



CUSTOMER PERCEPTION ON THE MODERN (M)-SERVQUAL OF BANKING ORGANIZATIONS: A STUDY IN VISAKHAPATNAM, ANDHARA PRADESH, INDIA

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I. INTRODUCTION:

Banks are key players in financial markets operations and play an important role in keeping a country's economy running smoothly. In today's highly competitive corporate environment, quality of services is an essential element for enhancing customer satisfaction and customer loyalty and has become an important factor in improving the performance of banks and in determining their success (Mubbsher Munawar Khan 2014). The service quality has been one of the most effective means of establishing a competitive position and improving profitability & performance. Banks must measure and determine their level of service quality, if they desire to keep their customers by satisfy their needs. It is a primary means of providing a competitive advantage to banks, In order to achieve repeat bank transactions by the customers in the increasing competitive banking business; banks should organize their operations according to the needs of the customers (Meshach G.G and Teresa M.N 2016). Today financial institutions are facing so many challenges i.e. increase in customers' demands and expectations coupled with provision of premium quality services. Moreover, customers are behaving more critically to the service quality practices prevailing in banks. Increasing customer demands together with ever growing Impact of Service Quality on Customer Satisfaction and Customer Loyalty competition are compelling the financial institutions to adapt new competitive and innovative ways which will help them to take the lead in the market place. In Present Modern era, the service quality becomes very important factor with changing facets influencing the performance of the banks via, customer satisfaction. Earlier, the determinants of quality retail banking services were tangibility, reliability, responsiveness, assurance, empathy, efficiency, and confidence, reflecting a combination of SERVQUAL and BSQ scales (Tran Van Quyet et al 2015). Modern Banking is fully advancing towards digitalization which has been

clearly emphasized by the Govt of India in the recent Union Budget 2022, has mentioned that all post offices in the country have to be fully digitalized besides 100 per cent digitalized core banking system, followed by the digital payment initiatives in banking sector as such the scheduled commercial banks to set up 75 fully digital bank branches in 75 districts in our country (www.india.gov.in). Moreover, The Information quality measurement in online banking has been gaining wide attention presently and thus, many prior studies have sought to show major components of Information quality management linked with electronic environment. Under these conditions, The SERVQUAL is very important factor and plays significant role in the progress of banking business of banking organizations in India, via improved customer satisfaction and operational performance. Under this back drop, an attempt is made to study the Customer Perception on the Modern (M)-SERVQUAL of Banking Organization in Visakhapatnam, Andhra Pradesh, India. For this purpose, the quantitative study design approach has been adopted; the questionnaire has 22 items for 5 factors derived through factor analysis. The target population included current customers of Commercial banks in Visakhapatnam, AP, India. The sample should be at least five times the number of variables. In the present study, the questionnaire has a total of 22 items, and the sample size taken for the study has been 10 times more than the variables in the questionnaire which is to be 220 ($22 \times 10 = 220$) and the data generated from 220 Customers of Various Public and Private sector banking organization in Visakhapatnam, Andhra Pradesh, India and analyzed the data with the help of the statistical tools available in SPSS 25.

II. NEED FOR THE STUDY:

Banking system is a component of the financial system, which plays an important role in the economic development of countries of the world. There is a strong correlation between economic growth and development of the financial system. The development of an economy largely depends on the deployment and optimal use of resources and, most importantly, on the performance of different sectors of the economy. In particular, the banking sector helps form capital, create money and innovate in addition to facilitating monetary policies. Therefore, careful evaluation and analysis of the operations of banks to ensure a healthy financial system and an effective economy is essential. To evaluate the performance of the banking industry, it is necessary to use efficiency indicators to check the soundness of the activities of an economy. Excellent quality of online banking is a significant factor to improve performance of the banks and attract more clients. Information quality (INQ), E-service quality (E-SQ), system quality (SYQ) have a positive direct effect on commercial banks' performance" (PER) (Tariq and Norailis 2019). However, There is a lot of changes in the behaviour of customers, As such there is a sea change in the SERVQUAL factors as well. As a part of the study, certain factors that are being featured by the behaviour of modern digital age customers have been used in the scale of (M)-SERVQUAL which is developed as a part of the study due to the specific limitation of Traditional SERVQUAL scales' non agreement with the modern SERVQUAL scale parameters (24 variables and 5 factors). The Modern Service Quality factors comprises of 22 variables and 5 factors, placing majority of digital variables parameters in the scale. Under this back drop an attempt is made to study the services quality parameters of Modern banking Customers that determine the influence on Customer satisfaction. Further, it has made an attempt to structure a comprehensive definition of Modern Banking SERVQUAL with the help of quantitative measurement

via, Factor analysis of SPSS 25 version. The study has tested the Hypothesis that there is any significance in the Modern Banking Service Quality (M-SERVQUAL) Variables taken for the study followed by any significant rescaled variable dimensions useful for the study analysis and also is there any significant impact of the M-SERVQUAL variable rescaled dimensions on the Customer Satisfaction.

