

Awareness and Adoption of Green Accounting Practices: A Study of Firms in Pune



Ms. Priyavanda Khanvilkar*

*Assistant Professor at Indira University Pune. Email id: priyavanda.khanvilkar@iccs.ac.in

Abstract

This study examines the awareness and adoption of green accounting practices among selected firms in Pune, with specific reference to Tata Consultancy Services, Wipro Limited, and Tech Mahindra. Green accounting has become increasingly important in emerging economies such as India, where rapid industrialization, urbanization, and business growth have intensified environmental concerns. The study adopts a descriptive and analytical research design and is based on secondary data collected from annual reports, sustainability disclosures, corporate websites, government reports, and published sources. Environmental indicators such as energy consumption, water consumption, waste generation, greenhouse gas emissions, and environmental or corporate social responsibility expenditure are used to assess the extent of green accounting adoption. The findings reveal that the selected firms have adopted green accounting-related practices through sustainability reporting, environmental disclosure, resource management, and climate-related commitments. Tata Consultancy Services showed a continuous decline in energy consumption and greenhouse gas emissions between 2015 and 2019, indicating improvement in energy efficiency and carbon reduction. Wipro Limited demonstrated improvement in water-use efficiency, although inconsistency in reporting units affected comparability across years. Tech Mahindra reflected strong sustainability orientation through science-based emission reduction targets and carbon neutrality initiatives. The study concludes that green accounting supports environmental accountability, resource efficiency, stakeholder confidence, and sustainable business growth. However, standardized reporting formats, comparable indicators, digital tools, professional training, and policy support are required to strengthen adoption, especially among SMEs and emerging enterprises.

Keywords: Green Accounting; Environmental Accounting; Sustainability Reporting; Corporate Social Responsibility; Sustainable Business Practices

1. Introduction

Business, governments, policy makers and society have made sustainable development a major concern. Rapid industrialization and urbanization and economic growth in emerging economies like India have put pressure on natural resources and the environment. Consequently, business entities are increasingly required to go beyond the performance of their finances and prove their environmental responsibility, social accountability and ethical business practices. Incorporating this change into accounting research and practice can aid in measuring, reporting and managing economic, social and environmental impacts of organizations (Bebbington & Unerman, 2018). The climate change imperative has also heightened the importance of businesses embedding environmental factors into their businesses strategy and reporting (Lee et al., 2023).

Green accounting, or environmental accounting, is a process of identifying, measuring, recording and reporting the environmental costs and benefits of business activities. Green accounting expands the traditional scope of accounting, which is mostly financial based, to incorporate measures of energy consumption, water use, waste output, GHGs production, cost of pollution control, carbon footprint, resource efficiency and sustainability expenditures. Environmental accounting can

facilitate the linkage between environmental performance and managerial decision making, and long-term sustainability objectives (Burritt & Christ, 2016; Burritt et al., 2019).

The idea of green accounting has a particular significance in India where along with economic development there is environmental issues. Businesses are now required to create financial value AND show that they are environmentally and socially responsible. Sustainability reporting is thus an important tool to communicate with stakeholders about environmental performance. In the developing world, regulatory pressure and stakeholder expectations, corporate governance, and organizational awareness positively impact sustainability reporting (Farisyi et al., 2022). In this context, green accounting plays a supporting role in enhancing the transparency and accountability of the system by systematically providing environmental information.

Sustainable entrepreneurship and business development is also an important aspect of green accounting. Sustainable practices are becoming a must-have for competitiveness, especially for start-ups, SMEs, family businesses, and large corporations alike. SMEs are a vital source of employment and innovation, but they can be constrained by lack of resources, skills and environmental management systems. Johnstone (2021), Martins et al. (2022),

and Susanto & Meiryani (2019) suggest that environmental management systems and green accounting practices can assist SMEs in tracking their environmental performance and enhancing their sustainability control.

Environmental management accounting has the potential to enhance corporate environmental performance by bridging the gap between accounting practices, environmental strategy, and managerial commitment and resource efficiency. Latan et al. (2018) noted that environmental management accounting helps in the connection of environmental strategy and corporate environmental performance. Hence, green accounting is not just a reporting tool but also a strategic tool for enhancing the environment's efficiency and responsible business performance.

