# ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue **JETIR.ORG** JOURNAL OF EMERGING TECHNOLOGIES AND



# **INNOVATIVE RESEARCH (JETIR)**

An International Scholarly Open Access, Peer-reviewed, Refereed Journal

# **A COMPARATIVE STUDY ON CONSUMER USAGE OF PETROL AND DIESEL VEHICLE**

# **PROJECT REPORT**

Submitted in partial fulfillment of the requirements for the award of the degree of

# **BACHELOR OF COMMERCE**

At the Bharathiar University

# By ARUN.R.B

Under the Guidance of

Mr. D. SHANMUGAVADIVEL, M.Com., M.Phil., MBA., PGDCA., SET, (Ph.D.)

Assistant Professor

# **DEPARTMENT OF COMMERCE**

# Dr. N.G.P. ARTS AND SCIENCE COLLEGE

(An Autonomous Institution, Affiliated to Bharathiar University, Coimbatore) Approved by Government of Tamil Nadu & Accredited by NAAC with A<sup>++</sup> Grade (3<sup>rd</sup> Cycle -3.64 CGPA) Dr. N.G.P.-Kalapatti Road, Coimbatore-641 048, Tamil Nadu, India.

# **CHAPTER - I INTRODUCTION**

# **1.1 INTRODUCTION TO THE STUDY**

The modern marketing concept emphasises the importance of understanding the buyer's mind in order to be a successful marketer. As a result, the concept of the buyer's mind has been likened to a black box that needs to be opened by the seller in order to understand the consumer's decision-making process. This study aims to shed light on the various factors that influence a customer's decision to purchase a car. By gaining a deeper understanding of these factors, marketers can tailor their strategies to effectively target their audience and increase sales. Understanding the customer's needs, preferences, and decision-making process is crucial for successful management of a firm in today's highly competitive market. Thus, this study aims to provide

valuable insights into the factors that are considered by customers before purchasing a car, which can be used by marketers to improve their marketing strategies and ultimately, their sales results.

Understanding consumer preferences allows car manufacturers to create vehicles that meet those expectations, helping them to boost sales. There are many uses for diesel, and India depends heavily (by about 80%) on imported crude oil, which serves as the main raw material, to produce it. This in turn raises a variety of issues, including pricing structures that have an impact on both the current account and fiscal balance as well as resource allocation and technology adoption. As a result, attempts to preserve the uninterrupted supply of diesel and the price of diesel have caught the attention of those who make decisions about policy in the car industry. Manufacturers have a good understanding of customer preferences and they use this knowledge to design cars that meet the expectations of their target audience. By doing so, they are able to increase their sales and build a loyal customer base. Diesel is a versatile fuel that is used for a variety of applications, and India is heavily dependent on imported crude oil for its production. This dependence on imported crude oil has given rise to several concerns, including the pricing mechanism, which has a significant impact on the adoption of technology and the allocation of resources.

On one hand, the pricing mechanism affects the cost of diesel and the technology adopted to produce it. It also affects the allocation of resources and the level of investment made in the industry. On the other hand, the pricing mechanism also has a direct impact on the country's current account and fiscal balance. A high cost of diesel will lead to a rise in the cost of production for businesses and increased inflation for consumers, putting a strain on the country's economy.

Therefore, it is important for manufacturers to take these factors into consideration when designing cars that run on diesel. By developing vehicles that are fuel-efficient and environmentally friendly, manufacturers can not only meet the needs of their customers but also contribute to the sustainability of the country's economy.

#### **1.2 STATEMENT OF PROBLEM**

Before selecting an automobile, consumers might research many criteria. These variables may vary from person to person. Few consumers buy a car based on its fuel type—petrol or diesel—and even fewer may opt for a particular brand or model based on its mileage. The type of automobile a customer prefers depends on both safety and aesthetics. Car product quality has an impact on consumer preference. A customer's decision to choose an automobile is influenced by competitive gas and fuel prices as well as service level. Customers will consider the cost of petrol and diesel while buying a car. A customer's preference for an automobile is influenced by its full efficiency and after-sales service. These studies highlight the key elements that drive people to buy gasoline-powered vehicles rather than diesel ones.

#### **1.3 OBJECT OF THE STUDY**

- A study on consumers opinion towards petrol & diesel.
- To know the consumers preference towards petrol & diesel vehicles.
- To study on consumers satisfaction towards petrol & diesel vehicles.

#### **1.4 SIGNIFICANCE OF THE STUDY**

The company conducts customer surveys to gather feedback and gauge the level of satisfaction of its customers. This is done after customers have made a purchase of a car, to ensure that they have had sufficient time to experience the product and provide a fair evaluation. The survey is usually sent via email to the customer's registered address, and it asks the customer to rate their satisfaction level and provide rankings based on various aspects of the car such as performance, comfort, and design. One important piece of information that the company records is the difference in the purchase level of petrol and diesel cars. By understanding the customer preference for one type of fuel over the other, the company can make informed decisions about its future production and sales strategies. This information can also help the company to identify trends and changes in customer behavior, and to respond to these changes by adapting its products and services accordingly. The results of the customer surveys are analyzed and used to improve the company's products and services, as well as its overall customer experience. The company strives to provide the best possible service and products to its customers, and the feedback collected through the customer surveys plays an important role in achieving this goal. By regularly collecting and analyzing customer feedback, the company can ensure that it is meeting the needs and expectations of its customers and remain competitive in an ever-changing market.

#### **1.5 SCOPE OF THE STUDY**

The survey aids in determining consumer preferences for petrol and diesel vehicles. 150 people's comments served as the basis for this study. The business is aware of client preferences for petrol and diesel vehicles.

#### **1.6 RESEARCH METHODOLOGY**

#### **1.6.1 MEANING OF RESEARCH**

Research methodology is a way to systematically solve the research problems. It may be understood as a science of studying how research is done scientifically. It includes the Overall research design, the sampling procedure, data collection method and analysis procedure.

#### **1.6.2 AREA OF STUDY**

This study has been considered only in the Coimbatore.

#### **1.6.3 SAMPLE SIZE**

The sample size taken for the study is 100 Respondents.

# **1.6.4 SOURCES OF DATA**

There are two types of data has been evolved in the process, they are

Primary data

Secondary data

# **1.6.5 PRIMARY DATA:**

The primary data are those that are collected through questionnaire and direct personal interview. The questionnaire was framed in such a manner to obtain correct information graded suitably for study. All the questionnaires were collected through personal contact from the respondents.

# **1.6.6 SECONDARY DATA**

Secondary data regarding the industry, company and products were obtained from

- Internet
- Company personnel
- Books

#### 1.6.7 TOOLS AND TECHQUNIES USED

Statistical tools are to obtain finding and average information in logical sequence from the data collected after tabulation of data the researcher used following quantitative techniques.

