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## Management Research and Business Strategy

# A MODEL SHOWING FACTORS INFLUENCING CUSTOMER SATISFACTION IN RETAIL BANKING SERVICES OF KERALA: A SEM APPROACH

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The study intends to develop and operationalize the latent constructs of factors that mostly, customers value, while they interact with retail banking service providers in Kerala, India. To achieve the objective, randomly selected retail customers of Kerala banks were surveyed, using online questionnaire developed by the author. The survey instrument was tested for reliability, item and construct validity, using techniques of confirmatory factor analysis. A Confirmatory Factor Analysis (CFA) is done, to link the observed variables to their causal latent variable based on hypothesized behavior of factors like performance of employees, product features, physical facilities and public popularity. Conceptualization of the construct has been done with a graphical modelling using Structural Equation Modelling (SEM). The findings indicate that 4 P's- Performance of employees, Product features, Physical facilities and Public popularity are the pertinent factors influence customer expectation and the consequent customer satisfaction in specific geographic context.

**Keywords:** Performance of employees, Product features, Physical facilities and Public popularity, CFA, SEM

## INTRODUCTION

Customer satisfaction is the priority of any business organization in general and service organizations like banks in particular. Satisfied customer is the main indicator and forms the foundation for a successful service organization. Banking services are predominantly characterized by commoditization creating product differentiation difficult among players. This challenge can be overcome only by satisfying customers through providing quality services and create loyal customers. Customer satisfaction is the fundamental for the long-term success of an organization (Peppers and Rogers, 2005). Keeping the significance of customer satisfaction for the success of a service organizations, as banks being the high involvement service industry, banks needs to recognize that it can survive and succeed in today's highly competitive environment through the delivery of superior services. (Wang, Han, Wen, 2003). The marketing strategy of an organization should include the delivery of customer service as an integral component and demonstrates that conventional marketing and superior customer service is the key to ensure sustainable market

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success (Parasuraman, 1999). Customer satisfaction has a measurable impact on purchase on purchase intentions (Carter, 2010) on customer retention (Voss and Voss, 2008) and on a firm's profitability (Chalmeta, 2006). Customer satisfaction of a product is influenced by the expectation concerning the product and satisfaction with the product is lower when the product is unable to meets expectation of customer (Cardozo, 1965). If this assumption is true, then knowledge about factors affecting customer satisfaction is inevitable for marketers of services.

Customers' expectations and needs are changing constantly. Thus, what would have been delighted them in the past may not be a satisfier at present (Richards, 2006). Banks need to understand the changing needs and expectation of customers. Customer satisfaction can be known through the knowledge of customer expectation. Customer expectation is influenced positively and negatively by multiple factors. These factors can be related to the things that customers value about a particular product or service delivery, or they can be related to whether customers' expectations are met or exceeded. Some factors will influence the level of overall satisfaction more than others do. An important aspect of customer satisfaction measurement involves identifying and understanding the key drivers that cause customer satisfaction or dissatisfaction. This demands a comprehensive study on the factors affecting customer satisfaction of banks.

Consumers are more educated and well informed than ever, and they have the tools to verify companies' claims and seek out superior alternatives (Urban, 2004). Product differentiation is difficult in case of banking industry as banks are providing similar services across various geographical regions. Hence, one of the factors to differentiate one bank from other is through customer satisfaction. Literature says that customer dissatisfaction is the main reason for customer's decision to switch to other banks (Manrai and Manrai, 2007). If a bank wants to stay on top, mere satisfying the needs of customer is not enough but delights the customer. Evidently, a delighted customer takes six times less effort to retain and has a five times higher probability of providing continued business compared to a fresh customer (Homburg *et al.*, 2005). Customer satisfaction is the centre of focus to all banks irrespective of its nature of control and ownership. Customer satisfaction is not a new concept, but there are constant investigations on how a business organization can provide the highest customers satisfaction.

## RETAIL BANKING IN KERALA

Kerala, at present, has an extensive bank network and accounts for 4.2% of the total scheduled commercial banks in India. Though, geographical area of the state is lesser compared to other states in the country, Kerala has 44 commercial banks with 5286 branches (SLBS Statistics) across the state. Almost all leading commercial banks in India have their presence in Kerala, with State Bank of India and State Bank of Travancore being the dominant players in public sector and Federal Bank and South Indian Banks in private sector. Commercial banks in Kerala are mainly focused on deposit mobilization rather than delivering credit. This is mainly due to the higher volume of foreign exchange remittance to the state by Keralites working abroad (Prakash, 1978). Considering the peculiar focus of banks in Kerala,

what customer "experiences" from a bank is critical point of differentiation for bank and should be a matter of concern to ensure their success. Managing customer experience is a quite daunting task to a bank especially as customers have diverse needs and that can be often at the different ends in the same spectrum.

