



BUYERS' EXPECTATIONS, PERCEPTIONS AND SATISFACTION ON PHYSICAL EVIDENCE MIX OF CELLULAR SERVICES MARKETING (A CASE STUDY OF TATA INDICOM IN CHITTOOR DISTRICT OF ANDHRA PRADESH)

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ABSTRACT

Multiple growth of the number of customers, cut-throat competition, mega mergers and takeovers, and flexible TRAI regulations are the common phenomenon in the Indian cellular services right from its inception in 1996. The authors of the article measured the level of customer's expectation, perception and satisfaction with Tata Indicom's cellular services (CDMA and GSM) on its Physical evidence (servicescape) mix of 7Ps of services marketing, through a survey on various parameters using factor analysis and found that office exteriors and interiors followed by brand image and stationary, appearance of employees and manuals together affect by 64% of the customers' expectations; while it is by 67% the office interiors followed by literature and exteriors, technology, brand image and physical standards affected their perception leading to 83-98% of satisfaction over physical facilities, 65-79% satisfaction on manuals, technology, brand image, and parking facility, and only 55% of satisfaction with quality standards of Tata Indicom cellular services in Chittoor district of Andhra Pradesh. It can be concluded that the existing lapses and deviations which have been identified have to be solved, some immediately and some in the medium term, which otherwise the Tata Indicom may have to lose its market to Bharathi, Airtel, Reliance, and BSNL.

KEYWORDS: 7 Ps of services marketing, servicescape, factor analysis, brand image, professionalism, office interiors and exteriors

INTRODUCTION

Physical evidence is an essential ingredient of the 7Ps of services marketing. It includes all aspects of the organization's physical facility (the servicescape including exterior and interior attributes) as well as other forms of tangible communication and refers to the experience of using a product or service. Choosing to use a service can be perceived as risky because it is intangible. Helping potential customers to see what they are buying can reduce this uncertainty (Bitner and Zeithaml, 2010). The present study attempts to study the perceptions and expectations of consumers towards Tata cellular services and the gaps between these two - either satisfaction or dissatisfaction and then to suggest measures to improve its market share.

INDIAN TELECOM INDUSTRY

India's digital cellular service network is one of the third largest in the world after China and USA with nearly 360 million connections. Telecommunication sector in India can be divided into two segments: fixed service (land line) providers, and cellular services. Cellular services can be further divided into two categories: Global System for Mobile Communications (GSM) and Code Division Multiple Access (CDMA). The GSM sector is ruled by Airtel, Vodafone, and Idea Cellular while the CDMA sector is dominated by Reliance and Tata Indicom. Other major players include BSNL, MTNL, Spice, and VSNL. There are primarily 9 GSM and 5 CDMA operators providing mobile services in 23 telecom circles and 4 metro cities (categorized as A, B, and C) covering 3500 towns across the country.

The following table shows the revenue market share and their customer market shares of key mobile operators in India during 2011.

PROFILE OF TATA TELESERVICES

The Tata Group's Tata Indicom telecom initiatives are currently spread over four enterprises: Tata Teleservices and its subsidiaries: Tata Teleservices (Maharashtra), VSNL and Tata Power Broadband, a division of Tata Power. Tata Teleservices (TTSL), a part of the Rs. 96,723 crore Tata Group, was incorporated in 1996. Starting with the major acquisition of Hughes Tele.com (India) Limited, now renamed Tata Teleservices (Maharashtra) Limited in December 2002, is targeting to achieve 100 million subscribers by 2011. The company launched mobile operations in January 2005 and today it enjoys its presence in all of India's 22 telecom circles. Tata Teleservices was the first to launch CDMA mobile services in India with the Andhra Pradesh circle as launching pad. Tata Teleservices has partnered Motorola, Erickson, Lucent and ECI Telecom for the deployment of a reliable, technologically advanced network. The product profile of Tata Indicom includes: 1. Mobiles, including prepaid and post paid mobiles, 2. Walky, 3. Landline, 4. Postpaid Indicom 10, 5. eCentrex, 6. Broadband, 7. Personal calling card, including India calling and Global calling card. It has entered into an agreement with Quippo Telecom Infrastructure Ltd owned by SREI Group and Singapore government in January 2009 to merge its mobile tower company WTTIL with Quippo to erect and maintain signaling towers in India.