Percentage Analysis: Percentage analysis shows the entire population in terms of percentages.

$$\frac{d}{2} * 100$$

#### Percentage = *n*

Where, d is the number of respondents and n is the base or samples.

**Chi-square analysis:** Chi-square analysis is a statistical method used to determine whether there is a significant association between two categorical variables. It involves calculating the difference between the observed and expected frequencies of data, and then determining the probability of obtaining such a difference by chance alone.

**Ranking analysis:** Ranking analysis can be used in a variety of fields, such as sports, education, and business, to compare and evaluate performance. However, it is important to note that ranking analysis has limitations, such as the potential for bias and the inability to capture the complexity of individual differences. Therefore, it

is important to consider additional factors, such as context and individual strengths and weaknesses, when interpreting ranking results.

#### **1.7 LIMITATIONS OF THE STUDY**

- The sample size chosen is covered only a small portion of the whole population of Coimbatore.
- Getting responses from the users in between their busy schedule was a very difficult task.
- Accuracy of the study is purely based on the information as given by the users.
- The findings are fine only for the present situation and need not be true for any other situation.

#### **1.8 CHAPTER SCHEME**

- **Chapter 1-** Deals with the introduction part, comprising of objective of study, research methodology, limitations and chapters scheme.
- Chapter 2 Deals with the review of literature.
- Chapter 3 Brings out of theoretical background of the study and the organisation.
- Chapter 4 Exhibits the analysis and interpretation.
- Chapter 5 States the findings and suggestions with conclusion.

# CHAPTER - II REVIEW OF LITERATURE

The literature review is a written overview of major writings and other sources on a selected topic. Sources covered in the review may include scholarly journal articles, books, government reports, Web sites, etc. The literature review provides a description, summary and evaluation of each source. It is usually presented as a distinct section of a graduate thesis or dissertation.

#### **Kishore (2011)**

says"it depends on customer usage, if customer daily travel 70 + km then go for diesel no second thought. Diesel cars are 1 lakh expensive than petrol if keep it for 1 lakh in bank (F.D) it will get 950 every month that give go into petrol maintenance cost."

#### P. V. S. V Prasad (2011)

says, diesel price is less when compared to petrol. It's better to use diesel cars. They emit less quantity of carbon particles into the atmosphere. Also diesel prices don't hike as fast as petrol. Otherwise if customer use car for long distances customer opt a petrol engine car.

#### Dash P. K (2013)

Potential Need for Electric Vehicles, Charging Station Infrastructure and its Challenges for the Indian Market: by Praveen Kumar and Kalyan Dash, India should invest in small scale reinforcements to manage the load issues locally rather than going for an enormous change. Home charging should be encouraged. Proper planning of place, population, traffic density and safety should be considered before implementing the massive scale charging infrastructure. The integration of activities within the energy and transport fields is important. Development goals through different innovative policies and programs, for instance, drivers of electrical cars are offered a financial consumer incentive, like tax credits, purchase subsidies, discounted tolls, free parking, and access to restricted highway lanes will help the market to grow.

#### Lee Boyce (2012)

in his opinion, a diesel will typically cost 10 to 15% more to insure than equivalent petrol car. It has higher average accident repair cost, especially if the turbo intercooler is damaged. And many diesels have twin radiators, which are more vulnerable in a head- on collision.

#### Fanchao Liao (2017)

Consumer preferences for electric vehicles: by Fanchao Liao, Eric Molin & Bert van Wee, Widespread adoption of EVs may contribute to lessening of problems like environmental pollution, global warming and oil dependency. However, this penetration of EV is comparatively low in spite of governments implementing strong promotion policies. They presented a comprehensive review of studies on consumer preferences for EV aiming to convey policy-makers and give direction to further research. They compared the economic and psychological approach towards consumer preference for Electric vehicle. The impact of financial and technical attributes of EV on its utility is generally found to be significant, including its purchase and operating cost, driving range, charging duration, vehicle performance and brand diversity on the market. The density of charging stations also positively affects the utility and promotion of EV. The impact of incentive policies, tax reduction is quite effective.

#### Lingzhi Jin (2017)

International Council on Clean Transportation: Lingzhi Jin, Peter Slowik, The early market growth for electric vehicles continues, but a number of barriers prevent their widespread uptake. These barriers include the additional cost of the new technology, relative inconvenience of technology considering range and charge times, and consumer understanding about the availability and viability of the technology. This last point, typically referred to as "consumer awareness," is crucial.

#### Janardan Prasad Kesari (2019)

Opportunities and Scope for Electric Vehicles in India: by Janardan Prasad Kesari, Yash Sharma, Chahat Goel, Developing an aggressive strategy for the adoption of EVs in India and ensuring a wellexecuted implementation is a challenge but vital for government. The geography and diversity of India will present problems that require thoughtful solutions. Public procurement is expected to be an important driver of growth of EVs, with the purchase of four-wheeled vehicles for government offices, three-wheeled vehicles and buses for public transport. Investments by fleet operators such as Ola and Uber, and operators of food distribution services, are also expected to boost the initial growth of two- and four-wheeled electric vehicles. However, the private EVs may take 5- 6 years to gain popularity and acceptance.

#### Mattias Wissman, Soren Dalenback, and Jonas Eliasson (2016)

This study explores the factors that influence consumer choice between petrol and diesel vehicles in Sweden. The authors found that consumers were more likely to choose diesel vehicles if they had a longer commute or drove more frequently. They also found that diesel vehicles were more likely to be chosen by consumers who were older and had higher incomes.

#### John German and Alan Baum (2012)

This study examines the economic and environmental benefits of diesel hybrid vehicles in the United States. The authors found that diesel hybrids had lower fuel consumption and emissions than petrol hybrids, and that they were more cost-effective over the lifetime of the vehicle.

# CHAPTER - III BACKGROUND OF THE STUDY

Diesel and petrol are crucial cogs of the Indian economy. Hence, the usage pattern of these fuels in the agriculture, industrial, and transportation segments, and for back-up power generation through diesel generator (DG) sets, is an indicator of the health of the economy. In fact, optimising and improving efficiencies in the transportation sector can help enhance the competitiveness of all sectors of the economy, and significantly improve India's goal of becoming a \$5 trillion economy by 2025.

To be sure, the fuel retailing segment has shown resilience over the past several years, owing to rising per capita income, and expanding commercial and industrial sectors. But projection of crude oil demand (along with its derivatives) is critical for policymakers to devise strategies for supply optimisation. Analysing diesel and petrol consumption trends across sectors/ sub-sectors also assists in estimating segment-wise secondary sales.

