

TRANSFORMATION OF GREEN UNIVERSITIES IN INDONESIA: THE ROLE OF TRANSFORMATION LEADERSHIP STYLE INNOVATION AND GREEN MANAGEMENT ACCOUNTING IN ACHIEVING SUSTAINABILITY PERFORMANCE

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Abstract: In the era of smart society 5.0, universities are required not only to excel academically, but also to be able to demonstrate sustainability performance that includes economic, social, and environmental aspects. Catholic University as an institution based on values and spirituality has a strategic role in addressing global sustainability challenges. The urgency of this research lies in the need for a deeper understanding for the entire academic community on how the application of transformational leadership style and Green management accounting can encourage the achievement of sustainability performance in the environment of universities in Indonesia, the level of application and understanding is still diverse in the achievement of sustainability performance. The object of research is all universities in Surabaya and Jakarta, because they are the two largest cities in Indonesia and become the mecca of tridarma of higher education throughout Indonesia. The main purpose of this study was to analyze and examine the influence of transformational leadership style and Green management accounting on the sustainability performance of universities in Indonesia. Specific objectives, this study wants to uncover the strategic role of green Management Accounting in maintaining the sustainability of institutions in the midst of technological developments and global environmental demands. The study used a quantitative approach with survey methods. The Data was collected through a Likert scale 1-5 questionnaire distributed via google form to the academic community of selected universities in Jakarta and Surabaya. Sampling technique using purposive sampling. Data analysis was conducted to test the relationship between variables and draw empirical conclusions.

Keywords: *Transfomational Leadership Style, Green Management Accounting, Sustainability Perfomance*

Submitted: 2025-12-01; Revised: 2025-12-26; Accepted: 2025-12-30

1. Introduction

In the era of smart society 5.0, universities in Indonesia are required not only to excel academically, but also to be able to demonstrate sustainability performance that includes economic, social, and environmental aspects. Universities as value-based institutions and spirituality have a strategic role in responding to global sustainability challenges. The concept

of Sustainability Accounting is a concept that becomes a new paradigm in the development of Contemporary Accounting of an organization. The implementation of sustainability accounting has many benefits for both profit and non-profit organizations. One of the largest non-profit organizations and has a wide impact is the University. The university has a far-reaching impact not only on finance, but also on social and environmental impact. By applying the concept of transformational leadership style and Green Management Accounting, the management of a university can connect the University's business strategy with the University's Sustainability Performance Framework. This process will make a university not only focus on the economic impact, but also consider the social and environmental impact of every business decision made by the company's Management (Adam) [1]. Research from Kaur & Lodhia [13] shows that university stakeholders are instrumental in achieving sustainability performance. Ghozali's Research [8] describes the practice of disclosing sustainability performance in public sector organizations, namely universities. The results of his research indicate that the practice of implementing Green Management Accounting can have an impact on the internal business processes of an organization and the sustainability performance of an organization. The research above will provide an understanding of the opportunities for the application of Green management accounting concepts to non-business organizations in Indonesia, especially within the scope of universities. This research aims to provide a new paradigm that the concept of Green Management Accounting that can be applied by universities. This concept has now been widely applied, especially at universities with a high commitment to the concept of sustainability. Higher education is an organization that highly implements the accounting system and can be a pioneer in the context of achieving sustainability performance. This research focuses on making guidelines in the implementation of transformational leadership style and Green management accounting for non-business organizations, especially universities. This research is expected to contribute to policies related to the implementation of Transformational Leadership Style, Green Management Accounting and sustainability performance in universities in Indonesia. Green accounting in education has an increasing urgency along with increasing global awareness of environmental and sustainability issues including: 1. Encouraging sustainability in campus financial management 2. Meet global regulations and standards 3. Improving the reputation and competitiveness of the University 4. Creating environmental awareness for students 5. Optimize the use of resources 6. Increase transparency and accountability 7. Encourage continuous innovation and research This study took the object of the largest universities in Indonesia, namely Surabaya and Jakarta. The reasons for the study chose two factors, namely leadership style and Green Management Accounting are (1) leadership style becomes one of the tools used by Education personnel in the implementation of activities to achieve sustainability performance of the University, without a good Transformational Leadership Style, the implementation will not be realized. (2) Green Management Accounting cannot be separated in achieving sustainability performance. Good Green Management Accounting factors can make the performance of a university can be achieved well, so that sustainability performance can be achieved.

