

ENVIRONMENTAL DISCLOSURE PRACTICES IN INDIA (A COMPARATIVE STUDY OF TATA CONSULTANCY SERVICES AND WIPRO LTD)

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ABSTRACT – This study has been undertaken to compare and evaluate the environmental reporting practices followed by the top two Information Technology service companies working in India. Tata Consultancy Services and WIPRO are examined, which are among the top five companies in the global A list in the Global Reporting Initiative (GRI Index). The objective of this research paper is to lay emphasis on environmental disclosures at the corporate level and understand the importance of green accounting. In this study, five successive sustainability reports of both companies are examined on the various parameters such as water conservation, waste management, Greenhouse gas (GHG) emissions, energy conservation, etc., and comparative analysis is performed. Corporates are voluntarily disclosing environment-related information in their annual reports. However, there is no set standard practice to disclose such information, due to which wide disparities could be seen in these reports.

Keywords: *Environmental Reporting, Tata Consultancy Services, WIPRO, Green Accounting, Global Reporting Initiatives (GRI) Index, Sustainability reporting, Disclosure practices*

I. Introduction

With the changes in societal needs there are simultaneous changes happening in the environment which require attention of masses, to be in sync with the sustainable development goals of the globe. As we all know, industrial operations are frequently to blame for accidents that have a negative impact on natural resources, both directly and indirectly. Economic growth must be environmentally friendly. The awareness regarding environmental issue is increasing, the companies are also voluntarily coming forward and taking responsibility of their actions and trying to reduce the impact by taking certain measures. Some companies are doing it willfully while some to comply with the regulations.

The financial statements of the companies are a way to communicate the performance of the companies to its stakeholders, the information regarding the environment is either provided in the annual report of the company or the company issues a separate sustainability report.

The Global Reporting Initiatives (GRI) is a not-for-profit international organization working independently. The Global Reporting Initiatives (GRI) standards provides assistances to the business in decreasing their ambiguousness and inform about positive and negative impacts on sustainable development. The companies can enhance their strategic decision making by recognizing business opportunities, reduce uncertainties and have a strong stakeholder relationship. Currently Global Reporting Initiatives (GRI) Standards are leading global standards to report economic, environmental, and social impact. These standards are flexible and are structured in a manner that can be used by any organization associated with different businesses.

Tata Consultancy Services Limited and Wipro Limited are two companies from the Information Technology sector in India, which follows the Global Reporting Initiatives standards and hence therefore are chosen for the study.

Profile of Tata Consultancy Limited

Table 1. Shows the profile of Tata Consultancy Limited which includes all the basic information about the financial performance and position of the company.

Environmental Policy at Tata Consultancy Services Limited

The critical areas of Tata Consultancy Services Program are:

- *Decreasing Carbon emission:* To attain efficiency of power and increasing use of renewable sources of energy
- *Management of water:* Water recycling and using water efficiently and adopting large scale rainwater harvesting
- *Management of waste:* Three R's - Reduction in Waste Generation, reusing of waste and recycle of waste.

Sustainability of the supply chain

The green building standards are being incorporated by Tata Consultancy Services as its office space of more than 60% is constructed accordingly. It is equivalent to 21.8 million sq ft of working space. Out of the given space, 17.24 million sq ft are the office premises over the country. Being Energy efficient is always a critical factor for Tata Consultancy Services when new space is leased. Mumbai and Indore's new office of Tata Consultancy Services are entirely green buildings. Even Gandhinagar and Bangalore leased office buildings are made absolutely in accordance with the green building norms.

Other milestones achieved in FY 2019

Highest platinum rating has been awarded to the House of Tata Consultancy Services which is addressed in Mumbai from the IGBC (Indian Green Building Council) underneath the "Existing Building Category". The Tata Consultancy Services Ltd is also the 1st Information Technology company in the country for achieving the "ISO 50001:2011" EMS (Energy Management System) certification for its campus in the city of Pune.

The renewable energy use for activities has increased from 8 % approx. to 10 % in Tata Consultancy Services offices in previous years, leading it even more close to achieving the 2020 target of 20% usage of renewable energy. In the current year, the company has also established 1.7 MW of "Rooftop solar systems" at four locations. The company also has plans on adding another 3MW of Solar Rooftop systems in the FY 2020. Installation of Solar Rooftop over its offices contributes to fulfilling about 5849 MWh of energy needs of the company.