The city of Pune is one of the most important industrial and information technology cities of Maharashtra, which is apt for the study of green accounting practices. The city is well endowed with manufacturing, IT, service sector companies, educational institutions, start-ups and expanding business enterprises. With the quick growth of industries and urbanization, companies in Pune are under more and more pressure to practice eco-friendly operations. A study of awareness and adoption of green accounting practices in the selected firms in Pune can give insights into the awareness and response to sustainability challenges of business in emerging urban industrial zones.

The use of green accounting is increasing but not widespread. While large corporations have begun producing sustainability reports and reporting environmental metrics, many small and medium-sized enterprises either do not know about sustainability reporting or have limited understanding of the topic, lack technical capacity and financial resources, and have not established a reporting process. Comparisons are difficult because environmental data is often not available in an integrated form and data is reported in different ways, with different measurement units used by firms. There is a worry here because economic development should not be at the cost of biodiversity and natural capital (Dasgupta, 2021).

This article concentrates on the awareness, adoption and implementation of green accounting practices in selected firms of Pune. It analyzes environmental indicators released by some companies like Tata Consultancy Services, Wipro Limited and Tech Mahindra. The companies have been chosen due to their transparency in reporting sustainability-related information and their availability of useful data regarding the environmental performance. This study is based on secondary data obtained from company reports, sustainability disclosures, corporate websites, government reports, and published data.

The primary aim of the study is to explore about the awareness and practice of green accounting practices of selected firms in Pune. In particular, the study is concerned with understanding the concept and significance of green accounting, studying the environmental indicators provided by the selected firms, analysis of adoption in the light of energy consumption, water usage, generation of waste, GHG emissions and environmental and CSR expenditure, identifying the key benefits and challenges, and recommending steps for better adoption of green accounting in India in the context of energy consumption, water usage, waste generation, GHG emissions and environmental or CSR expenditure.

Which is the importance of green accounting to the development of sustainable business? Those firms that disclose environmental information, what happens? Which firms disclose env indicators, what happens. What has been the degree of implementation of green accounting related practices by selected companies? What are the key obstacles to adopt green accounting practices in India? What can be done to enhance the green accounting practices of companies in emerging markets?

The study adds to the body of knowledge in entrepreneurship, sustainability and environmental accounting by analysing the green accounting practices of selected firms in India. It is relevant to academics, policy makers, corporate managers, entrepreneurs, sustainability professionals, and other stakeholders who wish to encourage responsible business practices, environmental accountability and sustainable growth in emerging economies in Asia.

2. Research Methodology

2.1 Research Design

This study is descriptive and analytical in which the awareness and utilization of green accounting practices of selected firms in Pune are explored. The study is descriptive as it explains the concept, relevance and significance of green accounting in the context of sustainable business practice. It is analytical because it considers some of the indicators that companies report for the environment and tries to draw conclusions about their level of green accounting. The design is suitable for study because green accounting is both conceptual and practical understandings, and analysis of the environmental disclosures of the companies.

2.2 Sample Selection

The chosen companies are those that implemented sustainability reporting, and they report on environmental performance measures. The companies chosen for the study are Tata Consultancy Services, Wipro Limited and Tech Mahindra. The companies selected were some of the

leading Indian companies that have had a long history of environmental reporting and have published environmental related information publicly. Whilst these companies are large corporations they do offer valuable insight into the adoption of green accounting systems and can be used as reference models for other companies, including those of SMEs and start-ups.

2.3 Sources of Data

The study is based on secondary data obtained from the annual reports of companies, sustainability reports, corporate websites, environmental disclosure reports, governmental reports, published research articles and pertinent institutional sources. The data regarding environment used in the study are data concerning energy consumption, water consumption, waste generation, greenhouse gas emissions, environmental expenditure, and corporate social responsibility expenditure. These sources serve as useful tools since they show the documented evidence as to how companies measure and report their environmental performance.

2.4 Period of the Study

Environmental data is for the 2015-2019 period and reflects data from recent company reports that were compatible for the analysis. This timeframe enables the study to measure changes in the selected environmental indicators over time. The chosen time frame is useful for understanding the trend of improvement, deterioration or a combination of both for firms' disclosures and sustainability performance in green accounting.

