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Green University Initiative's Influence On Reuse Intention: Moderated By Environmental Value Among Undergraduates In Indonesian Universities

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Abstract
Environmental sustainability is a very crucial matter in today's world. Universities across the globe made efforts to take part in this matter and it is scored based on the UI GreenMetric. There is a paradox of confusing environmental behaviour among the learners given that their universities exhibit good sustainability policies. This research aims to examine the effects of Green University Initiatives (GUI) on undergraduates' reuse intention in Indonesian Universities while being moderated by environmental value. The population used in this research are undergraduate students from Universitas Indonesia, Universitas Diponegoro, and Universitas Gadjah Mada. The phenomena in this study were explored by using quantitative method. A purposive sampling method is applied to collect the data, with a total of 418 respondents. The data was collected through a survey that was spread amongst active undergraduates in the three universities. Previous studies are analysed to establish the relationship between the constructs, forming the basis for the research framework and hypotheses. To analyse the relationships between the variables, the research uses Structural Equation Modelling (SEM) to avoid common method variance and attain statistical credibility. A revised version of the Theory of Planned Behavior is recommended for studying sustainable actions in the academic environment and to achieve this, Attitude Towards Reuse, Moral Norm and Environmental Value should be endorsed more while removing the less influential predictors for a more accurate model. The outcome of this research will help policymakers and Indonesian universities to incorporate sustainability ethics across disciplines and prioritizing Green University Initiatives to facilitate sustainable decisions and encourage participation.

Keywords: *Green University Initiative, Reuse Intention, Environmental Value, Attitude Towards Reuse, Subjective Norm, Perceived Behaviour Control, Moral Norm*

INTRODUCTION

Since the formulation of the SDGs, Indonesian private sector has also been supportive particularly when organisations acknowledge that sustainability is key in business continuity. There has been a rise in environmentally friendly policies especially among manufacturing firms and in the energy as well as farming sectors. Although the goals are quite general in nature, there are issues in their implementation because of existing gaps on infrastructure, awareness, and enforcement (Megawati & Pratama, 2024). These gaps give the educational institutions room in which they can practice in the promotion of green activities and good environmental practices that will foster sustainable development at the national level. Higher education institutions are organizations primarily focused on education, which makes their business processes distinct from those of other types of organizations (Pasaribu et al., 2021). Even so, there are not a lot of research that studies the roles of these universities in helping with the SDG. Universities not only assist in the communication of knowledge about the SDGs but also in the execution of the SDGs through green campus policies and student-based sustainability causes.

The UI GreenMetric World University Ranking was developed in 2010 by Universitas Indonesia to gauge green progress in universities around the world. Indonesian institutions have consistently demonstrated leadership in promoting sustainable practices across six key criteria: Setting and Infrastructure, Energy and Climate Change, Waste Management, Water, Transportation, and Education and Research (UI GreenMetric, 2024). Much has been accomplished by these universities through their efforts at ensuring that

sustainability forms part of the campus management process and this involves energy management, waste management as well as Quality (UI GreenMetric, 2024).

Taken from UI GreenMetric (2024), The top three ranked Universities in Indonesia are Universitas Indonesia (UI), Universitas Gadjah Mada (UGM), and Universitas Diponegoro (Undip). The three universities have held a high rank in the green metric for years. Even now, UGM holds a relatively sustainable rank within the list of Asia's universities which, based on the 2024 UI GreenMetric ranking, it emerges within the top 5 universities (Kompas, 2024). It has established community environmental activities and participated in debates on how to achieve the SDGs by education and research (UI GreenMetric, 2024). As well as UI and Undip, UGM engaged in partnership programs allowing for increasing the awareness on sustainable practices and policies. These initiatives demonstrated that these universities adopted actualisation of their sustainability courses, affirming that quality learning sustains that these programs served as benchmarks for higher education institutions in Indonesia and internationally.

Despite universities like these having great efforts and reports on their UI Green Metric, it is known that the students still don't show the same efforts as how the campus envisions. The most common example we can take is littering not on the designated bins or even utilizing reusable cups. Littering still remains a significant challenge among university students in Indonesia; this of course reflects a gap between environmental awareness and their behaviour. Cross-sectional study showed that although Indonesian students have significantly higher environmental efficacy than their Japanese counterpart's improper disposal of wastes is still evident in school environment (Syakura et al., 2020).

