Measuring Retail Service Quality: Examining Applicability of International Research Perspectives in India

Subhashini Kaul

Executive Summary

Service quality is being increasingly perceived as a tool to increase value for the consumer; and as a means of positioning in a competitive environment to ensure consumer satisfaction, retention, and patronage. Existing research indicates that consumers satisfied with the store's service quality are most likely to remain loyal. However, despite its strategic importance, Indian retailers do not have an appropriate and established instrument to measure service quality.

This study examines the Retail Service Quality Scale (RSQS) developed in the US for applicability in India. RSQS has five dimensions and six sub-dimensions and has been found appropriate in a variety of settings — across different countries such as South Africa and Singapore and across a variety of store types such as supermarkets, department stores, and hyper stores. The five dimensions — Physical Aspects, Reliability, Personal Interaction, Problem Solving, and Policy—are believed to capture distinct though correlated aspects of retail service. Each of the first three dimensions has two sub-dimensions. These six sub-dimensions, also called the first-order factors, are labelled as Appearance, Convenience, Promises, Doing-it-Right, Inspiring Confidence, and Courteousness/Helpfulness.

The dimensions and sub-dimensions provide strategic focus areas for retailers, enabling them to improve certain aspects of store service where performance is relatively poor.

Data using a survey questionnaire from 144 adult shoppers at large format apparel stores in the city of Bangalore indicates that:

➢ The RSQS dimensions and sub-dimensions are *not* clearly identifiable. The dimension of 'Physical Appearance' is the only one that is relatively clear. All other dimensions are ill-defined. The dimension of 'Problem-Solving' is hazy and all the remaining dimensions of RSQS comprise one factor.

➢ RSQS has *limited* diagnostic application. Consequently, retailers would find RSQS a poor instrument to help identify strategic areas requiring focus to improve service levels. The scale can, at best, be employed to assess overall service quality levels and for tracking overall improvements over a period of time.

➢ RSQS is *inappropriate* for application in Indian retail. Pre-test interviews of shoppers indicate that several service aspects mentioned by shoppers during interviews are not included in RSQS.

Much future research is needed to develop a scale appropriate for the Indian context. ❧

Among all services marketing topics, service quality has gained much research prominence in the recent years (Schneider and White, 2004). Existing research indicates that consumers satisfied with service quality are most likely to remain loyal (Wong and Sohal, 2003). Service quality is perceived as a tool for increasing value for the consumer; as a means of positioning in a competitive environment (Mehta, Lalwani and Han, 2000) and for ensuring consumer satisfaction (Sivadas and Baker-Prewitt, 2000), retention, and patronage (Yavas, Bilgin and Shemwell, 1997). With greater choice and increasing awareness, Indian consumers are increasingly demanding better quality of service (Angur, Nataraajan and Jahera, 1999) and players can no longer afford to neglect customer service issues (Firoz and Maghrabi, 1994; Kassem, 1989).

BACKGROUND OF THE STUDY

Much of the attention focused on the service quality construct is attributable to the SERVQUAL instrument developed by Parasuraman, Zeithaml and Berry (1988) for measuring service quality. Several studies subsequently employed SERVQUAL to measure service quality and to assess the validity and reliability of the scale across a wide range of industries and cultural contexts (Carman, 1990; Finn and Lamb, 1991; Gagliano and Hathcote, 1994; Blanchard and Galloway, 1994; Mittal and Lassar, 1996; Zhao, Bai and Hui, 2002; Witkowski and Wolfinbarger, 2002; Wong and Sohal, 2003).

Little is known about the service quality perceptions in India (Jain and Gupta, 2004) because the focus of research has primarily been on the developed countries (Herbig and Genestre, 1996). Given the relatively mature markets where the service quality scales have been developed, it seems unlikely that these measures would be applicable in the Indian context without adaptation. Angur, Nataraajan and Jahera (1999) examined SERVQUAL in the retail banking industry and reported a poor fit of the scale to the empirical data. Despite this, several researchers (Sharma and Mehta, 2004; Bhat, 2005) have used the SERVQUAL scale in similar settings with no assessment of the psychometric soundness of the scale.

Service quality in retailing is different from any other product/service environment (Finn and Lamb, 1991; Gagliano and Hathcote, 1994). For this reason, Dabholkar, Thorpe and Rentz (1996) developed the Retail Service Quality Scale (RSQS) for measuring retail service quality. RSQS has a five-dimensional structure of which three dimensions comprise two sub-dimensions each. Studies assessing the applicability of RSQS have reported encouraging results. Dabholkar, Thorpe and Rentz (1996) replicated their own study and found all RSQS dimensions and sub-dimensions to be valid in the US. Mehta, Lalwani and Han (2000) found the RSQS five-dimensional structure appropriate for measuring the service quality perceptions of supermarket consumers in Singapore. According to Kim and Jin (2002), RSQS is a useful scale for measuring service quality of discount stores across two different cultural contexts of the US and South Korea though they reported empirical support for a four-and not a five-dimensional structure. Boshoff and Terblanche (1997), in a replication of the Dabholkar, Thorpe and Rentz (1996) study, report highly encouraging results for the RSQS applicability in the context of department stores, specialty stores, and hypermarkets in South Africa.

This study makes an attempt to evaluate the applicability of the RSQS scale developed by Dabholkar, Thorpe and Rentz (1996) for measuring service quality in the Indian specialty apparel store context. If RSQS is found to be valid and reliable, it will be the first such instrument available to the Indian retailers. If not, then researchers and retailers alike would be forewarned about using an unreliable scale for measuring retail service quality in India.

RSQS FOR MEASURING SERVICE QUALITY

Service quality is defined as 'a global judgment or attitude relating to the overall superiority of the service' (Parasuraman, Zeithaml and Berry, 1988). SERVQUAL proposes a gap-based conceptualization of service quality where the gap indicates the extent to which the service obtained confirms to expectations. In SERVQUAL, both store service performance and consumer expectations of the store service are explicitly measured to assess the 'gap.' Conceptually, this gap assessment assumes that the statement of desired attribute levels is the yardstick a consumer uses to assess store service performance (Carman, 1990). Schnieder and White (2004) provide a list of several other yardsticks that can be used by a consumer to evaluate store service delivery. Even empirically, several researchers find the performance perceptions to be sufficient in assessing service quality as compared to the gap (Carman, 1990; Angur, Nataraajan and Jahera, 1999). This resulted in the adoption of the SERVPERF instrument instead of the gap-based measure of SERVQUAL.