Table 1: Market shares of Indian majors in cellular services (year 2011)

Telecom operator	Revenue market share	Customer market share	Cumu. cust. market share
Bharathi Airtel	33.80%	21.34%	21.34%
Reliance Communications	11.50%	18.90%	40.24%
Vodafone	12.00%	17.08%	57.32%
Tata Tele services	10.60%	12.45%	69.77%
Idea Cellular	12.10%	12.28%	82.05%
BSNL	10.20%	10.31%	92.36%
Aircel	8.00%	7.64%	100.00%

REVIEW OF LITERATURE

Schneider and Bowen (1999) in their study explored the antecedents of customer satisfaction in the telecommunications industry with reference to fixed line services provided to residential customers on the performance of the basic telecommunication product, the branch network, the directory inquiry system, the fault repair and service system, and the billing system. Attachment theory helps us to understand how people develop bonds to places, objects and other people. It was originally developed to explore the bond that develops between child and mother (Bowlby, 1969), and is now considered a central construct in understanding how customers interact with places, possessions, and experiences (Milligan, Belk, 1988; Ball and Tasaki, 1992; Low and Altman, 1992; Kleine and Baker, 2004). These bonds develop over time, and will vary across people; it is possible to have multiple strong attachments. The increase with reward and with rejections, and rely strongly on interaction or signaling behavior for reinforcement (Bowlby, 1969). Attachment bonds may cause a person to feel a sense of belonging in a place involved in an experience, or cared for by a person. Social interaction in servicescapes has been recognized as having a significant influence on an individual's satisfaction with the service encounter, whether this be from crowding, peer-group influence, repeated interactions with staff in extended service encounters, or 'communitas' relationships generated by shared experience (Bitner, 1992; Arnould and Price, 1993; Aubert-Gamet and Martin, 1996; Otnes 1998, and Cova, 1999). In an attempt to address this problem, Tombs and McColl-Kennedy (2003) developed the social-servicescape conceptual model, which brings together Bitner's (1992) servicescape model with theoretical perspectives on behavior settings, approach-avoidance models and social facilitations theory in order to conceptualize these human elements and provide an account as to how they influence consumption experiences. In the absence of a tangible good, the physical surroundings and other visible and ambient cues can have a vital effect on customer's perceptions and perceived risk of the service quality (Lovelock, Patterson & Walker, 2001).

RESEARCH METHODOLOGY

The following is the research methodology adopted by authors for this study:

i. Statement of the problem and need for the study

Services are intangible because unlike a product, a service can't be experienced before it is used. The design of the servicescape can influence customer choices, expectations, satisfaction, and other behaviors. It is clear that physical evidence plays a crucial role in services marketing to attract and to retain the customers in this competitive market otherwise the operators have to face declining in their market share. So there is a need for an element by which the customer will be able to feel, taste and smell the product or experience the service. It is known from table 1 that Tata Tele Services stands fourth with just 12.45% of customer market share in its tug of war with other established marketers Bharathi Airtel, Reliance, and Vodafone who stand 1st, 2nd and 3rd their customer market shares reflect their assumed strength in physical evidence, of course, besides other 6Ps, which Tata Tele Services is not, as it is assumed. Hence, there is a need for the present study.

ii. Objectives of the study

Following are the objectives set by the authors for their study:

1. To study and analyze the needs and preferences of the customers for physical evidence (servicescape) of Tata Indicom cellular services.
2. To determine the gap between the service expected by customers and the services offered by Tata Indicom (called satisfaction/dissatisfaction) on physical evidence.
3. To suggest measures to improve the satisfaction of customers of Tata cellular services towards its physical evidence.

iii. Locale of the study

The study aims at analyzing the expectations, perception, and satisfaction of Tata Indicom's customers on its physical evidence in Chittoor district of Andhra Pradesh.

iv. Hypotheses of the study

Against the background of the research objectives cited above and the review of literature, the following three null hypotheses were set:

H01: All the assumed factors are not equally important in influencing the customer’s expectations with regard to Physical evidence of Tata Cellular Services.