III. THE SERVICE QUALITY (SERVQUAL):

There are several categories in the Modern service quality (M-SERVQUAL) in the commercial banking sector; they are customer service quality (C-SERVQUAL), banking service product quality (BPSERVQUAL), and online systems quality (E-SERVQUAL). The derived dimensions include: for customer service quality (C-SERVQUAL) - ten dimensions such as reliability, responsiveness, competence, courtesy, credibility, access, communication, understanding the customer, collaboration, and continuous improvement; followed by online systems quality (E-SERVQUAL) - six dimensions such as content, accuracy, ease of use, timeliness, aesthetics, and security; and banking service product quality (BPSERVQUAL), one dimension of product variety/diverse features. In context of service quality, tangibles can be referred to as Information and Communications Technology (ICT) equipment, physical facilities and their appearance (ambience, lighting, air-conditioning, seating arrangement); and the services providing personnel of the organization. However, attributes of the SERVQUAL are 1, Reliability: the ability of a service provider to provide the committed services truthfully and consistently. 2, Assurance: It is developed by the level of knowledge and courtesy displayed by the employees in rendering the services and their ability to instil trust and confidence in customer. 3, Empathy: taking care of the customers by giving attention at individual level to them and addressing their concerns and demands (Mubbsher Munawar Khan 2014). The E-service quality (E-SQ) has a positive direct effect on commercial banks' performance" (PER), followed by system quality (SYQ) has a positive direct effect on commercial banks' performance" (PER). Furthermore, developing Information Technology can improve performance (Tariq Barjes and Norailis 2019). With continuing competition in the market, the quality of service has become essential to maintain competitive advantage. The service quality is the entrance key to TQM, which focus on customer satisfaction and meet their expectations. In the current era, developments in services related to the wireless revolution, this revolution has reduced the direct connection between service providers and customers which led to the emergence of electronic service as corporate strategies especially in e-commerce activities. The modern technology transferred business processes to achieve more accuracy, speed and protection to meet the needs of existing customers, achieve satisfaction and attract new customers with newer types of technology available. Electronic E-SERVQUAL delivers all interactive services via the Internet, and the use of advanced communications and information and multimedia technology and a set of business done through information and communications technology. It is provided via a mobile phone, Internet, and self service centres, includes several elements, which are electronic retail, customer support; service itself, and service. Electronic service enables

companies to exceed the expectations of customers, and go beyond traditional consumer service, which helps these companies to invest for the long term by promoting the growth of customers, and keep customers in case of company loyalty. As a result, the uses of technology in customer service are important for access to the most basic survival goals of organization.

IIIa: MODERN (M) - SERVQUAL- The Concept:

Definition: “Modern Banking Service Quality(M-SERVQUAL) can be defined as a desired level of services that a customer can enjoy from anywhere through On line and Offline banking and other facilities which include Reception, Information Quality and Security (RQS), Effective Mobile Banking & Complaint Handling (MB&CH), Online Reservation Charges and CRM (RC & CRM), Time Management (TM)and Attending Problems (AP), rendered by any banking organization (Study Analysis)”.The SERVQUAL variable, used in factor analysis to derive the above definition via rescaled variable factors as an output of The Modern Service Quality scale of variables comprising 22 variables : SQ-Minimum Bank Charges, SQ-Good Bank SMS Services, SQ-Responsiveness, SQ-Attending Problems, SQ-online Money Transfers, SQ-Time Management, SQ- Easy mobile Access to Account Information, SQ-Easy Accessibility, SQ-Good CRM, SQ-Good bank USSD services, SQ- Good Bank Mobile app, SQ-Information Quality, SQ-Good Privacy and Security, SQ-Good ambience, SQ-Good compliant handling, SQ-Online Reservations, SQ-Quick Services etc.

