

## Internet Banking and Customer Satisfaction in Pakistan

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## **Internet Banking and Customer Satisfaction in Pakistan**

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# (Preliminary Draft)

**Abstract** 

This study determines the effects of service quality dimensions on customer satisfaction in

Pakistan by using SERVQUAL model. A survey research questionnaire of 30 items has been

adopted and collects the data of 400 respondents from the users of internet banking of different

bank located in Karachi city of Pakistan. Reliability analysis shows that all dimensions are

reliable. Results of factor analysis confirm the grouping of adopted questioner. At last,

regression analysis indicates significant positive relationship between assurance, tangibility,

reliability and responsiveness with customer satisfaction. Conversely, empathy shows positive

but insignificant effect on customer satisfaction. It is recommended that the management of

online banks has to focus on making the design and content of the websites more visually

appealing to grab the attention of existing customers, as well as to attract new customers. The

management has to take effective measures to further enhance the security and safety of online

bank accounts, so that customers can maintain long-term relationships with the usage of online

banking. Online banks have to provide more reliable services to the customers at heart to make

the customers more comfortable and confident. The management should develop more effective

systems to solve the issues of customers quickly.

**Key words:** Customer Satisfaction, SERVQUAL, Internet Banking, Pakistan

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## 1. Introduction

For the development of an economy and the endurance of any country, the banking sector is considered to be a fundamental backbone. The banks are deliberated as the utmost compelling component of financial sector in any country. The most valuable activities have been executed by banks such as banks usually simplify the premise of goods and services, provide liquidity for development of new industries. This is the way through which banks give rise to employment, assign the capital into profitable investments and also to empowers a country to commence international transactions and trade which is a contribution in the prosperity of a country.

As the technology has been enhanced and people are more devoted towards performing their routine life activities with the help of internet, the banking sector has also enhanced the availability of its services by elaborating its extent of competition towards an e-environment along with the services of internet banking. The need of internet banking has been analyzed in order to provide satisfactory services to the customers which make them delight. In general, the internet has been discovered and used as a method to bring improvements in providing the service, particularly in banking industry as well as in other service industries<sup>1</sup>. In traditional banking, the major flaws are the convenience and operating hours of physical bank branches. The branches of banks are only serving customers for 8 hours, and most of the customers feel irritation in visiting physical branches of banks because they have to wait for their turn, especially in case of payment of utility bills. Another issue with traditional banking is that banks are closed on gazette holidays. The services provided by online banks are more attractive for the customers as it provides the ease of use, accessibility, convenience and flexible operating hours. Now-a-days, the internet is examined as a part of strategic plan by the banks. As the competitive

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<sup>&</sup>lt;sup>1</sup> Rod et al., (2009)

advantages of conventional networks of branches are disintegrating promptly, the technological advancement in internet is helpful to transform the way banks operate, deliver and compete<sup>2</sup>.

Service quality has been determined as an analytical factor of success for the firms through which the firms can formulate their competitive advantage as well as to enhance their competitiveness. Pioneered by Parasuraman *et al.*, (1988), the SERVQUAL instrument comprises of five distinct dimensions. The dimensions of SERVQUAL include tangibles, reliability, responsiveness, assurance and empathy (Parasuraman *et al.*, (1988) and (1991). It has been argued by Cowling and Newman (1995), that SERVQUAL Instrument has been extensively used to evaluate the service quality of distinct service organizations, including banks. The service quality accompanies that bank should propose the best services of internet banking in order to encourage the customers to migrate towards the usage of online banking services. The services of internet banking which should be offered necessarily include ease of use, perceived usefulness, reliability, accessibility, security, privacy, and responsiveness (Liao and Cheung, 2008)