## CUSTOMER SATISFACTION – THE CONSTRUCT

The concept of customer satisfaction occupies central focus in marketing as it is the ultimate outcome of the marketing activities of banking service organizations. Consumers are more educated and well informed than ever, and they have the tools to verify companies' claims and seek out superior alternatives (Urban, 2004). Satisfaction is a person's feelings of pleasure or disappointment that result from linking a product's perceived performance (or outcome) to their expectations (Oliver, 2006). If the performance falls short of expectation, the customer is dissatisfied. If the performance matches the expectations, the customer is satisfied. If the performance exceeds expectations, the customer is highly satisfied or delighted (Susan and Glenmick, 1999). The concept is now regarded as a key performance indicator and within the business and a part of the balance score card. In an industry like banking where marketers are striving hard to compete for customers. The concept of customer satisfaction occupies a predominant component of its marketing strategy. Satisfied customers are the key determinants to drive market share and the increased profit which is the ultimate goal of any organization (Gitman and Carl, 2005).

Customer satisfaction on a product performance depends on many factors, especially the loyalty relationship the customer has with the brand. Many organizations are systematically measure how well they treat their customers, identify the factors determining satisfaction, and making changes in their business process and marketing as a result (Morgan, 2005). Banks need to measure factors influencing customer satisfaction regularly as the key to customer retention is customer satisfaction (Kathleen *et al.,* 2005). A highly satisfied customer generally stays loyal longer, buys more and engages in positive word-of-mouth pays less attention to competitor's products and is less sensitive to price and cost less to serve than new customers because transaction can become routine (Christian *et al.,* 2005). Hughes and Macdonald (2002), states retail banking is the provision of banking services for individual customers. Retail banking services includes accepting deposit, making advances to consumers for home, car, and other products; credit card services; transaction services; and even insurance and investment management services for retail clients. Mengi (2009) found assurance and responsiveness are important factor affecting customer satisfaction, while Zaithamal *et al.* (2008) identified reliability, tangibility, and empathy are significant factors. Kumar *et al.* (2010) and Lai (2004) found that empathy, assurance, and tangibles are the main factor, whereas, Baumann *et al.* (2007) established that tangibles are not related to customer satisfaction and similarly, Ahmed *et al.* (2010) also holds the same view that empathy is negatively related to customer satisfaction.

Value preposition quality and service delivery quality are the major determinants of customer satisfaction in Islamic retail banking (Estiri *et al.,* 2011). Customer satisfaction is influenced by

mainly seven factors—employee responsiveness, appearance of tangibles, social responsibility, services innovation, positive word-of-mouth, competence, and reliability (Singh and Kaur, 2011). Customer satisfaction in the Indian retail banking sector especially on technology based banking services are affected by six factors, viz., customer service, technology convenience, technology security and information quality and technology usage easiness and reliability. Out of these factors, customer service and technology usage easiness have been the significant factors contributing customer satisfaction (Ganguli and Roy, 2011). Customer satisfaction and retention are critical for retail banks, and investigates the major determinants of customer satisfaction and future intentions in the retail bank sector of Canada. Service problems and the bank's service recovery ability have a major impact on customer satisfaction and intentions to switch (Terrence Levesque Gordon, 1996). Competitive interest rate is one of the important determinants of customer satisfaction in retail banking sector. A cordial

"employee-customer" relationship can increase the satisfaction level and a prompt problem-recovery is important to maintain the customer satisfaction. However, the results did not confirm that satisfactory problem-recovery can increase satisfaction. At least, it can maintain the satisfaction level. Finally, they concluded that competitiveness and convenience of the banks are the two important determinants of customer satisfaction (Levesque and McDougall, 1996).

## THEORETICAL MODEL OF THE RESEARCH

The study aims to identify and conceptualize various factors influencing customer satisfaction in order to measure customer satisfaction in the retail banking service sector.

