

QUALITY OF BRANCHLESS BANKING SERVICE IN LAHORE CITY: APPLICATION OF SERVEQUAL MODEL

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ABSTRACT: This study is aimed at examining the factors that affect the service quality of Branchless Banking in a mega city of Pakistan known as Lahore. SERVEQUAL model is used with determinants of service quality of Branchless Banking. The variables of interest are age, gender, education, marital status, monthly income and residence. Confirmatory factor analysis is used to confirm that factors of service quality of branchless banking are determined through the dimensions of SERVEQUAL model. Qualitative method is used for data collection; questionnaire and interviews. Sample size is composed of 311 respondents from Lahore city. Data was collected from the users of branchless banking. The results can be helpful in highlighting the chief determinants of service quality of branchless banking. These results provide guidance for bank managers and policy makers responsible for growth of branchless banking in Lahore, Pakistan.

Keywords: Branchless banking, SERVEQUAL model, Factor analysis, Kaiser-Meyer-Olkin measure, Bartlett's test of sphericity.

1. INTRODUCTION

Financial sector is not an exception to the impact that information and communication technology (ICT) has brought. Recent empirical literature verifies the existence of strong influence of ICT on various fragments of financial sector [13]. Out of financial sector, commercial banks comprise a substantial share of transactions. Banks offer multiple products and service to their customers. One of the channels to deliver these services is branchless banking. It provides financial services to the customers without relying on the branches of banks. In addition to existing bank branch network for giving customers a broader range of channels, branchless banking can also be used as a separate channel strategy.

Following directions are included in branchless banking, which provide picky banking services such as:

- Mobile phones for recognition of customers and conducting transactions.
- Third parties such as traders and post offices.
- Organization permitted by the government, with the funding of an enterprise.
- Internet or Online.
- ATM.

Next section reviews the literature on the area of such mode of banking.

2. LITERATURE BACKGROUND

Literature on branchless banking is still in its stage of infancy due to newness of the topic. Some studies are reviewed in this section. Wisniewski [14] conducted an empirical study collecting data through interactive questionnaire from users of internet. Results show that the use of online banking also makes advertisement of other services of banks. There exists a direct relationship between the level of security of internet transactions and online account. High level of risk of security is considered as a barrier. Demographic variables and other products offered

by the banks are also responsible for the adoption of online banking. For data collection electronic questionnaire were used.

Gounaris and Koritos [7] analyze the drivers of internet banking adoption through empirical study by comparing the two widely used models the technology acceptance model (TAM) and the Diffusion of Innovations (DOI) model. These help to examine the innovation factors that influence the consumer to adopt internet banking. The web survey was used to get the data from both users and non-users of internet banking. They used confirmatory factor analysis and then use a logistic regression analysis for assessing the psychometric properties and compare the models ability to predict accurately the consumer adoption of IB services. The characteristics of non-usability innovations are the important factors of consumer adoption.

On the other hand, Al-Somali, Gholami, & Clegg [1] conducted similar research for Saudi Arabia to indicate factors supporting in adopting online banking. Using TAM with some important control variables, data of 400 customers was empirically analyzed. They found quality of Internet connection, awareness of online banking and benefits, the social influence and computer self-efficacy as main effects on the perceived usefulness and perceived ease of use. In addition, education, trust and resistance to change were also found as significant determinants of adoption of online banking.

Barati and Mohammadi [2] investigated the factors that affect the acceptance of Mobile banking. With the advancement and development in technology banking industry is also reshaped and become a foremost sector in developing new technology for customers and because of this ease banking functions can now be operated anytime and anywhere. Sometimes customers also show resistance to innovation and there could be barriers as usage barrier, risk barrier, value barrier, tradition barrier and image barrier which prevent people to move towards the innovative

technologies. TAM model is applied on the data while the factors as perceived ease of use, perceived usefulness and behavioral intentions to use also effects the use of mobile banking. Conclusion drawn from this research is that mobile technology could offer to business enterprises and to customers as well.