Tata Consultancy Services has repeatedly invented and promoted its Information centers power productivity by measures such as consolidation of data centers, solutions for rack cooling, management of air flow, UPS load optimization of UPS by modular UPS solutions and central supervision; hence reducing the PUE (Power Utilization Efficiency) throughout twenty-three data centers from 1.71 in the Financial Year 2018 to 1.67.

Tata Consultancy Services are also dedicated to use "0-ozone depleting potential" (ODP) refrigerants in its every activity. Every new facility of Tata Consultancy Services which is upcoming has "0--ODP refrigerants" based HVAC systems. The company has specific plans to phase out every ODP refrigerant gas and will be replaced with "0-ODP refrigerant gases" which is exactly in synchronization of the country-specific deadlines agreed upon in compliance with the Montreal Protocol.

Emissions due to Value Chain

Tata Consultancy Services records and reports all indirect emissions as "Scope 3 emissions". These emissions caused due to the value chain are also known as indirect emissions as these are because of the points which are neither possessed nor checked by the Tata Consultancy Services, although are necessary for its activities in the ambit of its value addition chain. By implementing an exhaustive frontier and applying "Scope 3 emission factors", Tata Consultancy Services Ltd has estimated that the value chain emissions have amounted to a total of 1.67 tons CO₂ emission per full time employee, in

the Financial Year “2019”. The business travel intrinsic for the consultancy business model and the everyday travel of the company staff was the largest contributor at 60%. For decreasing the amount of these emissions, the company has been allocating heavily for excellent quality interaction through video conferencing architecture for promoting seamless connectivity over its interior groups while promoting less in-person attendance for discussions and business meetings. The initiative taken by Tata Consultancy Services has favored the company in reducing the CO₂ emissions generated air traveling by air undertaken for business by more than Fifty nine percent across the baseline year.

The Performance Highlights of Tata Consultancy Services limited has been shown in Table 2 mentioning the key performance indicators for past 5 years.

Profile of Wipro Limited

Table 3. Shows the profile of Wipro Limited which includes all the basic information about the financial performance and position of the company.

Environmental Policy at Wipro Limited

Compliance: WIPRO believes that environmental regulations by the government always have a very crucial part to enact in developing sustainability, the “Wipro Ltd.” has committed to accord by both paper as well as spirit along with the legal framework in every area that the company operates in.

Internal Footprint: Wipro shall be striving to reduce and minimize its internal operations’ ecological footprint. WIPRO’s approach is four dimensional viz. decrease in power consumption and Greenhouse gases (GHGs) emissions, an increment in efficiency of water usage, management of waste in a sustainable manner, and conservation and amplification of the campus’s biodiversity.

WIPRO aims to achieve this by a “3-pronged approach” which includes 1) Creating extensive programs for calculating and supervising its effect (2) Installing the most feasible solution

and technical resources and (3) involving all its staff in uninterrupted green development at the workplace.

Integrating business strategies with environmental goals: WIPRO has concrete plans of integrating its internal programs of ecology into its principal strategies of the business and also correspond to its planning processes, setting of goals, measurements followed by continuous progress of reviewing.

Caring for its Customer WIPRO shall interact with its customers to identify & provide suitable products, services and solutions which are sustainable. This will assist customers in decreasing their carbon emission.

Role of Stakeholders: The fact has also been recognized by Wipro that conquering environmental sustainability requires collective efforts of all the stakeholders. A keystone of its sustainability process is also to collaborate with its maximum stakeholders on common programs:

- (i) Operating along the supply channel to achieve a sustainable and responsible chain of supply.
- (ii) Collaborating along the government in process to modify the environmental regulations and policies.
- (iii) Collaborating along with academic institutions, Non - Governmental Organizations and traditional groups on bigger objectives for sustainability of cities, regions, and communities.

Transparency: The company is committed towards being transparent about its purposes and progress on sustainability. Wipro can do this by several platforms for reporting and revealing information such as yearly report of sustainability, the CDP project, and providing on- demand information on requirements from its stakeholders.

Leadership’s Commitment: Leadership at Wipro has always committed towards the key demands of being an environmentally sustainable company. This is done by creating adequate provisions with the goal of investment of

essential resources and by involving employees regularly for the realization of their common environmental vision.

Table 4. has presented the performance highlights of Wipro limited by the key performance indicators for past 5 years.

II. Literature Review

The research of Ranga and Garg (2014) has reported a variety of ecological methods of recording transactions and events of a business concern and how it has evolved over the years to incorporate various environmental details required by the users. Tarun and Ramu (2018) defined green accounting as a five-stage process including identification of reporting parameters, identification of environmental parameters, defining the firm's current and noncurrent goal to sync them in coordination, developing appropriate environmental indicators safety and prevention standards, development of measurement standards for environmental indicators to divide them as qualitative and quantitative standards.