## METHODOLOGY

The study was based on descriptive research design. This design is adopted to describe the characteristics of the variable under study. Literature review suggested that the construct of customer satisfaction should be operationalized

**Figure 1: Hypothesized Research Model**
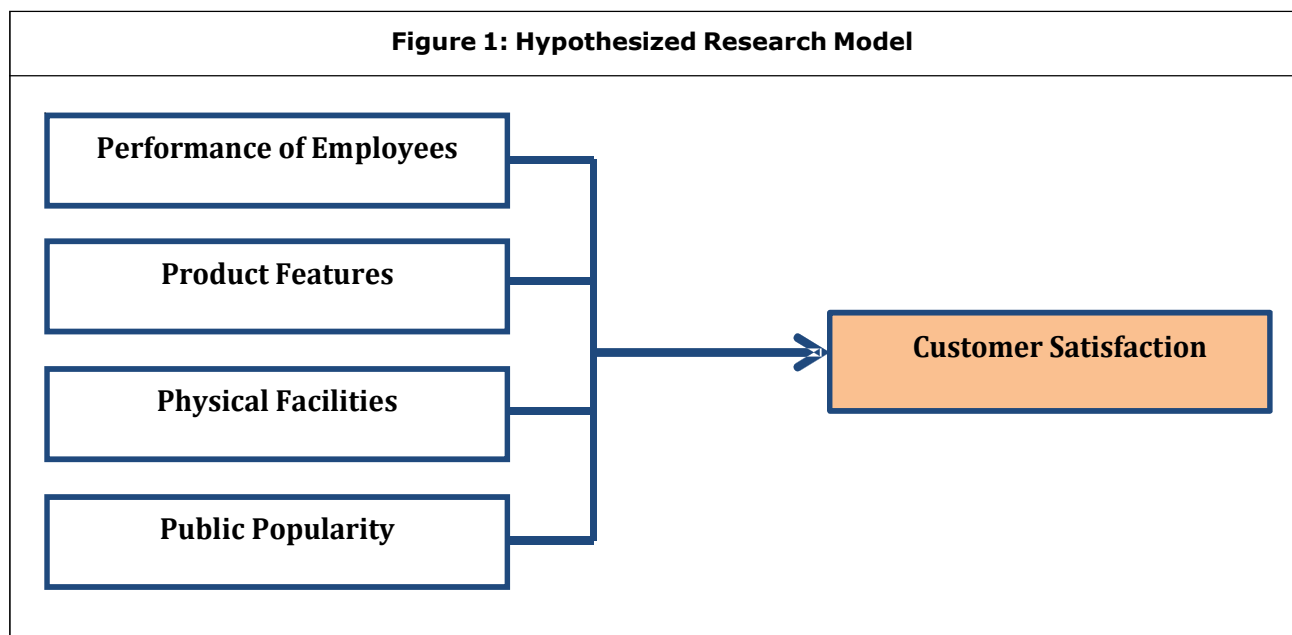
in the same ways as various factors on which service quality is operationalized (Sureshchandar *et al.*, 2002). Churchill (1979) argues that, research approach suitable to generate factors affecting qualitative constructs like customer satisfaction should be based on exploratory research and qualitative analysis. Therefore, to test the above hypothesized model, an exploratory survey has been adopted to elucidate the determinants of the abstract concept of customer satisfaction in the banking service. The findings of the study will eventually lead to the conceptualization of the connection between the customer satisfaction and the service quality in the retail banking services. The scope of the study is limited to the retail banking sector of Kerala and the universe of the study was, all the retail banking customers who have accounts with commercial banks in Kerala. The period of data collection was from May 2015 to May 2016. It was collected through questionnaire using online survey tool of google.doc. An email address base was used under probability sampling. The questionnaire contained 42 variables on which the expectation of customers were measured using a five-point Likert type scales anchored at 1 (Not at all important) and 5 (Very much important). There was no funding for carrying out the research.

The survey questionnaire originally contained 42 variables which were then reduced to 36 variables after confirmatory factor analysis. 36 variables again were categorized into four main

| Table 1: Definition of Variables Used | | |
|---|---|---|
| **Latent Variable** | **Observed Variable** | |
|  | S1 | Staff behaviour should be helpful, polite and friendly |
|  | S2 | Staffs at the counter serve you quickly |
| Performance of employees | S3 | Bank employees are trained and knowledgeable |
| -10 | S4 | People that are easy to deal with |
|  | S5 | Overall customer service |
|  | S6 | Availability of employees |
|  | S7 | Staff which is interested in your comments and suggestion |
|  | S8 | Staff answering the phone is polite, patient and cheerful |
|  | S9 | Efficient and effective staff |
|  | S10 | Service enquiry returned quickly |
|  | S11 | Interest rate of the loans |
|  | S12 | Availability of specialised e- banking service |
| Product features | S13 | Locker facilities in saving account |
| -13 | S14 | Wide and easy reach of ATM facilities |
|  | S15 | Implementer of government policies & welfare schemes |
|  | S16 | Procedural formalities |