As for the formulation of the problem studied: does transformational leadership style, and Green Management Accounting affect the sustainability performance of universities in Indonesia?. Special Purpose Of Research The specific purpose of this study is to look at the level of leadership style, as well as Green management accounting, can make the sustainability performance of higher education can be achieved. Urgency Of Research The urgency in this study is that all higher education communities have different levels of

implementation of leadership styles, Green Management Accounting. Specific specifications of this study, more focused on the theme of Management Accounting Research.

Research Benefits in the research are 1. The practical benefits of this study are as follows: a. For the University academic community: provide empirical evidence on the influence of transformational leadership style and Green Management Accounting on the sustainability performance of the University and provide input on appropriate policies related to good leadership style and Green management accounting. b. For the community and the environment: contributing motivation in the implementation of the implementation of the University Green management accounting for the implementation of the tridarma of higher education, especially community and environmental service. 2. Benefits of theoretical research : a. This study is expected to contribute to the development of accounting studies, especially green management accounting regarding the influence of transformational leadership style, green management accounting on sustainability performance b. Can be used as a reference for further research for academics and other researchers.

2. Research Method

The problem-solving approach that can be done with quantitative research with survey methods through questionnaires distributed to the academic community of all universities in Indonesia. Quantitative approach through testing the relationship between variables model transformational leadership style, green Management Accounting, and sustainability performance. The research Model is designed to identify how much the direct influence of these variables on the achievement of institutional sustainability. The first step is the preparation of questionnaires based on measurable indicators of each variable, referring to the theory and practice of transformational leadership style, green management accounting principles, as well as the dimensions of sustainability performance according to the triple bottom line (economic, social, environmental). The instrument was developed using a Likert scale and validated prior to deployment. Data collection was conducted through an online survey (google form) of the academic community of universities in Jakarta and Surabaya using purposive sampling techniques, taking into account the position, managerial involvement, and understanding of respondents towards sustainability. The collected Data were analyzed using inferential statistical techniques, such as multiple linear regression analysis or SEM (Structural Equation Modeling), to examine the significant relationships between variables and the strength of their contributions. Through this approach, the research is expected to produce empirical models that explain the strategic role of transformational leadership styles and green Management Accounting in shaping sustainability-oriented universities. This finding is expected to be a practical and academic recommendation for college management in designing policies and campus management systems that are green and transformative.

Operational definition is a specification of research activities in measuring a variable, in this study can be explained as follows:

Transformational Leadership Styles

Table 1. Leadership Style Question Items

| Number | Items of Question |
|---------------|--|
| 1 | My university leaders have a clear vision and mission regarding future sustainability performance for future |
| 2 | My university leaders show integrity in every decision relating to the economic, social and environmental in Tridarma Universities |

| | |
|---|--|
| 3 | My university leaders inspired me to implement good environmental management in the campus environment |
| 4 | My university leaders promote innovation and creativity in the application of eco-green within the scope of the campus. |
| 5 | My university leaders expressed appreciation or appreciation for our work from ESG-related teaching, research and community service. |
| 6 | My university leaders provide clear direction in each program relating to the college's ESG-related tridarma goals |
| 7 | My university leaders have a long-term program for Green University transformation for sustainable achievement. |

Green Management Accounting

An accounting approach that integrates environmental aspects into the University's management process. This approach involves the identification, measurement, analysis, and reporting of financial and non-financial information related to environmental activities. The development of Green Management Accounting instruments appear in Table 2:

Table 2. Green Management Accounting Question Items

| Number | Items of Questions |
|--------|--|
| 1 | My university identifies and records and reports well any costs incurred for social and environmental responsibility in terms of the tridarma of Higher Education. |
| 2 | My university has a special procedure for recording any environmental management fees |
| 3 | My university measures the impact of ESG committed to the college Tridarma of teaching, research and service |
| 4 | The Data my university provides is transparent and accessible to all stakeholders |
| 5 | Every decision my university makes actively considers its impact on economic, social and environmental sustainability |
| 6 | My university has policies to reduce carbon footprint through greener business practices |
| 7 | My university allocates a specific budget for ESG related activities (e.g. waste treatment, energy saving and others). |
| 8 | The entire academic community at my university is involved in ESG environmental conservation activities which are reflected in all activities in the organization. |

Sustainability Performance

A measure or evaluation of the extent to which a university can successfully achieve its sustainability goals covering economic, social and environmental aspects in a balanced manner. Sustainability performance reflects the University's ability to create long-term value while minimizing negative impacts on ecosystems and communities. Sustainability Performance question items appear in Table 3:

