A Comparative Study on Customer Satisfaction in Telecommunication industry

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I. INTRODUCTION

Reliance Jio Infocomm Limited is an Indian telecommunications company and a subsidiary of Jio Platforms, headquartered in Mumbai, Maharashtra, India. It operates a national LTE network with coverage across all 22 telecom circles. It does not offer 2G or 3G service, and instead uses only voice over LTE to provide voice service on its 4G network. The company was registered in Ambawadi, Ahmedabad, Gujarat on 15 February 2007 as Infotel Broadband Services Limited (IBSL). In June 2010, Reliance Industries (RIL) bought a 95% stake in IBSL for 4,800 crore (US$670 million). Although unlisted, IBSL was the only company that won broadband spectrum in all 22 circles in India in the 4G auction that took place earlier that year. Later continuing as RIL's telecom subsidiary, Infotel Broadband Services Limited was renamed as Reliance Jio Infocomm Limited (RJIL) in January 2013.

Bharti Airtel Limited, also known as Airtel, is an Indian global telecommunications services company based in New Delhi, Delhi NCT, India. It operates in 18 countries across South Asia and Africa, and also in the Channel Islands. Airtel provides GSM, 3G, 4G LTE, 4G+ mobile services, fixed line broadband and voice services depending upon the country of operation. Airtel had also rolled out its VOLTE technology across all Indian telecom circles. It is the second largest mobile network operator in India and the second largest mobile network operator in the world with over 423.28 million subscribers. Airtel was named India's 2nd most valuable brand in the first ever Brandz ranking by Millward Brown and WPP plc.

Airtel is credited with pioneering the business strategy of outsourcing all of its business operations except marketing, sales and finance and building the 'minutes factory' model of low cost and high volumes. The strategy has since been adopted by several operators. Airtel's equipment is provided and maintained by Ericsson, Huawei, and Nokia Networks whereas IT support is provided by Amdocs. The transmission towers are maintained by subsidiaries and joint venture companies of Bharti including Bharti Infratel and Indus Towers in India.

II. RESEARCH METHODOLOGY

Both Reliance Jio and Airtel telecommunication Private Ltd are the market leader in telecommunication industry, that is why they are being selected for the present studyt. The collection of data for this paper was focused on the primary as well as secondary data. The primary data collected served to provide first hand information regarding the customer satisfaction at Reliance Jio and Airtel telecommunication Private Ltd..The targeted respondents are customers of Reliance Jio and Airtel telecommunication Private Ltd, who are living in the cities of Chandigarh and Ludhiana . These respondents are working in different types of industries ranging from Banking and Finance; Retailing and Wholesaling; Insurance and Mutual Fund; Transportation, Logistics and Warehousing; Hotel and Entertainment; Manufacturing; and Education and Training. The research instrument used in this study was a self-administered questionnaire. There is no right or wrong answer as the questionnaire requires respondents to tick which answer they feel suited them much. The questionnaire was designed in such a way that it was a self-explanatory and able to complete it by the respondents. The questionnaire was designed to be precise and simple and double negative statements were avoided. The questionnaire contained a five point Likert type rating scale (rating scale of 1 to 5) used to draw responses from the respondents. A pilot study was carried out to increase the validity of the questionnaire.

III. HYPOTHESES DEVELOPMENT

The following hypotheses are stated in the form of alternative hypotheses:

H1: There is significant difference in assurance between Reliance Jio and Airtel telecommunication Private Limited

H2: There is significant difference in responsiveness between Reliance Jio and Airtel telecommunication Private Limited

H3: There is significant difference in convenience between Reliance Jio and Airtel telecommunication Private Limited

H4: There is significant difference in reliability between Reliance Jio and Airtel telecommunication Private Limited.

H5: There is significant difference in tangibles between Reliance Jio and Airtel telecommunication Private Limited.

Responsiveness is measured by using the following items:
   a) How do you rate the representative's willingness to help you?
   b) How would you rate the representative's on being courtesy?
   c) How do you rate the representative's ability to answer your questions?

d) How do you rate the representative's imitativeness in handling your call?

e) How do you rate the representative's action towards your queries?

