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## IMPACTS OF SERVICE QUALITY ON CUSTOMER SATISFACTION: A COMPARATIVE STUDY ON BANKING SECTOR OF PAKISTAN THROUGH WEIGHTED SERVPERF MODEL

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### ABSTRACT

This study determines the service quality impacts on customer satisfaction of the banking sector of Pakistan. Five hundred customers of three sub-sectors of commercial banks in the i) private-sector, ii) public-sector, and iii) the Islamic-banks were questioned on the Weighted SERVPERF model. The validity and reliability of the data have been tested using CFA and SEM. The analysis confirmed that service quality with its five dimensions has a significant and positive impact on customer satisfaction. Based on overall mean of data, a comparative analysis of three sub-sectors was carried out to distinguish between high and low quality of their service performance. The findings indicate that private-sector conventional banks are distinguished as high-performance agents followed by Islamic-banks both in public and private sectors, whereas the public-sector conventional banks are shown as low-performance banking services. The three banking sub-sector has been ranked with respect to five service quality dimensions separately.

**Disciplinary:** Management Sciences (Banking), Mathematics (Statistics).

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## 1. INTRODUCTION

Studies have been conducted and a substantial contribution put forth by the prominent research scholars on the area under study. The commercial banks serve as an essential medium for the development of the national economy (Kolor, 2015), providing trade finance services for a better and healthier performance of the economy (Khan & Fasih, 2014). There is a dire need for service quality assessment, as it is one of the major steps to enhance customer satisfaction. Improving service quality is imperative to carve out a competitive edge in the market (Murugiah & Akgam, 2015). The limitations in measuring service quality arise from such dimensions of service as intangibility, diversity, and difficulties in categorization (Saghier & Nathan, 2013).

The major issue in service quality measurement is to define the service dimensions namely Tangible, Reliability, Responsiveness, Assurance, and Empathy in a way that any overlapping is avoided and these are clearly demarcated to display the nature and scale of performance on which customer satisfaction is entirely dependent. A measurement model was developed by Parasuraman et al in 1985 and 1988 which became popular and was widely used. The model was further refined and improved by Cronin & Taylor (1992, 1994).

As an important sector of the national economy, the impact of banking sector quality of service is closely bound up with the overall financial management and facilitation of financial transactions in every business field encompassing a very wide clientele. It is the perceived quality of service and the satisfaction expression of a huge body of customers that ensure the health and smooth functioning of this sector. The commercial banks have a dominant role in this sector and their customers are very sensitive to nature and quality of service.

According to State Bank of Pakistan half-yearly performance review from Jan-18 to June-18, the commercial banks in Pakistan have total assets of Rs.19,197.1 billion, investments 8417.8 billion, advances 7310.30 billion and deposit amounting Rs. 13,755 billion. It is also highlighted in the above review that out of Rs. 13,755 billion deposits, 13,005 billion (about 94.5%) deposited by the customer however only 749 (billion) deposit of Financial Institution. Further as of June 2018, the Pakistan banking sector is comprised of total of thirty-four banks in which twenty local private commercial banks, five public sector banks, five banks are foreign and five specialized banks. Further the commercial banks having 13,908 branches. The banking industry caters different sectors and individuals i.e. commercial, small-medium enterprises, corporate, agriculture sector and encompassing industries like automobile, cement, chemical, electronics, commodity, financial, individual and insurance, etc.

The purpose of the study is manifold and stated as under:

- To validate the extended Weighted SERVPERF measurement model through Confirmatory Factor Analysis by capturing uni-dimensionality, construct reliability, construct validity and model-fit-indices.
- To ascertain the service quality dimensions relationship with customer satisfaction through SEM.
- To identify differences in customer perception with respect to three banking sectors of Pakistan i.e. i) private sector and ii) public sector conventional banks and iii) Islamic Banking Sector (Public/Private)
- To categorize the high and low-performance banking sector.
- To determine the high and low-performance service quality dimensions in the banks.

## 2. LITERATURE REVIEW

### 2.1 DEFINITIONS OF SERVICE QUALITY

The service quality as defined by the scholars followed in two contradictory paradigms i.e. ‘Disconfirmation paradigm’ and ‘Performance-based paradigm’. The basis of the disconfirmation paradigm is that the perceived service quality is the expectation and perception comparison (Grönroos, 1984). The model is suitable for the measurement of service quality. SERVQUAL and Weighted SERVQUAL are the most prominent models originating from this paradigm Parasuraman et al. (1985). In contrast; the performance-based concept of service quality rejecting the

disconfirmation paradigm, Instead SERVPERF was proposed and based entirely on performance measure (Cronin & Taylor, 1992). The scale solely relied on perception of customer, ruling out at the same time the requirement of expectation. The authors argued that it was more reliable and valid measurement model for service quality. They further compared four alternative measurement models SERVPERF, SERVQUAL Weighted SERVPERF and Weighted SERVQUAL, in their study in 1992 found that SERVPERF (Performance only) model was more reliable and effective than the other three models, as it captures service quality nature adequately.

