

Understanding the factors of customer satisfaction: An empirical analysis of Telecom broadband services

M Malook Rind
Department of Computer Science
Sindh Madressatul Islam University
Karachi, Pakistan
malook.rind@smiu.edu.pk

Sadaf Solangi
Department of Computer
Science
Nanjing University of Science &
Technology (NJUST)
Nanjing, China
sadafsolangi14@gmail.com

Aftab A. Shaikh
Department of Computer Science
Sindh Madressatul Islam University
Karachi, Pakistan
aftab.shaikh@smiu.edu.pk

M.Ameen Chhajro
Department of Computer Science
Sindh Madressatul Islam University
Karachi, Pakistan
ameen.chhajro@smiu.edu.pk

Kamlesh Kumar
Department of Computer Science
Sindh Madressatul Islam University
Karachi, Pakistan
kamlesh@smiu.edu.pk

Abstract— keeping in view the tough competitive market, customer satisfaction is one of the most important factors for the survival of any service provisioning organization. Research community has been contributing enough literature with special focus on the analysis of the important predictors that has significant impact on customer satisfaction. Most of the empirical research studies are conducted to understand customer satisfaction related to products as compared to services. Additionally, very few studies have been conducted in context of telecommunication service quality. Therefore, this research is aimed to explore the customer satisfaction of broadband telecommunication services provided by Pakistan Telecommunication Company Limited (PTCL). To identify the most significant factors that affect customers' satisfaction of broadband services provided by (PTCL) in Pakistan, a comprehensive framework is proposed. The results of research study will provide potential guidelines to (PTCL) management in formulating appropriate strategies as a mean to improve their efficiency and gain competitive advantage to attract more customers and retain existing customers.

Keywords— Telecom broadband services, customer satisfaction, PTCL

I. INTRODUCTION

With the introduction of internet, mobile services and other technological innovations, telecom industry has experienced tremendous growth since last two decades. Global fixed-broadband subscriptions are expected have reached around 12 per 100 inhabitants in 2016 [1]. After the telecom deregulation policy in year 2003 [2], centralized monopolistic telecom market of Pakistan has changed and become an open competitive market. As a result, telecom reformism and customer oriented service provision has been a vision and mission of telecom competitors with focus on total quality management (TQM) principles in mind. The increasing competition has resulted significant price reduction to attract and maintain large customer base. Because of bandwidth hungry application like IP based premium HDTV (High Definition Television), high speed internet, video calling, video conferring, CCTV (Closed-

Circuit Television) video surveillance etc. broadband services require high bandwidth access and core telecom network with robust systems at backend.

As per quarterly report (1st quarter 2017) of Pakistan telecommunication report, total tele-density of in Pakistan is 72.3 percentage of its total population and has almost 42.3 million broadband users [3]. Currently in total thirteen telecom companies are competing and offering broadband services in 14 telecom regions of Pakistan [4]. Although much investment has been done to improve overall network quality, attain excellence in quality of service and attract customers, but still huge number of customers are not persistent and happy with any one operator and keep switching in between service providers for better service. Broadband service providers have been keen to know the causes of customer dissatisfaction and factors that can help them win customer loyalty. No market survey has been conducted on this subject as yet. Therefore, this research aims to understand the significant factors that affect the customer satisfaction by conceptualizing the main and high frequency factors concerned with broadband service quality (stability, content quality, responsiveness, staff attitude), as the antecedents of overall customer satisfaction.

II. PROBLEM STATEMENT AND RESEARCH QUESTIONS

Customers always demand more than expected results for what they pay. It has become a crucial issue for service providers to keep their customers happy with the services and packages they provide. Almost all organizations try to gain more customers but customer satisfaction has not been paid the required attention by telecom service providers, which is causing the loss of increasing revenue on per capita investment. Broadband services are the main contributors in the overall profit of any telecom service provider. Telecommunication Corporation such as PTCL has realized that their customers are not happy with their services and always complain related to service quality, responsiveness to their complaints and staff attitude. It is of prime

importance to diagnose the important determinants which causes customer dissatisfaction.

