



## Does Modern Consumerism Bring Sustainability in Responsible Consumer Behavior? The Case of Household Waste in Indonesia

Andri Ardhiyansyah<sup>✉1</sup>, Abu Bakar Ashidiqy<sup>2</sup>, Ujang Badru Jaman<sup>3</sup>

Faculty of Business and Humanities, Universitas Nusa Putra, Sukabumi, Indonesia<sup>1</sup>

Faculty of Business and Humanities, Universitas Nusa Putra, Sukabumi, Indonesia<sup>2</sup>

Faculty of Business and Humanities, Universitas Nusa Putra, Sukabumi, Indonesia<sup>3</sup>

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### Abstract

Urbanization, globalization, and economic growth in Indonesia have changed consumer behaviors, leading to more household waste and environmental damage. Modern consumerism, fueled by a neoliberal economic model, worsens these issues as Indonesia's waste management systems fail to keep up with the increasing waste from growing urban and middle-class populations. This study examines how knowledge, personalization, and word-of-mouth marketing, three components of contemporary consumerism, affect sustainable and ethical consumer behavior, particularly with regard to home trash management in Indonesia. A quantitative technique was used, and 370 Indonesian homes were surveyed. A structured questionnaire with a Likert scale (1–5) was used to gather the data, and (SEM-PLS 3) was used for analysis. The findings demonstrated that word-of-mouth, personalization, and informativeness had a major influence on the intention to decrease waste as well as the formation of waste reduction behaviors. In turn, these behaviors and intentions strongly indicate long-term, responsible behavior. These findings underscore the crucial role of modern consumerism's components in shaping responsible waste management practices. As the urban and middle-class demographics continue to grow, the implications for Indonesia's waste management systems are profound, suggesting a critical need for targeted interventions that leverage personalization and social influence to promote sustainability.

## Apakah Konsumen Modern Membawa Keberlanjutan Dalam Perilaku Konsumen yang Bertanggung Jawab? Kasus Pada Sampah Rumah Tangga di Indonesia

### Abstrak

Urbanisasi, globalisasi, dan pertumbuhan ekonomi di Indonesia telah mengubah perilaku konsumen, yang menyebabkan lebih banyak sampah rumah tangga dan kerusakan lingkungan. Konsumerisme modern, yang didorong oleh model ekonomi neoliberal, memperburuk masalah ini karena sistem pengelolaan sampah di Indonesia tidak mampu mengimbangi peningkatan jumlah sampah yang berasal dari pertumbuhan populasi perkotaan dan kelas menengah. Studi ini meneliti bagaimana pengetahuan, personalisasi, dan pemasaran dari mulut ke mulut, tiga komponen konsumerisme kontemporer, mempengaruhi perilaku konsumen yang berkelanjutan dan etis, khususnya yang berkaitan dengan pengelolaan sampah rumah tangga di Indonesia. Teknik kuantitatif digunakan, dan 370 rumah di Indonesia disurvei. Kuesioner terstruktur dengan skala Likert (1-5) digunakan untuk mengumpulkan data, dan (SEM-PLS 3) digunakan untuk analisis. Temuan menunjukkan bahwa promosi dari mulut ke mulut, personalisasi, dan keinformatifan memiliki pengaruh besar terhadap niat untuk mengurangi sampah serta pembentukan perilaku pengurangan sampah. Pada gilirannya, perilaku dan niat ini sangat mengindikasikan perilaku jangka panjang yang bertanggung jawab. Temuan ini menggarisbawahi peran penting dari komponen konsumerisme modern dalam membentuk praktik pengelolaan sampah yang bertanggung jawab. Seiring dengan pertumbuhan demografi perkotaan dan kelas menengah, implikasi terhadap sistem pengelolaan sampah di Indonesia sangatlah besar, sehingga menunjukkan adanya kebutuhan yang sangat mendesak untuk intervensi yang ditargetkan dengan memanfaatkan personalisasi dan pengaruh sosial untuk mempromosikan keberlanjutan.

JEL Classification: M31, Q56, D12, Q01

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✉Correspondence Address

Institutional address: Jl. Raya Cibolang No.21

Cisaat Sukabumi 43152, Indonesia

Email: andri.ardhiyansyah@nusaputra.ac.id

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## INTRODUCTION

Urbanization, globalization, and economic expansion have significantly influenced the dramatic shifts in purchasing habits characteristic of modern consumerism, which, in turn, have adverse effects on the environment (Hhidayat, 2023). The shift towards unsustainable consumption patterns, particularly in rapidly developing countries like Indonesia, has raised concerns about environmental impacts, especially in relation to the increase in household waste production (Bibin, 2023). The adoption of the neoliberal economic model in developing countries, such as Indonesia, exacerbates environmental issues by promoting overconsumption and materialistic objectives (Sargin & Dursun, 2023). To mitigate these impacts, sustainable consumer behavior is crucial, highlighting the importance of a comprehensive understanding of how modernity, lifestyle, and social norms shape purchasing decisions (Bui et al., 2022). The growing urban and middle-class population in Indonesia necessitates a comprehensive approach that considers the complex interactions among economic development, cultural values, and individual behaviors to effectively address the environmental impact of increased consumption.

