

**GREEN ACCOUNTING PRACTICES IN CAR INDUSTRIES:
A SPECIAL REFERENCE WITH TATA MOTORS,
MAHINDRA & MAHINDRA LTD AND HYUNDAI INDIA
LTD, ERNAKULAM**

PROJECT REPORT SUBMITTED TO
MAHATMA GANDHI UNIVERSITY, KOTTAYAM
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR
THE AWARD OF THE DEGREE IN
BACHELOR OF COMMERCE (2020 - 2023)

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OF COMMERCE

(Affiliated to Mahatma Gandhi University, Kottayam)

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CERTIFICATE

This is to certify that this project titled **“GREEN ACCOUNTING PRACTICES IN CAR INDUSTRIES: A SPECIAL REFERENCE WITH TATA MOTORS, MAHINDRA & MAHINDRA LTD AND HYUNDAI INDIA LTD, ERNAKULAM”** is a bonafide record of work done by **ADHITHYAN M J, ALEENA JHONSON** and **ALEN JOB MATHEW** in partial fulfilment of the requirements for the award of degree of Bachelor of Commerce in Mahatma Gandhi University, Kottayam, under the supervision of **Asst. Prof. JULIE P.J.** It is further certified that this project work is not any part thereof has not been submitted elsewhere for any other degree.

Signature of HOD
Asst. Prof. JULIE P.J

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Asst. Prof. JULIE P.J

Name and Signature of
External Examiner

Place: Thrikkakara

Date:

DECLARATION

We hereby declare that this project entitled “**GREEN ACCOUNTING PRACTICES IN CAR INDUSTRIES: A SPECIAL REFERENCE WITH TATA MOTORS, MAHINDRA & MAHINDRA LTD AND HYUNDAI INDIA LTD, ERNAKULAM**” is our original work and has not been submitted earlier to MG University or to any other universities. We have undertaken this project work in partial fulfilment of the requirements of B.COM 2020-2023 in Bharata Mata College, Thrikkakara, Ernakulam affiliated to MG University, Kottayam.

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01.03.2023

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CONTENTS

SL.NO.	TITLE	PAGE NO.
1	INTRODUCTION	1
2	LITERATURE REVIEW	4
3	THEORETICAL FRAMEWORK	8
4	DATA ANALYSIS AND INTERPRETATION	18
5	FINDINGS, SUGGESTIONS AND CONCLUSION	41
6	BIBLIOGRAPHY	45
7	APPENDIX	47

LIST OF TABLES

SL.NO	CONTENTS	PAGE NO.
1	Age	19
2	Gender	20
3	Occupation	21
4	Familiarity with the concept of green accounting	22
5	Strict action must be taken by the govt if green reporting is not followed	26
6	Should green accounting be implemented in all companies	27

LIST OF CHARTS

SL.NO	CONTENTS	PAGE NO.
1	Age	19
2	Gender	20
3	Occupation	21
4	Respondents familiarity with the concept of green accounting	22
5	Green accounting as a major tool for sustainable development	23
6	Importance of CSR	24
7	Imposing strict rules and regulations regarding the implementation and adoption of green accounting	25
8	Strict action must be taken by the govt if green reporting is not followed	26
9	Should green accounting be implemented in all companies	27
10	Green accounting information is essential for manufacturing concerns to create awareness about the impact of environment on the performance of the enterprise	28
11	Environmental accounting orientation and efficiency	29
12	Organizations need to disclose environmental performance over the period	30

13	Which has the least green house emission	31
14	Which company has opportunities in clean technology	32
15	Which of these company uses green devices	33
16	Which has best waste management system	34
17	Which company has reduction in carbon footprint	35
18	Which has efficient energy management	36
19	Electric cars contribute to sustainable environment thereby increasing the green accountability of the car manufacturing concern	37
20	Can electric cars can decrease global warming	38
21	Electric cars as a substitute for regular vehicles	39
22	Electric cars can save a lot of money	40

CHAPTER 1
INTRODUCTION

INTRODUCTION

With rising global temperatures, environmental sustainability is becoming increasingly important. Following green accounting standards and disclosure is one of the finest methods to show how responsible businesses are. One of the most crucial management systems for enhancing a company's economic and environmental performance is the Green Accounting system. Green accounting should be included in the new model that policymakers use because it has been claimed that gross domestic product overlooks the environment. Since corporate environmental externalities have grown at an alarming rate, it is imperative to implement efficient environmental protection measures. As a result, a large number of associations and organisations recognised the urgency of the situation and began to promote and preserve this cause. Nowadays, environmental awareness and the need for accounting for it are expanding at a dangerous rate. Business entities are developing new procedures and other environmentally friendly initiatives in order to act in a way that will affect both the present and the future.

The goal of green accounting, often known as environmental accounting, is to account for the environment and its sustainability. Green accounting is still in its infancy in India. Accounting for environmental resources, their costs, and the monetary quantification of an organization's environmental impacts are all included in green accounting. Identifying, gathering, analysing, disseminating, and utilising environmental cost information for environmental decision-making within an organisation is what is meant by environmental accounting.

The focus of this report will be on green accounting in the automotive sector.

The creation of cars has a big effect on the environment, from the pollutants that are produced to the carbon dioxide that is emitted when cars are being driven. Automakers must adopt green accounting procedures that account for the social and environmental costs related to their production processes in order to lessen these effects.

According to statistics from 2021, India has the fourth-largest output of automobiles worldwide. India became the fourth-largest nation in the world by automobile industry worth in 2022. India surpassed Japan and Germany to become the third-largest vehicle market in the world as of 2022 in terms of sales.

Currently, India's automobile industry is valued at more than \$100 billion and accounts for 8 percent of the country's total exports and 2.3 percent of India's GDP. Major car manufacturers in India include Maruti Suzuki, Tata Motors, Ashok Leyland, Mahindra and Mahindra, Force Motors, etc.

The car industry in India is one of the most important industries in the country. It is responsible for the employment of millions of people and contributes significantly to the country's GDP. However, the car industry is also one of the most polluting industries in the country. In order to promote sustainable development, it is important to account for the environmental impacts of the car industry

STATEMENT OF PROBLEM

The main problem with green accounting is the lack of awareness and understanding of the concept. Despite the fact that green Accounting is a relatively new field, it has not been widely adopted or Implemented . This lack of understanding and adoption of Green accounting has resulted in a lack of accurate data on environmental performance, making it difficult to measure the impact of businesses on the environment. Additionally, there are limited resources available to businesses to help them understand and implement green accounting practices. This has resulted in a lack of access to information and resources needed to effectively implement green accounting.

OBJECTIVES

- ◆ To gather information on green and sustainable practices of companies
- ◆ Comparative analysis of different green accounting practices
- ◆ To analyze the level of achievements in green accounting attained by incorporating it

RESEARCH METHODOLOGY

The method of study is through primary and secondary data. For the collection of Primary data a Questionnaire was designed to collect the view of the respondents about car manufacturing companies and products offered by them and a comparative study is done with the results so provided by the responders. The secondary data is collected through magazines, articles, websites and books.

- The results are analyzed using percentage method.
- The sample size selected for the study is 71.
- The questionnaire includes 22 questions.

LIMITATIONS

- ◆ Being a long term process, arriving at a conclusion immediately is not easy
- ◆ Business concerns are not very much aware of green accounting practices
- ◆ There is no proper frame work for green accounting
- ◆ The resources available for green accounting research in Kerala are limited

CHAPTER 2
LITERATURE REVIEW

REVIEW OF LITERATURE

- ➔ **(Chranjit Singh 2022) “Measuring the effect of green lean practices on the performance of manufacturing industries in India”**: The results indicate that the marketer and the government should create the desired knowledge , so that people are made aware of the environment problem arising out of the cars being used. The efforts will have to be made by the manufacturers that the TCO (Total Cost of Ownership) of the environment friendly car should be made low to the extent possible to reduce the over all financial burden on the customer and this will enable the marketers to promote the cars easily in the market place.

- ➔ **(Agrawal, Dipti 2020) “Critical Analysis in Green Accounting and Reporting Practices with its Implication in the Selected Indian Automotive Industry A Study Perspective”** : It is concluded that to survive in today’s dynamic market, Automobile Industries have to satisfy the continually rising expectations of the customers and fulfill The norms and policies. The green management and accounting system in automobile Sector is not enough and pervasive so far. So the urgent issue for automobile sectors of India is to adopt the philosophy of GARP.

- ➔ **(Paisal, Renu 2018) “A Study on the Relationship between Green Supply Chain Management Practices and Corporate Social Performance as Moderated by Stakeholders Intervention in Indian Automobile Industry”** : The findings firms up the assurance in the adoption of Green Supply Chain Management practices as a profitable environmental strategy that can be used to reduce environmental impact while increasing the economic performance .The industry also gains from enhanced goodwill and creation of favorable image amongst the society.