SERVPERF is the performance battery of SERVQUAL. Similar to and originating from the SERVPERF, RSQS is a performance-based measure of service quality but specific to the retail context.

Given the lack of theoretical support, Dabholkar, Thorpe and Rentz (1996) used a triangulation of research techniques to discover the factor structure of service quality consisting of phenomenological interviews with three retail customers, exploratory in-depth interviews with six customers, and a qualitative study tracking the thought processes of three customers during an actual shopping experience at a store. Combining these findings, they proposed a hierarchical factor structure for retail service quality consisting of five dimensions — Physical Aspects, Reliability, Personal Interaction, Problem Solving and Policy. These are also referred to as the second-order factors because they are comprised of several sub-dimensions. Each of the first three dimensions has two sub-dimensions each. These six sub-dimensions, also called the first-order factors, are labeled as Appearance, Convenience, Promises, Doing-it-Right, Inspiring Confidence, and Courteousness/Helpfulness. The entire RSQS structure is represented in Figure 1.

RESEARCH OBJECTIVE

Since service quality is a theoretical construct, researchers have defined its dimensions based on the setting used to explore the construct. If RSQS is to be applicable in the Indian context, the dimensions and sub-dimensions have to be reliable and valid in measuring service quality. Consequently, assessing a service quality scale requires examining the model component structure comprising the associations between overall service quality, the dimensions, and the sub-dimensions. To test their proposed hierarchical model (Figure 1), Dabholkar, Thorpe and Rentz (1996) subjected the following four component structure models to confirmatory factor analyses:

Model I: This model tests the five dimensions/second-order factors. If an assessment of this model yields positive results, then the Indian retailers can apply the same five dimensions to define strategic service focus areas.

Model II: This is the basic retail service quality model which has resulted in RSQS being labeled as a five-dimension scale. In this model, the service quality construct is a second-order factor which comprises the five basic dimensions as first-order factors. If this model is supported, one can conclude that the five dimensions

Figure 1: The Retail Service Quality Scale (RSQS)
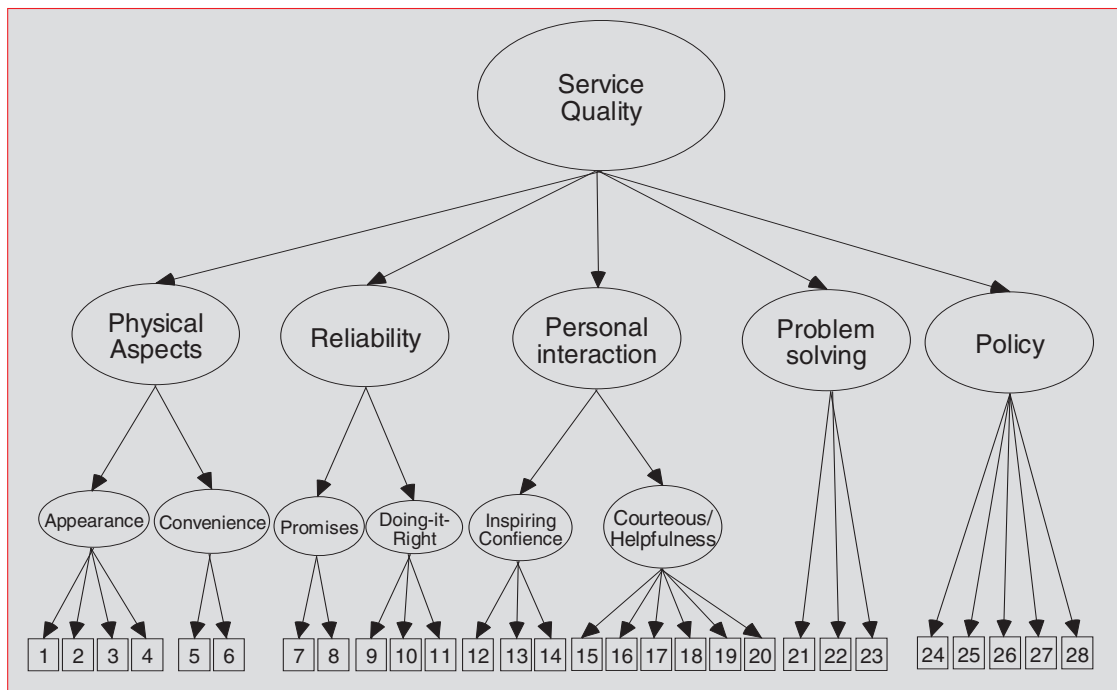
Key to Figure 1: Items 1-28 as given in Appendix 2. All dimensions and sub-dimensions are correlated amongst each other though not depicted in the diagram for the sake of clarity.

are appropriate for measuring a single factor — overall service quality.

Model III: The third model tests the six sub-dimensions/first-order factors. This model would examine if the Indian shopper is able to distinguish between different aspects of service within the dimensions and perceives separate sub-dimensions. If this is true, retailers would be able to better focus on specific service aspects for ensuring and monitoring improvement in quality.

Model IV: This model tests the association between the dimensions and the sub-dimensions. The six sub-dimensions are modeled as first-order factors and the corresponding (three) dimensions as second-order factors.

The objective of this study was to assess the applicability of RSQS for measuring service quality in India. This was achieved by examining the reliability, validity and component structures of RSQS.

METHODOLOGY

Sample

The population comprised retail shoppers as defined in similar studies (Dabholkar, Thorpe and Rentz, 1996; Boshoff and Terblanche, 1997). A quota sampling procedure was used on a sample size of 180 respondents. The quota was fixed based on income, gender, and age since these are known to impact perceptions of service quality (Gagliano and Hathcote, 1994). The sample was divided equally across SEC A and SEC B (income categories), men and women (gender), and age groups 18-25 and greater than 25. The respondents were at least 18 years old since, by this age, one is definitely shopping for oneself in India. The second group comprised respondents aged 25 years and above, because, by the age of 25, one is usually more independent of parental influence in India — usually working and/or married with greater discretionary amount to spend and with increased travel and consequent exposure to a variety of stores and so on.