This argues that though students may have perception towards the conservation of the environment, the behaviour change may require more strategies. A study on Undip revealed that student knowledge plays an important role in their generation of solid waste; there is an excellent chance of achieving sustainable waste by providing knowledge and courses on sustainable waste (Budihardjo et al., 2021). These studies serve as an argument for further development of educational initiatives to promote the actual change in people's behaviours.

In the study by Siswanti et al. (2024), it emphasize on the importance of instituting green practices that would enhance sustainability results. These findings are consistent with Ta'Amnha et al. (2024) study that revealed that green process and product improvements improve organizational performance through reduction of the variability of operations and decrease in environmental pressures. Various innovations can be embraced by universities as other institutions through establishment of sustainable waste management and environmentally friendly working policies. It is also possible to use these changes to fill current lacks for example in the area of improper waste management, by implementing new solutions encouraging students to act more responsibly.

Ilmalhaq et al. (2024) support the aspect of behaviour change and the aspects of environmental attitude and mindful consumption of resources. According to such principles, universities could improve the efficiency of waste management as a result of stimulating students to participate in awareness campaigns and taking personal responsibility for the sustainable behaviour. Such efforts could help combine technological and behaviour change approaches that may narrow the awareness-action gap on university campuses.

Another research conducted in Universitas Indonesia also included the analysis of the factors affecting to waste separation behaviour of the students. That is, waste bins' presence did not significantly predict the proper waste separation; instead, students' perceived usefulness of the action did. This is an implication that only providing facilities is insufficient without fostering a sense of responsibility and value towards waste management among students (Chaerunnissa et al., 2020). Besides, a study conducted to determine the level of perception towards the management of solid wastes at IPB University showed that students had a high level of awareness, but their actual practices regarding waste sorting, minimizing, reusing and recycling were different. The last research highlighted a statistically significant relationship between awareness and practices, suggesting that there should be awareness creation programs that include consistent students' waste management behaviours (Rugatiri et al., 2021).

It is relevant to investigate how reuse intention, a type of pro-environmental behaviour, can be better promoted by green initiatives from universities and students' environmental values. Although there are a lot of investigations of general environmental behaviour, few attempts have been made to understand relationships between specific green initiatives at universities and predefined environmental values of students in terms of sustainable behaviour more specifically concerning the reuse of materials in Indonesian universities. Thus, this research aims to address the inconsistency between the increased level of environmental consciousness, established by green university activities, and the real tendencies of student reusing behaviour.

LITERATURE REVIEW

Green Supply Chain

Today, global supply chains face more risks compared to the past, including disruptions and delays in supply, as well as fluctuations in demand and prices (Hendayani et al., 2021). This is helped by the emergence of new trends in SCM, developed based on Industry 4.0 where integration of smart technologies integrate supply chains into complex of intelligent web. Zhang et al., (2023). Supply chain is also a field that is transitioning into being greener. As highlighted by Saini et al., (2023), GSCM goes beyond efficiency objectives, and anchors sustainability into supply chain management. This approach commonly requires implementing circular economy concepts like recycling and reuse and utilizing instruments like life-cycle assessments.

Green University Initiative

The main objective of Green University Initiatives (GUIs) is to promote environmentally friendly practices in Higher Education Institutions (HEIs) by including them in the syllabus and running them in the daily operations. GUIs are designed to cut energy use, reduce greenhouse gas emissions and curb water and waste consumption, matching the goals set in the Millennium Development Goals (Pereira Ribeiro et al., 2021). HEIs include GUIs in infrastructure, curriculum and the larger community, with reasonable methods to monitor how green their practices are (Zhu et al., 2020). Sustainability measurement and observation of all areas of the university lead GUIs to help stakeholders act environmentally friendly and minimize pollution, energy and waste (Menon & Suresh, 2022; Fissi et al., 2021).

Reuse Intention

Reuse Intention (RI), depends on their attitude, perception of social pressure and how much control they feel they have (Beck & Ajzen, 1991). They take a leading part in helping the planet by encouraging people to use reusable drink containers rather than plastic ones (Roy, 2023). RI is mostly encouraged by appreciating the advantages, pressure from society and the simplicity of using/reusing again (Aboelmaged, 2021; Bhutto et al., 2020). In higher education, RI is achieved by teaching ethical norms and environmental values along with sustainability programs, making sure workshops and lessons support a strong sustainability culture on campus grounds (Roy, 2023).

