Abstract: Background: In a competitive environment all commercial banks retail services either Public sector banks or Private sector banks are required to offer almost same services. They want to attract a new customer and retain the old customer by the way of differentiate themselves in providing and performing the well known banking services to its customer. This research study has measuring the effectiveness of banking six service quality constructs among public sector banks. Objective: Based on the above background of the study, the research paper have an objective to measure the effectiveness of six banking service quality constructs among public sector banks. Methodology: This study was purposive to measure the effectiveness of six banking service quality among public sector banks in urban area of Tiruchirappalli district. The researcher has purposively select 292 bank customer as sample respondent of Public sector bank located in the urban area of Tiruchirappalli District. Results and Discussion: In Public sector bank, the tangible indicator namely “Comfortable lobby area and adequate parking space” and the tangible indicator namely “Availability large number of branches with internet banking facility” were influence the customer.

Keywords: Service Quality – Responsiveness-Tangibility-Reliability-Assurance-Accessibility- Empathy

I. INTRODUCTION

The most important factor that matters a lot in today’s modern and successful of banking business is the quality of services. Due to uniform policies of the central bank, all commercial banks retail services either Public sector banks or Private sector banks are required to offer almost same services. This research study titled “Measuring banking service quality among Public sector banks in Tiruchirappalli District” has elaborately discussed the banking services quality.

II. BANKING SERVICE QUALITY (SERQUAL)

The “SERQUAL” items which were adopted from the contribution of Parasuraman et al., (1988). The SERQUAL scale is the principal instrument widely utilized to assess service quality for a variety of services. In their study they derive a five dimensional model of service quality such as: reliability, responsiveness, empathy, assurance and tangibility. Moreover the sixth dimension of service quality namely “accessibility” contributed by Al-Fazwan (2005). Their measurement instrument is known as SERQUAL, which has become almost the standard way of measuring service quality.

This research paper has adopted their model and measure this constructs in the proposed research area.

III OBJECTIVE

This research paper has a primary objective to measure the banking service quality dimensions among the bank customer of Urban branches located in Tiruchirappalli district. The banking service quality has consisted of six dimensions namely, Responsiveness, Tangibility, Reliability, Assurance, Accessibility and Empathy factors. Based on the above objective, the research paper has framed following hypothesis.

IV HYPOTHESIS

H₀₁ Responsiveness significantly influence banking service quality
H₀₂ Tangibility significantly influence banking service quality
H₀₃ Reliability significantly influence banking service quality
H₀₄ Assurance significantly influence banking service quality
H₀₅ Accessibility significantly influence banking service quality
H₀₆ Empathy significantly influence banking service quality

V METHODOLOGY

This study is confirmatory by the nature of proving the six banking service quality constructs by using the second order reflective structural equation model. Therefore the researcher has dependent a large sample that is 300 to derive a concrete result with minimum margin of error. The hundred sample respondent was chosen from three public sector banks in the foundation of researcher’s knowledge and clarity that the results obtained will be highly accurate. The purposive sampling of non-probability was adopted for inducting sample respondent from the urban branches of public sector banks in Tirruchirapplli District for this research study. The respondent were customer of three public sector banks (SBI, IOB, PNB,) which located at the Urban area of Tiruchirappalli District consider as a sample unit of the study. The sample respondent was identified in the bank premises and ATM centers. The entire issued questionnaire were collected and scrutinized by using SPSS 20 statistical package to find out any missing data. It is found that out of 300 sample data, 8 were missing value. All the missing data were eliminated and finally 292 questionnaires were taken into consideration. It is 97.33 percent of total questionnaire issued. The
Questionnaire had consisted of twenty nine. Apart from Age, Gender, Qualification, Occupation and Income, there are twenty two questions (five point Likert’s scale – 1 strongly Disagree . . . . 5 Strongly Agree) were reflect the banking service quality indicators. The quantitative analysis was done with a help of SPSS 20 and AMOS 20 to measure the significant of banking service quality items among the bank customer of urban branches of public sector banks in Tiruchirappalli district. The descriptive analysis was done primarily to know the respondent personal and demographic background. The reflective structural model was created. Initial structural model was unfit because of poor model fit indices. Hence, to improve the structural model fit indices, the result of modification indices was taken into consideration. According to that the negative indicators were eliminated (RES3 & RES4-Appendix I). Finally twenty four service quality indicators were inducted in the model for further analysis.

