

A STUDY ON CONSUMER SATISFACTION TOWARDS AMT CAR WITH SPECIAL REFERENCE TO ERODE CITY

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Abstract: In the Indian scenario both men and women are going for employment not only to meet their financial demand but also to live with comfort. As a result, the needs and wants of the people have increased. In the recent years, many manufacturing companies have diversified their business activities to meet both the needs of the household and industrial users and there by introducing lot of new technologies in the automobile sector. In automobile sector the car is very essential for today's generation. Reliability, modern style and economy are demanded by the mass segment, while convenience is the important feature for the emerging segment seeking the power and pleasure of riding a car. The manufacturers are responding to these Consumer needs with the introduction of new models with innovative technology in different varieties.

Keywords: Primary market, benefits and demerits, costs, extent literature review.

1. INTRODUCTION

The Indian automobile industry seems to come a long way since the first car that was manufactured in Mumbai in 1898. The automobile sector today is one of the key sector of the country contributing majority to the economy of india. The automobile industry has a well established name globally being the second largest two wheeler market in the world, fourth largest commercial vehicle market in the world, and eleventh largest passenger car market in the world and expected to become the third largest automobile market in the world only behind USA and China. India is also a prominent auto exporter and has strong export growth expectations for the near future. In addition, several initiatives by the government of India and the major automobile players in the Indian market are expected in the world by 2020.

This research discusses the development of such a control framework for the car which is called the automated manual transmission, which consists of a joint mechanism between the driver and car, decision making and control. The study also gives a n idea about general attitude of a Consumer towards Automated Manual Transmission (AMT) Car and also reveals that the trend in performance of the vehicle. The Indian car industries have acquired a new dimension in the last five years with intense competitions and introduction of the state of art-technology changing the very complexion of the car market.

Statement of the Problem:

The creation of Automated Manual Transmission(AMT) car is attracted by a majority of the society. The young generation always prefers to drive a high-speed engine with immediate pickup and comfortable car whereas the old generation prefers a moderate pickup and moderate speed and fuel economy. It helps to drive very comfortable in traffic. In other side, AMT cars are not advisable to drive very on hills and slope driving. In this type cars are not having auto release function due to cost reduction technique. So, while using hill driving, it is advisable and recommended to choose in manual mode(in AMT). the researcher were probed the following questions.

- What extent the advertisement attracted the consumers of AMT ?
- What are the factors that influence the consumer satisfaction in using AMT cars ?

- What are the problems faced by the consumers in using AMT cars ?

Scope of the Study:

This study mainly focuses on the consumers' satisfaction towards the Automated Manual Transmission car in the Erode City. The consumers are influenced by external and internal factors such as the color, pickup, durability, engine power, mileage and so on. The study supports the policy makers for examining the problems faced by the consumers and examining the model based services by the consumers.

Objectives of the study:

- To study the effect of advertisement on the Consumers to promote the product.
- To ascertain the factors influencing the Consumer Satisfaction towards Automated Manual Transmission (AMT) cars.
- To study the level of satisfaction of the respondents about price, driving comfort and the appearance of AMT cars.
- To analyse the problems of Consumers of AMT cars.
- To study the users opinion regarding the performance of AMT car in Erode City.
- To offer suitable suggestions to improve the performance of AMT car.

2. RESEARCH METHODOLOGY

Collection of Data:

The researcher used both primary and secondary data.

❖ **Primary Data**

The primary data collected from the Consumers through questionnaire. For the collection of data, a well structured questionnaire was framed and distributed to the consumers in the Erode city.

❖ **Secondary Data**

Besides the primary data, the secondary data was also collected for the study. Leading journals, magazine and Google search were referred for this purpose from library to facilitate proper understanding of the study.

Sample size and technique:

A sample size of 250 respondents was taken for the study. Convenient sampling method has been used for selecting the sample respondents.

Are of the study:

The area of the study was confined to Erode City.

Statistical tools:

The statistical tools used in this study are

- Percentage analysis
- Chi – Square test
- Weighted Average Method
- Correlation analysis

3. REVIEW OF LITERATURE

The review of literature is an important activity in research because it helps the researcher to learn and understand the concept of the study and the problem he/she is going to probe. The review of literature is also useful in learning about the appropriateness of various statistical tools by comparing the tools used in the past researches by various means and ways of conducting a research and outcomes of such researches and their theoretical importance. The review of literature

further helps the researcher to identify the gap(s) that exist in the area of study and one of the gaps will be eventually taken by the researcher for further investigation and analysis.

