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RESEARCH ARTICLE

Customer Satisfaction in Indian Retail Banking: Scale Development and Validation

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Abstract

The construct of customer satisfaction and scale development and validation with respect to Indian retail banking has been studied. The scale development was carried out over three stages (item generation, scale purification, scale validation). It comprised of conducting depth interviews and focus groups for item generation and three separate phases of data collection. The data provide evidence for face, content, discriminant and convergent validity, dimensionality, reliability and generalizability of the scale. It is a seven-dimensional scale that might be used for understanding dimensions affecting customer satisfaction in Indian retail banking and by Indian retail banks in measuring customer satisfaction levels.

Keywords: *Customer satisfaction, Scale development, Retail banking, India, Scale validity, Scale reliability.*

Introduction

Customer satisfaction is the key to long term success of any company [1]. Keeping the importance of customer satisfaction in mind, banks need to maintain stable and close relationships with their customers. Customer satisfaction levels need to be judged and the application of the knowledge of customer satisfaction is imperative to establishing and maintaining a long-term relationship with customers and long-term competitiveness [2]. Banking is a high involvement industry. Banks recognize the fact that delivery of quality service to customers is essential for success and survival in today's global and competitive banking environment [3]. Researchers have found that customer satisfaction has a measurable impact on purchase intentions [4], on customer retention [5] and on a firm's financial performance [6, 7].

Customers' wants, needs, and expectations change quickly. Therefore, what would have delighted and surprised them a short while back might not satisfy them at present [6]. Banks may not be able to provide superior services to the customers unless customer expectations are known [8]. Customer expectations can be known through the knowledge of satisfaction levels of customers [9]. This necessitates the measurement of customer satisfaction level. Customer satisfaction cannot be measured unless the dimensions affecting customer satisfaction are determined. This necessitates an in-depth study about the dimensions affecting customer satisfaction.

In this study, an attempt has been made to understand the various dimensions of customer satisfaction in the Indian retail banking scenario. The aim of the study is to develop a valid and reliable customer satisfaction scale to measure the level of customer satisfaction among the Indian retail banking customers.

Customer Satisfaction in Indian Retail Banking

The economic growth and development of India has been influenced and accelerated by the expansion of the banking system. The Indian banking industry has shown enormous growth during the past two to three decades. Retail banking is a service industry and delivers its services to the consumer. A satisfied customer is the best person to generate positive word of mouth for a retail bank.

The banking industry in India has undergone a number of major changes in the post-independence era. More recently, liberalization, the opening up of the economy in the 1990s and the government's decision to privatize banks resulted in the banking reforms. Like any other

financial services, the banking industry, too, is facing a market that is changing rapidly. New technologies are being introduced and there is always a fear of economic uncertainties. Fierce competition, more demanding customers and the changing climate have presented an unparalleled set of challenges [10]. This has led the Indian banking industry to experience difficult times. In such a competitive scenario, it is extremely important that banks are able to retain a loyal base of customers. To attain this and to improve their market and profit positions, banks in India have to formulate their strategies and policies towards increasing customer satisfaction levels.

Banking institutions all over the world have recognized the importance of customer satisfaction and of developing and maintaining enduring relationship with their customers as two crucial parameters leading to increased business performance. At the same time, several banking institutions are experiencing increasing level of retail customer dissatisfaction. Research suggests that customer dissatisfaction is still the major reason of bank customers' switch to other banks [11]. This dissatisfaction could be because of a variety of reasons (access, services, products, prices, image, personnel skills, treatment, credibility and responsiveness, waiting time, location and technology).

Definitions of Customer Satisfaction

Customer satisfaction is a person's feelings of pleasure or disappointment that result from comparing a product's perceived performance (or outcome) to their expectations. [12]

Satisfaction is the consumer's response to and evaluation of the perceived discrepancy between prior expectations (or some other norm of performance) and the actual performance of the product as perceived after its consumption. [13]

Satisfaction can be broadly characterized as a post-purchase evaluation of product quality given pre-purchase expectations. [14]

As evident from the above definitions of customer satisfaction, in order to measure satisfaction, it is necessary to measure both expectations at the time of purchase and reactions at some time after purchase. If actual consequences equal or exceed expected consequences, the customer is satisfied, but if actual consequences fall short of expected consequences, the customer is dissatisfied.