## **2.2 SERVICE QUALITY MEASUREMENT**

The service quality measurement operationalization was initially traced to the research of Parasuraman et al. (1985), identified ten dimensions which were later refined and developed SERVQUAL model with five dimensions namely Empathy, Assurance, Responsiveness, Reliability and Tangible (Parasuraman et al. 1988). Subsequently, contentions arose as to the SERVQUAL model but twenty-two items of service quality dimensions remain intact as part of five factors of service quality and which were accepted as comprehensive enough to cover the entire domain. In this paper, the same 22 items of perception have been adopted and further strengthen by 5 items, measured it through the weighted SERVPERF model.

## **2.3 THEORETICAL BASIS OF SERVICE QUALITY DIMENSIONS**

### **2.3.1 TANGIBLE**

Fitzsimmons et al. (2006) define tangible as “physical facilities, materials, and equipment as well as communication material which is indicative of the care and attention paid for the details offered by the service provider.

### **2.3.2 RELIABILITY**

Reliability involves handling customer service issues such as timely services and maintenance of error-free record. It is the most significant factor in banking services (Parasuraman et al., 1988; Yang & Fang, 2004).

### **2.3.3 RESPONSIVENESS**

Responsiveness is defined as “the willingness to help customers and provide prompt service” (Parasuraman et al., 1988). Positive effects of responsiveness on customer satisfaction have been indicated by several studies, among them, important contributions are Appannan et al. (2013); El Saghier and Nathan (2013); Fauz (2014); Tufail et al. (2016); Felix (2017).

### **2.3.4 ASSURANCE**

Assurance implies courteous and knowledgeable personnel having the ability to convey confidence and trust (Parasuraman et al., 1988). Felix (2017) believed that the satisfaction of the customers in the banking sector could increase with the feeling and sense of safe transactions.

### **2.3.5 EMPATHY**

Parasuraman et al. (1988) defined empathy as caring and individualized attention that the firm provides to its clients and is concerned with the understanding of customer needs by the employees. It is a significant aspect of service quality showing a considerable impact on customer satisfaction in all categories of banking (Wieseke et al., 2012).

## **2.4 SERVICE QUALITY AND CUSTOMER SATISFACTION**

Customer satisfaction is dependent on service quality and is directly proportionate to service

quality. The better the service quality, the better customer satisfaction (Ojo, 2010). The service quality dimensions have a significant impact on ensuring the loyalty of the customers (Kheng et al., 2010). There is a meaningful positive relationship between all the dimensions of service quality and customer satisfaction and as such overall service quality acts as a mediator in this relationship (Mosahab et al., 2010). In the perspective of customer satisfaction, service quality profitability and competitive advantage (Krishnamurthy et al., 2010; Petridou et al. 2007).

### 3. RESEARCH METHODS

#### 3.1 SAMPLE SIZE

Although the targeted population comprises all commercial banks in Pakistan, the survey sample is restricted to the urban area of Karachi. The study questioned customers of twenty-seven commercial banks in three banking sub-sectors.

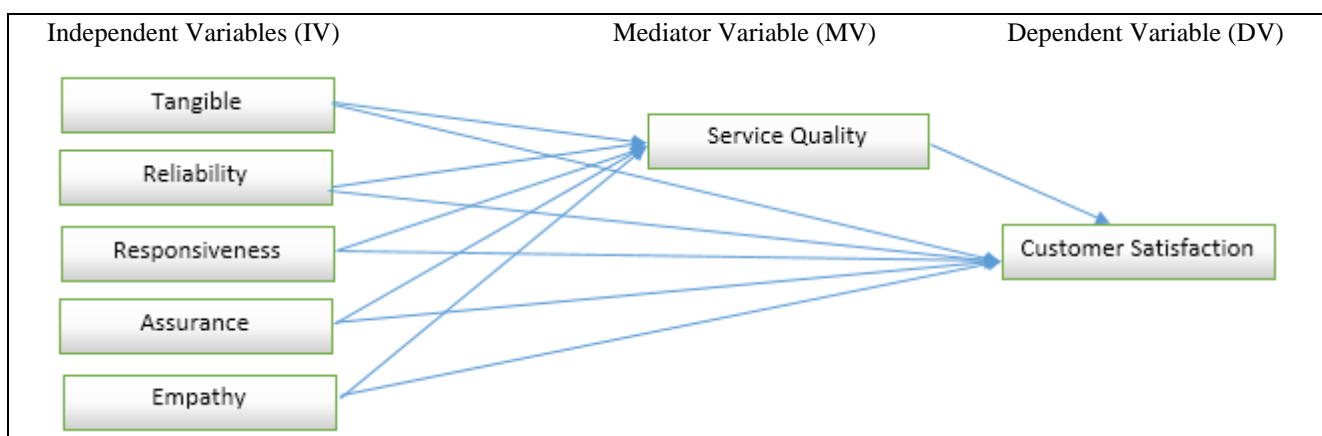
The justification of restricting the sample to Karachi is provided by the fact that the city offers a large educated audience who is capable of understanding the significance of the study and the meaning of the questions put to them in the questionnaire. Further Karachi, being a financial hub, contains a substantial part of the banking sub-sectors and is characterized by maximum service delivery levels in the entire country where the assessment of quality can be gained at its optimum level.

