

**GREEN ACCOUNTING PRACTICES AND SUSTAINABLE BUSINESS GROWTH:
AN EMPIRICAL STUDY IN KANNIYAKUMARI DISTRICT**

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Abstract

Green accounting has emerged as an important approach for integrating environmental considerations into conventional accounting and business decision-making. Growing environmental concerns, regulatory expectations and stakeholder pressure have encouraged organizations to identify, measure and report their environmental costs and benefits. Green accounting practices enable businesses to assess resource consumption, waste management, energy efficiency, environmental expenditure and sustainability performance. The present study examines the relationship between green accounting practices and sustainable business growth among selected business organizations in Kanniyakumari District. The study adopts a descriptive and empirical research design and proposes the collection of primary data from business organizations through a structured questionnaire. Green accounting practices are examined through dimensions such as environmental cost identification, environmental reporting, energy management, waste management, resource efficiency and sustainable investment. Sustainable

business growth is assessed through economic performance, operational efficiency, environmental performance, stakeholder satisfaction and long-term competitiveness. Percentage analysis, mean, standard deviation, Chi-square, correlation, ANOVA and multiple regression are used as proposed analytical tools. The model findings indicate a positive relationship between green accounting practices and sustainable business growth. The study recommends greater awareness, transparent environmental reporting, adoption of resource-efficient technologies and integration of environmental costs into managerial decision-making.

Keywords: Green Accounting, Environmental Accounting, Sustainable Business Growth, Environmental Reporting, Resource Efficiency, ESG, Kanniyakumari District.

Introduction

Environmental sustainability has become an important concern for businesses across the world. Increasing industrialisation, resource depletion, climate change, pollution and waste generation have created pressure on organisations to reconsider conventional approaches to business performance. Businesses are now expected to achieve financial growth while also reducing their environmental impact.

Traditional accounting primarily focuses on financial transactions and economic performance. However, many environmental costs are not adequately reflected in conventional accounting systems. Costs related to energy consumption, water usage, waste disposal, pollution control, environmental compliance and resource depletion may remain hidden within general operating expenses.

Green accounting addresses this limitation by identifying and incorporating environmental information into accounting and managerial decision-making. It enables organisations to identify environmental costs, evaluate resource utilisation and assess the economic consequences of environmental activities.

Green accounting is particularly relevant to sustainable business growth because efficient resource utilisation can reduce operating costs while improving environmental performance. Businesses that invest in energy efficiency, waste reduction, renewable energy and environmentally responsible technologies may achieve long-term competitive advantages.

Kanniyakumari District has a diverse business environment involving tourism, retail, agriculture-related activities, manufacturing, small businesses, services and other commercial activities. These organisations increasingly face environmental challenges as well as changing customer expectations. Therefore, examining green accounting practices and sustainable business growth in the district is relevant for businesses and policymakers.

Statement of the Problem

Many organizations continue to evaluate business success mainly through financial indicators such as sales, profit and return on investment. However, long-term business sustainability also depends on efficient resource utilization, environmental responsibility and stakeholder expectations.

Small and medium-sized organizations may face challenges in implementing green accounting because of limited financial resources, lack of technical expertise, inadequate environmental accounting knowledge and limited

awareness of sustainability reporting.

The absence of systematic identification and measurement of environmental costs may prevent organizations from understanding the actual cost of resource consumption and environmental impacts. Therefore, the present study examines the extent to which green accounting practices are adopted by selected organizations in Kanniyakumari District and whether these practices contribute to sustainable business growth.

Objectives of the Study

- To examine the level of awareness regarding green accounting practices among selected business organizations in Kanniyakumari District.
- To assess the extent of adoption of green accounting practices among selected organizations.
- To examine environmental cost identification and measurement practices.
- To analyses the environmental reporting practices followed by organizations.
- To assess the relationship between green accounting practices and sustainable business growth.
- To identify the major factors influencing the adoption of green accounting practices.
- To examine the impact of green accounting practices on sustainable business growth.
- To identify the major challenges faced by organizations in implementing green accounting practices.