2.5 Variables and Indicators Used for the Study

This study analyzes some of the environmental indicators that are generally used in the context of green accounting and sustainability reporting. Energy use, water use, waste, greenhouse gas emissions, and environmental and/or corporate social responsibility expenditures are all indicators. The efficiency of the firms in using energy resources is measured by energy consumption. Water use reflects the level of water use efficiency and conservation. Waste generation is an indicator of waste management and reduction in environmental burden by firms. The greenhouse gas emissions are a good indicator of the carbon footprint of business activities. Firms' financial dedication to sustainability and social responsibility is shown by their environmental and CSR expenditure.

2.6 Method of Data Analysis

Data analysis in the study is done by using method of descriptive and comparative analysis. Selected companies are subjected to descriptive analysis explaining the environmental indicators revealed by the selected companies and comparative analysis comparing the company-wise data between the

selected years. Analysis is based on the identification of trends in energy use, water use, waste production, GHGs and expenditure on the environment and/or CSR. Interpretation of data assists in comprehending whether the chosen companies have advanced their environmental performance and consequently systematically adopted green accounting practices.

2.7 Rationale for Selecting the Companies

These companies—Tata Consultancy Services, Wipro Limited and Tech Mahindra—were chosen as they are among the top Indian firms that provide sustainability-related information and environmental performance data. These companies are also pertinent to the study in terms of the increasing importance of environmental responsibilities, digital innovation, stakeholder accountability, and sustainability reporting in their respective industries. The disclosures of sustainability information offer relevant information to analyse the use of sustainable accounting in India's corporate environment.

2.8 Scope of the Study

The present study is restricted to discuss green accounting practices of selected companies by studying the environmental indicators which are provided in the corporate reports. This study addresses issues of awareness and adoption of green accounting from the lens of environmental reporting and sustainability disclosure. It is not an overview of all firms in Pune and does not contain primary responses from managers, accountants or employees. The study offers nevertheless some insights for the reporting of environmental information by selected companies and the role of green accounting in supporting sustainable business development.

2.9 Ethical Considerations

The study is conducted based on public secondary data, therefore there is no direct ethical problem with human participation in the study. The information for this study has been sourced from company reports, sustainability reports and published websites, as well as academic sources. Citations and references should be used to properly attribute all sources. Analysis carried out objectively, without the manipulation or misrepresentation of the information available.

3. Results

3.1 Overview of Green Accounting Practices among Selected Firms

Based on the findings of the study, the green accounting practices adopted by the selected firms Tata Consultancy Services, Wipro Limited and Tech Mahindra are presented. The analysis is done based on environmental indicators that have been

published in company's annual reports, sustainability reports and corporate disclosure. The key parameters taken into account for the study are energy consumption, water consumption, waste generation, greenhouse gas emission, expenditure on environmental and corporate social responsibility. They illustrate ways in which companies measure, report and manage environmental impacts in their green accounting practices.

The findings show that the chosen companies have taken various approaches to green accounting-related practices. Tata Consultancy Services and Wipro Limited have provided quantitative information on environmental performance, whereas Tech Mahindra has highlighted Sustainability commitments, emission reduction goals, and climate related initiatives. The findings also reveal that while there is an increase in the reporting of environmental indicators by larger companies, the content and units of disclosure are not always standardized.

3.2 Green Accounting Practices of Tech Mahindra

Tech Mahindra has taken steps towards sustainability in its company's environmental policy. The company has demonstrated its efforts to cut down GHGs and adapt its activities to climate action targets. Tech Mahindra is a member of the Mahindra Group which has taken up the science based GHG emission reduction targets as part of the Paris

Agreement. The company was validated in February 2019 by the Science Based Targets initiative, signaling that it has set measurable targets related to emissions as a result of climate change.

The findings reveal that most of Tech Mahindra's green accounting practices are evident in its sustainability commitments, carbon neutrality goals, resource optimisation initiatives, and technology-based environment-friendly practices. The company's disclosure implies sustainability is not just a compliance obligation, but a part of business. By emphasizing emission reduction and low-carbon business practices, it reflects the significance of green accounting in fostering long-term environmental responsibility and sustainable corporate growth.