- ➔ **(Dr. Varsha Agarwal & Kalpaja L 2018) “A study on the importance of Green Accounting”**:The main Objective of this study is to create awareness of Green Accounting and understand its need and importance. The study concludes that Green Accounting helps the company as well as the environment in different ways and has to be strictly implemented in all levels of organization.

- ➔ **(Jain, Mukul 2018) : “E-procurement espousal and assessment: study of Indian car manufacturers”**: This study revealed that the industry is growing at an exponential growth rate, however there are still many areas which are still not being utilized properly. Hence, to do so, electronic procurement as a technology has been proposed in the industry. . The Assessment model can be used by industries to measure the success of Electronic Procurement Systems. It also helps users to figure out areas to be improved upon to make the system more Productive and effective. Verification of proposed frameworks was done with inputs and Suggestions from industry AND academic experts with a brief on elements used in frameworks and Their importance during pre-adoption, during adoption, and post adoption phases.

- **(Vatsa, Madhuranjan 2017) “Sustainable green marketing strategy a case study of car industry in India “:** The research clearly points out that car industry in India is simply following the government norms and not taking the environment friendly measures proactively. This has been very clearly concluded that there is a need of responsibility to be owned by every citizen of the globe and the car manufacturers jointly to behave in the eco-friendly manner to produce the conducive atmosphere to have sustainable earth – the only planet to live.

- **(A. A. Agbiogwu, J. U. Ihendinihu and M. C. Okafor 2016) “Impact of environmental and social costs on performance of Nigerian manufacturing companies”:** analyzed the impact of environmental and social costs on the performance of manufacturing companies in Nigeria. The findings showed that environmental and social costs significantly affect the net profit Margin, earnings per share and return on capital employed.

- **(J. C. Eze, A. U. Nweze and C. I. Eneke 2016) “Green Accounting: The Way to Economic Sustainability “:** identified the factors affecting Environmental accounting in developing nations by means of employing both primary and Secondary data. The survey approach was the selected research design. However, the study Found that environmentally friendly companies which voluntarily disclose their environmental Activities benefit from a high level of competitiveness. Their findings also suggest that environmental accounting stimulates companies to track their greenhouse gas emissions and other environmental elements against the reduction or elimination point.

- **(D. E. Emeakponuzo and M. Udih 2015) “Environmental Accounting Practices by Corporate Firms in Emerging : Economies Empirical Evidence from Nigeria”:** The study found that environmental accounting practice was significant In benchmarking the standard for corporate reporting and that compliance with the Environmental protection laws in Nigeria might not have had a significant influence on Environmental accounting practice due to enlightenment, enforcement and compliance issues.

- **(D. M. Makori and A. Jagongo 2013) “Environmental Accounting and Firm Profitability : An Empirical Analysis of Selected Firms Listed in Bombay Stock Exchange , India” :** The study found that there was a significant negative association between environmental accounting and return on capital employed, whereas a significant and positive association was established for earnings per share, the net profit margin and a dividend per share.

- **(Nasir Zameer Qureshi 2012) “Green Accounting and reporting among Indian corporates”:** Identified the major obstacles for environmental accounting and reporting

and concluded that for sustainable development of country, a well-defined environmental policy as well as proper follow up and proper accounting procedure is a must. Unless common people of India are not made aware about environmental damages and safety, development of accounting in this regard is really becomes difficult.

- **(Harazin, 2011)“Relationship between environmental accounting and pillars of sustainability”** :explains the challenges regarding sustainable development. The objective of this study was to find out and come to a conclusion whether the social and integration point of view is outside of the environmental accounting concept. At the end of the study, after various literature reviews and primer researches, the author was able to come to a conclusion that environmental accounting cannot be beyond social and integration challenge of sustainability and so, it can be related to pillars of sustainability.

- **(Lehmann, 2011) “ The Management of sustainability :The Art of Interpretation”**: In this study,the author explains about IAR (interpretive accounting research). The main objective of IAR is to understand how the accounting discipline like management accounting might help in overcoming or suppressing issues related to global warming and sustainability considerations.The author also depicts how interpretive accounting research allows people to re-think the structure and strategies towards the natural world.

CHAPTER 3
THEORETICAL FRAMEWORK

Green Accounting

The practice of "green accounting" or "environmental accounting" demonstrates that a company is committed to important aspects of our environment, including the planet, people and profits. Environmental firms mostly use accounting methods to incorporate environmental costs into their financial strategies. Finally, it covers environmental resources and assets in corporate financial statements and green audits. It measures the impact of business on society, environment and economy. The business sector is aware of environmental aspects and includes costs in its budget thanks to the development of green accounting

Importance of Green Accounting

Changes in the environment have adverse effects on both the environment and the economy as a whole. Furthermore, it is common knowledge that changes in the economy directly affect every business. It is also important to remember that environmental and climate change can affect a country's GDP. As a result, it is the best tool to help companies identify and manage potential trade-offs between conventional financial goals and environmental goals. Furthermore, because this important information is often overlooked, it expands the critical information available for analyzing policy issues. So it can be said that it is necessary to understand the saying "how to lose the saddle like a horse", companies that design their accounting system without considering environmental costs must meet this requirement as soon as possible.

Benefits of Green Accounting

The benefits of Green Accounting are listed below:

- Green accounting helps to know whether the business entity has been discharging its responsibilities towardS environment or not.
- It discloses to the investors and other stakeholders the preventative measures taken by the management to reduce the environmental Costs.
- It helps keep a systematic track record of environmental Information.
- Green accounting helps to get environmental licenses from Government authorities.
- It can ensure that the entity is operating in way that environmental damages do not occur.
- A company having Green accounting practices or better environmental performance gets increased reputation among public.
- The company can control over operational and material efficiency gains.
- In a macro point of view, Green accounting and reporting lead to sustainable GDP growth.
- If Green accounting is implemented country and companies shall invest more in Greener processes and technologies
- The collection of the waste and the preventionof the pollution could create financial resources for the business entities.

Limitations of Green Accounting

Green accounting suffers from the following situations:

- The Institute of Chartered Accountants of India(ICAI) has not framed accounting standard for prescribing procedures of environmental accounting and reporting.
- Comparison of two firms of two different companies is not possible if system of accounting is different

- Sometimes it would be difficult to make proper distinction between environmental expenditure and business expenditure.
- Social values for environmental goods and services are uncertain and change very rapidly .
- It mainly considers internal cost of the company and ignores social cost to society
- Initial cost for its tools and application is high
- It cannot work independently, it should be integrated with financial accounting which is not easy.

Types of Green Accounting

- **Environmental Management Accounting(EMA):** Management accounting with a particular material and energy flow information and environment cost information. This accounting can be classified in Segment Environmental Accounting, Eco Balance Environmental Accounting and Corporate Environmental Accounting.
- **Environmental Financial Accounting(EFA):** This is the financial accounting which focuses on reporting of environmental liability costs and other significant costs related to environment.
- **Environmental National Accounting (ENA):** This is a national level accounting with a specific focus on natural resources stocks and flows, externality costs and environmental costs.

Ways to implement Green Accounting

- **Educate Staff** –Teach accountants how to work in the workplace using environmentally friendly practices. Give them training programmes, give them rewards for practicing sustainability, and make energy management enjoyable with games.
- **Minimize Paper** –Make an effort to use less paper in the office. Although it may not be feasible to create an entirely paperless accounting process, paper usage can be curbed to some level. Keep track of how many documents each employee produces, make printing less convenient, and ask the banks for paperless statements.
- **Use eco-friendly methods**-Implement a greener solution using accounting system techniques. Make use of eco-friendly office supplies, embrace renewable energy, make the most of natural light, reuse, and recycle.
- **Boost Mobilization** –Motivate accountants to bike, walk, carpool, or work from home to reduce travel emissions. Reduce the number of individuals that commute to the office and the carbon footprint of the business by implementing cloud accounting.
- **Lower Energy Usage** –Lowering the office’s energy use will not only assist the environment, but it will also save energy costs. Employ light sensors, dim the AC, use energy-saving bulbs, and replace your appliances.

Ways to promote Green Accounting

- **Recognize Accounting Methods That Harm the Environment:** Analyze how much energy is being used by the various parts of your business. This analysis ought provide offer a reasonable idea of the resources and techniques in use that waste energy implementing a greener solution won't need much work after you've identified them.
- **Consider the Environment When Setting Performance Parameters:**Modern methods have begun to include natural assets in the calculations due to growing environmental concern. The System of Environmental-Economic Accounting (SEEA) is an illustration of this type of system reform. It is better to make the transition to these calculations as soon as possible in order to contribute to the environmental benefits.
- **Go Paperless:** The accounting department continues to be weighed down by paper. Paper not only produces maintenance confusion, but it also harms environmental causes. Adopting there are various ways to conduct paperless accounting, including the use of sophisticated software, promoting e-payments, submitting taxes online, etc.
- **Use greener products and solutions:** Your accounting department has been using energy to maintain productivity high by powering the accountants' workstations, servers, printers, etc.The greatest solution for maintaining the same level of productivity is to swap them out for low-energy-consumption gadgets. Never forget to look at the energy-star ratingof the equipment you use for accounting tasks.
- **Keep It Simple with Green Practices:** Being environmentally conscious at work may be as easy as adhering to the 3R principle of reducing, reusing, and recycling. While not in use, turn off the lights, computers, and other electronics. Encourage employees to use public transportation or work from home.