The dimension of tangibles is associated with the physical equipment, physical facilities, personnel and the materials which are related to communication (Parasuraman *et al.*, (1988) and (1991). However, in the context of Internet Banking, tangibles is usually related with the design of websites, contents provided by the banks, installation of updated technologies and visually appealing physical facilities. Reliability basically refers to the capability of performing the promised services precisely as well as deliberately<sup>3</sup>. As far as the internet banking is concerned, the dimension of reliability comprises of providing relevant information to the users and to provide timely and reliable services. The responsiveness is associated with the compliance of

<sup>&</sup>lt;sup>2</sup> Sadeghi and Hanzaee (2010)

<sup>&</sup>lt;sup>3</sup> Parsuraman *et al.*, (1988, 1991)

service providers to provide help and instant services to the customers. This dimension comprises of providing response to the customers regarding any of the queries related to their online bank accounts. The responsiveness dimension also includes convenience and easy accessibility of online banking services. The dimension of assurance is related to the information and courtesy of employees as well as their competency to convey reliance and confidence. Assurance dimension is comprised of providing reliable answers, consistent services, sustaining the privacy of account as well as to maintain error-free records. Empathy refers to the provision of caring and providing peculiar attention to the customers on individual basis. This dimension is associated with providing the best interests to the customers; understand the particular needs of customers, provides convenient operating hours and provides individual concentration to the customers.

Customer satisfaction is defined as a measure of the performance of an organization's product or service in correspondence to the needs and requirements of customers. For all organizations whether they belong to service sector, manufacturing sector, etc. customer satisfaction has been emerged as a fundamental objective of operating in the relative industry<sup>4</sup>. Customer satisfaction is also described as the capability of an organization to accomplish the emotional, business and psychological needs of the potential customers (Pairot, 2008). According to different researches related to the attitude of customers and their adoption of online banking services, it has been observed that various determinants have an impact on the perspectives of customers in adoption of online banking services which include demography, behavior and motivation level (Laforet and Li, 2005). However, when the adoption of internet banking is analyzed, the variables such as trust, privacy and security are delineated as intensely significant factors from the viewpoint of customers (Benamati and Serva, 2007).

<sup>&</sup>lt;sup>4</sup> Hill and Alexander (2006)

In earlier times, many researches have been conducted related to the recognition and execution of internet banking by the customers<sup>5</sup>. Some researchers have performed the study on what are the perceptions of customers towards adoption of internet banking services<sup>6</sup>, however, some of the researchers have also measured the level of customer satisfaction by considering the dimensions of internet banking service quality<sup>7</sup>. In the context of Pakistan, only the determinants related to the adoption of internet banking by the customers has been performed<sup>8</sup>. This study attempts to determine the relationship between the level of customer satisfaction and the dimensions of internet banking service quality in Pakistan, by using SERVQUAL Instrument.

This paper is organized in five sections which start from introduction, section 2 represents previous literature, section 3 provides methodology, section 4 represents estimations and results while last section concluded the study and give policy implications.

## 2. Literature Review

Levesque and McDougall (1996) have performed a study on the factors of customer satisfaction in retail banking. The SERVQUAL instrument has been used by the researchers for the identification of these factors. The variables included in the research are relational performance, core performance, tangibles, competitive rates, enabling, future intentions and customer satisfaction. The sample size of the study is 325 respondents. The results of the study shows that the features related to service quality which include relational performance, features and core performance exists in retail banking and these have a strong influence on customer satisfaction. It has been recommended by the results of this study that the determinants of service quality provide the basis of customer satisfaction. It has been exposed that while making

<sup>&</sup>lt;sup>5</sup> Polatoglu and Ekin (2001), Eriksson et al., (2005), Musiime and Ramadhan (2011)

<sup>&</sup>lt;sup>6</sup> Sathye (1999), Al Hajri (2008).

<sup>&</sup>lt;sup>7</sup> Jun and Cai (2001), Rod *et al.*, (2009), Nupur (2010)

<sup>&</sup>lt;sup>8</sup> Raza and Hanif (2013)

enhancements in the satisfaction level of customers, the managers are required to appropriately weight the core performance, features and relative performance factors in context of retail banking. It is also suggested that managers should concentrate on making amendments in the factors which are not contributing in satisfying the customers in retail banking.