The analysis is even more crucial when India is diversifying its energy base. The road transportation sector is transitioning from crude oil derivate fuels to alternate fuels such as compressed natural gas (CNG), as well as electric mobility. Driving this are the government's various policy measures, including fiscal initiatives.

Against this backdrop, the Petroleum Planning & Analysis Cell (PPAC), along with oil marketing companies (OMCs) – Indian Oil Corporation Ltd (IOCL), Bharat Petroleum Corporation Ltd (BPCL), and Hindustan Petroleum Corporation Ltd (HPCL) – has undertaken an all-India study on segment-wise demand for diesel and petrol sold at retail outlets (ROs) of the OMCs.

The OMCs have engaged CRISIL Risk & Infrastructure Solutions Ltd (CRIS) to carry out an observation study each quarter for 12 months (i.e., four times in total), covering 3,000 ROs that have high diesel sales, across 212 districts in 20 states and two union territories. The study aims to provide a sharp understanding of usage patterns of diesel and petrol across segments that would, in turn, help the OMCs project the supply and infrastructure requirements. The survey was aimed at providing a realistic picture of the consumption pattern. To meet the objectives of the study, at each selected RO, observations were recorded via electronic devices in real time. Two sets of questionnaires were prepared for the ROs. Answers to these questionnaires were recorded on a mobile-based web application. Enumerators were physically present at each of the surveyed ROs to record the fuelling of diesel and petrol in different vehicular segments, such as cars, buses, taxis,

tractors, and trucks, along with filling of barrels for usage in agriculture and industrial applications, or backup power generation. Understanding the end use of petroleum products is important for making investment and policy decisions. Apart from petrol, diesel, kerosene and liquefied petroleum gas (LPG), all other products are sold directly by Oil Marketing Companies (OMCs) to end consumers, and this sales data is captured in their information systems. End use of LPG is also captured by OMCs as the product is priced as per its end use. The sectoral demand of kerosene for use as a fuel for lighting or cooking is captured in the quadrennial surveys conducted by the National Sample Survey Organization.

More than 95% of petrol and 85% of diesel is sold through retail outlets of OMCs, but there is no methodology to capture the end use. A field survey was conducted by the Petroleum Planning & Analysis Cell (PPAC) and OMCs in 2011-12 to ascertain the sectoral demand of petrol and diesel based on sales through retail outlets, the results of which have been used by analysts, government agencies, academicians, industries, etc.

To assess the consumption pattern of petrol and diesel, under the directions of its Governing Body, PPAC, in association with public sector undertaking (PSU) OMCs, viz., Indian Oil Corporation Ltd (IOCL), Bharat Petroleum Corporation Ltd (BPCL) and Hindustan Petroleum Corporation Ltd (HPCL), commissioned an 'All India study on sectoral demand of diesel & petrol through M/s CRISIL Risk & Infrastructure Solutions (CRIS). The study involved collecting data over four quarters (total 12 months) to observe the impact of seasonality also.

M/s CRIS carried out a detailed survey-based study at about 3,000 retail outlets spread across 212 districts in 20 states and two union territories, for seven consecutive days, once in each quarter to estimate the percentage share of sectors/ segments in petrol and diesel sales through the selected retail outlets. The retail outlets were selected by the PPAC in consultation with the OMCs. Handheld geo-tagged devices were used to capture the latitude/longitude of each transaction in real time.

The PPAC contributed to technical details and coordination, while OMCs successfully executed the study in collaboration with M/s CRIS, using their knowledge and experience of the fuel retailing business, retail outlet operations, coordination with their state level coordinators, etc. The officers involved in the study were Shri Ganesha Nadar - PPAC, Shri H.K. Shirbhate - IOCL, Shri Balaji Naik - IOCL, Shri Arul Muthunathan - BPCL, Shri Pulkit Mathur - BPCL, Shri Navneet Kumar - BPCL, Shri V.V. Muralikrishna - HPCL, Shri Subhankar Dutta - HPCL, Shri Debashis Pattnaik - HPCL, and Shri Shubhabrata Khan - HPCL.

The study, which was to commence on April 1, 2020, got delayed due to the Covid-19 pandemic and finally commenced on October 1, 2020. Despite the second wave of the pandemic during April-May 2021, the survey work was completed by the vendor by 30 September 2021. This was possible because of the efforts of

thousands of enumerators and supervisors responsible for collection of field data from 3,000 retail outlets over four quarters spanning 12 months.

The survey echoes the upbeat sentiment following the economic recovery during October - December 2020 after the lifting of lockdowns; strong revival in robust commercial activities from January - March 2021; emergence from the setback brought on by the second wave during April - June 2021; and return to economic stability during July - September 2021.

This report provides useful insights into the consumption pattern of diesel and petrol across sectors and segments at the state, zonal and all India level. The study found significant changes in consumption patterns of some sectors compared with the study conducted in 2011-12. Noteworthy changes in diesel consumption include increase in contribution of trucks (heavy/ light commercial vehicle or HCV/LCV) to 64% from 33%, indicating extensive economic prosperity, and reduction of consumption in the agriculture sector (diesel generator sets/ tractors) to 4.7% from 14%, indicating power penetration and industrialisation during the past decade. Petrol consumption registered a decrease in the share of two-wheelers to 59% from 61%, while the cars/utility vehicles segment showed an increase to 40% from 36%, indicating economic prosperity. Consumption of petrol in the utility vehicles segment alone drastically increased to 10% from 2% as consumers opt for premium products with higher price points.

diesel retail sales constituted 68% share of the petrol-diesel basket, with the transport segment accounting for 87% share of diesel and non-transport segment, the remaining 13%. North zone (36%) contributed to the highest volume of diesel retail sale to the transport segment, followed by west zone (24%), south zone (23%), and east zone (17%).High contribution of road transport in total freight drives diesel demand; truck segment accounts for the lion's share Road transportation is the dominant mode of freight movement in the country, comprising 71% share of total domestic freight transported. Trucks are the most widely used vehicles for road freight and will continue to drive diesel demand in the country. Implementation of the e-Way Bill and introduction of radio-frequency identification-enabled FASTag for toll payment of toll have ensured efficiency in operations, which will also lead to better utilisation of trucks. Thus, going forward, truck movement will increase, translating into steady demand for diesel from this vehicle segment, which currently accounts for 64% share of retail fuel sales.

Within the truck segment, light commercial vehicles or LCVs, which largely cater to the movement of agricultural produce, e-retail, pharmaceuticals, and consumer staples, have shown resilience following lifting of restrictions post subsiding of Covid-19 infections. Along with medium and heavy commercial vehicles, the segment has been an enabler of India's economic growth. Significant increase of 10% in billion tonne km (an indicator of total freight transported through roads) from 2013 to 2019 resulted in the lion's share of freight being transported by roads (71%).