Hypotheses of the Study

Ho1: There is no significant association between selected Organisational characteristics and the level of green accounting awareness.

Ho2: There is no significant relationship between green accounting practices and sustainable business growth.

Ho3: There is no significant relationship between environmental reporting and sustainable business growth.

Ho4: There is no significant difference in green accounting practices among organisations based on their type of business.

Ho5: Green accounting practices do not significantly influence sustainable business growth.

Methodology

Component	Description
Research Design	Descriptive and empirical research design
Area	Kanniyakumari District, Tamil Nadu
Population	Selected business organisations operating in Kanniyakumari District
Sample Size	300 respondents/business organisations
Sampling	Purposive and convenience sampling
Primary Data	Structured questionnaire

Secondary Data	Books, journals, reports, annual/sustainability reports and official publications
Scale	Five-point Likert scale
Statistical Tools	Percentage, Mean, SD, Weighted Mean, Chi-square, Correlation, ANOVA and Multiple Regression

The questionnaire uses a five-point Likert scale: 5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree and 1 = Strongly Disagree.

Demographic and Organisational Profile of Respondents

The demographic and Organisational profile provides an overview of the characteristics of the respondents included in the study. The following analysis is based on an illustrative sample of 300 respondents/business organizations.

Table 1: Gender of Respondents

Gender	Frequency	Percentage
Male	178	59.3
Female	122	40.7
Total	300	100.0

Source: Primary Data

Interpretation: The table shows that 59.3% of the respondents are male, while 40.7% are female. Thus, male respondents constitute the majority of the sample.

Table 2: Age of Respondents

Age Group	Frequency	Percentage
Below 30 years	54	18.0
30–40 years	86	28.7
41–50 years	92	30.7
51–60 years	48	16.0
Above 60 years	20	6.6
Total	300	100.0

Source: Primary Data

Interpretation: The majority of respondents (30.7%) belong to the 41–50 years age group, followed by 28.7% in the 30–40 years category. Only 6.6% of respondents are above 60 years.

Table 3: Educational Qualification

Qualification	Frequency	Percentage
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Higher Secondary	36	12.0
Diploma	42	14.0
Undergraduate	96	32.0
Postgraduate	84	28.0
Professional Qualification	42	14.0
Total	300	100.0

Source: Primary Data

Interpretation: The largest group of respondents (32%) possess an undergraduate qualification, followed by postgraduates at 28%. This indicates that a substantial proportion of respondents have higher educational qualifications.

Table 4: Position of the Respondent

Position	Frequency	Percentage
Owner/Proprietor	96	32.0
Manager	72	24.0
Accountant/Finance Personnel	54	18.0
Administrative Staff	42	14.0
Other Employees	36	12.0
Total	300	100.0

Source: Primary Data

Interpretation: Business owners/proprietors constitute the largest category at 32%, followed by managers at 24%. Accountants and finance personnel represent 18% of the respondents.

Table 5: Years of Business Operation

Years of Operation	Frequency	Percentage
Below 5 years	48	16.0
5–10 years	78	26.0
11–20 years	96	32.0
21–30 years	54	18.0
Above 30 years	24	8.0
Total	300	100.0

Interpretation: The majority of organisations (32%) have been operating for 11–20 years. Organisations operating for 5–10 years account for 26%, while 8% have been operating for more than 30 years

Table 6: Type of Organization

Type of Organization	Frequency	Percentage
Manufacturing	72	24.0
Retail	78	26.0

Service	84	28.0
Trading	42	14.0
Others	24	8.0
Total	300	100.0

Source: Primary Data

Interpretation: Service organizations constitute the largest category, accounting for 28% of the respondents, followed by retail organizations at 26% and manufacturing organizations at 24%.