Environmental Value

Environmental value refers to people's awareness of their environmental duties and normally practice recycling and preserving resources (Corraliza & Berenguer, 2000). Taller EVs lead to stronger standards of morality that encourage conserving energy and reusing things, because of the VBN theory. Using the Theory of Planned Behavior with EVs improves how well we can predict environmentally friendly actions and helps care for the environment (Wang et al., 2022). When we consider that EVs are more efficient, they lead to people being eco-friendly and organizations supporting sustainability, as both are closely related to teaching about the environment (Qazi et al., 2020; Menon & Suresh, 2022).

Attitude Towards Reuse

Attitude Toward Reuse measures how a person feels about using things a second time, as it strongly impacts predicting someone's behavior (Beck & Ajzen, 1991)Evidence shows that an important ATR leads to actions such as reusing beverage containers and recycling electronics (Aboelmaged, 2021). Even so, the COVID-19 pandemic has been shown to reduce the influence of ATR on somebody's actions (Chia et al., 2023).

Combining educational ideas, motivational factors and equipment can help make ATR more sustainable (Bhutto et al., 2020; Yahya et al., 2021).

Subjective Norm

Subjective Norms (SNs) describe how a person believe others expect them to behave. Such beliefs affect a person's intentions (Beck & Ajzen, 1991). They have a significant impact on motivating e-waste recycling and making various energy-saving efforts (Aboelmaged, 2021). Using SNs, individuals may be encouraged to use reusable drinkware and receive discounts for doing so (Nicolau et al., 2022). Promoting better SNs among people needs more social activities and learning opportunities to help them become more eco-friendly (Aboelmaged, 2021; Novoradovskaya et al., 2021).

Perceived Behaviour Control

PBC is the belief someone has in performing a behaviour, based on experiences and what they think holds them back (Beck & Ajzen, 1991). PBC encourages people to, for example, buy energy-saving household items (Bhutto et al., 2020) and take part in recycling electronic devices (Aboelmaged, 2021). It also helps encourage people to use reusable water bottles more often (Fedi et al., 2021). Greater PBC ties a person's willingness to their actual activities, making them more likely to behave in an environmentally friendly way (Hamzah & Tanwir, 2021).

Moral Norm

Moral norms played the roles of providing directions for behaviour by means of moral evaluations and blame attributions (Beck & Ajzen, 1991). Emotions such as understanding and guilt are moderated by MNs in the process of environmental actions (Bamberg & Möser, 2007). According to Lu et al. (2020) and Wang et al. (2022)MNs increase how well TPB can explain why people adopt sustainable behaviours. Adopting MNs in guidelines, programs and teaching better matches a person's personal ethics with official objectives, working toward sustainability (Wang et al., 2022).

RESEARCH METHODOLOGY

This research uses a quantitative method. Quantitative research methods emphasize numerical data collection and statistical analysis to understand patterns and test hypotheses. These methods are formal and involved the use of apparatus such as questionnaires, controlled tests, and general achievement tests whereby data that can be measured and quantified statistically is collected. This research method gather data through questionnaire, since the results from questionnaires can easily be analyzed due to their structured nature. By utilizing questionnaires, it is possible to organize the data collection from numerous and geographically dispersed participants and, therefore, maximize the credibility and authenticity of the obtained data (Sekaran & Bougie, 2016).

The population taken for this research are active undergraduate university students from Universitas Indonesia, Universitas Diponegoro, and Universitas Gadjah Mada. The reason the author chooses active undergraduate students from these three universities are because it is to get the current condition and perception from the top 3 ranked universities according to UI Green Metric ranking. According to PDDikti (2024), the total population of active undergraduate students from Universitas Indonesia, Universitas Diponegoro, and Universitas Gadjah Mada amounts to 134,794. The technique that will be used in this research is purposive sampling. The sample criteria required for this research are as follows:

1. Active student from the University of Indonesia, Diponegoro University, and Gadjah Mada University.
2. Aware of the Green Environment or UI Green Metric.

After calculations using the Slovin formula, having the result rounded off, it is concluded that the minimum number of samples used should be at least 400.

RESULTS

This study conducted a Descriptive Analysis to describe the independent or dependent variables, standard deviation and mean were used in measuring the variables. This includes Green University Initiative, Attitude

Towards Reuse, Subjective Norm, Perceived Behaviour Control, Moral Norm, Environmental Value, and Reuse Intention.