| Latent Variable | Observed Variable | |
|---|---|---|
| | S17 | Online banking facility |
| | S18 | Mobile banking facility |
| | S19 | Availability of varied services |
| | S20 | Provision of zero balance in accounts |
| | S21 | Technology used |
| | S22 | Security and safety |
| | S23 | Reasonable cost or charge |
| | S24 | Amenities inside bank premises |
| | S25 | Rules and regulations |
| Physical facilities | S26 | Refreshments facilities |
| | S27 | Seating arrangement and spacious layout |
| | S28 | Helpdesk for the customers |
| | S29 | Waiting place for the customers |
| | S30 | Location of the bank |
| Public Popularity | S31 | Social Commitment |
| | S32 | Popularity of the Bank |
| | S33 | Implementer of Government Policies& Schemes |
| | S34 | Wide network of branches |
| | S35 | Equitable and fair treatment of all customers |
| | S36 | Asset and resource base of the bank |

determinant factors by the researchers according to the hypothesised behavior of the sub variable. The variables identified and tested are listed Table 1.

# EMPIRICAL FINDINGS AND DISCUSSIONS

The multivariate technique, Structural Equation Modelling (SEM) has been used to estimate the series of inter-related dependence relationships and conveys causal processes which are outlined by regression equations and are graphically modelled in order to enable better conceptualisation of the theoretical framework of the study. The variables of the study have been classified as latent variables and observed variables or manifest variables based on their presumed behaviour. A Confirmatory Factor Analysis (CFA) is done to link the observed variables to their causal latent variable, i.e., to focus on the linkage between the factors and the observed variables. The primary interest in the test procedure is to define the goodness of fit between the hypothesised model and the observed data. It tests how well the sampled data

fit with hypothesised model. The difference between the two is termed as residuals.

## Item Validity

The item validity of each statement in each construct is assessed and exhibited in Table 2. If the loadings in the regression weights are greater than 0.5, then an item or statement passes the item validity.

The regression weights, of the observed variables of the constructs Performance of employees [F1], Product Features [F2], Physical Facilities [F3] and Public Popularity [F4], are greater than 0.5 and the significant value (P-Value) is less than 0.05. Therefore, each statement in each construct maintains item validity.

| Table 2: Item validity | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Regression Weights (Performance of Employees) | | | | | | | Regression Weights (Product Features) | | | | | | |
| | | | Estimate | S.E. | C.R. | P | | | | Estimate | S.E. | C.R. | P |
| S1 | < | F1 | 1.000 | | | | S11 | < | F2 | 1.000 | | | |
| S2 | < | F1 | .711 | .116 | 6.119 | *** | S12 | < | F2 | 3.162 | 1.337 | 2.366 | .018 |
| S3 | < | F1 | .908 | .117 | 7.731 | *** | S13 | < | F2 | 2.692 | 1.195 | 2.254 | .024 |
| S4 | < | F1 | .837 | .115 | 7.302 | *** | S14 | < | F2 | 2.175 | .925 | 2.351 | .019 |
| S5 | < | F1 | .972 | .140 | 6.932 | *** | S15 | < | F2 | 2.250 | .997 | 2.257 | .024 |
| S6 | < | F1 | 1.010 | .175 | 5.786 | *** | S16 | < | F2 | 1.411 | .679 | 2.077 | .038 |
| S7 | < | F1 | .974 | .171 | 5.702 | *** | S17 | < | F2 | 2.771 | 1.170 | 2.369 | .018 |
| S8 | < | F1 | 1.118 | .161 | 6.955 | *** | S18 | < | F2 | 2.646 | 1.134 | 2.333 | .020 |
| S9 | < | F1 | .988 | .123 | 8.040 | *** | S19 | < | F2 | 2.544 | 1.086 | 2.342 | .019 |
| S10 | < | F1 | 1.005 | .143 | 7.001 | *** | S20 | < | F2 | 2.532 | 1.100 | 2.302 | .021 |
| | | | | | | | S21 | < | F2 | 2.727 | 1.158 | 2.355 | .019 |
| | | | | | | | S22 | < | F2 | 2.113 | .904 | 2.338 | .019 |
| | | | | | | | S23 | < | F2 | 2.105 | .950 | 2.215 | .027 |
| Regression Weights (Performance of Employees) | | | | | | | Regression Weights (Product Features) | | | | | | |
| | | | Estimate | S.E. | C.R. | P | | | | Estimate | S.E. | C.R. | P |
| S24 | < | F3 | 1.000 | | | | S31 | < | F4 | 1.000 | | | |
| S25 | < | F3 | 1.096 | .194 | 5.657 | *** | S32 | < | F4 | .870 | .137 | 6.331 | *** |
| S26 | < | F3 | 1.017 | .208 | 4.892 | *** | S33 | < | F4 | 1.105 | .145 | 7.615 | *** |
| S27 | < | F3 | .772 | .232 | 3.327 | *** | S34 | < | F4 | .887 | .135 | 6.577 | *** |
| S28 | < | F3 | 1.202 | .210 | 5.739 | *** | S35 | < | F4 | .828 | .142 | 5.849 | *** |
| S29 | < | F3 | 1.116 | .189 | 5.912 | *** | S36 | < | F4 | .930 | .144 | 6.442 | *** |
| S30 | < | F3 | .944 | .216 | 4.378 | *** | | | | | | | |