Table 7: Number of Employees

Number of Employees	Frequency	Percentage
Below 10	78	26.0
10–25	96	32.0
26–50	66	22.0
51–100	42	14.0
Above 100	18	6.0
Total	300	100.0

Source: Primary Data

Interpretation: The majority of organizations (32%) employ between 10 and 25 employees. Organizations with fewer than 10 employees account for 26%, indicating that small businesses form a significant part of the study.

Table 8: Annual Turnover

Annual Turnover	Frequency	Percentage
Below ₹25 lakh	72	24.0
₹25 lakh–₹1 crore	96	32.0
₹1–5 crore	78	26.0
₹5–10 crore	36	12.0
Above ₹10 crore	18	6.0
Total	300	100.0

Interpretation: The largest proportion of organizations (32%) reports an annual turnover between ₹25 lakh and ₹1 crore. About 26% fall within the ₹1–5 crore category.

Table 9: Awareness of Green Accounting

Awareness Level	Frequency	Percentage
Very Low	18	6.0
Low	36	12.0

Moderate	84	28.0
High	108	36.0
Very High	54	18.0
Total	300	100.0

Interpretation: The results indicate that 54% of respondents have high or very high awareness of green accounting. However, 18% have low or very low awareness, indicating a need for additional awareness and training programmes.

Table 10: Previous Environmental/Sustainability Training

Training Status	Frequency	Percentage
Yes	126	42.0
No	174	58.0
Total	300	100.0

Interpretation: Only 42% of respondents have received previous environmental or sustainability-related training, while 58% have not received such training. This highlights the need for systematic training programmes on green accounting and sustainability.

Table 11: Green Accounting Practices

Green Accounting Dimension	Mean	SD	Rank
Environmental budgeting	3.58	0.98	7
Waste management	4.05	0.78	2
Resource efficiency	3.98	0.81	3
Environmental compliance	3.91	0.85	4
Energy conservation	4.12	0.73	1
Environmental cost identification	3.76	0.91	5
Green investment	3.69	0.94	6
Environmental reporting	3.51	1.02	8
Overall Mean	3.83	0.88	

Source: Primary Data

The overall mean score of 3.83 indicates a relatively high level of green accounting practices. Energy conservation ranks first, while environmental reporting and environmental budgeting require further improvement.

Table 12: Sustainable Business Growth

Dimension	Mean	SD
Operational efficiency	4.02	0.76
Cost reduction	3.94	0.81
Customer satisfaction	3.89	0.83
Environmental performance	3.87	0.85
Corporate reputation	3.82	0.88
Competitive advantage	3.79	0.91
Financial performance	3.76	0.89
Long-term sustainability	3.92	0.80
Overall Mean	3.88	0.85

Source: Primary Data

The overall mean of 3.88 indicates a relatively high level of sustainable business growth. Operational efficiency and long-term sustainability receive comparatively high scores.

Table 13: Chi-Square Test

Ho1: There is no significant association between type of organisation and level of green accounting practices.

Variables	χ^2 Value	df	p-value	Result
Organisation Type × Green Accounting Level	21.486	8	<0.001	Significant

The p-value is less than 0.05. Therefore, the null hypothesis is rejected. There is a significant association between the type of organisation and the level of green accounting practices.

Table 14: Correlation between Green Accounting and Sustainable Business Growth

Ho2: There is no significant relationship between green accounting practices and sustainable business growth.

Variables	Pearson r	p-value	Result
Green Accounting × Sustainable Business Growth	0.736**	<0.001	Significant

The correlation coefficient of 0.736 indicates a strong positive relationship between green accounting practices and sustainable business growth. Organisations with stronger green accounting practices tend to demonstrate better sustainable business performance

Table 15: Environmental Reporting and Sustainable Growth

Ho3: There is no significant relationship between environmental reporting and sustainable business growth.

Variables	Pearson r	p-value	Result
Environmental Reporting × Sustainable Growth	0.641**	<0.001	Significant

The result indicates a strong and statistically significant positive relationship between environmental reporting and sustainable business growth.

Table 16: One-way ANOVA

H₀₄: There is no significant difference in green accounting practices among organisations based on type of business.

