

Assignment No. 2

Corporate Sustainability Campaign in Pakistan

Introduction to SBTi and NZIA

Global challenges like climate change, environmental degradation, and social inequality require concerted efforts from all sectors, including corporations. Two major frameworks have emerged as guiding forces in helping companies address these sustainability challenges: the Science-Based Targets initiative (SBTi) and the Net-Zero Insurance Alliance (NZIA).

The SBTi provides companies with a clear pathway to reduce greenhouse gas emissions and contribute to keeping global temperature rise below 1.5°C, in line with the Paris Agreement. By setting science-based targets, companies can align their operations with global climate goals, showing leadership in sustainability. SBTi offers companies support in validating their targets, ensuring they are both ambitious and feasible.

On the other hand, the NZIA brings together major insurance companies to accelerate the transition to a net-zero economy. Insurance companies play a pivotal role in financing industries and covering risks, and the NZIA aims to decarbonize insurance portfolios and ensure that insurers support companies pursuing net-zero goals.

Together, SBTi and NZIA create a powerful framework for corporations to take sustainability seriously, mitigate environmental risks, and contribute to global efforts in combating climate change.

Corporate Sustainability Initiatives and the Role of Corporations

Sustainability is no longer a peripheral issue for corporations; it has become an integral part of business strategy. Consumers, investors, and regulatory bodies are increasingly demanding that businesses act responsibly and sustainably. By embracing sustainability initiatives, companies can:

- Reduce operational costs through energy efficiency and waste reduction.
- Attract and retain talent by fostering an inclusive, purpose-driven workplace.
- Enhance brand value and reputation by demonstrating leadership on social and environmental issues.
- Comply with regulations and avoid legal risks in countries that are introducing stringent sustainability standards.
- Mitigate financial risk by adopting climate-resilient strategies, which are particularly important as physical risks from climate change increase.

Concern's Campaign for Corporate Sustainability in Pakistan and Your role

You are working as a Data Analyst in Concern which is a non-profit organization working for betterment of the society and the environment. Concern is running a comprehensive campaign to encourage the corporate sector in Pakistan to adopt sustainability initiatives. The campaign aims to showcase the benefits of sustainability, such as cost savings, brand enhancement, and compliance

with future regulations, which could ultimately lead to a more resilient and competitive business environment.

Concern believes that Pakistani companies, particularly those in industries like manufacturing, textiles, energy, and finance, have a unique opportunity to lead the sustainability movement within the country. By adopting global best practices and frameworks such as SBTi, Pakistani companies can improve their long-term viability while addressing pressing environmental and social challenges.

By taking the following actions Pakistani companies can position themselves as leaders in sustainability and open up new opportunities in both domestic and international markets:

1. Setting Science-Based Targets: Aligning with the SBTi to reduce emissions and contribute to the global fight against climate change.
2. Enhancing Gender Diversity: Promoting women to leadership positions and ensuring equal representation in the workforce.
3. Improving Transparency: Reporting on sustainability performance, CEO pay ratios, and other key indicators to build trust with stakeholders.
4. Adopting Circular Economy Principles: Reducing waste and reusing resources to create value from sustainability efforts.

To support the objective of Concern, your team has compiled a dataset on 100 of the most sustainable corporations from around the world. Those companies have demonstrated leadership in areas such as environmental impact, gender diversity, and equitable pay, all while achieving strong financial performance. Description of each field of dataset is given in Annexure-A.

This dataset can serve as evidence to persuade Pakistani companies that sustainability initiatives benefit not only the environment but also their business performance. However, the dataset is currently in raw form and requires processing to extract meaningful insights. To test your basic skills in Python for data manipulation tasks, the scope of this assignment is limited to the tasks outlined in the 'Required' section.