Deshwal (2015) determined the opinions regarding green accounting and reporting practices in 50 selected companies and concluded that the environmental reporting in India is nascent stage and mass awareness is required in the respect to have strict adherence to the environmental disclosure. Hussain et al. (2016) analyzed the determinants of sustainable developmental and environmental reporting from the existing literature and indicated that carbon related disclosures have increased significantly in the last 5 years but mostly is voluntary.

Kumar et al. (2017) found that Green Accounting and its reporting in India is in developing stage both at the corporate level and at the national level. Magablih (2017) studied the needs and methods of environmental accounting claiming that no significant differences could be seen in between the arithmetic averages of the possibility of measurement environmental cost accredited to a variable monthly income.

Agarwal and Kalpaja (2018) disclosed the significance of green accounting through study which is done through the

System of Environmental-Economic Accounting and referred to as SEEA. It concentrates on preventing the exhaustion of scanty inherited assets and forbidding ecological degeneration. The two purposes that sustainability accounting fulfills among which first is to upgrade the environment performance among the business and the other is to test the level of influence on the environmental system by the ventures of the organization. It could be beneficial for the government to record the operations of the enterprises towards nature by using environmental reports. Saxena (2020) studied the environmental practices followed in India disclosed that to understand the role of natural environment towards economic development, economic system is an essential element.

Objectives of the Study

1. To understand theoretical knowledge and gist of Green Accounting.
2. To comprehend the disclosure practices related to environmental expenditure and benefits of the sample companies.
3. To compare and evaluate the top two companies reporting practices as per Global reporting Initiative (GRI) Index.

III. Research Methodology

The Study

The study is descriptive in nature and deduced the environmental disclosure practices of Tata Consultancy Services Ltd. and Wipro Ltd. for a period of five years (FY 2015-16 to FY 2019-20).

Tools for Data Collection

The study is based on secondary data which has been collected through the website of the company, the sustainability reports as well as annual reports of Tata Consultancy Services Ltd and WIPRO Ltd. for five consecutive years (FY 2015-16 to FY 2019-20).

Tools for Data Analysis

The reports were studied and analyzed for their environmental accounting practices, numerical data were tabulated, and percentage analysis tools were used for analyzing the results. The analysis was presented graphically. Also, relevant annual reports of these companies available on the official websites were studied.

Environmental Performance Indicators: Out of many indicators, the following 5 indicators are studied for both the companies as information related to them were present in the reports although variation was present with respect to presentation.

- **Energy Consumption**
- **Water Consumption**
- **Waste Generation**
- **Greenhouse Gases (GHG) emission**
- **Environmental expenditure/Corporate Social Responsibility (CSR) Expenditure**

IV. Result and Discussion

The Energy Consumption, Water Consumption, Waste Generation, Greenhouse gases (GHG) emission, Environmental expenditure/Corporate Social Responsibility Expenditure, indicators are analyzed in table 5 for Tata Consultancy Services Ltd. for the years 2015 – 2019, all the figures mentioned in the table have been taken from their annual reports. According to the table 5 we see that there is a mix trend in almost all the above indicators and there is some change in pattern of reporting.

For Energy consumption we can clearly see that there is a decreasing trend of 72.36%. The use of energy has decrease from 177 kwh / FTE/ Month to 128 kwh / FTE/. For water consumption only 15% reduction was given and not the total quantity for the year,2015 and after that the water consumption in total quantity used is provided so, we cannot

clearly say that there is a decrease in consumption. For the other years there is a mix trend and for the last year of analysis 2019 the consumption of water is less than previous year. For the waste generation instead of total waste produced waste per FTE annually is given, i.e., Per Full Time Employee which shows are Increasing trend and waste generation has Increased from 2015 to 2017 and then decreased, for the year 2019 no information in the following respect is being provided and an 100% recycle of paper waste is mentioned but no information of other type of waste and their recycle is being provided. For Greenhouse gases (GHGs) emission we can clearly see a decreasing trend of 68.04% from year 2015, 1.69 t [CO]₂ e FTE/year to 1.15t t [CO]₂ e FTE/year and the pattern is consistent in all the year. For Environmental Expenditure, there is no clear information about how much amount is spent specifically for environmental issues therefore the amount spent on CSR activities by the firm is considered. Which shows an increasing trend, but pattern is not seen to be consistent for the time period of the study for the year 2015,2016,2017 the amount provided is in \$ (million) while for remaining years it's in rupees.

