

# Surana College

### **AUTONOMOUS**

16, South End Road | Bengaluru-04 Reaccredited 'A+' Grade by NAAC | Affiliated to Bengaluru University

#### 1.3.1

## **Student Research Projects and Papers on Crosscutting Issues**

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Principal Surana College (AUTONOMOUS) No. 16, South End Road, Bangalore - 560 004,



#### TO WHOM SO EVER IT MAY CONCERN

This is to certify that Ms. Varshini S with Register Number 20KXCOM035. Student of final year M.COM from Surana College, Bangalore. Was provided with facilities to do Project at Mc Donald's corporation, Bangalore as per the following details.

Project Titled "An analysis of environmental accounting with reference to Mc Donald's corporation, Bangalore."

This permission to do the project on the request from her institute where she is studying for partial fulfillment for the completion of the course.

She has successfully completed the project and during the project period, she showed keen interest and her conduct was good.

Place: BTM Layout Branch, Bangalore.

Date: 09th August 2022.

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## **SURANA AUTONOMOUS COLLEGE**

Re-ACCREDITED BY NAAC WITH "A+" GRADE Recognised under 2(F) & 12(B) of UGC ACCREDITED IAO & ISO Certified

# BIOTECHNOLOGY FIELD REPORT

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# Objective:-

- > To beam the environmental challenge
- To improve the knowledge on plants
- To study about the part of the plant
- > Economic importance of the plants tree

# Introduction:-

A botanical garden dedicated to the collection cultivation preservation and display of an especially wide range of pants which are typically labelled with their botanical names. It may contain specilist plant collections such as cacti and other succulent plants hearb geardens. Plants from particular parts of the world there may be greenhouse. Shadehouse again with special collection such as tropical plants alpine plants or other exotic plants. Most are at least partly open to the public and many offer guided tours educational display.

# Top 8 botanical gardens of India:

- 1. Lalbagh Botanical garden, Banglore
- 2. Government Botanical garden, Ooty
- 3. TNAU Botanical garden, Coimbatore
- 4. The Acharya Jagadish Chandra Bose Indian Botanical garden, Kolakata
- 5. The Agri Horticulture society of India, Alipore, Kolkata
- 6. Lloyd's Botanical garden, Darjeeling
- 7. National Botanical research institute [NBRI], Lucknow
- 8. Botanical Garden of Forest Research Institute [FRI], Dehradun

# Lalbagh Botanical Garden:-



Lalbagh botanical garden is an old botanical garden and one of the most famous tourist attracts in Bengaluru. It was first planned and laid by the rules of Mysore. Hyder ali and completed during the region of his son Tippu Sulthan.

The Lalbagh garden were commissioned by the 18th century and over the years it acquired India's first lawn clock and the subcontinent largest collection of rare plants.

Lalbagh is a 240 acers garden and located in Bangalore south. It hold's tow flower shows and has over 1000 species of plants with many trees that are more than a hundred years old.

The garden adjoins one of the towers erected by the founder of Banglore Kempegowda. The park has some rare species of plants brought from Persia, Afghanistan and France with an intricate watering system for irrigation this, this garden is aesthetically designed, with lawns, flowers beds lotus pools and fountain. Most of the centuries old trees are labelled for easy identification. The Lalbagh Rocks, one of the most ancient rock formation on earth, dating back to 3000 million years, is another attraction that attracts the crowds.

Lalbagh has four gates, the western gates is situated near siddapura circle and one can enter this gate and enjoy the Sylvan atmosphere of the garden. The north western wall adjoins Krumbigal road named after G H Krumbiegal, the last pre independence superintendent.

Birds eye view of lalbagh encloses tourist spot as floral clock. Maharaja statue, aquarium band stand, rose garden, lake watch tower, silk cotton tree, tree fossils, lotus pond, glass house, dove cot, bonsai garden Japanese garden, Topiary garden, kempegowda tower M H Marigowda library.

# Monkey puzzle tree

Monkey puzzle tree is also called Chile Pine an evergreen ornamental and timber confer of the family Araucariaceae. The scientific name of Monkey Puzzle tree is **Araucaria Araucana**. The monkey puzzle tree may grow to a height of 40-50 meter with a diameter of 2.5 meter and may live for more than 700 years. Its spiral arrangement of rigid needle pointed leaves along stiff branches inspired its common name evoked by a comment about the challenge this prickly network might pose to climbing monkey. The plants are usually dioecious, meaning male and female cones are somewhat spherical in shape and can produce about 200 edible seeds.



Kingdom: Plante

**Division**: Pinophyta

**Family:** Aracariaceae

**Order:** Pinales

**Genus:** Araucaria

**Species:** Araucana

The tree's native habitat is the lower slopes of the Chilean and Arginine South central Andes, typically about 1000m. Juvenile tree exhibit a broadly pyramidal or conical habit which naturally develops into the distinctive, volcanic soil, but will tolerate almost any type provided it drains well.

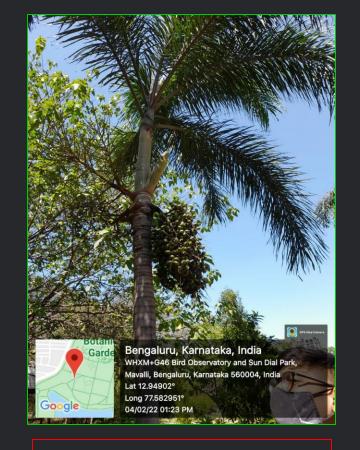
## **Economic Importance:**

Monkey puzzle wood has been used for beams in buildings, bridges, piers, roofs furniture, boat structure, venture and plywood's

# Areca Catechu

Areca catechu is a maintain sized palm tree growing straight to 20m [60ft] tall, with a trunk 10 -15 cm [4-6in] in diameter. The leaves are 1.5-2m long, pinnate with numerous crowded leaflets.

Areca catechu is grown for its commercially important seed crop the areca nut. The seed contains alkaloids such as arecaidine and arecoline which when chewed are intoxicating and slightly addictive. The seed also contain condensed tannis called arecatannis which are carcinogenic.



Kingdom: Plante

**Division**: Arecoideae

**Family:** Arecaceae

**Order:** Arecales

**Genus:** Areca

**Species:** Catechu

## **Economic Importance:**

- The palms with the greatest importance in world commerce.
- 2. The hurt of the fruit is the source of coir used for ropes and mats
- 3. The hand inner fruit layer [Endocarp] is used as fuel and make charcoal cups bottles and trinkets

# Zinnia

Zinnia is genus of plants of the sunflower tribe [Heliantheae] within the daisy family members of the genus are notable for their solitary long stemmed flowers that come in variety of bright colours.

Zinnias are popular garden flowers because they come in a flower colours and shape and they can withstand hot summer temperature and are easy to grow in fertile human rich and well drained soil.

A number of zinnia are popular flowering plants and interspecific hybrids are becoming more common. Their varied habits allow for uses in several parts of a garden and their tendency to attract butterflies and humming birds is seen as desirable



Kingdom: Plantae

Family: Asteraceae

**Order:** Asterales

**Genus:** Zinnia

**Species:** acerosa

## **Economic Importance:**

Some species of Zinnia genus have been studied for their potential biological actions such as -

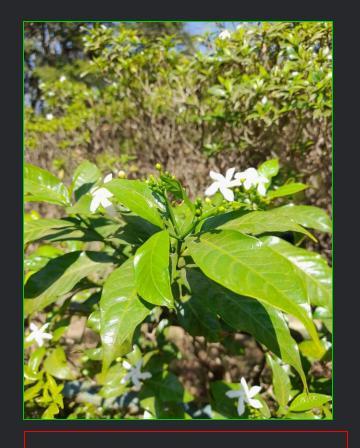
- Antifungal
- Antioxidant
- Heptoprotective
- Antibacterial
- Antiviral
- Antimalarial
- Cytotoxic and
- Insecticidal

# Tubernaemotana Divaricata

Tubernamontan divaricata commonly called Pin wheel flower.

Crape jasmine East India rosebay and Nero's crown is an evergreen shrub or small tree native to south Asia. In zones where it is grown as a house plant for its attractive flowers and foliage. the stem exudes a milky latex when broken, whence the name milk flower.

The plant generally grown to a height of 1.5-1.8 meters and is dichomously branched. The large shiny leaves are deep green and about 15cm in length and 5cm in width. The waxy blossoms are found in small cluster on the stem tips. the flowers have a pleasing flagrance. More than 66 alkaloids are found in the shrub.



Kingdom: Plantae

Family: Apocynaceae

**Order:** Gentatinales

**Genus:** Tubernaemontana

**Species:** Divaricata

The species is known to produce many alkaloids including catharanthine cornaridine dreganrine ibogamine, tabersonine, voacangine voacamine and voacristine

## **Economic Importance**

- 1. Tubernaemonata devericata is used in the production of Medicine.
- 2. All plant parts are used in Ayurvedic Chinese and Thai traditional Medicine
- 3. Studies have shown properties including antioxidant antitumor antiinfection an allergic
- 4. An Ayurveda this plants is considered to pacify vata and pitta veda's

# Artemisia Californica

Artemisia Californica also known as California Sagebrush is a species of western north American. Shrub in the Sunflower family.

Artemisia Californica branches from the base and grows 1.5 -2.5 meters tall. the stems of the plant are slender, flexible and globous or Canescent. The leaves range from 1-10cm long and are pinnately divided with 2-4 thread like lobes less than five cm long. Their leves are hairy and light green to grey in colour the margins of the leaves curl under. the inflorences are leafy, narrow and sparse. the pistillate flowers range in number from 6 to 10 and the disk flowers range from 15 to 30 and they are generally yellowish but sometimes red.



Kingdom: Plantae

**Division:** Angiosperm

Class: Dicotyledoneae

Family: Asteraceae

**Order:** Asterales

**Genus:** Artemisia

Species: californica

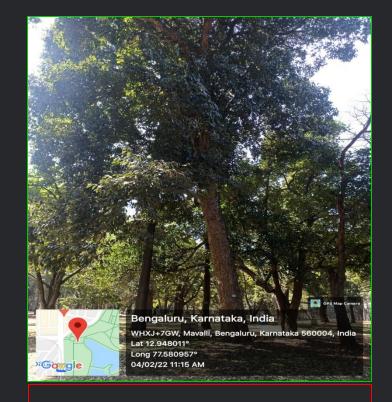
## **Economic Importance:**

- 1. It is used as a treatment to fight coughs and colds by the chuilla native
- 2. It was used by women of Cahuilla and Tongva to alleviate menstrual cramps and to ease labour
- 3. The plant stimulates the uterine mucosa which quickened childbirth
- 4. It was also made into a decoration and if taken regularly prior to menstruation it reviled menstrual cramps and menopause

# Indian cork tree

The scientific name of Indian cork tree is Millingtonia hortensis. It is sole species in the genus Millingtonia. The tree grows to height of between 18 to 25 m and has a spread of 7 to 11m. It reaches maturity between 6 and 8 years of age and lives for up to 40 years. The tree is evergreen and has an elongated pyramidal stem. The soft yellowish white wood is brittle and can break under strong guests of wind.

The leaf is imparipinnate ad resembles that of the neem. Leaves are prone to attack by Acherontia stax and hyblaea puera. The white flowers come as large panicles which emit a pleasant fragrance. They are bisexual and zygomorphic. The bell shaped sepals of the flower



Kingdom: Plantae

**Division**: Angiosperms

**Class:** Eudicots

Family: Bignoniaceae

**Order:** Lamiales

**Genus:** Millingtonia

**Species:** hortensis

# **Economic Importance:**

- 1. The tree is considered ornamental and the pleasant fragrance of the flower renders it ideal as a garden tree
- 2. The wood is also used as timber and the bark is used as an inferior substitute for cork
- 3. The leaves are used as a cheap tobacco in cigarettes

# Erythrophleum Fordi

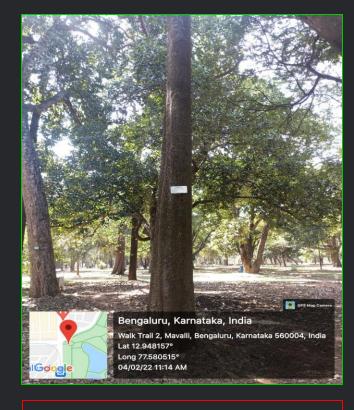
Erythrophleum fordil is a species of plant in the Fabaceae.

It is a tree about 10 meter tall, occasionally reaching 30 meters.

It is found in southeastern chain, Taiwan and Vietnam. It is a valuable timber tree threatened by over exploitation. It is under second class national protection in china.

## **Economic importance**

- Tannin is obtained from the wood. It obtained from the bark.
   It is used for dying fabries
- 2. A famous and valuable hard wood. It is used for construction ship, building, furniture, plants, Pillars of house etc.



Kingdom: Plantae

**Division**: Angiosperms

**Class:** Dicotyledoneae

**Family:** Fabaceae

**Order:** Fabales

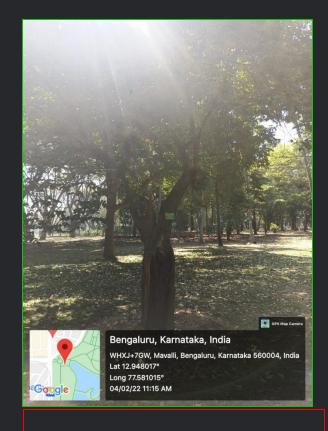
**Genus:** Erythrophleum

**Species:** fordil

# Averrhoa Carambola

Averrhoa carambola is a species of tree in family oxalidaceae native to tropical southeast Asia it has a number of common names including Carambola, Star fruit and five corner. It is a small tree or shrub that grows 5-12m tall with rose to red purple flower. The flowers are small and bell shaped with five petals that have whitish edges.

The flowers are often produced year round under tropical conditions. The tree is cultivated in tropical and semitropical regions for its edible fruits. The pinnate leaves have a single terminal leaflets and 5-11 nearly opposite leaflets, each leaf is 15-20cm long, and the 3.8-9cm long leaflets are ovate or ovate oblong in shape.



Kingdom: Plantae

**Division:** Angiosperms

**Class:** Endicots

Family: Oxalidaceae

**Genus:** Aversh

**Species:** carambola

# **Economic Importance**

- 1. Averrhoa Carambola is best known as the star fruit as it is best known for the star like shape it was when cut
- 2. The fruit is used in traditional Asian medicine to treat chickenpox interstial parasite headache and other illiness. Star fruit contain oxalate too much of which can be dangerous

# **Conclusion:**

- ✓ We visited Lalbagh Botanical Garden on February 04<sup>th</sup> 2022.
- ✓ We got to see different kinds of plants and trees.
- ✓ Large rock and kempegowda watchtower, flower clock are some of the other interesting spots to explore inside Lalbagh botanical garden.
- ✓ The main attraction was the replica of Bangalore Place. We were enjoyed the Field visit to Lalbagh .







## Reference:

- √ https://en.wikipedia.org/wiki/Lal\_Bagh
- √ https://en.wikipedia.org/wiki/Araucaria\_araucana
- √ https://en.wikipedia.org/wiki/Areca\_catechu
- √ https://en.wikipedia.org/wiki/Zinnia
- √ https://en.wikipedia.org/wiki/Tabernaemontana\_divaricata
- ✓ https://en.wikipedia.org/wiki/Artemisia\_californica
- √ https://en.wikipedia.org/wiki/Millingtonia
- √ https://en.wikipedia.org/wiki/Erythrophleum\_fordii
- √ https://en.wikipedia.org/wiki/Averrhoa\_carambola

# THE YOU

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#### **INTRODUCTION**

#### 1.1 ENVIRONMENTAL ACCOUNTING

In the adverse environmental consequence of profitable progress has come a buzzword and a subject of great public concern across the globe. In the once three decades, there has been a global awakening regarding environmental issues. Countries each over the world have come more concerned to reduce emigrations of dangerous feasts and the manufacturing processes that redounded in poisonous substances. The adverse impact of profitable development is getting a much more critical profitable, social, and political problem. The part of inequality both profitable and social within the society and among societies and nations has come the docket for the study of the terrain by social experimenters, particularly at the position of policy phrasings. In the period of liberalization and globalization, rapidfire industrialization is raising a tremendous pressure on terrain, which has a profound impact on all living brutes on this earth. Due to environmental pollution ecological balance has been seriously disturbed. The organizational response to environmental conservation and protection and the part of account to environmental operation are of huge significance. Environmental accounting is used to be considered as a distinct form of accounting and experts have found its relevance in reducing the impact of day-to-day business operations by way of public reporting. Organizations are increasingly being encouraged to account for, and publicly disclose their internal and external environmental and social costs and report on their progress towards greater sustainability to their stakeholders. Various environment issues such as global warming, air, noise, and water pollution caused by industrial activity has led to the degradation and depletion of natural resources and biodiversity which has heightened the concern for the preservation of the environment and the need for the implementation of environmental accounting theory and practice worldwide. The benefit of industrialization, economic growth and development of the society should not be at the cost of degrading the environment. Thus, over the last few decades, the increasing pressure from the stakeholders, government, NGO has led to the development of environmental accounting, and it is reporting for the purpose of preservation and protection of environment. Various environment issues such as global warming, air, noise, and water pollution caused by industrial activity has led to the degradation and depletion of natural resources and biodiversity which has heightened the concern for the preservation of the environment and the need for the implementation of environmental accounting theory and practice worldwide.

The benefit of industrialization, economic growth and development of the society should not be at the cost of degrading the environment. Thus, over the last few decades, the increasing pressure from the stakeholders, government, NGO has led to the development of environmental accounting, and it is reporting for the purpose of preservation and protection of environment.

#### 1.2 MEANING

Environmental accounting is a part of accounting which refers to utilisation of natural resources it accounts for environmental cost and its expenditure it is a tool to assist the management to review the environment and its operational cost of natural resources.

#### 1.3 DEFINITION

Environmental accounting, as defined in these guidelines, aims at achieving sustainable development, maintaining a favourable relationship with the community, and pursuing effective and effective environmental conservation conditioning. These account procedures allow a company to identify the cost of environmental conservation during the normal course of business, identify benefit gained from similar conditioning, and give the stylish possible means of quantitative dimension and support the communication of its results.

#### 1.4 BACKGROUND OF ENVIRONMENTAL ACCOUNTING

The ultramodern accounting is not only concerned with record keeping and reporting of information to the investors, but it aims at fulfilling the information requirements of a wide range of internal and external stakeholders. It is now considered as a service exertion. Estimating and counting for the costs of environmental impacts is a fleetly developing area of operation, account, and finance. Its function is to give quantitative information primarily fiscal nature about profitable conditioning that is intended to be useful in making profitable decision. Due to growing public concern about the intimidating impact of artificial conditioning on nature companies are under pressure from both Government and society to reduce adverse impacts of their conditioning on the terrain. The performance of an organization is now being judged not only on the base of its fiscal results, but also with respects to its donation to cover and ameliorate the terrain. Environmental issues have come an important variable in the models used by the investors and creditors to determine the threat associated with their investment.