IIIb. CUSTOMER SATISFACTION:

Customer satisfaction is a model to facilitate results that are significant, consistent and effective to forecasting the financial ability of an organization (Arcot, Purna et al 2019). It plays an important role in the success of business strategies and helps organizations and businesses to increase their return and achieve competitive, leads to long term profits by making the customer loyal to the Organization. In this digital age, interest has increased in financial services over the past few years that require development and modernization, which became a major challenge for marketers and academics alike, prompting banks to seek to improve their electronic services offered to customers in order to maintain current customers, and trying to attract new customers, and even to make banks able to be distinguished in providing its services, they must keep pace with technology (Suliman and Warda Fares AL 2017). The criteria for measuring the satisfaction level of customers regarding banking services are 1, *Satisfaction*: The perception developed by the customers that the goods or services are acceptable or tolerable; 2, *Content*: The features of goods or services and the underlying benefits gives customer a positive consumption experience; 3, *Relived*: The alleviation of the negative state of customers’ mind of by the goods or services provided; 4, *Novelty*: The goods or services bring freshness and excitement in customers; 5, *Surprise*: The amazement and unexpected pleasure brought to people by services enjoyed (Mubbsher Munawar Khan 2014). Ease of use, credibility and customer attitude have significant influence on determination of customer satisfaction in banking sector. More value added services in mobile banking apps and design more user friendly M-banking apps to enhance customer experience and satisfaction (Metlo, M et al 2021)

IV. REVIEW OF LITERATURE:

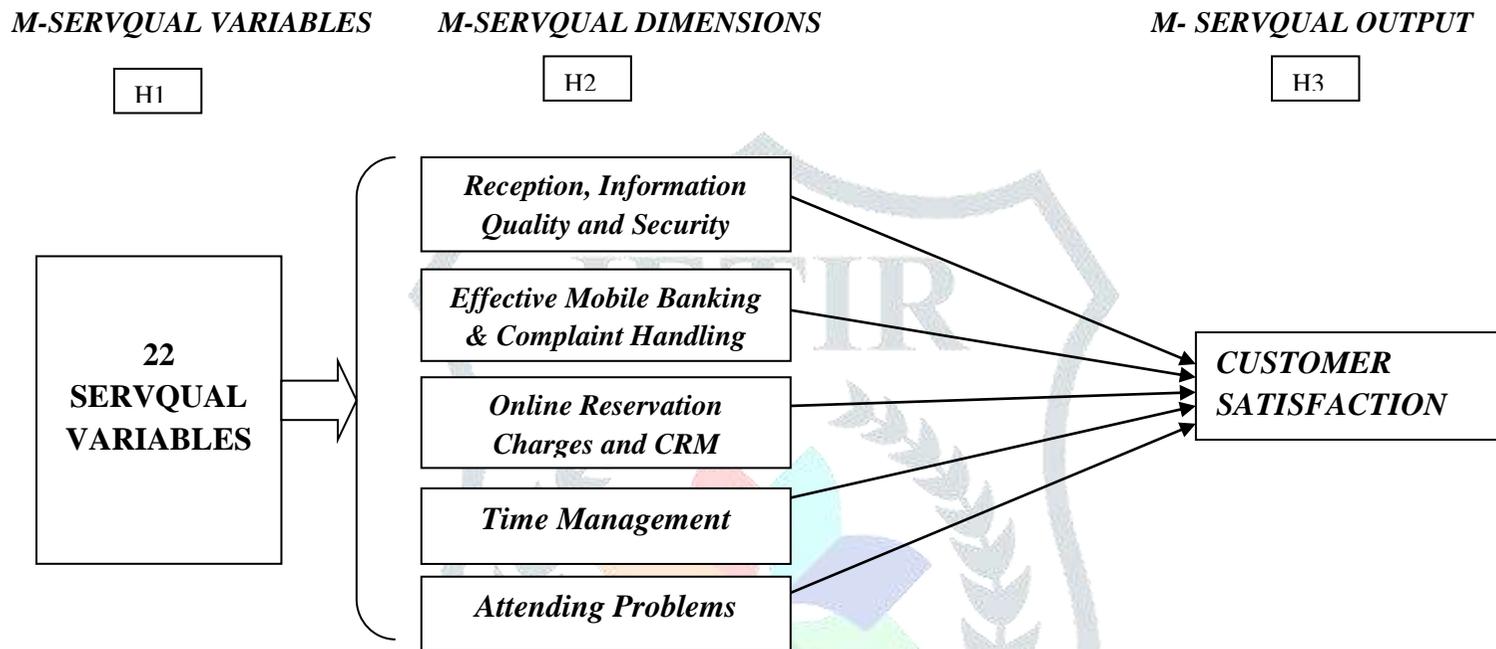
There is statistical significant impact of the Electronic Service Quality (Ease of use, Web Site Design, privacy, and Responsiveness) on Customers Satisfaction of Islamic Banks in Jordan. Regarding the dimensions of reliability and effectiveness, the study indicates that they had insignificant impact on Customers Satisfaction (Sulieman and Warda Fares 2017). In banking industry, service quality is one of the most important aspects of the premium customer experience. Most organizations monitor their services quality on a regular basis to ensure maximum customer satisfaction and to improve customer retention and loyalty. Customer satisfaction is attained by properly meeting the customer demands and expectations and providing services which are up to the market standards. Service quality has been suggested as a strong predictor of customer retention and customer satisfaction by many organizational researchers. It is a drive of the customer satisfaction that impacts customer loyalty. Service quality is a key factor for customer satisfaction. It is an important tool for banks for augmenting their income and market share (Mubbsher Munawar Khan 2014). E- service is obtained through mechanical interaction and mutual between the applicant and machine, and noticed that there are some challenges to electronic service providers since there is no direct contact between staff and customers, and consequently, the website became the basis for interaction between customers and organizations (Sulieman and Warda Fares 2017). The operational efficiency, service quality and managerial effectiveness are the main areas to observe the performance of a bank. The financial performance of a bank can be measured as the achievement of the bank in terms of profitability position, service quality, customer satisfaction and other relevant aspects. The profitability of a bank denotes the efficiency with which a bank deploys its total resources to optimize its net profits and thus serve as an index to the degree of asset utilization and managerial effectiveness (Maj Syed and Mohd Taqi 2017). The *CAMEL rating system* is an effective monitoring measure which was first applied in the United States in 1979. The CAMEL's crucial indicators are independent variables (capital adequacy, Asset quality, Management effectiveness, Liquidity of bank) and return on assets (ROA), return on equity (ROE), and Net interest margin (NIM) as proxy for commercial banks' financial performance – dependent variables (Anh Huu Nguyen et al 2020). The most frequently mentioned dimensions, as the main sources of satisfaction or dissatisfaction, were reliability, responsiveness, access, and accuracy. Some suggestions and recommendations were provided to improve the Internet banking service quality and, in turn, customer satisfaction (Jun, M. and Cai, S 2001).