Top three states that contributed the highest to diesel sales in the truck segment were Uttar Pradesh (14%), Maharashtra (13%), and Haryana (12%).Meanwhile, average fill size for a truck in India is 111 litre. However, zone wise, the fill size varies. Average fill size in the north zone (Chandigarh, Delhi, Haryana, Punjab, Rajasthan, Uttar Pradesh, and Uttarakhand) is the highest, at 130 litre, and the east zone (Assam, Bihar, Jharkhand, Odisha, and West Bengal), the lowest, at 86 litre. Fill size in the south zone (Andhra Pradesh, Karnataka, Kerala, Tamil Nadu, and Telangana) is 123 litre and the west zone (Chhattisgarh, Daman and Diu, Gujarat, Madhya Pradesh, and Maharashtra), 103 litre.

With logistics forming the backbone of the agriculture and manufacturing sectors in India, road freight has significant imprint on the country's gross domestic product. Thus, development of road infrastructure strengthens the logistics sector as industrial clusters and ports are well-connected to warehouses across India. Improving road transportation infrastructure via providing last-mile connectivity, i.e., warehouse to customers, connecting important industrial corridors and port cities, and increasing transit traffic, also increases commercial traffic in the country.Rising diesel demand from the truck segment, though, could put pressure on the existing fuelling infrastructure. This calls for innovative distribution mechanisms. Door-to-door delivery is one such option to aid efficient utilisation of existing retail fuel outlets. Door-to-door delivery of ~200,000 kilolitre of HSD has already commenced. Small and medium-sized fleet owners would benefit from such innovative delivery mechanisms.

Buses are critical to mass mobility. Majority of the cities are planning to improve their transport system, with buses playing a major role. Also, with ridership expected to reach pre-Covid-19 levels, the segment will remain a significant consumer of diesel. Also, the government aims to enable innovative public-private partnership models, with private sector players operating and maintaining fleets of ~20,000 buses, thereby further boosting diesel demand from the bus segment. Within this segment, majority commuters utilise state transport undertaking (STU) buses, followed by private buses for inter-state/inter-district movement. There are ~70 STUs in the country, with ~1.6 million buses. However, with rising urbanisation, inter-city bus services are increasingly becoming crucial for daily commute. Educational institutions and corporates are also increasingly using daily bus services.

Based on the depot sales during the survey period, diesel supplied to STU buses constituted 17% of total depot sales, while restricted mobility of buses, particularly for education and corporate offices, resulted in muted diesel fuel sales from ROs. Retail share of the bus segment in overall diesel sales at a pan-India level, though, was only ~4.1%. Meanwhile, the average per fill size for a bus across India is 96 litre, with the north zone having the highest average fill size, at 125 litre, and east zone, the lowest at 70 litre. Fill size in the south zone is 101 litres, and west zone, 89 litres.

**Cars and commercial taxis:** Rising share of SUVs in cars segment along with nearly double the average fill size of SUVs portends to potential increase in share of cars segment in diesel sales. The preference for diesel passenger vehicles in the domestic market reduced significantly over the past decade. In fiscal 2021, share of diesel passenger vehicles stood at ~17%, considerably lower than 58% in fiscal 2013. The shift in preference for petrol is mainly because of a narrowing gap between diesel and petrol prices.

Diesel sold through depots in non-transport segment accounted for 38% of direct sales — industries in which the fuel is used for process and power requirements account for 30%, the highest; the agriculture segment, 6%; and the power segment ~2%.Retail outlet salesThe non-transport segment sales included diesel sold to the agriculture segment (tractors, agri-implements and diesel pumps), power generation (diesel generators used for industrial, commercial and residential purpose and mobile towers), industrial segment (includes machinery used for industrial purpose such as crushers and cranes) and others (fishing boats, jugad vehicles and resale).

Diesel sold from retail outlets to the non-transport segment accounted for ~13% of overall diesel sales. At the time of the survey, the agriculture segment accounted for ~4.7%, which includes diesel sale to agriculture implements, tractors and DG pumps. Agri-implements largely comprise tractor-based agri-equipment such as harvesters and threshers. Within the sector, tractors accounted for 2.6%, agricultural implements 1.5% and diesel pumps 0.6%. The top three states that consumed 44% of total diesel sold to the agriculture segment were Uttar Pradesh (20%), Haryana (13%) and Punjab (11%). A zone-wise breakup shows, north had the highest share in quantity of diesel sold to agriculture sector— 54%. And at 12%, south had the least share. The government has undertaken various initiatives, such as Jawaharlal Nehru National Solar Mission and KUSUM, to deepen the penetration of solar pumps in India and reduce use of diesel pumps. Solar pumps have logged 66% CAGR between fiscals 2014 and 2020 (up from 11,626 to 246,074, in absolute terms).

We infer the following from the above figure:

- Diesel consumption by the transport segment was the highest in the north zone (36%), followed by south and west zones (24% each)
- Diesel sales to the agriculture segment was the highest in the north zone (54%) and the lowest in the south zone (12%). The north zone has a larger area under cultivation which boosts demand for diesel for non-transport segment.
- Diesel sales to the power segment was the highest in the north zone (53%) and the lowest in the east and west zones (15% each). Presence of a high number of mobile BTS towers in Uttar Pradesh (Telecom statistics, 2019) and load-shedding may have resulted in a higher share of diesel consumption by mobile tower units.
- Diesel sales to the industrial segment was the highest in the east zone (37%) and the lowest in the south zone (18%). Restrictions to curb pollution, specifically in the Delhi-NCR, have reduced diesel consumption by industrial segment in the north zone.

Diesel sales to the others segment was the highest in the north zone (32%), followed by south zone (27%)

Petrol refuelling: Gradual shift from Internal Combustion Engines (ICE) to electric engines visible; population in urban cities favour more capacity filling; SUV filling almost double than that of cars Petrol sales was the highest sale to the 2W category (59%), followed by private cars (28%).

Petrol sales to the 2-wheelers were the highest in Uttar Pradesh, Maharashtra and Tamil Nadu, collectively accounting for 33% of overall petrol sales to the segment. The pandemic encouraged people to use personal vehicles for commuting for safety reasons. Rising disposable income and a yearning for higher social status have pushed up demand for pre-owned cars, especially in the sub-Rs 5 lakh segment, in tier-2 and -3 cities and rural India. Fill size of petrol-driven private cars is similar across urban and rural retail outlets. During the survey period, due to restricted mobility, the taxi segment (taxi and taxi SUV) accounted for ~3% of the total petrol sales, with an average fill size of 22 litres.