## Construct Validity

Construct validity refers to whether a scale or test measures the construct adequately, i.e., the test whether the theoretical concept matches with a specific measurement used in the research. It states the degree to which inferences can reasonably be made from the operationalizations to the theoretical constructs on which those operationalizations were grounded. The composite reliability is measured through construct validity. The composite reliability value ranges from 0-1. The rule of thumb for evaluation, where all path loadings from construct to measures are expected to be strong if it is greater than 0.70. If the value is greater than .6, then the construct is reliable. Construct validity of the data is presented in Table 3.

$$Composite\ Reliability = \frac{\Sigma(y)^2}{\Sigma(y)^2 + \Sigma(\delta)}$$

where $\lambda$ = Standardized Factor Loadings

$\delta$ = Measurement Error

$$Performance\ of\ Employees = \frac{(6.928)^2}{(6.928) + (3.814)}$$

$$= \frac{(47.99718)}{(47.99718) + (3.814)} = 0.92638$$

$$Product\ Features = \frac{(8.169)^2}{(8.169) + (6.937)}$$

$$= \frac{(66.732568)}{(66.732568) + (6.937)} = 0.90583$$

$$Physical\ Facilities = \frac{(4.373)^2}{(4.373)^2 + (4.706)}$$

$$= \frac{(19.12313)}{(19.12313) + (4.706)} = 0.80251$$

$$Public\ Popularity = \frac{(4.33)^2}{(4.33)^2 + (3.324)}$$

### Table 3: Construct Validity

| Performance of Employees | | | | | | Product features | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Estimate ($\lambda$) | | Estimate ($\delta$) | | | | Estimate ($\lambda$) | | Estimate ($\delta$) | |
| S1 | < | F1 | .758 | e1 | .269 | S11 | < | F2 | .246 | e1 | .966 | |
| S2 | < | F1 | .620 | e2 | .294 | S12 | < | F2 | .798 | e2 | .354 | |
| S3 | < | F1 | .766 | e3 | .211 | S13 | < | F2 | .557 | e3 | 1.001 | |
| S4 | < | F1 | .728 | e4 | .226 | S14 | < | F2 | .751 | e4 | .227 | |
| S5 | < | F1 | .695 | e5 | .368 | S15 | < | F2 | .562 | e5 | .684 | |
| S6 | < | F1 | .589 | e6 | .699 | S16 | < | F2 | .396 | e6 | .666 | Composite Reliability = 0.9058 |
| S7 | < | F1 | .581 | e7 | .677 | S17 | < | F2 | .811 | e7 | .249 | |
| S8 | < | F1 | .697 | e8 | .481 | S18 | < | F2 | .701 | e8 | .450 | |
| S9 | < | F1 | .793 | e9 | .209 | S19 | < | F2 | .724 | e9 | .365 | |
| S10 | < | F1 | .701 | e10 | .380 | S20 | < | F2 | .635 | e10 | .591 | |
| Composite Reliability = 0.92638 | | | | | | S21 | < | F2 | .763 | e11 | .333 | |
| | | | | | | S22 | < | F2 | .715 | e12 | .266 | |
| | | | | | | S23 | < | F2 | .510 | e13 | .785 | |

| Physical facilities | | | Estimate ($\lambda$) | | Estimate ($\delta$) | Public Popularity | | | Estimate ($\lambda$) | | Estimate ($\delta$) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| S24 | < | F3 | .627 | e1 | .588 | S31 | < | F4 | .706 | e1 | .484 |
| S25 | < | F3 | .726 | e2 | .412 | S32 | < | F4 | .695 | e2 | .391 |
| S26 | < | F3 | .598 | e3 | .708 | S33 | < | F4 | .859 | e3 | .209 |
| S27 | < | F3 | .382 | e4 | 1.32 | S34 | < | F4 | .723 | e4 | .346 |
| S28 | < | F3 | .741 | e5 | .452 | S35 | < | F4 | .639 | e5 | .478 |
| S29 | < | F3 | .777 | e6 | .312 | S36 | < | F4 | .708 | e6 | .416 |
| S30 | < | F3 | .522 | e7 | .906 | Composite Reliability = 0.88972 | | | | | |
| Composite Reliability = 0.80251 | | | | | | | | | | | |

$$= \frac{(18.7489)}{(18.7489)+(2.324)} = 0.88972$$

The construct validity of each construct is estimated. All composite reliabilities of constructs Performance of Employees [0.92638], Product Features [0.90583], Physical facilities [0.80251] and Public popularity [0.88972] have a value greater than 0.70 which indicates that there is adequate internal consistency.