The Energy Consumption, Water Consumption, Waste Generation, Greenhouse gases (GHGs) emission, Environmental expenditure/Corporate Social Responsibility Expenditure Indicators are analyzed in table 6 for Wipro Ltd. for the years 2015 – 2019, all the figures mentioned in the table have been taken from their annual reports of the following years.

The energy consumption shows a decreasing trend for 5 years from 423306 Mn units to 915 million joules but in between the five years there could be seen a mix trend for energy consumption, for the year 2019 we can see an increase from previous year, 2018 of 15 million joules. For water consumption we see a change in pattern of reporting from 2015 to 2016, In 2015 total consumption of water is given while in 2016 it given as per employee consumption, so we can't compare for first year from 2016 to 2019 we see a

decreasing trend in consumption of water. For waste generation we see a mix trend up to 2018 for year 2019 the pattern of reporting is changed from waste generated per employee per year to total waste generated during the year. Green House Gas (GHG) emissions shows a decreasing trend for last 4 years from 2016 to 2018 but is higher than 2018 to 2019. The pattern of reporting is found inconsistent in this respect. No information is mentioned specifically about environmental expenditure hence CSR expenditure figures are mentioned in the table which shows an increasing trend the pattern is changed in the 5 years from million to crore and again to million.

In this paper an attempt is made to understand green accounting which is relatively a new concept in India and a comparison is made between top two information technology companies, although policies for disclosing information is different in both the company. The research has studied the environmental measures and indicators embraced by both the companies and found that both the companies are active in environmental disclosure but there is lack in consistency in reporting. The results are similar to the study conducted by Bullard and Raju (2020) on BPCL and ONGC which disclosed natural accounting and bookkeeping practices in the energy sector and found that there is absence of rules to disclose information about the environment related information and both the companies follows diverse policy in respect to same item.

A study conducted by Shavita Deswal in her paper green accounting practices, published in International Journal of Applied Research, in which she has studied 50 companies 27 manufacturing and 23 non - manufacturing in the Delhi - NCR location with both primary as well as secondary data, to study green accounting practices for manufacturing and non - manufacturing firm and to found out, that there is significant difference between green accounting practices for manufacturing and non – manufacturing firm but also says

that's there is lack of strict rule for ensuring compliances of these practices.

A study conducted by Dr. Shruti Sandeep Chavarkar, titled Environmental Accounting Disclosure Practices of India (A comparative study of Larsen and Toubro and Tech Mahindra) published in International Journal of Advances in Engineering and Management, has concluded that both companies are disclosing about environmental information on yearly basis but there is lack of a standard format for reporting this information and hence the data suffers from lack of comparability and verifiability which is also seen in our study.

V. Conclusion

The two companies Wipro limited, and Tata Consultancy Services limited are globally listed as “A” grade by an international non-profit Global Reporting standard, which helps companies of the world in disclosing the environmental impact they cause. Although, the disclosure practices are not comparable among the two, despite being operating in the same country as well as industry which makes comparative study difficult. Many such examples can be quoted which show disparity. This shows that green accounting is still in the primitive stage in India and there is no definite structure of reporting the environmental performance. After studying sustainability reports of both the companies it can be concluded that the efforts and initiative taken by the corporates these days in respect to climate change and social upliftment is commendable. Tata Consultancy Services has been trying to achieve zero waste level. The Wipro limited has also provided environment indicator valuation for all the above items, which is a great step for considering environmental cost into the financial statements. Both the companies have provided details about various environment indicators as per the Global Reporting Initiative (GRI) Index, however, the data to be comparable needs to be adjusted which can be seen from the above schedules as there are no standardized guidelines.

VI. Limitations of the Study & Suggestions

One of the critical limitations of the study is that it is based on secondary data collection. The findings of the study cannot be generalized for whole IT industry as the two companies are not the true representatives of the whole population. The lack of standards in reporting caused the analysis to be uneven at many points during the research and acted as a major obstacle. India needs to formulate a standard set of guidelines and common framework for environmental disclosures. The information is necessary in a standardized format so that necessary awareness can be created as well as steps could be taken by various stakeholders towards improvement in measure of protection of the environment. It is also suggested that a set of standard tools should be developed so that the environmental cost of actions of companies can be evaluated in monetary terms and becomes a part of the financial statement of a specific company.

