The Influence of Moral Norms, Social Environment, and Recycling Inconvenience on Recycling Behavior

Nurlasera[1], Mey Dinda Nurhikmah[2], Najwa Aliyya Zahra[3], Risnawati Tambunan[4], & Yunelly Asra[5].
[1-4] Faculty Of Economics and Social Sciences,
Universitas Islam Negeri Sultan Syarif Kasim Riau, Pekanbaru, Indonesia
[5]Politeknik Negeri Bengkalis
nurlasera@uin-suska.ac.id

ABSTRACT

This study aims to analyze the influence of moral norms, social environment, and recycling inconvenience on recycling behavior within the community. The research was conducted using a quantitative approach, where data were collected through questionnaires distributed to 163 respondents. The collected data were analyzed using simple and multiple regression methods to determine the individual and simultaneous effects of the independent variables on recycling behavior. The results reveal that moral norms, social environment, and recycling inconvenience each have a significant individual effect on recycling behavior. However, in the multiple regression analysis, only social environment and recycling inconvenience remained significant predictors, while moral norms did not show a significant influence. These findings suggest that social and practical factors play a more dominant role in shaping recycling behavior compared to individual moral considerations. The implication of this research highlights the importance of strengthening community engagement and improving the convenience of recycling facilities to enhance pro-environmental behavior. The novelty of this study lies in its integration of moral, social, and practical dimensions in explaining recycling behavior within the community context.

Keywords: *Moral Norms, Social Environment, Recycling Inconvenience, Recycling Behavior*

BACKGROUND

Environmental problems, especially related to waste management, have become a major global concern. The rapid growth of population and urbanization has significantly increased the volume of waste, leading to pollution and environmental degradation. Recycling has been recognized as one of the most effective solutions to reduce waste accumulation and promote environmental sustainability. However, public participation in recycling programs remains relatively low despite various government and community initiatives. Understanding the factors that influence recycling behavior is therefore essential for designing effective environmental policies. Previous studies indicate that recycling behavior is influenced by internal and external factors, such as moral norms, social environment, and recycling inconvenience. Moral norms represent an individual's moral responsibility to act in an environmentally friendly manner. People who perceive recycling as a moral duty are more likely to engage in it consistently.

The social environment also plays an important role, as individuals tend to adapt their behavior based on social expectations and peer influence. Support from family, friends, and community members can increase the likelihood of someone

participating in recycling activities. On the other hand, if recycling is not a common practice within a community, individuals may feel less motivated to recycle. In addition, recycling inconvenience can act as a significant barrier. Limited access to recycling facilities, lack of time, or complicated sorting procedures often discourage people from recycling, even when they have positive attitudes toward environmental protection. Therefore, overcoming these practical barriers is crucial to improve recycling rates.

Considering the above factors, this study aims to analyze the influence of moral norms, social environment, and recycling inconvenience on recycling behavior. The findings are expected to contribute to a better understanding of behavioral determinants in waste management and to provide useful insights for policymakers in promoting more sustainable recycling practices.

Research Objectives

This section contains the research objectives. The main objective of this study is to analyze the factors influencing recycling behavior in the community. Specifically, this research aims to:

- Examine the influence of moral norms on recycling behavior
- Determine the effect of the social environment on recycling behavior
- Analyze the influence of recycling inconvenience on recycling behavior
- Identify which of the three variables moral norms, social environment, or recycling inconvenience has the most dominant effect on recycling behavior.

Through these objectives, the study seeks to provide a deeper understanding of the behavioral factors that encourage or hinder individuals from participating in recycling activities and to offer practical insights for designing more effective environmental programs and policies.

LITERATURE REVIEW

Recycling behavior can be understood through several behavioral theories that explain how individual and social factors influence pro-environmental actions. One of the most widely used models is the Theory of Planned Behavior (TPB) developed by Ajzen, which proposes that behavioral intention is determined by attitude, subjective norms, and perceived behavioral control. Within this framework, moral norms are considered an extension of subjective norms representing an individual's sense of moral obligation to perform or avoid certain behaviors. When people believe that recycling is the right and responsible thing to do, their moral considerations become strong motivators for engaging in recycling activities.

In addition, the concept of social environment is rooted in Social Norms Theory, which explains that individuals' behaviors are influenced by perceptions of what others expect or approve of. Recycling becomes more likely when it is seen as a common or socially rewarded behavior within a community.