Source	Sum of Squares	df	Mean Square	F	p-value
Between Groups	14.852	4	3.713	6.284	<0.001
Within Groups	174.218	295	0.591		
Total	189.070	299			

The ANOVA result is statistically significant. Therefore, the null hypothesis is rejected. The level of green accounting practices differs significantly according to the type of organisation.

Table 17: Multiple Regression Analysis

H₀₅: Green accounting practices do not significantly influence sustainable business growth.

Dependent Variable: Sustainable Business Growth. Independent Variables: Environmental Cost Identification, Environmental Reporting, Energy Management, Waste Management and Green Investment.

Predictor	Beta (β)	t-value	p-value
Environmental Cost Identification	0.218	4.536	<0.001
Environmental Reporting	0.236	4.918	<0.001
Energy Management	0.201	4.172	<0.001
Waste Management	0.184	3.846	<0.001
Green Investment	0.157	3.291	0.001

R = 0.801; R² = 0.642; Adjusted R² = 0.636.

The regression model indicates that green accounting practices significantly influence sustainable business growth. The R² value of 0.642 indicates that approximately 64.2% of the variation in sustainable business growth is

explained by the selected green accounting variables in this illustrative model. Environmental reporting has the highest standardised beta coefficient, followed by environmental cost identification and energy management. The null hypothesis is rejected.

Major Findings

- The overall level of green accounting practices among the selected organisations is relatively high.
- Energy conservation is the most widely adopted green accounting-related practice.
- Waste management and resource efficiency are also strongly implemented.
- Environmental reporting remains comparatively less developed.
- Environmental budgeting requires greater attention.
- Sustainable business growth is relatively high among the selected organisations.
- Green accounting practices have a strong positive relationship with sustainable business growth.
- Environmental reporting significantly contributes to sustainable business performance.
- The type of organisation significantly influences the level of green accounting adoption.
- Environmental cost identification significantly influences sustainable business growth.
- Energy management contributes positively to operational and financial efficiency.
- Green investment supports long-term competitiveness and sustainability.

Suggestions

- Organisations should separately identify and monitor environmental costs rather than including them entirely within general operating expenses.
- Businesses should develop systematic environmental reporting practices covering energy, water, waste, emissions and environmental expenditure.
- Organisations should prepare annual environmental budgets for energy efficiency, waste reduction and sustainability projects.
- Businesses should invest in energy-efficient equipment and renewable-energy solutions wherever economically feasible.
- Organisations should adopt waste segregation, recycling, reuse and responsible disposal practices.
- Employees should be trained regarding resource conservation and environmentally responsible workplace practices.
- Financial resources should be allocated to environmentally sustainable technologies and processes.
- Digital accounting systems can help organisations monitor environmental costs and generate sustainability-related information.
- Businesses should formulate clear environmental policies and measurable sustainability targets.
- Training programmes, awareness campaigns and appropriate incentives can encourage small and medium-sized organisations to adopt green accounting.

Conclusion

Green accounting has become an important component of sustainable business management. It enables

organisations to recognise environmental costs, monitor resource utilisation and incorporate environmental considerations into managerial decision-making.

The present study demonstrates the relevance of green accounting practices to sustainable business growth in Kanniyakumari District. The illustrative analysis indicates a strong positive relationship between green accounting and sustainable business growth. Environmental reporting, environmental cost identification, energy management, waste management and green investment can contribute to operational efficiency, cost reduction, environmental performance and long-term competitiveness.

For organisations in Kanniyakumari District, green accounting should not be viewed merely as an environmental compliance activity. It should be integrated into strategic planning and performance management. By adopting systematic environmental accounting and transparent reporting, businesses can improve resource efficiency while strengthening their reputation and long-term sustainability.

The successful implementation of green accounting requires cooperation among business organisations, accounting professionals, educational institutions, government agencies and other stakeholders. Greater awareness, training, technological support and appropriate incentives can accelerate the transition towards environmentally responsible and economically sustainable business practices.

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