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

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

Abstract: (95 words)

Service quality measures developed internationally are often accepted as adequate in India. This study evaluates the Retail Service Quality Scale (RSQS) developed in the U.S. and considered valid across a variety of formats and cultural contexts. Confirmatory factor analysis of the component structures using AMOS 4.0 indicates the RSQS dimensions are not valid in India. This lowers the diagnostic ability of the scale for identifying areas requiring strategic focus. This study argues for further research and extensive scale adaptation before scales developed in other countries such as the RSQS are applied in the Indian context.

Key Words:

Service Quality, Indian apparel stores, Retail Service Quality Scale, Scale validation, Component Structures

Executive Summary: **(211 words)**

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

This study examined the Retail Service Quality Scale (RSQS) developed in the U.S. for applicability to Indian retail. This scale 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 data collected from 144 adult shoppers at large format apparel stores in the city of Bangalore indicates that the RSQS can be used to assess overall service quality levels and for tracking overall improvements over a period of time. However, the different dimensions of service quality are not clearly identifiable. This limits the diagnostic application of the RSQS. Consequently, retailers may find the RSQS a poor instrument to help them identify strategic areas requiring focus to improve overall service levels. Investment in further research to modify the RSQS for application in India is recommended.

About the Author: (74 words)

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Introduction

Of all services marketing topics, service quality has gained much research prominence in 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 to increase value for the consumer; as a means of positioning in a competitive environment (Mehta, Lalwani and Han, 2000) and to ensure consumer satisfaction (Sivadas and Baker-Prewitt, 2000), retention and patronage (Yavas, Bilgin and Shemwell, 1997). With greater choice and increasing awareness, Indian consumers are more demanding of quality service (Angur, Nataraajan and Jahera, 1999) and players can no longer afford to neglect customer service issues (Firoz and Maghrabi, 1994, Kassem, 1989).

Much of the attention focused on the service quality construct is attributable to the SERVQUAL instrument developed by Parasuraman, Zeithaml & Berry (1988) for measuring service quality. Several studies subsequently employed the 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, 1995; Mittal and Lassar, 1996; Zhao, Bai and Hui, 2002; Witkowski & Wolfinbarger, 2002; Wong and Sohal, 2003).

Little is known about service quality perceptions in India (Jain and Gupta, 2004) because research focus has primarily been on 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 to India without adaptation. Angur, Nataraajan and Jahera (1999) examined the 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. The RSQS has a five dimensional structure of which three dimensions comprise of two sub-dimensions each. Studies assessing the applicability of the RSQS have reported encouraging results. Dabholkar, Thorpe and Rentz (1996) replicated their own study and found all the RSQS dimensions and sub-dimensions to be valid in the U.S. Mehta, Lalwani and Han (2000) found the RSQS five dimensional structure appropriate for measuring the service quality perceptions of supermarket consumers in Singapore. Kim and Jin (2001) report the RSQS a useful scale for measuring service quality of discount stores across two different cultural contexts of U.S. 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 evaluates 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 the RSQS is found to be valid and reliable it will be the first such instrument available to Indian retailers. If not, then researchers and retailers alike would be forewarned about using an unreliable scale for measuring retail service quality in India.

The 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, p16). The 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