Another relevant framework is the Behavioral Cost Theory, which highlights the role of convenience and effort in decision-making. According to this theory, individuals tend to avoid actions that require more time, energy, or resources. Thus, recycling

inconvenience such as limited access to recycling bins or complicated sorting processes can reduce people's willingness to recycle, even when they hold positive environmental attitudes.
These theoretical perspectives collectively explain that moral, social, and practical aspects interact in shaping recycling behavior. Encouraging sustainable actions therefore requires both strengthening moral and social motivations and reducing barriers that make recycling inconvenient.

Previous Research
Several previous studies have examined the factors influencing recycling behavior from different perspectives:
Poškus (2015) found that incorporating moral norms into the Theory of Planned Behavior significantly improves the ability to predict recycling behavior. Individuals with strong moral responsibility toward the environment are more consistent in performing recycling actions.

Wu, Zhu, and Zhai (2022) investigated waste management behavior among Chinese university students and discovered that environmental knowledge and personal norms significantly influence recycling intentions and actions.

Daoud (2025) explored the impact of social norms on recycling in multicultural communities and revealed that a supportive social environment fosters collective participation and strengthens pro-environmental culture.

National Academies (2023) identified logistical barriers such as facility access, time constraints, and procedural complexity as primary obstacles to recycling, showing that convenience plays a crucial role in encouraging participation.

White, Habib, and Hardisty (2019) in their study on sustainable consumer behavior emphasized that simplifying recycling processes and providing social reinforcement can greatly enhance recycling rates, particularly when moral motivation alone is insufficient.

Based on these studies, it can be concluded that recycling behavior is not determined solely by internal moral values but also by external social influences and the level of convenience. Integrating these aspects is essential for promoting sustainable waste management practices.

RESEARCH METHODS
This study used a quantitative research approach with a survey method to examine the influence of moral norms, social environment, and recycling inconvenience on recycling behavior. The quantitative method was chosen because it allows for measurable, objective, and statistically testable data collection and analysis. The research employed a correlational design, aiming to determine both the partial and simultaneous effects of independent variables (moral norms, social environment, and recycling inconvenience) on the dependent variable (recycling behavior). The

study relied on primary data obtained from respondents through structured questionnaires as the main data source.

Data

The population in this study included individuals who are aware of or participate in recycling and waste management activities in their communities. The sample consisted of 163 respondents selected using a purposive sampling technique, ensuring that participants had sufficient awareness or experience related to recycling.

The data collection process utilized a structured questionnaire that contained statements measured using a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). The questionnaire covered four main variables:

- Moral Norms: The individual's moral obligation to engage in environmentally responsible behavior.
- Social Environment: The influence of family, friends, and community on one's recycling behavior.
- Recycling Inconvenience: Barriers that make recycling less practical, such as limited facilities, time, or accessibility.
- Recycling Behavior: The actual consistency and frequency of individuals in sorting, collecting, and properly disposing of recyclable materials.

Methods

The data obtained from the questionnaires were analyzed using SPSS software. The analysis involved two stages: simple regression and multiple regression.

- Simple regression was used to test the direct effect of each independent variable on recycling behavior.
- Multiple regression was used to identify the simultaneous effects and the dominant factor influencing recycling behavior.

Before hypothesis testing, validity and reliability tests were conducted to ensure that the research instrument was both accurate and consistent. The results of these analyses were then interpreted to evaluate the significance and strength of the relationships among variables.

RESULTS AND DISCUSSION

RESULTS

Multiple Linear Regression Analysis

Multiple linear regression analysis was conducted to determine the functional relationship between the dependent variable (Recycling Behavior) and the independent variables (Moral Norms, Social Environment, and Recycling Inconvenience).

Table 1.
Results of Multiple Linear Regression Analysis

Model	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients	t	Sig.

			(Beta)		
(Constant)	3.070	1.231	-	2.494	.014
Moral Norms	.009	.096	.008	.094	.925
Social Environment	.578	.081	.587	7.176	.000
Recycling Inconvenience	.177	.063	.185	2.830	.005

Based on the table, it can be seen that the B value for Social Environment (0.578) and Recycling Inconvenience (0.177) are positive and significant, while Moral Norms (0.009) is not significant. This indicates that the better the social environment and the lower the inconvenience of recycling, the higher the recycling behavior.