The rising volume of waste generated in Indonesian cities due to changing consumption habits presents a significant challenge for waste management systems. Household consumption patterns, particularly those focused on maximizing utility and influenced by external factors, are major contributors to this waste generation. Such practices can lead to unmanaged waste issues in communities, including Kecamatan Duren Sawit in East Jakarta (Widyaningsih et al., 2022). It is essential to modify consumption habits towards more environmentally friendly practices in order to mitigate their impact on the environment.

In Indonesia, one of the most pressing environmental issues is household waste (Purnomo et al., 2021; Rachmawati et al., 2021). As Indonesia's population continues to grow and its cities become increasingly urbanized, the annual production of household waste has risen significantly (Akhirul et al., 2020). According to statistics released by the Ministry of Environment and Forestry (KLHK) in 2022, the national waste accumulation reached 21.1 million tons. This data underscores the substantial volume of waste generated in Indonesia. Approximately 65.71%, or about 13.9 million tons, of this waste can be managed effectively; however, the remaining 34.29%, equivalent to about 7.2 million tons, remains inadequately managed.

The diverse components of household waste in Indonesia including plastics, paper, cardboard, glass, metal, and organic materials such as food waste complicate waste management efforts. Effective management necessitates significant work and resources for the proper classification, sorting, and processing of each type of waste. The varied composition of waste poses challenges for sustainable management; for instance, the combination of organic waste with plastics or other hazardous materials can obstruct recycling processes and create residues that are difficult to decompose. Plastic waste, in particular, is a major concern due to its non-biodegradable nature and potential for substantial environmental pollution, making it one of the most prevalent types of waste (Ardhiyansyah & Iskandar, 2023). Many regions in Indonesia continue to struggle with efficient waste collection, transportation, and treatment, despite numerous government efforts to enhance waste management. Contributing factors to this inefficiency include inadequate infrastructure and a lack of public awareness regarding the importance of proper waste disposal. Many

consumers tend to be either unaware of or indifferent to the environmental impacts of the waste generated by their consumption habits. This phenomenon can be attributed to various factors, including habitual behaviors, ignorance of environmental effects, disregard for ecological concerns, and corporate practices that promote the production of inexpensive, disposable goods.

Household waste has a significant detrimental impact on both the environment and public health (Widjaja & Gunawan, 2022). Inadequate waste management practices can lead to the contamination of air, water, and soil. The release of toxic gases from uncontrolled burning of waste contributes to air pollution, while poorly maintained waste piles become breeding grounds for pests and diseases, increasing health risks for nearby communities (Widjaja & Gunawan, 2022). Therefore, it is essential to properly segregate and manage household waste to prevent the intermingling of different types, which exacerbates these harmful effects. Waste segregation represents a critical first step in effective waste management. Although challenging, early education is key to cultivating a generation that values environmental stewardship and understands the importance of protecting the environment.

This study explores various factors influencing household waste management in Indonesia, focusing on informativeness, personalization, word-of-mouth communication, waste reduction intentions, habits, and sustainable, responsible behavior. Previous research on household waste management in Indonesia has examined these factors, including word-of-mouth communication, personalization, informativeness, waste reduction intentions, habits, and sustainable behavior (Purnawan & Kadarisman, 2016; Kakinuma, 2019; Dewi, 2020). For instance, Volpp

and Loewenstein (2020) studied the impact of waste reduction intentions and habits; while other researchers have focused on the role of informativeness and sustainable behavior. R. Li and Roe (2024) examined customization and its relationship with sustainable, responsible behavior, while H. Liu and McCarthy (2023) explored the influence of habits and personalization. Sabbir et al. (2023) analyzed the effects of personalization, word-of-mouth communication, and waste reduction intentions, while Theodoridis et al. (2024) emphasized informativeness and its impact on sustained responsible behavior.

Tuu (2023) concentrated on personalization and waste reduction intentions, along with the relationship between informativeness, word-of-mouth communication, and sustainable behavior. This research seeks to integrate these factors into a unified research model, employing a comprehensive quantitative survey methodology. By examining these variables—informativeness, personalization, word-of-mouth, waste reduction intentions, and habits—this study aims to provide a detailed understanding of contemporary consumers' knowledge and behaviors regarding sustainable household waste management.