H02: All the assumed factors are not equally important in influencing the customer’s perceptions with regard to Physical evidence of Tata Cellular Services.

H03: Customers are not dissatisfied with the services performed by Tata Cellular Services.

v. **Sample selection**

The sample was selected by using systematic judgment sampling. The frequency distribution of the respondents is done according to their gender, age, education, occupation, and income (table 2).

Table 2: Sample selection (sample size=100)

Selection base	No. of respondents against the class of the customer profile				
1. Gender	Men= 60	Women=40			
2. Age (yrs)	<25 yrs =25	25-35 yrs= 30	35-45 yrs =22	> 45 yrs=25	
3. Education	SSC=14	Inter=16	31=graduates	24=PGs	14=Professional
4. Occupation	Studnts=21	Selfemployed=37	Employed=37	Professional =5	
5. Monthly income	Rs. 0=21	<Rs. 5000=41	Rs.5000-10000=21	Rs.10001-15000=10	Rs.15001-20000=4 >Rs.20000=3

vi. **Data collection and its analysis**

The research has made use of both secondary and primary sources of data. A questionnaire was designed to collect primary while journals, magazines, reports and websites were used for collecting secondary data. The data collected in the field work is confined to a period of 12 months during 2010-11. Factor analysis test is used for the analysis of the primary data collected.

vii. **Limitations of the study**

The limitations of the study are: 1. The sample taken for research was confined to 100 customers only even though there are 1.3 lakhs of Tata Indicom customers scattered around the Chittoor district of Andhra Pradesh. Hence based on this small sample, it is well neigh impossible to predict the same buying behavior with Tata Indicom across India. 2. The attributes taken into Physical evidence mix, though covered to extent possible, might not be exhaustive and hence the results could be subjective to some other extraneous attributes also. But for these limitations, the study could have been more realistic and strategic in its application.

FACTOR ANALYSIS

I. Factors determining the expectation levels of customers towards physical evidence:

Factor analysis is applied on opinions expressed by the respondents to group together variables that are highly correlated (Nargundkar 2005). This analysis involves three steps: firstly, extracting factors from a correlation matrix,

secondly, deciding how many factors are to be interpreted, and thirdly, rotating these retained factors. The Eigen value

or the total variance explained by a factor represents the sum of the squares of the factor loadings of each variable on that factor. It indicates the relative importance of each factor in accounting for the particular set of variables being analyzed (C.K. Kothari 2010). Eigen values >1.0 are considered significant and a total variance > 60% is considered satisfactory.

Tests of sample adequacy

Measure of sample adequacy, such as Bartlett’s test of Sphericity (approx Chi-Square is 782.555 for 91 dof at 0.000% level of significance) and the Kaiser-Meyer-Oklin (KMO) sampling adequacy test was used to measure sampling adequacy. The KMO index ranges from 0 to 1, reaching 1 when each variable is perfectly predicted without error by the other variables. The KMO test interprets that the sampling data is 86.5% adequate for this factor analysis and thus falls in the meritorious range of 0.8 and above (Hair *et al.*, 1998). Since the number of factors that are extracted and retained are different from each other with regard to variables on expectations and perception two different summaries have been prepared and presented in table 3 and table 4.

Findings

Principal components analysis and Vari-max rotation were used for generating and extracting factors, as a result of which three factors (with Eigen value of more than 1.0 and with an explained total variance of 64.208%) namely office interior and exteriors, brand image and communication, appearance of employees and manuals were retained and rotated (Table 3).