VI SAMPLE RESPONDENT OF THE STUDY:
Out of 292 sample respondent, 52.6 percentages of sample respondents were male and 47.4 percent were female participated in the sample survey. Out of the four level classification of sample respondent age, 50 percent of sample respondent were at the age group between “25 – 40”. It is found that the middle age group of people were largely participated in the sample study. Among the total sample of the study, 36.3 percentage of sample respondents were graduates and 24.4 percentages of respondents were Post Graduates. Among the six level classification of sample respondent’s occupation, 24.6 percentage of respondent were doing business and 15.5 percentage of respondents were professionals. Regarding their monthly income, 18.6 percentage of respondents were earn a monthly income Rs.15001 – 2500

VII MODEL FIT INDICES
The dependence relationship between six measured constructs and interdependence relationship between constructs themselves were shown in the table 1 & 2. The following fit indices were examined to assess the measurement model fit. The ratio of the Chi-square to degree of freedom is less than 3(1.72), Root mean square error of approximation less than 0.05 (.03) for an excellent fit, Comparative fit index greater than 0.9 (.968), Tucker Lewis Indes greater than 0.9 (.963), normal fit index greater than 0.9 (.929), Goodness-of-fit index greater than 0.9 (.946), and adjusted goodness-of-fit index greater than 0.9 (.931). The result clearly indicates that all the indices fall within the generally accepted guidelines for indicating congruence between the model and data. The proposed model can be termed as excellent. Thus after specifying appropriate measurement models, the structural model is tested.

Table No.1 validity for the proposed model
VALIDITY CONCERNS: Convergent Validity: the AVE for Reliability and Empathy is less than 0.50.

The table no 1 has shown the value of composite reliability (CR), Average variance extracted (AVE) and Maximum Shared Variance (MSV) and correlation between the six factors. it is found that the composite value for all the six service quality dimensions has scored above 0.7. It is found that the Average variance extracted (AVE) value for Assurance, responsiveness, Accessibility and Tangibility has scored above 0.5. However, the AVE value for Reliability and Empathy factor has scored less than 0.5. it is also observed that the Value of MSV is higher than AVE has reflect in all the six service quality factors. Moreover the intercorrelation between the six factors (Table No.2) has excellent by the way of scoring more than .5.

### Table No.2 Interdependence relationship between constructs

| Service Quality Dimensions | Assurance | Responsiveness | Reliability | Empathy | Accessibility | Tangibility |
|----------------------------|-----------|----------------|-------------|---------|---------------|-------------|
| Assurance                  | 0.730     |                |             |         |               |             |
| Responsiveness             | 0.183     | 0.931          |             |         |               |             |
| Reliability                | -0.023    | 0.042          | 0.670       |         |               |             |
| Empathy                    | 0.161     | 0.125          | -0.050      | 0.630   |               |             |
| Accessibility              | 0.233     | 0.302          | -0.057      | 0.141   | 0.721         |             |
| Tangibility                | 0.106     | 0.185          | 0.013       | 0.507   | 0.001         | 0.715       |

The above table shows the inter correlation between six banking service quality dimensions. Since there is a clear convergent validity prevailed in the proposed model, there is concreate correlation occurred with each other within their parent factor.. The highest inter correlation has occurred between Responsivenss factor with other five factors by 0.913. The Empathy factor has set a intercorrection with other five factor by 0.630 Moreover the inter correlation between the six factors has excellent by the way of scoring more than .5. It is concluded that the six latent factors of banking service quality are well explained by its observed variables.

### VIII REGRESSION WEIGHTS ON SERVQUAL

### Table No. 3 Regression Weights for indicators of Responsiveness

| Observed | Latent   | Estimate | S.E. | C.R. | P        | Beta Weights |
|----------|----------|----------|------|------|----------|--------------|
| RES2     | Responsiveness | 1.000    | 1.000 | Reference Point | 0.092 |             |
| RES1     | Responsiveness | .711     | .087  | 8.179 | ***.757  |              |

The above table shows the emerging indicators which significantly predict the banking service quality factor such as Responsiveness. It is found that the two indicators were significantly emerged to predict the responsiveness constructs. The probability of getting a critical ratio as large as 8.179 in absolute value is less than 0.001. The beta weighs for Responsiveness factor of banking service quality in the prediction of RES1 is significantly different from zero at the 0.001 level. it is estimated that When Responsiveness goes up by 1 standard deviation, RES2 (Attitude of bank staff towards customer was good) goes up by 1.092 standard deviations and RES1(put money aside on a regular basis for the future) goes up by 0.757 standard deviations. It is concluded that both indicators such as, approach of bank staff’s towards its customer was good and they provide a proper guidance to its customer highly influence the responsiveness factor.