The sample size follows the determination principle set by Krejcie and Morgan (1970) for a finite population, that any number of respondents exceeding 1000,000 will require a sample size of 384 or more persons in a sample. This study surveyed 500 customers of twenty-seven commercial banks to understand the viewpoint with regards to service quality offered by the banking sector in Pakistan.

The study based on the survey of 500 customers as mentioned in Table 1, which comprises 267 customers of 16 banks of Private Sector – Conventional banks, 128 customers of 5 banks of Public Sector Conventional Bank and 105 customers of 6 Public and Private Islamic Banks.

**Table 1:** Distribution of Commercial Banks by Sub-Sectors and Number of Customers Surveyed

Sector	Conventional / Islamic	No. of Banks	No. of Customers
Private Sector	Conventional Banks	16	267
Public Sector	Conventional Banks	05	128
Private & Public	Islamic Banks	06	105
Commercial Banks		27	500



**Figure 1:** Extended Model of Service Quality Impact on Customer Satisfaction with Service Quality as a Mediator under Weighted SERVPERF (Self) Model based on (Cronin Jr & Taylor, 1992, 1994; Parasuraman et al., 1988)

### 3.2 THEORETICAL FRAMEWORK -- MODEL

To measure and evaluate the service quality of commercial banks, the model proposed by (Cronin Jr & Taylor, 1992, 1994) and its weighted version of SERVPERF have been applied. For this model, the service quality is defined as “Perception” of customers in relation to the service quality dimensions along with the importance given to each of these dimensions. These dimensions constitute the basic variables under this study.

Independent Variables (IV) = 5 Dimensions of Service Quality

Mediator Variable (MV) = Service Quality

Dependent Variable (DV) = Customer Satisfaction

The service quality definition may be represented in the mathematical expression as  $SQ = f(P \times I)$ . Where  $SQ = 5$  Dimensions of Service Quality,  $f =$  function,  $I =$  Importance,  $P =$  Perception.

### 3.3 LAYOUT OF QUESTIONNAIRE: MEASUREMENT VARIABLES

The questionnaire for the customers consisted of queries as shown in Table 2. Each question addresses a specific variable in the areas of critical information covering all aspects define under study. The main variables for analysis are those that pertain to perception and importance weight, service quality and customer satisfaction.

**Table 2:** Layout of Questionnaire

Sections of Questionnaire	Variables
Customer Profile	04 Items
Bank Customer Relationship	02 Items
Perception variables	22 Variables
Importance Dimension	05 Factors
Service Quality	06 Variables
Customer Satisfaction	07 Variables

The further dimension wise each variables questions mentioned in Table 3 regarding Perception, Importance weight, Service Quality and Customer Satisfaction mentioned in the model.

**Table 3:** Dimension-wise Number of Questions for Customers under Weighted-SERVPERF

Model	Dimensions of Service Quality under Weighted SERVPERF					SQ	SAT	Total
	Reliability	Assurance	Tangible	Empathy	Responsiveness			
Perception	05	04	04	05	04	-	-	22
Importance Weight	01	01	01	01	01	-	-	05
Service Quality	01	01	01	01	01	01	-	06
Customer Satisfaction	-	-	-	-	-	-	07	07
<b>Total</b>	<b>07</b>	<b>06</b>	<b>06</b>	<b>07</b>	<b>06</b>	<b>01</b>	<b>07</b>	<b>40</b>

A brief definition of each of the dimensions may be given in Table 4, in order to explain the variables nature and for the orientation of the study.