V. METHODOLOGY:

The questionnaire had 22 variables and 5 factors. The target population included current customers of Commercial banks in Visakhapatnam, AP, India. The sample should be at least five times the number of variables. , the questionnaire has a total of 22 items, and the sample size taken for the study has been 10 times more than the variables in the questionnaire which is to be 220 (22 x 10 = 220) and the data generated from 220 Customers of Various Public and Private sector banking organization in Visakhapatnam, Andhra Pradesh, India and analyzed the data with the help of SPSS 25.

Va. OBJECTIVES OF THE STUDY:

The main Objectives of the study are to redefine SERVQUAL of Banking Organizations in the present Modern Banking era; to identify appropriate service quality variables and draw out fitting service quality dimensions for the study; to find out the significance of the SQ dimensions of the study and also to evaluate the influence of these Modern (M)SERVQUAL Dimensions on the satisfaction of customers, selected for the study.

Figure1: The Research Model**Vb. HYPOTHESIS:**

H01: There is no significance in M-SERVQUAL variables of select commercial banks in Visakhapatnam, AP, India

H11: There is significance in M-SERVQUAL variables of select commercial banks in Visakhapatnam, AP, India

H02: There is no significance in the variables rescaled component dimensions representing M-SERVQUAL of select commercial banks in Visakhapatnam, AP, India

H12: There is no significance in the variables rescaled component dimensions representing M-SERVQUAL of select commercial banks in Visakhapatnam, AP, India

H03: There are no Impact of M- SERVQUAL variables on Customer Satisfaction

H13: There are Impact of M- SERVQUAL variables on Customer Satisfaction

VI. STUDY ANALYSIS:

About 63.5 per cent of male customers and the Rest of them are female customers (About 36 per cent) who have participated in the survey. The occupation of the respondents has been elicited. About 48.3 per cent respondents are working in Private organizations, followed by Govt employees (about 22 percent), Business owners (about 20 per

cent) and rest of them are farmers, contractors, house wives and DWACRA women belongs to others category. About 90 per cent of the respondents have opined that they have dependents. Rest of them representing (about 7.9 per cent) have no dependents and belongs to nuclear families. The details of the educational qualification of the respondents have also been elicited. About 44 per cent of the respondents have UG degree, followed by PG degree (about 36 per cent), Rest of them includes SSC, Inter, Non formal Education. About 46.5 per cent of the respondents have opined that they have Bank Accounts (Savings Bank or Current Bank or Both) with SBI, followed by Canara Bank (about 15.5 per cent), AXIS Bank (about 11.5 per cent) Indian Overseas bank (about 10 per cent), Indian Bank (about 5.5 per cent) and rest of them belongs to other public and private sector commercial banks. About 65 per cent of the respondents are SB Account holders only, followed by CA Holders (about 19.5 per cent) and Rest of them belongs to the category of the holders of both or multiple accounts. The Respondents knowledge on the bank services has been elicited. About 68 per cent of the respondents have opined that they have very good/full knowledge on bank services, followed by good knowledge (about 20 per cent), average knowledge (about 15.5 per cent) and rest of them have very limited or no knowledge in banking services and can have services with the help of others. About 54.2 per cent of the respondents have come under 1 to 5 years category of experience in using E-Services, followed by 5 to 10 years (about 25.8 per cent) and Rest of them (about 20 per cent) belongs to up to 1 year experience in using E- bank services. The satisfaction regarding E- bank services has been elicited from the respondents. About 55.9 per cent of the respondents have opined that they are fully satisfied with e- banking services provided by the banks through different online means, followed by the response (about 20 per cent) not satisfied fully with the E bank services offered by their respective banks due to several reasons and rest of them (about 24.1 per cent) have neutral opinion towards the E banking services offered by the banks. The main problems that the respondents have had encountered are Technical Problems (about 30 per cent), followed by No cash Boards (about 20 per cent), Funds transferring problems (about 15 per cent), Internet connectivity break down (about 12 per cent), Limitation on withdrawal (about 10 per cent). Privacy and Security (about 8 per cent), Rest of them includes non availability, Overcrowded ATM Centres, on line frauds and Rigidness in Services etc.