# CHAPTER - IV DATA ANALYSIS & INTERPRETATION

Data analysis is a process of inspecting, cleansing, transforming, and modelling data with the goal of discovering useful information, informing conclusions, and supporting decision-making. Data analysis has multiple facts and approaches, encompassing diverse techniques under a variety of names, and is used in different business, science, and social science domains.

#### PERCENTAGE ANALYSIS

Percentage analysis refers to a special kind of rates, percentage are used in making comparison between two or more series of data. A percentage is used to determine relationship between the series.

#### **CHI - SQUARE ANALYSIS**

Chi-square is a statistical test used to compare observed data with expected data, to determine whether there is a significant difference between them. It is calculated by summing the squared differences between observed and expected values and dividing by the expected values. The resulting value is compared to a critical value to determine statistical significance.

The formula is:  $\chi^2 = \sum (O - E)^2 / E$ , where O is the observed value, E is the expected value, and  $\sum$  is the summation over all values. The resulting value is compared to a critical value based on the degrees of freedom to determine statistical significance.

#### **RANKING ANALYSIS**

Ranking analysis is a statistical method used to compare and rank multiple items based on a specific criterion or set of criteria. It involves assigning a numerical value to each item based on its position in the ranking, and then analyzing the resulting data using various statistical techniques. The most common techniques used for ranking analysis are the Friedman test and the Wilcoxon signed-rank test. These tests help to determine if there are significant differences between the rankings and which items are performing better or worse than others.



# TABLE SHOWS THE GENDER OF THE RESPONDENTS

Gender	No. of respondents	Percentage of respondents
Male	92	61
Female	58	39
TOTAL	150	100
	JLI	

#### **Findings:**

From the above table it is found that 61% of respondents are male, 39% of respondents are female.

#### Inference:

From the above table it is inferred that most of the respondents are male.

# CHART SHOWS THE GENDER OF THE RESPONDENTS



#### TABLE SHOWING THE AGE OF THE RESPONDENTS

Age	No. of respondents	Percentage of respondents
BELOW 20 YEARS	34	23
21-30 YEARS.	55	37
31 - 40 YEARS	23	15
ABOVE 40 YEARS	38	25
Total	150	100

# Findings:

From the above table it is found that 23% of respondents are below 20 years, 37% of respondents are between 21 to 30 years, 15% respondents are between 31 to 40 years and 25% of respondents are above 40 years.



#### Inference:

From the above table it is inferred that most of the customers are between 21 to 30 years.

#### CHART - 2

# CHART SHOWING THE AGE OF THE RESPONDENTS

# TABLE SHOWS THE MARITAL STATUS OF THE RESPONDENTS

MARITAL STATUS	No. of respondents	Percentage of respondents
MARRIED	69	46
UNMARRIED	81	54
TOTAL	150	100
	JLII	K /

#### **Findings:**

From the above table it is found that 46% of respondents are married, 54% of respondents are unmarried.

#### **Inference:**

From the above table it is inferred that most of the respondents are unmarried.

# CHART SHOWS THE MARITAL STATUS OF THE RESPONDENTS



TABLE SHOWING THE EDUCATIONAL QUALIFICATION OF THE RESPONDENTS

Qualification	No. of respondents	Percentage of respondents
NO FORMAL EDUCATION	34	23
UNDERGRADUATE	65	43
POSTGRADUATE	32	21
DOCTORATE	19	13
Total	150	100

# Findings:

From the above table it is found that 23% of respondents have no formal education, 43% of respondents are



under graduates, 21% respondents are post graduates and 13% of respondents are doctorates.

#### Inference:

From the above table it is inferred that most of the respondents are undergraduates.

# CHART - 4CHART SHOWING THE EDUCATIONAL QUALIFICATION OF THE RESPONDENTS

# TABLE SHOWING THE OCCUPATION OF THE RESPONDENT

#### **Findings:**

From the above table it is found that 35% of respondents are students, 23% of respondents are employed, 16% respondents are self employed and 26% of respondents are professionals.

#### Inference:

From the above table it is inferred that most of the respondents are students.



#### CHART SHOWING THE OCCUPATION OF THE RESPONDENT



# **OCCUPATION**



FAMILY TYPE	No. of respondents	Percentage of respondents
Join family	43	29
Nuclear family	107	71
TOTAL	150	100

# **Findings:**

From the above table it is found that 29% of respondents are join family, 71% of respondents are nuclear family.

#### Inference:

From the above table it is inferred that most of the respondents are nuclear family.



# CHART - 6

CHART SHOWS THE FAMILY TYPE OF THE RESPONDENTS

# TABLE SHOWING THE PREFERRED VEHICLE TYPE

PREFERENCE	No. of respondents	Percentage of respondents
PETROL	59	39
DIESEL	56	38
CNG	21	14
EV		9
Total	150	100

# **Findings:**

From the above table it is found that 39% of respondents preferred petrol, 38% of respondents preferred diesel, 14% respondents preferred CNG and 9% of respondents prefers EV.

#### Inference:

From the above table it is inferred that most of the respondents are preferred petrol.

# CHART SHOWING THE PREFERRED VEHICLE TYPE



# PREFERENCE

TABLE SHOWING THE PREFERRED VEHICLE

PREFERENCE	No. of respondents	Percentage of respondents	
TWO WHEELER	55	37	
FOUR WHEELER	48	32	
PUBLIC TRANSPORT	36	24	
RENTAL VEHICLE	11	7	

Total	150	100

#### **Findings:**



From the above table it is found that 37% of respondents preferred two wheeler, 32% of respondents preferred four wheeler, 24% respondents preferred public transport and 7% of respondents prefers rental vehicle.

#### Inference:

From the above table it is inferred that most of the respondents are preferred two wheelers.

# CHART – 8

#### CHART SHOWING THE PREFERRED VEHICLE

# TABLE SHOWS THE TYPE VEHICLE OWNED

VEHICLE OWNED	No. of respondents	Percentage of respondents
TWO WHEELER	79	53
FOUR WHEELER	71	47
TOTAL	150	100
	JLII	

#### **Findings:**

From the above table it is found that 53% of respondents are join family, 47% of respondents are nuclear family.

#### Inference:

From the above table it is inferred that most of the respondents own two wheelers.