The findings are expected to offer insights into the organization of household waste by modern consumers, particularly those who have not yet adopted proper waste management practices. Ultimately, this study aspires to promote the development of sustainable, environmentally responsible behaviors among consumers.

This study explores the influence of key aspects of modern consumerism specifically informativeness, personalization, and word-of-mouth on sustainable consumer behavior in household waste management in Indonesia. The research seeks to address the following questions: (1) How does informativeness affect consumers' intentions and habits related to waste reduc-

tion? (2) How does personalized marketing shape sustainable behavior? (3) What role does word-of-mouth play in fostering responsible waste management practices?

The objective of the study is to analyze the relationships between these factors and sustainable waste reduction, emphasizing the role of social influence in shaping responsible waste management practices. The findings are expected to provide valuable insights for policymakers and stakeholders in improving Indonesia's waste management system, contributing to the development of more effective strategies for fostering environmentally conscious behaviors.

### **Informativeness**

The term "informativeness" describes the caliber and applicability of the information offered to customers, which has a big impact on how they make decisions about reducing waste (Chen et al., 2023). Giving customers accurate, up-to-date information on the advantages of waste reduction and the effects that waste has on the environment might encourage them to behave responsibly (Cismaş et al., 2023). By increasing people's awareness of sustainable practices, constant exposure to educational information can aid in the development and reinforcement of waste reduction behaviors.

Educating consumers about the environmental impact of waste management techniques and products can enhance their awareness and motivate them to adopt sustainable behaviors. According to research Cawley et al. (2021) consumers are more likely to practice responsible waste management when they are aware of the advantages of recycling and the costs associated with trash to the environment. One of the most effective ways to communicate is to utilize messages that are succinct, captivating, and clearly convey the advantages of sustainable behavior. Interactive informa-

tion, testimonials, and visual aids can all improve how informative communication efforts are (Vereshchagin, 2023). Previous research underlines that informativeness is a key factor, but there is still a gap when it comes to Indonesia, so we propose a hypothesis:

H1: Informativeness positively influences Waste Reduction Intention.

H2: Informativeness positively influences habits related to Waste Reduction Intention.

### **Personalization**

Customizing product offers and marketing messaging to each customer's unique interests and behaviors is known as personalization. Personalization makes messaging more relevant and engaging, which has a substantial impact on consumer behavior. Personalized communications that fit the values and lifestyles of the recipient are more likely to inspire behavior change. Customers may be encouraged to adopt more sustainable behaviors by providing them with tailored feedback on the amount of trash generated in their homes and waste reduction advice. More advanced personalization strategies are now possible because to technological advancements like artificial intelligence and data analytics (Choi & Lee, 2015). Thanks to these technologies, marketers may design experiences that are specifically catered to the interests and tastes of their target audience, which in turn can promote sustainable behavior. Customizing product offerings and marketing messaging to individual preferences is known as personalization, and it has a big impact on consumer behavior (Chandra et al., 2022). Customized communications that fit each person's values and way of life are more likely to be understood and inspire customers to make a waste reduction commitment (Hanson-Wright et al., 2022). Tailoring waste management ad-

vice and feedback to individual needs can aid in integrating these activities into daily schedules and developing sustainable habits (Choi & Lee, 2015).

H3: Personalization positively influences the Waste Reduction Intention.

H4: Personalization positively influences habits related to Waste Reduction Intention.

### Word of Mouth

Positive word-of-mouth (WOM) regarding sustainable products and behaviors can raise awareness and motivate others to follow suit (Kallergi & Lamers, 2008). WOM and social media: WOM's effect and reach have increased with the rise of social media. Customers can use online platforms to share their thoughts and experiences with a larger audience, which can have a positive knock-on effect on a large number of individuals (Gupta, 2023). One way to encourage responsible behavior in customers is to involve them in social media conversations about sustainability.

Word-of-mouth (WOM) refers to the informal exchange of information and opinions among consumers and is a powerful driver of behavior change, particularly in areas related to sustainability. Positive recommendations and discussions about waste reduction practices from trusted sources, such as friends, family, and community leaders, can significantly increase an individual's intention to adopt these behaviors (Abdulla, 2022). These interpersonal interactions build trust and credibility, which can be more persuasive than traditional marketing. Additionally, frequent conversations and the sharing of personal experiences related to sustainable practices within social networks not only reinforce waste reduction behaviors but also help to normalize and spread these practices throughout a community (Wandoko & Panggati, 2022). This creates a ripple ef-

fect, where sustainable behaviors become integrated into the social fabric, leading to a broader impact on household waste management and environmental responsibility. Furthermore, WOM can also amplify awareness of local waste management initiatives, encouraging greater participation and fostering a culture of sustainability.