Table 3: Summary of the results of Factor analysis explaining the expectations of buyers of Tata Indicom's cellular services

Factors retained (I, II and III) and variables (14 – as are numbered from 1 to 14 in the administered questionnaire)	Loadings of variables (attributes)	Communalities	Percentage of variance explained and its Eigen value
<i>Factor I: Office interior and exterior</i>			
5. Convenient operating hours	0.808	0.842	
4. Up-to-date technology	0.749	0.736	
2. Comfortable layout of office	0.730	0.586	
1. Convenient location of office	0.717	0.600	Variance explained = 30.558% (Eigen value = 6.607)
6. Clear facilities	0.671	0.575	No. of variables = 7
3. Office is well-furnished with modern equipment.	0.644	0.432	
8. Convenient parking facility.	0.552	0.518	
<i>Factor II: Brand image and stationary</i>			
13. Availability of brochures.	0.816	0.703	
11. Internet / web pages.	0.798	0.732	Variance explained = 21.628% (Eigen value = 1.317)
9. Corporate brand image.	0.624	0.736	No. of variables = 5
12. Simple-to-understand billing statements	0.594	0.653	
14. Maintains highest possible standards (with regard to the quality of voice, speed, and charged power)	0.521	0.536	
<i>Factor III: Appearance of employees and manuals</i>			
10. Easy-to-follow manuals	0.806	0.712	Variance explained = 12.022% Eigen value = 1.065
7. Professional appearance of employees	0.747	0.628	No. of variables = 2
Total variance explained:			64.208%
Total no. of attributes:			14

* Source: Primary data

The three factors depicted in table 3 are discussed below:

FACTOR-1: Office Interior and Exterior

Of the 30.558% of the variance explained, expectation for convenient operating hours accounts for highest factor loading (0.808). This is followed by the up-to-date technology (0.749), comfortable office layout (0.730), convenient location of the office (0.717), clear-cut facilities (0.671), modern equipment (0.644) and convenient parking facility (0.552). This means that the Tata Indicom should take these buyer's priorities into account in designing the *tangibility* dimension of service quality.

FACTOR -2: Brand Image and Stationary

It accounts for 21.628% of the variance explained. Of this the buyers expect more of availability of brochures (0.816), and online services and communication (0.798) followed by brand image, simple billing statements, and quality standards with regard to the quality of voice, speed, and life of charged power, etc. This data reflects on the research to be done by the company on these lines.

FACTOR-3: Appearance of Employees and Manuals

Of the 12.022% of the variance explained, easy-to-follow manuals are expected more ((0.806) followed by professional appearance of employees in the show room (0.747

II. FACTORS DETERMINING THE PERCEPTION LEVELS OF CUSTOMERS TOWARDS PHYSICAL EVIDENCE:

Tests of sample adequacy: The Bartlett's test of Sphericity (approx Chi-Square is 782.555 for 91 dof at 0.000% level of significance) and the Kaiser-Meyer-Okin (KMO) sampling adequacy test (sampling adequacy is 71.7%) were used to

measure sampling adequacy to measure the perceptions of the buyers about performance of the company on the variables under the factors generated and extracted through factor analysis.

Findings

By using Principal components analysis, five factors (whose total variance explained is 67.586%) having more than 1.0 of Eigen value were generated and extracted, and the same are retained and rotated by using Vari-max rotation method and are shown in table 4.

Table 4: Summary of the results of Factor analysis explaining the Perceptions of buyers on the performance of physical evidence of Tata Indicom