The specific problems that a bank customer can meet with ATM facility are elicited in the survey. About 25 per cent of the respondents have opined that they have Money availability problems with ATMs, followed by odd location (about 20 per cent), Withdrawal restrictions (about 10 per cent) and bank Charges (about 5 per cent). Significantly, Most of the Respondents (about 35 per cent) have opined that they have not any problems with ATMs and further, they add ATM facilities and other online flexibility in Bank transactions through UPI, Credit and Debit Card payments help them to lead high quality life in the society (about 40 per cent). There is a gradual decrease in the number of visits by Customers to their respective banks. In the study, About 50.4 per cent of the respondents have opined that they visit very rarely/ no visits to their respective banks, followed by less than 5 times (About 40.4 per cent), rest of them visits more than 5 times. The main motivators of the bank customers to utilize on line payment modes via UPI- Phone pe, Paytm, Google pay, PhonePe, BHIM app, MobiKwik, Google Tez, Uber, Chillr, SBI Pay, iMobile, Axis Pay, BOB UPI. The Best money transfer app between friends: Venmo, followed by Best for bank-to-

bank transfers: Zelle, Best for flexible payments: PayPal, Best for budding investors: Cash App, Best for sending money internationally: Remitly. Similarly, the Top 10 Mobile Banking Apps in India are Kotak-811 & Mobile Banking, Followed by HDFC Bank Mobile Banking, YONO Lite SBI, Axis Mobile, IDBI Bank GO Mobile, Baroda M-Connect Plus, iMobile Pay by ICICI Bank and CANDI – Mobile Banking App. The main Motivator of Online Payments E- banking are Grocery payments (about 31.5 per cent), followed by; Food payments through UPI and Special Food apps (about 30 per cent) via (Zomato (about 28.5 per cent), Swiggy (about 18.5 per cent), Shupple (about 13.5 per cent), Uber Eats (about 13.5 per cent), Food Panda (about 11.5 per cent), Scootsy (about 8.5 per cent) and rest of them includes Dunzo,Box8 apps); travelling & ticketing (about 20 per cent), Apparel on line payments (about 10 per cent) and Rest of them includes Movie ticket online booking, Home appliances and other E-bill payments via bank account connectivity.

Table 6.1:Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.473	.712	22

Source: Study Analysis

Reliability Statistics are calculated to reveal the Cronbach's Alpha and Cronbach's Alpha Based on Standardized Items which is 0.473 and 0.712 respectively. Hence the data collected and examined for the study is reliable (Table 6.1). The ANOVA with Cochran's Test has been calculated. The Grand Mean is 23080.4116, Cochran's Q is 2977.477, significant at 0.01 level (Table 6.1a)

Table 6.1a:ANOVA with Cochran's Test

	Sum of Squares	df	Mean Square	Cochran's Q	Sig
Between People	907595295881.200	199	4560780381.313		
Within People					
Between Items	24444249159746.516	21	1164011864749.834	2977.477	.000
Residual	10036564862655.896	4179	2401666633.801		
Total	34480814022402.414	4200	8209717624.382		
Total	35388409318283.610	4399	8044648628.844		

Grand Mean = 23080.4116

Source: Study Analysis

There is a significant variance which has been found in different service quality variables by Age of the respondents. The SQ variables via Reception (F-2.514 sig .000), Good Bank Mobile app (F-2.722 sig .000), Easy mobile Access to account Information (F-3.054 sig .000), Good Privacy and Security (F-2.529 sig .000), Quick Services (F-3.302 sig .000), Good ambience (F-2.800sig .000), Good CRM (F-3.555 sig .000) and also, Security (F-2.187 sig .001), Good bank USSD services (F-2.282 sig .001), Minimum Bank Charges (F-1.913 sig .007), Online Money Transfers (F-1.896 sig .008),Online Reservations (F-1.876 sig .009),and Information Quality (F-1.994 sig .004) at 0.001 level

** . Similarly the SQ variables via, Responsiveness (F-1.526 Sig .057), Easy Accessibility (F-1.440sig .086) and Good compliant handling (F-1.791 sig .014) have been found significant at 0.05 level* (Table 6.2).

