

Measuring the Customer Satisfaction Level Before and After Sales Service Provided by TATA Motors in Pondicherry

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Abstract – This study proposes a research design approach to identify what factors that highly influences the customer satisfaction level on before, during and after sales service of Tata Motors in Pondicherry. The researcher tried for 200 customers, but able to reach 157 because of eliminating the extreme cases and some missing values and few questionnaires were not returned. The cronbach's α reliability test was performed for each factor to know reliability of measurement items. Multiple regression analysis was used to know which factor influence more towards the satisfaction level of customers. It was inferred from the study that the customers were more satisfied with after sales service and also during the service. But, they feel the before sales service was not much satisfactory.

Keywords: Before, During and After Sales Service, Multiple Regression, Tata Motors

I. INTRODUCTION

The automotive industry is experiencing significant changes in global market volumes, with flat sales in Western Europe and increasing importance of the emerging markets of Eastern Europe, Russia, China and India. This growing importance includes not only new car sales, but also the aftermarket. Given the fact that the aftermarket business creates attractive revenues and margins, aftermarket activities are on the management agenda in both established and emerging markets.

Winning the aftermarket is far from easy, since it entails significant complexity, a large number of maintenance and parts activities, and crucial supply chains.

Tata Motors was established in 1945 as Tata Engineering and Locomotive Co. Ltd. to manufacture locomotives and other engineering products. It is India's largest automobile company, with standalone revenues of Rs. 25,660.79 crores (USD 5.5 billion) in 2008–09. It is the leader in commercial vehicles in each segment, and among the top three in passenger vehicles with winning products in the compact, midsize car and utility vehicle segments. The company is the world's fourth largest truck manufacturer, and the world's second largest bus manufacturer.

The company's 23,000 employees are guided by the vision to be 'best in the manner in which they operate best in the products they deliver and best in their value system and ethics.'

Tata Motors' presence indeed cuts across the length and breadth of India. Over 4 million Tata vehicles ply on Indian roads, since the first rolled out in 1954. The company's manufacturing base in India is spread across Jamshedpur (Jharkhand), Pune (Maharashtra), Lucknow (Uttar Pradesh), Pantnagar (Uttarakhand) and Dharwad (Karnataka). Following a strategic alliance with Fiat in 2005, it has set up an industrial joint venture with Fiat Group Automobiles at Ranjangaon (Maharashtra) to produce both Fiat and Tata cars and Fiat powertrains. The company is establishing a new plant at Sanand (Gujarat). The company's dealership, sales, services and spare parts network comprises over 3500 touch points; Tata Motors also distributes and markets Fiat branded cars in India.

Tata Motors, the first company from India's engineering sector to be listed in the New York Stock Exchange (September 2004), has also emerged as an international automobile company. Through subsidiaries and associate companies, Tata Motors has operations in the UK, South Korea, Thailand and Spain. Among them is Jaguar Land Rover, a business comprising the two iconic British brands that was acquired in 2008. In 2004, it acquired the Daewoo Commercial Vehicles Company, South Korea's second largest truck maker. The rechristened Tata Daewoo Commercial Vehicles Company has launched several new products in the Korean market, while also exporting these products to several international markets. Today two-thirds of heavy commercial vehicle exports out of South Korea are from Tata Daewoo. In 2005, Tata Motors acquired a 21% stake in Hispano Carrocera, a reputed Spanish bus and coach manufacturer, with an option to acquire the remaining stake as well. Hispano's presence is being expanded in other markets. In 2006, it formed a joint venture with the Brazil-based Marcopolo, a global leader in body-building for buses and coaches to manufacture fully-built buses and coaches for India and select international markets. In 2006, Tata Motors entered into joint venture with Thonburi Automotive Assembly Plant Company of Thailand to manufacture and market the company's pickup vehicles in Thailand. The new plant of Tata Motors (Thailand) has begun production of the Xenon pickup truck, with the Xenon having been launched in Thailand at the Bangkok Motor Show 2008.

Tata Motors is also expanding its international footprint, established through exports since 1961. The company's commercial and passenger vehicles are already being marketed in several countries in Europe, Africa, the Middle East, South East Asia, South Asia and South America. It has franchisee/joint venture assembly operations in Kenya, Bangladesh, Ukraine, Russia and Senegal.

The foundation of the company's growth over the last 50 years is a deep understanding of economic stimuli and customer needs, and the ability to translate them into customer-desired offerings through leading edge R&D. With over 2,000 engineers and scientists, the company's Engineering Research Centre, established in 1966, has enabled pioneering technologies and products.