<i>Factors retained (I, II, III, IV and V) and variables (14 - as are numbered from 1 to 14 in the administered questionnaire)</i>	<i>Loadings of variables (attributes)</i>	<i>Communalities</i>	<i>Percentage of variance explained and its Eigen value</i>
Factor I: Office interior:			
1. The location is convenient.	0.860	0.787	Variance explained =21.497% (Eigen value = 3.816) No. of variables = 5
2. Layout of office is very comfortable.	0.766	0.706	
7. Employees are having professional appearance.	0.746	0.620	
3. Office is well furnished with modern equipment.	0.683	0.725	
5. Operating hours are convenient.	0.585	0.691	
Factor II: Literature and office exterior:			
13. Availability of brochures	0.831	0.728	Variance Explained = 13.673% (Eigen value=1.927) No. of variables = 4
12. Billing statements are simple to understand	0.712	0.675	
11. Internet/web pages are very informative	0.536	0.626	
8. Convenient parking facility	0.333	0.611	
Factor III: Technology used and other physical facilities:			
4. Technology used is up-to-date	0.824	0.741	Variance explained = 12.807% Eigen value = 1.452 No. of variables = 2
6. Facilities are clear	0.597	0.514	
Factor IV: Brand image and manuals:			
10. Manuals are easy to follow	0.801	0.652	Variance Explained = 11.699% Eigen value = 1.220 No. of variables = 2
9. Corporate brand image is motivating	0.730	0.572	
Factor V: Maintenance of standards:			
14. Maintains highest possible standards (with regard to the quality of voice, speed and charged power)	0.857	0.815	Variance explained = 7.910% Eigen value = 1.046 No. of variables = 1
Total variance explained :			67.586%
Total no. of variables :			14

Source: Primary data

The five factors retained in table 4 are explained below:

Factor – 1: Office interior:

The office location, its layout, employees' appearance, equipment, and convenient operating hours are perceived in that order with factor loadings of 0.860, 0.766, 0.746, 0.683, and 0.585 respectively, and together accounted for 21.497% of the variance explained. Their high communalities indicate high association among variables included within this factor.

Factor – 2: Literature and facility exterior:

It accounted for 13.67% of the variance. Buyers have perceived availability of brochures and (0.831) easy-to-understand billing statements (0.712) more positively followed by internet pages and parking facility. All the attributes have high communality indicating that the variables within factor 2 are closely associated.

Factor – 3: Technology used and other physical facilities:

It accounted for an explained variance of 12.807% and two variables, such as technology (0.824) and clear-cut facilities (0.597) were loaded on this factor showing that they play leading and least roles respectively in gaining customer satisfaction.

Factor – 4: Brand Image and manuals:

Only two variables, such as company manuals and brand image, with high factor loadings accounted for an explained variance of 11.699% of the variance.

Factor – 5: Maintenance of standards:

There is only one variable, namely 'highest possible standards' with regard to the quality of voice, speed, and life of charged power, etc accounted for 7.910% of explained variance and 0.857 of factor loading. It does mean that people have not perceived the physical standards to a favorable extent.

Measurement of buyer's satisfaction:

Satisfaction is customer's fulfillment response. Failure to meet the needs and expectations is assumed to result in dissatisfaction with the product or service, and vice versa (Zeithaml and Bitner 2010). The mean scores for expectations as well as perceptions, and the gap between these two for all the given 14 variables of physical evidence of Tata Indicom cellular services are calculated to find the level of buyers' satisfaction (Table 5) on those variables.

Table 5: Mean gap analysis of satisfaction on the attributes of Physical evidence of Tata Indicom cellular services

Sl. No.	Attributes	Perception (P) Means	Expectation (E) Means	Mean gap (P-E)	% of satisfaction
1.	The location is convenient	3.69	3.75	-0.06	98.40
7.	Employees are having professional appearance	3.70	3.78	-0.08	97.88
5.	Operating hours are convenient	3.79	4.05	-0.26	93.58
3.	Office is well furnished with modern equipment	3.18	3.45	-0.27	92.17
12.	Billing statements are easy to understand	3.32	3.78	-0.46	87.83
6.	Facilities are clear	3.49	4.16	-0.67	83.89
2.	Layout of office is very comfortable	3.30	3.95	-0.65	83.54
10.	Manuals are easy to follow	3.40	4.08	-0.68	83.33
4.	Technology used is up-to-date	3.27	4.12	-0.85	79.37
9.	Corporate brand image	3.10	4.12	-1.02	75.24
11.	Internet / web pages	3.01	4.21	-1.2	71.49
8.	Convenient parking facility	2.98	4.34	-1.36	68.66
13.	Availability of brochures	2.89	4.37	-1.48	66.13
14.	Maintains highest possible standards	2.29	4.12	-1.83	55.58