Laws related to Green Accounting

- Environmental protection water (Prevention and control pollution) Act, 1974
- The Air (Prevention and control pollution) Act, 1981
- The environment (Protection) Act, 1986
- The Forest Conservation Act, 1980
- Hazardous Waste (Management and Handling) Rules, 1986
- Motor Vehicle Act,1991
- The Factories Act,1948

INDUSTRY AND
COMPANY PROFILE

INDUSTRIAL PROFILE

According to statistics from 2021, India has the fourth-largest automobile industry worldwide. India became the fourth-largest nation in the world by automobile industry worth in 2022. India surpassed Japan and Germany to become the third-largest vehicle market in the world as of 2022 in terms of sales.

The auto sector in India is currently valued more than \$100 billion, produces 8% of the total exports, and accounts for 2.3% of the country's GDP. Maruti Suzuki, Tata Motors, Ashok Leyland, Mahindra & Mahindra, Force Motors, Tractors and Farm Equipment Limited, Eicher Motors, Royal Enfield, Sonalika Tractors, Hindustan Motors, Hradyesh, ICML, Kerala Automobiles Limited, Reva, Pravaig Dynamics, Premier, Tara International, and Vehicle Factory Jabalpur are just a few of the country's major automakers.

One of the most significant sectors in India is the automobile industry. Millions of people are employed by it, and it greatly raises the GDP of the nation. But the auto industry is also one of the most environmentally destructive in the nation. It's critical to take the automotive industry's environmental effects into account in order to support sustainable development.

In India, the automotive industry has primarily negative environmental effects related to air, water, and noise pollution.

- **Air pollution:** A significant contributor to air pollution in India is the automobile industry. Many pollutants, such as nitrogen oxides (NO_x), carbon monoxide (CO), and particulate matter, are released by vehicles (PM). These contaminants play a role in a number of health issues, such as cancer, heart disease, and respiratory illnesses.
- **Water contamination:** A significant contributor to water pollution in India is the automobile sector. Oil, grease, and heavy metals are just a few of the toxins that vehicles dump into water bodies. These toxins can harm aquatic habitats and taint drinking water supplies.
- **Noise pollution:** Another negative effect of the automobile sector on the environment is noise pollution. When a car is driven, a lot of noise is produced. Stress, hearing loss, and disturbed sleep are all possible effects of this noise.

India's auto sector is expanding and has tremendous growth potential. The Indian auto sector is still in its early phases in terms of green accounting, but it is starting to pick up speed. To encourage green accounting practices in the auto industry, the government and industry participants are launching a number of programmes. Among the major projects are:

1. In order to encourage the use of electric and hybrid vehicles in the nation, the government has introduced a number of programmes and subsidies.
2. To encourage the use of electric vehicles, the government is also putting infrastructure for charging them in place all across the nation.
3. A number of industry companies are attempting to create cars that use less gasoline and are better for the environment.
4. To lessen its overall environmental impact, the automotive industry is also promoting the use of recycled materials in manufacturing.
5. A number of industry organizations are attempting to educate the participants in the auto sector about the value of green accounting methods.

CAR INDUSTRY IN KERALA

Kerala's auto sector contributes significantly to the state's environmental pollution. The state government has put in place a number of regulations and programmes to "green" the business. The first regulation is the "pollution control norm for the automobile sector," which mandates compliance with specific environmental requirements by all auto manufacturing firms.

The "emission trading programme for the vehicle industry" is the second regulation, which enables businesses to exchange emissions credits in order to fulfil their requirements. The third regulation, titled "Environmental Impact Assessment for the Automobile Industry," calls for businesses to evaluate how their operations affect the environment.

The state government of Kerala has also developed a variety of schemes to aid the automobile sector there. The "car scrappage policy," which offers financial incentives to businesses to scrap outdated automobiles, is the first initiative. The second scheme, known as the "vehicle replacement programme," offers firms financial assistance when they buy new vehicles to replace their used ones. The "electric vehicle programme," the third initiative, offers financial aid to businesses so they may move to using electric vehicles.

COMPANY PROFILE

➤ TATA MOTORS

The Tata Group includes the multinational Indian automaker Tata Motors Limited, which has its headquarters in Mumbai. The company manufactures buses, coaches, vans, and passenger automobiles. The business was established in 1945 as a producer of locomotives and was formerly known as Tata Engineering and Locomotive Company (TELCO). In 1954, the business produced its first commercial vehicle as part of a partnership with Daimler-Benz AG that lasted until 1969. Tata Motors became the first Indian manufacturer to be able to create a competitive domestic automobile when it introduced the Tata Mobile in 1988, followed by the Tata Sierra in 1991, and so entered the passenger vehicle market. Tata introduced the Indica, the world's first fully indigenous Indian passenger car, in 1998. The Tata Nano, the world's most affordable car, was introduced in 2008. In 2004, Tata Motors purchased Daewoo Commercial Vehicles Company, a South Korean producer of trucks. Since the firm created it for the 2008 acquisition of Jaguar Cars and Land Rover from Ford, Tata Motors has served as Jaguar Land Rover's parent company.

The two main divisions of Tata Motor's are the South Korean commercial vehicle producer Tata Daewoo and the British luxury car manufacturer Jaguar Land Rover (which produces the Jaguar and Land Rover automobiles). Tata Motors has joint ventures with Stellantis that produce automotive parts and automobiles with the Fiat Chrysler and Tata brands, as well as a joint venture with Hitachi that manufactures construction equipment. Private equity company TPG made a \$1 billion investment in Tata Motors' electric vehicle division on October 12, 2021.

TATA MOTORS	
Formerly	Tata Engineering and Locomotive Company Ltd. (TELCO)
Type	Public
Traded as	BSE: 500570 ↗ NSE: TATAMOTORS ↗ NSE NIFTY 50 Constituent
ISIN	IN9155A01020
Industry	Automotive
Founded	1945; 78 years ago
Founder	Jehangir Ratanji Dadabhoy Tata
Headquarters	Mumbai, Maharashtra, India ^[1]
Area served	Worldwide
Key people	Natarajan Chandrasekaran (Chairman) Guenter Butschek (CEO) Martin Uhlarik (CDO)
Products	Automobiles Luxury vehicles Commercial vehicles Automotive parts Pickup trucks SUVs
Production output	▲ 1.1 Million (approx) (2021)
Services	Automotive finance Vehicle leasing Vehicle service
Revenue	▲ ₹301,144 crore (US\$38 billion) (2022) ^[2]
Operating income	▲ ₹-7,003 crore (US\$-880 million) (2022) ^[2]
Net income	▲ ₹-11,234 crore (US\$-1.4 billion) (2022) ^[2]
Total assets	▼ ₹330,619 crore (US\$41 billion) (2022) ^[3]
Total equity	▼ ₹44,554 crore (US\$5.6 billion) (2022) ^[3]
Number of employees	50,837 (2022) ^[4]
Parent	Tata Group
Divisions	Tata Motors Cars
Subsidiaries	Tata Daewoo Jaguar Land Rover Tata Technologies Tata Hispano Tata Hitachi Construction Machinery Tata Passenger Electric Mobility
Website	www.tatamotors.com ↗

➤ MAHINDRA AND MAHINDRA LIMITED

Mahindra & Mahindra Limited (M&M) is a Mumbai-based, multinational Indian automotive manufacturing company. It was founded in 1945 under the name Mahindra & Mohammed and changed to Mahindra & Mahindra subsequently. M&M, a member of the Mahindra Group, is one of India's top car producers by production. By volume, Mahindra Tractors, one of its divisions, is the world's biggest tractor manufacturer. In 2018, Fortune India 500 placed it 17 th on a list of the best firms in India. Tata Motors and Marti Suzuki are two of its principal rivals in the Indian market.

mahindra

Type	Public
Traded as	BSE: 500520 ↗ NSE: M&M ↗ BSE SENSEX Constituent NSE NIFTY 50 Constituent
ISIN	INE101A01026
Industry	Automotive
Founded	2 October 1945; 77 years ago Jassowal, Ludhiana, Punjab, India
Founders	J. C. Mahindra K. C. Mahindra M. G. Muhammad
Headquarters	Mumbai, Maharashtra, India
Area served	Worldwide
Key people	Anand Mahindra (Chairman) Dr. Anish Shah (MD & CEO) ^[1] Rajesh Jejurikar (Executive Director AFS)
Products	Automobiles Commercial vehicles Tractors Motorcycles
Production output	▼ 4,076,043 vehicles (2020)
Revenue	▲ ₹74,277.78 crore (US\$9.3 billion) ^[2] (FY2021)
Operating income	▲ ₹8,411.10 crore (US\$1.1 billion) ^[2] (FY2021)