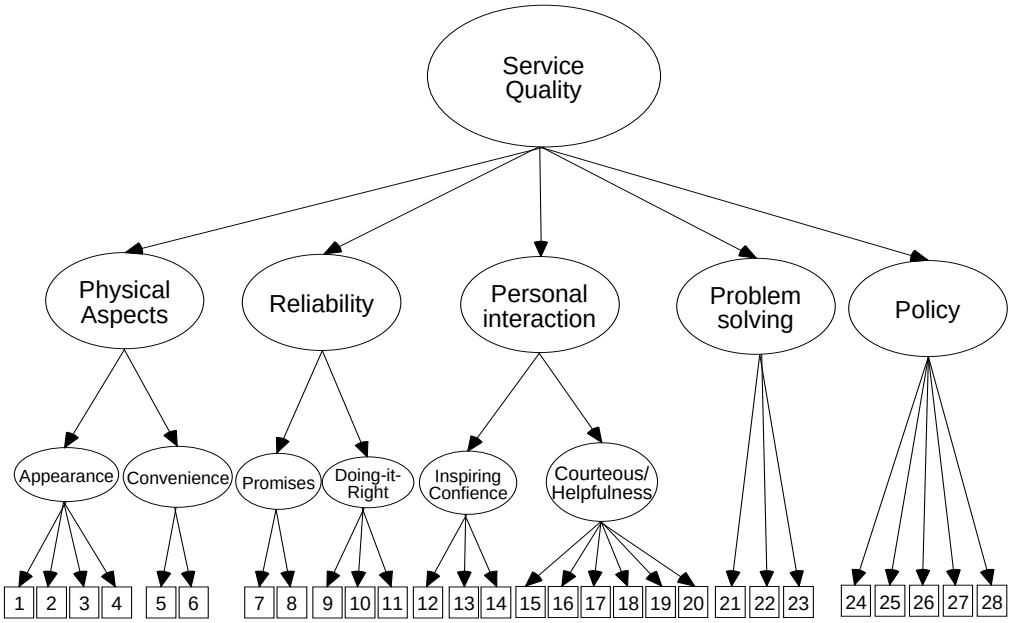
consumer expectations of the store service, are explicitly measured to assess the 'gap'. Conceptually, this gap assessment assumes that the statement of desired attribute levels is the yardstick a consumer uses to assess store service performance (Carman, 1990). Schnieder and White (2004) provide a list of several other yardsticks 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, the 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. It consisted 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 which are labeled as Appearance, Convenience, Promises, Doing-it-right, Inspiring confidence and Courteousness/helpfulness. The entire RSQS structure is represented in Figure 1.

Figure 1: The Retail Service Quality Scale (RSQS)



Key: Items 1-28 as given in Appendix II. All dimension and sub-dimensions are correlated amongst each other -not depicted in diagram for sake of clarity.

Research Objective

Since service quality is a theoretical construct researchers have defined its dimensions based on the setting used to explore the construct. If the RSQS is to be applicable for 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 (Figure 2). If an assessment of this model yields positive results, then 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 (Figure 3). 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 are appropriate for measuring a single factor - overall service quality.

Model III: The third model tests the six sub-dimensions/first-order factors (Figure 4). 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 will be able to better focus on specific service aspects for ensuring and monitoring improvement in quality.

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

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

Methodology

Sample

The population was defined as in similar studies - comprising retail shoppers (Dabholkar, Thorpe and Rentz, 1996; Boshoff and Terblanche, 1997). A quota sampling procedure was used with a sample size of 180 respondents. The quota were 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. Respondents were at least 18 years old since by this age one is definitely shopping for oneself in India. 25 years and above was taken as a second group 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; 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 our study findings are not very 'short-term' retail evolution stage specific (Woodruffe, Eccles and Elliott, 2002). For the same reason, we also selected apparel shoppers as the respondent base for our study since large format apparel stores have been in existence far longer in India as compared to say, large format grocery stores or hyper stores.

The MAP sampling process was used to select respondents. In this process, the entire city is divided into five zones (East, West, North, South and Central) and 'starting points' randomly selected from amongst the identified SECA and SECB residential localities. Within each SP, a pre-specified number of responses are obtained. In our sample, six SP's 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 the author till they were familiar with the instrument. The data was collected at the residence of 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 past three months and was willing to respond.

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

Instrument

Of the 28 items in RSQS, two were found inapplicable for inclusion in the Indian context (Appendix II). The process used of examining face validity of the items for inclusion/exclusion was similar to the procedure used by Dabholkar, Thorpe and Rentz (1996) when developing the RSQS. An improvement in the process used in this study was that in addition to the author, 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 own credit cards'. All other 26 items were found relevant by all examiners.

The final instrument (Appendix II) consisted of these 26 items and three additional items to assess the predictive, convergent and discriminant validity of the retail service quality questionnaire. These 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. 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 cribs made to friends and relatives because formal complaints at the store were few even if the shoppers had problems with the store service. During these interviews and based on the suggestions of the two store managers, explanations were added for some items to avoid any chance of ambiguity. Appendix II gives a list of all RSQS items used in the final instrument. The instrument also contained a final section collecting data on gender, age and education level of the respondent.

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

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 indicator of reliability (Nunnally, 1978), we see that all underlying sub-dimensions/dimensions are reliable except the Convenience sub-dimension pertaining to Physical aspects dimension of service quality (alpha = 0.67). This compares to the findings of Boshoff and Terblanche (1997) who found the RSQS scale (alpha = 0.93) and all dimensions reliable except the Policy dimension (alpha = 0.68).

Table 1: The RSQS Scale and Reliability Results

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

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 respondents were asked whether they intend to buy at the specified store again (repurchase intentions). The results confirm the predictive validity of the instrument (correlation of 0.591, $p < 0.0001$).