Note:

1. Mean gap is defined as Perception mean – Expectation mean.

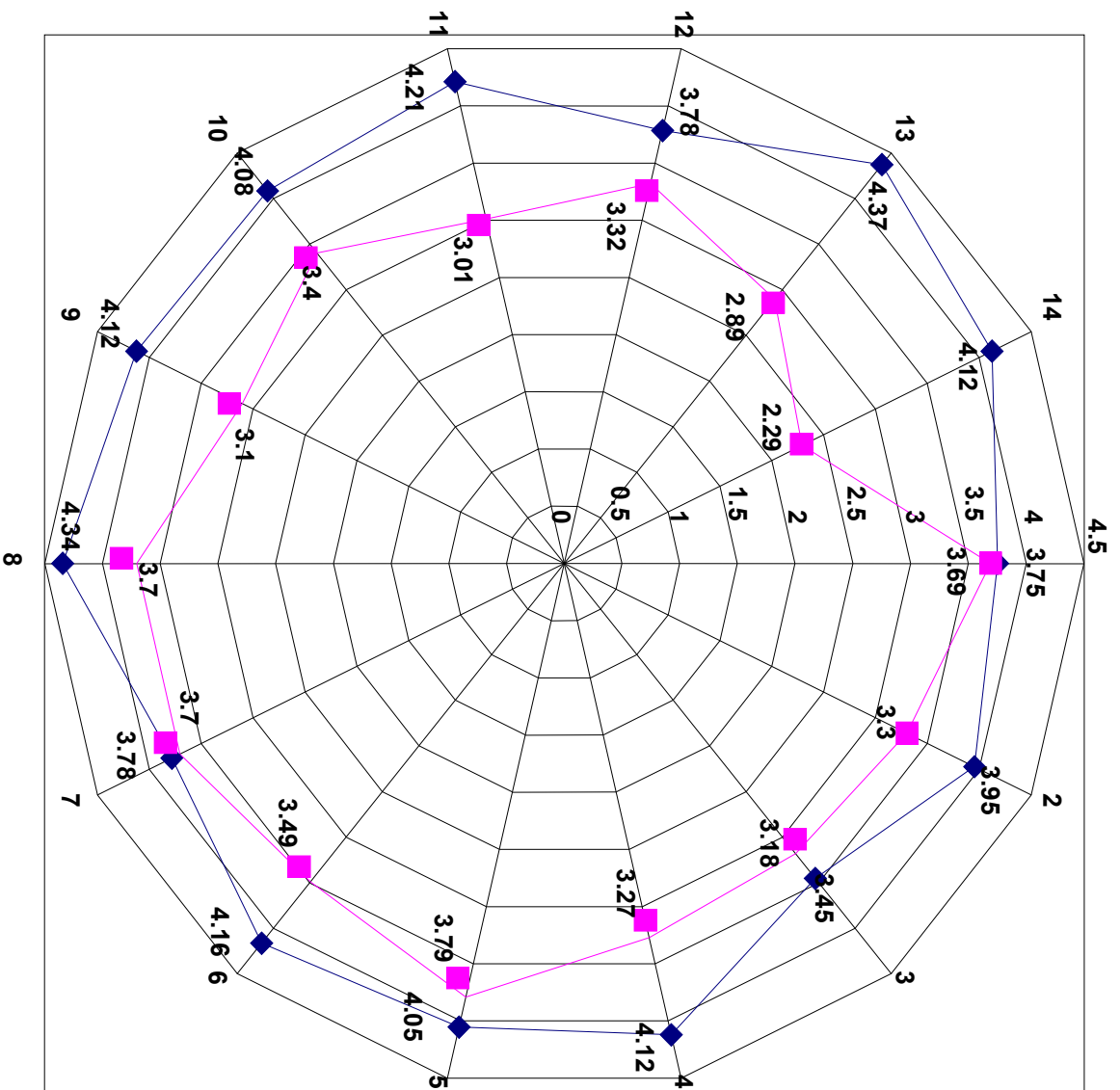
2. A positive gap indicates that customers perceived that service delivery exceeded their expectations (thus leads to satisfaction); while a negative gap indicates that service delivery did not meet their expectations (thus leads to dissatisfaction).