Given the importance of customer satisfaction in today's competitive consumer market and increasing customer complaints about broadband services of PTCL, there is a great need to explore the important factors behind it. Considering this, below questions are aimed to be explored by this study.

- 1) Which significant factors affect customer satisfaction of broadband services of PTCL in Pakistan?
- 2) How the empirical findings using research framework help to find the significant factors?
- 3) What are the important guidelines for PTCL management to address customer issues and improve the service provisioning of the broadband services in Pakistan?

III. RESEARCH AIM AND OBJECTIVES

Following objectives are identified to be achieved under this research study:

- 1) To propose a research framework for the identification of the significant factors of telecom broadband services that affect the customer satisfaction?
- 2) To empirically validate the proposed framework to understand the factors effecting customer satisfaction of broadband services of PTCL in Pakistan?
- 3) To suggest guidelines to PTCL management to address customer issues and improve the service provisioning of the broadband services in Pakistan?

IV. LITERATURE REVIEW, CONCEPTUAL MODEL AND HYPOTHESES:

Previous literature contributes lot of empirical studies in context of service quality, customer retention and customer satisfaction [5], [6], [7], [8], [9], [10], [11], [12]. Most of these research studies were done in developed economies like, United Kingdom, United States of America, and Japan. There is a lack of research work in developing economies like Pakistan, specifically in context of telecommunication and other related service industries. Various areas are taken as research area but very little research is conducted in telecommunication industry's customer satisfaction [10].

A study conducted [5] found a strong relationship among customer satisfaction, service quality, post purchase intention and perceived value in context of value-added services. They collected data from graduate students from various universities of Taiwan and found that customer satisfaction is positively influenced by service quality, and that customer perceived value has positive influences on post-purchase intention and customer satisfaction.

In another research [10] related to service quality of telecom services, customer satisfaction and behavior intention it was found that service provider's responsiveness, quality of service and behavior towards customer are important factors

involved the overall customer satisfaction in telecommunication industry. In another related study in context of mobile instant message service [7], they claim that perceived service quality, perceived customer value, trust, both functional value and emotional values, has influence in the contribution of generating customer satisfaction. They conclude that customer's trust and satisfaction has direct influence on the enhancement of customer loyalty in services sector.

The aim of this research is to check the inter-relationship between perceived service quality, service stability, content quality, responsiveness, and staff attitude as the antecedents of overall customer satisfaction of telecom broadband service of PTCL. The research contribution will fulfill the gap the literature gap and empirical evidences in context of customer satisfaction in telecommunication and other service oriented industries in Pakistan. The conceptual model in "Fig.1", shows the relationship of various factors involved in this research and their hypotheses relationships.

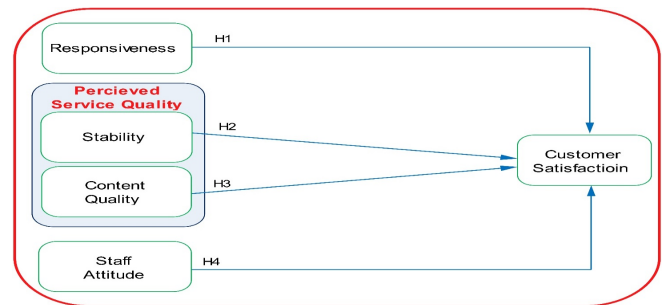


Fig. 1. The concept model.

A. Dependent Variable - Customer satisfaction:

Researchers [7], argued that customer satisfaction is one of the most important determinant of customer's post-purchase intention. Satisfaction is defined as the buyer's state of being sufficiently satisfied in buying a particular service or product against his or her sacrifice made [9]. Research communities has been frequently using customer satisfaction to inspect service quality. As customer satisfaction is a measurement of the degree to which a customer feels positive in context of service provider, it is vital that a service providers must understand what customer need to be loyal [8].