VII. References

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VIII. Webilography

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- <https://www.wipro.com>
- https://www.globalreporting.org/standards/media/2458/gri_standards_brochure.pdf
- <https://www.icsi.edu/>

IX. Annexures

Table 1: Profile of Tata Consultancy Service

Type	Public Limited
Traded as	NSE: TCS Included in Nifty 50 constituent
Share price	Rs. 3084
Industry	IT Services & Consulting
Headquarter	Mumbai
Parent organization	Tata sons
Key person	CEO: Rajesh Gopinath
Revenue	Rs. 1.62 lakh crore
Income from Operating Activities	Rs. 376 billion
Total Income	Rs. 21 lakh Crore
Aggregate Assets	Rs. 32,340 crores
Owner	Shareholders
Number of employees	4,17,929
Founder	F. C. Kohli, J.R. D Tata, Tata Sons
Website	https://www.tcs.com/

Table 2: Performance Highlights of Tata Consultancy Services

(All Figures are in million)

Year	2015-2016	2016-2017	2017-2018	2018 – 2019	2019- 2020
Sales Turnover	1,08,646	1,17,966	1,23,104	1,46,463	156,949
Profit before tax	31,840	34,513	34,092	41,563	42,248
Profit after tax	24,270	26,289	25,826	31,472	32,340
Earnings Per share	111.87	133.41	134.19	83.05	86.19
Source: Company's Annual Report					

Table 3: Wipro Limited

Type	Public Limited
Traded as	NSE: WIPRO Included in Nifty 50 constituent
Share price	Rs. 410.90
Industry	IT Services & Consulting
Headquarter	Bengaluru
Parent organization	WIPRO limited
Key person	CEO: Thierry Delaporte
Total assets	97,482 Million
Owner	Azim Premji (73.85%)
Number of employees	1,75,000
Founder	M.H. Hasham Premji
Website	https://www.wipro.com/

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Table 4: Performance Highlights of WIPRO Ltd

(All Figures are in million)

Year	2015-2016	2016-2017	2017-2018	2018 – 2019	2019- 2020
Sales Turnover	516,307	554,179	546,359	589,060	613,401
PBT (Profit Before Tax)	114,933	110,356	102,474	115,415	122,512
PAT (Profit After Tax)	89,075	84,895	80,081	90,031	97,218
EPS (Earnings Per Share)	13.60	13.11	12.64	14.99	16.67
Source: Company's Annual Report					

Table 5: Comparison for the year 2015 – 2019 for Tata Consultancy Services Ltd.

Environmental Indicators	2015	2016	2017	2018	2019
Energy consumption	177 kwh / FTE/ Month	162 kwh/ FTE/ Month	155kwh/ FTE/ Month	145 kwh/ FTE/ Month	128kwh/FTE/Month
Water consumption	15% reduction in per capita consumption	3.9 million KL	4.04 million KL	4 million KL	3.9 million KL
Waste Consumption	15.2 kg/FTE/ annum	21.7 kg/FTE/annum of waste.	22.9 kg/FTE/annum of waste	21.41 kg/FTE/annum of waste	100% recycling of paper waste Other waste no information
Greenhouse gases (GHG emission)	1.69 t CO ₂ e FTE/year	1.53t CO ₂ e FTE/year	1.42t CO ₂ e FTE/year	1.31tCO ₂ e FTE/year	1.15t CO ₂ e FTE/Year
Environmental/Corporate Social Responsibility expenditure	\$171 million	\$65 million	Rs. 400 crores	Rs. 600 crores	Rs. 602 crores

Table 6: Comparison for year 2015 – 2019 for Wipro Ltd.

Environmental Indicators	2015	2016	2017	2018	2019
Energy consumption	423306 Mn units	315 Million Units	1344.3 Million joules	900.8 Million joules	915.3 million M joules,
Water Consumption	6670382 m ₃	1,119 liters per employee per month	991 liters per employee per month	951 liters per employee per month	930 liters per employee per month
Waste generation	3.26 kg per employee per annum	1.55 kg per employee per annum	2.02kg per employee per annum	2.66kg per employee per month	5057 tons
Greenhouse Gases GHG emission	211,986 MT CO ₂ e	228,526 MT CO ₂ e	189,785 MT CO ₂ e	1,17,290 MT CO ₂ e	1,37,995 tons CO ₂ e
Environmental/CSR expenditure	Rs. 53.17 million	11,433 million	Rs. 176.1 crore	185.3 crores	Rs. 1,818 Mn.

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