Need for the Measurement of Customer Satisfaction

The importance of measurement of customer satisfaction lies in the fact that one key to customer retention is customer satisfaction [15]. A highly satisfied customer generally stays longer, buys more as the company introduces new products and services and upgrades existing products and services, talks favorably to others about the company, pays less attention to competing brands, offers product or service ideas to the company, and costs less to serve than new customers because transactions can become routine [16]. Greater customer satisfaction has also been linked to higher returns and faster company growth [17].

Literature Review

Various Customer Satisfaction Indices and Scales have been constructed from time to time. Among them the major ones are American Customer Satisfaction Index (ACSI) [26], Net Promoter Score (NPS) [59] and Net Effect of Word of Mouth (NEW) [23].

Fornell et al. [18] studied the nature and the scope of ACSI. They found that customer satisfaction is greater for goods than for services and, in turn, greater for services than for government agencies. They estimate the model for seven major economic sectors for which data was collected. Banking was one of those seven sectors. Highlights of the findings include that customer expectations play a greater role in sectors in which variance in production and consumption is relatively low, and customer satisfaction is more quality-driven than value- or price-driven. In the calculation of ACSI only present customers and not past customers are considered. Also ACSI is a general customer satisfaction index and not specific to the banking sector.

The process of measurement of ACSI is complex. Companies look to certain measures which are simple to conduct and easy to implement. Reichheld [19] proposed the concept of Net Promoter Score (NPS). It claimed that only one question based on the likelihood of the recommendation of the customer to friends or colleagues would determine the level of satisfaction and loyalty for a specific customer. Reichheld [19] also claims that NPS is superior to ACSI in measuring customer satisfaction and loyalty. Further research has been conducted by various researchers [20, 21, 22]. Based on both macro-level and micro-level investigations that test the linkage between NPS and customer satisfaction, and NPS and customer loyalty respectively, it is found that neither of the above

claims are supported. Also, NPS is used to measure customer satisfaction across a number of industries and is not specific to the banking sector.

Attempts were made to rectify some of the drawbacks of ACSI and NPS by a new metric, Net Effect of Word of Mouth (NEW) [20]. NEW considers the volume and the impact of Positive Word of Mouth (PWOM) and Negative Word of Mouth (NWOM) and also tries to consider both past customers and never-customers. But this measure of customer satisfaction is also a general measure and is not specific to the banking sector.

Although the above three measures calculate customer satisfaction, they are general measures of customer satisfaction and are not specific to the banking sector. So, the above measures might not be applicable for the measurement of customer satisfaction in the retail banking sector.

Studies on customer satisfaction scales have been also done by Klaus and Maklan [23], Aydin and Ozer [24], Fecikova [25], Vilares and Coelho [26], Nicholls et al. [27], Danaher and Haddrell [28]. Most of these studies are based on validation of existing customer satisfaction scales like American Customer Satisfaction Index (ACSI) and European Customer Satisfaction Index (ECSI) for different industries.

Studies on scales in the banking sector are few. Scales to measure service quality have been developed by researchers [29, 30, 31]. Studies deal with the construction and validation of service quality in internet banking [32, 33].

Studies also deal with the construction and validation of customer attachment scale [34]. But none of the studies have considered the construction and validation of customer satisfaction scale in retail banking.

Studies on customer satisfaction scales are few in the Indian context. A study concerning the scale development for measuring effectiveness of customer relationship management (CRM) in Indian retail banks has been done by Padmavathy et al. [35]. A scale has been constructed and validated to measure the CRM effectiveness in the Indian retail banks. CRM effectiveness considers customer satisfaction as one of the constituents. But the scale does not consider the various dimensions of customer satisfaction in Indian retail banking.

From the above discussion it can be found that although various customer satisfaction scales like ACSI, NPS, NEW have been constructed by researchers and validated by others, customer satisfaction scales in the banking sector are almost non-existent. In the Indian scenario, both sector-specific and in the banking sector in particular, customer satisfaction scales have not been constructed and validated. This points out to a research gap necessitating the construction and validation of a customer satisfaction scale for the Indian banking sector in particular.

The above discussions lead to the following objective of the study:

Construction of a customer satisfaction scale in the Indian retail banking context.