Table 6.2: ANOVA IN DIFFERENT SERVICE QUALITY (SQ) VARIABLES BY AGE

		Sum of Squares	df	Mean Square	F	Sig.
SQ-Security	Between Groups	31.343	27	1.161	2.187	.001
	Within Groups	91.277	172	.531		
	Total	122.620	199			
SQ-Reception	Between Groups	38.639	27	1.431	2.514	.000
	Within Groups	97.916	172	.569		
	Total	136.555	199			
SQ-Information Quality	Between Groups	43.441	27	1.609	1.994	.004
	Within Groups	138.779	172	.807		
	Total	182.220	199			
SQ-Responsiveness	Between Groups	20.214	27	.749	1.526	.057
	Within Groups	84.381	172	.491		
	Total	104.595	199			
SQ-Easy Accessibility	Between Groups	30.573	27	1.132	1.440	.086
	Within Groups	135.247	172	.786		
	Total	165.820	199			
SQ-Online Money Transfers	Between Groups	21.304	27	.789	1.896	.008
	Within Groups	71.576	172	.416		
	Total	92.880	199			
SQ- Online Reservations	Between Groups	31.138	27	1.153	1.876	.009
	Within Groups	105.737	172	.615		
	Total	136.875	199			
SQ- Good Bank Mobile app	Between Groups	8.567	27	.317	2.722	.000
	Within Groups	20.053	172	.117		
	Total	28.620	199			
SQ-Good bank USSD services	Between Groups	36.182	27	1.340	2.282	.001
	Within Groups	101.013	172	.587		
	Total	137.195	199			
SQ- easy mobile Access to Account Information	Between Groups	37.058	27	1.373	3.054	.000
	Within Groups	77.297	172	.449		
	Total	114.355	199			
SQ-Good compliant handling	Between Groups	21.582	27	.799	1.791	.014
	Within Groups	76.773	172	.446		
	Total	98.355	199			
SQ-Good Privacy and Security	Between Groups	34.539	27	1.279	2.529	.000
	Within Groups	87.016	172	.506		

	Total	121.555	199			
SQ-Quick Services	Between Groups	34.409	27	1.274	3.302	.000
	Within Groups	66.386	172	.386		
	Total	100.795	199			
SQ-Good ambience	Between Groups	32.604	27	1.208	2.800	.000
	Within Groups	74.176	172	.431		
	Total	106.780	199			
SQ-Good CRM	Between Groups	41.908	27	1.552	3.555	.000
	Within Groups	75.087	172	.437		
	Total	116.995	199			
SQ-Minimum Bank Charges	Between Groups	34.672	27	1.284	1.913	.007
	Within Groups	115.483	172	.671		
	Total	150.155	199			

Source: Study Analysis

The Mean scores and their respective SD of M-SERVQUAL (Mean 4.3496 and SD 0.45987), & its variables have been derived in the study. The Good bank Mobile app is considered to be one of the best service quality variables (Mean 4.8700 and SD 0.37923) as opined by the respondents selected for the study, Followed by Good Bank SMS Services (Mean 4.7350 and SD 0.57132), Attending Problems (Mean 4.6300 and SD 0.78497), Easy Mobile Access To Account Information (Mean 4.3650 and SD 0.75806), Good Compliant Handling (Mean 4.3650 and SD 0.70303), Good Bank USSD Services (Mean 4.3450 and SD 0.83031), Online Money Transfers (Mean 4.3400 and SD 0.68318), Information Quality (Mean 4.3300 and SD 0.95691), Good CRM (Mean 4.2450 and SD 0.76676). Rest of them including Responsiveness, Easy accessibility, Online reservations, Good privacy and security, Quick services, Good ambience, Minimum bank charges exert marginal influence on SERVQUAL perception of the customers. The Sq - Time Management Perception of the customers has no influence with very low Mean scores and High SD (Table 6.3).