In today's life there is no house without a car. Many people have the idea of driving a car easily, that's the AMT car. There are a lot of people saying and write about it. It's about as follows:

Muruganandam (1997)¹ in his study entitled "A Consumer Brand Preference for Motor Cars in Coimbatore City" stated that the factors that influence consumers in the preference of a car were price, design and after sales services provided by the dealer. He concluded that the price and design influenced more to buy Maruti and Ambassador Cars and further revealed that the after-sales service was good.

Mandeep Kaur and Sandhu H.S(2004)² in their article entitled "A study on factors influencing buying behavior of passenger car market" examines the factors that customer considers while going for the purchase of a new car. The study covers the owners of passenger cars living in the major cities of the state of Punjab and union Territory of Chandigarh. The respondents consider that safety and comfort are the most important features of the passenger car followed by luxury. So, the manufactures must design the product giving maximum weight age of these factors.

4. OVERVIEW OF AUTOMATED MANUAL TRANSMISSION (AMT) CAR

Now a days we depend on car for all our work whether it is small or big. We need to take proper care and should give a complete servicing in regular time interval basis. In the recent times, the craze for automatic transmission car has increased to great extent. Many people are attracted towards automatic transmission car. But it didn't decrease the sale of manual transmission car. Many companies of car manufacturing has manufactured both automatic and manual transmission car.

A transmission basically transfers the power from a car's engine to drive shaft and the wheels. The gears present inside the transmission change the drive wheel speed and torque in relation to the engine speed and torque (pulling power), Lower gear ratios helps the engine to build up enough of power so that the car can easily accelerate from a halt.

The transmission is a device that is connected to the back of the engine and sends the power from the engine to the drive wheels. An automobile engine runs at its best at a certain RPM (Revolutions Per Minute) range and it is the transmission's job to make sure that the power is delivered to the wheels while keeping the engine within that range.

In first gear, the engine turns much faster in relation to the drive wheels, while in high gear the engine is loafing even though the car may be going in excess of 70 MPH. In addition to the various forward gears, a transmission also has a neutral position which disconnects the engine from the drive wheels, and reverse, which causes the drive wheels to turn in the opposite direction allowing you to back up. Finally, there is the Park position.

MANUAL TRANSMISSION:

The Manual Transmission enables the driver to shift the gears manually as per the driving requirements and a manual clutch was pressed while shifting the gear from one to another, which uses a solid clutch plate. There is no doubt that a Manual adds the fun in driving due to the changing of gears but as long as you are driving on a clean empty stretch.

There are various types of gear systems, viz., simple gear system, column type gear shifting and planetary gear system. In city driving, especially like of India where there are mammoth traffic jams, a manual gearbox could prove to be tiresome to shift in every next moment.



Manual Transmission

Features of Manual Transmission:

Manual Transmission cars are the driver to change the gear as per driving needs and there is a manual clutch pedal used while changing gears. The features are as follows:

Easiness

The manual transmission is about the person who is new to driving may find manual gearbox to be messy and confusing to operate but it's all about interest and doesn't takes much time to get familiar with its functioning.

Fuel Efficiency

For Fuel Efficiency conscious, manual makes an ideal choice over an automatic gearbox due to its less consumption of fuel by which your car runs on. However, with the rapid increase in technology, the gap of fuel efficiency is being gradually filled between manual and automatic gearbox.

Maintenance

Manual Transmission cars are much cheaper than their counterparts having automatic gearbox, so is their maintenance. The vehicles engaged with a manual Gear box prove to be much lighter on your pocket when it comes to maintenance or purchase simply because of their not-so- complex working.

Problems of Manual transmission:

Manual transmission is important to keep up a regular maintenance schedule for the car. Many times major expensive repairs can be avoided if the vehicle is properly maintained. The problems of manual transmission cars are given below.

- ❖ **Learning curve** : those learning to drive a manual can expect the first few rider to involve jerking and stalling while becoming accustomed to the clutch and shifting timing.
- ❖ **Difficulty on hills** : stopping on a hill and starting again can be inconvenience as well as scary. Since the vehicle rolls back, drivers have rolled into traffic or stalled.
- ❖ **Pain from the clutch** : the left leg will be in constant use when driving a stick shift car. Over time, it can mess with the joints in the leg.