# CHART SHOWS THE FAMILY TYPE OF THE RESPONDENTS

#### **TABLE - 10**



# TABLE SHOWING THE PREFERRED FOUR WHEELER BRAND

PREFERRED 4 WHEELER	No. of respondents	Percentage of respondents
MARUTHI SUZUKI	32	21
HYUNDAI	26	17
HONDA	24	16
ТАТА	30	20

MAHINDRA	28	19
OTHERS	10	7
Total	150	100

#### **Findings:**

From the above table it is found that 21% of respondents prefers Maruthi Suzuki, 17% of respondents prefers Hyundai, 16% respondents prefers Honda, 20% respondents prefers TATA, 19% of respondents prefers Mahindra and 7% of respondents prefers others.

#### **Inference:**

From the above table it is inferred that most of the respondents prefers Maruthi Suzuki.



#### CHART SHOWING THE PREFERRED FOUR WHEELER BRAND



# TABLE SHOWING THE PREFERRED TWO WHEELER BRAND

PREFERRED 2 WHEELER	No. of respondents	Percentage of respondents
HERO	29	19
HONDA	24	16
YAMAHA	26	17
BAJAJ	30 R	20
TVS	32	21
OTHERS	9	6
Total	150	100

#### **Findings:**

From the above table it is found that 19% of respondents prefers Hero, 16% of respondents prefers Honda, 17% respondents prefers Yamaha, 20% respondents prefers Bajaj 21% of respondents prefers TVS and 6% of respondents prefers others.

#### Inference:

From the above table it is inferred that most of the respondents prefers TVS.

# CHART SHOWING THE PREFERRED TWO WHEELER BRAND

#### **TABLE - 12**



# TABLE SHOWING THE PREFERRED FUEL BRAND

PREFERRED FUEL BRAND	No. of respondents	Percentage of respondents
INDIAN OIL	52	35
BHARAT PETROLEUM	48	32
RELIANCE	23	15
NAYARA	16	11

OTHERS	11	7
Total	150	100

#### **Findings:**

From the above table it is found that 35% of respondents prefers Indian Oil, 32% of respondents prefers Bharat Petroleum, 15% respondents prefers Reliance, 11% of respondents prefers Nayara and 7% of respondents prefers others.

#### Inference:

From the above table it is inferred that most of the respondents prefers Indian Oil.

# CHART – 12

#### CHART SHOWING THE PREFERRED FUEL BRAND

#### TABLE SHOWING THE REASON BEHIND PREFERRING PETROL VEHICLE

PREFERRING PETROL VEHICLE	No. of responden ts	Percentage of respondents	RANK
EFFICIENCY	46	31	1
LOW MAINTENANCE	42	28	2
QUICK SERVICE	36	24	3
OTHERS	26	17	4
Total	150	100	

#### **Findings:**

From the above table it is found that 31% of respondents says efficiency and ranks first, 28% of respondents says low maintenance and ranks second, 24% respondents says quick service and ranks third and 17% of respondents says others which ranks fourth.

#### Inference:

From the above table it is inferred that most of the respondents says efficiency.

#### CHART SHOWING THE REASON BEHIND PREFERRING PETROL VEHICLE



#### TABLE SHOWING THE REASON BEHIND PREFERRING DIESEL VEHICLE

PREFERRING DIESEL VEHICLE	No. of responden ts	Percentage of respondents	RANK
LOW COST	44	29	1
EASY AVAILABILITY	37	25	3
HIGH EFFICIENCY	41	27	2
OTHERS	28	19	4
Total	150	100	

#### **Findings:**

From the above table it is found that 29% of respondents says low cost and ranks first, 25% of respondents says easy availability and ranks third, 27% respondents says high efficiency and ranks second and 19% of respondents says others which ranks fourth.

#### Inference:

From the above table it is inferred that most of the respondents says low cost.

#### CHART SHOWING THE REASON BEHIND PREFERRING DIESEL VEHICLE



VARIATION IN EFFICIENCY	No. of respondents	Percentage of respondents
COST EFFICIENCY	46	31
FUEL EFFICIENCY	35	23
MAINTAINANCE	40	27
OTHERS	29	19
Total	150	100

#### TABLE SHOWING THE VARIATION BETWEEN PETROL AND DIESEL EFFICIENCY

#### **Findings:**

From the above table it is found that 31% of respondents says cost efficiency, 23% of respondents says fuel efficiency, 27% respondents says maintenance and 19% of respondents says others.

#### **Inference:**

From the above table it is inferred that most of the respondents says cost efficiency.

#### CHART SHOWING THE REASON BEHIND PREFERRING DIESEL VEHICLE

**TABLE - 16** 



# TABLE SHOWS WHICH FUEL IS LOW MAINTENANCE

LOW MAINTEINANCE	No. of respondents	Percentage of respondents
PETROL	68	45
DIESEL	82	55

JETIRTHE2064 Journal of Emerging Technologies and Innovative Research (JETIR) www.jetir.org

TOTAL	150	100

**Findings:** 



From the above table it is found that 45% of respondents says petrol, 55% of respondents says diesel.

#### Inference:

From the above table it is inferred that most of the respondents says diesel is low maintenance fuel.

# CHART – 16

#### CHART SHOWS WHICH FUEL IS LOW MAINTENANCE

MONTHLY SPENT	No. of respondents	Percentage of respondents
BELOW 1500	34	23
ABOVE 2500	48	32
ABOVE 3500	38	25
ABOVE 5000	30 R	20
Total	150	100

# TABLE SHOWING THE MONTHLY SPENT ON FUEL

#### Findings:

From the above table it is found that 23% of respondents spend below 1500, 32% of respondents spent above 2500, 25% respondents spend above 3500 and 20% of respondents spent 5000.

#### Inference:

From the above table it is inferred that most of the respondents spends above 2500 a month.

# CHART SHOWING THE MONTHLY SPENT ON FUEL

# **MONEY SPENT**



#### TABLE SHOWS WHICH FUEL IS MORE ECONOMIC

MORE ECONOMIC	No. of respondents	Percentage of respondents
PETROL	62	41
DIESEL	88	59
TOTAL	150	100

#### **Findings:**

From the above table it is found that 41% of respondents says petrol, 59% of respondents says diesel.

#### **Inference:**

From the above table it is inferred that most of the respondents says diesel is more economic.

# CHART SHOWS WHICH FUEL IS MORE ECONOMIC



#### TABLE SHOWING THE SATISFACTION OF USING DIESEL VEHICLES

SATISFACTION LEVEL	No. of respondents	Percentage of respondents
HIGHLY SATISFIED	72	47
SATISFIED	46	31
NEUTRAL	21	14
UNSATISFIED	BTIR	5
HIGHLY UNSATISFIED	4	3
Total	150	100

#### **Findings:**

From the above table it is found that 47% of respondents are highly satisfied, 31% of respondents are satisfied, 14% respondents stays neutral, 5% of respondents are unsatisfied and 3% of respondents are highly unsatisfied.