Net income	▲ ₹3,347.41 crore (US\$420 million) ^[2] (FY2021)
Total assets	▲ ₹166,462.49 crore (US\$21 billion) ^[2] (FY2021)
Total equity	▲ ₹41,581.92 crore (US\$5.2 billion) ^[2] (FY2021)
Number of employees	40,619 (2021) ^[2]
Parent	Mahindra Group
Subsidiaries	Mahindra Electric Mahindra Tractors Mahindra 2 Wheelers Mahindra Truck and Bus Division BSA Company Yezdi Classic Legends Motorcycles Peugeot Motorcycles Automobili Pininfarina Pininfarina
Website	auto.mahindra.com ↗

➤ HYUNDAI MOTORS INDIA LTD

A fully owned subsidiary of the South Korean-based Hyundai Motor Corporation, Hyundai Motor India Ltd. As of 2022, it will have a 15% market share in India and a US\$5.5 billion annual revenue, making it the second-largest automaker. The Hyundai Motor Corporation of South Korea established Hyundai Motor India Ltd on May 6, 1996. Hyundai Motor India Ltd., a wholly owned subsidiary of the Hyundai Motor Company with its headquarters in South Korea, was the Hyundai brand when Hyundai Motor Company first entered the Indian vehicle market in 1996. As of 2022, it will have a 15% market share in India and a US\$5.5 billion annual revenue, making it the second-largest automaker. The Hyundai Motor Corporation of South Korea established Hyundai Motor India Ltd on May 6, 1996. The Hyundai brand was essentially unknown in India when Hyundai Motor Corporation entered the Indian auto market in 1996. There were only five major automakers in India at the time Hyundai entered the market in 1996: Maruti, Hindustan, Premier, Tata, and Mahindra. With the Cielo, Daewoo joined the Indian auto market just three years ago, whereas Ford, Opel, and Honda did so less than a year before. Tata Motors, Mahindra & Mahindra, and Hindustan and Premier both produced obsolete and uncompetitive automobiles, leaving Maruti Suzuki with a near monopoly over the passenger car market for more than a decade before Hyundai entered the market.



Headquarters in Gurugram, India

Type	Subsidiary
Industry	Automotive
Founded	6 May 1996; 26 years ago
Headquarters	Gurugram, Haryana, India
Key people	Unsoo Kim (MD & CEO) Tarun Garg (COO)
Products	Automobiles
Production output	▲ 710,012 units (2018) ^[1]
Revenue	▲ ₹47,042.79 crore (US\$5.9 billion) (2022)
Net income	▲ ₹2,861.77 crore (US\$360 million) (2022)
Parent	Hyundai
Website	www.hyundai.co.in

CHAPTER 4
DATA ANALYSIS AND
INTERPRETATION

1. Age

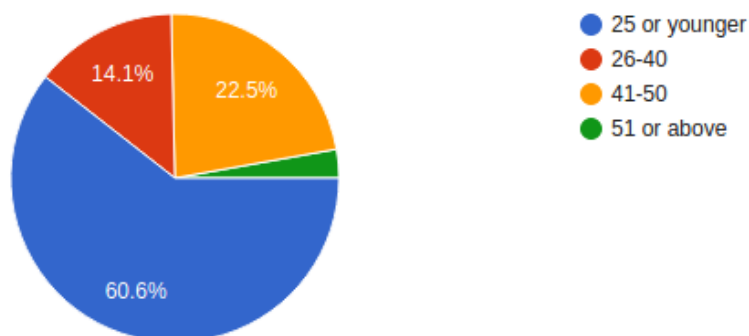
Table 1 shows the age of the respondents

Sl.No	Age	No of respondents	Percentage(%)
1	25 or younger	43	60.6%
2	26-40	10	14.1%
3	41-50	16	22.5%
4	51 or above	2	2.8%
Total		71	100%

Figure 1 shows the age of the respondents

Age

71 responses



Interpretation

Table 1 and Figure 1 shows the age of the respondents. Here the respondents age which is 25 or younger (60.6%) are more as compared to others and the lowest one is 51 or above which is 2.8%.

2. Gender

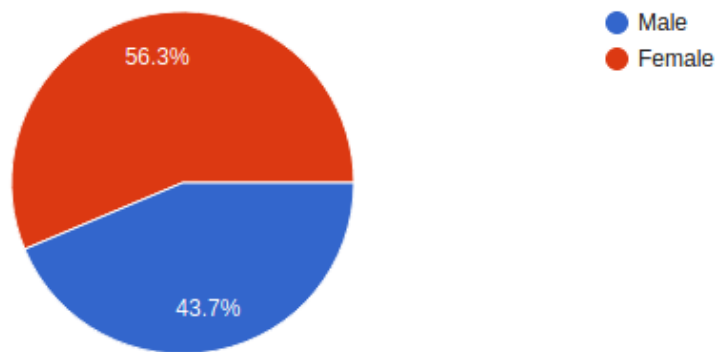
Table 2 shows the Gender of the respondents

Sl.No	Gender	No of respondents	Percentage(%)
1	Male	31	43.7%
2	Female	40	56.3%
Total		71	100%

Figure 2 shows the Gender of the respondents

Gender

71 responses



Interpretation

Table 2 and Figure 2 shows the gender of the respondents. Here female respondents(56.3%) are more as compared to male respondents(43.7%)

3. Occupation

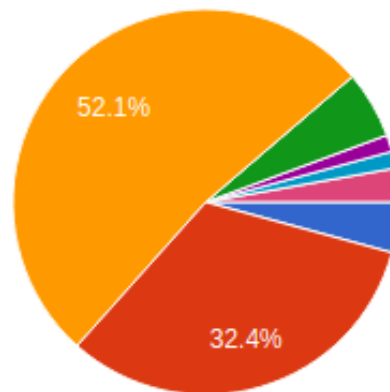
Table 3 shows the occupation of the respondents

Sl.No	Occupation	No of respondents	Percentage(%)
1	Government Employee	3	4.2%
2	Students	23	32.4%
3	Employees from car industry	37	52.1%
4	Self Employed	4	5.6%
5	Business	3	4.3%
6	Others	1	1.4%
Total		71	100%

Figure 3 shows the occupation of the respondents

Occupation

71 responses



Interpretation

Figure 3 and Table 3 displays the occupation of the respondents. The majority of respondents that is 52.1% are employees from car, students make about 32.4% of the total respondents. 4.2% of the respondents are government employees while 5.6% are self employed. Only 4.3% are business owners and rest 1.4% consists of other category.

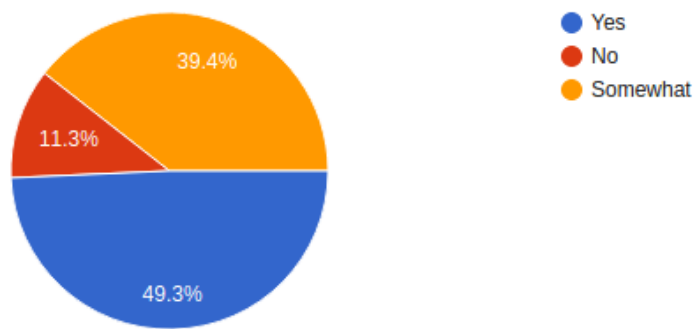
4. Respondents familiarity with the concept of green accounting

Table 4 shows the familiarity with the concept of green accounting

Sl.No	Familiar	No of respondents	Percentage(%)
1	Yes	35	49.3%
2	No	8	11.3%
3	Somewhat	28	39.4%
Total		71	100%

Figure 4 shows the familiarity of respondents with the concept of green accounting

71 responses



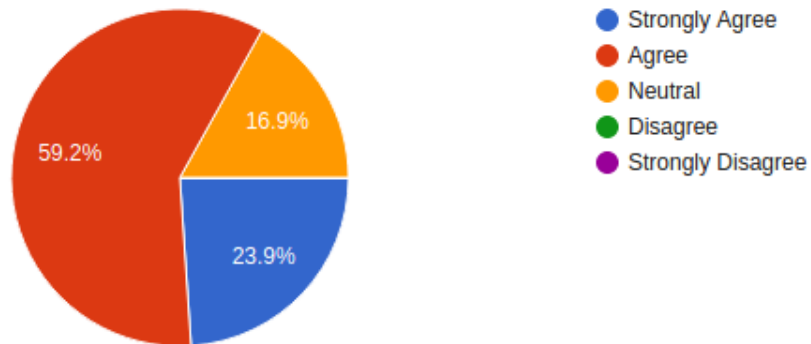
Interpretation

Figure 4 shows that about 49.3% of the respondents are familiar with the concept of green accounting, whereas 39.4% of the respondents are somewhat aware about this concept and the rest 11.3% are not at all aware about the concept of green accounting.