H5: Word of mouth has a positive effect on the Waste Reduction Intention.

H6: Word of mouth positively influences habits related to Waste Reduction Intention.

### Waste Reduction Intention

The motivational factors that drive individuals to reduce waste generation are referred to as waste reduction intentions. According to the Theory of Planned Behavior (TPB), intention is significantly influenced by attitudes, subjective norms, and perceived behavioral control, making it a strong predictor of actual behavior (Ajzen, 1991). Strong intentions to minimize waste are likely to lead to tangible changes in waste reduction behaviors. Factors such as environmental awareness, the belief in the effectiveness of waste reduction strategies, and a sense of personal responsibility contribute to these intentions (Rakhmawati et al., 2023). Additionally, social influences, including peer norms and behaviors, play a significant role in shaping these intentions (Obuobi et al., 2024). A strong desire to reduce waste reflects the incentives that encourage individuals to minimize waste production. In line with the Theory of Planned Behavior, strong intentions are key predictors of actual behavior, suggesting that effective waste management practices are likely to follow from a firm intention to reduce waste (Han, 2023; Y. Li et al., 2023).

H7: Waste Reduction Intention positive effect on sustainable responsible behaviour.



## Habits

Habits are formed and reinforced through regular practice over time (Gardner & Rebar, 2019). While these habits can be difficult to break once established, they can also be leveraged to promote sustainable behaviors (Fiorella, 2020). For example, cultivating a habit of recycling can foster consistent, sustainable behavior. Breaking unsustainable habits and forming new, sustainable ones requires intentional effort and targeted interventions. Techniques such as feedback, incentives, and encouragement can facilitate the formation of new habits and the disruption of old ones. Habits are automatic behaviors, performed with minimal conscious thought, often shaped through repetition (Y. Liu et al., 2023). Well-established waste management habits tend to be consistently followed, resulting in long-term responsible behavior.

H8: Habits positively influence sustainable responsible behaviour.

## METHOD

### Research Design

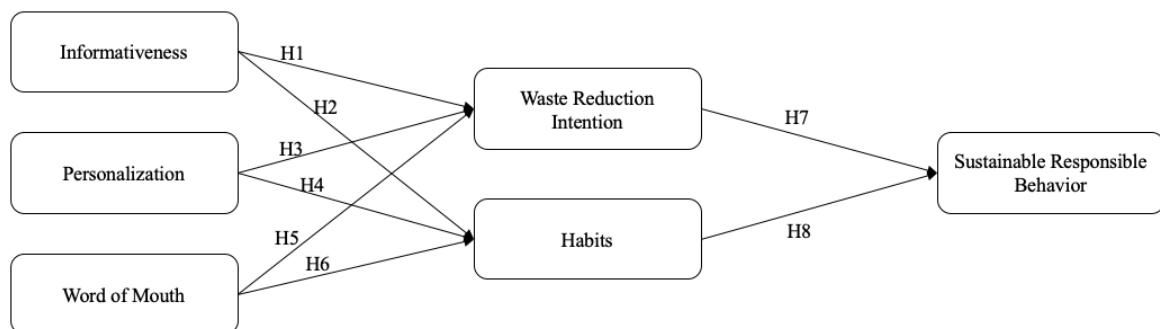
To collect data for this study, researchers employed a survey method targeting respondents, or groups representative of the general public (Schindler, 2019).

This quantitative approach utilized surveys to test the hypotheses and exami-

ne the relationships between the model's variables. The research focused on Indonesian consumers, and the model was empirically tested through surveys distributed both offline and online, including via social media platforms.

### Sample

This study employed non-probability sampling as the selected method. This approach was chosen due to the uncertainty regarding the exact size of the research population (Schindler, 2019). Purposive sampling was employed in this study, as the selection of samples and respondents was based on specific criteria relevant to the research objectives. Purposeful sampling involves selecting participants based on predetermined criteria tailored to the study's objectives. The study's sample was chosen in accordance with Hair et al. (2019) SEM-PLS guidelines, which state that when using a primer in research, the number of indicators should be multiplied by five or ten. With 37 indicators and a multiplicand of 10, this study's minimal sample size is 370. A Likert scale, which gauges individual or group attitudes on connected phenomena, was employed in the data gathering method. Likert scale statements are accompanied by a series of responses in a formatted 1–5 scale. Table 1 shows the demographic characteristics of the participants.