This study uses Cronin and Taylor (1992) proposed Weighted SERVPERF (P) x (I) with some modifications as per the study requirement.

### 3.4 RESEARCH HYPOTHESIS

HA1: The service quality dimensions i.e. Tangible, Reliability, Responsiveness, Assurance, and Empathy have a positive and significant impact on customer satisfaction.

**Table 4: Definitions of Variables of the Study**

Variables	Definitions
Reliability	Delivery of promised service, error-free records and problem-solving attitude by a service provider.
Responsiveness	Service provider swift response and readiness to help customers.
Assurance	Courteous and knowledgeable personnel have the ability to convey confidence and trust.
Empathy	Individualized caring of customers by personnel of the service provider.
Tangible	Service provider appearance i.e. interior and exterior, communication resources and personnel
Service Quality	Assess the positive impact of service quality on customer satisfaction.
Customer Satisfaction	Included from relevant literature.

### 3.5 VALIDATING THE MEASUREMENT MODEL

The study first validates the extended Weighted SERVPERF model by using SEM. The SEM validating procedure is known as Confirmatory Factor Analysis (CFA) through which we check uni-dimensionality, Construct Validity, Construct Reliability and Model Fit Indices. Further identification of mediation effects through bootstrap approach in respect of complete, partial and No Mediation that exists in the model.

Further, for testing of hypothesis, the regression weights of independent variables of service quality on customer satisfaction have been applied through Structural Equation Modeling.

### 3.6 SCALING PROCEDURES AND TERMINOLOGIES

To achieve the objective of the study, it requires some sort of yardstick, which could provide support to management for better resource utilization.

The questionnaire is designed on a Likert scale seven-point and uses the criteria of overall mean to distinguish between variables of minor and major importance (Rhee, 2009). To remove the biases of respondents, 'yea sayers' and 'Nay sayers' as pointed out by Greenleaf (1992), the criteria of overall mean have been adapted instead of Likert Scale mid-point of 3.5.

Accordingly, the criteria of mean value above overall mean have been preferred and used to differentiate between high and low-performance dimensions. It is also applied with respect to three banking sectors which were ranked as high and low-performance sectors. The terminologies are mentioned in Table 5.

**Table 5: Terminologies**

Terminologies	Basis of Scaling
High-Performance-Dimension	Dimension mean-value above 'overall-mean'
Low-Performance-Dimension	
High-Performance-Sector	Overall-mean value of Sector above 'overall-mean' of total banking Sector
Low-Performance-Sector	