### Table No.4 Regression Weights for indicators of Reliability factor

The above table shows the emerging indicators which significantly predict the banking service quality factor such as Reliability. It is found that the indicator was significantly emerged to predict the reliability constructs. The probability of getting a critical ratio as large as 0.001 in absolute value is less than 0.001. The beta weighs for Reliability factor of banking service quality in the prediction of RES1 is significantly different from zero at the 0.001 level. It is estimated that When Reliability goes up by 1 standard deviation, RES2 (Attitude of bank staff towards customer was good) goes up by 1.092 standard deviations and RES1(put money aside on a regular basis for the future) goes up by 0.757 standard deviations. It is concluded that both indicators such as, approach of bank staff’s towards its customer was good and they provide a proper guidance to its customer highly influence the reliability factor.
It is observed from the above table that all the five indicators were significantly emerged to predict the Reliability constructs by 0.001 percent significant level. The highest beta score were occurred on the indicator namely, REL2 and lowest beta score were occurred on REL1. It is revealed that When Reliability goes up by 1 standard deviation, REL1 (information over performing services) goes up by 0.749 standard deviations and REL2 (Gives prompt service) goes up by 0.720 standard deviation. It is concluded that the highest influential indicators on Reliability factor were happened on REL2 (Gives prompt service).

The five indicators of empathy factor of banking service quality were significantly predicted the empathy factor. The highest influential were happened on EMP2. It is revealed that when Empathy goes up by 1 standard deviation, EMP2 (Safe transactions) goes up by 0.79 standard deviations and at lowest EMP4 (Convenient operating hours) goes up by 0.567 standard deviations.

The above table shows the unstandardized and standardized regression weights of four indicators of banking service quality of Accessibility factor by Public sector banks concern. It is observed that all the four accessibility indicator were significantly emerged to predict the Accessibility constructs of banking service quality. It is observed that when banking accessibility factor goes up by 1 standard deviation, ACC2 (Extended working hours) goes up by 0.815 standard deviations and ACC1 (Convenient branch locations) goes up by 0.877 standard deviations.

The above table shows the standardized regression weights for four indicators of banking service quality assurance factors. It is found that all the four indicators were significantly emerged to predict the banking service quality assurance factor by 0.001 percent level. The highest factor score was happened in the variable ASS3 and lowest factor score was happened in the variable ASS1. It is revealed that When Assurance goes up by 1 standard deviation, ASS3 (Understand customer's specific needs) goes up by 0.849 standard deviations and ASS4 (resolve the customer specific request) goes up by 0.865 standard deviation. It is concluded that ASS4 (resolve the customer specific request) has highly influence the banking service quality factor of bankers Assurance

The above table shows the standardized regression weights for four indicators of banking service quality assurance factors. It is found that all the four indicators were significantly emerged to predict the banking service quality assurance factor by 0.001 percent level. The highest factor score was happened in the variable ASS3 and lowest factor score was happened in the variable ASS1. It is revealed that When Assurance goes up by 1 standard deviation, ASS3 (Understand customer's specific needs) goes up by 0.849 standard deviations and ASS4 (resolve the customer specific request) goes up by 0.865 standard deviation. It is concluded that ASS4 (resolve the customer specific request) has highly influence the banking service quality factor of bankers Assurance
The standardized regression weights for all the four Tangibility factor has achieved moderate score to influence banking Tenability factor. Moreover all the four indicators were significantly predict the banking Tangibility factor by 0.001 levels. It is revealed that when banking tangibility goes up by 1 standard deviation, TAN2 (Physical facility) goes up by 0.789 standard deviations and TAN1 (Modern looking equipment) goes up by 0.782 standard deviation. It is concluded that the indicators such as TAN2 (Physical facility) has highly influence the banking service quality factor Tangibility.