1. Attitude Towards Reuse

Data processing results reveal that the respondent's answer ranges between 3.89 to 4.3. The evaluation showed ATR 1 held the highest value under the ATR variable whereas ATR 4 displayed the lowest value. The recorded average score from this data is at 4.16. The "Agree" category of the continuum line scale represents the variable position based on the scores obtained from the rating scale. The survey results revealed that Attitude Towards Reuse is at "Agree" level.

2. Subjective Norm

Data processing results reveal that the respondent's answer ranges between 3.83 to 4.22. The evaluation showed SN 4 held the highest value under the SN variable whereas SN 3 displayed the lowest value. The recorded average score from this data is at 4.02. The "Agree" category of the continuum line scale represents the variable position based on the scores obtained from the rating scale. The survey results revealed that Subjective Norm is at "Agree" level.

3. Perceived Behaviour Control

Data processing results reveal that the respondent's answer ranges between 4.03 to 4.19. The evaluation showed PBC 1 held the highest value under the PBC variable whereas PBC 5 displayed the lowest value. The recorded average score from this data is at 4.13. The "Agree" category of the continuum line scale represents the variable position based on the scores obtained from the rating scale. The survey results revealed that Perceived Behaviour Control is at "Agree" level.

4. Moral Norm

Data processing results reveal that the respondent's answer ranges between 3.89 to 4.21. The evaluation showed MN 1 held the highest value under the MN variable whereas MN 3 displayed the lowest value. The recorded average score from this data is at 4.04. The "Agree" category of the continuum line scale represents the variable position based on the scores obtained from the rating scale. The survey results revealed that Moral Norm is at "Agree" level.

5. Environmental Value

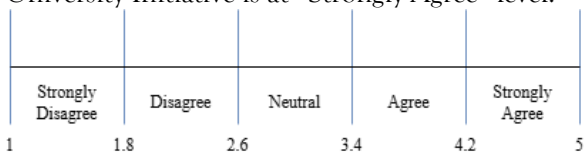
Data processing results reveal that the respondent's answer ranges between 4.07 to 4.26. The evaluation showed EV 5 held the highest value under the EV variable whereas EV 2 displayed the lowest value. The recorded average score from this data is at 4.19. The "Agree" category of the continuum line scale represents the variable position based on the scores obtained from the rating scale. The survey results revealed that Environmental Value is at "Agree" level.

6. Reuse Intention

Data processing results reveal that the respondent's answer ranges between 4.15 to 4.3. The evaluation showed RI 1 held the highest value under the RI variable whereas RI 5 displayed the lowest value. The recorded average score from this data is at 4.24. The "Strongly Agree" category of the continuum line scale represents the variable position based on the scores obtained from the rating scale. The survey results revealed that Reuse Intention is at "Strongly Agree" level.

7. Green University Initiative

Data processing results reveal that the respondent's answer ranges between 4.24 to 4.38. The evaluation showed GUI 4 held the highest value under the GUI variable whereas GUI 1 displayed the lowest value. The recorded average score from this data is at 4.33. The "Strongly Agree" category of the continuum line scale represents the variable position based on the scores obtained from the rating scale. The survey results revealed that Green University Initiative is at "Strongly Agree" level.



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Analysis Result

Measurement Model Evaluation

The convergent validity test involves comparing measurement scales with positive values to other instruments that evaluate similar constructs.

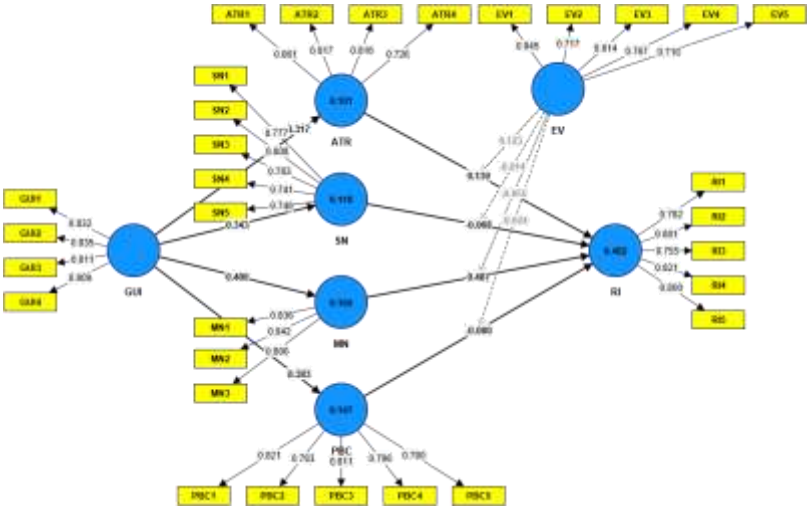

Figure 2. Outer Model Figure

Validity can be assessed when an element or indicator has both a loading factor and an Average Variance Extracted (AVE). The following are the results of the validity test conducted using SmartPLS software:

Table 1. Convergent Validity Test Result

Variable	Question Item	Loading Factor (>0.7)	AVE (>0.5)	Description
Attitude Towards Reuse	ATR 1	0.861	0.650	Valid
	ATR 2	0.817		Valid
	ATR 3	0.816		Valid
	ATR 4	0.726		Valid
Subjective Norm	SN 1	0.777	0.595	Valid
	SN 2	0.808		Valid
	SN 3	0.783		Valid
	SN 4	0.741		Valid
	SN 5	0.746		Valid
Perceived Behaviour Control	PBC 1	0.821	0.637	Valid
	PBC 2	0.783		Valid
	PBC 3	0.811		Valid
	PBC 4	0.796		Valid
	PBC 5	0.780		Valid
Moral Norm	MN 1	0.836	0.683	Valid
	MN 2	0.842		Valid
	MN 3	0.800		Valid
Environmental Value	EV 1	0.845	0.597	Valid
	EV 2	0.717		Valid
	EV 3	0.814		Valid
	EV 4	0.767		Valid
	EV 5	0.710		Valid

Variable	Question Item	Loading Factor (>0.7)	AVE (>0.5)	Description
Reuse Intention	RI 1	0.782	0.628	Valid
	RI 2	0.801		Valid
	RI 3	0.755		Valid
	RI 4	0.821		Valid
	RI 5	0.800		Valid
Green University Initiative	GUI 1	0.832	0.676	Valid
	GUI 2	0.835		Valid
	GUI 3	0.811		Valid
	GUI 4	0.809		Valid

Source: Processed Data (2025)

The results of the convergent validity test show that all 7 variables—Attitude Towards Reuse, Subjective Norm, Perceived Behaviour Control, Moral Norm, Environmental Value, Reuse Intention, and Green University Initiative—along with their respective indicators, demonstrate high convergent validity. This is confirmed by meeting the required criteria, with AVE values exceeding 0.5 (>0.5) and loading factor values above 0.7 (>0.7). Since all tested indicators are valid, it can be concluded that the validity outcomes for each variable are acceptable and the corresponding questions can be used reliably.

The discriminant validity approach from the reliability test ensures reliable and consistent outcomes from the instrument. The research implemented Cronbach's alpha and composite reliability to determine the discriminant validity of testing.

Table 2. Cronbach's Alpha and Composite Reliability Test Result

Variable	Cronbach's Alpha	Composite Reliability	Conclusion
Attitude Towards Reuse	0.819	0.842	Reliable
Subjective Norm	0.830	0.830	Reliable
Perceived Behaviour Control	0.858	0.860	Reliable
Moral Norm	0.768	0.770	Reliable
Environmental Value	0.830	0.845	Reliable
Reuse Intention	0.852	0.856	Reliable
Green University Initiative	0.841	0.852	Reliable

Source: Processed Data (2025)

Fornell-Larcker Criterion

The square root of a construct's AVE must be higher than it correlates with every other construct. The criterion is testing if the construct accounts for a greater share of variance among its own indicators than the construct's indicators.

Table 3 Discriminant Validity (Fornell-Larcker Criterion) Result

Path	ATR	EV	GUI	MN	PBC	RI	SN
ATR	0.806						
EV	0.495	0.773					
GUI	0.317	0.428	0.822				
MN	0.442	0.558	0.400	0.826			
PBC	0.466	0.595	0.383	0.601	0.798		

RI	0.369	0.549	0.385	0.632	0.405	0.792	
SN	0.389	0.469	0.343	0.522	0.597	0.326	0.771

Source: Processed Data (2025)

Structural Model Evaluation

Explanatory Power

The Explanatory Power (R-Square) test is used to predict the causal relationship between independent variables and their influence on dependent variables. The interpretation criteria for R-square values are as follows: a value of 0.75 and above indicates a strong model, 0.50 reflects a moderate model, and 0.25 suggests a weak model.