3.3 Environmental Indicators of Tata Consultancy Services

Tata Consultancy Services (TCS) have released the environmental indicators for their energy usage, water usage, waste generation, greenhouse gas emissions, and environmental expenditure / CSR expenditure between 2015 and 2019. The indicators have been presented in Table 1, which explains the environmental performance of the company over the period and gives an insight into the changes in the disclosures of the company's environmental performance in relation to accounting over the selected period.

Table 1: Environmental Indicators of Tata Consultancy Services, 2015-2019

Environmental Indicator	2015	2016	2017	2018	2019
Energy consumption	177 kWh/FTE/month	162 kWh/FTE/month	155 kWh/FTE/month	145 kWh/FTE/month	128 kWh/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 generation	15.2 kg/FTE/annum	21.7 kg/FTE/annum	22.9 kg/FTE/annum	21.41 kg/FTE/annum	100% recycling of paper waste
Greenhouse gas emissions	1.69 t CO ₂ e/FTE/year	1.53 t CO ₂ e/FTE/year	1.42 t CO ₂ e/FTE/year	1.31 t CO ₂ e/FTE/year	1.15 t CO ₂ e/FTE/year
Environmental/CSR expenditure	\$171 million	\$65 million	Rs. 400 crores	Rs. 600 crores	Rs. 602 crores

Table 1 indicates that energy use by Tata Consultancy Services (TCS) has been decreasing over time throughout the study. The energy use efficiency was improved by reducing energy use from 177 kWh/FTE/month in 2015 to 128 kWh/FTE/month in 2019 over five years. The year-wise decrease in TCS energy consumption is also demonstrated in Figure 1, which visualizes the decrease in energy use by TCS between 2015 and 2019.

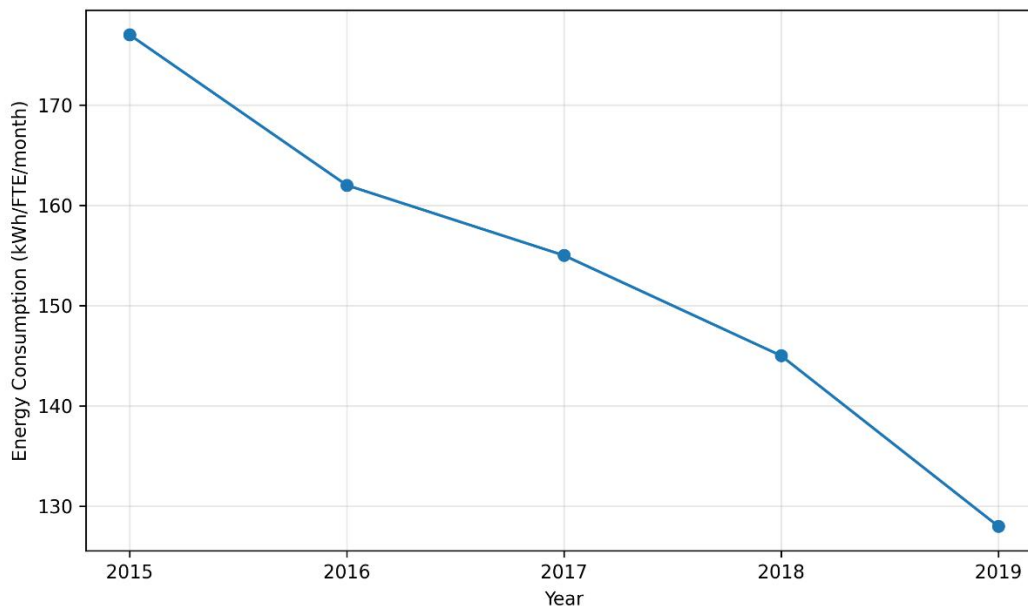


Figure 1: Energy Consumption Trend of Tata Consultancy Services, 2015–2019

Also, as indicated in the greenhouse gas emission data in Table 1, the emissions have continued to fall over time. The company's carbon intensity decreased in the selected years, from 1.69 t CO₂e/FTE/year in 2015 to 1.15 t CO₂e/FTE/year in 2019. This is also evident from a bar chart, as shown in Figure 2, which clearly depicts a gradual year-wise decline in GHGs.