The sample was selected from the city of Bangalore because it is among the first cities in India where large format retail stores were introduced and consequently has a greater degree of stability in consumer expectations as compared to other cities. This was important to ensure that the findings of our study are not very 'short-term' retail evolution stage-specific (Woodruffe, Eccles and Elliott, 2002). For the same reason, we selected apparel shoppers as the respondent base for our study since large format apparel stores have been in existence for a longer period of time in India as compared to, say, large format grocery stores or hyper stores.

The MAP sampling process was used to select the respondents. In this process, the entire city is divided into five zones (East, West, North, South, and Central) and the 'starting points' (SPs) are randomly selected from amongst the identified SEC-A and SEC-B residential localities. Within each SP, a pre-specified number of responses is obtained. In our sample, six SPs were randomly identified in each zone and six respondents targeted randomly within each SP-determined residential locality to arrive at the targeted total of 180 respondents. The instrument was administered by a research agency familiar with the city of Bangalore and the investigators trained by us till they were familiar with the instrument. The data were collected at the residence of the shoppers over a period of two months during the evenings and weekends from one adult member of a household who had shopped for apparel in any large format store in the past three months and was willing to respond.

For the final analysis, after deleting incomplete records, we had a respondent base of 144 respondents. The profile of the respondents is given in Appendix 1.

Instrument

Of the 28 items in RSQS, two were found inapplicable for inclusion in the Indian context (Appendix 2). The process used for examining the face validity of the items for inclusion/exclusion was similar to the procedure used by Dabholkar, Thorpe and Rentz (1996) when developing RSQS. An improvement in the process used in this study was that, in addition to our inputs, two other sources were used to examine the face validity of the items: an independent expert with extensive academic and consulting experience in Indian retailing and store managers of two nationally reputed apparel specialty stores. The two items excluded by all four examiners as being inapplicable for Indian retail pertained to 'telephonic interaction with customers' and 'store's own credit cards.' All other 26 items were found relevant by all examiners.

The final instrument thus consisted of 26 items of RSQS. Three additional items were included for the purposes of assessing predictive, convergent, and discriminant validity of the scale. These three items are based on the study by Boshoff and Terblanche (1997). All items were measured using a seven-point Likert scale from '1-strongly disagree' to '7-strongly agree.' An

in-depth interview of three shoppers was used to pre-test the instrument in terms of the wording of items. These shoppers were selected because they had visited at least three different chains/local large format stores in at least two different cities in India in the last three months and had spent a significantly large amount on shopping during such store visits. The interviews indicated a need to modify the item on 'complaint behaviour' to be used for measuring discriminant validity. This item was modified to include informal complaints made to friends and relatives because formal complaints at the store were few even if the shoppers had problems with the store service. Based on the interviews and suggestions of the two store managers, explanations were added for some items to avoid any ambiguity.

ANALYSIS AND DISCUSSION

The analysis of the reliability and validity of the RSQS scale is followed by the assessment of the scale component factor structure.

Reliability Results

Given the relatively small sample size, the validity and the reliability of the scale were not assessed using structural equation modeling. Samples of less than 200 tend to impact chi-square values severely and the estimates as well as the standard errors are unreliable. Thus, the validity and reliability of the scales were examined using the Campbell and Fiske (1959) procedures which have been used quite extensively in similar studies (Boshoff and Terblanche, 1997).

Internal reliability of the scale was examined using the Cronbach alpha coefficients. The results (Table 1) indicate that the retail service quality scale proposed by Dabholkar, Thorpe and Rentz (1996) is a reliable instrument returning an overall Cronbach alpha of 0.78. Taking 0.7 and above as an indicator of reliability (Nunnally, 1978), we see that all the underlying sub-dimensions/

dimensions are reliable except the Convenience sub-dimension pertaining to the Physical Aspects dimension of service quality (alpha = 0.67). This compares with the findings of Boshoff and Terblanche (1997) which suggested that the RSQS scale (alpha = 0.93) and all the dimensions are reliable except the Policy dimension (alpha = 0.68).

Validity Results

Convergent validity was examined using an item assessing the overall quality of service. The results (Table 2) showed a high correlation between the scale and this item (0.703; $p < 0.0001$), confirming its convergent validity. To assess predictive validity, the respondents were asked whether they intended to buy at the specified store again (repurchase intentions). The results confirm the predictive validity of the instrument (correlation of 0.591, $p < 0.0001$).

Regarding discriminant validity, we are unable to arrive at any conclusion. Even though the sign of the correlation between the past complaint behaviour and the RSQS scale is negative as expected, the value of the correlation is low and insignificant (-0.021 correlation $p<0.800$). It is possible that complaint behaviour was an inappropriate measure as Indian shoppers tend not to complain and would rather switch stores as a form of passive protest than 'create a scene.'

Discussion

Based on the reliability and validity results, we can conclude that overall service quality is unidimensional (overall reliability in Table 1) and that RSQS is fairly reliable in measuring a single construct. However, high reliability does not indicate whether the items are indeed measuring service quality or some other construct. Cronin and Taylor (1992) remark that high reliability in a scale could also mean 'a set of correlated items' measuring 'nothing.' However, the acceptable convergent and predictive validity of RSQS (Table 2) indicates that the scale does measure

Table 1: RSQS Scale and Reliability Results

Dimensions	Alpha Reliability	Sub-dimensions	Alpha Reliability
Physical Aspects(6 items)	0.7868	1.1 Appearance (4)	0.8121
		1.2 Convenience (2)	0.6725
Reliability(5 items)	0.7985	2.1 Promises (2)	0.8857
		2.2 Doing-it-Right (3)	0.8299
Personal Interaction (8 items, 1 deleted)	0.7843	3.1 Inspiring Confidence (3)	0.8347
		3.2 Courteousness/Helpfulness (5)	0.8067
Problem Solving(3 items)	0.8567	None	
Policy(4 items, 1 deleted)	0.8041	None	
Overall scale (26 items)	**0.7854**		

Table 2: Tests of Validity for RSQS

Convergent validity	Overall service quality	0.703 correlation (p<0.000l)
Predictive validity	Repurchase intentions	0.591 correlation (p<0.000l)
Discriminant validity	Past complaint behaviour	-0.021 correlation (p<0.800)

the service quality construct.