Sathye (1999) has conducted a research on adopting the services of online banking in Australia. This study is basically attempted to identify the factors which are averting customers in adoption of internet banking services. The sample size of the research consists of 500 respondents which include both the individual and business customers of bank. The variables considered in this research are ease of use, security, awareness of online banking and its advantages, availability of infrastructure and resistance to change. It has been demonstrated through the results of research that customers are not adopting internet banking services because of the lack of awareness regarding online banking and its advantages, as well as also due to the security issues in online bank accounts. Most of the customers who are not educated are also hesitating in adoption of internet banking. From these findings, the researcher has recommended that the management of banks should have to consider these factors in order to eliminate them and to bring awareness among the customers to adopt internet banking services by classifying its benefits. The banks should also require targeting the educated and wealthy people first to migrate them towards online banking.

Polatoglu and Ekin (2001) scrutinize the acceptance of online banking services by the customers of Turkey. The researchers have considered the customers of Garanti Bank as their sample size which comprises of 150 respondents. The variables considered in this research include reliability, accessibility, saving of costs, perceived risk, security and privacy. The results of the research shows that the customers are more satisfied on reliability, security, privacy,

accessibility and perceived risk variables of online banking, as they were enjoying these services without facing any reliability issues. The customers also reported that they are using online banking services due to its accessibility and convenience. However, the variable of saving of costs has not been considered as an acceptance of online banking usage from the perspective of customers. The results of the study recommends that as the customers are satisfied on all variables of online banking provided by Garanti Bank, the management of Garanti Bank should be focused on making enhancements in its services with the advancement of technology. The management of banks is also required to efficiently deal with the complaints of customers in order to retain the existing customers as well as to attract new customers.

Jun and Cai (2001) empirically investigate the essential factors which are helpful in determining the service quality of internet banking. The data collection for this research has been done by considering 180 respondents. The results of the study reveal that customers are satisfied with the dimensions of reliability, tangibles and assurance. Due to technological advancement, the customers have started to focus on the design and content of online banking websites. The banking services which are being used by the customers are very reliable and their online banks provide them accurate information. It is recommended in this study that management of online banks has to design programs for improvement of the service quality in order to pay attention to the requirements of customers as well as to solve their issues. The management is also required to make their systems more efficient and effective so as to provide satisfaction to the customers in usage of internet banking services.

Pikkarainen *et al.*, (2006) have studied how to measure the satisfaction of customers in usage of internet banking in Finland. This study has been conducted in Finland. This research was performed on the basis of End-User Computing Satisfaction (EUCS) Model. The sample

size considered for this research comprises of 268 respondents who are the regular users of online banking services. It has been observed from the results that customers are satisfied with the factors of timeliness, format, accuracy and ease of use, whereas, the factor of content leads to the dissatisfaction of customers. According to responses of customers, it has been analyzed that the information provided by online banking websites is very limited and it is not in accordance with their requirements. It has been proposed by the researchers that managers should focus on the methods which are helpful in enhancement of customer satisfaction by improving the content factor regarding online banking services. It is also recommended that the services of internet banking can be enhanced by establishing personalization and user interfaces, which usually considers the diverse needs of distinct user segments.

Herington and Weaven (2009) scrutinize the service quality of internet banking and its emphasis on the satisfaction level of customers in Australia. The sample size chosen for this study is based on 200 respondents. It has been observed from the results that personal needs, site organization and user friendliness have been found to have a positive as well as compelling influence on the satisfaction level of customers. The recommendations of the study show that the management of banks should need to evaluate their performance individually in association with the e-service quality. The management of online banking should also require being conscious about the role and significance of the services which have been provided conventionally in order to encourage enduring relationships with the customers.