Table 2: Tests of Validity for RSQS

Convergent Validity	Overall service quality	0.703 correlation (p<0.000)
Predictive validity	Repurchase Intentions	0.591 correlation (p<0.000)
Discriminant validity	Past Complaint Behaviour	-0.021 correlation (p<0.800)

Regarding discriminant validity, we are unable to make any conclusions. Even though the sign of the correlation between past complaint behavior 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

We can conclude that overall service quality is unidimensional (overall reliability in Table 1) and the 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'. But the acceptable convergent and predictive validity of RSQS (Table 2) indicates the scale does measure 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 of the component structures.

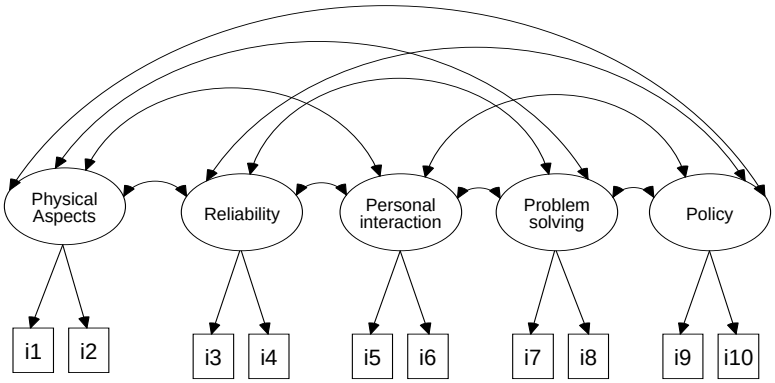
Cross-validation of the RSQS Model of Service Quality

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

Model 1: Assessing the Five-Dimensional Structure of RSQS

The AMOS output returned an inadmissible solution for Model I (Figure 2).

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)

The correlation estimates (Table 3) for two associations between latent constructs in Model I was greater than 1. This indicates a high degree of multicollinearity 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).

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

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 (χ^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 (χ^2=86.373, df=23; RMR=0.444, GFI=0.894, AGFI=0.818, CFI=0.956, RMSEA=0.109) had comparable fit indices. A two factor model was examined and rejected due to poor fit.

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

An Exploratory Factor Analysis (EFA) was conducted for the 26 items of using oblique rotation in SPSS-X resulted in four factors explaining 64.212% of the variance. Of these only the second factor was identifiable as pertaining to store 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 (2001) who find support for a four factor structure. However, the fourth factor in this study had no loadings greater than 0.45 (Appendix III) enabling us to understand why the three factor solution also shows comparable fit with the four factor structure.

Discussion

The RSQS is not a five dimensional structure in India.

This is quite 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 Indian consumer does not distinguish between service attributes related to Reliability and Policy. An examination of the items indicates that the items in both dimensions have a common characteristic – the 'store'! All 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). Exploratory factor analysis (EFA) indicated that all 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. Indian consumers perceive all these as policy related matters. 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 responsibility. In the EFA, this item also loaded onto the same factor which can now be labeled as 'Store Policy'. The only other two dimensions left are 'Physical aspects' - the items of which loaded onto one single factor in the 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 the 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.

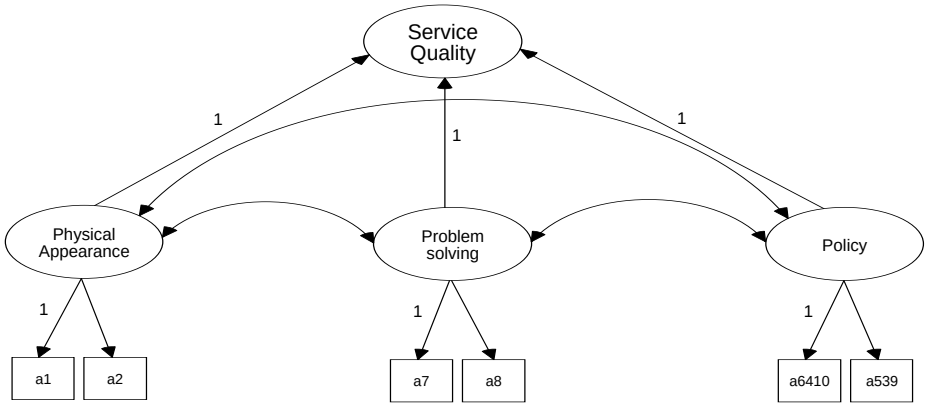
The solution was inadmissible even for four dimensions.