In the developing script, the need for account and reporting on the terrain has been felt. As a result, account of environmental issues, their exposure in the environmental issues and their exposure in the periodic reports or by other medium has come an important part of commercial account and reporting systems. To ameliorate the quality of what company's report, there's a need to examine the ways in which companies include environmental pointers in their commercial reports. During the below timeframe, we have published multitudinous exploration reports and held several colloquies and forums. Also, since 1999 we have been working with the Ministry of the Environment to study assurance engagements for environmental and commercial social responsibility reports and encourage the wide use and relinquishment of environmental account. In addition, in recent times we have also been working with the Ministry of Economy, Trade and Industry in relation to intellectual- assetgrounded operation reports. Environmental business operation has concentrated its attention on how and why being enterprises can come greener. The field of green operation has begun to broaden its arena and lately there has been a growing recognition of the significance of several factors impacting green operation similar as linking sustainability and invention, the part of small and medium enterprises in instituting products and processes keeping sustainability in mind. The significance of sustainability in strategic business development and green practices in diligence is must. For an assiduity to have a positive environmental influence, real enhancement can be created only if the product processes, products, and services are terrain friendly. Environment is the aggregation of the eco system of living organisms and the non-living factors like air, water, soil etc. around us which together affects the livelihood of men and creatures on earth. Natural Capital Accounting is the dimension and valuation of nature's benefits in terms of ecosystems, goods, and services-like fresh water, flood tide control and timber products to be incorporated into a general standard format harmonious with conventional public accounts. The present civilization is involved in colourful profitable and on-economic conditioning which generates waste with implicit ingredients. Responsibility towards the terrain is one of the pivotal areas of social responsibility. Environmental pollution is a worldwide miracle, and we must not forget that the earth's terrain has been handed to us by the former generations and nature. Wealth is enough to satisfy everyone is need but not their rapacity. Thus, terrain protection is a critical issue in the present-day environment. The magpie disposal of similar wastes contributes towards the environmental pollution and hazards. At present, the magnitude of environmental pollution is adding at a veritably intimidating magnitude in different corridor of the globe.

#### 1.5 CONCEPT OF ENVIRONMENTAL ACCOUNTING

Environmental Accounting can be connected to both money related Accounting and administration Accounting. In Financial Accounting a firm reports its monetary exercises to its different partners which should now additionally incorporate announcing of natural expenses and liabilities of an association. In Management Accounting, the way business can report the utilization of material and other operational costs included. It is a gainful endeavour to see and pass on to the light the advantages depleted, and cost rendered also to the earth by the business houses. Just, it is partner Environmental expenses with the likelihood of corporate specifying. Close to the day's end, Environmental Accounting is a structure that attempts to make the best quantitative assessment of the expenses and focal points to and experience of the trademark affirmation practice that it tries. In this way it tends to be said that Environmental Accounting is a framework which powers an organization to seek after natural protection exercises because the association needs to report the advantages got from the Environmental, benefits given to Environmental alongside cost acquired on condition. The organizations are required to give quantitative estimation of assets wasted. Environmental Accounting is not representing the earth and at a fundamental level, Environmental Accounting is a course that examines how Environmental issues influence customary accounting sub discipline.

#### 1.6 CHARACTERISTICS OF ENVIRNMENTAL ACCOUNTING

- Users of accounting information are stakeholders, namely management, shareholders, investors or owners, creditors, suppliers, consumers, employees, the government, and the wider community who have direct or indirect interests with corporate entities.
- Green accounting information constraints are a comparison of the cost-benefit, cost and effort, materiality of information presented and disclosure of integrated quantitative and qualitative accounting information.
- The specific and pervasive requirements needed by users of accounting information is that accounting information presented to the users must be understood and useful in the assessment and decision making of economic and non-economic.

#### 1.7 OBJECTIVES OF ENVIRONMENTAL ACCOUNTING

- Environmental Accounting helps in providing the relevant information to the ethical investors which helps in building a positive image for the company thereby helping them to attract more funds from the investors and the groups.
- to identify, collect and analyse the data about the raw consumption and environmental aspects of a business activity which will correspondingly help the business in better decision making, improved profitability as well as protection of the environment.
- To provide information regarding the economic and environmental performance of a business entity which leads to a better relationship between business and the external environment.
- Implementing environmental accounting helps in identifying distinct environmental costs, making provisions for risks and other costs.
- The segregation of all flows and stocks of assets related to environment permits the estimation of the total expenditure for the protection of the environment. A further objective of this segregation is to identify that part of the gross domestic product that reflects the costs necessary to compensate for the negative impacts of economic growth, that is, the defensive expenditures.
- The consideration of the costs of depletion of natural resources and changes in environmental quality permits the calculation of modified macro-economic aggregates, notably an environmentally adjusted net domestic product.

#### 1.8 SCOPE OF ENVIRONMENTAL ACCOUNTING

- Degradation and destruction like soil erosion, loss of biodiversity, air pollution, water pollution, voice pollution, problem of solid waste, coastal & marine pollution.
- Depletion of non-renewable natural resources i.e., loss emerged due to over exploitation of non-renewable natural resources like minerals, water, gas.
- Deforestation and Land uses. This type of accounting is not easy, as losses to environment cannot be measured exactly in monetary value.
- It may play a better role I product costing, product pricing and for developing environmentally desired product.
- It provides macroeconomics indicators for sustainability such as changes in total wealth adjusted net savings that are complementary to GDP.

#### 1.9 BASIC DIMENSION OF ENVIRONMENTAL ACCOUNTING

- **Relevance:** Environmental accounting should provide valid information related to a company's environmental conservation costs and benefits from associated activities which contributes to the decision-making of stakeholders. The goal is to provide information beneficial to stakeholders in their decision-making.
- Materiality and Significance: In environmental accounting, materiality is placed on the aspects of quantity and significance is placed on the aspects of quality. From the standpoint of the materiality, consideration is given to the quantitative impact of data that is expressed in monetary value or physical units. The significance focuses on the quality of information from the standpoint of environmental conservation or the future impact that it carries.
- **Reliability:** Environmental accounting should eliminate seriously inaccurate or biased data and aid in building the trust and reliability of stakeholders. When disclosing environmental accounting data, it should be represented accurately, faithfully. In addition to the fact that the information must be accurate and without error, it must represent the costs and benefits that could be expected to represent without misleading.
- **Substance over Form:** Information disclosure should not just be a mere formality of following steps laid out within these guidelines. When necessary, the company should determine an appropriate method of disclosure which conforms to and accurately describes the actual environmental activities being conducted. If the substantiality of the information is not fully communicated when following the format set out by these guidelines, necessary supplementary information should be provided to better explain reality.
- **Neutrality:** Information that is disclosed taking a fair and impartial stance. A fair and impartial stance is when the company avoids the arbitrary selection of information or intentionally direct readers toward a given conclusion.
- **Completeness:** The scope of environmental accounting should extend to all material and significant information for all environmental conservation activities.
- **Prudence:** Information that may be vague or unclear should be handled carefully and the nature, scope and grounds on which it is based should be made clear. Careful selection is necessary regarding projected results and predicted comprehensive impact

If these results or impacts are disclosed, then the premises and reasoning behind this information should be clearly stated to prevent any misunderstandings by stakeholders.

- Understandability: By achieving understandability of disclosure of necessary
  environmental accounting data, environmental accounting should eliminate the
  possibility of any mistaken judgment about the company's environmental
  conservation activities. To ensure that the disclosed information is easy to understand
  for stakeholders, wording should be made a simple as possible. No matter how
  complex the content might be, it is necessary to disclose all essential information.
- Comparability: Environmental accounting makes it possible for a company to make year-on-year comparisons. Information provided should be comparable with different companies in the same sector. When disclosing environmental accounting data, it is important to assure that comparability to avoid misconceptions by stakeholders. Methods of comparison include comparisons of results between different fiscal years for the same company or comparisons for the same fiscal year with a peer company. Currently, in certain cases comparisons may be difficult even if all companies follow these guidelines, as methods have yet to be established for certain areas. Consequently, these guidelines aim for better comparability in the future. In the case where there are several methods to choose from, we are careful to clarify the approach taken.
- **Verifiability:** Environmental accounting data should be verifiable from an objective standpoint. Verifiable information is data for which the same results can be obtained when using premises, standards, and methods identical to those used by the party which created the data.

#### 1.10 NEED OF ENVIRONMENTAL ACCOUNTING

- ➤ National accounts are primarily an economic framework and are not suitable for an adequate representation of all environmental changes. There also serious problems with the valuation of resources and environmental stocks.
- ➤ Many environmental costs can be significantly reduced or eliminated because of business ranging from operational and housekeeping changes to invest in greener process technology to redesign processes or products.
- ➤ Industry and green movement are tilting towards consensus on the pivot concept of sustainable development. Better natural resources and green accounts would provide valuable insights into the interaction between the environment and the economy.

Integrated resource accounting is vital for developing nations which have a heavy dependence on natural resources, and for which conventional accounting can lead to distorted and destructive macroeconomic and trade policies.

### 1.11 FUNCTIONS OF ENVIRONMENTAL ACOUNTING

- Internal functions are carried out within a company. They calculate the cost incurred by environmental conservation activities and the related benefits and are beneficial in improving the efficiency and effectiveness of environmental conservation activities and help in gaining an understanding of what impacts such activities might have on business operations.
  - Companies
  - ➤ Corporate management tool
  - ➤ Management related partners department
  - > Employees local government
- External functions are effective in conveying information about a company's environmental activities to stakeholders. Environmental accounting data is made public through environmental reports. Environmental accounting not only fulfils a company's accountability to people outside the company, such as consumers, investors, and residents, but also facilitates attaining a fair corporate assessment, not just from the point of environmental conservation.
  - Consumer, business, and investor
  - > Financial resident and Ngo
  - Society

### 1.12 ADVANTAGES OF ENVIRONMENTAL ACCOUNTING

- Environmental Accounting is meant to be used for both internal and external user
- Green Accounting provides useful information regarding decision making for level and structure of production, value of investment and environmental costs.
- It identifies collects and analysis data about raw materials energy and other information's about environmental impact of the business that will lead to more informed decision making with consequent implications for improved profitability and environmental protection.
- It provides information regarding the performance of an economy entity which leads to a better relationship between partners and the external environment being new clients and better image of the society.

- It helps to measure the organization environmental performance.
- Proper environmental accounting system facilitates proper reporting of the results
  of environment practices followed by the company. It facilitates communicating environmental
  performance towards stakeholder which goes a long way in enhancing the corporate image of the
  organization.
- It helps also in assessing, testing, and reporting performance of environmental activities.
- Environmental accounting assist in projection cost estimating life cycle in the environment as well as product circulation, administration form environmental practices.
- Information source for other routine managerial activities such as: product and process design, cost distribution and control, capital budgeting, supply process, price policies, performance evaluation.
- Product circulation administration from environmental perspective.
- Supply process from environmental perspective; the product or producer's Liability.

### 1.13 DISADVANTAGES OF ENVIRONMENTAL ACCOUNTING

- Environmental accountings have no economic value.
- Estimated values for environmental goods quantified or qualified in terms which have no fixed conversion into money.
- The method of estimating the social value of environmental goods and services is imperfect, often misleading and construers.
- The method of estimating the social value of environmental goods and services is imperfect, often misleading and construers.
- Social value placed on environmental goods and services are changing so fast that the estimates are likely to be obsolete before they are available for use.
- Lack of accounting standards for environmental accounting.
- Because of unrecorded environmental costs and difficulty in extracting and separating environmental cost the industry data is virally unreliable.
- Comparison between two countries or firms is not possible if the method of accounting is different which is quite clear.
- Environmental Accounting must be analysed along with other aspects of accounting. It is so because costs and benefits related to the environment.

- Environmental Accounting is a long-term process. Therefore, to draw a conclusion with help of it is not simple and easy.
- Many businesses and the Government organizations even large and well the use of energy and material or the cost of incompetent materials use, waste management and related issue. Therefore, many organizations, significantly underestimate the cost of underprivileged environment performance to their organization.

### 1.14 ROLE OF ENVIRONMENTAL ACCOUNTING

- 1. **Environmental contamination**: Environmental impurity by nature refers to natural disasters or inhuman interventions, similar as stormy eruptions swab spray from the ocean, feasts from creatures, and factory deterioration. Humans cause the alternate type of impurity, and it involves all the residuals that are related to the consumption and product of feasts and patches from the chemical wastes of manufacturing processes. Applicable measures and responsibility for environmental impurity, which has come a worldwide problem, are necessary. Global associations, similar as the UN, the World Bank, the UNCED, and the OECD, have been playing their part to manage and ensure environmental responsibility because industrialization has created dangerous impacts, from one country to another, through globalization.
- 2. Environmental pollution global issue: Environment-related issues have been broadening from domestic-pollution problems to a worldwide issue. He also highlights the robust worldwide movements to pinpoint the distant and instant causes of environmental contamination and the impairment that it has caused to society, nature, and the earth. It emphasizes that the world has become more attentive to environmental contamination and to the implications of environmental degradation that is caused by corporate activities. The majority of GHG emissions have originated from developed countries, which has been a major factor in climate change in recent years, and which has created harmful effects from developed to developing/emerging countries. Environmental-contamination issues are no longer restricted to the borders of countries but have become a global issue that needs consideration at the local and global levels. Industrialization and corporate manufacturing processes are substantial suppliers of environmental contamination. All these show the significance of

evaluating the responsibility of corporations in environmental management and accountability.

- 3. Environmental disclosure: The environmental cost is the quantum that is paid by a company to conduct the environmental- protection process. Environmental account is also used as a deputy by different experimenters in the case of environmental costs. The environmental enactments of companies associated with ecologically delicate businesses can attract the attention of associated people that represent the associates of the civilization that are specifically involved with the enterprises' environmental enactments for conterminous communities, environmentalists, or regulative associations.
- **4. Corporate environmental responsibility:** When globalization, capitalism, and leftism are trending, the commercial sector has attained influence over society; thus, it is responsible for its conduct on society, and it must be held responsible. Still, pots are presumed responsible for the operation of their environmental conditioning in society, and they are answerable for their conduct. This is what can be perceived of as responsibility. Account scholars view this act of responsibility as a way of securing Eco-friendly sustainability. To guar deco-friendly sustainability, argues that pots ought to play a positive part in society in Eco justice, Eco effectiveness, and deco-effectiveness. To show the responsibility of the commercial sector, pots must guard the requirements of the current generation in terms of an Eco-friendly terrain, without immolating those of coming generations.
- 5. Relations between Environmental accounting and performance: Establishment performance may be affected by Environmental account and reporting. Enterprises that are not concerned about the terrain may face prohibitive costs of capital because external stakeholders want high- threat decorations. There are multitudinous environmental and energy levies in the United Kingdom, similar as the tip duty. Attracting transnational investors has also stimulated the enterprises profitability, and the sustainability exposures of companies significantly affect their growth and size. Pots with high gearing/ influence tend to report exposures regarding the terrain and social responsibility.

#### 6. Environmental accounting /reporting as a medium of accountability practice:

This reporting practice becomes one of the parts of companies' annual reports to present the corporate-sector environmental performance and impacts on the environment. He further argues that environmental reporting is the practice of disclosing the environmental performance to the society, be it an exclusive report related to environmental disclosures, or a part of the annual report. The method of publishing environmental issues becomes effective because the environment-related disclosures are available to all the relevant stakeholders.

### 1.15 FORMS OF ENVIRONMENTAL ACCOUNTING

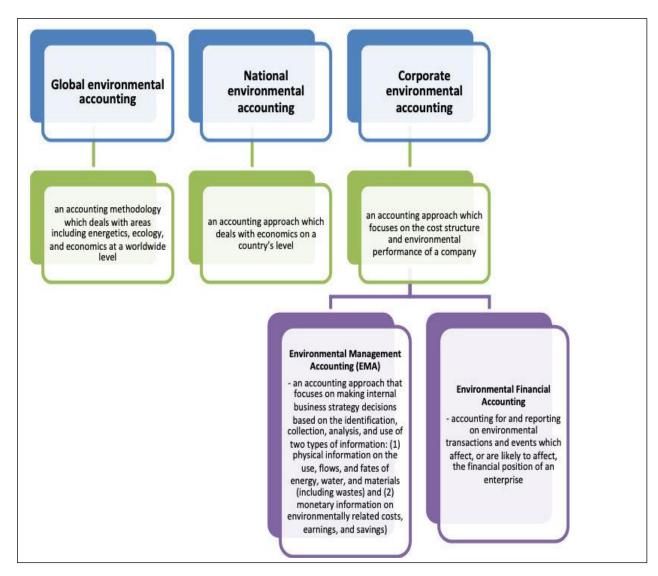


CHART 1.13- FORMS OF ENVIRONMENTAL ACCOUNTING

- 1. Environmental Financial accounting: Environmental financial accounting (EFA), data about financial events collects, analysis, records, and reports. Data of EFA make up environmental cost. Environmental information of business is shown in financial statements by means of EFA. 3 rd. International Symposium on Sustainable Development, Financial Accounting with a particular focus on reporting environmental liability costs and other significant environmental costs. Environmental accounting, financial accounting measurement procedures to apply carefully.
- 2. Environmental cost accounting: An advanced step of development of environmental accounting is development of environmental cost accounting (ECA). Cost accounting is defined as use of the accounting record to directly assess costs to products and processes. In this approach, costs are accounted for by their specific causes. Environmental cost accounting directly places a cost on every environmental aspect and determines the cost of all types of related action. Environmental actions include pollution prevention, environmental design and environmental management. Past approaches on environmental impacts were based on environmental clean-up costs and past product disposal.
- **3. Environmental management accounting:** Environmental management accounting is defined as the generation, analysis, and use of financial and related non-financial information, to support management within a company or business. EMA integrates corporate environmental and business policies, and thereby provides guidance on building a sustainable business.
- **4. Environmental national accounting:** National Level Accounting with a particular focus on natural resources stocks and flows, environmental costs, and externality costs etc. Need of Environmental Accounting at Business Level: It helps to know whether business has been discharging its responsibilities towards environment or not.

### 1.16 ENVIRONMENTAL ACCOUNTING PRINCIPLES

➤ Sustainability principle: Accounting that recognizes and measures values, records, summarizes, and reports information related to objects, impacts, events and or financial, social, and environmental transactions in an integrated and systematic manner in an accounting reporting package to support the sustainability of corporate profit growth, social welfare, and ecological sustainability. The integrated accounting process is

intended to produce an integrated, relevant, and reliable Green Accounting Reporting or Green Financial Statement to assist management and other users in the assessment and consideration of economic and non-economic decision making, especially regarding the risks and sustainability prospects of corporate entities.

- Asset recognition principle: The sacrifice of corporate entity economic resources to implement a green business and green corporation, implementing voluntary corporate social responsibility and corporate social and environmental responsibility can be recognized as an investment sacrifice if sacrifice it is able to provide tangible benefits and intangible benefits which are quite certain in the present and in the future. If it does not meet these criteria, the sacrifice must be immediately treated as a periodic burden in the entity's profit-loss performance report.
- ➤ The principle of liability recognition: An environmental liability or social liability must be recognized immediately when the government or other parties require a corporate entity to bear losses or replace the costs of environmental damage and community losses caused by corporate operations. Corporate commitment to be responsible for dealing with pollution and pollution, restoring environmental damage, greening and conserving nature, and participating in assisting the government in efforts to improve the quality of life and economic welfare of surrounding communities through corporate social responsibilities programs can also be recognized as social and environmental obligations.
- The principle of matching in measuring the costs-benefits and efforts accomplishments of social and environmental responsibility: The measurement of value and the comparison of results to the costs-benefits and efforts accomplishments of corporate social and environmental responsibility are not only applied in the same accounting period, but also for different periods later when sacrificing economic resources and these efforts have the potential for considerable economic and non-economic benefits in the future. The essence of the principle of value measurement is also the basis in the principle of recognition of expense and revenue recognition.
- ➤ Integrated accounting process principle: The accounting process, namely recognition, measurement of value, recording, summarizing, and reporting accounting information must integrate objects, financial/economic, social, and environmental transactions, and events in a systematic and integrated manner in one reporting package so that users can obtain information complete, complete, relevant and reliable accounting and useful for economic and non-economic decision making.