Table 3. Explanatory Power Table

Variable	R-Square	Information
Attitude Towards Reuse	0.101	Weak
Moral Norm	0.160	Weak
Perceived Behaviour Control	0.147	Weak
Reuse Intention	0.482	Moderate
Subjective Norm	0.118	Weak

Source: Processed Data (2025)

Based on the results of the R-Square test shown in table 4.13, the research model explains the variability of the dependent variable. The independent variable has an influence of 10.1% on ATR, this finding is proven by the r-square coefficient of 0.101. For MN, it is influenced by the independent variable at 16%, continued by PBC at 14.7%, then RI at 48.2%, and finally for SN at 11.8%. Most of the variables tested for r-square are considered weak, other than the variable Reuse Intention, which is considered to be almost moderate.

Significance and Relevance

Table 4. 1Hypothesis Test Result (T-Statistics and P-Value)

Hypothesis	Path Relationship	T Statistics (|O/STDEV|)	P-Value	Information
H1	ATR -> RI	2.419	0.016	H1 Accepted
H2	EV -> RI	4.391	0.000	H2 Accepted
H3	GUI -> ATR	5.017	0.000	H3 Accepted
H4	GUI -> MN	7.331	0.000	H4 Accepted
H5	GUI -> PBC	6.795	0.000	H5 Accepted
H6	GUI -> SN	6.185	0.000	H6 Accepted
H7	MN -> RI	6.024	0.000	H7 Accepted
H8	PBC -> RI	1.211	0.226	H8 Rejected
H9	SN -> RI	1.515	0.130	H9 Rejected
H10	EV x ATR -> RI	2.220	0.026	H10 Accepted
H11	EV x SN -> RI	0.222	0.824	H11 Rejected
H12	EV x MN -> RI	0.836	0.403	H12 Rejected
H13	EV x PBC -> RI	0.354	0.723	H13 Rejected
H14	GUI -> SN -> RI	1.483	0.138	H14 Rejected
H15	GUI -> PBC -> RI	1.180	0.238	H15 Rejected
H16	GUI -> MN -> RI	4.523	0.000	H16 Accepted
H17	GUI -> ATR -> RI	2.196	0.028	H17 Accepted

Source: Processed Data (2025)

1. H1: ATR → RI

ATR demonstrates positive and statistically significant influence on RI according to testing results whereby the T-Statistic reached 2.419 and P-Value hit 0.016. Higher ATR amounts show positive connections to RI outcomes which means expanded ATR values correspond with enhanced RI strength. This statistical outcome provides evidence to back up H1 because the P-Value falls below 0.05. H1 is accepted.

2. H2: EV → RI

A significant positive relationship exists between EV and RI because their T-Statistic is 4.391 and their P-Value reaches 0.000. The significant T-Statistic demonstrates EV plays a major and positive role in RI so RI rises substantially when EV increases. These findings lead to the acceptance of H2 because the statistical strength of the relationship between EV and RI is confirmed by the extremely low P-Value. H2 is accepted.

3. H3: GUI → ATR

Tests indicate that GUI has a robust and statistically significant positive influence on ATR since the result includes a T-Statistic value of 5.017 and a P-Value of 0.000. Reasons behind ATR growth can be attributed to GUI improvements because the high T-Statistic shows that GUI possesses a strong impact on ATR. A P-Value of 0.000 demonstrates such high significance. H3 is accepted.

4. H4: GUI → MN

The analysis shows that GUI strongly increases MN because its results yield a T-Statistic of 7.331 and a P-Value of 0.000. The high T-Statistic value demonstrates GUI acts as a major determining factor in MN which causes better GUI interfaces to result in significantly increased metrics of MN. The P-Value (0.000) proves that this statistical evidence establishes the undeniable relationship between variables. H4 is accepted.

5. H5: GUI → PBC

The data reveals a strong relationship between GUI and PBC because the T-Statistic reaches 6.795 and shows a P-Value value of 0.000. The large T-Statistic value indicates that GUI exerts a strong positive impact on PBC as increased GUI features result in elevated PBC levels. P-Value reached 0.000. H5 is accepted.

6. H6: GUI → SN

A strong positive association exists between GUI implementation and SN where the obtained T-Statistic equals 6.185 and its corresponding P-Value reaches 0.000. SN benefits significantly from GUI implementation according to the high value of the T-Statistic thus demonstrating that delivering GUI enhancements brings about better SN results. P-Value (0.000) which indicates a strong statistical significance. H6 is accepted.

7. H7: MN → RI

Research findings demonstrate a strongly significant relationship between MN and RI because the T-Statistic reached 6.024 and P-Value became 0.000. Programmers with higher numeric intensity functions demonstrate heightened reliability for information systems. The statistical results through P-Value (0.000) demonstrate a certain effect. H7 is accepted.