5. Green accounting as a major tool for sustainable development

Figure 5 shows the respondents opinion on green accounting as a major tool for sustainable development

71 responses

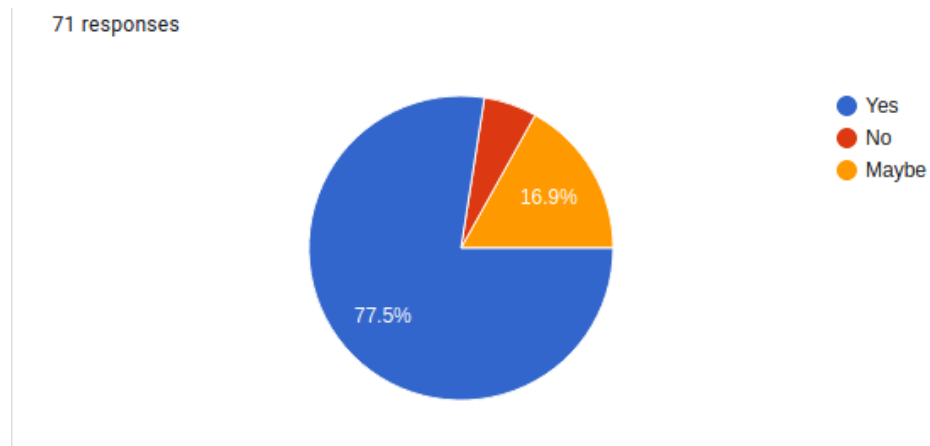


Interpretation

From the figure 5, 23.9% of the respondents strongly agrees and 59.2% agrees with the fact that green accounting acts as a major tool for sustainable development. While 16.9% respondents have neutral opinion and none of them disagrees with this fact. So as we conclude we can agree to the fact that green accounting act as a major tool for sustainable development.

6. Importance of corporate social responsibility

Figure 6 shows the response of people on the importance of CSR



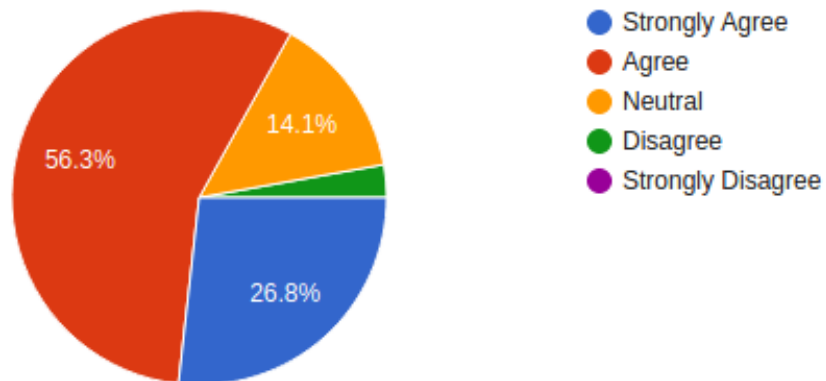
Interpretation

Figure 6 shows that 77.5% of respondents are aware about the importance of corporate social responsibility, about 16.9% of are somewhat aware about this.while rest of them are not at all aware about CSR.So as we conclude majority of the respondents are aware about the importance of CSR as green accounting and sustainable development plays an important role in CSR activities of the companies.

7. Imposing strict rules and regulations regarding the implementation and adoption of green accounting

Figure 7 shows the response of people on imposing strict rules and regulations regarding the implementation and adoption of green accounting

71 responses



Interpretation

From the figure 7 we can understand that about 26.8% of respondents strongly agree and about 56.3% of agrees to impose strict rules and regulations regarding the implementation and adoption of green accounting. About 14.1% have neutral response about this and rest disagrees about this opinion. So from this response we can understand that majority of people agrees to impose strict rules and regulations regarding the implementation and adoption of green accounting.

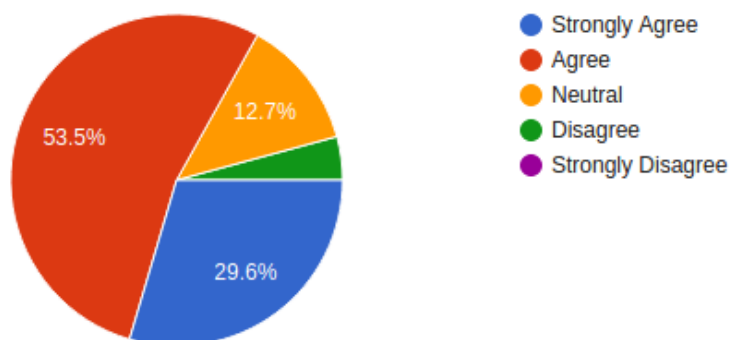
8. Strict action must be taken by the govt if green reporting is not followed

Table 8 shows the response of people about taking strict actions by the govt if green reporting is not followed

Sl.No	Response	No of respondents	Percentage(%)
1	Strongly agree	21	29.6%
2	Agree	38	53.5%
3	Neutral	9	12.7%
4	Disagree	3	4.2%
5	Strongly disagree	----	-----
Total		71	100%

Figure 8 shows the response of people about taking strict actions by the govt if green reporting is not followed

71 responses



Interpretation

when a statement was put up for the respondents if strict actions must be taken by the government if green reporting is not followed, 4.2% of them disagreed with it. Moreover majority of them, 53.5% agreed and 29.6% strongly agreed with the statement yes, strict actions must be taken by the government if green reporting is not followed. And also 12.7% of them were neutral about it.

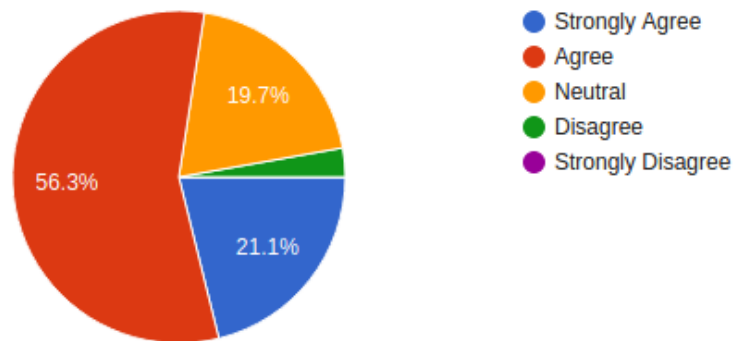
9. Should green accounting be implemented in all companies

Table 9 showing the response of “should green accounting be implemented in all companies”

Sl.No	Response	No of respondents	Percentage(%)
1	Strongly agree	15	21.1%
2	Agree	40	56.3%
3	Neutral	14	19.7%
4	Disagree	2	2.8%
5	Strongly disagree	-----	-----
Total		71	100%

Figure 9 showing the response of “should green accounting be implemented in all companies”

71 responses



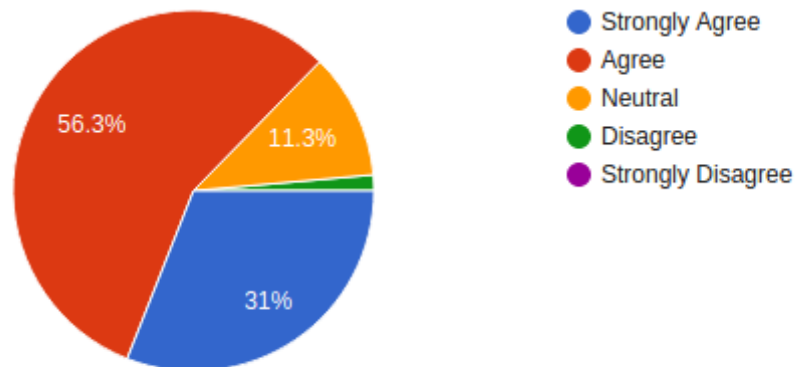
Interpretation

When respondents were asked if green accounting has to be implemented in all the companies 56.3% of the people agreed and 21.1% strongly agreed that it has to be implemented in all companies and 19.7% of them were neutral about it and also 2.8% of the people disagreed to it. Through this response we can conclude that even though very less number of people disagrees about green accounting being implemented in all companies, majority of the people think that green accounting has to be implemented in all of the companies as it helps the companies to keep track of what it is taking from the environment and what it is giving back in return.