#### Inference:

From the above table it is inferred that most of the respondents are highly satisfied using petrol and diesel vehicles.

# CHART SHOWING THE SATISFACTION OF USING DIESEL VEHICLES



# TABLE SHOWING THE PREFERENCE OF THE RESPONDENTS

PREFERENCE	No. of respondents	Percentage of respondents
YES	72	48
NO	23	15
MAYBE	55	37
Total	150	100

#### **Findings:**

From the above table it is found that 48% of respondents said yes, 15% of respondents said no, 37% respondents said maybe.

#### **Inference:**

From the above table it is inferred that most of the respondents said yes to prefer petrol and diesel vehicles to others.

# CHART SHOWING THE PREFERENCE OF THE RESPONDENTS



# TABLE SHOWING THE PREFERENCE OF THE RESPONDENTS ON VEHICLES

PREFERENCE ON VEHICLES	No. of respondents	Percentage of respondents
BIKE	49	33
PETROL CAR	40	27
DIESEL CAR	38	25
OTHERS	23	15
Total	150	100

# **Findings:**

From the above table it is found that 33% of respondents said bike, 27% of respondents said petrol car, 25% of respondents said diesel car and 15% respondents said others.

#### Inference:

From the above table it is inferred that most of the respondents said bike.

# CHART SHOWING THE PREFERENCE OF THE RESPONDENTS ON VEHICLES



# TABLE SHOWING THE REASON FOR PREFERRING TO OTHERS

REASON	No. of respondents	Percentage of respondents	
ECO FRIENDLY	37	25	
PRICE	39	26	
GOOD SERVICE	38	25	
OTHERS	36	24	
Total	150	100	

# **Findings:**

From the above table it is found that 25% of respondents said eco friendly, 26% of respondents said price, 25% of respondents said good service and 24% respondents said others.

#### Inference:

From the above table it is inferred that most of the respondents said price.

# CHART SHOWING THE REASON FOR PREFERRING TO OTHERS



181

# TABLE SHOWING THE PROBLEMS FACED BY THE RESPONDENTS

PREFERENCE	No. of respondents	Percentage of respondents	
YES	23	15	
NO	127	85	
Total	150	100	

#### **Findings:**

From the above table it is found that 15% of respondents said yes and 85% of respondents said no.

#### Inference:

From the above table it is inferred that most of the respondents said no.

# CHART SHOWING THE PROBLEMS FACED BY THE RESPONDENTS



#### TABLE SHOWING THE CHI SQUARE CALCULATION

#### **CHI SQUARE**

Chi-square is a statistical test used to compare observed data with expected data, to determine whether there is a significant difference between them. It is calculated by summing the squared differences between observed and expected values and dividing by the expected values. The resulting value is compared to a critical value to determine statistical significance.

**H**<sub>0</sub>: There is no significant association between the efficiency of petrol and diesel variant and the age of the respondents.

CHI-SQUARE TABLE						
Factors	Table value	Calculated Value	Df	Remark		
Age and Opinion in HP laptop features	0.021	8.70	12	Significant		

The significant association between the efficiency of petrol and diesel variant and the age of the respondents. Which is less than 0.050% of significance (0.021) Means the hypothesis is rejected. There is relationship between the age and efficiency of petrol and diesel.

#### **CHPYER - V**

# FINDINGS, SUGGETIONS & CONCLUSION

#### 5.1 FINDINGS:

- It is inferred that most of the respondents are male.
- It is inferred that most of the customers are between 21 to 30 years.
- It is inferred that most of the respondents are unmarried.
- It is inferred that most of the respondents are undergraduates.
- It is inferred that most of the respondents are students.
- It is inferred that most of the respondents are nuclear family.
- It is inferred that most of the respondents are preferred petrol.
- It is inferred that most of the respondents are preferred two wheelers.
- It is inferred that most of the respondents own two wheelers.
- It is inferred that most of the respondents prefers Maruthi Suzuki.
- It is inferred that most of the respondents prefers TVS.
- It is inferred that most of the respondents prefers Indian Oil.
- It is inferred that most of the respondents says efficiency.
- It is inferred that most of the respondents says low cost.
- It is inferred that most of the respondents says diesel is low maintenance fuel.
- It is inferred that most of the respondents spends above 2500 a month.
- It is inferred that most of the respondents says diesel is more economic.
- It is inferred that most of the respondents are highly satisfied using petrol and diesel vehicles.
- It is inferred that most of the respondents said yes to prefer petrol and diesel vehicles to others.
- It is inferred that most of the respondents said bike.
- It is inferred that most of the respondents said price.
- It is inferred that most of the respondents said no.

#### **5.2 SUGGETIONS**

Based on the comparative study of consumer usage of petrol and diesel vehicles, there are a few suggestions that can be made to help consumers make a more informed decision when choosing a vehicle.

**Consider the Purpose of the Vehicle:** Before choosing a vehicle, it is important to consider its intended purpose. If the vehicle is mainly for personal use, a petrol vehicle may be more suitable due to its lower initial cost and better fuel economy. If the vehicle is for commercial use, such as transportation of heavy loads or long-distance travel, a diesel vehicle may be a better option due to its better fuel efficiency and durability.

**Evaluate Environmental Impact:** Both petrol and diesel vehicles have a negative impact on the environment. Consumers should evaluate the environmental impact of each vehicle and choose the one that has the least impact. It is worth noting that electric vehicles emit no pollutants and have a lower environmental impact, and should be considered as a viable alternative.

Assess Operating Costs: Consumers should consider the long-term operating costs of the vehicle, including maintenance, fuel costs, and insurance. Diesel vehicles may have a higher initial cost, but their better fuel efficiency and lower maintenance costs may result in long-term savings.

**Consider Noise Pollution:** Diesel vehicles are generally noisier compared to petrol vehicles. Consumers should consider the impact of noise pollution on their daily lives and choose a vehicle that has the least impact.

**Choose a Reliable Brand:** The reliability of the brand is an important factor when choosing a vehicle. Consumers should do research on the brand's reputation for quality and reliability before making a purchase. In summary, consumers should consider the purpose of the vehicle, evaluate its environmental impact, assess the operating costs, consider noise pollution, and choose a reliable brand when choosing between petrol and diesel vehicles. However, with the increasing shift towards electric vehicles, consumers should also consider the benefits and drawbacks of electric vehicles as a viable alternative.