8. H8: PBC → RI

The analysis demonstrates an insignificant relationship between PBC and RI because the examined T-Statistic equals 1.211 and the P-Value reaches 0.226 which exceeds 0.05. The P-Value (> 0.05) together with the low T-Statistic value indicates PBC has no substantial effect on RI measurement. H8 is rejected.

9. H9: SN → RI

The data revealed that SN has no meaningful influence on RI since the T-Statistic measure equals 1.515 and P-Value reaches 0.130 which surpasses the 0.05 mark. The observed positive trend between SN and RI remains weak based on the T-Statistic but due to randomness we cannot confirm this relationship statistically since the P-Value exceeds 0.05. H9 is rejected.

10. H10: EV × ATR → RI (Moderating Effect)

The combined influence between EV and ATR shows a clear positive relationship for RI according to a T-Statistic at 2.220 and P-Value measurement of 0.026. When EV is combined with ATR they produce a stronger RI impact than either factor would independently achieve. The statistical significance of this combination is validated by the P-Value (< 0.05). H10 is accepted.

11. H11: EV × SN → RI (Moderating Effect)

The joint influence between EV and SN fails to produce a noteworthy effect on RI because their T-Statistic stands at 0.222 while their P-Value reaches 0.824 exceeding the 0.05 mark. The extremely low T-Statistic and high P-Value together prove that the combination of EV and ATR does not create any meaningful or valid relationship with RI. H11 is rejected.

12. H12: EV × MN → RI (Moderating Effect)

The combination of EV and MN fails to affect RI since their interaction level produced a P-Value of 0.403 and T-Statistic of 0.836 which are above 0.05. Random variation might explain the observed weak effect because the T-Statistic value is 0.222 combined with a P-Value greater than 0.05. H12 is rejected.

13. H13: EV × PBC → RI (Moderating Effect)

The relationship between EV and PBC does not affect RI because the statistical T-Statistic reaches 0.354 and P-Value goes to 0.723 above 0.05. The results demonstrate that EV and PBC interaction does not have a statistically significant relation with RI. H13 is rejected.

14. H14: GUI → SN → RI (Mediation Effect)

The research suggests no significant mediation between SN and the relationship between GUI and RI since the T-Statistic is 1.483 and P-Value reaches 0.138 above the 0.05 significance threshold. Testing reveals that GUI does impact SN (H6) except the effect does not pass through to RI. The results indicate no mediation occurs between these variables. H14 is rejected.

15. H15: GUI → PBC → RI (Mediation Effect)

The evaluation of PBC as a mediator between GUI and RI indicates no significant relationship since the T-Statistic reached 1.180 and P-Value exceeded 0.05. The path between GUI and PBC exists (H5) but PBC fails to create significant transmission to RI. H15 is rejected.

16. H16: GUI → MN → RI (Mediation Effect)

The statistical results show that MN fully mediates the connection between GUI and RI because the T-Statistic reaches 4.523 and P-Value remains at 0.000. The results demonstrate that MN serves as a complete mediator between GUI and RI because the effects of GUI on RI run mainly through the MN variable. The tested mediation effect is statistically reliable because it maintains a P-Value of 0.000. H16 is accepted.

17. H17: GUI → ATR → RI (Mediation Effect)

Results show significant mediation of ATR between GUI and RI because the T-Statistic reaches 2.196 and the P-Value stands at 0.028 (< 0.05). ATR functions as a partial intermediary element connecting the relationship between GUI and RI because it acts as both a direct and indirect impact factor. The analyzed data shows the P-Value is under 0.05. H17 is accepted.

DISCUSSION

Some hypotheses were accepted due to statistical analysis, presenting corresponding correlations between the factors of GUI and Reuse Intention (RI) among undergraduates in Universitas Indonesia, Universitas Diponegoro and Universitas Gadjah Mada. The statistics maintained several substantive findings that assist in the realisation of the nature and extent to which Green University Initiative affects Reuse Intention among Indonesian undergraduate students.

These findings imply that Indonesian universities could potentially need to look beyond mainstream behavior change frameworks in the establishment of sustainability projects, focusing rather on more potent determinants of attitude and moral norms that did exert significant influence in this study. Lack of significant correlations for PBC and SN may represent a sign of cultural difference in motivation or a need for stronger institutional support structures to make reuse behaviours more within reach and socially supported.