To explore further into the RSQS structure and to examine if the scale can be used for diagnostic purposes, we conducted confirmatory factor analysis (CFA) of the component structures.

Cross-validation of the RSQS Model of Service Quality

To assess the factor structure of RSQS, the four-component models were subjected to CFA using AMOS 4.0. The items were combined (see key at the end of each figure) using the key/procedure as detailed by Dabholkar, Thorpe and Rentz (1996) so that the results would be comparable (Boshoff and Terblanche, 1997).

Assessing the Five-dimensional Structure of RSQS

The AMOS output returned an inadmissible solution for Model I (Figure 2). The correlation estimates (Table 3) for two associations between the latent constructs in Model I were greater than 1. This indicates a high degree of multi-collinearity between the items supposed to be measuring different constructs/dimensions. To reduce collinearity, the normal procedure is to eliminate one of the constructs out of the pair showing high correlation and to include the

indicator variables of that construct within the other construct in the pair (Byrne, 2001).

Using this process, we first eliminated the dimension of Reliability which was a construct in both the associations having correlation greater than 1 (Table 3). The indicator variables of this construct were included in the dimension of Policy due to the higher correlation as well as the nature of the items which were more oriented to Policy than Personal Interaction.

This revised Model I was subjected to CFA and the solution was found admissible. The fit indices showed a relatively poor fit of this model (X^2=82.169, df=29; RMR=0.401, GFI=0.896, AGFI=0.803, CFI=0.957, RMSEA=0.113). In this model, the correlation between Personal Interaction and Policy was 0.981. Exploring the fit for a three-factor structure, these two constructs were combined. The resultant model (X^2=86.373, df=23; RMR=0.444, GFI=0.894, AGFI=0.818, CFI=0.956, RMSEA=0.109) had a comparable fit indices. A two-factor model was examined and rejected due to poor fit.

Table 3: Correlation Estimates for Model I RSQS Dimensions' Associations Estimate

Physical_Appearance<—> Policy	0.891
Physical_Appearance<—> Personal_Interaction	0.798
Personal_Interaction<—> Policy	0.970
Physical_Appearance<—> Reliability	0.870
Reliability<—>Personal_Interaction	1.015
Personal_Interaction<—>Problem_solving	0.891
Problem_Solving<—>Policy	0.882
Reliability<—>Policy	1.042
Reliability<—>Problem_Solving	0.941
Physical_Appearance<—> Problem_Solving	0.764

Figure 2: Model I — Five Dimensions of RSQS as First-order factors
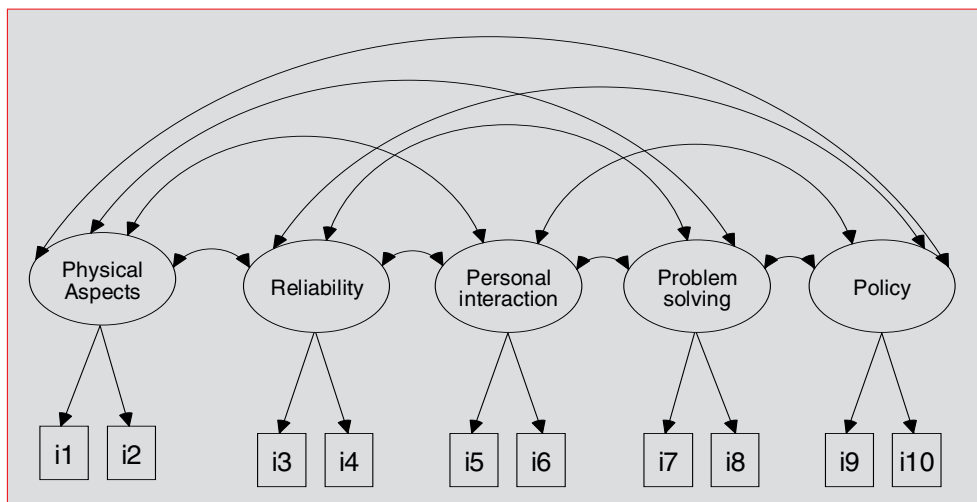
Key to Figure 2: Indicator variables i1-i10 created based on the same item combinations as employed by Dabholkar, Thorpe and Rentz (1996).

Thus, the CFA indicates that a three-or four-factor structure fits the data.

An EFA conducted for the 26 items using oblique rotation in SPSS-X resulted in four factors explaining 64.212 per cent of the variance. Of these, only the second factor was identifiable as pertaining to the store's Physical Aspects. All other factors were a mix of various items relating to Reliability, Personal Interaction, Problem Solving, and Policy. This finding is similar to the findings of Kim and Jin (2002) indicating support for a four-factor structure. However, the fourth factor in this study had no loadings greater than 0.45 (Appendix 3) enabling us to understand why the three-factor solution also shows a comparable fit with the four-factor structure.

Discussion

Contrary to the findings of other assessment studies which support the five-dimensional structures of RSQS (Dabholkar, Thorpe and Rentz, 1996; Boshoff and Terblanche, 1997), the RSQS is not a five-dimensional structure in India. The Indian consumer does not distinguish between service attributes related to Reliability and Policy. An examination of the items indicates that the items in both the dimensions have a common characteristic — the 'store'! All the items are clearly the responsibility of the store management whether relating to the 'store' fulfilling its promises (a Reliability item) or relating to the 'store' offering quality merchandise (a Policy item). EFA indicated that all the items of both these dimensions largely loaded onto one factor.