➤ Principle of integrated reporting of green accounting information: In reporting and disclosing environmental accounting information, corporate entities must report and disclose all financial, social, and environmental accounting information, both quantitative and quantitative, in an integrated manner. The objective is for internal and external users can obtain complete, relevant, and reliable information about financial position and financial performance, risks, and prospects, as well as commitment to social and environmental responsibility and sustainability of an entity before evaluating, evaluating, and planning. The role of disclosing qualitative accounting information is to complete and explain important matters relating to items of social and environmental accounting information that are quantitative in nature. Disclosure of qualitative social and environmental accounting information can be carried out through media notes on environmental accounting reports.

### **ENVIRONMENTAL ACCOUNTING MEASURES**

<u>Description</u>	Environmental accounting issue and scope		
Pollution prevention	Cost incurred to prevent air and water pollution along with		
control	water treatment facilities and other activities		
Environmental Protection	Cost of energy saving measures as well as cost of global		
Costs	warming reduction measures.		
Cost of resource	Cost incurred for waste reduction and disposal as well as for		
recycling	water conversation rainwater usage and other measures		
	aimedAt efficient resource usage.		
Environmental	Cost of environmental restoration operations (eliminating soil		
restoration cost	and groundwater contamination, environmental		
	compensation.)		
Management Cost	Management related environmental protection costs including		
	environmental promotion activities and cost associated with		
	acquiring and maintaining ISO certificate.		
Social promotion	Environmental protection cost stemming from participation in		
activities	social activities such as participation in organisation		
	concerning with environmental preservation etc.		
Research and	Environmental protection cost for research and development		
development cost	activities and cost of environmental solutions business		
	activities (Green product/environmental technology design		
	and development cost, environmental solutions business costs,		
	others etc.		

**Table 1.1- Environmental accounting measures** 

### **ADAPTION OF ENVIRONMENTAL ACCOUNTING**

- > Setting up the objectives of green accounting.
- > Setting up the Environmental accounting project team and project.
- ➤ Identifying the significant influences of the enterprise on the environment.
- > Determining the forms of impact on the Environment.

Environment analysis	Forms of impact on the	Action taken because of
<u>elements</u>	environment – by means of	the environment analysis
Product services activities	✓ Discharged rivers.	✓ Controlling impact on
	✓ Used by underground waters	the environment.
	discharged by sewage.	✓ Adapting to legal
	✓ Gas emissions in the	requirements,
	atmosphere.	according to the
	✓ Vibration noises.	legislation in the field.
	✓ Abnormal situations	
	✓ Other pollution factors	
Technology	✓ Quantity, product nature, its	✓ Controlling the impact
	environmental sensitivity.	on the environment.
	✓ Created/natural/incident	✓ Current situation.
	sand/or accidents.	✓ Product's life cycle
		✓ Studying product-
		related ecological
		aspects and the
		corresponding interest
		rate of the clients.
		Adapting to legal
		requirements,
		according to the
		legislation in the field.

Table 1.2-Adaption of environmental accounting

# $\frac{\textbf{COMPARISON OF TRADITIONAL AND ENVIRONMENTAL}}{\textbf{ACCOUNTING}}$

Basis	Traditional accounting	Environmental accounting
Perspective	Corporate economic(financial) aspects	Link between the economy and the environment.
Task	Show the general economic situation; Cost management.	Show environmental performance; Show environmental liabilities and environmental costs.
Elements	Financial accounting  Management accounting	Environmental financial accounting External ecological accounting Environmental management accounting Internal ecological accounting.
Tools	Financial and accounting statements Internal reports, reports.	Environmental reports
Methodology	Assessment procedures, Cost accounting.	Environmental performance evaluation, Life-cycle analysis, Environmental cost-savings analysis.
Unit	Financial units (excluding inventory).	Financial and natural units.
Regulation	Legal regulation (financial accounting) Voluntary (management accounting).	Legal regulations require reporting of some elements of environmental performance.

Table 1.3- Comparison of traditional and environmental accounting

# 1.17 THE LEGAL FRAMEWORK OF ENVIRONMENTAL ACCOUNTING

### 1.17.1 Introduction

Over the times, together with a spreading of environmental knowledge, there has been a change in the traditionally- held perception that there is a trade- off between environmental quality and profitable growth as people have come to believe that the two are inescapably reciprocal. The current focus on terrain is not new — environmental considerations have been an integral part of the Indian culture. The need for conservation and sustainable use of natural coffers has been expressed in Indian Holy Writ, further than three thousand times old and is reflected in the indigenous, legislative and policy frame as also in the transnational commitments of the country. Even before India's independence in 1947, several environmental legislations was but the real motivation for bringing about a well-developed frame came only after the UN Conference on the mortal terrain (Stockholm, 1972). Under the influence of this protestation, the National Council for Environmental Policy and Planning within the Department of Science and Technology was set up in 1972. This Council latterly evolved into a full-fledged Ministry of Environment and timbers (Molefe) in 1985 which moment is the apex executive body in the country for regulating and icing environmental protection. After the Stockholm Conference, in 1976, indigenous permission was given to environmental enterprises through the 42nd Amendment, which incorporated them into the Directive Principles of State Policy and Fundamental Rights and Duties. Since the 1970s an expansive network of environmental legislation has grown in the country. The Molefe and the pollution control boards (CPCB i.e., Central Pollution Control Board and SPCBs i.e., State Pollution Control Boards) together form the regulatory and administrative core of the sector. A policy framework has also been developed to complement the legislative provisions. The Policy Statement for Abatement of Pollution and the National Conservation Strategy and Policy Statement on Environment and Development were brought out by the Molefe in 1992, to develop and promote initiatives for the protection and improvement of the environment. The EAP (Environmental Action Programme) was formulated in 1993 with the objective of improving environmental services and integrating environmental considerations into development programmes. Other measures have also been taken by the government to protect and preserve the environment. Several sectorspecific policies have evolved, which are discussed at length in the concerned chapters.

This chapter attempts to highlight only legislative initiatives towards the protection of the environment.

# 1.17.2 <u>LEGISLATION FOR ENVIRONMENTAL PROTECTION</u> INDIA

- ➤ <u>Water</u>: Water quality norms especially those for drinking water are set by the Indian Council of Medical Research. These bear close resemblance to World Health Organisation norms. The discharge of artificial backwaters is regulated by the Indian Standard Canons and lately, water quality norms for littoral water marine outfalls have also been specified. In addition to the general norms, certain specific norms have been developed for effluent discharges from diligence similar as, iron and sword, aluminium, pulp and paper, oil painting refineries, petrochemicals, and thermal power shops. Legislation to control water pollution is listed below.
- ✓ Water Prevention and Control of Pollution Act, 1974: This Act represented India's first attempts to comprehensively deal with environmental issues. The Act prohibits the discharge of pollutants into water bodies beyond a given standard and lays down penalties for non-compliance. The Act was amended in 1988 to conform closely to the provisions of the EPA, 1986. It set up the CPCB (Central Pollution Control Board) which lays down standards for the prevention and control of water pollution. At the State level, the SPCBs (State Pollution Control Board) function under the direction of the CPCB and the state government.

#### ✓ Water Prevention and Control of Pollution Cess Act, 1977:

This Act provides for a levy and collection of a cess on water consumed by industries and local authorities. It aims at augmenting the resources of the central and state boards for prevention and control of water pollution. Following this Act, The Water (Prevention and Control of Pollution) Cess Rules were formulated in 1978 for defining standards and indications for the kind of and location of meters that every consumer of water is required to install.

Air: The air quality index (AQI) is an index for reporting air quality daily. It is a measure of how air pollution affects one's health within a brief time. The purpose of the AQI is to help people know how the local air quality impacts their health. The Environmental Protection Agency (EPA) calculates the AQI for five major air pollutants, for which national air quality standards have been established to safeguard public health.

- ✓ Air Prevention and Control of Pollution Act, 1981: To fight the problems associated with air pollution, ambient air quality morals were established, under the 1981 Act. The Act provides means for the control and abatement of air pollution. The Act seeks to combat air pollution by forbidding the use of polluting powers and substances, as well as by regulating appliances that give rise to air pollution. Under the Act establishing or operating of any artificial plant in the pollution control area requires concurrence from state boards. The boards are also anticipated to test the air in air pollution control areas, check pollution control outfit, and manufacturing processes.
- The Air Prevention and Control of Pollution Rules formulated in 1982: defined the procedures for conducting meetings of the boards, the powers of the presiding officers, decision-making, the quorum; way the records of the meeting were to be set etc. They also prescribed the manner and the purpose of seeking assistance from specialists and the fee to be paid to them. Complementing the above Acts is the Atomic Energy Act of 1982, which was introduced to deal with radioactive waste. In 1988, the Motor Vehicles Act, was enacted to regulate vehicular traffic, besides ensuring proper packaging, labelling and transportation of the hazardous wastes. Various aspects of vehicular pollution have also been notified under the EPA of 1986. Mass emission standards were notified in 1990, which were made more stringent in 1996. In 2000 these standards were revised yet again and for the first-time separate obligations for vehicle owners, manufacturers and enforcing agencies were stipulated.

In addition, stringent Euro I and II emission norms were notified by the Supreme Court on April 29, 1999, for the city of Delhi. The notification made it mandatory for car manufacturers to conform to the Euro I and Euro II norms by May 1999 and April 2000, respectively, for new non-commercial vehicle sold in Delhi.

Forests and wildlife: Wildlife refers to the beast species that are not domesticated. So, any living organism that lives in the timber region is associated with wildlife. It is set up in all ecosystems similar as rainforests, boreal timbers, plains, champaigns, comeuppance etc. Wildlife provides great stability to our terrain wherein they are involved in natural processes either directly or laterally. The Wildlife Protection Act, 1972, Amendment 1991: The WPA (Wildlife Protection Act), 1972, provides for protection to listed species of flora and fauna and establishes a network of ecologically important protected areas. The WPA empowers the central and state governments to declare any area a wildlife sanctuary, national park, or closed area. There is a blanket ban on carrying out any industrial activity inside these protected areas. It provides for authorities to administer and implement the Act;

regulate the hunting of wild animals; protect specified plants, sanctuaries, national parks, and closed areas; restrict trade or commerce in wild animals or animal articles; and miscellaneous matters. The Act prohibits hunting of animals except with permission of authorized officer when an animal has become dangerous to human life or property or as disabled or diseased as to be beyond recovery WWF-India, 1999. The near-total prohibition on hunting was made more effective by the Amendment Act of 1991.

✓ The Forest Conservation Act, 1980: This Act was adopted to protect and conserve forests. The Act restricts the powers of the state in respect of de-reservation of forests and use of forestland for non-forest purposes the term 'non-forest purpose' includes clearing any forestland for cultivation of cash crops, plantation crops, horticulture, or any purpose other than re-afforestation.

### 1.18 INTRODUCTION TO FMCG

Fast- moving consumer goods are products that vend snappily at low cost. These goods are also called consumer packaged goods. FMCGs have a short shelf life because of high consumer demand or because they are perishable. These goods are bought constantly are consumed fleetly are priced low and are vended in substantial amounts. They also have a high development when they are on the shelf at the store. The assiduity is competitive due to presence of multi-national companies, domestic companies, and unorganized sector. A major portion of the request is captured by unorganized players dealing unbranded and unpackaged products. further than 50 per cent of the total earnings of FMCG companies come from products worth Rs 10 or less 1. This has made the proliferation of localized brands which are offered in loose form in small municipalities and pastoral part where brand mindfulness is low. In last ten times domestic players are giving tough com-solicitation to chains; in fact, they have excelled numerous MNCs in growth and request cap. Between 2005- 2014 the profit of domestic companies increased by twenty-four against 14 increases of transnational companies. Urban India accounts for sixty-six of total FMCG consumption, while pastoral India accounts for the remaining thirty-four. still, pastoral India accounts for further than forty of the consumption in major FMCG orders similar as particular care, fabric care and hot potables. As per the analysis by ASSOCHAM, companies like Hindustan Unilever Ltd and Dabur India induce half of their deals from pastoral India while Colgate Palmolive India and Marico constitute thirty-seven independently.

#### 1.19 IMPORTANCE OF FMCG

- ➤ FMCG products are goods that are meant for immediate consumption by the average consumer. They are day-to-day items that are purchased recurrently by consumers. It is an industry where competitiveness is one way to thrive, by offering various alternatives and choices for the consumer to choose from.
- ➤ The turnover rate for this industry is also high, crediting the high-volume production and equally high purchases.
- ➤ Packaging plays a significant role in the operations, not only for identification, but to also provide any extension to and efficacy to the mostly perishable goods in this segment.
- These goods are often divided into categories, owing to their shelf-life. They include processed goods like cheese, cereals etc. and prepared meals that are ready to eat and/or frozen food that is heated at the time of consumption. Beverages, baked goods, cleaning products and prescription less medications, stationery etc.

### 1.20 ADVANTAGES OF FMCG

- ➤ Cut out the middleman and maximise profits: With Ecommerce you are selling direct to the consumers so there are no margins. You can make 2/3 times the profit per product that you can through the major retailers.
- ➤ Overcome geographical limitations: If you have a physical store, you are limited by the geographical area that you can service. With an e-commerce website, the entire world is your playground.
- ➤ Keep your eye on consumer's buying habits: Data is one of the most valuable commodities within FMCG and using analytics on your Ecommerce platform you can learn more about your consumer and this can help build more effective NPD, Marketing, and digital campaigns.
- ➤ Low investment: Setting up an Ecommerce platform is surprisingly affordable. The automation of checkout, billing, payments, inventory management, and other operational processes lowers the number of employees required to run an Ecommerce setup. Additionally, an Ecommerce merchant does not need a physical location so real estate is not an expense.
- ➤ Open 24/7: Ecommerce websites run 24/7/365 meaning more convenience for the customer.

- ➤ Consumers can locate products quicker: No searching in various retailers or up and down shop isles, with a few clicks your consumer can easily find your products.
- ➤ **Provide abundant information:** There are significant limitations to the amount of information that can be displayed in a physical store and sometimes it can be challenging to convey your brand's message and the benefits of your products. Ecommerce platforms are a limitless platform to provide this information in the form of videos, images, or text.
- ➤ Create a market for niche products: Consumers and brands can find it challenging to locate each other in the physical world. Online, it is only a matter of the consumer searching in Google.
- > Scalability: Brands can reach new markets easily and scale internationally.
- ➤ Use consumer data to build a long-term relationship: Consumers typically do not feel comfortable giving their personal details in a physical store but on your ecommerce platform you have access to their email, name, and number. Email marketing is one of the most effective digital marketing strategies and costs nothing to implement.

### 1.21 DISADVATAGES OF FMCG

- ➤ High Competition: As the FMCG sector is a low capital ferocious sector and introductory technology are fluently available, inexperienced players can enter fluently. Also, some brands do not have proper distribution system, they vend directly to wholesaler, as a result they save cost on distributor periphery and CFA cost. Competition among different player in different terrain is main challenge for this sector. Big brand must contend with big as well as small brand. Big brand spends a big quantum of plutocrat on hype while small brand gives further periphery to trade channel. Trade channels try to push small brand for their own profit while they are forced to keep big brand due to high consumer demand. In this situation small brand must face competition from consumer demand side while big brand must face competition from trade mate's periphery side.
- ➤ Low shelf life: Whether it is small brand or big shelf life is same for all. Some products are highly perishable like bread, cake, cold drink etc. these products shelf life is less than three months. Some products last for three to six months, like snacks and biscuits. Again, some products like toiletries and sanitary products lasts for two to three years. In this situation sales force need keep close observation in trade

channel which is exceedingly difficult. Otherwise, expiry stock needs to be taken back from trade channel which is a net loss to the manufacturer. Again, if any products expired in retail outlet, then all the dead stocks need to bring back to distributor point, which need some cost. Even destroy process of damaged stock need some spending from manufacturer. Again, excess dead stock discourages retailer/wholesaler for repeat purchase. Because they need to count and store all the dead stock and return to the manufacturer or distributor.

- > Stock out shifts consumer to other brand: Stock out is a situation when company cannot provide adequate stock as per market demand. As I have told already that large numbers of buyers and sellers are engaged in this sector, shortage of stock shifts consumer into the competitive brand or product. Consumer do not wait for a particular brand or product; they will purchase competitive brand. No consumer likes out of stock situation, and they shift to other brand. It affects consumer relationship with shopkeeper, brand reputation and revenue loss to the brand owner. So, manufacturer must ensure continuous supply to trade channel. Which is not an easy task in different location and market. In a country like India proper sales and distribution plan must be executed, so that shortage of stock can be avoided.
- ➤ Payment collection from channel is difficult: Due to large numbers of customer and a huge transaction within trade channel payment realization is another challenging task. It may Manufacturer to distributor or distributor to retailer/wholesaler payment realization is pathetic. Especially for those distributors who are dealing with retail market. In every town a substantial number of retailers asks for credit. Sometimes distributor must give credit in small amount like Rs300 to R500 and maintaining proper record of all these lesser amounts are not so easy task. Sometimes the distributor's collection boy must visit multiple time for payment realization. In some cases, it has been observed me that after getting credit, the outlet gets shut down and the distributor has to loss his money.
- ➤ Multi-channel working model: Due to large numbers of buyers and sellers, product must be visible in different channel like urban market, rural market, retails market, wholesale market, modern trade, and institutional market. In fact, the company need to keep a big sales force to service all these channels. Otherwise, competitor will take away market share. For different channel diverse types of discounts and promotion need to be designed, if necessary different MRP need to be printed. Also supply to these diverse types of channels need extra care. Channel wise sales data maintenance

and analysis, sales for caste preparation and planning accordingly are not so easy task.

### 1.22 TYPES Of FMCG

- ➤ Processed foods: Processed foods are those that come in a box or bag and contain further than one item on the list of constituents. For utmost of us, it is not realistic to avoid all reused foods. Some are veritably healthy, like precooked whole grains, Greek yogurt, nut flannel, organic stock, tofu, firmed vegetables, and unsalted mimetic sap. A reused food is any food that has baltered in some way during medication. rubbish products, cereals, and boxed pasta.
- ➤ **Prepared meals**: Prepared foods are foods that are produced for immediate consumption. "Preparing" is any act other than washing with water and may include shelling, cutting, mincing, or cuisine of a food item. shelling apples, washing, and mincing lettuce, cutting carrots, and making Cole slaw from cabbage are all exemplifications of medication, ready- to- eat reflections.
- ➤ **Beverages:** A beverage is any type of drink. It is something you might offer a guest in your house; it is also the favourite moniker of companies that manufacture both soda and juice they call themselves beverage companies. Bottled water, energy drinks, and juices.
- ➤ **Baked goods:** Any solid substance (as opposed to liquid) that is used as a source of nourishment food and drink Cookies, croissants, and bagels.
- > Fresh foods, frozen foods, and dry goods: Fresh food is food which has not been saved and has not putrefied yet. For vegetables and fruits, this means that they have been lately gathered and treated duly postharvest; for meat, it has lately been massacred and butchered; for fish, it has been lately caught or gathered and kept cold. Dairy products are fresh and will spoil snappily. therefore, fresh rubbish is rubbish which has not been dried or interspersed for aging. Sour cream may be considered fresh crème fraiche. Fresh food has not been dried, smoked, interspersed, firmed, canned, pickled, or else saved.
- ➤ Medicines: The science and art dealing with the maintenance of health and the prevention, alleviation, or cure of disease Aspirin, pain relievers, and other medication that can be purchased without a prescription.