## 4. RESULTS AND FINDINGS

### 4.1 CUSTOMER PROFILE AND ITS RELATIONSHIP WITH BANKS

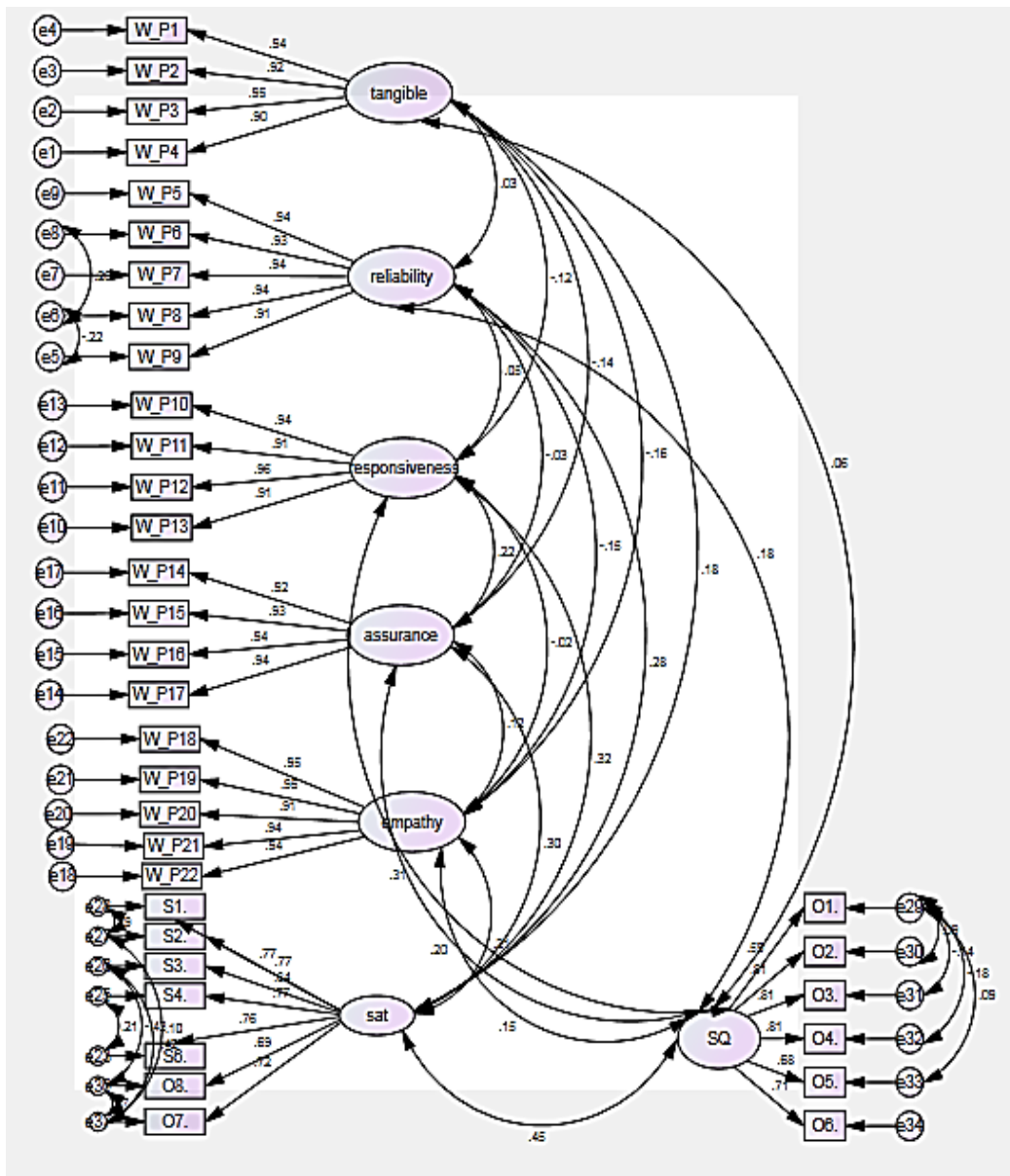
Customer profile and its relationship with banks are summarized in Table 6 and which presents the distribution of the bank customers by gender, age, education, occupation, banking sector, and account holding duration. These represent the personal characteristics of customers.

**Table 6: Demographic profile**

Demographic Variables	Category	Frequency	Demographic Variables	Category	Frequency
<b>Customer Profile</b>			<b>Education</b>	Matriculation	6
<b>Gender</b>	Male	356		Undergraduate	67
	Female	144		Graduate	194
<b>Age</b>	Below 20	8		Post graduate	231
	21 to 30	156		Others	2
	31 to 40	111	<b>Bank Customer Relationship</b>		
	41 to 50	131	<b>Banking Sector</b>	Public Sector Conventional Bank	128
51 and above	94	Private Sector Conventional Bank		266	
<b>Occupation</b>	Private Service	194		Public/Private Sector Islamic Banks	106
	Govt. Service	113	<b>Account Holding Duration</b>	Less than a Year	78
	Self Employed	39		Upto 3 Years	112
	Business	107		Upto 5 Years	101
	House Wife	42		Upto 10 Years	141
	Other	2		More than 10 Years	68

## 4.2 CONFIRMATORY FACTOR ANALYSIS

Figure 2 comprises the independent, mediating and dependent variables.



**Figure 2: The output of the Confirmatory Factor Analysis – Weighted SERVPERF Model with Standardized Factor Loading.**

### **Independent Variables**

#### **Tangible**

W\_P1: Up-to-date Equipment.

W\_P2: Counter sufficiency.

W\_P3: Well dress employees.

W\_P4: Attractive, well-explained brochures.

#### **Reliability**

W\_P5: On-time delivery of service.

W\_P6: Employees ready to resolve customer issues.

W\_P7: Upfront performance of service.

W\_P8: Advertisement reflects reality.

W\_P9: Error-free record maintenance.

#### **Responsiveness**

W\_P10: Express the right time of service by employees.

W\_P11: Prompt service delivery.

W\_P12: Willingness to help the customer.

W\_P13: Respond to customer requests.

#### **Assurance**

W\_P14: Compassionate and supportive in customer problems.

W\_P15: Feel safe in all relations.

W\_P16: Polite service provider.

W\_P17: Knowledgeable to answer queries of customers.

#### **Empathy**

W\_P18: Individualized services.

W\_P19: Convenient operating hours.

W\_P20: Special service to special customers

W\_P21: Customer interest first.

W\_P22: understand the customized needs.

### **Mediating Variable**

#### **SQ- Service Quality**

O1. Tangible impact positively on customer satisfaction.