In addition, the item 'store gives customers individual attention' (a Personal Interaction item) and the item 'store has clean physical facilities' (related to Physical Aspects) loaded onto the same factor. The Indian consumers perceive all these as policy-related issues. This also explains why the Personal Interaction dimension correlates highly with the Policy dimension. Ensuring that employees have the 'knowledge to answer customer's questions' is the store's responsibility. In EFA, this item also loaded onto the same factor which can now be labelled as 'Store Policy.' The only other two dimensions left are 'Physical Aspects' — the items of which loaded onto one single factor in EFA and 'Problem Solving' — which had, in addition to the expected item loadings, several items from other dimensions as well. The item related to 'parking convenience' — a Policy item in the RSQS — is considered by the Indian shopper as relating to Physical Aspects.

Assessing the Structure of Five Dimensions Explaining Service Quality

As expected, based on Model I results, AMOS 4.0 returned an inadmissible solution for Model II as well — the five dimensions as first-order factors and service quality as a second-order factor. The solution was inadmissible even for four dimensions.

Since the three-factor structure for Model I also had a good fit, Model II was revised accordingly wherein the three revised dimensions of 'Store Policy,' 'Physical Aspects,' and 'Problem Solving' were first-order factors and service quality was a second-order factor (Figure 3). The first indicator variable of each dimension of Reli-

Figure 3: **Model II — Three Revised Dimensions as First-order and Service Quality as Second-order Factor**
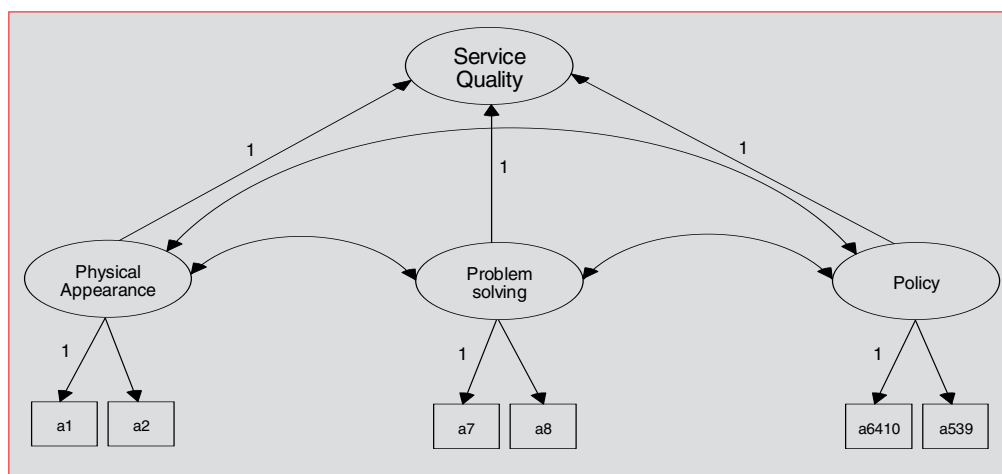
Key to Figure 3: As cited in Figure 2 and new indicators created by combining Reliability, Personal Interaction, and Policy dimensions.

ability, Personal Interaction, and Policy was combined to create a new indicator variable for the redefined 'Store Policy' dimension. The second set of indicator variables was similarly combined.

AMOS results for the revised Model II (Figure 3), using the above-mentioned three dimensions as first-order factors and service quality as second-order factor yielded a poor fit as indicated by the high RMR and high RMSEA with relatively low PCLOSE of 0.034 (X^2=18.059, df=6; RMR=0.708, GFI=0.708, AGFI=0.960, CFI=0.983, RMSEA=0.119).

Discussion

Our findings suggest that the service quality dimensions are not appropriate for measuring service quality in India. If these dimensions were applicable, then Model I and Model II would have shown a good fit. Even the revised model with three dimensions as first-order factors determining service quality indicates a poor fit. The Indian consumer does not perceive service quality dimensions similar to the shopper in the US or other countries where RSQS is considered. This reiterates our initial notion that measures developed internationally are of little use in determining service quality perceptions of the Indian shoppers.

Assessing the Structure of the Six Sub-dimensions

Considering that the key for combining items was not provided by Dabholkar, Thorpe and Rentz (1996) for Model III, it was decided to create a specific item-combi-nation for this study as per their specifications and using the random process suggested by them. Thus, the items were randomly selected and added to create two-indicator variables for each sub-dimension. The key to the combination is provided in Figure 4.

The AMOS output returned an inadmissible solution for Model III (Figure 4) testing sub-dimensions as first-order factors. The implied covariance matrix was not positive definite as the correlation estimates (Table 4) for three associations between the latent constructs were greater than 1.

To reduce collinearity, the sub-dimensions of 'Inspiring Confidence' and 'Doing-it-Right' were eliminated and all related indicator variables were included within the sub-dimension of Courteousness/Helpfulness. This revised model provided an admissible solution with acceptable fit indices (X^2=81.022, df=48; RMR=0.166, GFI=0.919, AGFI=0.868, CFI=0.970, RMSEA=0.069).

Discussion

At the sub-dimensions level, RSQS has a four-and not a six-factor structure supported by the data. Apart from the sub-dimensions pertaining to the 'Physical Aspects' dimension, the other sub-dimensions are not supported by empirical evidence. The sub-dimensions are highly corre-lated not just within the dimension but also across the dimensions related to Reliability and Personal Interaction. As the Indian shoppers do not distinguish even between the higher-order dimensions, it is understandable why the more subtle sub-dimensional differences are not sup-

Figure 4: Model III — Six Sub-Dimensions of RSQS as First-order factors
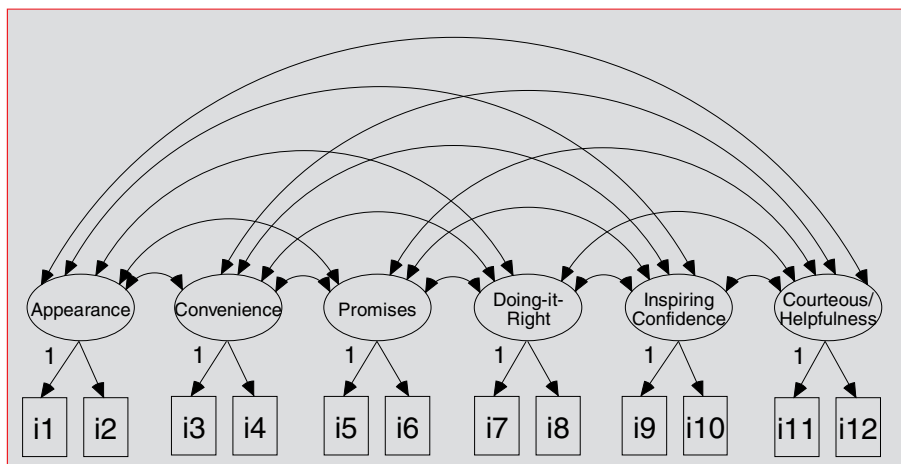
Key to Figure 4: Item combinations created using process as detailed by Dabholkar, Thorpe and Rentz (1996):

i1=P1+P2	i2=P3+P4	i3=P5	i4=P6	i5=P7
i6=P8	i7=P9+P11	i8=P10	i9=P12+P13	i10=P14
i11=P15+P17+P18	i12=P16+P19			