- ➤ Cleaning products: cleaning products play an essential role in our daily lives at home, in school and in the office. By safely and effectively removing soils, germs, and other contaminants, they prevent the spread of infectious diseases and control allergens, such as dust and mild, helping us to stay healthy. Baking soda, oven cleaner, and window and glass cleaner.
- ➤ Cosmetics and toiletries: Cosmetics and toiletries are often made from non-renewable, synthetic ingredients which are toxic in some cases. The best options are products made from natural, renewable ingredients that are non-toxic and biodegradable. Hair care products, concealers, toothpaste, and soap.
- ➤ Office supplies: Are consumables and equipment extensively used in offices by businesses and other organizations, by individuals engaged in written communications, recordkeeping, or bookkeeping, janitorial and cleaning, and for storage of supplies or data. The range of items classified as office supplies varies, and typically includes small, expendable, daily use items, consumable products, small machines, higher cost equipment such as computers, as well as office furniture and art, pens, pencils, and markers.

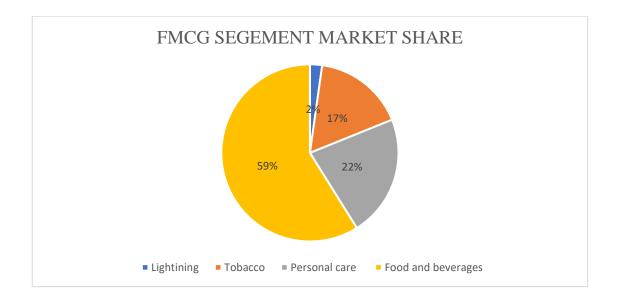
### 1.19.5 TYPES OF CONSUMER GOODS

- ✓ **Durable goods**: Durable good or a hard good or consumer durable is a good that does not quickly wear out or, more specifically, one that yields <u>utility</u> over time rather than being completely <u>consumed</u> in one use. Items like <u>bricks</u> could be considered perfectly durable goods because they should theoretically never wear out. Highly durable goods such as <u>refrigerators</u> or <u>cars</u> usually continue to be useful for several years of use, so durable goods are typically characterized by long periods between successive purchases.
- ✓ **Non-durable goods**: non-durable goods are the opposite of durable goods. They may be defined either as goods that are immediately consumed in one use or ones that have a lifespan of less than three years. Examples of nondurable goods include fast-moving consumer goods such as cosmetics and cleaning products, food, condiments, fuel, beer, cigarettes and tobacco, medication, office supplies, packaging and containers, paper and paper products, personal products, rubber, plastics, textiles, clothing, and footwear.

✓ **Service**: Services include intangible services or products, such as haircuts or car washes. Retailers/vendors website, Custom built CMS, and Marketplace for FMCG.

### 1.23 THE MAIN FMCG SEGMENTS

- ➤ **Personal Care:** It consists of oral care hair care skin care personal wash soaps; cosmetics and toiletries deodorants perfumes paper products tissues, diapers, sanitary shoe care etc.
- ➤ Household Care: It comprises of fabric wash laundry soaps and synthetic detergents; household cleaners dish/utensil cleaners, floor cleaners, toilet cleaners, air fresheners, insecticides and mosquito repellents, metal polish and furniture polish.
- ➤ Branded and Packaged Food and Beverages: It consists of health beverages; soft drinks; staples/cereals; bakery products biscuits, bread, cakes; snack food; chocolates; ice cream; tea; coffee; processed fruits, vegetables, and meat; dairy products; bottled water; branded flour; branded rice; branded sugar; juices etc.



#### **CHART 1.19.6-FMCG MARKET SEGMENT SHARE**

### 1.24 MARKET DRIVERS AND TRENDS

- > FMCG companies are investing in innovation by launching new products to take advantage of the rapidly evolving retail landscape and the changing purchasing behaviour of consumers.
- ➤ Growth in rural consumption has increased and, hence there is an increased demand for branded products in rural India which has made rural India a huge untapped market. Godrej launched One Rural programme to generate more revenues from

rural areas. Rural India is estimated to account for ~50% of the total FMCG market in 2016.

- ➤ Government initiatives such as FDI, Food Security Bill, and GST are expected to boost the FMCG market sentiments. Moreover, government's focus on rural areas have also encouraged many FMCG companies to expand their rural network and increase their product penetration.
- ➤ Growth in organised retail and E-commerce is also a major driver for the FMCG sector as the availability of products have become easier due to the growing organised retail stores and rising internet penetration. E-commerce websites such as Gofers, Flipkart, Amazon are making the FMCG products readily available to the Indian consumers.

### **REVIEW OF LITERATURE**

### 2.1 INTRODUCTION

This chapter includes a Review of the literature and Research design. A literature review is the synthesis of the available literature regarding your research topic. This synthesis merges the conclusions of many different sources to explain the overall understanding of the topic, thus laying a foundation for both the research question and primary research. Although a literature review will cite sources and should discuss the credibility of the sources included, it is more than an annotated bibliography. Your literature review needs to review all the significant sources on a topic, regardless of whether or not they support the claims you will eventually be working toward.

### 2.2 MEANING OF REVIEW OF LITERATURE

A literature review is more than a summary of the sources, it has an organizational pattern that combines both summary and synthesis. A summary is a recap of the important information of the source, but a synthesis is a re-organization, or a reshuffling, of that information. It might give a new interpretation of old material or combine new with old interpretations.

They are 5 steps for the review of literature:

- ✓ Search for relevant information and findings.
- ✓ Evaluate your sources and select the most relevant ones.
- ✓ Identify key topics, debates, and research gaps.
- ✓ Prepare your outline.
- ✓ Write the contents of your literature review.

#### 2.2.1 (Gotherstrom, 2015)

These research papers talk about the influence of environmental accounting disclosure which is not mandatory and companies that are environmentally sensitive industry had to disclose as there is no proper standard disclosure based on best industry practices. The objectives are how environmental accounting is disclosed and to know whether environmental accounting has influence or not. Secondary data is collected through annual reports, testing hypotheses was done through one-way analysis. This implies that the null hypothesis is rejected and that counting standards do not significantly influence environmental accounting disclosures. Accounting standards do influence environmental accounting disclosure as it is voluntary disclosure it is left to the company whether to disclose or not.

#### 2.2.2 (Rounaghi, 2019)

To establish well environmental accounting accountants are a powerful weapon of the government regarding economical and financial controls. There should be proper rules and regulations grounded and codified. Green accounting indicators such as the green gross domestic product can be used for the formulation of policy and to create awareness of sustainability concerns. Environmental accounting can be applied to larger smaller-scale industries in a systematic manner. The environmental accounting framework implemented in this study resulted in exploring useful tools for exploring environmental costs and impacts due to agricultural production.

#### 2.2.3 (Ulgiati, 2019)

Nine main Lebanese agricultural productions were investigated by means of a multi-criteria accounting framework comparison of different cropping systems crops characterized by high environmental costs. Implemented multicriteria accounting framework to explore the environmental performance and sustainability of agricultural and Environmental accounting methods such as gross energy requirement, and material flow accounting. energy accounting. This symbolic model represents a first qualitative step useful to see quantitative environmental accounting.

#### 2.2.4 (Qian, 2021)

Developing countries face problems such as threats of climate change, water pollution and biodiversity loss. To address political and cultural complexities. To review its recent development of social and environmental accounting in the context of developing countries and focus on focus on the introduction of Accounting, Auditing and Accountability conceptual overview of the field developed in the past decade and to identify major themes, trends and future research directions. Social and environmental accounting papers addressing the contextual challenges of developing countries have been published in leading accounting journals in the last 20 years. Three main contextualisation approaches to analyse contextual themes framed around regulatory, political, cultural and religious, and social-economic systems. The review is limited to leading to leading accounting journals.

#### 2.2.5 (Nguyen, 2017)

The research results indicate the importance of environmental accounting information disclosure for long term disclosure for long term business strategy. Disclosure of environmental accounting information also enhances their image and reputation with stakeholders. The firm size and time of listing on the stock market affect positively to the disclosure level of environmental accounting information. The objectives of assessing factors affecting disclosure levels of environmental and to see the level of disclosure influencing by these factors. The Methodology is based on the quantitative research method and the financial information of listed firm is taken from the website finance, view stock. The results show that there is a variation between the independent and dependent variables of the model. The level of disclosure of environmental accounting information has positive relationship with the variables of business size, profitability, listing time, and independent auditing, and negative relationship with financial leverage.

#### 2.2.6 (Amacha, 2020)

This study uses a small sample of the mining industry actors in Binah Dinha province, Vietnam. However, research results provide a new perspective on EA implementation in an environmentally-sensitive industry in Vietnam. This study can be considered as a starting point for other future studies when examining regional characteristics, industry characteristics, and corporate governance to implement EA in Vietnam. The research focus on investigates the impact of factors on environmental accounting implementation in mining enterprises in Binah Dinha province. Methodology was conducted in three phase they are

draft surveys, IN depth interview and design questionnaire Scale Reliability, Exploration Factor Analysis and research hypothesis. There are four factors that significantly influence at 1% statistical significance, including: coercive pressure by government agencies, awareness of senior managers, business characteristics, and accountant qualifications of Environmental accounting. Stakeholders pressure has the lowest impact at 10% statistical significance. In addition, managers also need to change their views on environmental protection activities, environmental policies, and proactive environmental strategies to overcome expanding green barriers.

#### 2.2.7 (OS, 2021)

Business is responsible for the environment in which they are present as they use resources of the environment. It is required to have peaceful harmony between consumer and the environment. It was revealed that it had negative relationship between Environmental disclosure such as government pressure firm size and community pressure. Relationship between environmental accounting activities and business performance of the businesses. The objectives are to know relationship between the environmental accounting activities and business performance of the businesses. And the activities of business within the scope of the research on environmental issues. Methodology is multiple regression equation. Descriptive Statistics and ANOVA and questionnaire were done through a random sampling method. Findings tells that there is a close and linear relationship between the performance, hence H1 is accepted that it there is significant relationship between environmental accounting and business performance... Professional associations need to organize seminars and conference to help managers and accountants raise awareness, and establish a learning mechanism about Environmental accounting.

#### 2.2.8 (Jasim, 2017)

This paper mainly gives information to develop environmental accounting disclosure which is suitable for Kurdistan. To increase restriction on oil refining company to follow the criteria with necessary of determining the limited ratio of environment information that must be put in annual financial statements. The objectives are important practices that an accountant does in oil refining factory and focus on impact of environmental accounting disclosure for harmful practices to environment. Methodology are questionnaire and T-test was applied and refers to continuous weakness of environmental accounting disclosure practices of oil refining companies in Kurdistan. The annual financial statement contains a little environmental accounting information or sometimes nonexistence.

#### 2.2.9 (Dhar, 2021)

The greater the sustainable development capabilities of the companies; the higher the debt-to-asset ratio, the profits of the companies will be used to repay debts of relevant creditors. Without sufficient funds for investment and environmental protection, sustainable development cannot be achieved without the development of social responsibility. This paper talks about are there any impact in environmental disclosure and sustainable development and continuous improvement. The objective is the application effect of green accounting in the sustainable development of heavily polluting companies and to know how effectively green accounting has improved sustainable development of heavily polluted companies. The methodology is sample selection. Multilinear regression model, Descriptive statistics, correlation analysis and regression analysis. Findings are. The extreme values are 0.07 and 0.80, respectively indicating that individual companies have inferior sustainable development capacity and some companies that remarkably perform capacity. Regression co-efficient between green accounting implementation and corporate sustainability (ESD) is 0.50 and passed 1% level of significance.

#### 2.2.10 (Das, 2020)

The company has also installed a number of solar plants which played a key role in the further reduction of consumption of non-renewal resources has also developed an efficient water recycling technology which enabled its units to recycle 36.04% of the water usage during the period of the study. The purpose of the present paper is to assess whether Bharat Heavy Electricals Limited furnishes environmental information in accordance with the Global Reporting Initiative (GRI) guidelines and also to measure the performance of the company on the basis of the selected environmental performance indicator. The objectives are the present study is based on secondary data and the researcher has also used industrial data published by various agencies to give a conclusive picture. Overall, it can be concluded that the company made genuine efforts to reduce its negative impact on the environment through its waste management system, green initiatives and effective inventory management. The ratio between environmental protection expenditure and total turnover shows fluctuations over the period of the study.

#### 2.2.11 (Adediran, 2020)

The study therefore rejected the null hypothesis and accepted the alternate which says that there is a significant impact of environmental accounting on market price per share in quoted food and beverages companies. Firm's authorities should disclose about the health and safety of stakeholders, waste management and how it affects share value. Management should increase their asset base in order to increase market price per share in Nigerian's objectives are to study the impact on share value and their future investment in public limited company and methodology used here is inferential and Descriptive statistics and The three independent variables in market price per share is 41.7%, while the remaining 58.3% comprise other factors not considered in this study and Waste management disclosure has a positive coefficient of 5.882727 but with insignificant p-value of 0.9604 greater than 0.05.This shows that 1% increase in WMD will lead to 5.88% increase in market price per share. The study population was 23 manufacturing food and beverages companies listed in Nigeria Stock Exchange out of which10 of the listed companies were selected using purposive sampling method based on age, size of assets, by position of ranking the leading firms in Nigeria and availability of data for the period under study.

#### 2.2.12 (Islam, 2015)

The findings of the study reveal that companies are well aware of the facts that environmental issues will affect the business and industry in the near future. They are fully convinced of the need for environmental information. Despite of this awareness, there is an absence of external environmental accounting. The companies in Bangladesh do not have a proper environmental accounting system to determine the environment related costs, benefits, assets and liabilities. This study indicated that the Companies have already given much effort in the field of environmental protection. However, the current accounting system does not reflect such efforts for its stakeholders. So, Companies should take the initiative showing such activities in their accounts. This study indicated that the Companies have already given much effort in the field of environmental protection. However, the current accounting system does not reflect such efforts for its stakeholders. So, Companies should take the initiative showing such activities in there. The objectives are focus on how the environmental accounting is disclosed and there accounting practices in the company. Secondary data is used.

#### 2.2.13 (Mishra K.K, 2015)

The findings of the study shows that ONGC are totally concern about the major issues of environment that directly hamper the environmental performance and Totally agree that duty with the best by providing fully information about environmental related disclosure, but industries provide only less information about the environmental related issues, and also not providing the information related to the environmental expenditure and environmental cost .The objectives are To analysis the extent of the disclosure of environmental information of sample units and to give suggestion for the improvement of their environmental policy. So, we can say that an attempt has been made to examine the places of this disclosure in the annual report, its type and length. There is also a lacking of quantitative information, so there should be proper accounting pronouncements from the regulatory authorities & the information related to the environmental expenditure. It has not been mentioned in their annual reports. There is also a lacking of the information about environmental related disclosures in the annual reports. The findings of the study suggest that the disclosure of environmental related information is mandatory in nature & there should be proper accounting system which determine environmental related costs, liabilities and expenditure and the Company should asked to submit the whole information regarding environmental issues & if the company is not providing the information, then action must be taken by regulatory body against the company.

#### 2.2.14 (Scarpellini, 2019)

This article helps to overcome the limitations of conventional accounting and gives much broader scale of environment information and helps policymakers a better understanding about circular economy which helps in policy design to check whether different circular economy adoption of EMS environmental accounting practices and the human resources involved in environmental management. The objectives are focus on measuring the environmental capabilities applied in circular economy and to study environmental competences that firms apply during this process. Methodology is partial least squares structural equation modelling, questionnaire was prepared. Findings are central finding of this study is that CE-related activities introduced by businesses are influenced by the analysed capabilities that also improve the environmental and financial performance of firms in a CE framework. The obtained results can help overcome the limitations of conventional accounting approaches and incorporates a much broader scale of environmental information

that can be applied to CE practices and the limitation is limitations of this study are related to the measurement of the degree of circularity, which accounts for only some of the activities carried out by businesses, and the characteristics of the sample.

#### 2.2.15 (Abdullah, 2018)

Environmental accounting depends upon the size type of industry it also focusses on creating awareness among people and stakeholders by conferences holding seminars from one company to another to share ethics of environment. To define and actualize firms on environmentally friendly approaches to increase the chance of their completeness. The objectives are to write reasonable evaluation of relationship between environmental accounting and financial performance and data was collected through primary secures, Chi square Pearson's chi-squared were used as methodology. Contribute in reducing waste and using public transport the highest percentage was 28% neutral rate, second, was if you feel that environment destruction is a big threat and it was 24% for both low and very high rate. There is no relationship between Social environmental accounting and profit. Due to the limit of time, a shorter number of firms will be questioned in each sector.

#### 2.2.16 (Magablih, 2017)

Through analysis the most important results that there were no statistically significant differences between the arithmetic average of the possibility of measuring the environment cost of disclosure, and the study also recommends the allocation of the budget to preserve and protect the environment and the budget of social cost, the development of accounting methods in order to provide environmental information to make sound decisions to exploit this resource. Objectives are a statement of the need for environmental cost accounting, a statement of the role of the advanced methods of production in the presence of environmental costs. Primary data was collected through questionnaire and Averages, Standard Deviations One-Sample T-test, there is a possibility of measuring environmental costs in companies. The presence of statistically significant differences between the arithmetic averages of the standard. There were no statistically significant differences between the arithmetic averages of the possibility of measuring the environmental costs of disclosure, attributed to a variable degree. His limitation the study sample includes financial managers to whom 180 questionnaires were distributed and 155 returned as there was no proper response from the finance managers of the companies.

#### 2.2.17 (Singh, 2017)

The present study needs to be further investigated under the light of legal and economic dimensions. The ISM-based model does not reveal the relative weights associated with each factor. This can be done using the analytic network process. Further, structural equation modelling can be used for testing the validity of the model. Research proposes a framework which can be very effective to develop strategies for Indian industries environmental legal framework with regard to environmental protection. Study is based on primary data collected from different sources. All the identified factors were found to be important. Significant interrelations are revealed which are sometimes not exposed by mere observation and the research limits itself to conceptual understand- ng of environmental regulatory framework towards sustainability reporting and its core elements; the study is not done at microscopic level.

#### 2.2.18 (Clarke, 2017)

On the basis of the study, it appears that companies have taken reporting on environmental aspects more on statutory obligations and less social responsibilities. Extent of environmental reporting in various industries is different. The environmental performance of a company also influences positively the extent of reporting. Most of the Indian companies are fully convinced of the fact that environmental issues will surely affect the industry and business organization in near future. Despite this, there is an absence of external environment accounting reporting practice. Due to absence of proper system in determining environmentally related costs, benefits, assets and liabilities, Indian companies fail to provide adequate disclosure on the environment. How the concept of environmental accounting and corporate reporting practices is relevant and beneficial to the society and the methodology is conceptual study and graphical analysis. Findings and conclusionary any company have reported on failure regarding environmental protection or any damaged caused by the concern to the environment and society. The environmental performance of a company also influences positively the extent of reporting.