Methodology and Data Collection for Scale Development

The methodology adopted for the development and testing of the Customer Satisfaction Scale was largely based upon the guidelines provided by DeVellis [36], Churchill [37] and Campbell and Fiske [38]. The steps in the method proposed by Churchill [37] for constructing and validating a customer satisfaction scale are followed. The method might be presented as a sequence of steps that will be followed and a list of calculations that need to be performed in developing measures of customer satisfaction.

The steps might be as follows:

- Specification of the domain of construct
- Generation of sample of items
- Collection of data
- Purification of the measure
- Collection of data again
- Assessment of reliability
- Assessment of validity
- Development of norms

Specifying the Domain of the Construct

The domain of the construct, customer satisfaction needs to be specified clearly. It needs to be understood what is included in the definition of customer satisfaction and what is excluded in the definition. The domain of the construct, customer satisfaction follows directly from the definitions of customer satisfaction already mentioned above.

Customer satisfaction by their definition seems to be attitude of the customers. Further, in order to measure customer satisfaction, it was necessary to measure the expectations of the customers before the purchase and actual use of the product

and reactions of those customers after the purchase and after the actual use of the product [37]. If actual consequences equal or exceed expected consequences, the customer is satisfied, but if actual consequences fall short of expected consequences, the customer is dissatisfied. So, the domain of the construct of customer satisfaction would include pre-purchase expectations of the customers, perception of the customer about the product or service during the actual use, and the evaluation of the product or service after its use. If the post-purchase evaluation exceeds the pre-purchase expectations, the customer is satisfied. If the post-purchase evaluation falls short of the pre-purchase expectations, the customer is dissatisfied. It was also found necessary to consult the existing literature to conceptualize the construct of customer satisfaction and specifying its domain.

Data collection was done in three stages – item generation, scale purification and scale validation.

Stage One-Generation of Sample of Items

Generation of sample of items was done in two phases. Existing literature was studied to find out the preliminary sample of items. Further generation of sample of items has been done by conducting depth interviews, focus group discussions and by applying critical incident method.

The items found from the existing literature are presented in a tabular format below:

Table 1: List of items from existing literature

Authors	List of Items
Gupta and Dev [39]	Service quality, Ambience/Hygiene, Client participation/Involvement, Accessibility, Financial benefits
Estiri et al. [40]	Value proposition quality, Service delivery quality
Singh and Kaur [41]	Social responsibility, Positive WOM, Reliability, Employee responsiveness, Appearance of tangibles, Services innovation, Competence
Ganguli and Roy [42]	Customer service, Technology security, Information quality, Technology convenience, Technology usage easiness, Reliability
Sadeghi and Hanzaee [43]	Customer convenience, Accessibility, Accuracy in operations, Security in operations, Bank image, Website design
Herington and Weaven [44]	Personal needs of customers, website organization, User friendliness, Efficiency in services
Abdulkarim and Alhemoud [45]	Fast Service, Courtesy and helpfulness of the employees, Availability of self-banking services
Kanning and Bergmann [46]	Performance of banks, Customer expectations
Casaló et al. [47]	Website usability
Molina et al. [48]	Correct functioning, Special treatment benefits, Social benefits
Pikkarainen et al. [49]	Website content, Ease of use, Accuracy
Ndubisi and Wah [50]	Competence, Communication, Conflict handling ability, Trust, Relationship quality
Zhou [51]	Empathy, Responsiveness of employees, Reliability, Assurance, Tangibility
Ahmad and Naser [52]	Service quality
Ahmad and Naser [53]	Service quality, Customer expectations
Lassar et al. [54]	Service quality
Johnston and Hewa [55]	Speed of processing information, Reliability
Levesque and McDougall [56]	Solutions to service problems, Bank's service recovery ability, Convenience for customers, Competitive interest rates, Skilled employees
Moutinho and Brownlie [57]	Location of branches, Accessibility of branches and ATMs

As per Churchill [37], items need to be gathered from other sources by conducting interviews and focus group discussions. So, interviews and focus group discussions of the Indian retail banking customers were conducted and analyzed to generate more items.

Analysis of the Interviews and Focus Group Discussions

A number of interviews (18 in numbers) and focus group discussions (two in numbers) were conducted to understand the concept of customer satisfaction for the retail banking customers. The respondents were Indian retail banking customers across all age groups. Qualitative analysis of the interviews and focus group discussions was done. The guiding principle used for conducting and analyzing the interviews and focus group discussions was based on Grounded Theory approach [58].