Reliability is measured by using the following items:
a) The representative of the telecom operator calls me back when promised.
b) My monthly billing statements are accurate.
c) My transactions are performed properly the first time.
d) The representatives deliver my services promptly.
e) How do rate the representative's trustworthiness that you perceive.

Assurance is measured by using the following items:
a) How do you rate the level of security measures provided by the telecom operator?
b) How confidential is your telecom operator concerning your account information in the telecom operator?
c) How do you rate security consciousness in your telecom office?
d) How do you rate the availability of security tools in the telecommuniction premise? Eg: cctv, alarm system

Convenience is measured by using the following items:
a) There are ample parking facilities provided by the telecom operator
b) I could do online telecom transactions via telecom websites
c) I could located office easily
d) I could easily withdraw use mobile telephone anywhere and anytime.

Tangibles are measured by using the following items:
a) The company representative dressed appropriately
b) How you find the appearance of the internal environment of the company
c) How do you find placement at telephone set and other equipments within the company
d) Does your company have a 24 hours toll free phone service

Customer satisfaction is measured by using the following items:
a) I am happy that the company representative is approachable
b) I am happy with the confidentiality of my billing statement with the company
c) I am glad with the prompt response from the representative
d) I am comfortable with the company appearance
e) I am satisfied with the representative initiative in handling my queries
f) I am cheerful since the company representative treats me with respect

g) I am delighted with the company sitting arrangement in the premise

h) I am comfortable operating the online facilities via company websites

i) I am satisfied as the bank has ample parking space facilities

Response Rate

Out of the 500 questionnaires distributed to respondents living in the cities of Chandigarh and Ludhiana and only 275 questionnaires were returned. This yielded a response rate of 55%. From these questionnaires returned, 30 were found to be unusable due to irrelevant answers and sample misrepresentation.

IV. FACTOR ANALYSIS

There are five factors which were use to determine the differences in customer satisfaction between Reliance Jio and Airtel Telecommunication Private Limited in the survey carried out, namely, responsiveness, reliability, assurance, convenience and tangibles. Factor analysis is used to reduce the number of variables to a more manageable and meaningful variables in analyzing the factors attributes to the customer satisfaction.

Table 3: KMO Measure of Sample Adequacy

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.789
	1410.244	
Bartlett's Test of Approx. Chi-Square Sphericity df		45
		0.000
Sig.		

This analysis is followed by the internal consistency reliability test, Kaiser-Meyer-Olkin (KMO), Bartlett's Test of Sphericity, and cumulative variance explained by each factor. Factor analysis with principle component extraction, using a Varimax with Kaiser Normalization (orthogonal) rotation was performed on the twenty five items to determine the number of factors. Besides using the scree plot as a guide to decide on the number of factors to be extracted, latent roots criterion and the Kaiser-Meyer-Olkin (KMO) method (eigen value greater than 1) was used. The KMO measure of sampling adequacy should be greater than 0.5 for a satisfactory factor analysis to proceed. For this study, the KMO measure of sample adequacy was 0.789, which indicates the adequacy of sampling for factor analysis and the results was reliable as shown in table 3 above.

Table 4: Rotated Component Matrix

	Components					
	1	2	3	4	5	6
Willingness	.928					
Courtesy	.891					
Ample	.828					
Courtesy	.798					
Consciousness	.774					
Willingness	.728					
Promptness		.895				
Accuracy		.830				
Well performed transactions		.780				
Prompt delivery		.745				
Trustworthiness		.700				
Security			.961			
Confidential			.960			
Security Consciousness			.899			
Security tools			.803			
Ample parking facilities				.866		
Online transactions				.865		
Easy to locate				.830		
Easy use				.801		
Properly dressed					.899	
Internal environment					.879	
Good layout					.700	
24X7 services					.695	
Approachable						.813
Confidential						.770
Queries						.770
Confidential						.699
Eigenvalues	13.599	7.747	5.173	4.036	3.233	1.775
Cronbach Alpha	.801	.805	.813	.863	.831	.783

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a Rotation converged in 8 iterations.