B. Factors Affecting Customer Satisfaction:

Perceived service quality has a significant role towards the overall satisfaction of customer. Some researcher [13] suggest that service quality is a comparison of performance perceptions against the service expectations however others say that it drives the comparison of service performance with an ideal standards of performance perceptions [9]. Due to increasing perception of customers about the products and service and available alternate options in market, perceived service quality is given high priority and more attention to gain competitive advantage. Thus we hypothesize that:

1) *Responsiveness*: Provision of post service assistance for customer care is most of the time part of pre service provision agreement between consumers and service providers. Customer demand early response in case of any failure or disruption in service.[6] has defined

responsiveness as a quicker way to assist customer for bringing the service back in action. Similarly [14] argued that the willingness to help customers and provide prompt service can be called responsiveness.

H1. *Responsiveness has significant, positive effect on customer satisfaction of telecom broadband services in Pakistan.*

2) *Stability*: [15] has identified eight main attributes of service quality. One of them is the stability of system or a service. It is defined as the probability that the system, service or a product will operate as per its prescribed value over a specified time under stated conditions in use. [5] highlighted system reliability by means of its reliability, error freeness, information richness. Therefore:

H2. *Stability has significant, positive effect on customer satisfaction of telecom broadband services in Pakistan.*

3) *Content Quality*: Content quality is usually defined as a combination of various values related to service or product, and that the offering of these services and products are as per the requirement of users or consumers [5]. Moreover, according to [15] “content quality is the customer’s perception of service or a product quality and performance based on the provider’s reputation”, Thus we hypothesize that:

H3. *Content quality has significant, positive effect on customer satisfaction of telecom broadband services in Pakistan.*

4) *Staff attitude*: Staff attitude is a significant factor that has very strong influence to improve the overall customer satisfaction. [12] Service based companies are mostly required to improve their employees' responsiveness by improving their selling skills, providing attitude training, clearing their role perceptions, increasing their motivations, enhancing service knowledge and the organizational policies [12]. [16] see staff attitude on greater scale including courtesy showing the politeness, respect and propriety of staff, flexibility to listen customers, friendliness with customers. Thus we hypothesize that:

H4. *Staff attitude has significant, positive effect on customer satisfaction of telecom broadband services in Pakistan.*

V. RESEARCH METHODOLOGY:

Researchers intend to collect primary data on five-point Likert scale through a quantitative survey. Furthermore, pre-testing along with pilot study will be employed in order to make sure that there is no error, ambiguity, or misinterpretation in questionnaire survey instrument. Self-administrated approach will be adopted to seek respondents' feedback.

In order to achieve research objective, i.e. to understand the customer satisfaction of broadband telecommunication services provided by Pakistan Telecommunication Company Limited (PTCL), researchers intend to conduct preliminary and secondary data analysis with the help of SPSS version, 23. SPSS has been accredited by many researchers [17], and widely accepted in various research areas including but not limited to, business studies, IS, social sciences, and Marketing research [18]. Therefore, researchers decide to

use this tool for data coding, identification of missing values and outliers, assumption of normality. In second stage, AMOS would be used for the evolution of structured model using Structural Equation Modeling (SEM) technique. To examine the hypothesized relationships in the proposed model, identification of a suitable and appropriate statistical technique is an important consideration. SEM is useful to simultaneously test the relationships among multiple dependent and independent variables [19]. Moreover, it appropriately tests a series of relationships comprising of large-scale complex models and a theory [19], [20]. SEM has attained large scale academic attention [21], [22].

VI. CONCLUSIONS:

This research is aimed to empirically inspect the customer satisfaction for telecom broad band services. The proposed conceptual framework is based on some most commonly used IS/IT satisfaction theories including, SERVQ. Researchers intend to evaluate the proposed model after conducting a formal survey for data collection. Proposed model and hypothesis were formed on the basis of strong significant correlational evidences between the constructs through detailed relevant literature investigation. After data collection the proposed model and hypotheses will be verified through well reputed statistical tools such as SPSS and IMB AMOS. Findings would contribute good results for telecom service providers.