HYPOTHESIS TESTING

Table 2.
Partial Significance Test (t Test)

Model	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.
(Constant)	3.070	1.231	-	2.494	.014
Moral Norms	.009	.096	.008	.094	.925
Social Environment	.578	.081	.587	7.176	.000
Recycling Inconvenience	.177	.063	.185	2.830	.005

From the coefficients table above:
- Moral Norms (X_1): t = 0.094, Sig. = 0.925 > 0.05 → Not significant.
- Social Environment (X_2): t = 7.176, Sig. = 0.000 < 0.05 → Significant.
- Recycling Inconvenience (X_3): t = 2.830, Sig. = 0.005 < 0.05 → Significant.
Thus, Social Environment has the most dominant influence on Recycling Behavior.

Simultaneous Significance Test (F Test)

Table 3.
ANOVA Test (F Test)

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	870.906	3	290.302	46.002	.000
Residual	1003.401	159	6.311		
Total	1874.307	162			

The F value (46.002) > F table (3.05) with Sig. = 0.000 < 0.05. Therefore, Moral Norms, Social Environment, and Recycling Inconvenience simultaneously have a significant effect on Recycling Behavior.

Table 4.
Coefficient of Determination (R^2 Test)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.682	.465	.455	2.512

The R Square value of 0.465 indicates that 46.5% of the variation in Recycling Behavior can be explained by Moral Norms, Social Environment, and Recycling Inconvenience, while the remaining 53.5% is influenced by other factors.

DISCUSSION

The Influence of Moral Norms on Recycling Behavior

The results show that the Moral Norms variable does not significantly affect Recycling Behavior (Sig. = 0.925 > 0.05). This means moral awareness alone is insufficient to drive recycling. It must be supported by social and structural factors.

The Influence of Social Environment on Recycling Behavior

The Social Environment variable has a positive and significant effect (Sig. = 0.000 < 0.05). A supportive environment strongly encourages recycling participation.

The Influence of Recycling Inconvenience on Recycling Behavior

The Recycling Inconvenience variable also has a significant positive effect (Sig. = 0.005 < 0.05). Reducing barriers such as limited facilities and complex sorting increases recycling behavior.

Simultaneous Influence

The F-test results show that all three variables simultaneously affect Recycling Behavior. However, Social Environment (β = 0.587) is the most dominant factor influencing Recycling Behavior.

CONCLUSION

The findings of this study show that moral norms, social environment, and recycling inconvenience each have a positive and significant influence on recycling behavior when tested separately. However, in the multiple regression analysis, only social environment and recycling inconvenience remain significant predictors, while moral norms do not show a significant effect.

This indicates that external social factors and convenience play a more dominant role in shaping recycling behavior compared to internal moral considerations. The results also suggest that recycling behavior is more likely to increase when individuals are surrounded by supportive social environments and when recycling is made more practical and accessible.

Suggestions and Recommendations

Based on the results of this study, several recommendations can be made for practitioners, policymakers, and researchers:

- For practitioners and environmental organizations: It is essential to strengthen community-based campaigns and collaborative programs that make recycling a socially encouraged and normalized activity.
- For local governments and policymakers: Efforts should focus on improving waste management infrastructure, such as providing accessible recycling bins and simplifying collection systems, to reduce the inconvenience that often discourages recycling.
- For academics and future researchers: Further research can include additional variables such as environmental awareness, recycling knowledge, and perceived behavioral control to obtain a more comprehensive understanding of the factors influencing recycling behavior.

REFERENCES

Daoud, O. W. 2025. The impact of socio-economic factors on recycling behavior in a multicultural and diverse context. Journal of Waste Management Research.

National Academies. 2023. Behavioral Drivers of Waste Management and Recycling. Washington, DC (US): The National Academies Press.

Poškus, M. S. 2015. Predicting recycling behaviour by including moral norms into the theory of planned behaviour. Psichologija, 52, 96–107.

Wu, L., Zhu, Y., & Zhai, J. 2022. Understanding waste management behavior among university students in China: Environmental knowledge, personal norms, and the theory of planned behavior. Frontiers in Psychology, 12, 771723. https://doi.org/10.3389/fpsyg.2021.771723.