Table 4 above shows the factors and their eigenvalues and Cronbach Alpha values. The factor loading was computed at 0.6 level. The eigenvalues for factor 1 is 13.599 and the cronbach's coefficient alpha is 0.801. The eigenvalues for factor 2 is 7.747 and the cronbach's coefficient alpha is 0.805. The eigenvalues for factor 3 is 5.173 and the cronbach's coefficient alpha is 0.813. The eigenvalues for factor 4 is 4.036 and the cronbach's coefficient alpha is 0.863. The eigenvalues for factor 5 is 3.233 and the cronbach's coefficient alpha is 0.831. The eigenvalues for the last factor, which is the customer satisfaction, is 1.775 and the cronbach's coefficient alpha is 0.783. All the eigenvalues above are greater than one.

t- test

Table 5: Group Statistics

	Bank	N	Mean	Std. Deviation	Std. Error Mean
Assurance_1	Jio	100	21.420	3.830	.383
	Airtel	100	22.520	3.740	.374
Responsiveness_1	Jio	100	14.910	2.678	.267
	Airtel	100	15.280	2.132	.213
Convenience_1	Jio	100	10.430	2.571	.257
	Airtel	100	11.330	2.601	.260
Reliability_1	Jio	100	10.760	1.602	.160
	Airtel	100	10.740	1.636	.163
Tangibles_1	Jio	100	8.640	1.611	.161
	Airtel	100	9.070	1.788	.178
Customer Satisfaction_1	Jio	100	27.170	5.031	.503
	Airtel	100	27.840	4.426	.442

The Group Statistics shows the results of t-test for equality of means. It compares the means for Reliance Jio and Airtel. The mean values for Reliance Jio and Airtel are displayed in the Group Statistics in table 5.

Table 6: Summary of Significant Difference between Reliance Jio and Airtel

FACTORS	Reliance Jio	Airtel	t value	Sig (2-tailed)
Assurance	21.42	22.52	-2.055	0.041**
Responsiveness	14.91	15.28	-1.081	0.281
Convenience	10.43	11.33	-2.460	0.015***
Reliability	10.76	10.74	.0087	0.931
Tangibles	8.64	9.07	-1.786	0.076*

Significance level: *** At 0.01 levels, ** at 0.05 level, * at 0.10 level

From the above summary, it can be concluded that there is a significant difference between Reliance Jio and Airtel in providing assurance, convenience and tangibles. Convenience is found to be the most significant at 0.01 levels, and this is followed by assurance at 0.05 levels and finally, the tangibles at 0.10 levels. This shows that Airtel is better compared to Reliance Jio in providing assurance, convenience and tangibles . But, for responsiveness and reliability Reliance Jio is better. It is concluded from table 8 that there is not any significant differences between Reliance Jio and Airtel of delivering responsiveness and reliability.

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Table 7: Summary of Hypothesis Result

No	Hypothesis	Results	Hypothesis
1	There is significant difference in assurance between Reliance Jio and Airtel	Significant	Accepted
2	There is significant difference in responsiveness between Reliance Jio and Airtel	Not Significant	Rejected
3	There is significant difference in convenience between Reliance Jio and Airtel	Significant	Accepted
4	There is significant difference in reliability between Reliance Jio and Airtel	Not Significant	Rejected
5	There is significant difference in tangibles between Reliance Jio and Airtel	Significant	Accepted

V.   CONCLUSION

It is concluded that the dimensions of services quality such as assurance, convenience and tangibles show significant differences in customer satisfaction between Reliance Jio and Airtel . The other dimensions, such as responsiveness and reliability do not show any significant differences in customer satisfaction between Reliance Jio and Airtel . The results suggest that Airtel performs better compared to Reliance Jio in the areas of assurance, convenience, and tangibles. Both Reliance Jio and Airtel perform in a similar manner in terms of responsiveness and reliability. Therefore, Reliance Jio should improve its performance in the areas of assurance, convenience, and tangibles to ensure the bank delivers customer satisfaction continuously in order stay relevant in the business.

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