Table 6.3: SERVICE QUALITY PERCEPTION (SERVQUAL) OF THE BANKS

	Mean	Std. Deviation
SQ-SERVICE QUALITY PERCEPTION (SERVQUAL)	4.3496	.45987
SQ-INFORMATION QUALITY	4.3300	.95691
SQ-TIME MANAGEMENT	2.9150	1.44158
SQ-RESPONSIVENESS	4.0450	.72498
SQ-ATTENDING PROBLEMS	4.6300	.78497
SQ-EASY ACCESSIBILITY	3.9700	.91283
SQ-ONLINE MONEY TRANSFERS	4.3400	.68318
SQ- ONLINE RESERVATIONS	4.0250	.82935
SQ- GOOD BANK MOBILE APP	4.8700	.37923

SQ-GOOD BANK SMS SERVICES	4.7350	.57132
SQ-GOOD BANK USSD SERVICES	4.3450	.83031
SQ- EASY MOBILE ACCESS TO ACCOUNT INFORMATION	4.3650	.75806
SQ-GOOD COMPLIANT HANDLING	4.3650	.70303
SQ-GOOD PRIVACY AND SECURITY	4.1650	.78156
SQ-QUICK SERVICES	4.1450	.71169
SQ-GOOD AMBIENCE	4.1900	.73252
SQ-GOOD CRM	4.2450	.76676
SQ-MINIMUM BANK CHARGES	3.9350	.86865

In order to formulate the best definition of Modern Service Quality of banking Sector in the present scenario, Factor Analysis has been chosen and used in the analysis in order to find out the variable rescaled dimensions representing Modern SERVQUAL of Commercial Banks selected for the study in Visakhapatnam, AP, India. It infers that there is a significance in the SERVQUAL (SQ)-independent variables, chosen for the study. Hence, Null Hypothesis (H01) is rejected and Alternative Hypothesis (H11) is accepted.

Via: FACTOR ANALYSIS:

It is a statistical method used to describe variability among observed, correlated variables in terms of a potentially lower number of unobserved variables called factors. The purpose of factor analysis is to reduce many individual items into a fewer number of dimensions. Factor analysis can be used to simplify data, such as reducing the number of variables in regression models. The scores can be used as an index of all variables and can be used for further analysis (www.statisticssolutions.com).

	Rescaled				
	Component				
	1	2	3	4	5
SQ-Security	.772				.119
SQ-Information Quality	.766	.301		.123	.118
SQ-Reception	.715		-.136		
SQ- easy mobile Access to Account Information	.125	.721			
SQ-Good Bank USSD services	.147	.601	.122	.126	
SQ-Good Privacy	-.272	.545	.264	.241	
SQ-Good Compliant Handling		.533		.213	
SQ-Good Bank SMS Services	.173	.507		.110	
SQ- Good Bank Mobile app	.185	.348			
SQ-Minimum Bank Charges	.114	-.221	.603		
SQ- Online Reservations	.412	.113	.570	.106	.129

SQ-Easy on line Accessibility	.523	-.113	.532		.176
SQ-Good CRM	-.234	.324	.530	.260	
SQ-Good Ambience	-.204	.266	.516	.255	
SQ-Quick Services	-.235	.348	.489	.267	
SQ-online Money Transfers	-.112	.131	.403	.108	.121
SQ-Responsiveness			.255	.186	
SQ-Time Management	.130			.987	
SQ-Attending Problems					.996

Source: Study Analysis

SQ-easy mobile access to Account Information, SQ-Good bank USSD services SQ-Good Privacy and Security, SQ-Good compliant handling, SQ-Good Bank SMS Services have come under factor-2; Effective mobile banking services, SQ-Minimum Bank Charges, SQ- Online Reservations, SQ-Easy Accessibility, SQ-Good CRM and SQ-Good ambience have come under factor-3; effective UPI payment and CRM; SQ-Security, SQ-Information Quality and SQ-Reception have come under the factor1 Quality, Security and Reception (IQOSR) SQ-Time Management Factor-4 and SQ-Attending Problems-factor 5.

The factor analysis revealed five factors accounting for about 75 per cent of the total variance. M-SERVQUAL model factors were labelled as “Security, Information Quality and Reception labelled as the dimension “**Reception, Information Quality and Security**” (Factor-1), followed by “**Bank Mobile SMS, Security and Complaint Handling**” (Factor-2), “**Online Reservation, Charges and CRM**” (Factor-3), “**Time Management**” (Factor-4), and “**Attending Problems**” (Factor-5). To test the reliability and internal consistency of each factor, its Cronbach’s alpha was determined. It infers that there is significance in the variables rescaled component dimensions representing M-SERVQUAL of select commercial banks in Visakhapatnam, AP, India. Hence, Null Hypothesis (H02) is rejected and Alternative Hypothesis (H12) is accepted.