AUTOMATED MANUAL TRANSMISSION (AMT)

The Automated Manual Transmission (AMT) is an intermediate technological solution between the Manual Transmission in Europe and Latin America and the Automated Manual Transmission popular in North America, Australia and part of Asia.

The Driver, instead of using a gear shift and clutch to change gears, presses a + or button and the system automatically disengages the clutch, changes the gear, and engages the clutch again while modulating the throttle; the Driver can also choose a fully Automated mode. AMT is an add-on solution on Classical Manual Transmission system with control technology helping to guarantee performance and ease of use.

An AMT is composed of a dry clutch, a gearbox, and an embedded dedicated control system that uses electronic sensors, processors, and actuators to actuate gear shifts on the driver's command. This removes the need for a clutch pedal while the driver is still able to decide when to change the gear. The clutch itself is actuated by electronic equipment that can synchronize the timing and the torque required to make gear shifts quick and smooth. The system is designed to provide a better driving experience, especially in cities where congestion frequently causes stop-and-go traffic patterns.

AMT have been used in racing cars for many years, but only recently have they become feasible for use in everyday vehicles with their more stringent requirements for reliability, cost, and ease of use.



Automated Manual Transmission

ADVANTAGES OF AMT

The AMT car are today something useful for society. There are lot of advantages and disadvantages when owing a AMT car. Its advantages are as follows:

- ❖ Changing gears without using a foot to operate the clutch
- ❖ No engine or gear modifications
- ❖ Less physical or psychological stress
- ❖ More comfortable than manual transmissions
- ❖ More “fun” factor compared to fully automatic transmissions
- ❖ AMT is not a clutch-less solution. It has a clutch but there is no clutch pedal.
- ❖ AMT is a kit that can be added to any manual transmission.
- ❖ AMT operates on the manual transmission car in the way a driver would; it engages and disengages the clutch and gears. It also has a SPORTS mode, which enables drivers to move to manual transmission.
- ❖ It is convenient of car manufacturers because if doesn't replace the manual transmission, unlike the Automatic Transmission System, which is entirely different.
- ❖ AMT is more fuel efficient the manual transmission, unlike Automatic Transmission, which reduces efficiency by up to 10% in most cases.
- ❖ The cost differential between Manual Transmission and AMT is Rs.40,000 to Rs.50,000 in India.

DISADVANTAGES OF AMT

Though The AMT car is having many advantages it is having some disadvantages also. The disadvantages of AMT car are as follows:

- ❖ Expensive to repair. Replacement is often more cost effective option.
- ❖ Unsuitable for use in off-road environments because it cannot provide engine braking.

Changing the gears frequently in city traffic is a boring work and Indian road traffic is becoming dense every day. So, driving a car in such a dense traffic condition becomes lactic work. The one hand is fully with gear, while another manages the steering control. One leg is busy pressing the clutch pedal again and again while another leg is busy is breaking and accelerating the car. Manufacturers have realized this situation and started offering AMT cars into Indian market.

5. CHI-SQUARE TEST

The Chi-Square test is a technique used to test independence of any two attributes. In other words. it is used to test whether one characteristics has significant influence over the other for applying Chi-Square test.

AGE AND LEVEL OF SATISFACTION

With a view to find the degree of association between age of the respondents and level of satisfaction, two way tables is prepared and result is shown in the following table.

TABLE : AGE AND LEVEL OF SATISFACTION (TWO WAY TABLE)

| LEVEL OF SATISFACTION | | | | |
|-----------------------|----------------|----------------|----------------|-------|
| AGE | HIGH | MEDIUM | LOW | TOTAL |
| BELOW 25 YEARS | 12 (18.46%) | 32 (28.31%) | 14 (19.44%) | 58 |
| 25-35 YEARS | 24 (36.92%) | 46 (40.70%) | 32 (44.44%) | 102 |
| 35-45 YEARS | 17 (26.15%) | 22 (19.46%) | 12 (16.66%) | 51 |
| ABOVE 45 YEARS | 12 (18.46%) | 13 (11.50%) | 14 (19.44%) | 39 |
| TOTAL | 65 | 113 | 72 | 250 |

Source: Primary Data

It is found from the table 4.33 that the percentage of high level of satisfaction on using the AMT car is highest (36.92%) among 25-35 years and lowest (18.46%) among below 25 years and above 45 years. The percentage of medium level of satisfaction perceived by the respondents is highest (40.70%) among 25-35 years and lowest (11.50%) among above 45 years. The percentage of lowest level of satisfaction perceived by the respondents is highest (44.44%) among 25-35 years and lowest (16.66%) among 35-45 years.