O2. Responsiveness impact positively on customer satisfaction.

O3. Reliability impact positively on customer satisfaction.

O4. Assurance impact positively on customer satisfaction.

O5. Empathy impact positively on customer satisfaction.

O6. Service Quality impact positively on customer satisfaction.

### **Dependent Variable**

Sat- Customer Satisfaction

S1. Satisfaction with my bank.

S2. Positive word mouth for my bank

S3. Keep continue and maintaining relationships with my bank.

S4. Encourage others to make relation with my bank.

SS. Intend to switch my bank.

O7. Overall evaluation of the performance of bank service quality.

O8. Overall Satisfaction provided by the bank

## **4.3 CFA- CONSTRUCT UNI-DIMENSIONALITY**

The factor loading of the individual variables is used to check the construct uni-dimensionality. The 0.6 and above are the cut-off criteria of factor loading. As shown in Table 7, the factor loading of all the factors and variables of the model are above the value of 0.6 and so the uni-dimensionality of the construct is established.



#### 4.4 CONSTRUCT RELIABILITY

The construct is considered reliable if the CR is  $> 0.70$  and Alpha  $> 0.70$ . The outcomes of the test (Table 7) show that all the Cronbach Alpha values are above the threshold criteria of  $> 0.70$  where the lowest is 0.872 for service quality and the highest 0.971 for reliability dimension. Further, the Composite Reliability of the model is shown to be above the critical values  $> 0.70$  where the lowest is 0.877 for service quality and the highest 0.877 for reliability dimension. Thus the construct reliability is clearly established.

**Table 7: Construct Reliability – Weighted SERVPERF**

Description	Construct Reliability	
	Cronbach's Alpha	Composite Reliability (CR)
Tangible	0.960	0.961
Reliability	0.971	0.971
Responsiveness	0.963	0.963
Assurance	0.962	0.964
Empathy	0.973	0.973
Service Quality	0.872	0.877
Customer Satisfaction	0.908	0.906

#### 4.5 CONSTRUCT VALIDITY

The construct validity has been calculated for its two subtypes, discriminant and convergent validity, Tables 8 and 9. According to the recommended criteria  $CR > 0.70$  and  $AVE > 0.50$ , the construct reliability table shows that the model has  $CR > 0.70$  and  $AVE > 0.50$ . Where minimum value for service quality is 0.547 and the maximum is of 0.869 for reliability, thus achieving the convergent validity.

**Table 8: Construct Validity – Weighted SERVPERF**

Description	Construct Validity		
	Convergent Validity	Discriminant Validity	
	Average Variance Extracted (AVE)	Maximum Shared Variance (MSV)	Average Shared Variance (ASV)
Tangible	0.861	0.032	0.016
Reliability	0.869	0.078	0.023
Responsiveness	0.865	0.102	0.044
Assurance	0.870	0.090	0.036
Empathy	0.880	0.044	0.022
Service Quality	0.547	0.203	0.066
Customer Satisfaction	0.579	0.203	0.092

**Table 9: Square Root of AVE and Construct Correlation Analysis – Weighted SERVPERF**

Variables	Tangible	Reliability	Responsiveness	Assurance	Empathy	Satisfaction	Service quality
Tangible	0.936						
Reliability							
Responsiveness	-0.116	0.049					
Assurance	-0.137	-0.028	0.219				
Empathy	-0.163	-0.149	-0.018	0.124			
Satisfaction	0.182	0.283	0.321	0.295	0.207		
Service Quality	0.063	0.177	0.314	0.205	0.151	0.451	

Further, the recommended criteria the construct achieved the recommended criteria  $MSV < ASV$ ,  $ASV < AVE$  and Square Root of AVE greater than Inter-construct correlation have been achieved and accordingly the discriminant validity has also been established.

#### 4.6 MODEL-FIT INDICES

Table 10, the model fit indices revealed its consistency with the data as chi-square/degree of

freedom is 1.824 meeting the criteria of  $< 3$ . The p-value also shows that the model is significant, p-value being  $< 0.05$ . The GFI at 0.90 and AGFI 0.88 also indicate a good model fit. Further, the NFI 0.950 and CFI 0.976 which are greater than 0.90 also signify that model fits the data well. The result of RMSEA 0.041 is less than 0.05 required.