Annexure-A

Description of each field of the dataset is as follows:

1. Rank: The company's ranking based on sustainability.
2. Previous Rank: The rank from the previous year.
3. Company: The name of the company.
4. Location: City and Country where the company is based.
5. Industry: Type of industry the company belongs to.
6. Revenue: Revenue generated by the company.
7. Profit %: Profit percentage.
8. CEO Pay Ratio: Ratio between CEO pay and median employee pay.
9. Women on Board %, Women in Leadership %, Women in Workforce %: Gender representation in the company.
10. Climate Grade: Grade based on the company's climate initiatives.
11. Sustainability Initiatives: Initiatives taken by the company, such as the Science-Based Targets initiative (SBTi) and net-zero goals.

Required

Following files have been provided to you:

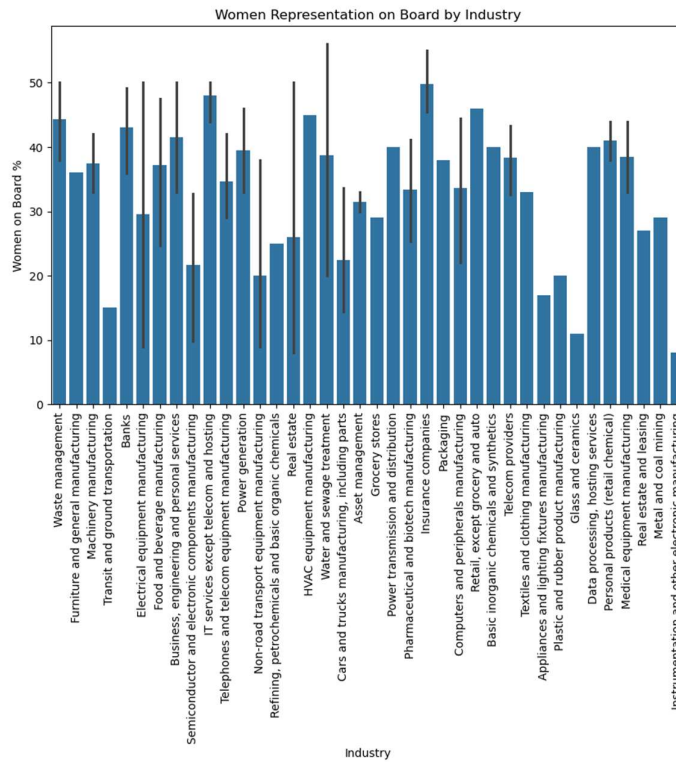
- GC100.csv that contains the dataset of 100 global companies
- Response.ipynb which is a Jupyter Notebook file.

Perform the following tasks in the Jupyter Notebook file (Response.ipynb) provided to you:

1. Load desired libraries and dataset
 - a. Import necessary library packages.
 - b. Load the data from GC100.csv to Response.ipynb
 - c. Display the first row of the loaded data to verify it has been loaded successfully.
2. Data cleaning and changing the data types
 - a. Examine the loaded data
 - b. Change the data types of the following fields to float and remove the '%' sign from those fields:
 - i. Women on Board %
 - ii. Women on Leadership%
 - iii. Women on Workforce%
 - c. Re-examine the data to verify that the data types have been changed.
 - d. Verify that the % sign has been removed from the desired fields.
3. Data Analysis
 - a. Calculate the average percentage of women in leadership, workforce, and on the board. Display your result.
 - b. Find the number of companies with Science-Based Targets initiative (SBTi) and display your result. Save those companies data to a new csv file and name it "sbt_i_companiesResponse.csv". Upload this file along with the Response.ipynb file to your secured area at the ICAP's website after completing your assignment.
 - c. Filter only those companies that are based in "Australia." Display only those fields in your result that show gender diversity and climate grades.
 - d. Print a list to show the distribution of companies based on their climate grade.

4. Data Visualization

- a. Generate bar plots to showcase representation of women in various industries. Your bar plots should look similar to the following:



- b. Generate a bar plot showing the distribution of companies based on their climate grade. Your bar plot should look similar to the following