Table 4: Correlation Estimates for Model III

RSQS Sub-dimensions' Associations	Estimates
Appearance<—>Convenience	0.871
Appearance<—>Promises	0.793
Appearance<—>Doing-it-_Right	0.775
Appearance<—>Courteous/_Helpfulness	0.728
Convenience<—>Promises	0.819
Convenience<—>Doing-it-_Right	0.847
Promises<—>Doing-it-_Right	0.917
Doing-it-_Right<—>Inspiring_Confidence	1.068
Inspiring_Confidence<—>Courteous/_Helpfulness	1.007
Appearance<—>Inspiring_Confidence	0.718
Convenience<—>Inspiring_Confidence	0.822
Doing-it-_Right<—>Courteousness/_Helpfulness	1.038
Promises<—>Inspiring_Confidence	0.872
Convenience<—>Courteousness/_Helpfulness	0.762
Promises<—>Courteousness/_Helpfulness	0.944

ported.

Since neither the six sub-dimensional nor the five-dimensional structure was supported, the fourth model consisting of an association of the sub-dimensions as first-order factors and the dimensions as second-order factors was not conducted.

Overall Evaluation of RSQS

None of the component models of the RSQS dimensions fits the data indicating that the RSQS factor structure is not applicable in the Indian retail setting. The findings of RSQS in India are thus different from those of previous researchers (Dabholkar, Thorpe and Rentz, 1996; Boshoff and Terblanche, 1997) who found all the RSQS component factor structures as examined in this study to be appropriate. The data in this study do not support the basic five-dimensional structure contrary to the findings of Mehta, Lalwani and Han (2000) or even a four-factor structure as reported by Kim and Jin (2002). The closest fit is a three-dimensional structure but two out of these three dimensions are ambiguous, incapable of being used to identify clear and specific areas for service improvement focus. The RSQS scale shows good convergent and predictive validity as well as an acceptable level of reliability in the Indian retail setting. Though the discriminant validity of the scale could not be established, these findings indicate that RSQS can be used to assess overall service quality.

CONCLUSIONS AND IMPLICATIONS FOR RETAILERS

Sureshchander, Rajendran and Kamalnaban (2001) raised the question of whether service quality scales such as SERVQUAL and SERVPERF address the 'critical aspects

of customer perceived service quality' in India. This study lends further credence to their argument indicating a high need for basic research into the Indian retail consumer perceptions of service quality.

The validity and reliability of RSQS in the Indian retail setting indicate that RSQS can be used to assess the overall service levels provided by the store and for tracking changes in the overall service levels over a period of time.

However, RSQS would help identify only three service areas for focus — a relatively clear dimension of 'Physical Aspects,' a slightly hazy 'Problem Solving' area, and one confusing generic dimension of 'Store Policy.' Even the six sub-dimensions are highly collinear not just within the same dimension but even across different dimensions adding to the haziness of dimensions. This severely restricts the usefulness of the scale as a diagnostic tool for providing strategic direction. Retailers wanting greater clarity in identifying service areas for improvement will be disappointed with the RSQS's hazy dimensions.

Retailers and researchers applying multi-dimensional service quality scales developed internationally such as RSQS in the Indian context are advised to pay special attention to scale adaptation to ensure that the scale has reliable diagnostic ability. International retailers planning a foray into India would require a careful re-thinking before applying their existing perspectives on service quality gained in other countries to the Indian shoppers.

LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

Service quality researchers argue for scale adaptation to account for contextual variations both in terms of the industry setting (Carman, 1990; Babakus and Boller, 1992; Dabholkar, Thorpe and Rentz, 1996; Furrer, Liu and Sudharshan, 2000) and the region of study given a difference in cultural and environmental factors (Malhotra, *et al.*, 1994; Herbig and Genestre, 1996; Furrer, Liu and Sudharshan, 2000; Mehta, Lalwani and Han, 2000; Kim and Jin, 2002; Zhao, Bai and Hui, 2002). Depending on the context, adaptation of the service quality scale may not be simple and the specific application needs to be examined in detail (Brown, Churchill and Peter, 1993). Future research needs to address this critical need before research into service quality in Indian retailing can progress further. In this study, no attempt was made to modify the scale

apart from an examination of the face validity of the items. Pre-test interviews were conducted solely for the purpose of assessing wording of items. However, shoppers mentioned several service aspects, such as 'mailers sent by store' and 'loyalty programs' as being 'missing' from the scale. The RSQS is possibly not just inaccurate but also 'incomplete' in the Indian context. Future research needs to examine not just the factor structure of service quality but also develop a scale that captures the entire store service construct. Developing a scale for measuring service quality in Indian retail - which is *comprehensive* and can provide *homogenous factors* would fulfill the urgent strategic need of Indian retailers. The retailers would then be able to identify service quality areas requiring improve-

ment. Such a scale would be able to track improvements in *specific* areas of service. Unless this is possible, any service quality scale would have limited application for the retailers. Unfortunately, without extensive adaptation, RSQS is simply not suited to address these needs.

