

Analyzing Customer Attitude towards BSNL Telecom Services Using ATO Model

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ABSTRACT— Customer Satisfaction is the prime motto behind the business relationship between buyer and seller. In a non-deterministic environment like telecommunication sector, the perception of the customer about the services plays a vital role in customer satisfaction. Various attributes like Network Quality, Service Support, Price and Brand Value determine the attitude of the customer towards the service. In the telecommunication domain, there are lot of enterprise services like Internet Leased line, Mobile Closed User Group, Broadband, Primary Rate Interface etc. In this paper, the customer attitude towards the enterprise services, Mobile Closed User Group (CUG) and Internet Leased Line (ILL) are analyzed using the Attitude-Toward-Object (ATO) model. The customer may have a favourable or unfavourable attitude towards specific Telecom services. ATO model analyze the overall attitude of the customer towards the particular service, strength of belief that the particular service contains specific attribute, importance of the attribute in the service and the number of favourable attitudes for the customer. The product of the absolute differences between the desired telecom service and the attitude of the customer towards the particular service provider results in attitude index. In our study, the enterprise telecom services, Mobile CUG and ILL provided by the Indian public sector company – BSNL is taken for analysis and implementation is done using the ATO model. For an ideal service where in the beliefs and desired values are same, the attitude index should be zero. In the practical study, the Overall Customer Attitude (OCA) with respect to BSNL Mobile CUG and BSNL ILL are calculated and the interest of the enterprise customers in availing the services is presented. The positive direction in the customer satisfaction and thereby success in the customer relation management is indicated by the attitude index value nearing as close as to zero.

KEYWORDS— ATO model, BSNL, Customer Attitude, Service Marketing, Telecom Services.

I. INTRODUCTION

In today's information and technology enabled society, telecommunication industry has been the major passenger for effective communication. Since the introduction of mobile phones, there exists a stiff competition in the telecom market. To retain the existing customer database and to attract the new customers, the telecom companies continuously persuade various researches and introduce innovative ideas to the market. So customer relation management plays a very vital role in the telecommunication market [1]. There are several factors involved in the shaping up of the business opportunities and converting them into successful business with long term relationship. Analysing the actual requirement of the customer, Market competition, Brand visibility, Availability of the services, Pricing strategy, Quality of Service, Customer service support are some of the primary requirements. To have a successful business relationship, these parameters need to be addressed and examined carefully.

The customer attraction towards a particular service may be due to some logical reasons, previous experience about the brand or through the advertisements. Empirical studies show that the customer choosing a particular service not only depends on the direct attributes such as pricing, service support, brand etc. There are certain qualities which are related to human emotions, they also play a vital role in choosing a particular service and this may vary from time to time [2].

Customers prefer various types of services among the available and their attitude towards the specific service may depend upon the prime factors such as quality, service support, brand and price. Considering these factors as basic attributes towards the customer attitude, the willingness of the customer shall be identified. This will give valuable information regarding the customer preference and accordingly marketing strategies can be formulated to win and retain the business [3]. To assure best quality of service to the customers, service quality parameters like reliability, assurance, empathy has to be generated to the customers [4][5].

In a business scenario, attitude as a parameter has a key influence on customer purchase decisions. While a part of the researches consider attitude has the prime analyst for customer purchase behaviour, others argue on the inconsistent nature of the attitude. On the similar lines, the attitude shall be considered either as evaluative where in the effects of the attitude have direct consequence on the customer decisions or non-evaluative where in the attitude is not considered as critical moderator and shall be considered as in-directly influencing catalyst [9][10][11]. In either of the cases, the need for analysing the customer attitude becomes vital and hence the need for mathematical models.

In the recent years, lot of research works is carried out to fulfil the requirement of the dynamically changing telecom market and their needs. Various attitude models based on mathematical computational methods are used by the researches to analyse the customer attitude. To improve the customer loyalty towards the service or brand, the satisfaction about the application of the service is the prime cause and these mathematical models predict the behaviour of the customers and produce results relatively accurately [6][10].

The future behaviour of the customer mainly depends on the relationship quality offered by the service provider during the provision and maintenance of the service. Researchers strive on formulating the casual relationship between the relationship quality and trustworthiness of the customer [7]. To improve the customer loyalty, sharing of information is considered as one of the aspects by the enterprise service providers. This will lead the development of positive attitude towards the brand [8].

To analyse the customer attitude of the enterprise customer, the services Mobile Closed User Group and Internet Leased Line have been taken in this study. In today's tech savvy environment, communication has become an essential part. Frequent conversations are inevitable between the marketers on the field and the manager in the office who is the decision making authority. So the enterprise service "Closed User Group" is gaining popularity. By using the facility, the users can talk over unlimited period of time in their mobile phones within their group. The fixed monthly rental alone is applicable for the service and the charges for the calls made between their closed user group will become completely free. Also, data communication is gaining more popularity with the development of centralised data storage and retrieval. So the means of communication between the server in the internet and the clients shall be done by the internet connectivity. For the corporate customers having multiple clients, the internet requirements shall be fulfilled by Internet Leased Line provision wherein the connection shall be uniform, assured and dedicated all the time. In our analysis, the customer attitude towards the service, closed user group (CUG) and Internet Leased Line (ILL) provided by the Indian public sector Telecommunication Company, BSNL [12] is taken for study and the results are analysed using Attitude-Toward-Object (ATO) Model.