The above diagram shows fitted covariance structural model by public sector banks prediction. It is observed that the factor score were high for Accessibility and Responsiveness factor of banking service quality. The banking service quality by overall is a good predictor of Tangible factor ($\beta=0.311$, $p<0.001$, $t=3.357$) and Empathy factor ($\beta=-0.426$, $p<0.001$, $t=-4.134$). The Responsiveness factor ($\beta=-0.508$, $p<0.001$, $t=-4.948$), Assurance factor ($\beta=-0.482$, $p<0.001$, $t=-4.627$) and Accessibility factor ($\beta=-0.654$, $p<0.001$) were less predictor of banking service quality. It is also noted that the Reliability factor ($\beta=-0.024$, $p>0.05$, $t=-0.46$) is fail to predict the banking service quality. It is summarized that $H_{01}$, $H_{02}$, $H_{04}$, $H_{05}$ and $H_{06}$ are supported and $H_{03}$ are not supported.

**X CONCLUSION AND FUTURE RESEARCH**

It is concluded that banking service quality indicators such as, approach of bank staff’s towards its customer and they provide a proper guidance to its customer highly influence the responsiveness factor. In the present development all the public sector banks were concentrate to provide comfortable and convenient physical facilities to its all branches. Nevertheless, the study correctly predicts the that the “Physical facility of public sector banks” was highly influence the bank customer now a days. It is found that the service quality dimensions such as, Responsiveness, Tangibility, Assurance and Accessibility were significantly predict the banking service quality by 0.001 level. However, the Reliability factor fails to predict the banking service quality. It is concluded that the modern banking services performed by the Public sector banks is not only predicted by its modern equipments but also depend on its modern and quick services to its customers.
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Customer. The above analysis was revealed except Reliability of banking service constructs, the remaining five constrits was positively influence public sector bank customer. Based on the above conclusion the future research may be done by comparing the banking service quality constructs between Urban and Rural branches of public sector banks.

Appendix-I Banking service quality indicators

| Banking service quality indicators – Label | Name    |
|------------------------------------------|---------|
| Modern looking equipment                 | TAN1    |
| Physical facility                        | TAN2    |
| Employee are well dressed                | TAN3    |
| Materials are visually appealing         | TAN4    |
| Tell about performance of service        | REL1    |
| Gives prompt service                     | REL2    |
| Perform service right first time         | REL3    |
| Follows the promised time                | REL4    |
| Maintain error free records              | REL5    |
| Proper Guidance                          | RES1    |
| Attitude of employees were good          | RES2    |
| Promptness of service                    | RES3    |
| Solve compliant with in a specific time frame | RES4  |
| Gives personal attention                 | ASS1    |
| work in Best interest in heart           | ASS2    |
| Understand customer's specific needs     | ASS3    |
| Resolve the customer specific request    | ASS4    |
| Gives Individual attention               | EMP1    |
| Safe transactions                        | EMP2    |
| Employees are consistently courteous      | EMP3    |
| Convenient operating hours               | EMP4    |
| Not busy to respond queries              | EMP5    |
| Convenient branch locations              | ACC1    |
| Extended working hours                   | ACC2    |
| ATM Network                               | ACC3    |
| Safe net banking and mobile banking      | ACC4    |

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AUTHORS PROFILE

Mrs. Sujatha Jeyaraman, Mba, Net Is An Assistant Professor In Business Administration Department, Government Arts College, Trichy. She Completed Her Pg In Saranathan College Of Engineering And Passed Ugc - Net Exam In Final Year Of Her Pg. She Has Been Teaching Various Papers In Management Subjects Like Management Accounting, Organizational Behavior, Entrepreneurship Development, International Business And Marketing Management For Over 10 Year. She Has Presented More Number Of Papers In National Level Conference. She Is Doing Ph.D In Management In The Topic Of “Banking Service Quality”.

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Dr. I. Narsis, M.Com., M.Phil., M.B.A., M.A., M.Ed., Pgdca., Ph.D. is an Assistant Professor & Research Advisor, Pg Department of Commerce in Government Arts College, Tiruchy 22, Tamil Nadu. He obtained his PG degree in Commerce from Loyola College, Chennai and M.Phil. in Commerce from Madurai Kamaraj University. Besides, he has a Ph.D. in Commerce.

Dr. I. Narsis has presented many papers in national and international level seminars and conferences and published various research articles in different commerce and economics journals and magazines. He is the author of the book titled Theory in Cost Accounting (2009), Fundamentals of Cost Accounting (Theory, Problems and Solution-2011), and Strategic Management (2018) published by Atlantic Publishers & Distributors (P) Ltd., New Delhi. Fundamentals of Research in Social Science published by Scitext Publishing Company, Chennai and co-author of the book titled Computer in Business.