



THE FACTOR STRUCTURE IN CUSTOMER SATISFACTION OF AFTER SALE SERVICE OF INDIAN TRACTOR CUSTOMERS

Khursheed Ahmad Siddiqui

Faculty of Management, Sri Satya Sai University of Technology & Medical Sciences,
Sehore, MP, India

Farhat Mohsin

Faculty of Management Studies, Manav Rachna International Institute of Research and
Studies, Faridabad, India.

ABSTRACT

The assay of chump achievement datasets has apparent that product-related appearance abatement into three categories (basic, performance, and excitement), which affect all-embracing achievement differently. Ahmad et al. [1] proposed a rule-based adjustment that can be acclimated to assay the characteristics of chump achievement abstracts features. In this paper, we apply three factor theory on customer satisfaction of after sale service of Indian tractor customers. We activated the adjustment proposed by Ahmad [1] to bisect assorted attributes into altered categories. We conclude that a lot of the attributes are Excitement, admitting some of the attributes are Basics.

KEYWORDS – Three factor theory, Customer satisfaction, Market research, Tractor, After sale service.

1- 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.

During 1965 production capacity has increased to over 5000 units per year and the total in used had moved to over 52000. That time Tractor market was not customer oriented but production oriented more production means more sale In 70s production has crossed 20K Mark with over 146000 tractors in the field. By 1980 with the help of more collaboration production capacity have crossed 71000 tractors per year. Although still there was enough gap between demand and supply but customers' expectations have start playing the role. 3 Companies (Kirloskar Tractors, Harsha Tractors and Pittie Tractors) did not survive. India a net importer up to the mid-seventies has start exporting in the 80s mainly to countries in Africa and Asia.

With the help of Government supported credit policy for farmers' tractor market expend rapidly. By 1990 Total 12 Lacs tractors were in the field 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.

Market analysis is the action of designing, gathering, analyzing, and advertisement advice that may be acclimated to break a specific business botheration [2]. Market analysis can advise companies to accept their barter so that they can adapt their action to allure added customers.

The three-factor approach of chump achievement [3] is accepting acceptance in market analysis problems [4]. The three-factor anatomy of chump achievement can be declared as an aggregate of the afterward three factors;

a) Basic factors- Customers yield these basal factors for granted. Although these factors accord actual little appear chump satisfaction, the absence of these factors is apprenticed to advance to dissatisfaction.

b) Performance factors- These factors accept both absolute and abrogating aftereffect on chump satisfaction. If provided, these factors accord absolutely appear chump satisfaction, and if not provided, again there is an abrogating aftereffect on chump achievement.

c) Excitement factors- These factors do not accord to chump annoyance if not provided, but if provided, they accord absolutely appear chump satisfaction.

The cold of the abstraction is to assay the tractor account area in India so that a adapted akin of chump achievement can be achieved. Modern business is characterized by accretion demands for top superior services. To accomplish this bigger compassionate of chump appeal is necessary; appropriately we will abstraction the chump achievement dataset for tractor account area to accept the behavior of customers.

In this paper, we show an application of a rule-based method for identifying the factor structure in customer satisfaction on a customer satisfaction dataset for tractor service sector. The paper is organized as follows. In Section 2, we describe the method [1] that we used in the paper. The experiments are described in Section 3. Section 4 has conclusion and future work.

2- THE METHOD PROPOSED BY AHMAD ET AL. [1]

In this section, we will explain the adjustment proposed by Ahmad et al. [1] to assay the agency structure. Ahmad et al. [1] proposed a rule-based adjustment that can be acclimated to assay the characteristics of chump achievement abstracts features. The inputs for these rules are acquired by application a probabilistic affection alternative technique. In that affection alternative method, alternate associations amid appearance ethics and chic decisions in a pre-classified database are computed to admeasurement the acceptance of appearance values. The proposed adjustment can be acclimated for all types of features:

cardinal and categorical. The proposed adjustment is computationally added able than the added methods. Here, we will explain this method.

2.1 Rules for different types of features

Ahmad et al. [1] proposed rules to analyze altered appearance by application abutment sets and acute powers.

1. The aphorism for a basic feature can be accounting as follows:

If affection ethics accept alone two kinds of abutment sets (one with chump achievement ethics and the added with chump achievement values)

Then the affection is a basic feature.

2. The aphorism for a performance feature can be accounting as follows:

If affection ethics accept altered abutment sets that change gradually from able annoyance ethics to able achievement values,

Then the affection is a performance feature.

3. The aphorism for the excitement features can be accounting as follows:

If some of the affection ethics accept agnate and alloyed abutment sets with low discriminating powers and the actual affection ethics accept abutment sets with able chump achievement values,

Then the affection is an excitement feature.

3- DATA AND RESULTS

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

I. 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.

The attributes are presented in Table 1. 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.

4- CONCLUSIONS

We applied a rule based method to for identifying the factor structure in customer satisfaction on tractor industry customer satisfaction samples to identify basic features, performance features and excitement features. More than 60% attributes are in excitement category. In the future, the better interpretation of these results will be done with the help of domain expert.

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

Table 1- Attribute information

Type of attribute	Attributes
Basic factors	4, 6, 8, 12, 14, 17, 22, 24, 26
Performance	11, 21, 23
Excitement	1, 2, 5, 7, 9, 10, 13, 15, 16, 18, 19 20, 25, 26

Table 2- Type of Attribute by using the method Ahmad et al. [1]

REFERENCES

[1] A. Ahmad, L. Dey, S. M. Halawani: A rule-based method for identifying the factor structure in customer satisfaction. Inf. Sci. 198: 118-129 (2012)

- [2] A.C. Burns, R.F. Bush, Marketing Research, Prentice Hall, 2005.
- [3] N. Kano, S. Nobuhiku, T. Fumio, T. Shinichi, Attractive quality and must-be quality, The Journal of the Japanese Society for Quality Control, 1984, pp. 39 – 48.
- [4] R. Johnston, The determinant of service quality: satisfiers and dissatisfies, International Journal of Service Industry management, 6 (5) (1995) 53 – 71.