#### 2.2.19 (P, 2021)

Majority of the companies are not having their own Research and development cell. They dependent on government Research and development cell. Most of the companies are recycled the plastic, wet waste, medical waste and metallized/ paper waste. It carrying out environmental conservation activities, a company or other organizations can accurately identify and measure investments and costs related to environmental conservation activities, and can prepare and analyse this data. The major polluters of the environment are manufacturing companies. To evaluate the conservation and recycling activities of the manufacturing companies. The sampling technique involved in this research study is convenient sampling. Findings 50% each agree as both Yes and No to dump into other areas and 80% of them does not follow other methods, and only 20% follow the other methods for waste management than that of listed below. Environmentally friendly product development research is carried out in another cell 75% agree as Yes and 25% agree as 82.6% agree as Yes and 17.4% agree as No for the clean process design.

#### 2.2.20 (Senn, 2020)

The research paper show that the disclosure of environmental accounting information is still in its infancy. Weak definitions and poor guidance in regulations explain the limitations in disclosure and induce interpretative strategies depending on the type of data to be disclosed in the company's annual reports. Research focus on providing insights into insider's perspectives on environmental accounting disclosures, which is relatively underinvestigated. Pre-analysis and review of annual reports and interview with top managers. The content analysis based on excerpts of annual reports for environmental provisions is provided. Consistent with this observation, the interviewed auditors confirm that the economic information used to justify the provision is usually non-existent in disclosures. Only three companies out of eight had disclosed dedicated amounts in the last year of observation, with each of them complying with a different guideline.

#### 2.2.21 (Hassan, 2017)

It gives us information that companies which disclose environmental information in standalone environmental reports tend to provide higher levels of environmental information than companies which combine financial and environmental disclosure in annual reports. To know through empirically testing a model of the relationships between corporate reporting format, industry membership, environmental disclosure, and environmental performance. Sample selection, descriptive statistics and Mann-Whitney U tests are conducted. Our findings support greenwashing as a new perspective of legitimacy theory: companies in carbon intensive industry use standalone environmental reports to pose as good corporate citizens even when they are not. His paper suggests that reporting format be considered a proactive, strategic communication driven activity rather than a decision that managers passively make in response to external scrutiny.

#### 2.2.22 (Stechemesser, 2016)

The development of instruments in this study may be valuable tools to evaluate EMAP in Malaysian manufacturing industry. This study also provides important guidelines for Malaysian manufacturing industry to implement EMAP. This research finding would provide new insights for the critical success factors of EMAP to improve performance in Malaysian manufacturing industry's know proper practices of environmental accounting is a vital issue for sustainable development. Finally, overall findings summarized from the review findings that proper practice of environmental accounting is a vital issue for sustainable development specially to concentrate on environmental taxes, environmental costs, valuing ecosystem services, costing of carbon dioxide, cost of water pollution and ensure income sustainability of leading in the way of sustainable development.

#### 2.2.23 (Adams, 2016)

Since regulatory regimes may include several types of means, the main contribution is the comparison of four types of regulations within the same regime, as opposed to analysing only one type of regulation at a time such as in the extant literature. The study also explores different types of legitimacy, and addresses the lack of research on environmental reporting in the public sector. Objectives are disclosures made by enterprises subject to regulations are compared with those of enterprises that are not. Intent analyses were used and sample of 235 public sector Company was collected. His result is not in line with predictions made

from any of the four types of legitimacy. Some alternative explanations are discussed and Enterprises subject to regulations report significantly more types of the information content required by law than other enterprises, which is in line with the higher regulatory legitimacy risk.

#### 2.2.24 (Lakshmi1, 2018)

Business has to prepare a concrete environmental policy, take steps for pollution control, comply with the related rules and regulations, and mention sufficient details of environmental aspects in the annual reports. For sustainable development, a definite environmental policy as well as proper implementation and appropriate accounting procedure is a must. Objectives are to study the corporate accounting and reporting practices on green accounting. And to find out the major obstacles in the sound development of these practices. Objectives are Analysis was done theoretical used model which consists of six stages. It provides that the companies are required to give more disclosures besides Company's general state of affair and financial performance regarding conservation of energy and environmental protection.

#### 2.2.25 (Das P. K., 2016)

The absence of standardized environmental accounting practices and disclosure techniques, both at national and international levels, and their legal enforcement, necessitates the urgent and pressing need to take steps nationally and globally to formulate these techniques and practices in regard to environmental issues. The objectives are to examine the drawbacks of the traditional accounting system and importance of environmental accounting today. Most of the application of environmental accounting requires shadow pricing because we cannot establish market values, since the economic goods and services concerned and Valuation of environmental goods and services and incorporation of environmental data into the national and corporate levels suggests different techniques.

### **RESEARCH DESIGN**

### 3.1 MEANING OF RESEARCH DESIGN

Research design is the framework of research methods and techniques chosen by a researcher to conduct a study. The design allows researchers to sharpen the research methods suitable for the subject matter and set up their studies for success.

### 3.2 STATEMENT OF PROBLEM

An inquiry was done related to environmental accounting of an organization the data analyzed are particularly about environmental indicators to know whether these indicators have any relationships between various dimension of environmental indicators. To know whether there is an impact on time and environmental indicators and resources saved by the organization know any significant differences this was considered as research gap.

### 3.3 SCOPE OF THE STUDY

The research is limited to single branch of an organization, MCDONALD, S CORPORATIONAT BTM LAYOUT the data analyzed are particular to the resources saved by the branch. The data consists of five years data which is collected from the annual reports of the organization are used conduct the research.

#### 3.4 OBJECTIVES OF STUDY

- To know the changes in environmental indicators over a period of time:
- \* To understand whether there is an impact on environmental indicators with time.
- ❖ To know the significant differences in various determinants of environmental indicators.

#### 3.5 HYPOTHESIS FOR ACHIEVING THE OBJECTIVES

- H0: Null hypothesis is rejected, and the alternative hypothesis is accepted.
- H0: There is no significant impact on time and environmental indicators.
- H1: There is a significant impact on time and environmental indicators.
- H0: Null hypothesis is rejected, and the alternative hypothesis is accepted.

H0: There is no significant difference in the various determinants of environmental indicators with regard to time.

H1: There is a significant difference in the various determinants of environmental indicators with regard to time.

### 3.6 OPERATIONAL DEFINITION OF THE CONCEPT

It is defined as a field that identifies resource use, measures, and communicates costs of a company's or national economic impact on the environment. Costs include costs to clean up or remediate contaminated sites, environmental fines, penalties and taxes, purchase of pollution prevention technologies and waste management costs.

### 3.7 RESEARCH METHODOLGY

Research methodology is the specific procedures or techniques used to identify, select, process, and analyse information about a topic. In a research paper, the methodology section allows the reader to critically evaluate a study's overall validity and reliability.

### 3.7.1 TYPES OF RESEARCH DESIGN

- This dissertation is based on analytical study.
- To analyse the data for this study quantitative data was used.

### 3.7.2 DATA USED FOR THE STUDY

Secondary data was gathered the data was collected through the annual reports of MCDONALD'S.

#### 3.7.3 RESEARCH TOOL:

The information was obtained by secondary data a quantitative research approach to analyse the objectives of the study, test the hypotheses, and analyse the trends in MCDONALD" S CORPORATION as a quantitative research method.

### 3.7.4 STATISTICAL TOOL:

The collected data were analysed using trend analysis, linear Regression analysis, correlation analysis, model fit analysis and one way ANOVA with the help of EXCEL and SPSS 32-bit Software.

### 3.8 LIMITATION OF THE STUDY

- \* The research is restricted to a branch (MCDONALD'S CORPORATION).
- ❖ The data used to analyse the study was not sufficient.
- ❖ Time is of the essence; the duration to analyse the data and to complete the dissertation is quite short.

### 3.9 CHAPTER SCHEME

## **Chapter 1: Introduction**

This chapter includes brief about the company its history meaning and definitions it gives information about the need for and importance of the environmental accounting, advantages and disadvantages of the environmental accounting and industry profile which gives information about fast moving consumer goods, main FMCG segments and information about consumer goods.

## **Chapter 2: Review of literature**

This chapter focus on review of articles related to our topic, review of articles is done by framing research objectives, findings, methodology, conclusion by authors, limitation of the study and comments of researcher is included in this chapter.

## **Chapter 3: Research Design**

This chapter focus on statement of the problem, objectives of the study, hypothesis for achieving the objective, research methodology, research design, statical tools, limitations of the study, types of research design, data used for study and operational definition of the concept.

## **Chapter 4: Company profile**

This chapter briefs about McDonald's company its history, introduction, products, finance, global operations, business model, finance, board of directors, principal subsidiary, principal competitors and SWOT analysis.

## Chapter 5: Data analysis and interpretation

This chapter includes about analysis about the data, trend analysis, model summary, descriptive analysis, correlation, coefficients and one way ANOVA is used for analysing the data, interpretation for each table and chart is shown.

## **Chapter 6: Findings, suggestions and conclusion**

This chapter includes about the findings of the research, findings based on the objectives, suggestions and conclusion. Suggestion is given based on the research done.

### **COMPANY PROFILE**

### **4.1 MCDONALD'S HISTORY**

From drive-thru caffs to Chicken McNuggets to council credits from Hamburger U, we've had quite a trip. And we're still going. But to investigate our history, we need to partake in the story of one man. In 1917, 15- time-old Ray Kroc prevaricated about his age to join the Red Cross as an ambulance motorist, but the war ended before he completed his training. He also worked as a piano player, a paper mug salesperson, and a Multimixer salesperson. In 1954, he visited an eatery in San Bernardino, California that had bought several Multimixers. There he set up a small but successful eatery run by sisters Dick and Mac McDonald and was stunned by the effectiveness of their operation. The McDonald's sisters produced a limited menu, concentrating on just many particulars – burgers, feasts, and potables – which allowed them to concentrate on quality and quick service. They were looking for a new franchising agent and Kroc saw an occasion. In 1955, he innovated McDonald's System, Inc., a precursor of the McDonald's Corporation, and six times latterly bought the exclusive rights to the McDonald's name and operating system. By 1958, McDonald's had ended its 100 million hamburgers. Since its objectification in 1955, McDonald's Corporation has not only come the world's largest quick-service eatery association but has changed Americans' eating habits-- and decreasingly the habits of non-Americans as well. On an average day, further, than 46 million people eat at one of the company's further than, 000 caffs which are located in 119 countries on six mainlands. About,000 of the caffs company possessed and operated; the remainder is run either by franchisees or through common gambles with original businesspeople. System-wide deals (which encompass total earnings from all three types of caffs) totalled further than \$46 billion in 2003. Nine major requests-- Australia, Brazil, Canada, China, France, Germany, Japan, the United Kingdom, and the United States-- account for 80 percent of the caffs and 75 percent of overall deals. The vast maturity of the company's caffs is of the flagship McDonald's hamburger common variety. Two others possessed chains, Boston Market (roaster funk) and Chipotle Mexican Grill (Mexican presto casual), along with Pert a Manger (upmarket set sandwiches), in which McDonald's owns a 33 percent stake, account for about,000 of the units.

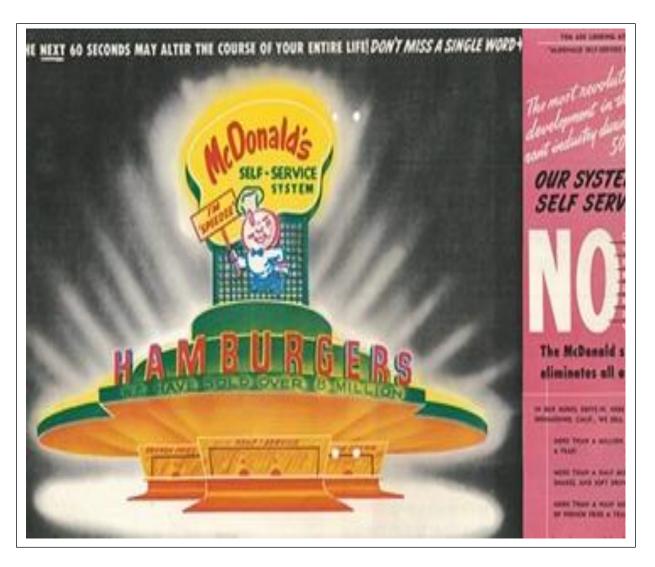


**CHART 4.1- Picture of McDonald's** 

## 4.2 MCDONALD'S INTRODUCTION

McDonald's introduced the new Mansard Roof Design in 1969 in Matteson, Illinois. originally, numerous franchisees refashioned they're being Red and White structures to reflect the new design. McDonald land Parks Play Places and the Drive-Thru was added to the café during the 1970s. The Mansard's face passed several changes during the intermediating years. McDonald's is the world's leading food service association. We induce further than\$ 40 billion in System-wide deals. We operate over, 000 cafes in further than 100 countries on six mainlands. We have got the benefits that come with scale and a strong fiscal position. We enjoy one of the world's most honoured and admired brands. We've got an unexampled global structure and capabilities in café operations, real estate, merchandising, marketing and franchising. We're a leader in the area of social responsibility. We laboriously pertain key our knowledge and moxie in food safety and are committed to guarding the terrain for unborn generations. Yet, we haven't achieved our growth prospects for the formerly several times. So, our challenge is to work our strengths to profitably serve further guest more ways more constantly. McDonald's caff point design incorporates being armature and other unique features.

Stock price the armature of the McDonald's continues to evolve to meet our client's prospects. McDonald's was found 5 April 1955, San Bernardino, California, United States .The stock price of MCD (NYSE) \$260.08 +1.66 (+0.64%) the present Chief executive officer is Chris Kempinski (4 Nov 2019) its headquarters are Chicago, Illinois, United States and its subsidiaries are McDonald's Canada, McCafé, McDonald's France, MORE.



**CHART 4.2- McDonald's Franchising brochure** 

### **4.3 PRODUCTS**

McDonald's sells hamburgers, colourful types of funks, funk sandwiches, French feasts, soft drinks, breakfast particulars, and goodies. In utmost requests, McDonald's offers salads and

submissive particulars, wraps and other localized chow. On a seasonal base, McDonald's offers the McRib sandwich. Some presume the seasonality of the McRib adds to its appeal. During March of time, McDonald's offers a Shamrock Shake to recognize Saint Patrick's Day. In addition, the chain also sells some particulars within the United States on an indigenous bases; for illustration, the Hatch Green Chile Double Cheeseburger, which is outgunned with New Mexico green Chile, is only available in the southwestern state of NewMexico.Products are offered as either" dine- in" (where the client opts to eat in the eatery) or" take- out" (where the client opts to take the food off the demesne)." Dine- in" reflections are handed on a plastic charger with a paper insert on the bottom of the charger." Take- out" reflections are delivered with the contents enclosed in a distinctive McDonald'singrained brown paper bag. In both cases, the individual particulars are wrapped or boxed as appropriate. Since Steve Easterbrook came CEO of the company, McDonald's has streamlined the menu which in the United States contained 200 particulars. The company has looked to introduce healthier options and removed high-fructose sludge saccharinity from hamburger buns. The company has removed artificial preservatives from Chicken McNuggets, replacing funk skin, safflower oil painting and citric acid set up in Chicken McNuggets with pea bounce, rice bounce and powdered bomb juice. In September 2018, McDonald's USA blazoned that they no longer use artificial preservatives, flavours, and colours entirely from seven classic burgers vended in the U.S., including the hamburger, cheeseburger, double cheeseburger, McDole, Quarter Pounder with rubbish, double Quarter Pounder with rubbish and the Big Mac. Nonetheless, the pickles will still be made with an artificial preservative, although guests can choose to conclude out of getting pickles with their burgers. In November 2020, McDonald's blazoned Plant, a factory- grounded burger, along with plans to develop fresh meat volition menu particulars that extend to funk backups and breakfast sandwiches. This advertisement came after the successful testing of Beyond Meat factory grounded meat backups

## 4.4 TYPES OF RESTAURANTS

- ➤ McDrive: In some countries, McDrive locales near roadways offer no counter service or seating. In discrepancy, locales in high- viscosity megacity neighbourhoods frequently forget drive through service. There are also manylocales, in town sections, which offer a" Walk- Thru" service in place of Drive- Thru.
- ➤ McCafé: McCafé is a café- style incident to McDonald's caffs. The conception was created by McDonald's Australia, starting with Melbourne in 1993. As of 2016, utmost McDonald's in Australia have McCafé's located within the being McDonald's eatery. In Tasmania, there are McCafé's in every eatery, with the rest of the countries snappily following suit. After upgrading to the new McCafé look and feel, some Australian caffs have noticed up to a 60 percent increase in deals. At the end of 2003, there were over 600 McCafé's worldwide.
- ➤ Create Your Taste restaurants: From 2015 to 2016, McDonald's tried a new gourmet burger service and café generality predicated on other gourmet caffs analogous as Shake Shack and Grill's. It was rolled out for the first time in Australia during the early months of 2015 and expanded to China, Hong Kong, Singapore, Arabia, and New Zealand, with ongoing trials in the US request. In devoted" produce Your Taste" (CYT) alcoves, guests could choose all ingredients including type of bun and meat along with voluntary extras. CYT food was served to the table on rustic boards, feasts in line baskets, and salads in demitasse colosseums with substance fork at an advanced price. In November 2016, produce Your Taste was replaced by a" hand drafted fashions" program designed to be more effective and less precious.
- ➤ Other: Some locales are connected to gas stations and convenience stores, while others called Express have limited seating or menu or may be in a shopping boardwalk. Other McDonald's are in Walmart stores. Misstop is a position targeted at truckers and trippers which may have services set up at truck stops. In the United Kingdom, McDonald's caffs can be set up in service stations, petrol stations, McDrive Thru, Asda Superstores and Supercentres, shopping centres, retail premises and high road caffs One McDonald's Drive-Thru in Crawley is in the auto demesne of a Sainsbury's store. Other McDonald's locales named' Express' or' McDonald's & Go' have limited seating and can be set up more generally in road

stations and airports. In Sweden, Happy mess holders can be used as goggles, with the game Slope Stars. In the Netherlands, McDonald's has introduced McTrax that doubles as a recording plant; it reacts to touch. They can produce their own beats with a synth and tweak sounds with special goods. On the swash Elbe in Hamburg, Germany is the world's only McBoat, a pier through service (analogous to drive through) for people on the swash.

- ➤ Play Places: McDonald's playgrounds are called McDonald's Play Place. Some McDonalds in suburban areas and certain cities feature large indoor or outdoor playgrounds. The first Play Place with the familiar crawl-tube design with ball pits and slides was introduced in 1987 in the US, with many more being constructed soon after.
- ➤ McDonald's Next: McDonald's Next use open-concept design and offer "Create Your Taste" digital ordering. The concept store also offers free mobile device charging and table service after 6:00 pm. The first store opened in Hong Kong in December 2015.
- ➤ 2006 redesign: In 2006, McDonald's introduced its "Forever Young" brand by redesigning all its restaurants, the first major redesign since the 1970s. It resembles a coffee shop, with wooden tables, faux-leather chairs, and muted colours; the red was muted to terracotta, the yellow was shifted to golden for a "sunnier" look, and olive and sage green were added. The warmer look has less plastic and more brick and wood, with modern hanging lights for a softer glow. Many restaurants feature free Wi-Fi and flat-screen TVs. Other upgrades include double drive-thrust, flat roofs instead of the angled red roofs, and fibre glass instead of wood. Instead of the familiar golden arches, the restaurants feature "semi-swooshes" (half of a golden arch), similar to the Nike swoosh.