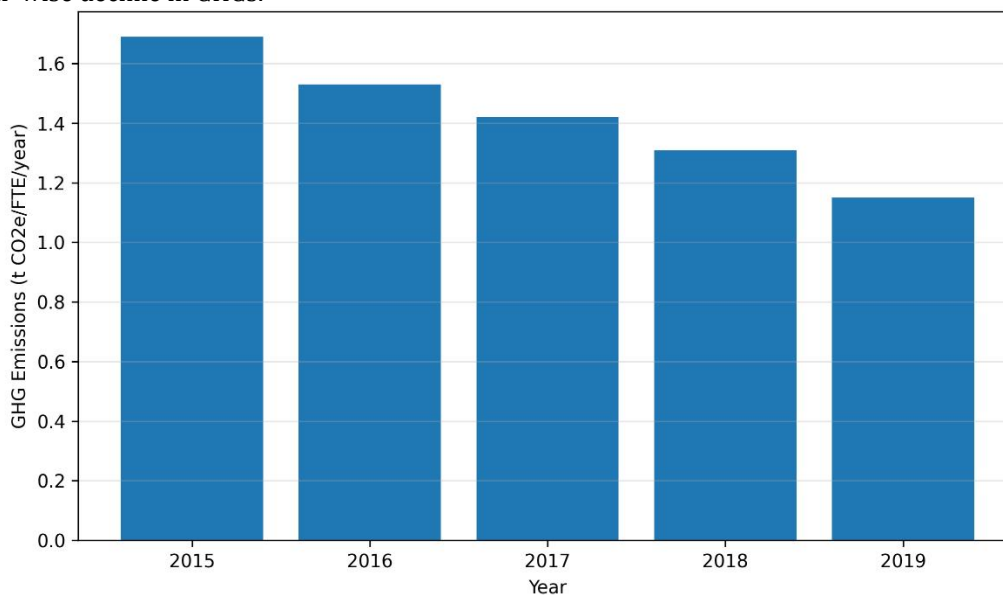


Figure 2: Greenhouse Gas Emission Trend of Tata Consultancy Services, 2015–2019

Water consumption is reported as 15% less per capita in 2015 as per the data in Table 1. Water use was relatively constant from 2016 to 2019. In 2016, it was 3.9 million KL; rose to 4.04 million KL in 2017; dropped to 4 million KL in 2018; and then came back to 3.9 million KL in 2019. The trend in these figures reflects fairly constant water use by the company over the years.

As shown in Table 1, waste generation is mixed. The amount of waste generated rose from 15.2 kg/FTE/annum in 2015 to 21.7 kg/FTE/annum in 2016, and to 22.9 kg/FTE/annum in 2017. It then decreased slightly to 21.41 kg/FTE/annum in 2018.

The company achieved a 100% paper waste recycling rate in 2019, but it did not have clear information on recycling for other types of waste.

Expenditure on environmental or CSR was measured in various currencies during the period of study. The expenditure was \$171 million in 2015, \$65 million in 2016, Rs. 400 crores in 2017, Rs. 600 crores in 2018, and Rs. 602 crores in 2019. It is evident from the data that the company continued to invest substantial funds in environmental and CSR related activities. Tata Consultancy Services' overall results indicate that the company has implemented green accounting-related practices by

presenting key environmental metrics, particularly concerning energy usage and greenhouse gas emissions.

3.4 Environmental Indicators of Wipro Limited

Wipro Limited gave environmental indicators for its energy use, water use, waste generation, greenhouse

gas emissions and environmental or CSR expenditure for the years 2015-2019. The following indicators are highlighted in Table 2 that offers year-wise data on Wipro's environmental performance and allows for tracking changes in selected green accounting indicators over the years.