Table 3. Sustainability Perfomance Question Items

| Number | Items of Questions |
|--------|---|
| 1 | My university has a financial management strategy that supports sustainability programs |
| 2 | My university budget includes allocations for college tridarma related programs in terms of ESG |
| 3 | My university implements effective waste management policies such as recycling |

| | |
|---|---|
| | and waste reduction |
| 4 | My university is renewable energy or has energy consumption reduction initiatives |
| 5 | My university makes a real contribution to the community through community service programs such as scholarships or support for underprivileged people, campus health programs and training and workshops |
| 6 | Environmental performance at my university is monitored and reported periodically in each institution's policies. |
| 7 | My university applies a renewable energy policy to every activity at the University. |
| 8 | My university has always created economic, social and environmental added value with regard to the Tridarma of Higher Education. |

Data Analysis Techniques

Multiple linear regression analysis is used to test research models, assumptions, feasibility models, and hypothesis testing. Hypothesis test in this study will be tested using linear regression analysis is an analysis used to determine the extent to which the influence of Transformational Leadership Styles, and Green Management Accounting as an independent variable on the Sustainability Performance as a dependent variable. To test hypotheses on leadership styles, and Green Management Accounting, influence on the sustainability performance of Catholic universities in Indonesia.

The regression equation Model used is:

$$KK = A + B1GK + B2AMH + e$$

Description :

KK : Sustainability performance of Catholic universities in Indonesia

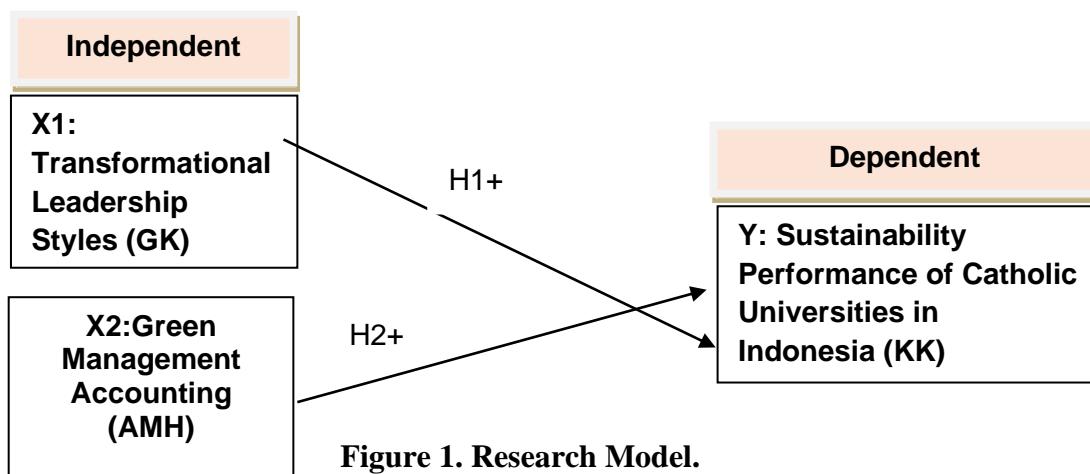
GK: Transformational Leadership Style

AMH: Green Management Accounting

A: Constant.

B: Regression Coefficient.

E : Error.



3. Result and Discussion

3.1. Results

Respondent Description

This study collected data from **100 respondents** representing academic communities from universities in Jakarta and Surabaya. The composition of respondents is shown in Table 4 regarding the composition of the following respondents:

Table 4. Respondent Description

| Position | Number | Percentage |
|--------------------|------------|-------------|
| University Leaders | 15 | 15% |
| Lectures | 55 | 55% |
| Education Staff | 30 | 30% |
| Total | 100 | 100% |

Sources: Data Processing (2025)

Descriptive Statistics

Descriptive statistics are used to see the tendency of respondents' answers to each variable.

Table 5. Descriptive Statistics

| Variable | Item Count | Min | Max | Mean | Std. Dev |
|--|------------|-------------|-------------|-------------|-------------|
| Transformational Leadership Style (TLS) | 7 | 2.70 | 5.00 | 4.18 | 0.57 |
| Green Management Accounting (GMA) | 8 | 2.50 | 5.00 | 4.05 | 0.63 |
| Sustainability Performance (SP) | 8 | 2.80 | 5.00 | 4.12 | 0.60 |

Sources: Data Processing (2025)

Mean scores above 4 indicate respondents generally perceived a strong implementation of TLS and GMA within their institutions.