#### 4.5 TREATMENT OF EMPLOYEES

➤ Automation: Since the late 1990s, McDonald's has tried to replace workers with electronic alcoves which would perform conduct similar as taking orders and accepting plutocrat. In 1999, McDonald's first tested-Clerks" in suburban Chicago, Illinois, and Wyoming, Michigan, with the bias being suitable to save plutocrat on live staffers and attracting larger purchase quantities than average workers. In 2013, the University of Oxford estimated that in the succeeding decades, there was a 92

probability of food medication and serving to come automated in fast food establishments. By 2016, McDonald's" produce Your Taste" electronic alcoves were

seen in some caffs internationally where guests could custom order reflections. As workers pushed for advanced stipend in the late- 2010s, some believed that fast food companies similar as McDonald's would use the bias to cut costs for employing individuals. In September 2019, McDonald's bought an AI- grounded launch- up Apprentice for replacing mortal waiters with voice- grounded technology in its US drive- throughs.

- ➤ Wages: Fast food workers in the U.S. drew an average of \$7 billion of public assistance annually resulting from receiving low wages. The Resource website advised employees to break their food into smaller pieces to feel fuller, seek refunds for unopened holiday purchases, sell possessions online for quick cash, and to "quit complaining" as "stress hormone levels rise by 15 percent after ten minutes of complaining." In December 2013, McDonald's shut down the Resource website amidst negative publicity and criticism. McDonald's plans to continue an internal telephone help line through which its employees can obtain advice on work and life problems. Liberal think tank the Roosevelt Institute accuses some McDonald's restaurants of actually paying less than the minimum wage to entry positions due to "rampant" wage theft. In South Korea, McDonald's pays part-time employees \$5.50 an hour and is accused of paying less with arbitrary schedules adjustments and pay delays. [87] In late 2015, data collected anonymously by Glassdoor suggests that McDonald's in the United States pays entry-level employees between \$7.25 an hour and \$11 an hour, with an average of \$8.69 an hour. Shift managers get paid an average of \$10.34 an hour. Assistant managers get paid an average of \$11.57 an hour. McDonald's CEO, Steve Easterbrook, earns an annual salary of \$1,100,000. His total compensation for 2017 was \$21,761,052
- ➤ Strikes: McDonald's workers have on occasions decided to strike over pay, with utmost of the workers on strike seeking to be paid\$15.00. (91) When canvassed about the strikes being, former McDonald's CEO Ed Renzi stated" It's cheaper to buy a\$,000 robotic arm than it's to hire a hand who is hamstrung making\$ 15 an hour bagging French feasts" with Renzi explaining that adding hand stipend could

conceivably take down from entry- position jobs. Still, according to Easterbrook, adding stipend and benefits for workers saw a 6 increase in client satisfaction when

comparing 2015's first quarter data to the first quarter of 2016, with lesser returns seen as a result. In September 2017, two British McDonald's stores agreed to a strike over zero-hours contracts for staff. entry lines were formed around the two stores in Crayford and Cambridge. The strike was supported by the Leader of the Opposition Jeremy Corbyn.

- ➤ Occupation: Workers at the McDonald's franchise at Saint-Barthelemy, Marseille, occupied the restaurant, in protest its planned closure. Employing 77 people, the restaurant is the second-biggest private sector employer in Saint-Barthelemy, which has an unemployment rate of 30 percent. Lawyers for Kamel Guembri, a shop steward at the franchise, claimed an attempt was made to kill him when a car drove at him in the restaurant car park.
- ➤ Working conditions: In March 2015, McDonald's workers in 19U.S. metropolises filed 28 health and safety complaints with the U.S. Occupational Safety and Health Administration which purport that low staffing, lack of defensive gear, poor training and pressure to work presto has redounded in injuries. The complaints purport that, because of a lack of first aid inventories, workers were told by operation to treat burn injuries with seasonings similar as mayonnaise and mustard. The Fight for\$ 15 labour association backed the workers in filing the complaints

### 4.6 ANIMAL WELFARE STANDARDS

In 2015, McDonald's pledged to stop using eggs from battery cage facilities by 2025. Since McDonald's purchases over 2 billion eggs per year or 4 percent of eggs produced in the United States, the switch is expected to have a major impact on the egg industry and is part of a general trend toward cage-free eggs driven by consumer concern over the harsh living conditions of hens. The aviary systems from which the new eggs will be sourced are troubled by much higher mortality rates, as well as introducing environmental and worker safety problems. The high hen mortality rate, which is more than double that of battery cage systems, will require new research to mitigate. The facilities have higher ammonia levels due to faeces being kicked up into the air. Producers raised concerns about the production cost, which is expected to increase by

36 percent. McDonald's continues to source pork from facilities that use gestation crates, and in 2012 pledged to phase them out.

## 4.7 CORPORATE OVERVIEW

Facts: McDonald's restaurants are in 120 countries and territories and serve 68 million customers each day. McDonald's operates 37,855 restaurants worldwide, employing more than 210,000 people as of the end of 2018. There are a total of 2,770 company-owned locations and 35,085 franchised locations, which includes 21,685 locations franchised to conventional franchisees, 7,225 locations licensed to developmental licensees, and 6.175 locations licensed to foreign affiliates. Focusing on its core brand, McDonald's began divesting itself of other chains it had acquired during the 1990s. The company owned a majority stake in Chipotle Mexican Grill until October 2006, when McDonald's fully divested from Chipotle through a stock exchange. Until December 2003, it owned Donato's Pizza, and it owned a small share of Aroma Café, from 1999 to 2001. On August 27, 2007, McDonald's sold Boston Market to Sun Capital Partners. McDonald's has increased shareholder dividends for 25 consecutive years, making it one of the S&P 500 Dividend Aristocrats. The company is ranked 131st on the Fortune 500 of the largest United States corporations by revenue. In October 2012, its monthly sales fell for the first time in nine years. In 2014, its quarterly sales fell for the first time in seventeen years, when its sales dropped for the entirety of 1997. In the United States, it is reported that drive-throughs account for 70 percent of sales. McDonald's closed down 184 restaurants in the United States in 2015, which was 59 more than what they planned to open. This move was the first time McDonald's had a net decrease in the number of locations in the United States since 1970. The McDonald's on-demand delivery concept, which began in 2017 with a partnership with Uber Eats and added Door Dash in 2019 (with select locations adding Grub hub in 2021), accounts for up to 3% of all business as of 2019. The \$100 billion in sales generated by McDonald's company-owned and franchise restaurants in 2019 accounts for almost 4% of the estimated \$2.5 trillion global restaurant industry.

➤ **Finance:** For the fiscal year 2018, McDonald's reported earnings of US\$5.9 billion, with an annual revenue of US\$21.0 billion, a decrease of 7.9% over the previous fiscal cycle. McDonald's shares traded at over \$145 per share, and its market capitalization was valued at over US\$134.5 billion in September 2018.

Year	Revenue in million US\$	Net income in million US\$	Total assets in million US\$	Price per share in USD\$	Locations	Employees
2005	19,117	2,602	29,989	31.88		
2006	20,895	3,544	28,975	36.79	31,046	
2007	22,787	2,395	29,392	50.98	31.377	
2008	23,522	4,313	28,462	58.06	31,967	
2009	22,745	4,551	30,225	57.44	32,478	385,000
2010	24,075	4,946	31,975	70.91	32,737	400000
2011	27006	5,503	32,990	83.97	33,510	420,000
2012	27,567	5,465	35,387	92.53	34,480	440,000
2013	28,106	5,586	36,626	97.26	35,429	440,000
2014	27,441	4,758	34,227	96.38	36,258	420,000
2015	25,413	4,529	37,939	100.28	36,525	420,000
2016	24,622	4,687	31,024	120.14	36,899	375,000
2017	22,820	5,192	33,804	148.76	37,241	235,000
2018	21,025	5,924	32,811	166.06	37,855	210,000
2019	21,077	6,025	47,511	198.27	38,695	205,000
2020	19,208	4,731	52,627	200.89	39,198	200,000
2021	23223	7545	53606	23469	40031	200,000

### 4.8 BUSINESS MODEL

The company owns all the land on which its restaurants are situated, which is valued at an estimated \$16 to \$18 billion. The company earns a massive portion of its revenue from rental payments from franchisees. These rent payments rose 26 percent, between 2010 and 2015, accounting for one-fifth of the company's total revenue at the end of the period. In recent times, there have been calls to spin off the company's U.S. holdings into a potential real estate investment trust, but the company announced at its investor conference on November 10, 2015, that this would not happen. CEO Steve Easterbrook discussed that pursuing the REIT option would pose too large a risk to the company's business model. The United Kingdom and Ireland business model is different from the U.S, in that fewer than 30 percent of restaurants are franchised, with the majority under the ownership of the company. McDonald's trains its franchisees and management at Hamburger University located at its Chicago headquarters. In other countries, McDonald's restaurants are operated by joint ventures of McDonald's Corporation and other, local entities or governments. According to Fast Food Nation by Eric Schlosser (2001), nearly one in eight workers in the U.S. have at some time been employed by McDonald's. Employees are encouraged by McDonald's Corp. to maintain their health by singing along to their favourite songs in order to relieve stress, attending church services in order to have a lower blood pressure, and taking two vacations annually in order to reduce risk for myocardial infarction. Fast Food Nation states that McDonald's is the largest private operator of playgrounds in the U.S., as well as the single largest purchaser of beef, pork, potatoes, and apples. The selection of meats McDonald's uses varies to some extent based on the culture of the host country. In 2021, the company cut value meals and cheaper items from its menu as part of a focus on higher-priced items.

## 4.9 GLOBAL OPERATIONS

McDonald's has become emblematic of globalization, sometimes referred to as the "McDonaldization" of society. The Economist newspaper uses the "Big Mac Index the comparison of the cost of a Big Mac in various world currencies can be used to informally judge these currencies' purchasing power parity. Switzerland has the most expensive Big Mac in the world as of July 2015, while the country with the least expensive Big Mac is India some observers have suggested that the company should be

given credit for increasing the standard of service in markets that it enters. A group of anthropologists in a study entitled Golden Arches East looked at the impact McDonald's had on East Asia and Hong Kong, in particular. When it opened in Hong Kong in 1975, McDonald's was the first restaurant to consistently offer clean restrooms, driving customers to demand the same of other restaurants and institutions. McDonald's has

taken to partnering up with Sinopec, the second largest oil company in the People's Republic of China, as it takes advantage of the country's growing use of personal vehicles by opening numerous drive-thru restaurants. McDonald's has opened a McDonald's restaurant and McCafé on the underground premises of the French fine arts museum, The Louvre. The company stated it would open vegetarian-only restaurants in India by mid-2013. On January 9, 2017, 80% of the franchise rights in mainland China and in Hong Kong were sold for US\$2.08 billion to a consortium of CITIC Limited (for 32%) and private equity funds managed by CITIC Capital (for 20%) and Carlyle (for 20%), which CITIC Limited and CITIC Capital would form a joint venture to own the stake. On March 8, 2022, McDonald's temporarily closed their 850 locations in Russia due to the invasion of Ukraine, but will continue to pay the salary for 62,000 employees. Approximately nine percent of global revenue and three percent of operating profit come from Russia and 100 locations in Ukraine. On May 16, 2022, McDonald's announced that the closures would become permanent and that it was selling all its 850 stores in Russia. Furthermore, 32 years after McDonald's entered the Soviet market, the American giant wants its current business to be "de-Arched", and the company plans to retain its trademarks in Russia, meaning the locations would no longer be allowed to use the McDonald's name, logo, or menu. McDonald's also said it would continue to pay its Russian employees until the sale is finalized. The company has more than 60,000 Russian employees. On June 10, 2022, a Russian McDonald's buyer announced a new logo as an attempt at rebranding. It featured one circle and two lines, which represented a burger and two French fries. The business was rebranded as Vkusno i tochka, which roughly translates to "Tasty - Period." McDonald's is to reopen its stores in Ukraine after closing them in February. However, in non-contested areas like Kyiv and Western Ukraine. During the closure McDonald's has continued to pay its employees, number some 10,000. Originally some 109 restaurants, it is unclear how many will reopen.

### 4.10 ENDROSEMENTS AND SPONORSHIPS

- **Celebrity endorsements:** In 1992, basketball player Michael Jordan became the first celebrity to have a McDonald's value meal named after him. The "McJordan", a Quarter Pounder with pickles, raw onion slices, bacon and barbecue sauce, was available at Chicago franchises. In March 2014, a special "Sprite 6 Mix by LeBron James" flavor of Sprite featuring the flavours of lemon-lime, orange, and cherry, debuted just before the NBA playoffs. [191] James' endorsement of Sprite has also included the seasonal "cranberry" and "winter-spiced cranberry" editions of the beverage. James' deal with Coca Cola and Sprite ended in 2020, with a new partnership with Pepsi and Mountain Dew launching in 2021. In September 2020, McDonald's partnered with rapper Travis Scott to release the "Travis Scott Meal", a Quarter Pounder with cheese, bacon, lettuce, pickles, ketchup and mustard; medium fries with barbecue sauce; and a Sprite, nationwide. Scott designed new uniforms for McDonald's employees and released Cactus Jack merchandise using vintage visuals from the fast-food chain's history. The company followed up with the "J Balvin Meal", a Big Mac with no pickles; fries with ketchup; and a Oreo Flurry, in a partnership with reggaeton singer J Balvin LeBron James has been a spokesman for McDonald's from 2003 to 2017 while co-endorsing Coca Cola-Sprite since early in his career. In 2021, McDonald's partnered with Korean boy group BTS to release the "BTS Meal" in 50 countries around the world, starting on May 26 in select countries. The meal consists of a 10-piece Chicken McNuggets, medium fries, medium Coke, and for the first time in the United States, two spicy dipping sauces: Sweet Chili and Cajun.
- ➤ Sponsorship in NASCAR: McDonald's entered the NASCAR Cup Series in 1977, sponsoring Richard Childress for one race. Between the years 1977 and 1986, McDonald's would only sponsor a handful of races in a season. In 1993, McDonald's became the full-time sponsor for the No. 27 Junior Johnson & Associates Ford, driven by Hut Stricklin. In 1994, Stricklin was replaced in the car by Jimmy Spencer, who would go on to win twice that season. The following season McDonald's would move over to the No. 94 Bill Elliott Racing Ford, driven by team-owner Bill Elliott. McDonald's stayed with Elliott until the 2001 season when they moved again, this time to the No. 96 PPI Motorsports Ford, driven by rookie Andy Houston. However,

when the team failed to field a car for the entire season, McDonald's became absent from NASCAR until 2004, when it joined Evernham Motorsports as a part-time sponsor for drivers Elliott, Kasey Kahne, Elliott Sadler, A. J. Allmendinger, and Reed Sorenson until 2010. During the 2010 season, McDonald's would enter its longest partnership with a team at Chip Ganassi Racing, sponsoring the No. 1 Chevrolet driven by Jamie McMurray until his final race in the 2019 Daytona 500. McDonald's moved to CGR's No. 42 of Kyle Larson, whom the company sponsored until his suspension in 2020, and also had a one-race partnership with Richard Petty Motorsports' No. 43 Chevrolet driven by Bubba Wallace in 2019 and 2020. McDonald's continued working with the No. 42 under new driver Ross Chastain in 2021 and also joined Wallace's new team 23XI Racing as a "founding partner".

> Sports awards and honours: McDonald's is the title sponsor of the McDonald's All-American Game, all-star basketball games played each year for top ranked amateur American and Canadian boys' and girls' high school basketball graduates.

## **4.11 CHARITY**

- ➤ McHappy Day: It is an annual event at McDonald's, during which a percentage of the day's sales go to charity. It is the signature fundraising event for Charities. In 2007, it was celebrated in 17 countries: Argentina, Australia, Austria, Brazil, Canada, England, Finland, France, Guatemala, Hungary, Ireland, New Zealand, Norway, Sweden, Switzerland, the United States, and Uruguay. According to the Australian McHappy Day website, McHappy Day raised \$20.4 million in 2009. The goal for 2010 was \$20.8 million.
- ➤ McDonald's Monopoly donation: In 1995, St. Jude Children's Research Hospital received an anonymous letter postmarked in Dallas, Texas, containing a \$1 million winning McDonald's Monopoly game piece. McDonald's officials came to the hospital, accompanied by a representative from the accounting firm Arthur Andersen, who examined the card under a jeweller's eyepiece, handled it with plastic gloves, and verified it as a winner. Although game rules prohibited the transfer of prizes, McDonald's waived the rule and made the annual \$50,000 annuity payments for the full 20-year period through 2014, even after learning that the piece was sent

by an individual involved in an embezzlement scheme intended to defraud McDonald's

➤ **Refugee:** Refugees are poor people in Hong Kong, Japan, and China who use McDonald's 24-hour restaurants as a temporary hostel.

### 4.12 PRINCIPAL SUBSIDARIES

- ✓ McDonald's Deutschland, Inc
- ✓ McDonald's Restaurant Operations Inc.
- ✓ MLCG Development Co.
- ✓ Chipotle Mexican Grill, Inc.
- ✓ Boston Market Corporation
- ✓ McDonald's Franchise GmbH (Austria)
- ✓ McDonald's Australia Limited
- ✓ McDonald's France, S.A
- ✓ MDC Nobiliary de Mexico S.A. de C.V.
- ✓ McDonald's Restaurants Pte., Ltd. (Singapore)
- ✓ Restaurants McDonald's S.A. (Spain)
- ✓ McKim Company Ltd. (South Korea)
- ✓ Shin Mac Company Ltd. (South Korea)
- ✓ McDonald's Nederland B.V. (Netherlands)
- ✓ Moscow-McDonald's (Canada)
- ✓ McDonald's Restaurants Limited (U.K.).

### 4.13 PRINCIPAL COMPETITOR

- ✓ Burger King Corporation Wendy's International, Inc.
- ✓ CKE Restaurants, Inc.
- ✓ Jack in the Box Inc.
- ✓ Sonic Corporation.
- ✓ Checkers Drive-In Restaurants, Inc.
- ✓ White Castle System, Inc.
- ✓ Whataburger, Inc.
- ✓ YUM! Brands, Inc
- ✓ Doctor's Associates Inc.

## 4.14 BOARD OF DIRECTORS

- ✓ Enrique Hernandez Jr., non-executive chairman; president and CEO of Inter-Con Security
- ✓ Lloyd H. Dean, president, and CEO of Dignity Health
- ✓ Chris Kempinski, president and CEO of McDonald's
- ✓ Robert A. Eckert, operating partner of Friedman Fleischer & Lowe
- ✓ Margo Georgiadis, CEO of Ancestry.com
- ✓ Richard H. Lenny, non-executive of Conagra Brands
- ✓ John J. Mulligan, executive vice president and COO of Target Corporation
- ✓ Sheila A. Penrose, non-executive chairman of Jones Lang LaSalle
- ✓ John W. Rogers Jr., chairman and CEO of Ariel Investments
- ✓ Miles D. White, chairman and CEO of Abbott Laboratories
- ✓ Andrew J. McKenna, chairman emeritus. Also, chairman emeritus of Schwarz Supply Source
- ✓ Catherine M. Engelbert, commissioner of the Women's National Basketball Association
- ✓ Paul S. Walsh, executive chairman of McLaren Group

## 4.15 SWOT ANALYSIS OF MCDONALD'S

- ➤ Strength: Strengths are usually the easy factors to consider because not only are they obvious, but they are also extremely exciting to talk about as well because this is how a company sets itself apart from all other competitors. Here are some of the biggest strengths McDonald's currently can boast.
- ✓ Global Presence: There are hardly any countries in the world that don't have a local McDonald's chain in their vicinity. Currently, there are over 120 countries in the world that have McDonald's. Pretty impressive for a brand to be able to achieve such success!
- ✓ <u>Brand Equity</u>: McDonald's has some of the best branding practices. Their marketing efforts have paid off because as soon as you see those wonderful golden arches, you intuitively know what to think of. Their logo is recognized by everyone in the world and even their staple food items such as their fries and the all-mighty Big Mac are easy to spot.