Table 2: Environmental Indicators of Wipro Limited, 2015-2019

Environmental Indicator	2015	2016	2017	2018	2019
Energy consumption	423,306 million units	315 million units	1,344.3 million joules	900.8 million joules	915.3 million joules
Water consumption	6,670,382 m ³	1,119 litres/employee/month	991 litres/employee/month	951 litres/employee/month	930 litres/employee/month
Waste generation	3.26 kg/employee/annum	1.55 kg/employee/annum	2.02 kg/employee/annum	2.66 kg/employee/month	5,057 tons
Greenhouse gas emissions	211,986 MT CO ₂ e	228,526 MT CO ₂ e	189,785 MT CO ₂ e	117,290 MT CO ₂ e	137,995 tons CO ₂ e
Environmental/CSR expenditure	Rs. 53.17 million	Rs. 11,433 million	Rs. 176.1 crore	Rs. 185.3 crore	Rs. 1,818 million

Wipro Limited has been consuming energy in various units as shown in Table 2 over the course of the study. For 2015, the consumption of energy is reported as 423,306 million units and for 2016 the consumption of energy is reported as 315 million units. In 2017, 1,344.3 million joules of energy was used, in 2018, 900.8 million joules of energy was used and in 2019, 915.3 million joules of energy was used. It is difficult to directly compare across all years due to the difference in the number of reporting units.

The decrease in water use is observed in the data presented in Table 2, as it is from 2016 to 2019. In 2016, the average of water used per employee per month was 1 119 litres, whereas it was 991 litres in 2017, 951 litres in 2018 and 930 litres in 2019. This is an improvement in water-use efficiency for this time period. This is illustrated again in Figure 3 where Wipro's water usage in 2016 has decreased consistently until 2019.

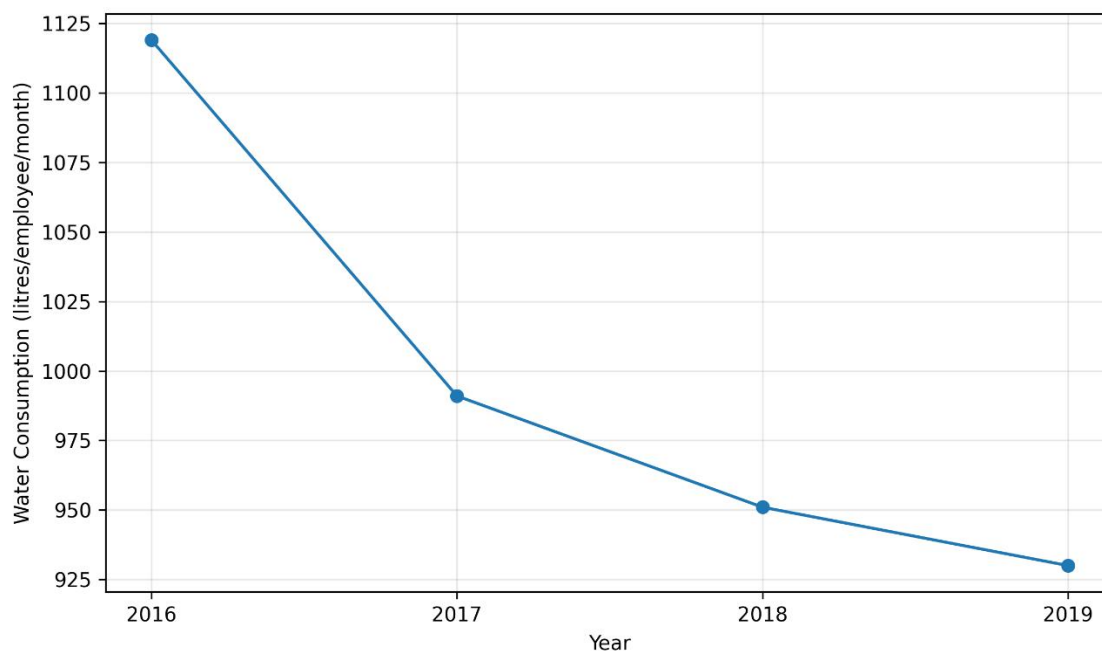


Figure 3: Water Consumption Trend of Wipro Limited, 2016–2019

Variance is also observed in waste generation data from Wipro. In 2015, the waste generated per employee per year was 3.26 kg, while in 2016, it was 1.55 kg and in 2017, it was 2.02 kg. In 2018, the company reported the amount of waste generated as 2.66 kg per employee per month, and in 2019, it was reported as 5,057 tons. There is limited year-wise comparison of waste generation because of the difference in the measurement units.