3. % of satisfaction = P/E x 100.

Radar chart 1: Satisfaction on the 14 attributes of Physical evidence of Tata Indicom cellular services

List of attributes under study:

1. The location is convenient
2. Layout of office is very comfortable
3. Office is well furnished with modern equipment
4. Technology used is up-to-date
5. Operating hours are convenient
6. Facilities are clear
7. Employees are having professional appearance
8. Convenient parking facility
9. Corporate brand image
10. Manuals are easy to follow
11. Internet / web pages
12. Billing statements are easy-to-understand
13. Availability of brochures
14. Maintains highest possible standards



On the basis of mean scores calculated, it is found out that customers have ranked top the attribute 'convenient location' with 98.4% of satisfaction, 97.8% satisfaction with 'employees' professional appearance', 93% with 'company's operating hours' and by 92% with 'modern equipment of office'. They are satisfied by 87% with 'easy-to-understand billing statements' while it is 83% with clear

facilities, comfortable layout of the office and easy-to-follow manuals. On factors 4, 9, 11, 8 and 13 the consumer derived satisfaction ranging between 79.37% and 66.13%. The maintenance of highest possible standards accounted for the least satisfaction levels such as 55.582%. The same thing is shown in radar graph 1.

1.1.1 Acceptance or rejection of the formulated hypotheses: Based on the results of the factor analysis and mean gap analysis, of the three hypotheses that were formulated two are accepted and the third one is rejected (table 6).

Table 6: Acceptance/rejection of the formulated hypotheses

<i>Null hypothesis No.</i>	<i>Statement</i>	<i>Test used and acceptance/rejection of hypothesis</i>
H01	All the assumed factors are not equally important in influencing the customer's expectations with regard to Physical evidence of Tata Indicom Cellular Services.	Tool used for testing: Factor analysis H01 accepted (see table 3).
H02	All the assumed factors are not equally important in influencing the customer's perceptions with regard to Physical evidence of Tata Indicom Cellular Services.	Tool used for testing: Factor analysis H02 accepted (see table 4).
H03	Customers are not dissatisfied with the services performed by Tata Cellular Services.	Tool used for testing: Mean gap analysis H03 rejected (see table 5 and radar chart 1)

Suggestions on Physical evidence:

Suggestions have emanated from the sample respondents in the course of interviews conducted during the research period. In addition, the researcher has also gathered a number of suggestions from various experts on the subject and also from the officials and non-officials of Tata Indicom in Chittoor district of Andhra Pradesh. The researchers also have arrived at their own suggestions to overcome a number of problems that are discussed in the earlier pages in order to provide maximum satisfaction to the Indicom customers. The suggestions have been incorporated as follows under different headings reflecting their nature:

1. *Where customer satisfaction is <60%:* It is observed from table 5 that there is the highest negative gap between the mean values for perceptions (2.290) and expectations (4.120) for the attribute 'maintenance of highest possible standards' with regard to the quality of voice, speed, and life of charged power, etc and got the least satisfaction of 55% (ie., 45% dissatisfaction). It indicates that this attribute is either totally neglected or not perceived well by customers. Hence, it is suggested that Tata Indicom should improve from its low profile in this aspect on some benchmarks so as to avoid its shadowed impact on the minds of customers at least in

the imminent period which otherwise it may have to lose its market share to leaders like Bharathi Airtel, BSNL and Vodafone. Higher the physical standards maintained, higher shall be the customer satisfaction.