Rod *et al.*, (2009) have examined the association among the service quality of internet banking and customer satisfaction in New Zealand by using SERVQUAL instrument. The sample is comprised of 300 people who are the regular users of internet banking. The results of the study show that the dimensions of service quality of internet banking have a positive as well

as an indicative relationship with the customer satisfaction. It has been recommended by the researchers that the management of online service providers of banks be compelled to constantly analyze the level of fulfillment of the requirements and demands of customer with the site of the company, if they desire to endure the customers loyal with their online services.

Santouridis *et al.*, (2009) empirically investigate the internet banking in Greece by examining the customer satisfaction and the quality of internet banking services. The researchers have used SERVQUAL model to measure the internet banking service quality. The sample size of 200 respondents has been considered for data collection. It has been observed from the results of the research that the dimensions of assurance, responsiveness and reliability have a significant and positive impact on customer satisfaction level. Among these dimensions, the reliability is found to have the most strong and highest impact on customer satisfaction. It has been recommended that the dimensions which do not have association with level of customer satisfaction should need to be improved by the banking sector.

Nupur (2010) performed an analysis on the internet banking and the satisfaction level of customers in Bangladesh. The researcher has selected a sample size of 250 respondents to collect the data. The SERVQUAL model has been considered to measure the association among the level of customer satisfaction and internet banking. It has been observed through the outcomes of the research that a relationship exists between the internet banking services and customer satisfaction level. The main dimensions examined are reliability, empathy, responsiveness and assurance which results in adequately satisfying the customers, whereas, the tangibles dimension does not have any link to customer satisfaction. It has been recommended that internet banking system should be made more formative and the government of Bangladesh should play a leading role in fostering the framework of Information Technology in Bangladesh.

Sadeghi and Hanzaee (2010) have investigated the factors of customer satisfaction in the usage of internet banking services in Iran. The study has been conducted to determine the factors which examine the customer satisfaction with the services of internet banking. The result of the study reveals that reliability, design of the website, image, accuracy and impression of the management of bank are found to have the most significant impact on the satisfaction level of customers. The variables of privacy and security also have an impact on customer satisfaction, but its impact is very least. It has been proposed that in order to explore a direct association among the educational level of customers and the degree to which the electronic services of banks are used by the customers, the knowledge and apprehension of customers can be a conclusive factor to escalate the degree to which customers use these services as well as how habitually they are using it.

Ahmad and Zu'bi (2011) performed a research related to how the functionality of internet banking is related to the consequences of customer satisfaction. The research has been done by considering banks of Jordan. Through the random sampling technique, the sample size chosen by the researchers is 185. It has been found that the variables which include privacy, accessibility, design, convenience, content and security has been emerged to have a significant influence on the customer satisfaction. Out of these variables, three variables namely, privacy, content and security have the most numerous impact on customer satisfaction.

Ankit (2011) has determined the factors of online banking which have an impact on customer satisfaction in India. The sample size of 250 respondents has been selected for the study, and the data has been collected through questionnaires. The results of the study show that the banking needs which include convenience, privacy, risk, and problem resolution are found to be the most important determinants which have a positive impact on customer satisfaction,

whereas, the availability of features and customer continuation are found to have a very slight impact on customer satisfaction. The researcher has suggested that providing friendly services to the customers will play a vital role in enhancement of overall level of customer satisfaction in the usage of internet banking services.

Kadir *et al.*, (2011) scrutinize the influence of service quality of internet banking on the satisfaction level of customers in Malaysia. The influence of service quality on customer satisfaction has been measured through the dimensions of SERVQUAL. The sample size of the study comprises of 500 respondents who are students of Malaysian universities and are the holders of personal bank accounts. The dimensions of responsiveness and empathy are found insignificant in responding to the requirements of customers. The remaining dimensions of SERVQUAL which are tangibles, reliability and accessibility are found to have a significant and positive influence on the satisfaction level of customers. It is recommended that the management of online banks should focus on making enhancements in the dimensions of empathy and responsiveness so that they can be capable of fulfilling the requirements of customers.