**Convergent Validity**

There is convergent validity when each observed variable correlates strongly with its latent variable. The value of convergent validity ranges between 0-1. Average Variance Extracted (AVE) is used to measure the validity of each construct and it must exceed the variance due to the error. The rule of thumb says that the AVE should exceed 0.50.

The convergent validity shall not be established when there are high error estimates [$\delta$]. Practically it is difficult to satisfy the standard AVE value as the standardized factor loadings are squared and higher error estimates are added to the said squared value. The convergent validity is exhibited in Table 4.

The Average Variance Extracted (AVE) of performance of employees (0.56) and public popularity (0.58) satisfied the criteria of the convergent validity as its loadings were greater than 0.50. However, AVE of product features (0.44) and physical facilities (0.38) slightly deviated from the rule of thumb due to the effect of measurement Error. Since the AVE of the four constructs are greater than 0.50 or close to the standard, it can be inferred that the model satisfies convergent validity.

$$\text{Convergent validity} = \frac{\left(\sum_{i=1}^{n} \lambda^2\right)}{\left(\sum_{i=1}^{n} \lambda^2\right)\left(\sum \delta\right)}$$

OR

where $\lambda$ = Standardized Factor Loadings

$\delta$ = Measurement Error

$$\text{convergent validity} = \frac{\left(\sum \lambda^2\right)}{n}$$

where $\lambda$ = Standardized Factor Loadings

n = no. of observed variables

The convergent validity shall not be established when there are high error estimates [$\delta$].

**Table 4: Convergent Validity of the Variable**

| Performance of Employees | | | | | | Product Features | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | | | Estimate$(\lambda)$ | | Estimate$(\delta)$ | | | | Estimate$(\lambda)$ | | Estimate$(\delta)$ |
| S1 | < | F1 | .758 | e1 | .269 | S11 | < | F2 | .246 | e1 | .966 |
| S2 | < | F1 | .620 | e2 | .294 | S12 | < | F2 | .798 | e2 | .354 |
| S3 | < | F1 | .766 | e3 | .211 | S13 | < | F2 | .557 | e3 | 1.001 |
| S4 | < | F1 | .728 | e4 | .226 | S14 | < | F2 | .751 | e4 | .227 |
| S5 | < | F1 | .695 | e5 | .368 | S15 | < | F2 | .562 | e5 | .684 |
| S6 | < | F1 | .589 | e6 | .699 | S16 | < | F2 | .396 | e6 | .666 |
| S7 | < | F1 | .581 | e7 | .677 | S17 | < | F2 | .811 | e7 | .249 |
| S8 | < | F1 | .697 | e8 | .481 | S18 | < | F2 | .701 | e8 | .450 |
| S9 | < | F1 | .793 | e9 | .209 | S19 | < | F2 | .724 | e9 | .365 |
| S10 | < | F1 | .701 | e10 | .380 | S20 | < | F2 | .635 | e10 | .591 |
| AVE = 0.56 | | | | | | S21 | < | F2 | .763 | e11 | .333 |
| | | | | | | S22 | < | F2 | .715 | e12 | .266 |
| | | | | | | S23 | < | F2 | .510 | e13 | .785 |

AVE = 0.44 (applies to Product Features column)

Practically it is difficult to satisfy the standard AVE value as the standardized factor loadings are squared and higher error estimates are added to the said squared value.

*Performance of Employees* $[AVE]$

$$= \frac{(4.84927)}{(4.84927)+(3.814)} = \frac{(4.84927)}{(8.68927)} = 0.56$$

$\Pr oduct\ Features [AVE]$

$$= \frac{(5.474)}{(5.474)+(6.397)} = \frac{(5.474)}{(12.41)}$$

| Physical facilities | | | | | | Public Popularity | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | | | Estimate$(\lambda)$ | | Estimate$(\delta)$ | | | | Estimate$(\lambda)$ | | Estimate$(\delta)$ |
| S24 | < | F3 | .627 | e1 | .588 | S31 | < | F4 | .706 | e1 | .484 |
| S25 | < | F3 | .726 | e2 | .412 | S32 | < | F4 | .695 | e2 | .391 |
| S26 | < | F3 | .598 | e3 | .708 | S33 | < | F4 | .859 | e3 | .209 |
| S27 | < | F3 | .382 | e4 | 1.32 | S34 | < | F4 | .723 | e4 | .346 |
| S28 | < | F3 | .741 | e5 | .452 | S35 | < | F4 | .639 | e5 | .478 |
| S29 | < | F3 | .777 | e6 | .312 | S36 | < | F4 | .708 | e6 | .416 |
| S30 | < | F3 | .522 | e7 | .906 | AVE = 0.58 | | | | | |
| AVE = 0.38 | | | | | | | | | | | |