Since the three factor structure for Model I also had a good fit, Model II was revised accordingly – the three revised dimensions of 'Store Policy', 'Physical aspects' and 'Problem solving' as first order and service quality as a second order factor (Figure 3). The first indicator variable of each

dimension of Reliability, Personal interaction and Policy was combined to create a new indicator variable for the redefined 'Store Policy' dimension. The second set of indicator variables were 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 (χ^2=18.059, df=6; RMR=0.708, GFI=0.708, AGFI=0.960, CFI=0.983, RMSEA=0.119).

Figure 3: Model II - Four Dimensions as First-order and Service Quality as Second-order factors



Key to Figure 3: Figure 2, new indicators by combining Reliability, Personal interaction and Policy dimensions

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 indicate 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 Indian shoppers.

Assessing the Structure of the Six Sub-Dimensions

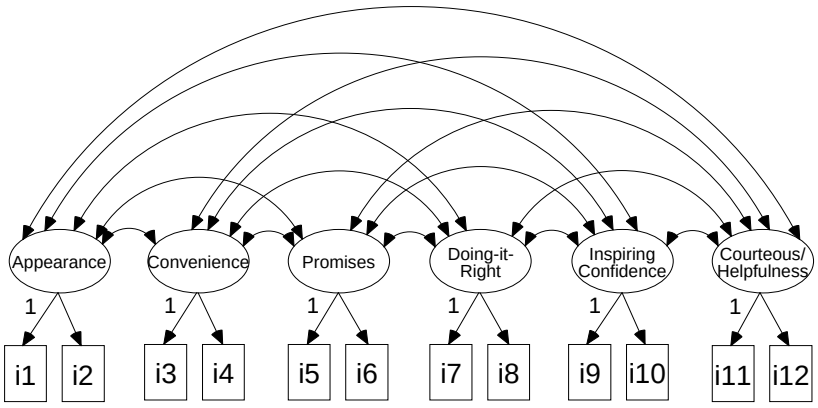
For Model III, since the key for combining items was not provided by Dabholkar, Thorpe and Rentz (1996), it was decided to create a specific item-combination for this study as per their specifications and using the random process suggested by them. Thus items were randomly selected and added to create 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 3 (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 latent constructs was greater than 1.

Table 4: Correlation Estimates for Model 3

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<-->Courteous/_Helpfulness	1.038
Promises<-->Inspiring_Confidence	0.872
Convenience<-->Courteous/_Helpfulness	0.762
Promises<-->Courteous/_Helpfulness	0.944

Figure 4: Model 3 - 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			

To reduce collinearity, the sub-dimensions of 'Inspiring confidence' and 'Doing-it-Right' were eliminated and all related indicator variables included within the sub-dimension of Courteousness/helpfulness. This revised model provided an admissible solution with acceptable fit indices (χ^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 six factor structure supported by the data. Apart from the sub-dimensions pertaining to 'Physical aspects' dimension, the other sub-dimensions are not supported by empirical evidence. The sub-dimensions are highly correlated not just within the dimension but also across the dimensions related to Reliability and Personal

interaction. As Indian shoppers do not distinguish even between the higher order dimensions, it is understandable why the more subtle sub-dimensional differences are not supported.

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.

RSQS Overall Evaluation

None of the component models of the RSQS dimensions fit the data, indicating that the RSQS factor structure is not applicable to the Indian retail setting. The findings of the 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 does 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 (2001). 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 the RSQS can be used to assess overall service quality.

Conclusions and Implications for Retailers

Sureshchander et al. (2001) raised the question of whether service quality scales such as the 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 RSQS validity and reliability in the Indian retail setting indicate that the RSQS can be used to assess the overall service levels provided by the store and for tracking changes in overall service levels over a period of time.

But 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 hazy dimensions.

Retailers and researchers applying multi-dimensional service quality scales developed internationally such as the RSQS to 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 careful re-thinking before applying their existing perspectives on service quality gained in other countries to 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. Future research needs to examine the factor structure of service quality applicable in the Indian retail context. Developing such a scale for measuring service quality in Indian retail based on an adaptation of the RSQS which can provide homogenous factors would fulfill the strategic need of retailers. Retailers would then be able to identify service quality areas requiring improvement. 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 retailers. Unfortunately, without adaptation the RSQS is not suited to address this need.