Vib: REGRESSION ANALYSIS:

It is applied to examine the influence of two or more individual variables (y) on a dependent variable (x). The linear regression analysis is used to predict the impact of independent variables on the dependent variable (Outcome variables) by testing the Hypothesis in the analysis. The Modern Service Quality perception (M-SERVQUAL) can be perceived to be influenced by above independent variables. The adjusted R square 0.398 reveals that there is about 40 per cent combined influence of the dependent variables SQ-Minimum Bank Charges, SQ-Good Bank SMS Services, SQ-Responsiveness, SQ-Attending Problems, SQ-online Money Transfers, SQ- easy mobile Access to Account Information, SQ-Easy Accessibility, SQ-Good CRM, SQ-Good bank USSD services, SQ- Good Bank Mobile app, SQ-Information Quality, SQ-Good Privacy and Security, SQ-Good ambience, SQ-Good Compliant handling, SQ- Online Reservations, SQ-Quick Services (Table-6b.1).

There is a significant difference that has been found in the influences of such independent variables on the dependent variable (F- 7.078, Sig 0.000) significant at 0.01** level (Table-6b.2).

6b.1: Model Summary

					R Square Change	F Change	Sig. F Change
1	.631 ^a	.398	.342	.63686	.398	7.078	.000

Source: Study Analysis

6b.2: ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	48.803	17	2.871	7.078	.000 ^b
	Residual	73.817	182	.406		
	Total	122.620	199			

a. Dependent Variable: Modern Service Quality perception (M-SERVQUAL),

b. Predictors: (Constant), SQ-Minimum Bank Charges, SQ-Good Bank SMS Services, SQ-Responsiveness, SQ-Attending Problems, SQ-online Money Transfers, SQ- easy mobile Access to Account Information, SQ-Easy Accessibility, SQ-Good CRM, SQ-Good bank USSD services, SQ- Good Bank Mobile app, SQ-Information Quality, SQ-Good Privacy and Security, SQ-Good ambience, SQ-Good Compliant handling, SQ- Online Reservations, SQ-Quick Services

The t- values and their respective significant levels at 0.05 and 0.001 levels are presented. SQ-Information Quality (t-6.286, sig .000), followed by SQ- Easy Accessibility (t-1.890, sig .060), SQ- Online Money Transfers (t-2.273, sig .024), SQ- Easy mobile Access to Account Information (t-1.683, sig .094) and SQ- Good Privacy and Security (t-1.707, sig .090) have been found to be significant at either 0.05* level (Table 6b.3). It infers that there is an Impact of M-SERVQUAL variables on Customer Satisfaction of the select Banking organizations in Visakhapatnam, Andhra Pradesh, India. Hence, the Null Hypothesis (H03) is rejected and Alternative Hypothesis (H13) is accepted.

6b.3: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	SQ-Information Quality	.358	.057	.437	6.286	.000
	SQ-Easy Accessibility	.115	.061	.134	1.890	.060
	SQ-Online Money Transfers	.169	.074	.147	2.273	.024
	SQ- Easy mobile Access to Account Information	.123	.073	.119	1.683	.094
	SQ-Good Privacy and Security	.121	.071	.121	1.707	.090

a. Dependent Variable: Modern Service Quality Perception(M-SERVQUAL)

VII. CONCLUSIONS & RECOMMENDATIONS

This study examines the relationships between the factors in the SERVQUAL model and customer satisfaction with the use of all kinds of banking services in Visakhapatnam, AP, India. According to the results, the 22 independent factors of M-SERVQUAL Scale developed in the study are positively related to customer satisfaction. It showed that *Reception, Information Quality and Security, followed by Bank Mobile SMS, Security and Complaint Handling, Online Reservation, Charges and CRM, Time Management, and Attending Problems* are the major factors relating to improving bank performance via Customer satisfaction and play important role in the M-SERVQUAL of banking Sector. Furthermore, it also can help the decision makers of Indian Commercial banks to improve and develop the performance with the online banking system. However, reliability had only partial support. The implications of these results and the limitations of this study are discussed for potential avenues for future research. Banks should increase the professional level of staff members providing services directly to customers. The candidates with Management UG / PG Professional Qualifications would be very much useful to provide business performance of Banking Organizations via, Perfect Implementation of M- SERVQUAL measures. In addition, they should have strong "soft" skills in the provision of services, including communication, negotiation, and sales skills.

The future research should consider studies with multi design questionnaires covering all aspects including SERVQUAL and CAMEL rating to examine and analyze the holistic Issues in variables over the time. The Website design Improvement, technology and Customer Satisfaction oriented Training Programmes programs have to be implemented for the better satisfaction of Customers and to Improve Business turnover of the Banking Organizations. In addition to undergoing training courses in that areas to speed up their response to customers and save time, assessments of customer satisfaction periodically appear on the website through customer feedback to improve weaknesses and enhance customer satisfaction are some of the significant remedial measures to improve customer satisfaction.

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