**Figure 1.** Conceptual Framework

**Table 1.** Distribution Sample Characteristics

Category	Frequency	Percentage
<b>Age</b>		
16 - 20 years	30	8.11
21 - 25 years	85	22.97
26 - 30 years	75	20.27
31 - 35 years	65	17.57
36 - 40 years	50	13.51
Above 41 years	65	17.57
<b>Gender</b>		
Male	182	49.2
Female	188	50.8
<b>Education</b>		
Secondary Education	118	31.9
Bachelor's Degree	167	45.1
Postgraduate Degree	85	23.0
<b>Household Income (USD)</b>		
Less than \$500	203	54.9
\$500 - \$1000	111	30.0
More than \$1000	56	15.1

Source: Data Processed (2024)

The sample's age distribution was primarily within the 21–30 range, making up over 43% of respondents, with the fewest (8.11%) aged 16–20. Gender representation was nearly even, with 50.8% female and 49.2% male. Educationally, 45.1% held an undergraduate degree, followed by 31.9% with a secondary school education, and 23.0% with postgraduate qualifications. Income levels varied: 54.9% of respondents earned less than \$500 per month, 30.0% earned between \$500 and \$1000, and 15.1% earned above \$1000, indicating a predominance of low to middle-income levels.

### Data Analysis

In this study, SMARTPLS 3.3.0 was used to perform Partial Least Squares and Structural Equation Modeling (PLS-SEM) for data analysis (Hair Jr et al., 2017). The model was built using Confirmato-

ry Factor Analysis (CFA), and indicators for each latent variable were derived from previous research (Sarstedt et al., 2021). PLS-SEM analysis involves examining the outer model for construct validity and reliability through convergent and discriminant validity, Cronbach's Alpha (CA), and Composite Reliability (CR) (Henseler et al., 2015). The inner model assesses the predictive accuracy by estimating variance in the variables and analyzing the conceptual model's effectiveness. R<sup>2</sup> analysis and a bootstrapping method with 5000 subsamples help evaluate the direct and indirect path coefficients (Hair et al., 2019). Statistical significance is assessed using a t-value and a p-value below 0.50. Finally, the model's overall validity is confirmed through Blindfolding, SRMR, NFI, and Chi-Square tests for predictive relevance and model fit (Kurniawan et al., 2023).

## RESULT AND DISCUSSION

### Outer Model

In structural equation modeling (SEM), the assessment of construct validity and reliability is crucial to ensure that the measures used accurately represent the theoretical constructs they are intended to measure. The Outer Model, which deals with the measurement model in SEM, often employs various statistical methods to evaluate these aspects, including convergent validity, discriminant validity, Cronbach's Alpha (CA), and Composite Reliability (CR) as shown in Table 2.

The instrument in this study has a loading factor more than 0.70, they all fairly reflect the construct being studied. Cronbach's alpha (CA) and Composite Reliability (CR) both have values over the 0.70 cutoff, as Table 3 demonstrates. If the Average Variance Extracted (AVE) number is more than 0.50, the instrument's dependability can be verified. Additionally, the ability of the instrument to discriminate is assessed by quantifying model fit using the Heterotrait-Monotrait, or HTMT, value.

Table 3 states that the Ratio HTMT for all variables is less than 0.90. Furthermore, this demonstrates the validity of the study's tools for measuring the created model. The internal VIF measurement needed to satisfy this requirement can be computed using the PLS technique. Multiple indicators are multicollinear if the Variance Inflation Factor (VIF) is greater than 3 as shown in Table 4.

A VIF score of less than three, according to (Hair et al., 2019), suggests that multicollinearity is not present in their analysis. Additionally, Model Fit testing is used to evaluate the internal or structural performance as well as the external model. The official SMART PLS website states that the non-fidelity index (NFI) should be better than 0.9 or very near to

1, the root mean square (RMS) should be less than 0.102, and the standardized root mean square (SRMR) should be less than 0.10 or 0.08.

### Hypothesis Assessment

The final step in analyzing the inner model involves hypothesis testing through bootstrapping. In accordance with the recommendation of Hair et al. (2019), the researchers utilized 5,000 subsamples to ensure the accuracy of the structural model. In management and economics research, a significance level of approximately 5–10% is commonly applied, and this threshold is considered highly significant.

The direct effects of the tested hypotheses on sustainable behavior and waste reduction are summarized in Table 6. The results indicate that informativeness (IT) has a positive and significant influence on both habits (HB) and waste reduction intentions (WI), with path coefficients of 0.181 (T-value = 3.605, p-value = 0.000) and 0.139 (T-value = 2.415, p-value = 0.004), respectively. Personalization (PL) also shows a significant effect on WI and HB, with path coefficients of 0.168 and 0.179 (T-values = 2.945 and 2.984, p-value = 0.003). Moreover, word-of-mouth (WM) demonstrates the strongest influence on both WI and HB, with path coefficients of 0.846 and 0.674 (T-values = 14.509 and 12.683, p-value = 0.000), highlighting its critical role in shaping consumer behavior.