*Physical Facilities* [*AVE*]

$$= \frac{(2.849027)}{(2.849027)+(4.67)} = \frac{(2.849027)}{(7.519027)} = 0.38$$

*Public Popularity* [*AVE*]

$$= \frac{(3.151656)}{(3.151656)+(2.324)} = \frac{(3.151656)}{(5.475656)} = 0.58$$

The AVE of performance of employees (0.56) and public popularity (0.58) satisfied the criteria of the convergent validity as its loadings were



**Figure 2: Structural Equation Model of Customer Satisfaction**
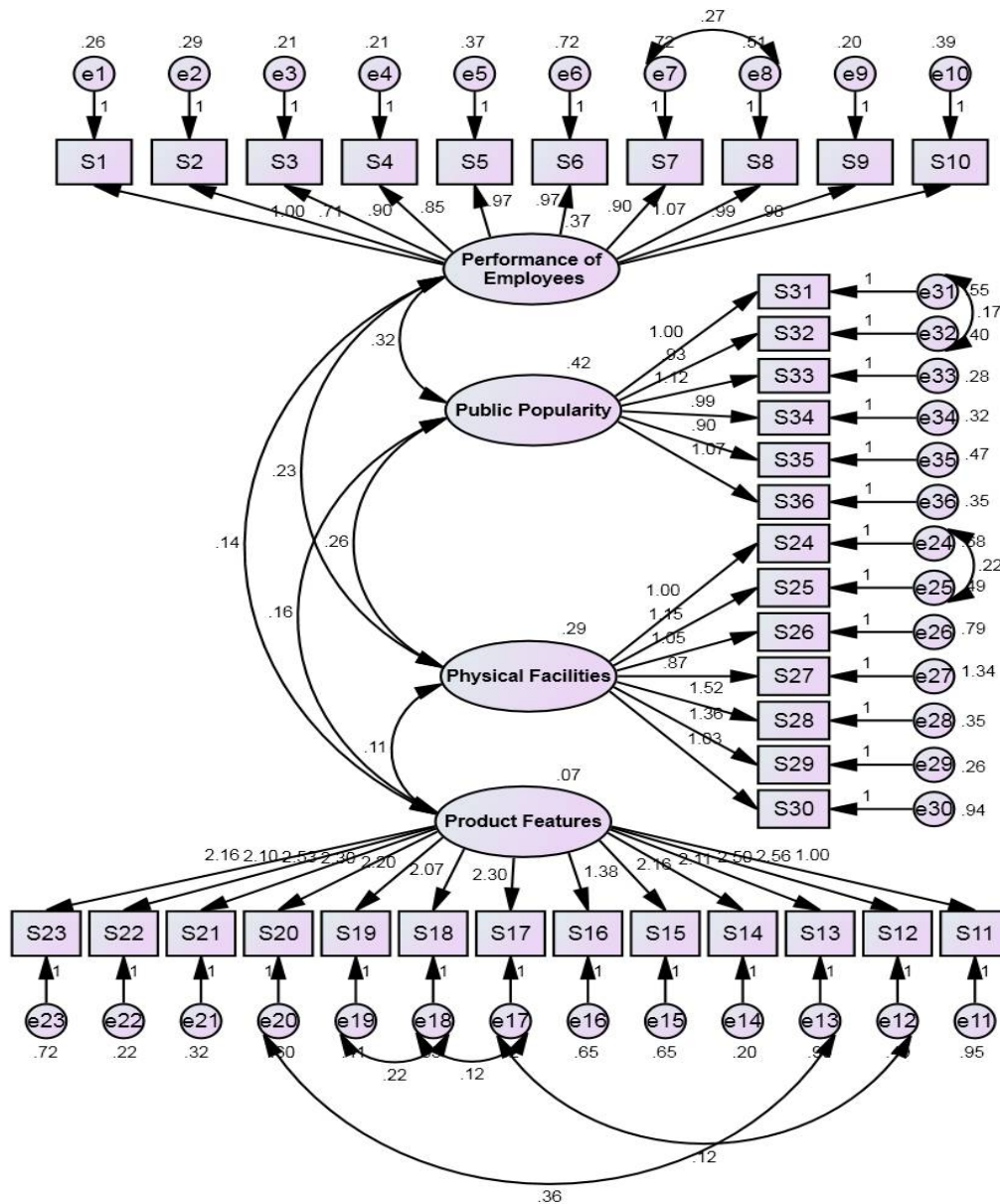
greater than 0.50. However, AVE of product features (0.44) and physical facilities (0.38) slightly deviated from the rule of thumb due to the effect of measurement Error. Since the AVE of the four constructs are greater than 0.50 or close to the standard, it can be inferred that the model satisfies convergent validity. The SEM model of customer satisfaction is shown in Figure 2 where latent variables are shown as elipse and the observed variables are shown as square and causal relationships are shown as single headed arrows.