CHI-SQUARE TEST

In order to find out the relationship between the age and level of satisfaction the chi-square test is used and the result is given below.

NULL HYPOTHESIS(H₀) : There is no relationship between the age and level of satisfaction

ALTERNATIVE HYPOTHESIS(H_a) : There is a close relationship between the age and level of satisfaction

TABLE : AGE AND LEVEL OF SATISFACTION CHI-SQUARE TEST

| FACTOR | DEGREES OF FREEDOM | CALCULATED VALUE | TABLE VALUE | SIGNIFICANT LEVEL |
|--------|--------------------|------------------|-------------|-------------------|
| AGE | 6 | 10.02 | 12.592 | 5% |

It is noted from the above table that the calculated value (10.02) is lower than the table value (12.592) therefore null hypothesis is accepted. Hence there is no relationship between the age and level of satisfaction.

MONTHLY INCOME AND LEVEL OF SATISFACTION

With a view to find the degree of association between monthly income of the respondents and level of satisfaction, two way tables is prepared and the result is shown in the following table.

TABLE: MONTHLY INCOME AND LEVEL OF SATISFACTION (TWO WAY TABLE)

| LEVEL OF SATISFACTION | | | | |
|-----------------------|----------------|----------------|----------------|-------|
| MONTHLY INCOME | HIGH | MEDIUM | LOW | TOTAL |
| BELOW Rs.25,000 | 14 (25%) | 25 (22.32%) | 30 (36.5%) | 69 |
| Rs.25000 – Rs.50,000 | 17 (30.35%) | 28 (25%) | 22 (26.82%) | 67 |
| Rs.50,000-Rs.75,000 | 11 (19.64%) | 24 (21.4%) | 13 (15.85%) | 48 |
| Above Rs.75,000 | 14 (25%) | 35 (31.25%) | 17 (20.73%) | 66 |
| TOTAL | 56 | 112 | 82 | 250 |

Source : Primary Data

It could be observed from the above table 5.3 that the percentage of high level of satisfaction on using AMT car is highest (30.35%) among Rs.25,000 to Rs.50,000 and lowest (19.64%) among Rs.50,000 to Rs.75,000. The percentage of medium level of satisfaction is highest (31.25%) among above Rs.75,000 and lowest (21.4%) among Rs.50,000 to Rs.75,000. The percentage of lowest level of satisfaction is highest ((36.5%) among below Rs.25,000 and lowest (15.85%) among Rs.50,000 to Rs.75,000.

CHI-SQUARE TEST

In order to find out the relationship between the monthly income and level of satisfaction the chi square test is used and the result is given below.

NULL HYPOTHESIS (Ho): There is no relationship between monthly income and level of satisfaction

ALTERNATIVE HYPOTHESIS (Ha): There is a close relationship between the monthly income and level of satisfaction

TABLE: MONTHLY INCOME AND LEVEL OF SATISFACTION CHI-SQUARE TEST

| FACTOR | DEGREES OF FREEDOM | CALCULATED VALUE | TABLE VALUE | SIGNIFICANT LEVEL |
|----------------|--------------------|------------------|-------------|-------------------|
| MONTHLY INCOME | 6 | 11.25 | 12.592 | 5% |

The above analysis revealed that the calculated value (11.25) is less than the table value (12.592). Therefore the null hypothesis is accepted. Hence there is no relationship between the monthly income and level of satisfaction.

BRAND OF AMT CAR AND LEVEL OF SATISFACTION

With a view to find the degree of association between brand of amt car of the respondents and level of satisfaction, two way tables is prepared and the result is shown in the following table.

TABLE: BRAND OF AMT CAR AND LEVEL OF SATISFACTION (TWO WAY TABLE)

| LEVEL OF SATISFACTION | | | | |
|-----------------------|----------------|----------------|----------------|-------|
| BRAND OF AMT CAR | HIGH | MEDIUM | LOW | TOTAL |
| MARUTI | 7 (11.67%) | 20 (20.40%) | 8 (8.6%) | 35 |
| RENAULT | 17 (28.33%) | 33 (33.67%) | 30 (32.60%) | 80 |
| HYUNDAI | 10 (16.67%) | 11 (11.22%) | 22 (23.9%) | 43 |
| MAHINDRA | 12 (20%) | 18 (18.36%) | 17 (18.47%) | 47 |
| OTHERS | 14 (23.3%) | 14 (16.32%) | 15 (16.30%) | 45 |
| TOTAL | 60 | 98 | 92 | 250 |

Source : Primary Data

It could be observed from the above table 4.37 that the percentage of high level of satisfaction on using AMT car is highest (28.33%) among Renault and lowest (11.67%) among Maruti. The percentage of medium level of satisfaction is highest (33.67%) among Renault and lowest (11.22%) among Hyundai. The percentage of lowest level of satisfaction is highest ((32.60%) among Renault and lowest (8.6%) among Maruti.

