Analysis of After Sale Service Data of Indian Tractor Users By Using Kano Model

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Abstract : *In this paper a data set was collected for tractor customers in north India. Kano model is used to analyze the data. Various attributes are divided into different categories. We found that most of the attributes are attractive, whereas some of the attributes are must-be. These results will help understand customer requirements and improve customer satisfaction. Managers can use this information to increase market share of their companies.*

Keywords : *Kano model, Customer satisfaction, Market research, Tractor.*

I.   Introduction

Tractor industry comes under rural Market. Tractor is a specifically designed machine to deliver a high traction at slow speeds, for the purposes of hauling a trailer or machinery used in agriculture or construction.

After independent Agricultural mechanization has taken new wing. Tractor industries has played key role in transforming India into powered mechanization. Initially India was fulfilling its demand through import of tractors but there was big gap between demand and supply. In 1951 there were 8,500 tractors in use, 20,000 in 1955 and 37,000 by 1960. Local production began with joint venture of local industrialists and international tractor manufacturers. In 1961 total production was only 880 units per year. Eicher, Gujarat Tractors, TAFE, Escorts, M&M were the major tractor manufacturers. After liberalization Since 1992 it has not been necessary to obtain an industrial license for tractor manufacture in India. With no production constrain and, more and more competitor in the market now game has changed. Intense competition also led to rapid advances in design and quality. Now India is world's biggest producer and consumer of tractors. With Rs. 4,000 Cr. Industry and so many options Indian tractor customer has become king.

The objective of the study is to analyze the tractor service sector in India so that a desired level of customer satisfaction can be achieved. Modern marketing is characterized by increasing demands for high quality services. To achieve this better understanding of customer demand is necessary; hence we will study the customer satisfaction dataset for tractor service sector to understand the behavior of customers.   In the next section, we will discuss about the Kano model that we used for the analysis. Section 3 has data and analysis part. Conclusions are presented in Section 4.

II.   Kano Model

Traditionally assumption was that customer satisfaction is one dimensional or directly proportional to service need fulfilled. Now Three factor theory or two dimensional grids is getting more focus in Market research [1-3]. The three-factor structure of customer satisfaction can be described as a combination of the following factors which is based on Kano model [4]:

- ATTRACTIVE (A): This category lists those preferences which delight the customer when achieved fully, but don't cause dissatisfaction when not fulfilled. They are only like sugar sprayed over the sweet biscuits.
- MUST-BE (M): This category lists the basic preferences which don't delight the customer when achieved fully, but cause greater dissatisfaction when not fulfilled. They are like stand on two-wheeler.
- ONE-DIMENSIONAL (O): This category lists the preferences which have a direct relation with the happiness of the customers. They delight the customer when achieved fully and cause dissatisfaction when not fulfilled. They are like carrier on bicycle.
- INDIFFERENT (I): This category lists the preferences which don't have any effect on the customers' satisfaction. They neither delight the customer when achieved fully, nor cause dissatisfaction when not fulfilled. They are rear view mirrors on bicycle.
- REVERSED (R): This category lists the preferences which are not desirable for the customer but they even expect the reverse.

• QUESTIONABLE (Q): This category lists the preferences which contradict the answers marked by the customer. The possibilities are either the customer misunderstood the preference or crossed out a wrong answer by mistake.

III. Data And Methodology

In this section we, discuss about the survey and the results;

1. **SURVEYS**

The surveys were conducted in the Northern India (Rajasthan, Gujarat, M.P., U.P. etc.) regarding to the customer services required by the customer.

II. **SAMPLE**

The sample constitutes of 45 customers who have been contacted and their feedback taken as per the Kano Question. 45 customers of the age range 19-38 years from Northern India (Rajasthan, Gujarat, M.P., U.P. etc.) who own the tractors.

Customer Requirements		Dysfunctional				
		Like	Must-be	Neutral	Live with	Dislike
Functional	❖ Like	Q	A	A	A	O
	❖ Must-be	R	I	I	I	M
	❖ Neutral	R	I	I	I	M
	❖ Live with	R	I	I	I	M
	❖ Dislike	R	R	R	R	Q

Table 1. Kano Evaluation Table

Each customer is asked to fill a form given in Table 1. Depending upon the functional and dysfunctional choices of an attributes the type of the attribute is decided. Hence, for each customer the choice is made. We carried out this exercise for each customer. First the results for all the customers are collected. It is possible that different customers have different view about an attribute for example for customer A an attribute may be R, whereas for customer B the attribute is A. The majority voting is used to find out the type of an attribute for the sample.

IV. Results And Analysis

No.	ATTRIBUTE	TYPE	No	ATTRIBUTE	TYPE
1	Services point should be available near to customer reach.	A	14	Parts other than consumable parts also provided at home.	M
2	Door step service facility should be provided.	A	15	Dealer should tell them about the different implement, & their use.	A
3	Extra tractor should be provided during off road condition.	A	16	Dealer should tell them about the changes in tractor.	A
4	Free pick & drop facility should be given.	M	17	Washing & Greasing should be done during service.	M
5	Time & Money should be told before service.	A	18	Greasing should be done in every service & it should be free.	A
6	Scheme related to discount on spare parts or service should be given to customer.	M	19	All the parts should be available at service center.	A
7	Dealer should visit the village.	A	20	All 38 point to be covered during service.	A
8	Reminder/SMS for due service.	M	21	Service should be done at fast rate.	O
9	Information about opening & closing time of service center should be present at service center.	A	22	Test drive of tractor should be taken before & after the service.	M
10	Information about holidays should be present at service center.	A	23	Problem should be solved in first time.	A
11	Information about the name & mobile number of mechanic & engineer should be given to the customer.	O	24	Supervisor properly listen their problem.	M
12	Computerized bill should be given to customer.	M	25	Service center should be automated.	A
13	Behavior of mechanic and manager should be good.	A	26	All the modern tool & method should be use at service center.	M

Table 2 – The table shows the different attributes and their categories. The M means MUST-BE attribute, O means ONE-DIMENSIONAL attribute, and A means Attractive attribute.

We carried out analysis and presented our results in Table 2. This table shows that about 60% of the customer needs are in attractive category. So to give a better customer service, the company should focus on the attractive category more. But this should only be done after the fulfillment of the basic services.

V. Limitations

The present study was carried out in only Northern India so it is not possible to predict about the attributes for entire india. It would be better to collect the data from customers from entire India to have better assessment of these attributes.

VI. Conclusion

In this research work, we collected after-service data from different part of the India. This data was then analysed by various techniques. Kano model analysis show that in order to give good customer service and to satisfy the customer needs, the company focus on the Attractive needs of the customer as this will lead to delighted customer and help in customer loyalty.

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