A. Major Car Players in India

1. Tata Motors Ltd.
2. MarutiUdyog Ltd.
3. Hyundai Motors India Ltd.
4. Generals Motors India.
5. Mahindra and Mahindra Ltd.
6. Hindustan Motors.
7. Daimler Chrysler India Private Ltd.
8. Skodu Auto India Private Ltd.
9. Fiat India Private Ltd.
10. Nissan Motors Co.Ltd.

B. Snippets about Maruti

The construction of Maruti Agency House started in 6th Nov.2002 and it was activated on 28 Jan 2003.

The company today has R&D centres in Pune, Jamshedpur, Lucknow, in India, and in South Korea, Spain, and the UK. It was Tata Motors, which developed the first indigenously developed Light Commercial Vehicle, India's first Sports Utility Vehicle and, in 1998, the Tata Indica, India's first fully indigenously passenger car. Within two years of launch, Tata Indica became India's largest selling car in its segment. In 2005, Tata Motors created a new segment by launching the Tata Ace, India's first indigenously developed mini-truck.

In January 2008, Tata Motors unveiled its People's Car, the Tata Nano, which India and the world have been looking forward to. The Tata Nano has been subsequently launched, as planned, in India in March 2009. A development, which signifies a first for the global automobile industry, the Nano brings the comfort and safety of a car within the reach of thousands of families. The standard version has been priced at Rs.100, 000 (excluding VAT and transportation cost).

Designed with a family in mind, it has a roomy passenger compartment with generous leg space and head room. It can comfortably seat four persons. Its mono-volume design will

set a new benchmark among small cars. Its safety performance exceeds regulatory requirements in India. Its tailpipe emission performance too exceeds regulatory requirements. In terms of overall pollutants, it has a lower pollution level than two-wheelers being manufactured in India today. The lean design strategy has helped minimize weight, which helps maximize performance per unit of energy consumed and delivers high fuel efficiency. The high fuel efficiency also ensures that the car has low carbon dioxide emissions, thereby providing the twin benefits of an affordable transportation solution with a low carbon footprint.

In May 2009, Tata Motors ushered in a new era in the Indian automobile industry, in keeping with its pioneering tradition, by unveiling its new range of world standard trucks. In their power, speed, carrying capacity, operating economy and trims, they will introduce new benchmarks in India and match the best in the world in performance at a lower life-cycle cost.

The years to come will see the introduction of several other innovative vehicles, all rooted in emerging customer needs. Besides product development, R&D is also focusing on environment-friendly technologies in emissions and alternative fuels.

Like this they expanded their business in whole Andaman & Nicobar Is. i.e. from northern to southern group of islands.

II. LITERATURE REVIEW

Leonardo Buzzavo and Giuseppe Volpato (2001) investigated in US vehicle market enjoyed an all-time record volume of about 17 million vehicles in 2000, thanks to an extended stage of growth. The US dealer structure is more concentrated than in Europe. Over 30% of dealerships belong to dealer group companies, with the top 5% of groups controlling about 30% of total sales. In the year 2000 there were three dealer groups owning more than 100 dealerships (AutoNation, Sonic Automotive, United Auto Group), while the top 10 dealer groups accounted for only 814 outlets (3.7% of all dealerships) and over 1 million new vehicle sales (5.9% of all sales). However, group ownership is much lower than in the UK market, with few public companies involved. One key reason is that traditionally the holder of the franchise had to be a named individual and not a company. In the USA publicly owned dealerships are a rather recent phenomenon, with just 9 cases in 2001, controlling in total 680 dealerships.

Lucie Kanovska (2009) investigates that the Services have the potential to supplement the goods offering. In the B2B context, product service strategies influence overall client satisfaction, improve new-product adoption and strengthen the client's confidence and the supplier's credibility. In fact, a better service increases both first-time and repeats sales, and thus increases market share. Furthermore the level and quality of the services offered is an effective way to

maintain ongoing relationships. Services often accompany products and add important value for their customers to them. Services can help customers to decide which product to buy. If the product is accompanied with proper customer services then it can be more interesting for potential buyers. Customer services on industrial markets can be the following ones: cooperation on product innovation and production, consultancy before and after sale, sufficient information about a company and its products, payment conditions, transport, packaging and assembling of products according to customer requirements, replacement of spare parts, service in and after maintenance, customer training, special meetings with customers, free phone connection, etc.