Furthermore, both habits (HB) and waste reduction intentions (WI) significantly impact sustainable behavior (SR), with path coefficients of 0.315 (T-value = 4.366, p-value = 0.000) and 0.446 (T-value = 8.446, p-value = 0.000), respectively. All proposed hypotheses (H1, H2, H3, H4, H5, H6, H7, and H8) were found to be statistically significant, with WM emerging as the most influential factor in promoting waste reduction behaviors.



**Table 2.** Validity and Reliability Assessment

Variable and Indicators	Code	Loading Factor	CA	CR	AVE
<b>Informativeness</b>			0.884	0.909	0.589
The informativeness of ads	IT.1	0.731			
Relevant information shared	IT.2	0.757			
Comprehensive explanations	IT.3	0.763			
Clear communication	IT.4	0.771			
Up-to-date information	IT.5	0.770			
Easily understandable info	IT.6	0.765			
Details provided in content	IT.7	0.811			
<b>Personalization</b>			0.840	0.883	0.558
Tailored product offers	PL.1	0.742			
Customized marketing messages	PL.2	0.716			
Personalized service suggestions	PL.3	0.802			
Preferences-based information	PL.4	0.736			
Individualized promotions	PL.5	0.819			
Specific consumer feedback	PL.6	0.753			
<b>Word of Mouth</b>			0.846	0.882	0.588
Recommendations from friends	WM.1	0.794			
Influential peer opinions	WM.2	0.773			
Positive experiences shared	WM.3	0.780			
Consumer reviews on social media	WM.4	0.794			
Online feedback and discussions	WM.5	0.791			
Personal stories influencing others	WM.6	0.781			
Peer recommendations in networks	WM.7	0.759			
Testimonials from trusted sources	WM.8	0.751			
<b>Waste Reduction Intention</b>			0.861	0.905	0.706
Willingness to reduce waste	WI.1	0.815			
Intention to adopt eco habits	WI.2	0.849			
Commitment to minimizing waste	WI.3	0.831			
Motivation to recycle	WI.4	0.864			
<b>Habits</b>			0.868	0.898	0.557
Daily recycling routines	HB.1	0.736			
Regular waste sorting	HB.2	0.763			
Consistency in eco-friendly acts	HB.3	0.751			
Green habits in household	HB.4	0.771			
Long-term sustainable actions	HB.5	0.785			
Frequent eco-conscious choices	HB.6	0.793			
Repetitive environmental behavior	HB.7	0.719			
<b>Sustainable Responsible Behaviour</b>			0.884	0.915	0.693
Acting responsibly towards the environment	SR.1	0.819			
Engaging in sustainable practices	SR.2	0.841			
Commitment to environmental preservation	SR.3	0.808			
Taking eco-friendly actions consistently	SR.4	0.818			
Awareness and responsibility for nature	SR.5	0.847			

Source: Data Processed (2024)

**Table 3.** Discriminant Validity HTMT

	IT	PL	WM	WI	HB	SR
Informativeness						
Personalization	0.650					
Word of Mouth	0.772	0.769				
Waste Reduction Intention	0.828	0.579	0.562			
Habits	0.838	0.559	0.535	0.627		
Sustainable Responsible Behaviour	0.764	0.653	0.796	0.791	0.629	

Source: Data Processed (2024)

**Table 4.** Outer VIF Relationship

	WI	HB	SR
Informativeness	1.932	2.182	
Personalization	2.019	2.281	
Word of Mouth	1.873	1.732	
Waste Reduction Intention			1.832
Habits			2.091
Sustainable Responsible Behaviour			

Source: Data Processed (2024)

**Table 5.** Model Fit Assessment

	Saturated Model	Estimated Model
SRMR	0.072	0.073
d_ULS	4.360	4.431
d_G	1.507	1.535
Chi-Square	1.559.740	1.566.023
NFI	0.754	0.759

Source: Data Processed (2024)

**Table 6.** Direct Effects

Hypothesis	Path	OS	SD	T	p
H1	IT -> WI	0.139	0.058	2.415	0.004
H2	IT -> HB	0.181	0.050	3.605	0.000
H3	PL -> WI	0.168	0.057	2.945	0.003
H4	PL -> HB	0.179	0.060	2.984	0.003
H5	WM -> WI	0.846	0.058	14.509	0.000
H6	WM -> HB	0.674	0.053	12.683	0.000
H7	WI -> SR	0.315	0.072	8.446	0.000
H8	HB -> SR	0.315	0.072	4.366	0.000