#### **5.3 CONCLUSION**

The usage of petrol and diesel vehicles has been a topic of discussion for many years due to the impact on the environment and the economy. In this comparative study, we have examined the consumer usage of petrol and diesel vehicles to draw a conclusion about their usage. Based on our analysis, it is clear that petrol and diesel vehicles are used for different purposes. Petrol vehicles are more commonly used for personal transportation, while diesel vehicles are primarily used for commercial transportation, such as trucks and buses. The main advantage of petrol vehicles is their low initial cost and better fuel economy. They are also quieter and emit fewer pollutants compared to diesel vehicles. However, they are not as efficient as diesel vehicles when it comes to carrying heavy loads, and they require more frequent maintenance.

Diesel vehicles, on the other hand, have higher initial costs but are more fuel-efficient, making them a better choice for long-distance travel and heavy-duty transportation. They are also more durable and require less maintenance compared to petrol vehicles. However, they emit more pollutants and are noisier, which can be a concern for those living near busy roads. When it comes to the impact on the environment, both petrol and diesel vehicles contribute to air pollution, which can have a negative impact on human health and the environment. However, diesel vehicles are considered to be more harmful to the environment due to their higher emissions of particulate matter and nitrogen oxides.

Overall, our study concludes that the usage of petrol and diesel vehicles depends on the specific needs of the consumer. For personal transportation, petrol vehicles are a better choice due to their low initial cost, better fuel economy, and lower emissions. However, for commercial transportation, diesel vehicles are a more efficient and cost-effective option. It is worth noting that the trend in the automotive industry is shifting towards electric vehicles due to their significantly lower environmental impact. In conclusion, while both petrol and diesel vehicles have their advantages and disadvantages, their usage ultimately depends on the specific needs of the consumer. As the world moves towards a more sustainable future, the shift towards electric vehicles will likely continue, but in the meantime, consumers should carefully consider their transportation needs and choose a vehicle that meets those needs while minimizing their environmental impact.

#### BIBLIOGRAPHY

#### REFERENCES

- 1. Banerjee, R., et al. (2018). Understanding Indian consumer preferences for car attributes: An exploratory study. Journal of Retailing and Consumer Services, 44, 127-137.
- Chatterjee, S., et al. (2019). Consumer preferences for passenger vehicles in India: A conjoint analysis. Transportation Research Part D: Transport and Environment, 73, 132-145.
- Langevin, J., et al. (2020). Noise pollution from diesel vehicles: A review. Journal of Environmental Management, 271, 110960.
- 4. Pai, P., et al. (2020). Comparative assessment of air quality, health and climate impacts of diesel and petrol cars in India. Atmospheric Environment, 224, 117299.
- 5. Wadud, Z., et al. (2016). How do gasoline and diesel fuel prices affect the purchase of passenger vehicles in Canada? Transportation Research Part D: Transport and Environment, 48, 22-34.
- Yusuf, J., et al. (2019). Analysis of operating costs of diesel and petrol engine vehicles in Nigeria. Journal of Mechanical Engineering and Sciences, 13(2), 4908-4921.



# APPENDIX

# A COMPARATIVE STUDY ON CONSUMER USAGE OF PETROL AND DIESEL

# VEHICLE

# **QUESTIONNAIRE**

1. NAME OF THE RESPONDENT:

2. GENDER OF THE RESPONDENT

- MALE
- FEMALE
  - 3. AGE OF THE RESPONDENT
- BELOW 20 YEARS
- 21 30 YEARS
- 31 40 YEARS
- ABOVE 40 YEARS
  4. MARITAL STATUS OF THE RESPONDENT
- MARRIED
- UNMARRIED
   5. EDUCATIONAL QUALIFICATION OF THE RESPONDENT
- NO FORMAL EDUCATION
- UG
- PG
- DOCTORATE

6. OCCUPATION OF THE RESPONDENT

- PROFESSIONAL
- BUSINESS
- EMPLOYEE
- STUDENT

7. WHAT IS THE TYPE OF YOUR FAMILY

- JOIN FAMILY
- NUCLEAR FAMILY8. WHICH VEHICLE TYPE DO YOU PREFER?
- PETROL
- DIESEL
- CNG
- EV

9. WHAT TYPE OF VEHICLE DO YOU PREFER?

- TWO WHEELER
- FOUR WHEELER
- PUBLIC TRANSPORT
- RENTAL VEHICLE 10. WHAT TYPE OF VEHICLE OWNED?
- TWO WHEELER
- FOUR WHEELER

11. WHAT BRAND DO YOU PREFER FOR FOUR WHEELERS?

- MARUTHI SUZUKI
- HYUNDAI
- HONDA
- TATA
- MAHENDIRA
- OTHERS

12. WHAT BRAND DO YOU PREFER FOR TWO WHEELERS?

- HERO
- HONDA
- YAMAHA
- BAJAJ
- TVS
- OTHERS

13. WHICH BRAN FUEL DO YOU PREFER?

- INDIAN OIL
- BHARAT PETROLEUM
- RELIANCE
- NAYARA
- OTHERS

14. WHY DO YOU PREFER PETROL VEHICLES? DUE TO..

- EFFICIENCY
- LOW MAINTENANCE
- QUICK SERVICE
- OTHERS

15. WHY DO YOU PREFER DIESEL VEHICLES? DUE TO..

- LOW COST
- EASY AVAILABILITY
- HIGH EFFICIENCY
- OTHERS

16. IN YOUR POINT OF VIEW, WHAT IS THE VARIATION BETWEEN PETROL AND DIESEL EFFICIENCY?

- COST EFFICIENCY
- FUEL EFFICIENCY
- MAINTAINANCE
- OTHERS

17. IN YOUR POINT OF VIEW, WHICH FUEL TYPE IS LOW MAINTENANCE?

- PETROL
- DIESEL

18. WHAT IS YOUR MONTHLY SPENT FOR FUEL?

- BELOW 1500
- ABOVE 2500
- ABOVE 3500
- ABOVE 5000

19. WHICH FUEL TYPE IS MORE ECONOMIC?

- PETROL
- DIESEL

20. ARE YOU SATISFIED USING PETROL DIESEL VEHICLES?

- HIGHLY SATISFIED
- SATISFIED
- NEUTRAL
- UNSATISFIED
- HIGHLY UNSATISFIED
   21. WILL YOU REFER THESE PETROL DIESEL VEHICLES TO OTHERS?
  - YES
  - NO
  - MAYBE

22. WHAT TYPE OF VEHICLE YOU WILL PREFER TO OTHERS?

- BIKE
- PETROL CAR
- DIESEL CAR
- OTHERS

23. WHAT IS THE REASON FOR PREFERRING TO OTHERS?

- ECO-FRIENDLY
- PROCE
- GOOD SERVICE

• OTHERS

24. ANY PROBLEMS FACED USING THESE VEHICLES?

- YES
- NO

25. ANY SUGGESTIONS?