CHI-SQUARE TEST

In order to find out the relationship between brand of AMT car and level of satisfaction the chi square test is used and the result is given below.

NULL HYPOTHESIS (Ho): There is no relationship between brand of AMT car and level of satisfaction

ALTERNATIVE HYPOTHESIS (Ha): There is a close relationship between the brand of AMT car and level of satisfaction

TABLE: BRAND OF AMT CAR LEVEL OF SATISFACTION CHI-SQUARE TEST

| FACTOR | DEGREES OF FREEDOM | CALCULATED VALUE | TABLE VALUE | SIGNIFICANT LEVEL |
|------------------|--------------------|------------------|-------------|-------------------|
| BRAND OF AMT CAR | 8 | 11.388 | 15.507 | 5% |

The above analysis revealed that the calculated value (11.388) is less than the table value (15.507). Therefore the null hypothesis is accepted. Hence there is no relationship between the brand of AMT car and level of satisfaction.

6. FINDINGS

PERCENTAGE ANALYSIS

- It is observed from the analysis that the majority (34%) of the respondents are in the age group of 35-45 years.
- It is determined from the analysis that the majority (76%) of the respondents are male.
- It is concluded from the analysis that the majority (73%) of the respondents are married.
- It is evaluated from the analysis that the majority (40%) of the respondents are living in urban area.
- It is noted from the analysis that the majority (44%) of the respondents are graduates.
- It is evaluated from the analysis that the majority (46%) of the respondents are working in private concern.
- It is obtained from the analysis that the majority (36%) of the respondents are having Rs.25,000 to Rs.50,000 monthly income.
- It is explored from the analysis that the majority (52%) of the respondents are having 3-5 members family.
- It is stated from the analysis that the majority (25%) of the respondents are having Maruti AMT cars.

Suggestion:

- Most of the people are not much aware of AMT car. Hence Manufacturer should create awareness about AMT car through more advertisements. These advertisement measures attract more people to buy AMT car and this in turn would boost up volume of sales.
- From the analysis, it is observed that majority of the respondents who belong to 25-35 years aged have perceived high level of satisfaction towards AMT cars than other counterparts. It indicates the gentle utilization of the medium aged respondents for their commitment in jobs and business. So, it is recommended to the policy makers that they should take necessary steps through real survey from below 25 years and above 35 years aged respondents and resolve the dissatisfied or disappointed product or services. It leads to increase the satisfaction of the consumers in utilizing AMT cars in Erode city.
- The price of AMT car is high when compared to Manual Transmission car. It Lower income group people are not able to buy the AMT cars due to its high cost. Hence, it is suggested to the manufacturers as well as government that in the recent technological era of the world, they should manufacture the AMT cars with focus of all category income people in India. It increases the usage of AMT cars and capture the market share.

From the analysis, it observed that consumers, who owned Renault AMT cars, have perceived high level of satisfaction than other cars. Even though, Indian Giant Maruti plays an important role in the AMT sector, France based company has more satisfaction among the consumers in Erode due to its performance. So, other players should concentrate the problems and take necessary steps to capture the Erode market.

7. CONCLUSION

Currently the global market presents many different cars by well-known carmakers. In this line, the penetration of Automated Manual Transmission cars also grasps the car market segment. This research is mainly focused on examining the satisfaction level of the consumers towards AMT cars in Erode. Through this research, it is understood that the AMT car users have faced some problems like less mileage, driving discomfort in hill area, high cost of spare parts, less service

support and more maintenance. Anyway, the consumers have perceived high level of satisfaction in utilizing AMT cars because of its automotive performance in the study area. It is easy to drive by the soft handled car users. But it is not success in the youth market segment. Anyway, it is a rewarding exercise, if the policy makers, government and marketers has to be implements the suggestions recommended by the researcher then the sales will increase.

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