VII. REFERENCES:

- [1] ITU-T, 2016. ITU releases 2014 ICT figures. Available at: <http://www.itu.int/en/mediacentre/Pages/2016-PR30.aspx>.
- [2] MOITT, 2003. De-Regulation Policy for the telecom industry.
- [3] PTA, 2017. Annual cellular Mobile Teledensity in Pakistan, May, 2014. Annual cellular Mobile Teledensity. Available at: http://www.pta.gov.pk/index.php?option=com_content&task=view&id=269&Itemid=658.
- [4] MOITT, 2017. MoIT Broadband Report. Available at: <http://www.moitt.gov.pk>.
- [5] Kuo, Y.-F., Wu, C.-M. & Deng, W.-J., 2009. The relationships among service quality, perceived value, customer satisfaction, and post-purchase intention in mobile value-added services. *Computers in Human Behavior*, 25(4), pp.887–896.
- [6] Wang, Y., Lo, H.-P. & Yang, Y., 2004. An Integrated Framework for Service Quality, Customer Value, Satisfaction: Evidence from China's Telecommunication Industry. *Information Systems Frontiers*, 6(4), pp.325–340.
- [7] Deng, Z. et al., 2010. Understanding customer satisfaction and loyalty: An empirical study of mobile instant messages in China. *International Journal of Information Management*, 30(4), pp.289–300.
- [8] Mittal, V., Ross, W., & Baldasare, P., 1998. The asymmetric impact of negative and positive attribute-level performance on overall satisfaction and repurchase intention. *Journal of Marketing*, 61(1), pp.33–47.
- [9] Basheer Abbas Al-alak Ghaleb Awad EL-refae, 2012. The Relationships between Service Quality , Satisfaction , and Behavioral Intentions of Malaysian Spa Center. *International Journal of Business and Social Science*, 3(1), pp.198–205.
- [10] Wang, Y. & Lo, H.-P., 2002. Service quality, customer satisfaction and behavior intentions: Evidence from China's telecommunication industry. *Info*, 4(6).

- [11] Cronin, J. J., Brady, M. K., & Hult, G.T.M., 2000. Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environments. Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environments. *Journal of Retailing*, 76(2), pp.193–218.
- [12] Lee, H., Lee, Y. & Yoo, D., 2006. The determinants of perceived service quality and its relationship with satisfaction.
- [13] Ghobadian, R., Speller, S. and Jones, W., 1994. "Service quality concepts and models". *International Journal of Quality Management*, 11, pp.43–66.
- [14] Rahaman, M.M. & Rahman, A., 2011. Measuring Service Quality using SERVQUAL Model : A Study on PCBs (Private Commercial Banks) in Bangladesh © Society for Business and Management Dynamics © Society for Business and Management Dynamics. , 1(1), pp.1–11.
- [15] Garvin, D, A., 1988. *Managing quality: The strategic and competitive edge*. The free press, New york.
- [16] Johnston, R. & Johnston, R., 2005. The determinants of service quality : satisfiers and dissatisfiers.
- [17] Tabachnick, B.G. & Fidell, L.S. (2007). *Using Multivariate Statistics*, 5th edn, Allyn and Bacon, Boston.
- [18] Zikmund, W., Babin, B., Carr, J., & Griffin, M. (2012). *Business research methods*. Cengage Learning.
- [19] Ahmed, Syed Faiz, et al. "Remote access of SCADA with online video streaming." *Computer Science & Education (ICCSE)*, 2013 8th International Conference on. IEEE, 2013.
- [20] Bhattacharjee, A. (2000). Acceptance of e-commerce services: the case of electronic brokerages, *IEEE Transactions on Systems, Man and Cybernetics*, 30, 411-420.
- [21] Spreng, R., MacKenzie, S., & Olshavsky, R. (1996). A re-examination of the determinants of consumer satisfaction. *Journal of Marketing*, 60 (3), 15-32.
- [22] Taylor, S. & Baker, T. (1994). An assessment of the relationships between servicequality and customer satisfaction in the formation of consumers' purchase intentions. *Journal of Retailing*, 70 (2), 163-178.