**Table 10: Model-fit Indices – Weighted SERVPERF**

Measurement	Abbreviation	Values
Chi-Square/Degree of Freedom	X <sup>2</sup> /DF	1.824
P-Value	P-Value	$< .001$
Comparative Fit Index	CFI	0.976
Normed Fit Index	NFI	0.950
Root Mean Error of Approximation	RMSEA	0.041
Goodness of Fit	GFI	0.90
Adjusted Goodness of Fit Index	AGFI	0.88

#### 4.7 SEM PATH ANALYSIS – WEIGHTED SERVERF MODEL

The result derived from SEM (Table 11) shows that all independent variables (IVs) have positive and significant impact on the mediator variable (MV), service quality (SQ). Further all Independent variables (IVs) along with mediator variable (SQ) have positive and significant relationship with the dependent variable (DV), customer satisfaction.

**Table 11: Structural Equation Modeling - Regression Weights**

			Est.	S.E.	C.R.	P
Service Quality	←	TAN	.044	.014	3.062	.002
Service Quality	←	REL	.056	.014	4.082	***
Service Quality	←	RESP	.099	.017	5.747	***
Service Quality	←	EMP	.056	.014	4.005	***
Service Quality	←	ASS	.049	.016	3.013	.003
Customer Satisfaction	←	SQ	.388	.080	4.839	***
Customer Satisfaction	←	TAN	.124	.020	6.094	***
Customer Satisfaction	←	REL	.122	.019	6.408	***
Customer Satisfaction	←	RESP	.119	.023	5.146	***
Customer Satisfaction	←	ASS	.116	.023	5.137	***
Customer Satisfaction	←	EMP	.108	.020	5.527	***

#### 4.8 SEM- MEDIATION THROUGH BOOTSTRAP APPROACH

Indirect effects derived through a bootstrap approach from SEM (Table 12) show that all five independent variables (IVs) have significant indirect effects on the dependent variable (DV) customer satisfaction (Sat) through the mediator variable (MV) Service Quality (SQ). It is also noted that all independent variables (IVs) have significant effects on mediator variable (MV) Service Quality (SQ).

**Table 12: Indirect Effects - Two-Tailed Significance (BC)**

	Empathy	Assurance	Responsiveness	Reliability	tangible	SQ	Sat
SQ	...	...	...	...	...	...	...
Sat	.001	.001	.001	.001	.002	...	...

**Table 13: Direct Effects - Two-Tailed Significance (BC)**

	Empathy	Assurance	Responsiveness	Reliability	Tangible	SQ	Sat
SQ	.001	.005	.001	.003	.004	...	...
Sat	.003	.002	.002	.002	.002	.001	...

Direct effects derived through a bootstrap approach from SEM (Table 13) show that all five Independent Variables (IVs) have significant direct effects on the dependent variable (DV) customer satisfaction (sat). It is also noted that all Independent Variables (IVs) have significant impact on mediator variable (MV) Service Quality (SQ).

The result of the independent variable (IVs) has significant indirect effects through mediator variable (MV) Service Quality (SQ) and significant direct effects on dependent variables (DV) indicate that model has achieved the partial mediation effects.

#### 4.9 COMPARATIVE ANALYSIS OF BANKING SUB-SECTORS OF PAKISTAN - WEIGHTED-SERVPERF MODEL

After comprehensive data analysis on the basis of CFA- uni-dimensionality, construct reliability construct validity, model-fit-indices, and regression weights, the study further derives the results from the data on the basis of mean-based ranking. Table 14 shows that on the basis of Weighted-SERVPERF, the dimensions of service quality were ranked according to mean values in the order as Reliability, Tangible, Responsiveness, Empathy and Assurance.

**Table 14:** Weighted SERVPERF Mean-based Analysis of Banking Sub-sectors of Pakistan

Descriptive Statistics	Conventional Bank Public-Sector N=128		Conventional Bank Private-Sector N=267		Islamic Bank Private/ Public-Sector N=105		Total Commercial Banking-Sector N=500	
	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank
Reliability	5.932	1	6.032	1	5.913	1	5.981	1
Tangible	5.530	2	5.754	2	5.288	5	5.599	2
Responsiveness	5.399	3	5.565	3	5.549	3	5.519	3
Empathy	4.839	4	5.216	5	5.636	2	5.207	4
Assurance	4.729	5	5.346	4	5.349	4	5.189	5

In the Islamic banking sector, the rank order of (service quality dimensions) is completely divergent showing many different ranks than those in other sub-sectors. It should be noted that Tangibles are at the lowest rank while Empathy and Responsiveness are ranked high following reliability at top of the order.