## Model Evaluation

The model fitting process contains the way of determining the goodness-of fit between the hypothesized model and the sample data. Goodness of fit indicates how well the model reproduces the observed covariance matrix among the indicator items. The model fit compares the theory to reality by assessing the similarity of the theory to reality. The closer the values of these two matrices, i.e., estimated covariance matrix and observed covariance matrix are close to each other, the better the model is the fit.

**The Goodness-of-fit Index (GFI):** The GFI is the standardized fit index. GFI is less than or equal to 1. A GFI value of 1 indicates a perfect fit and values close to zero indicate very poor fit. GFI > .90 may indicate good fit. Sometimes the value of GFI may fall outside the range of 0 to1. The model has the GFI 0.633 which indicates that it is moderately fitted.

**Normed Fit Index (NFI):** It is a ratio of the CMIN value of Independence model minus CMIN value of default model and CMIN value of Independence model i.e. the value for the fitted model and the null model divided by the value for the null model. It ranges in between 0 and 1. A Normed fit index

of one indicates perfect fit. The value 0.589 indicates that the model has a moderate fit.

**Relative Fit Index (RFI):** It represents a derivative of the NFI. The RFI values range from 0 to 1. RFI values close to 1 indicate a very good fit. The value 0.555 indicates that the model has a moderate fit.

**Comparative Fit Index (CFI):** It is an incremental fit index which is an improved version of the NFI. Its values range in between 0 to 1. The higher values indicating better fit. The value 0.729 indicates that the model tries to have a moderate fit.

**Root Mean Square Error of Approximation (RMSEA):** Attempts to correct for the tendency of the goodness of fit test statistic to reject models with a large sample or a large number of observed variables. Lower RMSEA values indicate better fit. The RMSEA value of 0.105 indicates a moderate fit.

**Root Mean Square Residual (RMR):** It represents the average residual value derived from the filling of the variance-covariance matrix for the hypothesized model. The smaller the RMR is, the better. An RMR of zero indicates a perfect fit. The value of RMR .077 indicates a good fit.

## Overall Measurement Model Fitness

In Structural Equation Modelling (SEM) a relatively small chi-square value supports the proposed theoretical model being tested which is in Table 5. In this model, the value is 1208.926 (Default Model CMIN) and is small when compared to the CMIN value of the independence model (2944.012). Hence the Chi-square value is good. Chi-square divided by degrees of freedom is

**Table 5: Overall Measurement Model Fitness**

| Model | NPAR | CMIN | DF | P | CMIN/DF |
|---|---|---|---|---|---|
| Default model | 85 | 1208.926 | 581 | .000 | 2.081 |
| Saturated model | 666 | .000 | 0 | | |
| Independence model | 36 | 2944.012 | 630 | .000 | 4.673 |

recommended as a better fit metric. If this metric does not exceed five for models with good fit. For the Model, it is 2.081 (CMIN = 1208.926, DF = 581) which suggests acceptable model fit.

The Confirmatory Factor Analysis (CFA) shows an acceptable overall model fit and hence, the theorized model fit moderately with the observed data. It can be concluded that the hypothesized model moderately fits the sample data.

# CONCLUSION

Research findings depict that the 4P's viz, physical facilities, public popularity, performance of employees and product features of banks are the indicative factors, which positively affects customer experience of the banking customers. Retail commercial banks need to frame their customer service policies and customer relationship management strategies including based on the above model This can be done by paying due consideration to the above factors. The model will help to contribute towards triggering future research in correlating the customer satisfaction with the service quality in banking services in this specific geographical context. The outcome of the research has indicated that customer expectation is also a multi-dimensional construct like customer satisfaction and service quality.

## Delimitation of the Study

The study did not consider socio-demographic factors on customer expectation such as education and other personal factors which might also have a bearing on customer satisfaction in banking service. Also, the study was only directed towards identifying key factors that a banking customer considers important while choosing a bank and also availing banking services. Further investigations should be initiated to understand and establish how these factors influence service quality. The model needs to be verified and replicated in different geographical contexts also, in order validate and confirm the present findings.

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