Glaser and Strauss [59] developed the idea of Grounded Theory (GT) out of an urgent need in the field of social research to discover theories as opposed to merely testing existing theories. In the particular case, GT was considered as the most

suitable approach because it is more suitable to researching problems that do not allow for pre-conceptualized theory [60]. GT is also a suitable approach in generating items for scale development [61].

The use of GT approach in this study allowed for the development of a conceptual understanding of the dimensions affecting satisfaction for the retail banking customers of India. The investigation examined the respondent's experiences in an attempt to understand the factors affecting customer satisfaction for Indian retail banking customers. The idea of emergence is one of the strengths of qualitative research and GT [62]. GT goes beyond speculations and presumptions to the actual processes and the respondent's reality [60]. The process followed to conduct and analyze the interviews and focus group discussions are mentioned below:

- The transcript of the interview/focus group discussion was prepared.
- The data was labeled to understand the phenomena.
- Open coding was done on the labeled data to understand the concepts which are the building blocks of GT.
- Memos were prepared to explain the emergence of the concepts.
- Exploratory index card sorting method was applied to segregate the concepts into categories and sub-categories.
- Axial coding was done to relate the categories and the sub-categories and also to find the intersection of the categories and sub-categories along the dimensional ranges.
- Around 300 unique sample of items emerged from the analysis.
- From an analysis of the interviews and focused group discussions, Service Delivery emerged as a major category.

The generated concepts were reduced to less number of items (65 items) in consultation with banking experts. This review also served the purpose of maximizing the face validity and content validity of the scale. The definition of the construct of customer satisfaction was validated by the experts. Also the pool of items was validated by them. They indicated how relevant they think each item was to what was intended to be measured. The experts were provided with the working definition of customer satisfaction. They were then asked to rate each item with respect to its relevance vis-à-vis the construct as has been defined. They were invited to comment on the fitness of the individual items. This helped in minimizing the ambiguity related to the pool of items. The experts evaluated the clarity and conciseness of the items. This helped to increase the reliability of the items because ambiguous or unclear items tend to reduce item reliability [36]. The experts also helped in pointing out ways of tapping the phenomenon that might not have been included. Review of the items in this way helped to maximize the content validity of the scale.

Stage Two-Scale Purification

Questionnaire was developed based on the items validated by experts. 5-point Likert scale was used to design the questionnaire with the ratings of the responses ranging between "highly important" and "not at all important". The respondents were asked to rate the importance of the different items with regard to customer satisfaction on a 5-point scale. Pilot testing of the questionnaire was done among 70 respondents to ensure the understandability of the questionnaire to the respondents.

The first phase of primary data was collected from the respondents who represented Indian retail banking customers. The number of responses was 401. This conforms to the sampling adequacy of 300 responses as suggested by Nunnally [63]. Also the number of responses satisfied the minimum ratio of number of responses (401 responses) to number of items (65 items) of 5:1 as suggested by Tinsley and Tinsley [64].

Statistical analysis based on the first phase of data collection was done in a number of steps.

Step1

The factor structure based on the categories generated from the qualitative analysis through Grounded Theory and subsequent exploratory index card sorting was the starting point.

Step 2

The analysis was conducted on SPSS20. Internal consistency of the factor structure was verified based on Cronbach's Alpha. As suggested by Nunnally [63] and Churchill [37], a cut-off value of 0.7 for Cronbach's Alpha was considered. All the factors generated from qualitative analysis were found to satisfy the above value of Cronbach's Alpha.

Step 3

The items in each factor were purified based on the combined effects of the following three criteria:

- Value of Cronbach's Alpha if a specific item is deleted
- Item-total scale correlations for the items
- Scale variance if a particular item is deleted.

One of the most important indicators of a scale's quality is the reliability coefficient, alpha. Alpha is an indication of the proportion of variance in the scale scores that is attributable to the true score. Items whose deletion did not affect the value of Cronbach's Alpha much were deleted. In a scale we want to arrive at a set of items with high inter-correlations. So, each individual item should correlate substantially with the collection of remaining items [36]. The items in a particular factor with a low item-total scale correlation or the items with a sudden drop in the item-total scale correlation were deleted. Also, another attribute for a scale item is relatively high variance. Items whose deletion did not affect the variance to a substantial extent were deleted. This indicates that exclusion of those items does not affect the scale variance much. 17 items were deleted based on the above criteria. 48 items remained.