Alireza Fazlzadeh, Fatemeh Bagherzadeh and Pegah Mohamadi (2011) investigated the understanding of the effect of after-sales services in satisfaction and post behavioral intentions is important to services marketing managers because it allows them to differentiate their offering substantially, in a way that strengthens the relationship with their clientele in the short, as well as in the long run. The purpose of this paper is to investigate the effect of after-sales services on customers' satisfaction as well as on their behavioural intentions, namely "repurchase intention" and "word-of mouth" (WOM). The research conducted followed a quantitative methodology. The selected research tool was a questionnaire. The study conducted was targeted at customers of a large retail chain marketing home appliances in Iran and 302 usable responses were utilized. A path analysis was performed using the "Amos 18" software. Findings show that after-sales service quality, affect satisfaction, which in turn affects behavioural intentions. Hence, after-sales services affect the overall offering and thus, the quality of the relationship with customers.

Nazim Hussain, Waheed Akbar Bhatti, Azhar Jilani (2011) investigated that Service quality is not a product manufactured in a plant which is delivered Intact to the customers. Service quality involves human capital and the way the service staffs delivers that service quality of service helps increase the market share if perceived quality of service is up to the mark, or lose it if the perceived quality of service is bad. Customer satisfaction is only the base line and not enough for survival in present intense competition scenario. So the aim is a bit higher and it focuses on gaining customer loyalty through enhancing customer's perception about quality of service quality is a multi-dimensional phenomenon. The customer does wish to get the best return of his money in shape of best product or services he buys. If the customer is enjoying service experience then he/she normally returns to the provider and may bring along friends and colleagues. On contrary dissatisfied customer will share his/her experience with others and organization may never know what is going to hit it. While comparing the product with the competitor's, customer sets the priority about its quality, why it is not good like the other product. This is basically the failure of total customer satisfaction

which in turn is the failure of product. In an ever evolving technological environment new and upgraded products with value additions need to be produced to meet the customer needs and growing expectations. Therefore the ability to produce quality product is very necessary besides the installation of new machinery.

M. van Birgelen, K. de Ruyter, A. de Jong and M. Wetzels (2011) investigated that the technological advances extend the after-sales services portfolio from traditional service encounters to voice- and bit-based services. Technology enables service organizations to transcend geographical as well as cultural boundaries. It might even result in geographical convergence, often treated synonymously with cultural convergence. In this paper we address this issue. This paper examines the interaction between perceived service performance and national cultural characteristics in the formation of customer satisfaction for three types of after-sales service contact modes. The results suggest that, in contrast to the traditional face to- face service encounter, the perceived quality-satisfaction relationship is particularly moderated by national culture in case of an after-sales service contact mode mediated by technology. Eindhoven Centre for Innovation Studies, the Netherlands

III. EMPIRICAL METHODOLOGY

A. Research Design

The structured questionnaire was designed to elicit the response from the customers. And the type of questions used in constructing a structured questionnaire includes Dichotomous questions, multiple choice questions and scale questions. The researcher tried for 200 customers, but able to reach 157 because of eliminating the extreme cases and some missing values and few questionnaires were not returned.

B. Measurement

The constructs and measurement items used in this research regarding before sales, during sales visit and after sales service rendered to the customers by the Tata Motors at Pondicherry. Apart from the demographic attributes and user preference for vehicle, all other measures were assessed via a 5-point scale ranging from "Highly satisfied" to "Highly dissatisfied". These scales were reverse coded where appropriate.

C. Data Description

The questionnaire was pre-tested on thirty individuals and was revised according to their feedback. It was sent to target people in Chennai. A total of 200 respondents were distributed and 157 of them were returned within the specified time frame (response rate 78.5%). From Figure 1, a total of 15% were under the age of 20-30 years, 30% of customers were under the age of 31-40 years, 38% of customers were under the age of 41-50 years and 17% of

customers were above 50 age. The employment status shows that 78 % of the customers were Government Employees, 22% of the customers were Private Workers/Business Peoples and only 2% of them were Home makers. About 86% of the customers prefer to buy a new car and 14% of the preferred used cars.