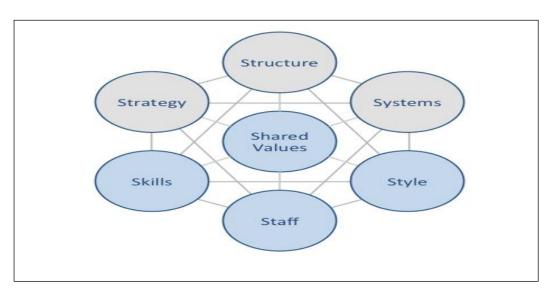
- ✓ <u>Technologically Sound</u>: McDonald's has successfully adapted with the times to be very aware of technological advancements in the world. They offer a lot of innovative solutions to customers globally. Their self-service kiosks make it possible for customers to not only select their order but also to pay for it without getting into queues.
- ✓ <u>Transnational Expansion</u>: It is one thing for a brand to be global, it is another for the same brand to be locally adaptive. Very few companies can achieve both successfully. McDonald's has mastered the art of formulating a transnational strategy of entering other countries. They have a franchising model of business which makes it possible for all their chains to be sensitive to the cultural and traditional requirements of the countries they operate in.
- ✓ <u>Market Share</u>: They have the highest market share when it comes to the fast-food industry. This isn't too hard to believe because we already know that they are literally everywhere in the world. As of February of 2022, they have a market cap of \$186.40 Billion! It is because of this achievement they are currently one of the world's most valuable organizations.
- ➤ <u>Weakness</u>: No matter how successful a brand may appear to be, they always have certain weaknesses that humble them down or motivate them to be even better. Here are some of the current weaknesses the brand should be mindful of.
- ➤ Their Food: Whilst people love to eat at McDonald's and they enjoy the taste as well, it is still an undeniable fact that fast food is unbelievably bad for health. This type of food only gives consumers excess calories and no actual nutritional value. Since McDonald's has the biggest chunk of the market share, they are automatically the biggest contributors to obesity in people, especially children and teenagers who have a greater love for fast food.
- The Business Model: Whereas the franchising strategy has helped them spread around the world in so many countries, it also has downsides. It makes it difficult for business owners to keep a check on how operations are being conducted when they sell to franchisees. The degree of standardization in terms of quality and the overall brand experience is also compromised.
- ➤ Employee Dissatisfaction: Employees in the company's franchises have been known to not be satisfied with their wages over the years. They believe the number of hours they put into work is not being rewarded adequately. Because franchisees

are independently owned and most of them are not owned by the company itself, wages also vary. As a result of this backlash, McDonald's has decided to eradicate the wage issue in all of their restaurants by the year 2024. This tells us that there is still a lot of time before employees are happy with their wages and not to think that even more people will have been employed by then.

- ➤ The menu doesn't have many options: For a fast-food lover, the menu is perfect. But for people who like to indulge with healthier snacking options, McDonald's, unfortunately, serves nothing. They should include more options in their menu as well.
- ➤ Opportunities: McDonald's still has many opportunities they can capitalize on to grow even bigger and stronger as a brand. We are going to address some of the most promising ones here.
- ✓ Menu Expansion: One of the weaknesses they currently are facing can easily be terminated by taking this opportunity. McDonald's is all about food as a brand; they have countless options to include in their menus all around the globe. The biggest trend that they can take advantage of is healthy eating alternatives. They should have options for people who are wary of what they consume either for weight loss or just for a better lifestyle.
- ✓ **Expansion:** They are currently in more than 120 countries. Their goal can be to be in all of them on earth. The franchising model has worked splendidly for them up till now as far as expansion is concerned.
- ➤ Threats: One of the weaknesses they currently are facing can easily be terminated by taking this opportunity. McDonald's is all about food as a brand; they have countless options to include in their menus all around the globe.
- ✓ Competition: Yes, McDonald's currently is the market leader in the fast-food industry because they are ahead of all their competition. This certainly doesn't mean that competition should be ignored or worse, underestimated. Although McDonald's is remarkably successful on their own, they still have many competitors to give them a tough time. Two of their biggest direct competitors are Burger King and Wendy's. They are always engaged in marketing wars with each other because all 3 places serve fast food consisting mainly of fries and burgers.

✓ Emerging Consumer Tastes and Preferences: Consumer trends are the driving force of every business's life cycle. The ones that learn to evolve with the trends continue to survive, whereas others become obsolete. As we know, many people are leaning towards clean and healthy eating to have a better quality of life. How long will fast-food chains survive in the market if increased people choose to move away from junk food towards cleaner alternatives.

## 4.16 MCDONALD'S MCKINSEY 7S FRAMEWORK



**CHART 4.16- MCKINSEY 7S FRAMEWORK** 

- ➤ Shared values: Shared Values are the core beliefs of an organization that are widely shared across the organization and are reason for its existence. Shared values include the vision, mission, and values statement that provide employees a common purpose. Shared values are the reason why the organization is doing what it is doing.
- > Strategy: McDonald's pursues business strategy of cost leadership and an aggressive international market expansion. The company can operate with low operational costs due to economies of scale enjoyed to an enormous extent. Moreover, along with operating company-managed restaurants, McDonald's capitalizes on the high level of brand awareness via franchising. High speed of customer services, universality of the taste and cleanliness of restaurants worldwide also belong to the list of competitive advantages for the fast-food giant.

- ➤ <u>Structure</u>: McDonald's has divisional organizational structure and fast-food chain's business operations are divided into four divisions according to geographical locations. These divisions consist of United States, Europe, Asia/Pacific, Middle East and Africa (APMEA) and other countries. The company benefits from divisional organizational structure in a way that managers are free to make decisions considering unique aspects of respective markets.
- ➤ <u>Systems</u>: There is a wide range of systems that enable McDonald's operations at a global scale. These systems include but not limited to employee recruitment and selection, team development and orientation, transaction processing and customer relationship management system. Moreover, the fast-food chain also relies on advanced business intelligence system and knowledge management system.
- > <u>Style</u>: Each organization has its own culture which has evolved over a period. The organization style or culture includes leadership style within the organization, dominant values and beliefs, work culture, informal network among employees, management style etc.
- ➤ <u>Staff</u>: Staff who works in the organization, how the organization manages its human resources recruit, selects, job profile specifications, career trajectories, training, and promotions.
- ➤ Skills: Skills it includes the competencies and capacities the human resources of the organization have. Skills analysis and planning requires answering the following questions Does the organization has required competencies and skills among its current work force to deliver organizational objectives, what are the new skills required, how those skills can be imparted among the employees in the organization, do the organization needs to make changes in procedures, systems, processes and technology to align them with skills of the employees.

## 4.17 ABOUT MCDONALD'S FRANCHISE

McDonald's is an equal opportunity franchisor by choice. McDonald's is seeking individuals who are capable of operating multiple locations. Candidates who have successfully operated multiple businesses may be suited to operating several McDonald's franchises. In everything we do, McDonald's takes a Systemwide view – the "three-legged stool" of franchisees, suppliers and employees. Being a McDonald's franchisee

is being part of a network whose sole focus is to help you succeed in delivering delicious, feel-good moments for each customer, in each restaurant, every single day. It's a relationship that has created tremendous economic opportunity and growth for thousands of small business owners worldwide. To honour and uphold what it means to be a McDonald's franchisee means always looking forward and building upon the proud tradition and leadership that has created thousands of success stories and will undoubtedly create thousands more. We want to attract and retain the best restaurant operators — individuals with a growth mindset and commitment to excellence. Individuals, who, when backed by a powerful brand and a network of resources, suppliers, and support, are excited and well-equipped to create success and prosperity for themselves and their communities.

## **DATA ANALYSIS AND INTERPRETATION**

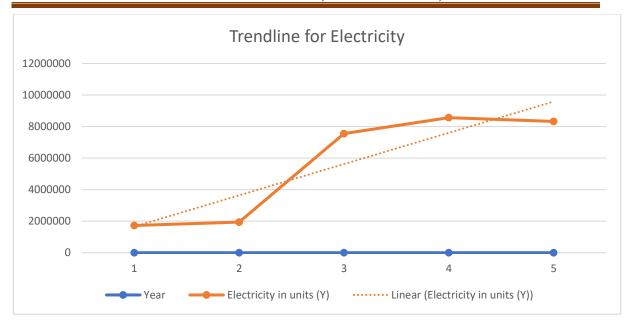
## **5.1 TRENDLINE FOR ELECTRICITY**

Year	Electricity units (Y)	in	% change in resources saved
2018	17,30,000		100
2019	19,39,000		112.08
2020	75,60,000		436.99
2021	85,66,000		495.14
2022	83,26,020		481.27

**Table 5.1-Trendline for Electricity** 

### **Analysis:**

The Electricity which is saved in units at McDonald's for five years from 2018-2022 is shown in the above table 2018 is considered as the base year. In 2019 electricity saved slightly increased by 112.08% in 2020 there is a drastic increase of 436.99% and in 2021 and 2022 there is a slight increase of 495.14% and 481.27%.



**Chart 5.1-Trendline for electricity** 

The above graph shows how much electricity is saved from 2018-2022. According to the trendline, there is a constant increase in 2019, and in 2020 there is a drastic increase, in 2021 and 2022 slight increase in electricity saved.

#### **Input:**

The trend line for Electricity over the last five years is analysed. The year and electricity are entered in the variable view of the SPSS software. The measure is entered as Scale because Electricity and Year are both scalable data. After that, the 5 Years' data is inserted into the data view. The input data is as follows:

Electricity	Year
17,30,000	-2
19,39,000	-1
75,60,000	0
85,66,000	1
83,26,020	2

Table 5.2-Input for trend analysis for electricity

Electricity is defined as a dependent variable, and Year is defined as an independent variable. The model fit, R square, and descriptive statistics were enabled in statistics, and the data was tested.

Descriptive Statistics						
Mean Std. N Deviation						
Electricity	56,24,204	3480187.957	5			
Year	0	1.58114	5			

Table 5.3- Descriptive statistics for Electricity

### **Interpretation:**

According to the descriptive statistics, the average electricity is 56,24,204 with a standard deviation of 3480187.957. The mean represents the average total electricity divided by the number of years. Mean is nothing but the average of the given set of values. It denotes the equal distribution of values for a given data set and the standard deviation is <u>calculated</u> as the square root of variance by determining each data point's deviation relative to the mean.

### **Output:**

Correlations						
		Electricity	Year			
Pearson Correlation	Electricity	1	0.9			
	Year	0.9	1			
Sig. (1-tailed)	Electricity	-	0.019			
	Year	0.019	-			
N	Electricity	5	5			
	Year	5	5			

**Table 5.4 - Correlations for Electricity** 

#### **Interpretation:**

The correlation demonstrates the link between the independent and dependent variables. From the above table, it is understood there is a high degree of positive correlation with a strong positive correlation of 0.9.

### **Output:**

	Model summary								
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.900a	0.811	0.748	1748084.496	0.811	12.854	1	3	0.037
a Predictors: (Constant), Year									

**Table 5.5- Model summary for Electricity** 

### **Interpretation:**

The model summary table reports the strength of the relationship between the model and the dependent variable. R, the multiple correlation coefficient, is the linear correlation between the observed and model-predicted values of the dependent variable. From the above table, it shows time impacts 81.1% of the independent variable influence on the dependent variable is indicated by the R-value of 0.900 and R square value of 0.811, which is known as model fit analysis. The significance is more than 0.05 % which is 0.037 it refers that there is no significant impact on time and electricity saved.

Coefficients								
Model	Unstandardized coefficients		Standardized Coefficients	t	Sig.			
		В	Std. Error	Beta				
1	(Constant)	56,24,204	7,81,767.153		7.194	0.006		
	Year	19,81,904	5,52,792.855	0.9	3.585	0.037		
a Dependent Variable: Electricity								

**Table 5.6-Coefficient for electricity** 

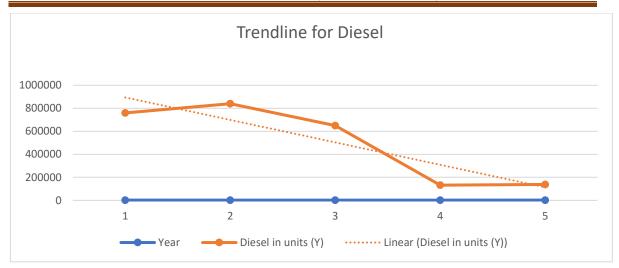
#### **Interpretation:**

In above table 4.6, The year and electricity have a positive relationship. The electricity saved is 56,24,204 when the year is zero. As the year changes the electricity saved is increasing by 19,81,904. The Sig. is 0.05, in the above table it is less than 0.05 here null hypothesis is rejected and the alternative hypothesis is accepted hence there is an impact.

Year	Diesel in units (Y)	% change in resources saved
2018	7,60,000	100
2019	8,40,000	110.5
2020	6,50,000	85.53
2021	1,32,000	17.37
2022	1,38,000	18.16

**Table 5.8 Trend line for Diesel** 

<u>Analysis</u>: The Diesel which is saved in units at McDonald's for five years from 2018-2022 is shown in the above table 2018 is considered as the base year. In 2019 there is a slight increase of 110.05% and in 2020 it is reduced by 85.53% and it continues to decrease drastically in 2021 and 2022.



**Chart 5.2.-Trendline for Diesel** 

The above graph shows how much diesel is saved from 2018-2022 according to the trendline In 2019 there is a slight increase in 2020 there is a constant decrease and continues the trend in 2022 as well hence there is a reduction in diesel saved.

### **Input:**

The trend line for Diesel over the last five years is analysed. The year and diesel are entered in the variable view of the SPSS software. The measure is entered as Scale because diesel and Year are both scalable data. After that, the 5 Years' data is inserted into the data view. The input data is as follows:

Diesel	Year
7,60,000	-2
8,40,000	-1
6,50,000	0
1,32,000	1
1,38,000	2

Table 5.9-Input for trend analysis for Diesel

Diesel is defined as a dependent variable, and Year is defined as an independent variable. The model fit, R square, and descriptive statistics were enabled in statistics, and the data was tested.

Descriptive Statistics					
	Mean	Std. Deviation	N		
Diesel	504000	343543.3015	5		
Year	0	1.58114	5		

Table 5.10- Descriptive statistics for diesel

### **Interpretation:**

According to the descriptive statistics, the average electricity is 50,400 with a standard deviation of 343543.3015. The mean represents the average total Diesel divided by the number of years. Mean is nothing but the average of the given set of values. It denotes the equal distribution of values for a given data set and the standard deviation is calculated as the square root of variance by determining each data point's deviation relative to the mean.

### Output:

Correlations						
		Diesel	Year			
Pearson Correlation	Diesel	1	-0.898			
	Year	-0.898	1			
Sig. (1-tailed)	Diesel	-	0.019			
	Year	0.019	-			
	Diesel	5	5			
	Year	5	5			

**Table 5.11- Correlation for Diesel** 

#### **Interpretation:**

The correlation demonstrates the link between the independent and dependent variables. From the above table, it is understood there is a low degree of negative correlation with a weak negative correlation of (0.898). Hence there is a negative correlation between the two variables.

				Model Summa	ry					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistic s					
					R Square Change	F Change	df1	df2	Sig. Chan	
1	.898a	0.807	0.743	174219.78456	0.807	12.553	1	3	0.038	3
a Deper	ndent Va	riable: Die	esel							

Table 5.11- Model summary for Diesel

#### **Interpretation:**

The model summary table reports the strength of the relationship between the model and the dependent variable. R, the multiple correlation coefficient, is the linear correlation between the observed and model-predicted values of the dependent variable. From the above table, it shows time impacts 89.8% of the independent variable influence on the dependent variable is indicated by the R value of 0.898 and R square value of 0.743, which is known as model fit analysis. The significance is more than 0.05 % which is 0.038 it refers that there is no significant impact on time and diesel saved.

Coefficients							
Model	Unstandardized coefficient			Standardized Coefficients	t	Sig.	
		В	Std. Error	Beta			
	(Constant)	5,04,000	77,913.456		6.469	0.007	
	Year	-1,95,200	55,093.133	-3.543	-3.543	0.038	
a Dependent Variable: Diesel							

**Table 5.12- Coefficients** 

#### **Interpretation:**

From the above table, the year and diesel have a negative relationship the diesel saved is 5,04,000 when the year is zero. As the year changes the diesel saved is decreasing by -1,95,200. The Sig. is 0.05, in the above table it is less than 0.05 hence null hypothesis is rejected and the alternative hypothesis is accepted hence there is an impact.

Year	Gas in no of cylinders (Y)	% change in resources saved
2018	1,765	100
2019	2,376	134.62
2020	2,376	134.62
2021	2,600	147.31
2022	2,600	147.31

**Table 5.13- Trendline for Gas** 

### **Analysis:**

The Gas which is saved in terms the no of cylinders at McDonald's for five years from 2018-2022 is shown in the above table 2018 is considered as the base year. In 2019 and 2020 there is increasing of 134.62% and it has been constant for 2 years, in 2021 and 2022 slight increase of 147.31, and remains the same for the next consecutive year.

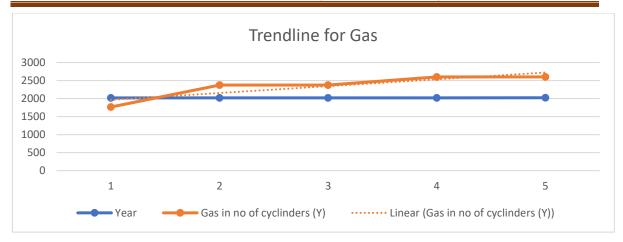


Chart - Trendline for gas

**Chart 5.3 - Trendline for gas** 

The above graph shows how much gas is saved from 2018-2022. According to the trendline in 2019, there is an increase in 2020 there is a slight decrease, an increase in 2021, and in 2022 there is a small amount of reduction in gas saved.

### **Input:**

The trend line for Gas over the last five years is analysed. The year and gas are entered in the variable view of the SPSS software. The measure is entered as Scale because gas and year are both scalable data. After that, the 5 Years' data is inserted into the data view. The input data is as follows:

Gas	Year
1765	-2
2376	-1
2376	0
2600	1
2600	2

Table 5.14- Input for trend analysis for Gas

#### **Analysis:**

Gas is defined as a dependent variable, and Year is defined as an independent variable. The model fit, R square, and descriptive statistics were enabled in statistics, and the data was tested.

#### **Output:**

Descriptive Statistics					
	Mean	Std. Deviation	N		
Gas	2343.4	342.18387	5		
Year	0	1.58114	5		

**Table 5.15- Descriptive statistics for Gas** 

#### **Interpretation:**

According to the descriptive statistics, the average Gas is 233.4 with a standard deviation of 342.18387. The mean represents the average total Diesel divided by the number of years. Mean is nothing but the average of the given set of values. It denotes the equal distribution of values for a given data set and the standard deviation is <u>calculated</u> as the square root of variance by determining each data point's deviation relative to the mean.

### **Output:**

Correlations					
		Gas	Year		
Pearson Correlation	Gas	1	0.875		
	Year	0.875	1		
Sig. (1-tailed)	Gas	-	0.026		
	Year	0.026	-		
N	Gas	5	5		
	Year	5	5		

**Table 5.16- Correlation for Gas** 

### **Interpretation:**

The correlation demonstrates the link between the independent and dependent variables. From the above table, it is understood there is a high degree of positive correlation with a strong positive correlation of 0.875. Hence there is a positive correlation between the two variables.