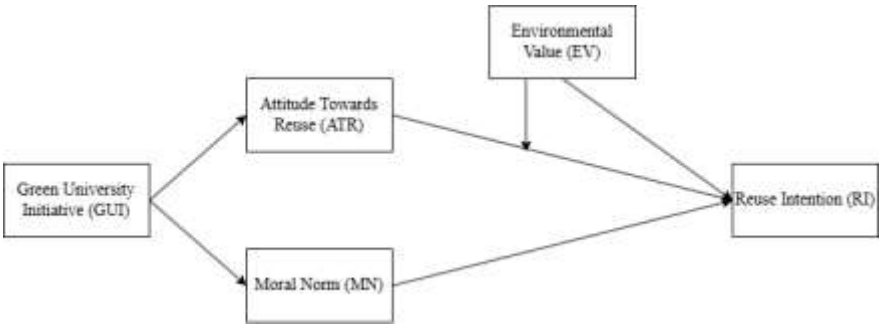

Figure 3. New Framework based on Accepted Hypotheses

Indeed, following the empirical results, the author makes a change to the alleged interdependence between the subject and each of the measures by rejecting the statistically insignificant relationships (the rejected hypotheses) but preserving the accepted relations. This elaborated model is particular to the three Indonesian universities studied herein: Universitas Indonesia (UI), Universitas Diponegoro (Undip), and Universitas Gadjah Mada (UGM) characterised by the student's demographics. The respondents were 418 active undergraduate students, ranging from 18 to 29 years old, thus belonging to a generation that is concerned about the environment but still needs specific motivation to address the attitude-behaviour gap.

CONCLUSION & SUGGESTIONS

The result of this research leads to a conclusion that the Green University Initiative (GUI) has a positive and significant influence on Attitude Towards Reuse (ATR), Moral Norm (MN), Perceived Behavior Control (PBC), and Subjective Norm (SN), most of which also contribute to increasing Reuse Intention (RI). The variables ATR, EV (Environmental Value), and MN are proven to significantly encourage students' intention to reuse goods, both directly and as mediating variables. Meanwhile, the influence of PBC and SN on RI has proven to be insignificant, both directly and when moderated by EV. The moderation effect of EV is only effective on the relationship between ATR and RI. In addition, GUI has a positive effect on RI when mediated by ATR and MN but is not significant when mediated by SN and PBC. Thus, the GUI approach that strengthens students' environmental values, attitudes, and moral norms can effectively increase their intention to behave in an environmentally friendly manner, especially in reuse practices.

The novelty on this research is the contribution in both theoretical and practical. This study emphasizes Attitude Towards Reuse (ATR), Moral Norm (MN) and Environmental Value (EV) as leading factors in studying sustainable behavior in universities. In future, researchers ought to study the framework across various conditions and find out how other important aspects and digital technology play a role in promoting sustainable behaviours. Universities can increase student participation in reuse tasks by designing special programs, embedding environmental ethics into courses and starting peer ambassador assignments and also enable them to experience and care for the environment through conservation endeavours. Making a campus more sustainable involves replacing single-use products, adding feedback methods and taking information-based actions to make programs and their benefits more accessible. By following this complete approach, students learn how to build a sustainable society.

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APPENDIX

Attitude toward reuse (ATR)
1. I think reuse is good.
2. I think reuse is useful.
3. I think reuse is a responsibility.
4. I think reuse is hygienic.

Moral norm (MN)
1. I feel I should not waste anything if it could be used again.
2. I would feel guilty if I did not reuse my recyclables.
3. It would be wrong of me not to reuse my recyclables.

Environmental value (EV)
1. I feel a personal obligation to do whatever I can to prevent environmental degradation.
2. People important to me thought that I should prevent environmental degradation.
3. If I start green work, so, most people who are important to me would encourage me.
4. If I prevent environmental degradation, it will help me to make my interpersonal relationships closer.
5. It would make a good impression on other people.

Reuse intention (RI)
1. I intend to use a reusable cup system in the future.
2. I will make an effort to make more use of a reusable cup system in the future.
3. I intend to use my own cup in the future.
4. I will make an effort to use my own cup to drink coffee, tea, or similar drinks on the go.
5. I already have a specific plan of when and how I would be able to use a reusable cup.

Green university initiative (GUI)
1. My university takes action to promote the use of renewable energies.
2. My university takes action to promote energy efficiency.
3. My university takes action to promote water efficiency.
4. My university takes action to promote waste management.

(Roy, 2023)