisfaction: Evidence from Greek Insurance // *Managing Service Quality*, 17 (4), pp. 467-485.
71. Ugboma, C., I.C. Ogwude, O. Ugboma & K. Nnadi (2007). Service Quality and Satisfaction Measurements in Nigerian Ports: An Exploration // *Maritime Policy & Management*, 34 (4), pp. 331-346.
72. Van Dyke, T.P., L.A. Kappelman & V.R. Prybutok (1997). Measuring Information Systems Service Quality: Concerns on the Use of the SERVQUAL Questionnaire // *MIS Quarterly*, 21 (2), pp. 195-209.
73. Wilson, D.T. (1995). An Integrated Model of Buyer-Seller Relationships // *Journal of the Academy of Marketing Science*, 23 (Fall), pp. 335-345.
74. Zeithaml, V.A., A. Parasuraman & L.L. Berry (1985). Problems and Strategies in Services Marketing // *Journal of Marketing*, 49 (April), pp. 33-46.
75. Zhou, L. (2004). A Dimension-Specific Analysis of Performance-Only Measurement of Service Quality and Satisfaction in China's Retail Banking // *The Journal of Services Marketing*, 18 (7), pp. 534-546.