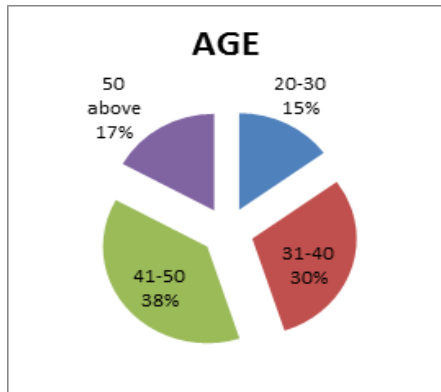


Fig. 1 Buyer Age

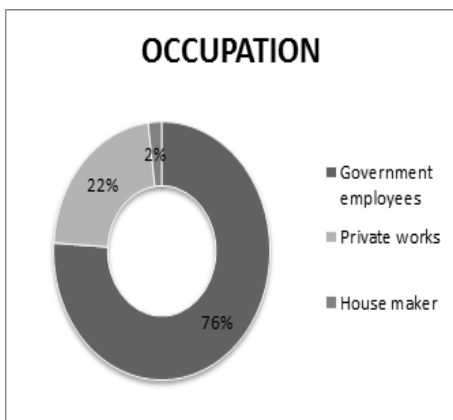


Fig. 2 Buyer Occupation

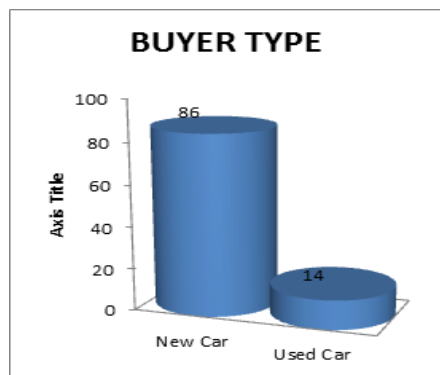


Fig. 3 Buyer Type

IV. DATA ANALYSIS

The reliability test was performed using cronbach's α for each measuring factors. From Table 1, there is high reliability for Service Visit Quality (.860) and also for before sales (.820). After sales is reliable at .732.

Descriptive Statistics regarding the overall customer satisfaction towards various measurement items are shown in Table 2, including the mean, standard deviation, and ranking. The table shows that all of these components are important to customer satisfaction, as means are all higher than the neutral score of 3.

TABLE 1 RELIABILITY TEST

Factor	Mean	Cronbac's α	No. of items
Before Sales	4.09	.820	6
Service Visit	3.86	.860	5
After Sales	3.96	.732	3

The multiple regression analysis was conducted to determine which factors contribute more towards the satisfaction level of customers. The results of multiple regression analysis are depicted in Table 3 are as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3$$

Where,

Y = Overall Customer Satisfaction

α = intercept of customer satisfaction

β_1 = Coefficient of before sales service (X1)

β_2 = Coefficient of service visit quality (X2)

β_3 = Coefficient of after sales service (X3)

Since the R value is .708, which is nearest to 1, and the R2 value is 50%, so the model has a moderate fit. The after sales service is found significant at 0.000 and also the service visit quality at .002. But the service before sales is insignificant (.701)

A. Regression Line

$$Y_{(OVS)} = 1.161 - .030X_{1(BS)} + .248X_{2(SVQ)} + .553X_{3(AS)}$$

Where,

OVS = Overall Customer Satisfaction; BS = Before Sales; AS = After Sales

TABLE 2 MEASURES OF ITEMS FOR BEFORE, DURING AND AFTER SALES

Measurement items	Min	Max	Mean	Rank	SD
Approach	2	5	4.1538	1	0.54659
Documentation work	2	5	4.1338	2	0.62116
Information	2	5	4.121	3	0.64401
Service Schemes & offers	2	5	4.1097	4	0.59835
call handling	2	5	4.0446	5	0.53522
Delivery process	2	5	4.0382	6	0.724
Delivery time	2	5	3.9873	7	0.82421
Customer treatment	2	5	3.9554	8	0.70113
Speed of response	2	5	3.9427	9	0.61229
Servicing of vehicle.	2	5	3.9236	10	0.66546
Competent persons for service.	2	5	3.8917	11	0.62614
Reminder for free service	2	5	3.879	12	0.81924
Feedback from service supervisors	2	5	3.828	13	0.72659
Time taken to repair	2	5	3.707	14	0.85681

TABLE 3 MULTIPLE REGRESSION

Multiple R	0.708				
R ²	0.501				
Adjusted R ²	0.491				
Standard error	0.371				
	DF	Sum of Squares	Mean Square		
Regression	3	21.025	7.008		
Residual	153	20.975	.137		
F = 51.20	Significance of F = 0.000				
Variables in the Equation					
Variable	B	SE_B	Beta(B)	T	Sig of T
Before Sales	- 0.032	0.084	-.385	0.701	
Service Visit	0.223	0.072	-.030	3.090	0.002
After Sales	0.533	0.071	.248	7.514	0.000
(Constant)	1.161	0.270	.5534	.304	0.000

V. DISCUSSIONS AND CONCLUSION

The survey analyzed and examined the customer satisfaction level of "Before & After Sales service of the Tata Motors Ltd. In Andaman most of the customers are satisfied with the services of the Tata Motors Ltd. This study attempted to understand, what factor that influence customer more towards their satisfaction level. Finally the researcher identified through analysis was the service visit quality and the after sales service attracts the customer more than before sales service.

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