Notes: OS = Original Sample, SD= Standard Deviation, T= T Statistics, P= P values

Source: Data Processed (2024)

## Discussion

The findings of the study support the idea that the provision of informative content significantly influences individuals' intentions to reduce waste. Numerous research conducted in Indonesia have highlighted the significance of knowledge in enhancing people's intention to decrease waste. Attitudes regarding food waste have a considerable impact on behavior and intention to decrease waste, while high environmental knowledge favorably promotes intention to minimize waste. Furthermore, a study conducted on students at Diponegoro University also emphasized the significance of perceived behavioral control and knowledge of the negative effects of food waste in encouraging people to prevent or minimize waste (Mganga et al., 2021). The results highlight the significance of information in influencing people's intentions to reduce waste in Indonesia and highlight the necessity of educational programs and awareness efforts to promote behavioral change.

Research suggests that providing individuals with accurate and timely information enhances their motivation and understanding of environmental issues, which in turn fosters the development of pro-environmental intentions (Kumar & Nayak, 2023). Furthermore, this study draws attention to research that has investigated how psychological responses and proactive behavior are affected by information processing depth. This shows that adjusting information processing depth can affect how danger is perceived and how likely someone is to take a proactive approach.

Additionally, informativeness had a favorable impact on habits, indicating that regular exposure to informative content can assist in ingraining sustainable behavior into Indonesian consumers' everyday routines. It has been noted that exposing Indonesian consumers to educational con-

tent on a regular basis is crucial to helping them adopt sustainable behaviors. According to research, a number of factors, including social effect, consumer behavior, support for environmental organizations, perceived understanding of sustainability concerns, and persuasive communication, strongly influence sustainable consumption behavior (Bui et al., 2022). A change towards sustainable purchasing can be accomplished by raising customers' environmental knowledge, trust, and perceived effectiveness in addition to teaching, altering their attitudes, and delivering genuine information (Tseng et al., 2021; Du, 2022).

Research by Nugraha et al. (2022) demonstrate that information is not sufficient to modify behavior on its own; structural support and motivational support are also needed. For Indonesian households to manage their trash responsibly, developing sustainable habits in information communication is crucial. Research on trash management in many locations, including Penawar Village, Tanggulun Village, and Bekasi City, has shown how important it is to disseminate knowledge in order to improve waste management techniques that have already been studied (Shirleen & Kho, 2023). Additionally, studies have shown how crucial it is to use interventions like verbal appeals and waste management training to improve community attitudes and awareness about waste management and encourage positive behavior changes (Niha et al., 2022). As a result, Indonesian families might be encouraged to develop sustainable waste management practices by distributing information efficiently and carrying out focused interventions.

The influence of personalization on waste reduction intents and practices is noteworthy, as it underscores the need of customized communication tactics in promoting environmentally conscious behavior in Indonesia. The studies indicate that rather than relying solely on altruistic

principles or uninterpreted data, people are more likely to be motivated to minimize food waste when they receive food waste statistics presented in the form of personal impacts, such as money wasted and daily progress (Hanson-Wright et al., 2022). Furthermore, behavioral insights demonstrate that the message's domain and composition affect the intentions of recipients to reduce food waste; gain-framed messages that emphasize environmental outcomes and loss-framed messages that focus on financial outcomes are especially effective at motivating recipients to reduce food waste (Begho & Zhao, 2023). The results highlight the significance of tailored and focused messaging in promoting long-term shifts in attitudes and intentions for environmental conservation initiatives.

The substantial impact of personalization on habits indicates that customized interventions may help Indonesian consumers gradually acquire sustainable behaviors. Consumer behavior change that is sustainable has been facilitated by personalized interventions, with encouraging outcomes. The research conducted in Indonesia and other areas highlight how effective customized strategies are at encouraging sustainable behavior by accounting for personal preferences and beliefs, which means that the results remain consistent (Krefeld-Schwalb & Gabel, 2023). Intrinsic motivation can be increased by offering tailored feedback and interventions, making the desired action more appealing and relevant to the individual (De Hoogh et al., 2021). The results underscore the significance of tailored approaches in favorably impacting behavior over an extended period of time, ultimately aiding in the formation of more enduring habits among consumers.

Intentions and behaviors related to waste reduction were found to be strongly influenced by word of mouth, highlighting the critical role that social influence

plays in encouraging sustainable behavior in Indonesia. This is consistent with earlier studies that highlight the influence of social reinforcement and observational learning on behavior modification (Khalil et al., 2022; Aravindan et al., 2023). Reliable sources in a person's social network are crucial in forming attitudes and customs, which in turn affect the adoption of new behaviors. Green purchasing intentions have been found to be significantly influenced by positive word-of-mouth, emotional value, and epistemic value, indicating the effectiveness of social influence in supporting green activities (Ardianti et al., 2022).