Two limitations of this study are the use of a relatively small sample and the study being restricted to the city of Bangalore and to apparel shoppers. These could impact the extent to which the results can be extrapolated to the other retail formats, product types, and cities. Future research in Indian retailing could examine a wider respondent base across the other cities of India. A larger sample size would also enable a separate analysis across the different income groups, gender, and age categories. ⩔

Appendix 1: Profile of Respondents

Gender

	Frequency	%	Cumulative %
Male	64	44.4	44.4
Female	80	55.6	100.0
Total	144	100.0	

SEC

	Frequency	%	Cumulative %
A1	44	30.6	30.6
A2	26	18.1	48.6
Total A	**70**	**48.6**	
B1	40	27.8	76.4
B2	23	16.0	92.4
Total B	**63**	**43.8**	
Not specified	11	7.6	100.0
Total	**144**	**100.0**	

Age

	Frequency	%	Cumulative %
18-25	68	47.2	47.2
>25	76	52.8	100.0
Total	**144**	**100.0**	

Occupation

	Frequency	%	Cumulative %
Skilled worker	1	0.7	0.7
Shop owner	18	12.5	13.2
Business/Indus - 0 emp	29	20.1	33.3
Business/Indus - 1 to 9 emps	1	0.7	34.0
Business/Indus - 10+ emps	1	0.7	34.7
Self employed professional	20	13.9	48.6
Clerical/Salesman	18	12.5	61.1
Supervisory level	11	7.6	68.8
Officers/Executive-Junior	5	3.5	72.2
officers/Exec/Middle/Senior	27	18.8	91.0
Retired	1	0.7	91.7
Not working	1	0.7	92.4
Student	1	0.7	93.1
Undisclosed	10	6.9	100.0
Total	**144**	**100.0**	

Appendix 2: The Retail Service Quality Scale (RSQS)

Dimension 1: Physical Aspects
Sub-dimension 1: Appearance
1. The store has modern-looking equipment and fixtures
2. The store and its physical facilities (trial rooms and restrooms) are visually attractive
3. Materials associated with this store's service (such as shopping bags, loyalty cards, and catalogues) are visually appealing
4. The store has clean, attractive, and convenient physical facilities (restrooms, fitting rooms)

Sub-dimension 2: Convenience
5. The layout of the store makes it easier for customers to find what they need
6. The layout of the store makes it easier for customers to move around in the store

Dimension 2: Reliability
Sub-dimension 3: Promises
7. When the store promises to do something (such as repairs, alterations) by a certain time, it will do so
8. The store provides its services at the time it promises to do so

Sub-dimension 4: Doing-it-Right
9. The store performs the service right the first time
10. The store has merchandise available when the customers want it
11. The store insists on error-free sales transactions and records

Dimension 3: Personal Interaction
Sub-dimension 5: Inspiring Confidence
12. Employees in the store have the knowledge to answer customers' questions

13. The behaviour of employees in the store instils confidence in customers
14. Customers feel safe in their transactions with this store

Sub-dimension 6: Courteousness/Helpfulness

15. The employees in the store give prompt service to customers
16. Employees in the store tell customers exactly when services will be performed
17. Employees in the store are never too busy to respond to customer's requests
18. The store gives customers individual attention
19. Employees in the store are consistently courteous with customers
20. Employees in the store treat customers courteously on the telephone.*

Dimension 4: Problem Solving

21. The store willingly handles returns and exchanges
22. When a customer has a problem, the store shows a sincere interest in solving it
23. Employees of the store are able to handle customer complaints directly and immediately.

Dimension 5: Policy

24. The store offers high quality merchandise
25. The store provides plenty of convenient parking for customers
26. The store has operating hours convenient for all their customers
27. The store accepts all major credit cards
28. The store has its own credit card *

* deleted as not applicable in the Indian context.

Appendix 3: Pattern Matrix of RSQS 26-item Scale

Item Code	Description	Factor 1	2	3	4
1	The store has modern-looking equipment and fixtures		0.832		
2	The store and its physical facilities (trial rooms and restrooms) are visually attractive	0.338	0.447		
3	Materials associated with the store's service (such as shopping bags, carry bags, etc. are virtually appealing		0.390		0.390
4	The store has clean and convenient physical facilities (trial rooms, restrooms)		0.610		
5	The layout at the store makes it easier for customers to find what they need		0.447		
6	The store layout makes it easier for customers to move around in the store		0.430	0.470	
7	When the store promises to do something (such as repairs, alterations) by a certain time, it will do so		0.443	0.333	
8	The store provides its services at the time it promises to do so	0.441			
9	The store performs the service right the first time			0.595	
10	The store has merchandise available when the customers want it	0.634			
11	The store has fast and error-free transactions (relating to billing, returns, etc.	0.657			
12	Employees in the store have the knowledge to answer customers' questions	0.760			
13	The behaviour of employees in this store instills confidence in customers	0.597			
14	Customers feel safe in their transactions with the store			0.672	
15	Employees in the store give prompt service to customers	0.509		0.334	
16	Employees in this store tell customers exactly when services will be performed	0.590			
17	Employees in the store are never too busy to respond to customer's requests	0.398		0.342	
18	The store gives customers individual attention	0.761			
19	Employees in the store are consistently courteous with customers	0.471		0.362	
20	The store willingly handles returns and exchanges			0.743	
21	When a customer has a problem, the store shows a sincere interest in solving it			0.579	
22	Employees of the store are able to handle customer complaints directly and immediately			0.477	
23	The store offers high quality merchandise (the colours of the fabrics do not run, fitting and stitching are good, merchandise use life is long, etc.	0.667	0.308		
24	The store provides plenty of convenient parking for customers		0.451		
25	The store has operating hours convenient to all their customers	0.369		0.346	
26	The store accepts all major credit cards	0.602			

Notes: Only loadings greater than 0.3 shown in table.
Extraction Method: Principal Axis Factoring.
Rotation Method: Oblimin with Kaiser Normalization. Rotation converged in 63 iterations.

REFERENCES

Angur, M G; Nataraajan, R and Jahera, J S (1999). "Service Quality in the Banking Industry: An Assessment in a Developing Economy," *International Journal of Bank Marketing*, 17 (3), 116-123.

Babakus, E and Boller, G W (1992). "An Empirical Assessment of the SERVQUAL Scale," *Journal of Business Research*, 24 (3), 253-268.

Bhat, Mushtaq A (2005). "Correlates of Service Quality in Banks: An empirical investigation," *Journal of Services Research*, 5(1), 77-99.