Kumbhar (2011) empirically investigate the perception of service quality and satisfaction of customers related to the internet banking service in the banks of public and private sector. A total of 190 respondents have been selected as a sample size of this study from both the public and private sector banks. The results of the study demonstrates that responsiveness, problem handling, e-fulfillment and contact variables of service quality of online banking are dissimilar for the public and private sector banks, whereas, the other variables which include efficiency of system, availability of system, convenience, security and compensation are found to be equivalent in the banks of both public and private sector. These determinants not only directed towards the usage of internet banking, but they also have an impact on the satisfaction level of

customers in online banking context. It has been suggested that as there is a compelling distinction in the perceptions of customers regarding online banking services provided by the banks of public and private sectors, there is a need that banks of public sectors are required to enhance their services of internet banking by considering the demands of their customers.

Raza and Hanif, (2013) determines the components which has an impact on adopting online banking among the internal and external customers in the context of Pakistan. The variables of the research are perceived usefulness, convenience, online banking information, perceived risk, governmental support and privacy and security. The sample size considered for external customers is 151, whereas, the sample size is 210 for internal customers. The results of the research demonstrates that the governmental support and perceived usefulness comprises of highest coefficients in the model of internal customers, which is showing that these two variables have significantly the highest impact on adoption of online banking among the internal customers. In the model of external customers, the variables of privacy and security and perceived usefulness consists of highest coefficients, which is showing the highest impact of these variables in adoption of online banking among the external customers. Besides this, the coefficient of government support is demonstrating to have more significant influence upon the acceptance of internal customers in comparison with the coefficient of external customers. It has been suggested that the management of online banks are required to focus on enhancement of the convenience and usefulness related to the services of online banking to encourage the internal and external customers of banks in adoption of online banking. The model of external customers recommends that banks have to place an emphasis on enhance the levels of privacy and security to persuade the external customers in usage of services related to internet banking.

## 3. Methodology

In this study, we have applied correlational research design to achieve our explanatory research purpose. A survey research questionnaire of 30 items has been designed to collect the data from the users of internet banking of different bank located in Karachi city of Pakistan. The sample size consists of 400 respondents. We have used SERVQUAL model to analyze the customer satisfaction in internet banking services provided by different banks in Pakistan. The following model is developed for estimation:

$$CS = \alpha_0 + \beta_1 TA + \beta_2 RP + \beta_3 RE + \beta_4 AR + \beta_5 EP + \epsilon$$

Where,  $\alpha_0$  is constant,  $\epsilon$  is error term, CS is customer satisfaction, TA is tangibles, RP is responsiveness, *RE* is reliability, *AR* is Assurance and *EP* is Empathy.

## 4. Estimations and Results

In this section different estimation procedures have been used to analyze the customer satisfaction in internet banking services provided by different banks in Pakistan.

## 4.1 Reliability Analysis

The test of Cronbach's alpha reliability analysis is used for the determination of reliability of instrument and collected data. This measure indicates the consistency of a multiple item scale. Alpha is typically used when you have several Likert-type items that are summed to make a composite score or sum mated scale. Alpha is based on the mean or average correlation of each item in the scale with every other item. The questionnaire which has been designed to conduct this study comprises of 30 questions. In reliability test the value of Cronbach's alpha should be greater than 0.5 according to the parameter. The results of reliability test are presented in table 4.1.1.

<sup>9</sup> See, Leech *et al.* (2005) pg. 67.

#### < Insert table 4.1.1 here>

The results of reliability analysis shows that the value of Cronbach's alpha is in the very good range of all variables and also of overall questionnaire. The value of Cronbach's alpha of overall questionnaire shows the value of 0.886 that's mean our data and instrument is almost 89% reliable and we should get consistent results by using this instrument. Results of reliability analysis confirm that our data and instrument is reliable for any further estimation.