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

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Appendix I: Profile of the respondents

GENDER

	Frequency	Percent	Cum Percent
Male	64	44.4	44.4
Female	80	55.6	100.0
Total	144	100.0	

SEC

	Frequency	Percent	Cum Percent
A1	44	30.6	30.6
A2	26	18.1	48.6
Total A	71	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	Percent	Cum Percent
18-25	68	47.2	47.2
>25	76	52.8	100.0
Total	144	100.0	

OCCUPATION

	Freq	Percent	Cum Percent
Skilled Worker	1	.7	.7
Shop Owner	18	12.5	13.2
Business/Indus - 0 emp	29	20.1	33.3
Business/Indus - 1 to 9 emps	1	.7	34.0
Business/Indus - 10+ emps	1	.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	.7	91.7
Not working	1	.7	92.4
Student	1	.7	93.1
Undisclosed	10	6.9	100.0
Total	144	100.0	

Appendix II: The RSQS Items used in the Instrument

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 catalogs) are visually appealing
4. The store has clean, attractive and convenient physical facilities (restrooms, fitting rooms)

Sub-Dimension 2 Convenience

5. The store layout at this store makes it easier for customers to find what they need
6. The store layout at this store makes it easier for customers to move around in the store

Dimension 2 Reliability

Sub-Dimension 3 Promises

7. When this store promises to do something (such as repairs, alterations) by a certain time, it will do so
8. This store provides its services at the time it promises to do so

Sub-Dimension 4 Doing-it-Right

9. This store performs the service right the first time
10. This store has merchandise available when the customers want it
11. This 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 this store instills confidence in customers
14. Customers feel safe in their transactions with this store

Sub-Dimension 6 Courteousness/Helpfulness

15. The employees in this store give prompt service to customers
16. Employees in this store tell customers exactly when services will be performed
17. Employees in this store are never too busy to respond to customer's requests
18. This store gives customers individual attention
19. Employees in this store are consistently courteous with customers
20. Employees in this store treat customers courteously on the telephone. (deleted as not applicable in Indian context) ∗

Dimension 4 Problem Solving

21. This store willingly handles returns and exchanges
22. When a customer has a problem, this store shows a sincere interest in solving it
23. Employees of this store are able to handle customer complaints directly and immediately. 34

Dimension 5 Policy

24. This store offers high quality merchandise
25. This store provides plenty of convenient parking for customers
26. This store has operating hours convenient to all their customers
27. This store accepts all major credit cards
28. The store has its own credit card (deleted as not applicable in Indian context) ∗

Appendix III: Exploratory Factor Pattern Matrix of RSQS 26 item scale
(only loadings greater than 0.3 shown in the table)

Item code	Description	Factor 1	2	3	4
1	The store has modern-looking equipment and fixtures		.832		
2	The store and its physical facilities (trial rooms and restrooms) are visually appealing	.338	.447		
3	Materials associated with the store's service (such as shopping bags, carry bags etc		.390		.390
4	The store has clean and convenient physical facilities (trial rooms, restrooms)		.610		
9	The layout at the store makes it easier for customers to find what they need		.447		
10	The store layout makes it easier for customers to move around in the store		.430	.470	
11	When the store promises to do something (such as repairs, alterations) by a certain time, it will do so		.443	.333	
12	This store provides its services at the time it promises to do so	.441			
16	This store performs the service right the first time			.595	
17	The store has merchandise available when the customers want it	.634			
18	The store has fast and error-free transactions (relating to billing, returns etc	.657			
22	Employees in the store have the knowledge to answer customers' questions	.760			
23	The behaviour of employees in this store instills confidence in customers	.597			
24	Customers feel safe in their transactions with this store			.672	
26	Employees in this store give prompt service to customers	.509		.334	
27	Employees in this store tell customers exactly when services will be performed	.590			
28	Employees in the store are never too busy to respond to customer's requests	.398		.342	
29	The store gives customers individual attention	.761			
30	Employees in the store are consistently courteous with customers	.471		.362	
32	The store willingly handles returns and exchanges			.743	
33	When a customer has a problem, this store shows a sincere interest in solving it			.579	
34	Employees of the store are able to handle customer complaints directly and immediately			.477	
39	The store offers high quality merchandise (the colours don't run, fitting and stitching is good, merchandise use life is long etc	.667	.308		
41	The store provides plenty of convenient parking for customers		.451		
45	The store has operating hours convenient to all their customers	.369		.346	
46	The store accepts all major credit cards	.602			

Extraction Method: Principal Axis Factoring. Rotation Method: Oblimin with Kaiser Normalization. Rotation converged in 63 iterations.