II. CUSTOMER ATTITUDE RESEARCH MODEL

Attitude-Toward-Object (ATO) Model is considered as most appropriate for measuring attitude towards non-deterministic service category like telecom sector. In this model, the association of the customer with an object which can be a physical thing or an action with respect to the buying process is analysed. There are various attributes such as network quality, price, service support and brand value involved in a product which will influence the customer either favourably or unfavourably. Based on the accepted level of positive attributes, the constructive perspective will be developed by the customer towards the product as shown in fig. 1.

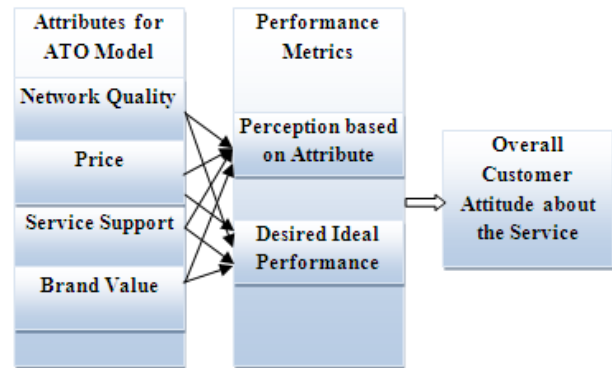


Fig. 1. Customer Attitude based on ATO Model

Similarly based on the level of negative attributes, the adverse thought will be built up by the customer. For service sector categories like telecommunication domain, the specific service shall be considered as individual product. Hence Overall Customer Attitude towards a particular service using Attitude-Toward-Object Model can be defined as equation in Table 1.

TABLE 1: OVERALL CUSTOMER ATTITUDE USING ATO MODEL - EQUATION

$OCA = \sum_{I=1}^N S_a I_a - F_a $
<p>where OCA is the overall customer attitude, S_a is the strength of belief that a particular service contain the attribute 'a', I_a is the ideal level of performance on the attribute, F_a is the customer's feeling or evaluation analysis towards the particular attribute 'a' and 'n' is the number of beliefs for the specific customer</p>

III. METHODOLOGY AND IMPLEMENTATION OF THE MODEL

To analyse the overall customer attitude towards the enterprise service "Mobile Closed User Group (CUG)" and "Internet Leased Line (ILL)" provided by the Indian public sector telecommunication company BSNL, Attitude-Toward-Object Model is used. To illustrate the model, field survey was conducted among the customer segments about the services "BSNL Mobile CUG" and "BSNL ILL". The customer perception about the level of performance of the service (P_s) and the desired performance level (D_s) based on the four attributes (i.e.

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Network Quality, Price, Service Support and Brand Value) was analysed and the overall customer attitude towards the particular service was identified.

The Ideal performance of the services would be High Network Quality, Low Price, Good Service Support and Popular Brand. Also all the attributes need not be equally important for the customers and the values were assigned based on the relative importance that the customer segment connected to each attribute.

For measurement weights, a popularly used approach of 100 point constant sum scale was used. The most preferred attribute Network Quality was given more importance and the relatively least preferred attribute, Brand Value was given less importance in the constant sum scale. The intermediate attributes Service support and Price were given importance in the mid-level.

TABLE 2: ATTRIBUTES OF TELECOM SERVICES AND THEIR IMPORTANCE

Attribute	Importance
Network Quality	40
Service Support	30
Price	20
Brand value	10

The attributes of the enterprise telecom services and their importance are drawn as chart as shown in fig. 2.

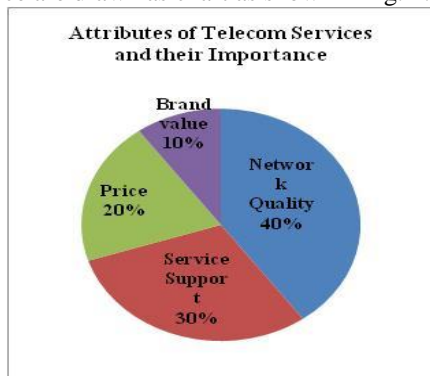


Fig. 2. Attributes of Telecom Services and their Importance

Based on the field survey responses taken from the customer segment, the following tabulation is arrived. The customers were asked to choose their desired service quality for the ideal Mobile CUG and ILL services with the perception about BSNL Mobile CUG and BSNL ILL. The grading was taken in standard five point scale with the least preferred value '1' and the most preferred value '5'.