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.875a	0.766	0.688	191.16799	0.766	9.816	1	3	0.052
	a Predictors: (Constant), Year								

**Table 5.17- Model summary for Gas** 

#### **Interpretation:**

The model summary table reports the strength of the relationship between the model and the dependent variable. R, the multiple correlation coefficient, is the linear correlation between the observed and model-predicted values of the dependent variable. From the above table, it shows time impacts 87.5% of the independent variable influence on the dependent variable is indicated by the R-value of 0.875 and R square value of 0.766, which is known as model fit analysis. The significance is more than 0.05 % which is 0.052 it refers that there is no significant impact on time and gas saved.

Coefficients								
Model				Standardized Coefficients	t	Sig.		
		В	Std. Error	Beta				
1	(Constant)	2343.4	85.493		27.41	0		
Year 189.4 60.453 0.875 3.133 0.05								
	a Dependent Variable: Gas							

Table 5.18-Coefficients for gas

### **Interpretation:**

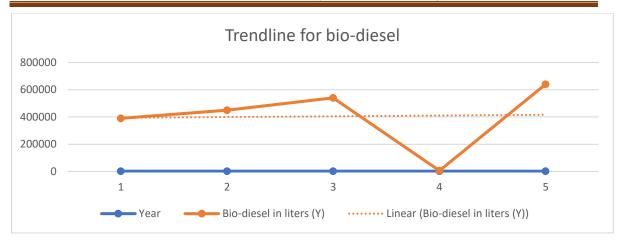
From the above table, the year and gas have a positive relationship the gas saved is 2342.4 when the year is zero. As the year changes the gas saved is increasing by 189.4. The Sig, is 0.05 from the above table it is less than 0.05 here the null hypothesis is rejected and the alternative hypothesis is accepted hence there is an impact.

Year	Bio-diesel in litres (Y)	% change in resources saved
2018	3,90,000	100
2019	4,50,000	115.38
2020	5,40,000	138.46
2021	5,700	1.47
2022	6,40,000	164.10

Table 5.19-Trendline for Bio-diesel

### **Analysis:**

The Bio-diesel which is saved in liters at McDonald's for five years from 2018-2022 is shown in the above table 2018 is considered as the base year. In 2019 there is a slight increase of 115.38% and it continues to increase in 2020 with 138.46%, but there is a drastic decrease in 2021 by 1.47% and a drastic increase in 2022 with 164.10%.



**Chart 5.4 - Trendline for Bio-diesel** 

The above graph shows how much bio-diesel is saved from 2018-2022. According to the trend line in 2019 and 2020, there is a slight increase, but in 2021 there is a drastic reduction, ND an increase in 2022.

### **Input:**

The trend line for bio-diesel over the last five years is analysed. The year and bio-diesel are entered in the variable view of the SPSS software. The measure is entered as Scale because bio-diesel and year are both scalable data. After that, the 5 Years' data is inserted into the data view. The input data is as follows:

Bio-diesel	Year
3,90,000	-2
4,50,000	-1
5,40,000	0
5,700	1
6,40,000	2

Table 5.20-Input for trend analysis for bio-diesel

Bio-diesel is defined as a dependent variable, and Year is defined as an independent variable. The model fit, R square, and descriptive statistics were enabled in statistics, and the data was tested.

Descriptive Statistics							
Mean Std. Deviation N							
Bio- diesel	405140	242456.38371	5				
Year	0	1.58114	5				

Table 5.21-Descriptive statistics for Bio-diesel

### **Interpretation:**

According to the descriptive statistics, the average bio-diesel is 405140 with a standard deviation of 242456.38371. The mean represents the average total bio-diesel divided by the number of years. Mean is nothing but the average of the given set of values. It denotes the equal distribution of values for a given data set and the standard deviation is <u>calculated</u> as the square root of variance by determining each data point's deviation relative to the mean.

## **Output:**

Correlations						
		Biodiesel	Year			
Pearson Correlation	Biodiesel	1	0.036			
	Year	0.036	1			
Sig. (1-tailed)	Bio-diesel	-	0.477			
	Year	0.477	-			
N	Bio-diesel	5	5			
	Year	5	5			

**Table 5.22-Correlations for Bio-diesel** 

## **Interpretation:**

The correlation demonstrates the link between the independent and dependent variables. From the above table, it is understood there is a high degree of positive correlation with a strong positive correlation of 0.036. Hence there is a positive correlation between the two variables.

	Model Summary								
Model	R	R Square	Adjus ted R Squar e	Std. Error of the Estimate	Change Statistic s				
					R Square Change	F Chang e	df 1	df 2	Sig. F Chang e
1	.036a	0.001	0.332	279779.7604 1	0.001	0.004	1	3	0.954
	a Predictors: (Constant), Year								

Table 5.23-Model summary for bio-diesel

## **Interpretation:**

The model summary table reports the strength of the relationship between the model and the dependent variable. R, the multiple correlation coefficient, is the linear correlation between the observed and model-predicted values of the dependent variable. From the above table, it shows time impacts 36% of the independent variable influence on the dependent variable is indicated by the R-value of 0.36 and R square value of 0.001, which is known as model fit analysis. The significance is more than 0.05 % which is 0.954 it refers that there is no significant impact on time and bio-diesel saved.

	Coefficients								
Model	Unstandardized coefficient			Standardized Coefficients	t	Sig.			
		В	Std. Error	Beta					
1	(Constant)	405140	125121.313		3.238	0.048			
Year 5570 88474.129 0.036 0.063 0.9									
	a Dependent Variable: Biodiesel								

Table 5.23-Coefficients for bio-diesel

## **Interpretation:**

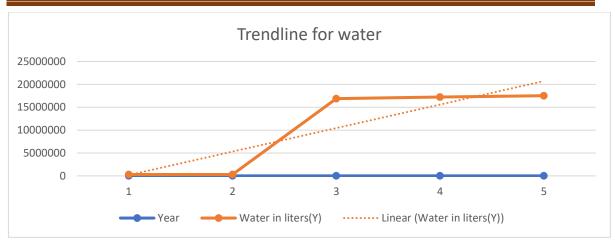
From the above table, the year and bio-diesel have a positive relationship the bio-diesel saved is 4,05,140 when the year is zero. As the year changes the bio-diesel saved is increasing by 5,570. The Sig. is 0.05% from the above table it is less than 0.05 here null hypothesis is rejected and the alternative hypothesis is accepted hence there is an impact.

Year	Water in litters(Y)	% change in resources saved
2018	2,95,000	100
2019	3,00,000	101.69
2020	1,69,00,000	5728.81
2021	1,72,20,000	5837.28
2022	1,75,20,000	5938.98

Table 5.24-Trendline for Water

### **Analysis:**

The Water which is saved in liters at McDonald's for five years from 2018-2022 is shown in the above table 2018 is considered as the base year. In 2019 there is a slight increase of 101.69% And in 2020 there is a drastic increase of 5728.81% and this continued for the next two consecutive years as well.



**Chart 5.5 - Trendline for Water** 

The above graph shows how much of water is saved in 2018-2022. According to the trendline, in 2019 there is no much change in resources saved, in 2020 it is highly increased and the same trend continues for 2021 and 2022 as well.

#### **Input:**

The trend line for Water over the last five years is analysed. The year and water are entered in the variable view of the SPSS software. The measure is entered as Scale because water and year are both scalable data. After that, the 5 Years' data is inserted into the data view. The input data is as follows:

Water	Year
2,95,000	-2
3,00,000	-1
1,69,00,000	0
1,72,20,000	1
1,75,20,000	2

Table 5.25-Input for trend analysis for water

Water is defined as a dependent variable, and Year is defined as an independent variable. The model fit, R square, and descriptive statistics were enabled in statistics, and the data was tested.

Descriptive Statistics					
Mean Std. Deviation N					
Water	1,04,47,000	92,67,777.2416	5		
Year	0	1.58114	5		

**Table5.26- Descriptive statistics for Water** 

### **Interpretation:**

According to the descriptive statistics, the average water is1,04,47,000 with a standard deviation of 9267777.246. The mean represents the average total water divided by the number of years. Mean is nothing but the average of the given set of values. It denotes the equal distribution of values for a given data set and the standard deviation is calculated as the square root of variance by determining each data point's deviation relative to the mean.

## **Output:**

Correlations					
		Water	Year		
Pearson Correlation	Water	1	0.876		
	Year	0.876	1		
Sig. (1-tailed)	Water	-	0.026		
	Year	0.026	-		
N	Water	5	5		
	Year	5	5		

**Table 5.27-Correlation for water** 

## **Interpretation:**

The correlation demonstrates the link between the independent and dependent variables. From the above table, it is understood there is a with a high degree of positive correlation and a strong positive correlation hence there is a positive correlation between the two variables.

	Model Summary								
Model	R	R Squar e	Adjuste d R Square	Std. Error of the Estimate	Change Statistic s				
					R Square Change	F Chang e	df 1	df 2	Sig. F Chang e
1	.87 6a	0.768	0.691	5153610.0615 7	0.768	9.936	1	3	0.051
a Predictors: (Constant), Year									

Table 5.28-Model summary for water

## **Interpretation:**

The model summary table reports the strength of the relationship between the model and the dependent variable. R, the multiple correlation coefficient, is the linear correlation between the observed and model-predicted values of the dependent variable. From the above table, it shows time impacts 87% of the independent variable influence on the dependent variable is indicated by the R-value of 0.87 and R square value of 0.768, which is known as model fit analysis. The significance is more than 0.05 % which is 0.051 it refers that there is no significant impact on time and water saved.

Coefficients									
Model	Unst	andardized co	efficient	Standardized Coefficients	t	Sig.			
		В	Std. Error	Beta					
1	(Constant)	1,04,47,000	23,04,764.485	-	4.533	0.02			
Year         51,37,000         16,29,714.597         0.876         3.152         0.051									
a Dependent Variable: Water									

**Table 5.29-Coefficients for Water** 

## **Interpretation:**

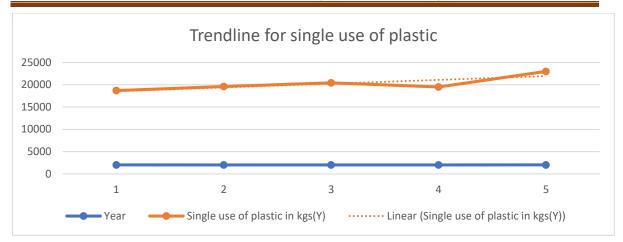
From the above table, the year and water have a positive relationship the water saved is 1,04,47,000 when the year is zero. As the year changes the water saved is increasing by 51,37,000. The Sig. is 0.05 from the above table it is less than 0.05 here null hypothesis is rejected and the alternative hypothesis is accepted hence there is an impact.

Year	Single-use of plastic in kgs(Y)	% change in resources saved
2018	18700	100
2019	19600	104.81
2020	20435	109.28
2021	19500	104.28
2022	23000	122.99

Table 5.30-Trendline for single use of plastic

## **Analysis:**

The Single use of plastic which is saved in units at McDonald's for five years from 2018-2022 is shown in the above table 2018 is considered as the base year. In 2019there is slight increase of 104.81% and the same trend continues in 2020 by 109.28% in 2021 there is decrease trend by 104.28 and in 2022 drastic increase of 122.99%.



**Chart 5.6 - Trendline for single use of plastic** 

The above graph shows how much of single use of plastic is saved in 2018-2022. According to trend line in 2091 there is a slight increase and it continues for two consecutive years, but in 2021 there is a slight decrease in 2022 it slight goes up.

### **Input:**

The trend line for single use of plastic over the last five years is analysed. The year and single use of plastic are entered in the variable view of the SPSS software. The measure is entered as Scale because the single use of plastic and year are both scalable data. After that, the 5 Years' data is inserted in view. The input data is as follows:

Single use of plastic	Year
18700	-2
19600	-1
20435	0
19500	1
23000	2

Table 5.31- Input for trend analysis of single use of plastic

Single use of plastic is defined as a dependent variable, and Year is defined as an independent variable. The model fit, R square, and descriptive statistics were enabled in statistics, and the data was tested.

Descriptive Statistics							
Mean Std. Deviation N							
Single use of plastic	20762	1718.9555	5				
Year	0	1.58114	5				

Table 5.32-Descriptive Statistics for single use of plastic

### **Interpretation:**

According to the descriptive statistics, the average single use of plastic is 20,762with a standard deviation of 1718.9555 The mean represents the average total single use of plastic divided by the number of years. Mean is nothing but the average of the given set of values. It denotes the equal distribution of values for a given data set and the standard deviation is calculated as the square root of variance by determining each data point's deviation relative to the mean.

#### **Output:**

Correlations							
		Year					
Pearson Correlation	Single-use of plastic	1	0.999				
	Year	0.999	1				
Sig. (1-tailed)	Single-use of plastic	-	0				
	Year	0	-				
N	Single-use of plastic	5	5				
	Year	5	5				

Table 5.33 - Correlations for single use of plastic

### **Interpretation:**

The correlation demonstrates the link between the independent and dependent variables. From the above table, it is understood there is a high degree of positive correlation with a strong positive correlation hence there is a positive relationship between the two variables.

Model Summary										
Mode	R R Adjuste Std. Error Change									
1		Squar	d R	of the	Statistic					
	e Square Estimate s									
					R	F	df	df	Sig. F	
					Square	Change	1	2	Chang	
	Change								e	
1	.999	0.997	0.996	106.3929	0.997	1041.15	1	3	0	
	a			8		1				
	a Predictors: (Constant), Year									

Table 5.34 - Model summary for single use of plastic

### **Interpretation:**

The model summary table reports the strength of the relationship between the model and the dependent variable. R, the multiple correlation coefficient, is the linear correlation between the observed and model-predicted values of the dependent variable. From the above table, it shows time impacts 99.9% of the independent variable influence on the dependent variable is indicated by the R-value of 0.999 and R square value of 0.997, which is known as model fit analysis. The significance is less than 0.05 % which is 0 it refers that there is a significant impact on time and a single use of plastic saved.

#### **Output:**

Coefficients										
Model	Unstandardized coefficient			Standardized Coefficients	t	Sig.				
		В	Std. Error	Beta		0				
1	(Constant)	20762	47.58		436.356	0				
	Year 1085.6 33.644 0.999 32.267									
	a Dependent Variable: Single use of plastic									

Table 5.35 - Coefficients for single use of plastic

#### **Interpretation:**

From the above table year and a single use of plastic have a positive relationship the single use of plastic saved is 20762 while the year is zero. As the year changes the single use of plastic saved is increasing by 1085.6. The Sig.is 0.05 from the above table it is less than 0.05 here null hypothesis is rejected and the alternative hypothesis is accepted hence there is an impact.

## One way ANOVA

## **Input:**

One way ANOVA is used for all the environmental indicators is to know is there any difference in various dimensions of environmental indicators with regard to time. It is applied for all the years that is from 2018-2022. Using SPSS software environmental indicators and the values are given to each indicator .1- Electricity; 2-Diesel; 3-Gas; 4-Biodiesel; 5- Water is entered in variable view and it is a nominal measure. In the data view, we represent environmental indicators with their respective numbers and values of all 5 years entered and its measure is scalable. Later to find where exactly the difference exists Post hock Tukey test is applied.

## **Output:**

Multiple Comparisons									
Dependent Variable:		VAR00001							
Tukey HSD									
(I) Environmental indicators		Mean Difference (I-J)	Std. Error		95% Confidence Interval				
				Sig.	Lower Bound	Upper Bound			
Diesel	Water	-9943000.00000*	2368609.20124	0.004	17456536.5029	-2429463.4971			
Gas	Water	- 10444631.80000*	2368609.20124	0.002	- 17958168.3029	-2931095.2971			
Biodiesel	Water	- 10041860.00000*	2368609.20124	0.004	- 17555396.5029	-2528323.4971			
Water	Diesel	9943000.00000*	2368609.20124	0.004	2429463.4971	17456536.5029			
	Gas	10444631.80000*	2368609.20124	0.002	2931095.2971	17958168.3029			
	Biodiesel	10041860.00000*	2368609.20124	0.004	2528323.4971	17555396.5029			
	Single use of plastic	10426238.00000*	2368609.20124	0.002	2912701.4971	17939774.5029			
Single-use of Plastic	Water	- 10426238.00000*	2368609.20124	0.002	- 17939774.5029	-2912701.4971			
*. The mean difference is significant at the 0.05 level.									

Table 5.36 - One way ANOVA for Various environmental indicators

### **Interpretation:**

From the above table, multiple comparisons are done for all the environmental indicators Diesel and water has 0.004 significance, Gas and water has 0.002 significance, bio-diesel and water has 0.004 significance, water and diesel has 0.004 significance, water and gas 0.002, water and bio-diesel has 0.004 significance, water and a single use of plastic have 0.002 significance, Single use of plastic and water has 0.002 significance hence the is a difference in various dimension of environmental indicators with regard to time. To find where exactly the difference exists Post hock Tukey test is applied.

## SUMMARY OF FINDINGS, SUGGESTIONS, AND CONCLUSION

The summary findings, suggestions, and conclusion are based on available information with available data analysis done and summarized.

## **6.1 FINDINGS**

The findings are stated below based on data analyzed on environmental indicators at McDonald's as to how are they saving resources and being environmentally friendly.

- ❖ Electricity in units that are saved is increased by 59% over a period of time.
- ❖ Single-use of plastic which is saved increased by 18.7%.
- ❖ There is a positive relationship between a year and a single use of plastic hence there is an impact on resources saved.
- ❖ There is a low degree of correlation and negative correlation between diesel and year.
- ❖ There is a significant difference in various environmental indicators Diesel and water, water and a single use of plastic.

## 6.2 FINDINGS BASED ON OBJECTIVES

- ✓ To know the changes in environmental indicators over a period of time:

  Environmental indicators such as electricity are saved by 59%, water is saved by 87%, and plastic by 18.7% as the year changes resources saved is also increasing Slightly.
- ✓ To understand whether there is an impact on environmental indicators with time:

There is a positive impact between electricity and time, Diesel and time, Biodiesel and time, gas and time, water and time, single use of plastic and time.

H0: Null hypothesis is rejected and the alternative hypothesis is accepted.

H0: There is no significant impact on time and environmental indicators.

H1: There is a significant impact on time and environmental indicators.

✓ To know the significant differences in various determinants of environmental indicators:

Multiple comparisons were done with various environmental indicators the Sig. is 0.05, here the level of significance is less than 0.05 hence there is a significant difference between various environmental indicators.

H0: Null hypothesis is rejected and the alternative hypothesis is accepted.

H0: There is no significant difference in the various determinants of environmental indicators with regard to time.

H1: There is a significant difference in the various determinants of environmental indicators with regard to time.

## **6.3 SUGGESTIONS**

- The company can implement energy-efficient appliances and renewable energy which reduce energy waste up to a certain level and they can save water by recycling and water processing facilities.
- ❖ By reducing our dependence on single-use plastics, we can greatly reduce the impact these products have on our environment.
- An organization can use biodegradable paper instead of giving toys that can reduce plastic which can be beneficial for the customers. Paper recycling can also be done.
- Providing filtered water for customers to avoid them purchasing bottled water can reduce the disposal of plastic bottles.

## 6.4 CONCLUSION

Organizations can use the latest technology to reduce the impact on the environment so that they can reduce the damage done to the environment and implement policies relating to the environment. Following the guidelines, rules and regulations prescribed by the pollution control board.

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