Kumar et al., [12] investigated that private banks are making strategies to improve the customer satisfaction and quality of services. The power of service quality is scrutinized on customer satisfaction. In this research eleven demographic variables were explored. The SERVEQUAL model has been applied to gain the insight of service quality dimensions. Primary data was collected for this research. The questionnaire was developed with the sample size of 300 respondents. The respondents were selected on convenience sampling. The results show that service quality of private banks was at adequate level. The conclusion drawn from this article is that increase in service quality of private banks can increase customer's satisfaction which will increase banks worth customers.

Diniz, de Albuquerque, and Cernev [6] reported the triggers and barriers to financial inclusion in Amazon by means of Information & Communication Technology (ICT) based branchless banking. Here they meant financial inclusion as access to financial services by low income groups at reasonable cost. The use of ICT can bring triumphant results in developing countries. The article focuses on case study of financial inclusion in Autazes a country in Amazon. The people of Autazes were not provided banking services since 2002 but when they started financial services they observe great social and economic change due to providing banking services at local level. The result based on the empirical research the context, the process and the content. Due to the lack of banking services in Autazes, created number of difficulties and transactional cost for population and for economic development. We can conclude on the basis of analysis of interviews that problems exist between local and non-local spheres. To promote local development to low income groups the access to financial resources should be accompanied by financial education and poor people should be making aware of these technology based banking services.

Bhutto [3] investigated the frauds caused by branchless banking due to lack of Know Your Customers (KYC) and Anti Money Laundering (AML). This study helps in growing yield and sinking frauds of banks. As per author branchless banking technology is increasing and growing rapidly but the security issues for both customers and banks. It is due to continuous up-gradation of ICT and its criminal uses (hacking, phishing etc.). The study examines the rules and regulations of branchless banking provided by the State Bank of Pakistan (SBP) and check the security with respect to AML and KYC processes.

Jayo et al., [11] narrates the innovative model of branchless banking in the context of Brazil. As Brazil is internationally known as a pioneer in acceptance of new technologies. The purpose of this research was to identify different business configurations models and the different bank services which are delivered through branchless banking channels. The data

was collected through interview with the managers which are involved in the banking business and for this purpose almost 300 correspondent location were used. This research was conducted in two steps, one is qualitative taxonomy through which they categorize different classes of network integration model and second is cluster analysis to explain the financial services that fits in each model. The results suggest that if appropriate service channel is used then more suitability it will be controlled by the banks. Conclusions drawn from this study provides better understanding of the diversity of network integration models in Brazilian branchless banking. New researchers can benefit from this research through taxonomy used in this research and transaction cost analysis for banking channel.

Hasan& Naz [8] reports that branchless banking is, providing banking services to the customers through a third party without visiting bank this could be through online banking, mobile banking, SMS banking, ATMs and POS. In past most of the banking system was done through *hawala* system where money not entered in the banks rather all the transactions were based on trust between the parties. Majority of people have mobile phones but they don't benefit banking services through their mobile number of mobile phones is much more than the bank account. *Hawala* system is broadly used in underdeveloped and in developing countries like that of Pakistan. The aim of this research work is to recognize the importance of branchless banking and help against money laundering and illegal functioning through *hawala* system. Conclusion drawn from this research is that branchless banking could help in boosting economy through increase in financial transactions. Branchless banking can be used to replace *hawala* system, as *hawala* system is difficult to regulate. Awareness level should be increased so that this form of branchless banking could work more effectively and efficiently.

Deshmukh, Deshmukh, & Thampi [5] investigated the specific form of SMS-based mobile banking in India. The purpose is to ensure the positive and negative aspects of mobile banking, to check the mobile banking expansion in India and to verify the adoption and mobile technology models. This research work's challenges are; what are the positive and negative aspects which persuade the adoption of SMS-based mobile banking in India whereas the hub of the study is the adoption and usage of mobile banking services by the customers. Despite the limitations, this research work provides valuable help to future researchers and the results provide practical recommendations for banking industries.