## 4.2 Kaiser-Meyer-Olkin (KMO) and Bartlett's Tests of Sampling Adequacy

Kaiser-Meyer-Olkin (KMO) and Bartlett's Tests have been used to check the adequacy of our collected sample. Kaiser-Meyer-Olkin (KMO) test use to analyze that either each factor have sufficient items for making proper groups. If the value of KMO test is greater than 0.70 then it is indicating that each factor have sufficient items for making proper group. However, if the measure of KMO is less than 0.50, it means that the insufficiency exists in the factors in order to make appropriate groupings. 10 Bartlett's test of sphericity is used to identify that correlation matrix has significantly different properties from an identity matrix. probability value of Bartlett's test is statistically significant or less than 0.05 then it is indicating that correlation matrix has significantly different properties from an identity matrix. 11 Results of KMO and Bartlett's tests are reported in table 4.2.1.

## < Insert table 4.2.1 here>

The results of Kayser-Meyer-Olkin (KMO) show that the value is greater than 0.70 which is demonstrating that the items within each factor are adequate and have sufficient items for making groups. The results of Bartlett's test indicate that the probability or significance value is

See, Leech *et al.* (2005) pg. 82.
 See, Leech *et al.* (2005) pg. 82.

0.000, which is less than 0.05. This result indicates that the variables are adequately correlated, which generally accommodates an acceptable basis for factor analysis.

## **4.3 Total Variance Explained**

Total variance usually provides an explanation related to how the variance can be divided among the potential variables. In order to determine the usefulness of a factor, the general criterion is that the Eigen values for all factors should be greater than 1.0. Eigen values are basically a measure of the variance explained. If the measure of Eigen values is less than 1.0, it indicates that the factor elucidates less information than an individual item would have described. The results of Total Variance are reported in table 4.3.1.

#### < Insert table 4.3.1 here>

The results of total variance table show that the cumulative variance explained by all six factors is about 74 percent. Results show that very good percentage of variance can easily be explained by considered factors.

## **4.4 Factor Analysis**

The table of factor analysis is useful as well as essential to understand the outcomes of the analysis. The 30 questions related to the internet banking have been categorized into five overlapping groupings of items. The items are generally distributed from the one with the highest factor weight or loading for that factor to the one having the lowest loading on that first factor, within each factor. The range of the loadings lies between -1.0 through 0 to +1.0, because the loadings are resulted from an orthogonal rotation are basically the correlation coefficients of every item with the factor. In case of a negative loading, the question is required to be interpreted in an opposed direction from the actual way it is written for that factor. Results of Factor Analysis are reported in Table 4.4.1.

#### < Insert table 4.4.1 here>

The items which have high loadings from each factor should be examined to check if they conceptually fit together and can be named.

## 4.5 Regression Analysis

Table 4.5.1 shows the results of regression analysis. Results indicate that all dimensions of service quality have significant positive effect on job satisfaction except empathy. The coefficient of assurance is 0.377 which is highest among all other dimensions. This shows that customer satisfaction is highly depends on privacy, security and error free records of the account. The coefficient of tangibility is 0.268 which indicate that visually appealing website and easily found information which is provided by the banks is the second effective factor of customer satisfaction. The coefficient of reliability and responsiveness are 0.167 and 0.032 respectively. Results also show the significant effect of these two dimensions on customer satisfaction. This means that issue solving behavior, correct information and good promising attitude enhance customer satisfaction. Simultaneously, convenience and easy accessibility of internet banking is also an important factor which effects customer satisfaction in banking sector of Pakistan.

## < Insert table 4.5.1 here>

On the other hand, empathy has insignificant effect on customer satisfaction. This finding is consistent with Kadir *et al.*, (2011). In this study, empathy represents personal care and individual attention towards customer. It is obvious that internet banking is nothing to do with personal attention. All online customers are treated at the same time with all attention, so the insignificant effect of empathy on customer satisfaction in the scenario of this study is logical.

## **5.1 Conclusion and Recommendations:**

The basic purpose of this research is to determine the relationship between customer satisfaction and internet banking service quality in Pakistani banks by using SERVQUAL model. The study also aims to find out that what factors have significant impact to increase customer satisfaction. A survey research questionnaire of 30 items has been adopted and contextualized to collect the data from the users of internet banking of different bank located in Karachi city of Pakistan. The sample size consists of 400 respondents.