Step 4

A new factor structure was generated after the deletion of the above items. The internal consistency and reliability of the factors were checked based on the value of Cronbach's Alpha ($\alpha \geq 0.7$). All the factors were found to satisfy the criteria of $\alpha \geq 0.7$.

Steps 3 and 4 were performed to purify the measure before conducting Exploratory Factor Analysis on the remaining set of items.

Step 5

Exploratory Factor Analysis (EFA) was performed taking all the 48 items together to generate a factor structure. Bartlett's test of sphericity was conducted to examine the hypothesis that the variables are uncorrelated in the population. Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was tested to examine the appropriateness of factor analysis. High value [65] indicated that factor analysis was appropriate. The extraction method used was Principal Component Analysis. Eigenvalues greater than 1 were considered. A maximum number of 100 iterations were considered for convergence. To ensure maximum variance in the factors, factor rotation with varimax rotation was conducted [65].

Step 6

The Exploratory Factor Analysis provided a seven-component structure which explained 69.4% of the variance. The factor loadings ranged between 0.53 and 0.792. As suggested by Sweeney and Soutar [66], the items from each component were deleted based on the following criteria:

- Factor loadings < 0.4 for a specific item in the matrix or items with factor loadings < 0.4 were deleted.
- Items with factor loadings < 0.5 were deleted.
- Items with almost equal loadings on two or more factors were deleted.

15 items were deleted based on the above process. 33 items remained which constituted the factor structure.

Step 7

The measure needed to be further purified based on the criteria mentioned in Step 3. This was needed for the internal consistency of the items which constituted the factor structure. Three items were deleted based on the above criteria. 30 items remained which constituted the purified factor structure after Exploratory Factor Analysis. The factors or dimensions which emerged were *Service capabilities, Customer services, ATM services, Employees, Paperless banking, Service quality,* and *Product/Service features.* Each of the dimensions consisted of three to five items. This was consistent with the recommendations by DeVellis [36] which states that each dimension should contain a minimum of three and a maximum of nine items.

Stage 3-Scale Validation

Second phase of data collection was done from respondents who were Indian retail banking customers. The questionnaire was based on the 30 items which were received after Exploratory Factor Analysis. 5-point Likert scale was used to collect the responses. 253 responses were collected. The responses were collected to perform Confirmatory Factor Analysis (CFA) on the data to test the multidimensionality of the construct of customer satisfaction in Indian retail banking. CFA was also conducted to test the goodness-of-fit measures for the generated model. Again, the reliability and internal consistency of the measure needed to be tested based on the new data. This was tested based on the value of Cronbach's Alpha. All the factors satisfied the value for Cronbach's Alpha ≥ 0.7.

The evaluation of the model was done based on the adequacy of the parameter estimates and the model as a whole [67]. In reviewing the model parameters, three criteria were checked:

- Feasibility of the parameter estimates
- Appropriateness of standard errors
- Statistical significance of the parameter estimates

The fit of the model was tested based on the goodness-of-fit measures Three types of models were compared to evaluate the goodness-of-fit statistics.

- The *independence model* is one of complete independence of all variables in the model (i.e., in which all correlations among variables are zero) and is the most restricted. In other words, it is a null model, with nothing going on as each variable represents a factor.

- The *saturated model* is one in which the number of estimated parameters equals the number of data points (i.e. variances and covariances of the observed variables) and is the least restricte

- The *hypothesized model* is compared with the above two models with respect to the goodness-of-fit statistics.