The literature on branchless banking in Pakistan still seems non-existent. This paper, accordingly, endeavors to fill this gap by conducting this empirical study that seems to be a pioneering effort in this regard.

2.1 Research Objectives

The objectives of the present study are to explore the factors of service quality of branchless banking. Moreover, it highlights the important dimensions of quality of services provided in branchless banking.

3. RESEARCH METHODOLOGY

3.1 Research Design

Following convenient sample strategy, a questionnaire based survey was conducted in Lahore malls, shops of branchless banking, on college students, family and friends in a non-contrived setting using individuals (male and female) as unit of analysis. Out of 400 questionnaires, 311 were fully filled and were analyzable. Data was analyzed using SPSS version 20. The primary data collected through questionnaires was analyzed using Confirmatory Factor Analysis. The SERVQUAL version 4.0 was used to obtain the results.

3.2 Confirmatory Factor Analysis

We applied confirmatory factor analysis which is frequently used to develop questionnaires. Factor analysis is used to identify common underlying variables called factors, with the large dataset. Factor analysis determines which variables go together. Where a factor is a group of related variables represents an underlying domain or theme. It is a model used to reduce data. We use confirmatory factor analysis to confirm that the service quality of branchless banking is affected by the dimensions of SERVEQUAL model.

4. RESULTS & INTERPRETATION

The Kaiser-Meyer-Olkin measure of sampling adequacy and Bartlett’s test of sphericity are employed. The KMO statistic varies between 0 and 1. Value closer to 1 indicates that analysis should produce distinct and reliable factors. In result of our analysis the KMO value is 0.815 which is acceptable. The null hypothesis in Bartlett’s measure test is that original correlation matrix is an identity matrix. We need some relationships between variables for factor analysis to work after that all correlation coefficients would be zero if the R-matrix were an identity matrix. Since probability value is less than 0.05, the confirmatory factor analysis is appropriate.

Table 1: KMO and Bartlett’s Test

Kaiser-Meyer-Olkin Measure of Sampling		0.815
Bartlett’s Test of Sphericity	Approximate χ^2	2155
	Degree of Freedom	231
	Significance	0.000

Source: Authors’ calculations

Factor Extraction

Eigen values before extraction, after rotation and after extraction associated with each linear component are listed in Table 2. SPSS has identified 22 linear components within the data set. The Eigen values associated with each factor represents the variance described by that specific linear element.

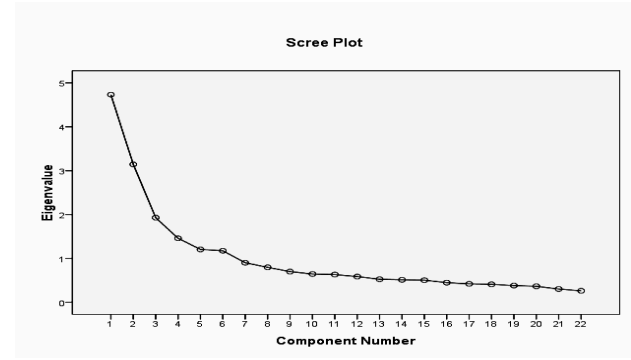
Table 2: Total Variance Explained

Component	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.73	21.50	21.50	4.73	21.50	21.50	3.46	15.74	15.74
2	3.14	14.29	35.79	3.14	14.29	35.79	2.86	13.00	28.74
3	1.93	8.76	44.55	1.93	8.76	44.55	2.22	10.08	38.82
4	1.46	6.62	51.17	1.46	6.62	51.17	1.92	8.74	47.55
5	1.20	5.47	56.64	1.20	5.47	56.64	1.74	7.90	55.45
6	1.17	5.33	61.97	1.17	5.33	61.97	1.43	6.52	61.97
7	0.90	4.09	66.06						

8	0.80	3.62	69.68
9	0.70	3.18	72.85
10	0.64	2.93	75.78
11	0.63	2.86	78.64
12	0.59	2.66	81.30
13	0.52	2.38	83.68
14	0.51	2.32	86.00
15	0.50	2.28	88.28
16	0.45	2.03	90.31
17	0.42	1.90	92.22
18	0.41	1.85	94.07
19	0.38	1.73	95.80
20	0.36	1.65	97.45
21	0.30	1.37	98.82
22	0.26	1.18	100.00

Extraction Method: Principal Component Analysis.