Classical Assumption Test

Normality, multicollinearity, heteroscedasticity, and autocorrelation tests have been performed, and all assumptions of classical linear regression are met.

Table 6. Classical Assumption Test

| Test | Result | Interpretation |
|---------------------------------|--------------------------|---------------------------|
| Normality (Kolmogorov-Smirnov) | Sig. 0.176 | Data normally distributed |
| Multicollinearity | VIF TLS=1.421, GMA=1.421 | No multicollinearity |
| Heteroscedasticity (Glejser) | Sig. > 0.05 | No heteroscedasticity |
| Autocorrelation (Durbin-Watson) | DW = 1.905 | No autocorrelation |

Sources: Data Processing (2025)

Model Summary

Table 7 Model Summary

| R | R Square | Adjusted R Square | Std. Error |
|-------|--------------|-------------------|------------|
| 0.811 | 0.658 | 0.649 | 0.322 |

Sources: Data Processing (2025)

This indicates that **65.8% of the variance in Sustainability Performance** can be explained by TLS and GMA.

Table 8. ANOVA (F-Test)

| Model | F-Statistic | Sig. |
|-------|-------------|--------------|
| 1 | 48.612 | 0.000 |

Sources: Data Processing (2025)

The model is significant at $p < 0.05$, meaning TLS and GMA collectively affect Sustainability Performance.

Table 9. Regression Coefficients (t-Test)

| Variable | β Coefficient | t-value | Sig. | Interpretation |
|---|---------------------|---------|--------------|----------------|
| Constant | 1.085 | 3.145 | 0.002 | — |
| Transformational Leadership Style (TLS) | 0.468 | 5.210 | 0.000 | Significant |
| Green Management Accounting (GMA) | 0.361 | 3.971 | 0.000 | Significant |

Sources: Data Processing (2025)

Regression Equation

$$SP = 1.085 + 0.468(TLS) + 0.361(GMA)$$

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3.2. Discussion

The Influence of Transformational Leadership Style on Sustainability Performance

Results demonstrate that Transformational Leadership Style has a **positive and significant impact** on Sustainability Performance ($\beta = 0.468$, $p < 0.05$).

This implies that university leaders who:

1. communicate a sustainability-oriented vision,
2. encourage innovation,
3. inspire ESG initiatives, and
4. foster environmental consciousness,

Implies are more likely to drive sustainable transformation. This supports earlier studies by **Kaur & Lodhia (2023)** and **Lozano (2022)** which found leadership as a key determinant of sustainability integration in higher education.

The Influence of Green Management Accounting on Sustainability Performance

Green Management Accounting also shows a significant and positive effect ($\beta = 0.361$, $p < 0.05$). Institutions that integrate environmental cost measurements, carbon accounting, ESG reporting, and resource efficiency into accounting systems demonstrate stronger sustainability output. This aligns with findings from **Adams (2024)** and **Hotmauli & Etty (2024)**, which indicated that GMA improves transparency, accountability, and strategic decision-making in sustainability initiatives.

Combined Impact on Sustainability Performance

With an Adjusted R^2 value of **0.649**, the model indicates that both variables **jointly play a strategic role** in shaping sustainability-based higher education transformation. This finding confirms that institutional transformation requires not only environmental accounting practices but also leadership capable of driving cultural and operational change.

4. Conclusion

Based on the empirical results of the study, several conclusions can be drawn:

1. **Transformational Leadership Style significantly contributes to increased Sustainability Performance.** Strong ESG-oriented leadership fosters motivation, innovation, and engagement in environmental initiatives.
2. **Green Management Accounting significantly affects Sustainability Performance.** Universities that integrate environmental accounting practices demonstrate better environmental stewardship, budgeting transparency, and sustainability reporting.
3. The regression model proves that **TLS and GMA collectively explain 65.8% of Sustainability Performance variance**, indicating a strong influence on higher education sustainability achievement.

Table 10. Practical Recommendations

| Stakeholder | Recommendation |
|------------------------|---|
| University Leaders | Implement structured sustainability leadership development and integrate ESG into institutional strategy. |
| Accounting & ESG Units | Formalize GMA policies including environmental budgeting, carbon metrics, and sustainability reporting systems. |
| Academic Community | Increase sustainability involvement in teaching, research, and community services. |

Sources: Data Processing (2025)

Future Research Recommendations

1. Include mediating or moderating variables (e.g., Green Culture, Digital Transformation).
2. Expand the sample to universities across Indonesia or Southeast Asia.
3. Apply SEM (PLS or AMOS) to validate model robustness.

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