After the collection of data, various tests have been applied. Firstly, the test of Reliability analysis has been applied to test the reliability of data. The second test is Factor Analysis, which is used to verify the value of Kayser-Meyer-Olkin (KMO) test. Factor analysis is also used to check the items which are included in the instrument, whether the items are in proper form or not. The last test which is applied is multiple linear regression. Regression has been used to check which factors have more impact on customer satisfaction. After complete analysis, it has been found that tangibles, reliability, responsiveness and assurance have a significant positive impact on Customer Satisfaction. However, Empathy has a positive but insignificant impact on Customer Satisfaction. The recommendations which have been analyzed in this study are as follows:

It is recommended that the management of online banks has to focus on making the design and content of the websites more visually appealing to grab the attention of existing customers, as well as to attract new customers. The management has to take effective measures to further enhance the security and safety of online bank accounts, so that customers can maintain long-term relationships with the usage of online banking. Online banks have to provide more reliable services to the customers at heart to make the customers more comfortable and

confident. The management should develop more effective systems to solve the issues of customers quickly.

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Table 4.1.1: Results of Reliability Analysis

Variables	Items	Cronbach's Alpha
Tangibility	5	0.754
Responsiveness	5	0.983
Reliability	5	0.909
Assurance	5	0.710
Empathy	5	0.651
Customer Satisfaction	5	0.959
Overall	30	0.886

**Source:** Authors' Estimations

Table 4.2.1: Results of KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.885	
Barllett's Test of Spherecity	Approx. Chi-Square	5715.276	
	Degree of freedom	400	
	Probability	0.000	

**Source:** Authors' Estimations

**Table 4.3.1: Results of Variance Explained** 

Items	TA	RE	RP	AR	EP	CS
Variance Explained by Each Factor in %	22%	17%	14%	9%	7%	5%
Cumulative Variance Explained in %	22%	39%	53%	62%	69%	74%

**Extraction Method:** Principal Components Analysis

**Source:** Authors' Estimations

Table 4.4.1: Results of Principal Component Analysis (PCA)

Items	TA	RE	RP	AR	EP	CS
Tangibles 1	0.934					
Tangibles 2	0.854					
Tangibles 3	0.889					
Tangibles 4	0.634					
Tangibles 5	0.901					
Reliability 1		0.873				
Reliability 2		0.895				
Reliability 3		0.895				
Reliability 4		0.825				
Reliability 5		0.851				
Responsiveness 1			0.749			
Responsiveness 2			0.658			
Responsiveness 3			0.801			
Responsiveness 4			0.783			
Responsiveness 5			0.779			
Assurance 1				0.685		
Assurance 2				0.688		
Assurance 3				0.755		
Assurance 4				0.849		
Assurance 5				-0.588		
Empathy 1					0.892	
Empathy 2					0.758	
Empathy 3					0.652	
Empathy 4					0.777	
Empathy 5					0.750	
Customer Satisfaction 1						0.902
Customer Satisfaction 2						0.946
Customer Satisfaction 3						0.959
Customer Satisfaction 4						0.951
Customer Satisfaction 5						0.876

**Extraction Method:** Principal Component Analysis **Rotation Method:** Varimax with Kaiser Normalization

**Source:** Authors' Estimations

**Table 4.5.1: Results of Regression Analysis** 

Variables	Coeff.	Coeff. t-stats		V.I.F		
C	-0.371	-2.526	0.013			
TA	0.268	1.892	0.062	1.024		
RP	0.032	2.405	0.029	2.067		
RE	0.167	2.816	0.006	1.967		
AR	0.377	4.114	0.000	1.928		
EP	0.004	0.040	0.968	1.030		
Adj. R <sup>2</sup>	0.338					
F-stats (Prob.)	20.280 (0.000)					

Source: Authors' estimation.