Word-of-mouth has a major impact on habits, indicating that peer pressure and societal norms can be crucial in helping Indonesian consumers integrate sustainable behavior into their everyday life. According to Thøgersen (2023) the idea of social proof highlights how crucial peer pressure and societal norms are in influencing customers' sustainable behavior in Indonesia. Consumers' sustainable purchasing behavior is significantly influenced by behaviors that support environmental organizations and their perceived knowledge of sustainability issues. The significance of consumer behavior and social impact in promoting sustainable consumption practices, suggesting that personal motivation and perspective are critical factors in promoting sustainable behaviors (Bui et al., 2022). Furthermore, Do & Do (2023) demonstrated that consumers who place a high value on social power and social face are more likely to exhibit green consumption behaviors that are positively correlated with perceived social norms. These findings are reinforced by the fact that people frequently turn to others for guidance on appropriate behavior, particularly when faced with uncertainty. This shows that fostering contact among friends and making use of social networks can be useful

tactics for fostering long-term, sustainable habits.

The present study examines the impact of habitual acts on sustainable and responsible behavior among Indonesian consumers. The findings are consistent with the theory that behavior transforms with time into an automatic response to contextual stimuli (Bui et al., 2022). A number of variables, including perceived consumer efficacy, trust, environmental awareness, responsibility, behavioral goals, emotions, and social consumption-related motives, influence sustainable consumption behavior (Sargin & Dursun, 2023). Since consumer behavior has a major impact on environmental sustainability, understanding sustainable consumer behavior is essential to reducing environmental problems and advancing sustainable development (Scherer & Santos, 2023). Furthermore, adopting Design for Sustainable Behaviour techniques might persuade consumers to make more environmentally friendly choices, particularly when it comes to culinary routines and home appliance usage.

### Limitations

Despite its comprehensive nature, this study has several limitations that should be acknowledged. First, the use of self-reported data may introduce bias, as participants might present their behavior in a more favorable light than is accurate. Second, the sampling method, which primarily focused on urban areas, may not sufficiently represent rural populations, potentially limiting the generalizability of the findings to all Indonesian households. Additionally, the focus on household waste management as the sole indicator of sustainable consumer behavior may overlook other significant aspects of sustainability, such as energy consumption and transportation habits. Lastly, the cross-sectional nature of this study limits our ability to infer causation from the observed relationships,

emphasizing the need for longitudinal studies to validate these findings and observe changes over time.

### Implications for Behavioral Science

This study adds to the body of knowledge regarding the ways in which external factors impact behavioral intentions and actual behavior in the context of home waste management by incorporating informativeness, personalization, and word-of-mouth into the SDG framework. The results highlight the importance of habit building in sustainable behavior and imply that promoting sustainable habits can influence consumer behavior over time. Word-of-mouth marketing has a big impact, which emphasizes how important peer recommendations and social influence are in forming sustainable behavior.

Enhancing the personalization and informational value of sustainability messaging should be the main goal of policy. Education campaigns can effectively encourage consumers to adopt sustainable practices by offering pertinent information and customized feedback. Marketing tactics should make the most of word-of-mouth by motivating customers to tell others about their satisfying experiences cutting waste. Customized advertising messages that fit the values and lifestyles of the target audience can boost motivation and engagement. In order to promote sustainable practices, waste management programs must to integrate social influence and personalization. These programs can be made more effective by offering customized feedback and fostering social interaction around waste reduction.

### CONCLUSION AND RECOMMENDATION

This study demonstrates the significance of word-of-mouth<sup>1</sup>, personalization<sup>2</sup>, and information<sup>3</sup> in influencing Indonesian households' intentions and



behaviors to minimize waste. The primary conclusions of this study demonstrate that informativeness has a major impact on waste management practices and the intention to minimize waste. Giving people access to thorough, reliable, and pertinent information can raise their knowledge of environmental issues and inspire them to reduce their own waste. Personalized messages<sup>2</sup> that are suited to an individual's values and lifestyle are more likely to encourage sustainable behavior change, which is why personalization plays a significant role in enhancing waste reduction intents and habits. Word-of-mouth is a powerful predictor of waste reduction intentions and behaviors, and suggestions from friends and family as well as social influence have a significant impact on the norms and perceptions that eventually shape behavior adoption. In the context of household waste management, intention plays a crucial role as a prelude to action. Intention to minimize waste has a direct impact on sustainable responsible behavior. Customized interventions and regular information exposure can create habits that facilitate long-term behavior change and are essential for maintaining long-term behavioral change.

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