Blanchard, R F and Galloway, R L (1994). "Quality in Retail Banking," *International Journal of Service Industry Management*, 5 (4), 5-23.

Boshoff, Christo and Terblanche, Nic S (1997). "Measuring Retail Service Quality: A Replication Study," *South African Journal of Business Management*, 28 (4), 123-128.

Brown, Tom J; Churchill Jr., Gilbert A and Peter, J Paul (1993). "Research Note: Improving the Measurement of Service Quality," *Journal of Retailing*, 69 (1), 127-139.

Byrne, Barbara M (2001). "Structural Equation Modeling with AMOS," Multivariate Analysis Series, Erlbaum, Chapter 6, http://www.spss.ch/_pdf Structural Equation Modeling.pdf, [accessed 10 June, 2005].

Carman, James M (1990). "Consumer Perceptions of Service Quality:An Assessment of the SERVQUAL Dimensions," *Journal of Retailing*, 66 (1), 33-55.

Cronin Jr., J Joseph and Taylor, Steven A (1992). "Measuring Service Quality: A Reexamination and Extension," *Journal of Marketing*, 56 (3), 55-68.

Dabholkar, Pratibha A; Thorpe, Dayle I and Rentz, Joseph O (1996). "A Measure of Service Quality for Retail Stores: Scale Development and Validation," *Journal of the Academy of Marketing Science*, 24 (1), 3-16.

Finn, David W and Lamb, Charles Jr. (1991). "An Evaluation of the SERVQUAL Scales in a Retailing Setting," *Advances in Consumer Research*, 18 (1), 483-490.

Firoz, N M and Maghrabi, A S (1994). "The Role of Service Marketing in Economic Development: An Analysis," *International Journal of Management*, 11 (2), 641-647.

Furrer, Olivier; Liu, Ben Shaw-Ching and Sudharshan, D (2000). "The Relationships Between Culture and Service Quality Perceptions: Basis for Cross-Cultural Market Segmentation and Resource Allocation," *Journal of Service Research*, 2 (4), 355-371.

Gagliano, K B and Hathcote, Jan (1994). "Customer Expectations and Perceptions of Service Quality in Retail Apparel Specialty Stores," *Journal of Services Marketing*, 8 (1), 60-69.

Herbig, Paul and Genestre, Alain (1996). "An Examination of the Cross Cultural Differences in Service Quality: The Example of Mexico and the USA," *Journal of Consumer Marketing*, 13 (3), 43-53.

Jain, Sanjay K and Gupta, Garima (2004). "Measuring Service Quality: SERVQUAL vs. SERVPERF Scales," *Vikalpa*, 29 (2), 25-37.

Kassem, M Sami (1989). "Services Marketing: the Arabian Gulf Experience," *Journal of Services Marketing*, 3(3), 61-71.

Kim, Soyoung and Byoungho, Jin (2002). "Validating the Retail Service Quality Scale for US and Korean Customers of Discount Stores: An Exploratory Study," *Journal of Services Marketing*, 7 (2), 223-237.

Malhotra, N K; Ulgado, F M; Agarwal, J and Baalbaki, I B (1994). "Dimensions of Service Quality between Developed and Developing Countries," *International Services Marketing*, 11 (2), 5-15.

Mehta, Subhash C; Lalwani, Ashok and Han, Soon Li (2000). "Service Quality in Retailing: Relative Efficiency of Alternative Measurement Scales for Different Product-Service Environments," *International Journal of Retail & Distribution Management*, 28 (2), 62-72.

Mittal, Banwari and Lassar, Walfried M (1996). "The Role of Personalization in Service Encounters," *Journal of Retailing*, 72 (1), 95-109.

Nunnally, J C (1978). "Psychometric Theory", Second Edition New York: McGraw Hill.

Parasuraman, A; Zeithaml, Valarie and Leonard, Berry (1988). "SERVQUAL: A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality," *Journal of Retailing*, 64 (1), 12-40.

Schneider, Benjanim and White, Susan (2004). *Service Quality - Research Perspectives, Foundations for Organizational Science*, California, USQ: Sage Publications Inc.

Sharma, Alka and Mehta, Versha (2004). "Service Quality in Financial Services – A Case Study of Banking Services," *Journal of Services Research*, 4 (2), 205-222.

Sivadas, Eugene and Baker-Prewitt, Jamie (2000). "An Examination of the Relationship Between Service Quality, Customer Satisfaction, and Store Loyalty," *International Journal of Retail & Distribution Management*, 28 (2), 73-82.

Sureshchander, G S; Rajendran, C and Kamalanaban, T J (2001). "Customer Perceptions of Service Quality – A Critique," *Total Quality Management*, 12(1), 111-124.

Witkowski, Terrence H and Wolfinbarger, Mary F (2002). "Comparative Service Quality: German and American Ratings Across Service Settings," *Journal of Business Research*, 55 (11), 875-881.

Wong, Amy and Amrik, Sohal (2003). "Service Quality and Customer Loyalty Perspectives on Two Levels of Retail Relationships," *Journal of Services Marketing*, 17 (5), 495-513.

Woodruffe-Burton, H., Eccles, S. and Elliott, R. (2002). "Towards a Theory of Shopping: An Holistic Framework." *Journal of Consumer Behaviour*, 1 (3), 256-266.

Yavas, Ugur; Bilgin, Z and Shemwell, D J (1997). "Service Quality in the Banking Sector in an Emerging Economy: A Consumer Survey," *International Journal of Bank Marketing*, 15 (6), 217-223.

Zhao, Bai and Hui (2002). "An Empirical Assessment and Application of SERVQUAL in a Mainland Chinese Department Store," *Total Quality Management*, 13 (2), 241-254.

Subhashini Kaul has recently completed her Doctorate (Marketing) at IIM, Ahmedabad. Her research interest is in the area of store-shopper relationship development focusing on consumer attitude toward retailer initiatives. After her PGDM in 1992 from the same Institute, she worked for five years with some of the leading firms in advertising, couriers, and travel. She has five years of teaching experience with nationally reputed Management Institutes and has been a consultant with a variety of service industry firms at the set-up stage.

e-mail: subhak@iimahd.ernet.in