Selected goodness-of-fit statistics are shown below:

Table 2: Selected AMOS output for hypothesized seven-factor CFA model: Goodness-of-fit statistics

Model fit summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Hypothesized model	81	620.928	384	.000	1.617
Saturated model	465	.000	0		
Independence model	30	3696.728	435	.000	8.498

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Hypothesized model	.043	.953	.906	.672
Saturated model	.000	1.000		
Independence model	.628	.379	.296	.334

Baseline comparisons

	NFI	RFI	IFI	TLI	
Model	Delta 1	rho 1	Delta 2	rho 2	CFI
Hypothesized model	.927	.907	.962	.953	.962
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-adjusted measures

Model	PRATIO	PNFI	PCFI
Hypothesized model	.817	.740	.785
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Hypothesized model	236.928	198.245	280.467
Saturated model	.000	.000	.000
Independence model	3261.728	3051.568	3517.726

FMIN

Model	FMIN	F0	LO 90	HI 90
Hypothesized model	.600	.229	.114	.375
Saturated model	.000	.000	.000	.000
Independence model	6.427	5.972	5.482	6.491

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Hypothesized model	.048	.034	.062	.562
Saturated model	.223	.214	.233	.000
Independence model	6.548	6.058	7.067	6.557

HOELTER

Model	HOELTER .05	HOELTER .01
Hypothesized model	204	223
Independence model	23	25

The above goodness-of-fit measures are within the acceptable ranges [67] and provide evidence of multidimensionality of the hypothesized model. The results also provide evidence of convergent validity as GFI is above 0.95 and AGFI is above 0.90, while RMR and RMSEA are below 0.05 and 0.08 respectively [68].

Primary data from Indian retail banking customers were again collected to test the construct validity of the measure. Responses were collected from the respondents based on two methods – questionnaires based on 5-point Likert scale and Semantic Differential Scale. Responses were collected based on two different methods to test the construct validity of the measure. This is in line with the suggestions made by Campbell and Fiske [38] and Churchill [37] which states that the construct validity – discriminant validity and convergent validity need to be verified by collecting data based on at least two or more different methods. 250 responses were collected.

Construct validity deals with the following two aspects:

- The extent to which the measure correlates with other measures designed to measure the same thing
- Whether the measure behaves as expected

Construct validity can be of two types -convergent validity and discriminant validity.

Evidence of *convergent validity* of the measure is provided by the extent to which it correlates highly with other methods designed to measure the same construct. *Discriminant validity* is the extent to which the measure is indeed novel and not simply a reflection of some other variable. Discriminant validity is indicated by predictably low correlations between the measure of interest and other measures that are supposedly no measuring the same variable or concept [69].

A useful way of assessing the convergent and discriminant validity of a measure is through the multitrait-multimethod (MTMM) model [38]. The multitraits are defined by the seven dimensions of the measure obtained based on Confirmatory Factor Analysis. The guidelines for analysis are set forth by Widaman [70]. The hypothesized MTMM model is compared with a nested series of more restrictive models in which specific parameters either are eliminated or are constrained equal to zero or 1. The difference in χ^2 ($\Delta\chi^2$) provides the yardstick by which to judge evidence of convergent and discriminant validity. The four models considered for the MTMM analysis are:

- Freely correlated traits and freely correlated methods
- No traits and freely correlated methods
- Perfectly correlated traits and freely correlated methods
- Freely correlated traits and uncorrelated methods

The table below shows the analysis of goodness-of-fit for the MTMM models.

Table 3: Summary of goodness-of-fit indices for MTMM models

				RMSEA		
Model	χ^2	df	CFI	RMSEA	90% C.I.	PCLOSE
Model 1	78.721	262	.999	.013	.000, .041	.985
Model 2	439.027	285	.751	.136	.122, .149	.000
Model 3	227.768	271	.893	.093	.082, .111	.000
Model 4	120.291	271	.971	.046	.026, .065	.000

Differential Goodness-of-Fit Indices for MTMM Nested Model Comparisons

	Difference in		
Model comparisons	χ^2	df	CFI
Test of Convergent Validity			
Model 1 versus Model 2 (traits)	360.306	82	.248
Test of Discriminant Validity			
Model 1 versus Model 3 (traits)	149.047	82	.033
Model 1 versus Model 4 (methods)	41.570	82	.028