**Table 15:** High and Low-Performance Commercial Banks Sub-Sectors

Commercial Banking Sector	N	Overall Mean
Conventional Bank - Private Sector	267	5.583
Islamic Bank - Public/ Private Sector	105	5.547
Conventional Bank - Public Sector	128	5.286
Total Commercial Banking Sector	500	5.501

In Table 15, the overall-mean value of any banking sub-sector above 5.501 (the overall mean of the entire commercial banking sector) marks the “High-performance Sector” whereas values below overall-mean indicate ‘Low-Performance Sector. The comparison of three banking sub-sectors with regards to service quality show that the ‘High-Performance Sector’ is Conventional Bank – Private-Sector with an overall mean value of 5.583 is a high-performance sector followed by Islamic Bank sector having mean value 5.547 as high-performance sector”. The Public Sector Banks with overall mean of 5.286 are indicated as low-performance sectors. The study further identified the high and low-performance dimensions of service quality based on overall mean, see Table 16. To distinguish a high-performance dimension from that of low performance, the mean value of

individual dimensions is taken as a yardstick for differentiation.

**Table 16:** High and Low-Performance Dimensions of Banking Sub-sector of Pakistan on the basis of ‘Overall Mean’

Banking Sector	High-Performance-Dimension	Low-Performance-Dimension
Conventional Bank – Public-Sector (Overall Mean: 5.286)	Reliability Tangible Responsiveness	Empathy Assurance
Conventional Bank – Private-Sector (Overall Mean: 5.583)	Reliability Tangible	Responsiveness Assurance Empathy
Islamic Bank – Private and Public-Sector (Overall Mean: 5.547)	Reliability Empathy Responsiveness	Assurance Tangible
Total Banking Sector (Overall Mean: 5.501)	Reliability Tangible Responsiveness	Empathy Assurance

Table 16, on the one hand, highlighted the high-performance dimensions of all three banking sub-sectors taken together along with the whole banking sector, and on the other hand, it brought out the low-performance dimension areas where improvements in service quality are required.

Empathy and Assurance are weak areas of the entire commercial banking sector of Pakistan. In the opinion of customers, the bank employees fail to show sympathetic and polite behavior and are often found wanting inadequate relevant information which satisfies the queries of customers. The level of empathy shown by the bank employees also leaves much to be desired, especially individual attention and understanding of specific needs of customers.

#### 4.10 HYPOTHESIS TESTING

The result derived from Structural Equation Modeling (Table 17) revealed that all dimensions of service quality have a significant and positive relationship with the dependent variable, Customer Satisfaction under Weighted SERVPERF Model.

**Table 17:** Hypothesis Testing

	Hypothesis	Null Hypothesis	Research Hypothesis
H <sub>A1</sub>	The service quality dimensions i.e. Tangible, Reliability, Responsiveness, Assurance, and Empathy have a positive and significant impact on customer satisfaction.	Rejected	Accepted

#### 4.11 DISCUSSION

The analysis results have shown notable differences between commercial banking sub-sectors as well as public and private as banking categories. Deficiencies in the private sector banks are noted with respect to responsiveness, assurance and empathy, according to our study while other studies on the subject have indicated private sector banks lacking in satisfactory performance levels of assurance and responsiveness which are contingent on employees behavior and represents and weak management area (Banerjee & Sah, 2012; Kamrani, 2016; Kaura, 2013; Kumar & Gangal, 2011; Patidar & Verma, 2013; Ragavan & Mageh, 2013; Selvakumar, 2016).

Private sector bank has been found to have a substantial edge over public sector banks in a matter of performance of service to customers. The results of our study show that private sector banks are ahead in all dimensions of service and pronounced differences relate to tangibility, responsiveness and assurance dimension. Similar results have also been shown by previous studies on banking sector in Pakistan Khalid, Mahmood, Abbas, and Hussain (2011); Haq and Muhammad (2013); Gilal, et al. (2015).

The results indicate that ‘reliability’, tangible and responsiveness respectively considered as high-performance dimensions while empathy and assurance are indicated as low-performance dimensions.

## 5. CONCLUSION

The study concluded that the Extended model of Weighted SERVPERF model has been validated by achieving the recommended value of uni-dimensionality, construct reliability, construct validity and model-fit indices through structural equation modeling (SEM) and also by using confirmatory factor analysis (CFA). The result shows a significant and positive relationship of dimensions of service quality with customer satisfaction.

The extended model of Weighted SERVPERF achieved partial mediation. The study also identified the differences regarding customer perception with respect to three banking sub-sectors. The conventional banks in the private sector are distinguished as high performance followed by Islamic banks, whereas the public sector conventional banks are indicated as low-performance sectors.

The study also identified the high and low-performance dimensions for all three sub-sectors along with the entire commercial banking sector of Pakistan.

## 6. AVAILABILITY OF DATA AND MATERIAL

Data can be made available by contacting the corresponding author.

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