As shown in Table 2 the greenhouse gas emissions trend is mixed. Emissions were 211,986 MT CO₂e in 2015 and increased to 228,526 MT CO₂e in 2016. They then decreased to 189,785 MT CO₂e in 2017 and further declined to 117,290 MT CO₂e in 2018. GHGs emissions rose to 137,995 tons of CO₂e in 2019. The data indicates that Wipro decreased emissions from 2016 to 2018, but after that, the emissions rose in 2019.

Wipro's environmental or CSR spending report was also presented in various formats. The company said its revenue was Rs. 53.17 million in 2015, Rs. 11,433 million in 2016, Rs. 176.1 crore in 2017, Rs. 185.3 crore in 2018, and Rs. 1,818 million in 2019. The figures show that Wipro had continued its spending on environmental and CSR activities during the study period. Overall, the findings for Wipro Limited indicate that the company reported on all the environmental indicators selected. The reduction in water use per employee suggests improvement in water use efficiency and the variations in reporting units for energy use and waste generation make it more difficult to compare years.'

3.5 Comparative Results of Selected Firms

The comparative results reveal that all of the selected companies have implemented green accounting-related practices, but the type and the disclosure format varies among them. Tata Consultancy Services reported environmental indicators in a fairly uniform fashion, particularly for energy use and greenhouse gas emissions. As displayed in Figure 1 and Figure 2, the company has reduced its energy usage and greenhouse gas emissions in the period 2015 to 2019.

Wipro Limited provided information on all major environmental indicators such as energy use, water use, waste generation, greenhouse gas (GHG) emissions, and environmental/CSR spending. There were, however, some indicators reported in different units in different years, so there was some lack of direct comparability. Nevertheless, the company's water use efficiency has improved from 2016 to 2019 as illustrated in Figure 3.

Tech Mahindra highlighted more sustainability commitments and efforts related to climate change. The company's targets for reductions in its GHG, derived from science, demonstrate sustainability has become part of the company's corporate agenda.

Tech Mahindra's reporting is more about its commitment to climate change and its sustainable orientation, as compared to TCS and Wipro, which provide year-wise environmental metrics.

The findings suggest that the firms selected for the study have implemented the green accounting through environmental disclosure, sustainability reporting, resource management and climate related commitments. The results also indicate that the reporting formats and measurement units should be more standardized to make reporting more comparable across firms.

4. Discussion

The findings indicate that the selected companies have embraced the green accounting related practices by environmental disclosure, sustainability reporting, resource management and commitments on climate-related issues. Tata Consultancy Services and Wipro Limited, on the other hand, provided quantitative environmental measures, while Tech Mahindra emphasized primarily on their sustainability initiatives, carbon neutrality targets, and science-based emission reduction targets. It suggests that big companies in India are increasingly taking environmental issues into account when it comes to reporting and decision making. These are examples of the increasing need for sustainability in the corporate value creation process, and the relationship between financial performance and environmental and social responsibility (ESR) (Adams, 2017).

Tata Consultancy Services shows a positive change in its energy use and GHG emissions. TCS has decreased its energy usage from 177 kWh/FTE/month in 2015 to 128 in 2019, as indicated in Table 1 and Figure 1. Likewise, greenhouse gas emissions have decreased from 1.69 t CO₂e/FTE/year in 2015 to 1.15 t CO₂e/FTE/year in 2019 (Table 1, Figure 2). This indicates that TCS became more energy efficient and was carbonintensive during the study period. Environmental management accounting can contribute to such improvements by helping companies measure the environmental costs, manage resource usage, and enhance environmental performance (Gunarathne & Lee, 2015; Qian et al., 2018).

But TCS had moderate stability in water consumption ranging from 3.9 million KL to 4.04 million KL between 2016 and 2019. The pattern of waste generation was mixed, with increasing amounts from 2012 to 2017, and then a slight decrease in 2018, and no information on other waste categories was provided for 2019 (100% paper waste was recycled). This suggests that despite good results in energy and emission measurements TCS needs to be disclosing more

extensive waste and water data to enhance the quality of green accounting reporting. Quality of disclosure is significant because the quality of environmental disclosures can help build stakeholder confidence and value of the firm (Plumlee et al., 2015).