TABLE 3: IDEAL DESIRED QUALITY AND PERCEPTION ABOUT BSNL MOBILE CUG AMONG CUSTOMER SEGMENT

	(5)	(4)	(3)	(2)	(1)	
High Network Quality	D	P				Poor Network Quality
Low Price			D	P		High Price
Good Service Support		D		P		Poor Service Support
Popular Brand			PD			Unpopular Brand

P – Perception about BSNL Mobile CUG service, D – Desired Quality of the Ideal Mobile CUG service

TABLE 4: IDEAL DESIRED QUALITY AND PERCEPTION ABOUT BSNL ILL AMONG CUSTOMER SEGMENT

	(5)	(4)	(3)	(2)	(1)	
High Network Quality	PD					Poor Network Quality
Low Price			D	P		High Price
Good Service Support		PD				Poor Service Support
Popular Brand			PD			Unpopular Brand

P – Perception about BSNL ILL service, D – Desired Quality of the Ideal Internet Leased Line Service

TABLE 5: OVERALL CUSTOMER ATTITUDE FOR BSNL MOBILE CUG SERVICE

Attribute Value (from Table 3)	Attitude _{BSNL Mobile CUG} (from Table 2)
(Network Quality D – P = 5 - 4 = 1)	40 x 1 = 40
(Price D – P = 3 - 2 = 1)	30 x 1 = 30
(Service Support D – P = 4 - 2 = 2)	20 x 2 = 40
(Brand) D – P = 3 - 3 = 0)	10 x 0 = 0
	OCA _{BSNL Mobile CUG} = (40 + 30 + 40 + 0) = 110

TABLE 6: OVERALL CUSTOMER ATTITUDE FOR BSNL ILL SERVICE

Attribute Value (from Table 4)	Attitude _{BSNL ILL} (from Table 2)
(Network Quality D – P = 5 - 5 = 0)	40 x 0 = 0
(Price D – P = 3 - 2 = 1)	30 x 1 = 30
(Service Support D – P = 4 - 4 = 0)	20 x 0 = 0
(Brand) D – P = 3 - 3 = 0)	0 x 1 = 0
	OCA _{BSNL ILL} = (0 + 30 + 0 + 0) = 30

The comparison between the ideal expectation of the customer segment related to Mobile CUG service and their perception about the service Mobile CUG from BSNL was provided in Table 3 and as that of ILL from BSNL was provided in Table 5. The calculation part, i.e. the product of the absolute differences of the ideal desired value and the perception of the service BSNL Mobile CUG with importance was given for the individual attributes of the service Mobile CUG. The Overall Customer Attitude for the service BSNL Mobile CUG (OCA_{BSNL Mobile CUG}) also known as “Attitude Index” was obtained by the grand summation of all the products obtained as shown in Table 4. Similarly the Overall Customer Attitude for the service BSNL ILL (OCA_{BSNL ILL}) was tabulated in Table 6.

IV. DISCUSSION

From the study and the subsequent calculation based on Attitude-Toward-Object Model, the overall customer attitude value towards the service, Mobile CUG from BSNL was 110. Under the ideal circumstances, all the perception values about BSNL Mobile CUG would meet the desired values for the service. With the practical considerations, the Attitude Index value nearing as close to zero, the better would be the customer attitude.

Based on the study conducted among the customer segment for selection of Mobile Closed User Group, the following observations were found. The Attitude Index with respect to the Attribute, Brand is zero and the ideal quality and the customer perception were matched. With respect to the Attributes, Network Quality and Price, the perception values slightly deviated from the ideal values. The most deviated attribute was the service support.

On the same lines, the Attitude Index for the service, BSNL ILL was 30. As per the opinion of the customer segment under observation, the overall customer attitude towards BSNL ILL was positive and the favourable situation prevailed for the service when compared to Mobile CUG. Among the various attributed under consideration, Network Quality, Service Support and Brand were matching the desired values by the customer and price was the only parameter to have slight deviation from the desired value.

V. CONCLUSION AND FUTURE DIRECTION

For a successful customer relationship management, the primary need of the customer has to be understood by the service provider. Knowing the attitude of the customer towards a specific service is very vital because once the perception of the customer is known, effective research methodologies shall be implemented to orient the customer attitude towards the success business relationship. In our study, the customer attitude towards the enterprise telecom services, Mobile Closed User Group and Internet Leased Line provided by the Indian public sector company BSNL were analysed using the Attitude-Toward-Object Model. The results show that improving the service support attitude will influence the attitude of the customer and thereby attract the customer to avail the Mobile CUG service. Also, regular monitoring and attention towards the attributes, Network Quality and Price will retain the customer base for BSNL. As far as ILL service is considered, the business is doing and reduction of tariff will have upper edge in the deeper penetration of the market. Our future works on Customer Attitude shall be based on the modern customer attitude models such as Tri-Component Attribute Model and Fisherbein's Behavioural Intentions Model. For a better customer relation management, the service provider needs to be in continuous search for the customer satisfaction and hence the good understanding about the customer attitude towards the services is a vital yardstick for a successful business relationship.

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