Evidence of Convergent Validity

One criterion of construct validity bears on the issue of convergent validity, the extent to which independent measures of the same trait are correlated (e.g. Likert scale and semantic differential scale ratings of service capabilities); these values should be substantial and statistically significant [38]. Using Widaman's [70] paradigm, evidence of convergent validity can be tested by comparing a model in which traits are specified (Model 1) with one in which they are not (Model 2), the difference in χ^2 between the two models ($\Delta\chi^2$) providing the basis for judgment. A significant difference in χ^2 supports evidence of convergent validity. In an effort to provide indicators of nested model comparisons that were more realistic than those based on the χ^2 statistic, Bagozzi and Yi [71], Widaman [70], and others have examined differences in CFI values. However, until the work of Cheung and Rensvold [72], these ΔCFI values have served in only a heuristic sense as an evaluative base upon which to determine evidence of convergent and discriminant validity. Recently, Cheung and Rensvold [72] examined the properties of 20 goodness-of-fit indices, within the context of invariance testing, and arbitrarily recommended that ΔCFI values should not exceed 0.01. Although the present application does for include tests for invariance, the same principle holds regarding the model comparisons. As shown in the above table, the $\Delta\chi^2$ was highly significant (χ^2 = 360.306, $p < .001$), and the difference in practical fit (ΔCFI = .248) substantial, thereby

arguing for the tenability of this criterion.

Evidence of Discriminant Validity

Discriminant validity is typically assessed in terms of both traits and methods. In testing for evidence of trait Discriminant validity, one is interested in the extent to which independent measures of different traits are correlated; these values should be negligible. When the independent measures represent different methods, correlations bear on the discriminant validity of traits; when they represent the same method, correlations bear on the presence of method effects, another aspect of discriminant validity.

In testing for evidence of discriminant validity among traits, a model in which traits correlate freely (Model 1) has been compared with one in which they are perfectly correlated (Model 3). The larger the discrepancy between the χ^2 and the CFI values, the stronger the support for evidence of discriminant validity. This comparison yielded a $\Delta\chi^2$ value that was statistically significant (χ^2 = 149.047, $p < .001$), and the difference in practical fit was fairly small (ΔCFI = .033), thereby suggesting sufficient evidence of discriminant validity.

Based on the above logic, evidence of discriminant validity related to method effects can be tested by comparing a model in which method factors are freely correlated (Model 1) with one in which the method factors are specified as uncorrelated (Model 4). In this case, a small $\Delta\chi^2$ value (or small ΔCFI) argues for the evidence of discriminant validity. On the strength of both statistical ($\Delta\chi^2$ = 41.570) and non-statistical (ΔCFI = .028) criteria, as shown in the above table, it seems reasonable to conclude that evidence of discriminant validity exists for the methods. The above results show the evidence of construct validity – both convergent validity and discriminant validity.

Discussion and Implications

In accordance with the research objective of the study, the scale development and validation process undertaken for the customer satisfaction scale has resulted in a parsimonious seven-dimensional scale which, over a series of separate studies, has demonstrated its validity, reliability and generalizability. The key strength of the customer satisfaction scale lies in its simplicity. It can be used as a means of measurement both in theoretical and practical domains.

The theoretical implications of the customer satisfaction scale are numerous. Firstly, the scale should be further examined across various segments of Indian retail banking customers to confirm its generalizability. Alternatively, various segments of Indian retail banking customers might be also identified based on the customer satisfaction scores obtained from the measurement. The individual satisfaction levels of the customers might be measured. Also satisfaction levels of a particular segment of customers might also be measured. The satisfaction levels of customers in different aspects of the banking services might be determined. This will give an indication to the banks about the areas to improve for higher customer satisfaction. The banks need to investigate the reasons for low customer satisfaction levels in those dimensions where customer satisfaction levels are low and build strategies for improvement in those areas. The banks can also learn from those dimensions where customer satisfaction levels are high and understand the reasons of high customer satisfaction in those dimensions. Based on the above the banks can build an evaluation matrix based on different areas – areas where satisfaction levels are high, areas where satisfaction levels are average, and areas where satisfaction levels are low. This will help the banks to visualize the satisfaction levels across different customers and across different dimensions.

Conclusion

The present study developed a seven-dimensional scale to measure satisfaction of Indian retail banking customers. The scale was developed over three stages which provided substantial evidence of the scale's validity, reliability, and generalizability. It is expected that the scale would help to measure customer satisfaction in Indian retail banking which was not possible previously due to non-existence of such measures. The customer satisfaction scale also has the potential to make a considerable contribution in the theoretical domain of understanding dimensions of customer satisfaction in Indian retail banking. Due to its parsimonious nature, it may prove to be a valuable diagnostic tool for academicians, marketers, and practitioners in future.

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