- Where customer satisfaction is between 61%-70%:* It is concluded from the gap analysis in table 5 that there is a little negative gap between the mean values for perceptions (2.890), (2.980) and expectations of (4.340), (4.370) for the attribute 'convenient parking facility' and 'availability of brochures' with 68.7% and 66% of satisfaction respectively indicating that the customers have perceived service delivery little less than their expectations. Hence it is suggested that the Tata Indicom must provide convenient parking facility to two-wheelers and 4-wheelers of their customers along with their staff for which they are suggested to open show rooms at the places where good amount of parking is available. As well, the Tata Indicom must make available literature brochures and pamphlets so that they get up-to-date and detailed information about new schemes and offers.
- Where customer satisfaction is 71%-80%:* It is evident from the gap analysis that there is a moderate gap

between the mean values for perceptions of (3.270), (3.100) and (3.010), and expectations (4.120), (4.120) and (4.210) for the attributes 'technology used is up-to-date', 'corporate brand image' and 'internet/web pages' leading to 79.368%, 75.242% and 71.496% of satisfaction respectively. This moderate negative gap indicates that the customer's perceived service delivery did not meet their expectations completely. So the Tata Indicom should take necessary steps to maintain up-to-date technology, provide quality mobiles, network, offers and service that are better than that of its competitors. It is required to design the web pages in such way that it must provide up-to-date information about the company's history, profile and new products and offers, schemes launched, etc. Higher the corporate brand image, higher shall be an endowed conspicuous psychological satisfaction in order to be loyal to the Indicom brand. As well, it should go for *co-branding* and bring in some TV and computer brands as its co-brands to market its cellular services.

4. *Where customer satisfaction is between 81%-90%:* Even though there is a positive response from customers as shown in factor analysis (table 3), it is evident from the gap analysis (table 5) that there is a little negative gap between the mean values for perceptions of (3.320), (3.490), (3.300) and (3.400); for expectations (3.780), (4.160), (3.950) and (4.080) respectively for the attributes, such as 'comfortable layout', 'easy-to-understand billing statements', 'easy-to-follow manuals', 'clear facilities' with 87.830%, 83.894%, 83.544% and 83.333% of satisfaction respectively. This can also be taken granted as the *higher satisfaction zone*. Hence it is suggested that the Tata Indicom must design the layout while taking into account the science of ergonomics and such requirements as pure drinking water and air conditioning to get customers as well as its employees relaxed in their transactions.
5. *Where customer satisfaction is between 91%-98%:* It is evident from the gap analysis (table 5) that there is a slight negative gap between the mean values for perceptions of (3.690), (3.700), (3.790) and (3.180), and expectations of (3.750), (3.780), (4.050) and (3.450) respectively for such attributes as 'location of the show room', 'professional appearance of employees', 'convenient operating hours', and 'office with modern equipment' with 98.4%, 97.883%, 93.580%, and 92.173% of satisfaction respectively. This is said to be *highest satisfaction zone*. Hence it is suggested that the Tata Indicom should maintain the same level of performance in order to retain them as loyal customers in the medium and long run. Otherwise it may have to lose these customers to Airtel, and Vodafone. So the Tata Indicom must hire or own the show room with good furnishing and ambiance at locations that are convenient to the customer base. As well, the Tata Indicom must have to maintain uniform,

shoes and tie for their employees for neat and professional appearance to its customers.

CONCLUSION

It can be concluded that there exists some lapses and deviations to be solved, some immediately and some in the medium term, which otherwise it may have to lose its market to Bharathi Airtel, Reliance, and BSNL. Gap analysis should be carried out regularly to measure level of satisfaction of customers, and to know what the pluses and minuses of the company are, so as to improve those factors, on some benchmark, on which it is losing out to leaders.

SCOPE FOR FURTHER RESEARCH

The scope of the study can be extended to large samples across India in order the survey results to be more reliable; and comparative studies can be conducted to know the expectations, perceptions and satisfaction of the consumers towards cellular services offered by other established brands.

ACKNOWLEDGMENT

We, three, together acknowledge Dr. K.V.S. Sharma, Professor, Dept. of Statistics, Sri Venkateswara University, Tirupati and Mrs. P. Lavanya Kumari, Statistical consultant, Tirupati, Andhra Pradesh for their professional guidance in the use of factor analysis in this area of services marketing.

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