Source: Authors’ calculations



The curve starts to tail off after 6 factors, but there is another drop after 7 factors before table plateau is reached. Therefore, retaining either 6 or 7 factors could probably justify. SPSS extract only 6 factors and compare the results by rerunning the analysis.

Table 3: Rotated Component Matrix

	Component					
	1	2	3	4	5	6
The facilities are such that we usually get our work done in the first attempt.	.796					
The appearance of the bank website and/or ATM should be visually appealing.	.784					
The website of the bank and/or the ATM should be easy to use.	.773					
The environment (like ATM) to use branchless banking is good.	.747					
We should be able to locate what we want on the interface (website or ATM)	.645				.423	
The appearance of the bank website and/or ATM should be modern looking.	.504				.423	
The transactions of branchless banking must be error free.		.706				
We can rely on the facilities for branchless banking instead of going to offices.		.685				
If there is a problem in using branchless banking, it should be looked and solved by the bank.		.671				
In case you require, the banks staff should be available.		.667				

There should be variety of options available on the interfaces to use.		.661			
The transactions should be processed without delay.		.618			
In case of problem, we should physically be able to approach the bank staff.		.869			
The interfaces (websites and ATM) are fast in response.		.801			
You should be certain about the website/ATM functionality and response.		.763			
The banks should understand the need of customers of branchless banking.		.808			
The services should be created according to customer's best interest		.751			
Appropriate bandwidth for the websites and appropriate number of ATMs should be available.		.730			
The interfaces (websites and ATM) should remain functional on special days also (like EID)				.829	
You should be sure that your information is safe and not provided to anyone else.				.698	
The services of branchless banking should be modified after customer feedback and suggestions.					.751
You should be sure that your need will be satisfied.					.673

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

Source: Authors' calculations

In this result we identify common themes out of the 22 dimensions that are reduced to 6 by using factor analysis. The questions that load highly on factor 1 are five. Therefore we might label this factor Service Ease. The questions that load highly on factor 2 are six. Therefore we might label this factor Service Reliability. The questions that load highly on factor 3 are three. Therefore we might label this factor Service Responsiveness. The questions that load highly on factor 4 are three. Therefore we might label this factor Service Assurance. The questions that load highly on factor 5 are three. Therefore we might label this factor Appealing Service. Lastly, the questions that load highly on factor 6 are two. Therefore we might label this factor Safe Service. The results indicate that the above 6 constructs are most important sub-components of determinants of service quality.

5. CONCLUSION

We explored the factors and determinants that affect the service quality of branchless banking. We assume that service quality of branchless banking is derived through dimensions of service quality and to achieve this first objective using confirmatory factor analysis. The results confirm that the factors that affect the service quality of branchless banking are derived from the dimensions of service quality. Secondly, we tried to highlight the important dimensions of services quality provided in branchless banking by achieve deploying confirmatory factor analysis.

It can be suggested from our findings that the most important factors of service quality are service reliability, responsiveness and assurance.

Policy makers in branchless banking should pay more heed to increase the reliability of service. It can be achieved by strengthening the ICT networks throughout the country. ICT is evolving over time which might increase the reliability of ICT networks over time. Role of Ministry of Information Technology (MoIT) in collaboration with State Bank of Pakistan (SBP) is pivotal in this regard.

Factors such as responsiveness and assurance can be addressed by SBP regulations, banks and the third parties that implement and execute the branchless banking. Quality assurance reforms can be instrumental in this respect. In addition, there is a need to grow digital literacy among the non-users of branchless banking which will augment the number of users in future.

6. LIMITATION

Chief limitation of this study is a restricted sample. Opening of future research can be by extending the analysis to a sample of multiple cities in different countries.

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