10. Environmental accounting information is very essential for manufacturing organisations to create awareness about the impact of environment on the performance of the enterprise

Figure 10 shows the response based on the above statement

71 responses



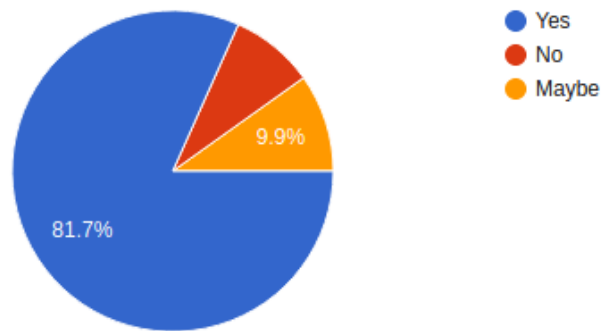
Interpretation

Next, the respondents were asked if more awareness has to be created for environment accounting and the response was as follows, Here we can see that 1.4% of the respondents disagree about more awareness being created about environment accounting whereas majority of the respondents which constitute 87.3% of the people strongly agreed and agreed to the fact that there has to be awareness created everywhere among people and companies regarding environmental accounting since not many of the people know what it actually means and how it actually helps the company as well as the environment and how benefiting it actually is.

11.Environmental accounting orientation and staff efficiency

Figure 11 shows the response about environmental accounting orientation and staff efficiency

71 responses



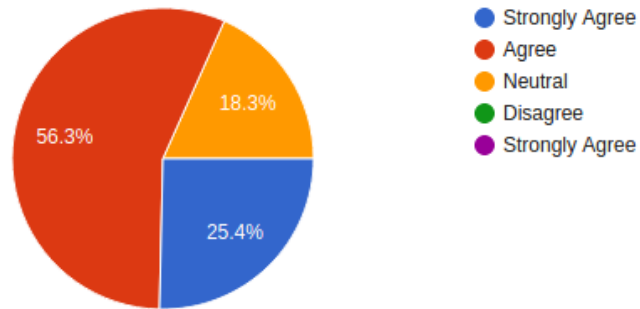
Interpretation

It is evident that 81.7% respondents replied very positive regarding organizations need orientation and staff efficiency for environmental accounting activities.

12. Organizations need to disclose environmental performance over the period

Figure 12 shows the response of above statement

71 responses

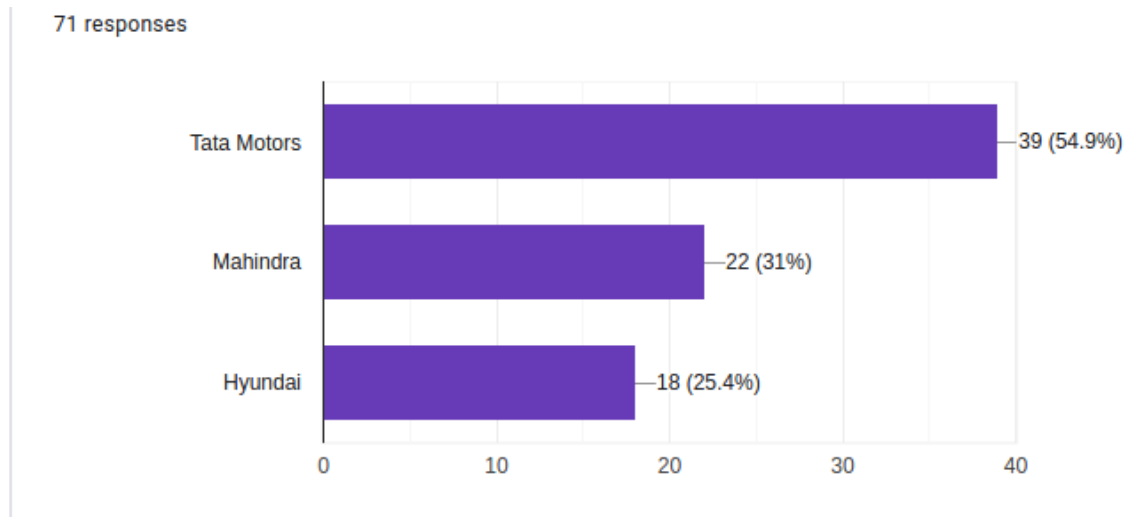


Interpretation

Reportedly, the stakeholders always want information about environmental events. The 81.7% respondents strongly agree and agree on this and the rest has a neutral response regarding this.

13. Which has the least green house emission

Figure 13 shows the respondents opinion on above statement



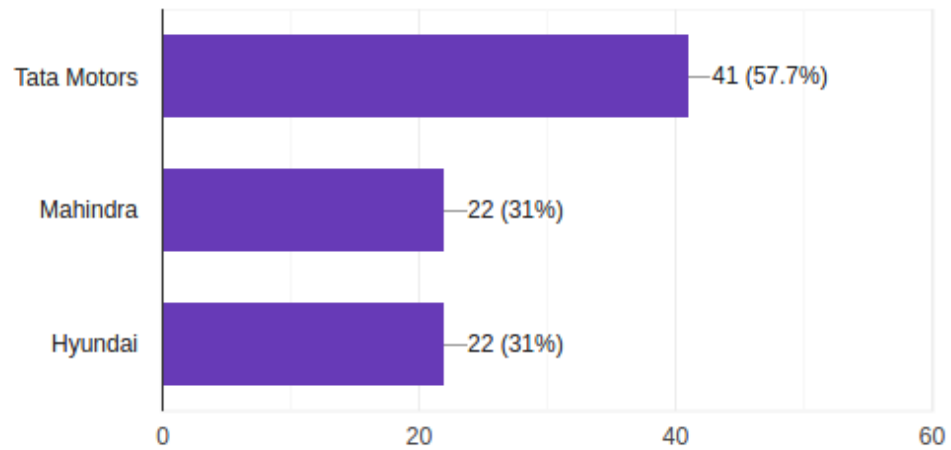
Interpretation

So from this figure it is evident that 54.9% respondents has agreed that Tata motors has least green house gas emission followed by Mahindra 31% and then last comes Hyundai with 25.4% response. Here, we conclude that Tata motors has least green house gas emission.

14. Which company has opportunities in clean technology

Figure 14 shows the respondents opinion on above statement

71 responses



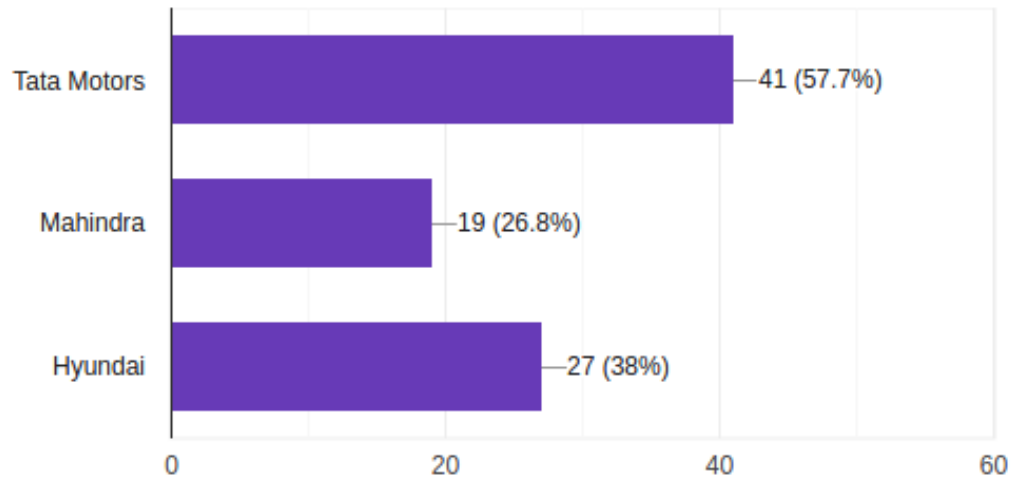
Interpretation

From this figure we can say that majority of responses are in favour of Tata motors which is 57.7% whereas Mahindra and Hyundai has got equal amount of response that is 31% each. So, here we can conclude that in respondents opinion Tata motors has way more opportunity in clean technology than other two companies i.e; Mahindra and Hyundai.

15. Which of these company uses green devices

Figure 15 shows the respondents opinion on above statement

71 responses



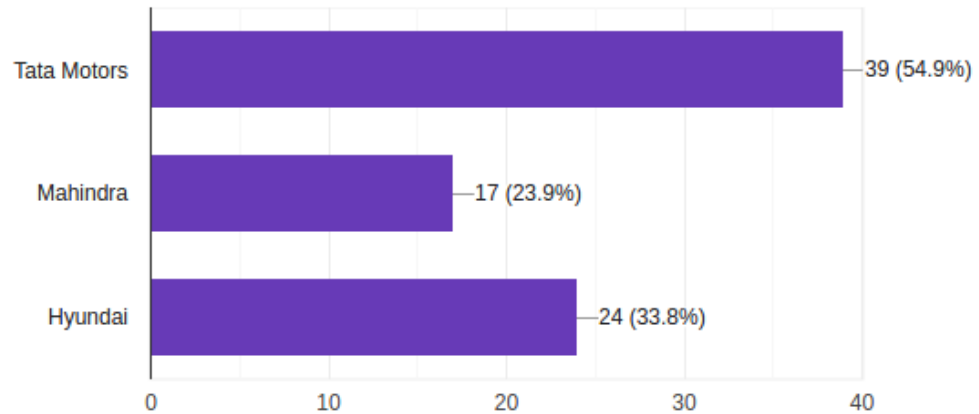
Interpretation

From the figure 15 we can understand that 57.7% of respondents agrees to the fact that Tata motors uses green devices way more than Hyundai which has got 38% response and Mahindra which has only 26.8% response. So from this we can conclude that Tata motors uses green devices more.