The findings for Wipro Limited are positive along with the reporting constraints. As presented in Table 2 and by Figure 3, water consumption has dropped from 1,119 litres per employee per month in 2016 to 930 litres per employee per month in 2019, which shows that the efficiency of water use has improved. But, the greenhouse gas emissions of Wipro were mixed. Emissions have risen since 2016, dropped until 2018 and increased in 2019. This indicates the need for ongoing environmental management and monitoring for emission reduction. Climate disclosure frameworks are clear and consistent on the importance of providing information on risks, metrics and targets that are clear and comparable (Financial Stability Board, 2017).

One of the major concerns with Wipro's reporting is the use of different units of measurement. Energy usage and waste production were measured in various units over the duration of the study, and therefore cannot be compared. This is part of the general issue of sustainability reporting, whereby the format of sustainability reports is not uniform across all, making it less useful for stakeholders (Dissanayake et al., 2019; Schaltegger et al., 2017). Standardized indicators, a uniform measurement unit and clear reporting systems are needed in order to enhance green accounting practices.

The results of Tech Mahindra demonstrate that the company's commitments towards climate and sustainability are embedded in its practices related to green accounting. It has science-based targets for greenhouse gas emissions reductions, which align it with global climate targets. While the year-wise environmental indicators were not displayed similar to TCS and Wipro, Tech Mahindra has made it clear that sustainability is a part of its business model with the focus on carbon neutrality, optimisation of resources and low carbon transition. This integration is crucial as sustainability gains significance when it is connected with their material business matters and long-term value creation (Khan et al., 2016).

The comparative results indicate that overall, all three selected firms have implemented green accounting related practices, although the levels of green accounting and reporting are not the same in depth or in consistency. TCS publishes fairly regular data and energy and emission indicators improved. Wipro provides a handful of environmental metrics, which do not have consistent units. Tech Mahindra's overall strategic approach to climate action is good. Such differences reveal that adoption of green accounting practices in large companies in India is

being built, however, there is a need for more standardization and comparability.

The results are significant for sustainable entrepreneurship, as green accounting enables responsible business practices, responsible use of resources, environmental responsibility and sustainable growth. This may be challenging for SMEs and start-ups due to lack of awareness, technical capacity, and financial resources compared with larger organisations that have established stronger systems and resources to implement sustainability reporting. So, it is necessary to have simplified green accounting frameworks, training, digital solutions and policy support in order to encourage more widespread adoption by smaller organisations. This is crucial for emerging countries like India where SMEs are a significant contributor to employment generation, innovation, and sustainable development.

Overall, the study reveals that the selected companies are practicing green accounting but the accounting reporting is not consistent. The results indicate that green accounting can be considered as not only a reporting instrument but also a strategic instrument that can facilitate the achievement of good environmental performance, sustainable business growth, and enhanced corporate responsibility.

5. Conclusion

Green accounting is an important tool for promoting sustainable business practices, environmental responsibility, and long-term corporate growth in emerging economies such as India. The present study examined the awareness and adoption of green accounting practices among selected firms in Pune, with reference to Tata Consultancy Services, Wipro Limited, and Tech Mahindra. The findings show that the selected firms have adopted green accounting-related practices through environmental disclosure, sustainability reporting, resource management, and climate-related commitments. Tata Consultancy Services showed improvement in energy efficiency and greenhouse gas emission reduction, while Wipro Limited demonstrated improvement in water-use efficiency, although its reporting showed inconsistency in measurement units. Tech Mahindra reflected strong commitment to sustainability through science-based emission reduction targets and carbon neutrality initiatives. The study highlights that large corporations are gradually integrating environmental indicators into their reporting and decision-making systems. However, the adoption of green accounting remains uneven due to lack of standardized reporting formats, inconsistent disclosure practices, limited comparability, and insufficient detailed data for some indicators. The findings suggest that green accounting should not be viewed merely as a compliance requirement but as a strategic

management tool that supports resource efficiency, environmental accountability, stakeholder confidence, and sustainable entrepreneurship. For wider adoption, especially among SMEs and start-ups, there is a need for simplified reporting frameworks, capacity-building programs, digital tools, trained professionals, and stronger policy support. Overall, the study concludes that green accounting can significantly contribute to sustainable development by helping firms measure environmental performance, reduce ecological impact, and align business growth with environmental and social responsibility.

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