16. Which has best waste management system

Figure 16 shows the respondents opinion on the above statement

71 responses



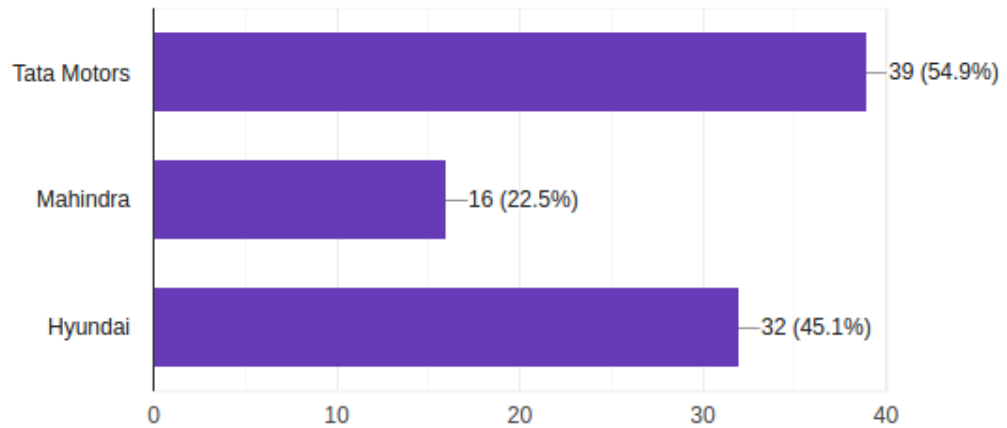
Interpretation

From above response it is evident that majority of the respondents which is 54.9% agrees that Tata motors has best waste management system, the 2nd position goes to Hyundai with 33.8% response and in last position we have Mahindra with 23.9% response, So from this we can understand that Mahindra has to improve its waste management system and thereby increase its green accountability.

17. Which of the company has reduction in carbon footprint

Figure 17 shows the respondents opinion on above statement

71 responses



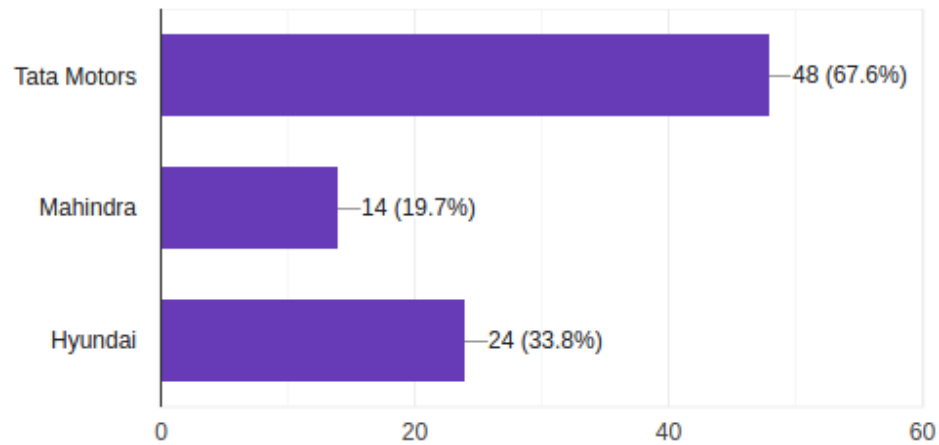
Interpretation

Here, comparatively Tata motors have way more reduction in carbon footprint which is 54.9% which is evident from above response, then Hyundai bagged the 2nd position with 45.1% response and then lastly Mahindra with only 22.5% response.

18. Which has efficient energy management

Figure 18 shows the respondents opinion on above statement

71 responses



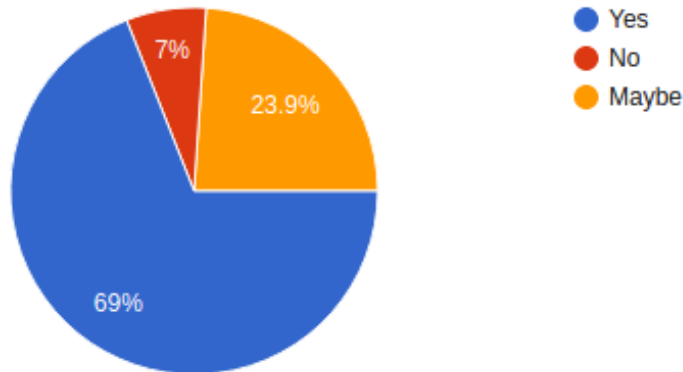
Interpretation

Here we can understand that Tata motors with a response of 67.6% has topped in efficient energy management, then comes Hyundai with a response of 33.8% and then comes Mahindra with a response of 19.7%.

19. Electric cars contribute to sustainable environment thereby increasing the green accountability of the car manufacturing concern

Figure 19 shows the response on above statement

71 responses



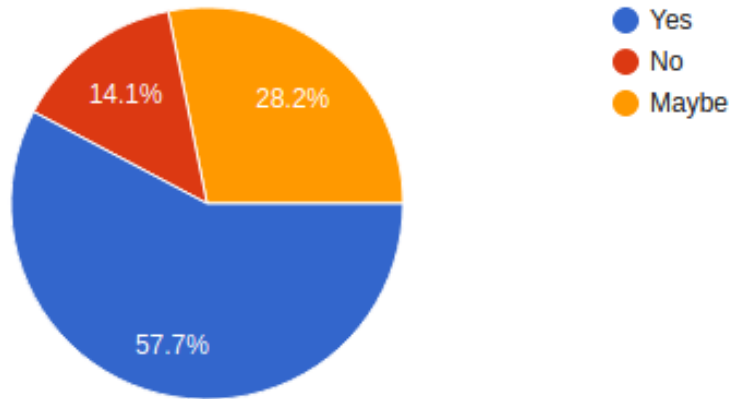
Interpretation

From this we can understand that 69% of the respondents agrees with the fact that electric cars contribute to sustainable environment thereby increasing the green accountability of the car manufacturing concern, 23.9% somewhat supports with this statement and 7% respondents disagrees to this statement.

20. Can electric cars can decrease global warming

Figure 20 shows the response on above statement

71 responses



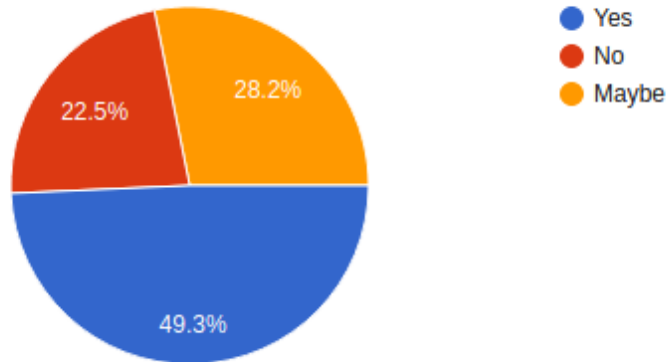
Interpretation

From the figure 20 it is evident that 57.7% agrees to the fact that electric cars can decrease global warming, about 14.1% disagrees to this fact and 28.2% respondents has a neutral opinion.

21. Electric cars as a substitute for regular vehicles

Figure 21 shows the response on above statement

71 responses

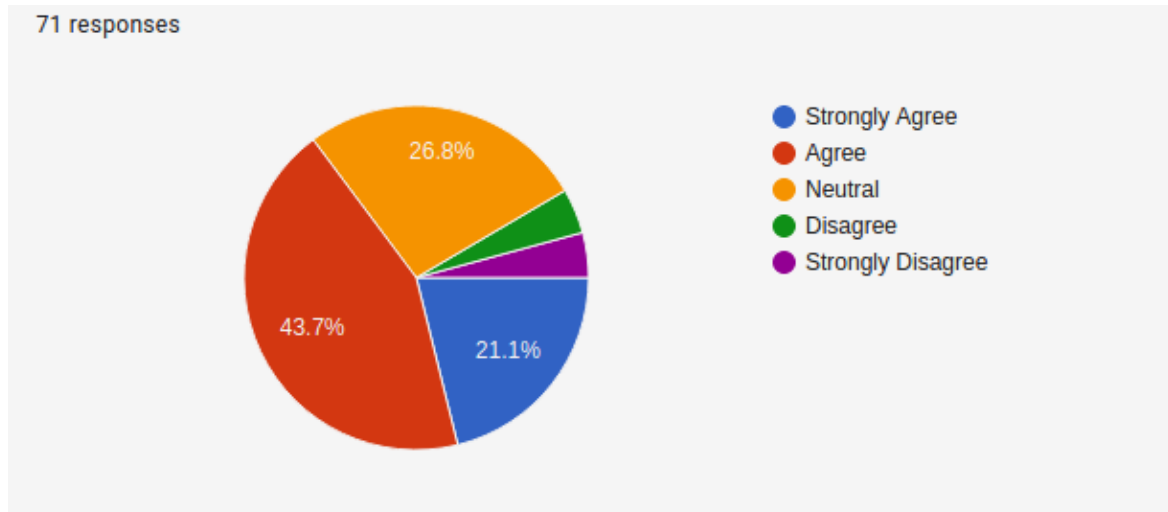


Interpretation

From the figure 21 we can understand that majority of the respondents that is 49.3% have positive response on electric cars as a substitute for regular vehicles, while 28.2% respondents have neutral opinion and rest 22.5% has a negative opinion about this.

22. Electric cars can save a lot of money

Figure 22 shows the response on above statement



Interpretation

From the figure 22 we can understand that about 21.1% strongly agrees and 43.7% agrees to the fact that electric cars can save a lot of money. While 26.8% have a neutral response, about 4.2% respondents disagree to this and about 4.2% strongly disagree to this fact.

CHAPTER 5
FINDINGS, SUGGESTIONS AND
CONCLUSION

FINDINGS

- Out of the 71 respondents, 49.3% of respondents are aware about Green accounting while 11.3% of respondents aren't aware & 39.4% of respondents are not sure about green accounting.
- A majority of 59.2% of respondents agree that Green accounting can be used as a major tool for sustainable development and none of the respondents disagree with it.
- More than half of the respondents agreed with the concept of Green accounting should be implemented in all companies.
- It is necessary to conduct orientation and have staff efficiency for environmental accounting activities.
- 53.3% of respondents agreed that the strict actions must be taken by the government if Green accounting reporting is not followed.
- According to the response, Tata motors has the least house emissions and had efficient energy management, followed by Hyundai.
- 57.7% of the respondents thinks that the electric vehicles can decrease Global warming.
- Out of the respondents 69% believes that the electric cars contributes to sustainable environment thereby increase the green accountability of the car manufacturing concerns.

SUGGESTIONS

- There is a necessity to create awareness about green accounting/green reporting to the Organization's as well as the general public.
- The government must make it mandatory for all the organizations to implement green accounting. Strict actions must be taken by the government if environmental norms are not followed by the organization.
- The Company must disclose its information regarding environmental accounting as a part of its annual report.
- There must be more of strict environmental norms and legislation created by the government.
- Each and every employee in the organization must be made aware of the importance of environmental reporting.
- After performing the research and examining the existing situation, it is advised to make sure that the companies have the infrastructure necessary to meet the demands of the E-Vehicles across the nation. There is a need for more businesses to diversify into the EV market because consumers have few options, which will lead to rising demand for purchases. Businesses must create such electric vehicles that are consistent with consumer perception.

CONCLUSION

From this study, we can conclude that green accounting brings many benefits to the organization and the environment. It also sheds light on what green accounting or green reporting entails and what its characteristics are and how it works. Great changes can be made to improve the environment if carefully implemented at all levels of the organization. With the help of green accounting, we can control the natural resources at our disposal, how they can be used and what can be done to get rid of them. It also aims to illustrate why it is important for companies to use green accounting both to improve the use of resources and to protect the environment. Based on the information gathered from the main sources, we can conclude that most people are in favor of green accounting, its effects on business and strict government regulation.

Green accounting is definitely a practice that can significantly save environmental pollution. Green accounting practices and disclosure improve a company's image. High costs of including green accounts in financial statements, or lack of knowledge about the benefits of tracking them, or lack of information for proper disclosure, may be the reason for non-compliance with green accounting. In addition, there are no specific rules and guidelines for performing green accounting. This study was limited to the voluntary disclosure of these three car manufacturers and their analysis to generalize the results to some extent.

CHAPTER 6
BIBLIOGRAPHY

WEBSITES

- www.google.com
- www.wikipedia.com
- www.researchgate.com
- <http://www.tatamotors.com/>
- <http://auto.mahindra.com/>
- <http://www.hyundai.co.in/>

REFERENCES

- <https://iasbaba.com/2022/10/green-accounting/>
- <http://ijrar.org/>
- <https://www.ijariit.com/>
- <https://shodhganga.inflibnet.ac.in/jspui/handle/10603/397903>
- <https://www.ccsenet.org/journal/index.php/ijef/article/view/62520>
- https://airjournal.org/ijaesd/journal_article/green-accounting-the-way-to-economic-sustainability/
- <https://www.studocu.com/in/document/biju-patnaik-university-of-technology/mba-regular/a-study-of-green-accounting-and-its-practices-in-india-2/16267515>
- <https://www.linkedin.com/pulse/green-accounting-zahid-munir>
- <https://www.worldwidejournals.com/global-journal-for-research-analysis-GJRA/article/a-study-on-green-accounting-concept-and-its-importance/MTI1Nzc=?is=1&b1=33&k=9>
- <https://www.jagranjosh.com/general-knowledge/green-accounting-system-objectives-and-importance-1545652441-1>
- <https://www.wavespartnership.org/en/system-environmental-economic-accountingseea>
- https://wikimili.com/en/Automotive_industry_in_India
- <https://www.indiancentury.in/2023/03/18/indias-growing-energy-needs/>
- <https://ccc.bc.edu/content/ccc/research/corporate-citizenship-news-and-topics/environmental-sustainability.html>
- <https://khatabook.com/blog/green-accounting-need-objectives-problems-and-other-details/>
- <https://thinkindiaquarterly.org/index.php/think-india>
- <https://slideshare.net/>
- <https://worldwidejournals.com/>
- https://en.wikipedia.org/wiki/Tata_Motors
- https://en.wikipedia.org/wiki/Mahindra_%26_Mahindra
- https://en.wikipedia.org/wiki/Hyundai_Motor_India
- <https://businessconnectindia.in/>
- <https://www.theseus.fi/>
- <https://tumble.org/>

- <https://universepg.com/home>
- <https://inspirajournals.com/>
- <https://www.iowadnr.gov/>
- <https://ijrcs.org/>
- <https://xedknowledge.com/>
- <https://www.moneycontrol.com/>
- <https://pt.slideshare.net/>

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APPENDIX

QUESTIONNAIRE

Green Accounting Practices in Car Industries

1. Age
 - 25 or younger
 - 26-40
 - 41-50
 - 51 or above
2. Gender
 - Male
 - Female
 - Other
3. Occupation
 - Government Employee
 - Employees in car industries
 - Student
 - Self Employed
 - Other
4. Are you familiar with the concept of green accounting
 - Yes
 - No
 - Somewhat
5. Do you agree that green accounting can be used as a major tool for sustainable development
 - Strongly agree
 - Agree
 - Neutral
 - Disagree
 - Strongly disagree
6. Are you aware about the importance of Corporate Social Responsibility
 - Yes
 - No
7. Do you think that government should impose strict rules and regulations regarding the implementation and adoption of green accounting

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

8. Strict actions must be taken by the government if green reporting is not followed

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

9. Should Green accounting be implemented in all companies

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

10. Environmental accounting information is very essential for manufacturing organisations to create awareness about the impact of environment on the performance of the enterprise

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

11. Does organisations need orientation and staff efficiency for environmental accounting activities

- Yes
- No
- Sometimes

12. Organisations needs to disclose environmental accounting performance over the period

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

13. In your opinion which has the least green house emission

- Tata Motors
- Mahindra
- Hyundai

14. In your opinion which company has opportunities in clean technology

- Tata motors
- Mahindra
- Hyundai

15. In you opinion which of these companies uses green devices

- Tata motors
- Mahindra
- Hyundai

16. In your opinion which has best waste management system

- Tata motors
- Mahindra
- Hyundai

17. In your opinion which of the following has reduction in carbon footprint

- Tata motors
- Mahindra
- Hyundai

18. In your opinion which has efficient energy management

- Tata motors
- Mahindra
- Hyundai

19. Do you think that electric cars contributes to sustainable environment thereby increasing the green accountability of the car manufacturing concern

- Yes
- No
- Sometimes

20. Do you think that electric vehicles can decrease Global Warming

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

21. Do you think that electric cars are a substitute for regular vehicles

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

22. Do you think that electric cars can save a lot of money

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree