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Determinants of Household Intention to Reduce Food Waste in the Jabodetabek Region

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Abstract

This study investigates the effects of Environmental Awareness, Social Media Usage, Economic Concern, and Impulsive Buying on household Intention to Reduce Food Waste within the Jabodetabek region. Employing a purposive non-probability sampling technique, data were collected through an online survey involving 280 female respondents responsible for food preparation at home. The analysis utilized Partial Least Squares Structural Equation Modeling (PLS-SEM) to test nine hypotheses. The results indicate that four hypotheses were supported, while five were not. Specifically, Environmental Awareness, Social Media Usage, and Attitude toward Food Waste exhibited significant positive effects on the Intention to Reduce Food Waste. Conversely, Economic Concern and Impulsive Buying showed no direct impact on the intention to reduce waste. These outcomes highlight the importance of psychological and informational factors over purely economic considerations in shaping pro environmental household behavior. The findings offer valuable insights for policymakers and practitioners, particularly marketers, in formulating effective strategies to minimize food waste. Recommended actions include designing targeted communication and advertising campaigns, establishing supportive policies to reduce household food waste, and developing educational initiatives to foster sustainable consumption habits. Overall, the study contributes to understanding behavioral determinants of food waste reduction in urban household contexts and underscores the role of awareness and digital engagement in promoting sustainable food management practices. The study also highlights the unique role of women managing household food preparation, offering gender-based insight into sustainable consumption behavior in Indonesia.

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1. Introduction

Food waste became significant global issue that requires immediate attention due to its substantial economic, environmental, and social impacts (Bravi et al., 2020; Morkunas et al., 2023; UNEP, 2021). Food waste refers to the reduction in the quantity of edible food that occurs between the distribution or marketing stage and the point of consumption (Bappenas, 2021b). Indonesia is among the top 10 countries contributing to food waste globally and has experienced a 54% increase in food waste between 2019 and 2030 (Bappenas, 2021a). Indonesia's food loss and waste (FLW) amounts to 23-48 million tons per year, equivalent to 115-184 kg per capita per year, with households being the largest contributor (Bappenas, 2021a). Food waste considered a pontential cause to poverty by the loss of resources that could be used to benefit more people (Waluyo & Kharisma, 2023). Food waste also contributes to food insecurity, increased greenhouse gas emissions, and economic losses (Bravi et al., 2020; Pandey, 2021; Rizzo et al., 2023).

The issue of food waste is closely related to the Sustainable Development Goals (SDGs), specifically the target of reducing food waste by half by 2030 (UNEP, 2021). Household consumers are the main contributors to food waste. Women play a crucial role in reducing food waste in households. Research shows that women produce food waste in households through cooking processes in the kitchen, but some food waste management practices have also been implemented (Yuliati, 2024). Several studies have investigated consumer behavior from various perspectives, including food selection, social media influence on consumer behavior, shopping practices, and consumer attitudes towards food waste (Aktas et al., 2018; Chen, 2019).

Intention is a motivational factor that influences an individual's actions or reflects the extent to which an individual is willing to engage in a behavior. The stronger the intention, the more likely an individual will take action (Ajzen & Fishbein, 2021). Intention to reduce food waste refers to an individual's motivation to reduce food waste in households. Intention to reduce food waste can be influenced by factors such as environmental awareness (Bhatti et al., 2019; Chen, 2019; Purwanto, Biasini, et al., 2023), social media usage (Azazz & Elshaer, 2022; Lahath et al., 2021; Teoh et al., 2022), economic concerns (Chen, 2019; Liao et al., 2022), impulsive buying (Chen, 2019; Liao et al., 2022), and attitudes towards food waste (Habib et al., 2023; Pandey, 2021; Purwanto, Yulianto, et al., 2023).

Environmental awareness plays a role in increasing intention to reduce food waste. Environmental awareness refers to an individual's concern for environmental issues and the actions that can be taken to achieve sustainability. There is a positive and significant relationship between environmental awareness and intention to reduce food waste. The higher the environmental awareness, the greater the intention to reduce food waste (Habib et al., 2023; Purwanto, Biasini, et al., 2023). Social media usage has a significant impact on changing consumer behavior, including promoting sustainable consumption (White et al., 2009). Social media usage can be used as a means to encourage people to engage in pro-environmental behaviors (Sujata et al., 2019). One such pro-environmental behavior is

reducing food waste. Social media usage is positively related to intention to reduce food waste (Azazz & Elshaer, 2022; Lahath et al., 2021).

Economic concerns are factors that influence purchasing decisions, including price. The culture of consumerism and affordable food prices lead consumers to buy food in large quantities without considering the risk of food waste (Aschemann-Witzel et al., 2015). Impulsive buying refers to unplanned purchasing behavior that leads to immediate possession of a product (Bhakat & Muruganantham, 2013). Impulsive buying occurs when consumers buy products that are not on their shopping list and may not be accompanied by positive feelings (Amos et al., 2014). Easy access to information and attractive food displays on social media can increase impulsive buying behavior and lead to increased food waste (Lahath et al., 2021). Attitudes can predict intentions, which ultimately influence an individual's behavior. Attitudes towards food waste refer to an individual's evaluation of food waste behavior. The more positive an individual's attitude towards reducing food waste, the greater their intention to engage in food waste reduction behavior (Habib et al., 2023; Purwanto, Yulianto, et al., 2023).

The primary research gap addressed in this study is the high percentage of food waste at the household level and its impacts on various aspects. This research focuses on factors such as environmental awareness, social media usage, economic concerns, impulsive buying, and attitudes towards food waste in relation to intentions to reduce food waste in households. The research gap discussed in this study is the limited research on food waste at the household level, as previous studies have primarily been conducted in restaurants, factories, or school canteens. The subjects of this study are women who prepare meals in their homes daily. The purpose of this study is to examine the direct effects of environmental awareness, social media usage, economic concerns, impulsive buying, and attitudes towards food waste on intentions to reduce food waste in households, as well as to investigate the mediating role of attitudes towards food waste in the relationship between environmental awareness, social media usage, economic concerns, impulsive buying, and intentions to reduce food waste.

2. Literature Review

Food Waste

Food Loss and Waste (FLW) refers to the reduction in food quantity resulting from the food supply chain, encompassing production by farmers, post-harvest handling and storage, processing and packaging, retail sales, and marketing until it reaches the consumer (Bappenas, 2021b). Direct factors contributing to food waste at the consumer stage include excessive portions and consumer behavior, misinterpretation of expiration dates and "best before" labels, and inadequate food storage facilities. The issue of food waste is addressed in the Sustainable Development Goals (SDGs), necessitating prompt and targeted action. Environmentally, food waste leads to increased greenhouse gas emissions, particularly methane, contributing to climate change, and food decomposition produces liquids that pollute soil and water (Zandonadi et al., 2021). Socially, food waste reduces food availability for those in need, exacerbates food access inequality, and worsens hunger and malnutrition

problems (Neff et al., 2015). Although society is aware of the food waste issue, in daily practice, individuals may unintentionally engage in food waste practices (Attiq et al., 2021).

Intention to Reduce Food Waste

Intention refers to an individual's tendency or desire to engage in a specific action and tends to describe their habits (Ajzen & Fishbein, 2021). Previous studies have shown that environmental awareness and attitude towards food waste are significantly related to intention to reduce food waste, ultimately leading to behavior or actions to reduce food waste (Bhatti et al., 2019; Chen, 2019; Habib et al., 2023; Purwanto, Biasini, et al., 2023; Purwanto, Yulianto, et al., 2023). Another factor found to be significantly related to intention to reduce food waste is social media usage. Social media usage can be an effective educational medium for increasing intention to reduce food waste (Teoh et al., 2022). Previous studies have also shown that economic concerns (price) have a significant relationship with intention to reduce food waste. Individuals who buy according to their budget tend to purchase food according to their needs, resulting in less food waste (Liao et al., 2022; Parizeau et al., 2015). Impulsive buying behavior is negatively related to intention to reduce food waste, meaning that the more impulsive food purchases, the lower the intention to reduce food waste (Azazz & Elshaer, 2022; Lahath et al., 2021; Liao et al., 2022).

Environmental Awareness

Environmental awareness involves attention to environmental issues and actions taken to implement sustainable practices. Lack of knowledge about environmental impacts is one of the causes of the low relationship between awareness and responsible environmental behavior (N. Kim & Lee, 2023). Individuals who are actively engaged or well-informed about environmental issues tend to exhibit environmentally friendly behaviors compared to those who are unaware or less informed (Handayani et al., 2021). Individuals with high environmental awareness tend to have a stronger intention to reduce food waste, as evidenced by the positive relationship between environmental awareness and intention to reduce food waste in previous studies (Chen, 2019; Purwanto, Yulianto, et al., 2023). Environmental awareness is also linked to attitude, as individuals with a positive attitude towards the environment tend to be more concerned about environmental issues, leading to a better understanding of the importance of environmental conservation and shaping environmentally responsible individual behavior (Cheung & To, 2019; Habib et al., 2023). Therefore, we propose the following hypothesis:

H1: Environmental Awareness has a direct influence on Intention to Reduce Food Waste.

Social Media Usage

Social media plays a crucial role in building relationships between individuals with shared interests. Social media usage can influence consumers' social norms related to sustainable behaviors, such as preventing food waste. Social media platforms, such as Instagram, promote food with attractive presentations, leading to impulse purchases that may not meet the buyer's expectations, resulting in food waste (Lahath et al., 2021). Social media usage, referring to online shopping habits, can lead to over-purchasing of food products, generating more food waste (Azazz & Elshaer, 2022). However, on the other hand, the application of

digital campaigns through social media usage has been shown to significantly increase consumers' intention to reduce food waste (Teoh et al., 2022; Young et al., 2017). Building on these explanations, we propose the following hypothesis:

H2: Social Media Usage has a direct influence on Intention to Reduce Food Waste.

Economic Concern

The economic concern discussed in this study refers to the price of food products. Each individual has a different perception of prices for various products. Price setting may trigger significant food waste. Research by William et al. (2012) explains that consumers who are aware of food prices tend to waste less food. This is also supported by Pandey et al.'s (2023) study, which found a significant relationship between economic concerns (price) and attitudes towards reducing food waste. Consumers who are more sensitive to prices have a positive attitude towards avoiding food waste. Another factor influencing consumption patterns and food waste reduction is the price of food products (Chen, 2019). A common practice is for companies to offer wholesale prices or special promotions like "buy one get one," encouraging price-sensitive consumers to purchase products in excess of their needs, leading to food waste (Lahath et al., 2021). Based on this rationale, we propose the following hypothesis:

H3: Economic Concern has a direct influence on Intention to Reduce Food Waste.

Impulsive Buying

Impulsive buying is a consumer phenomenon characterized by unplanned purchases made without considering future consequences (Amos et al., 2014; Sharma et al., 2010). Broadly, two factors influence impulsive buying: internal factors (individual attitudes) and external factors such as shopping environments, product proximity, and social and cultural aspects (Bhakat & Muruganantham, 2013; Changa et al., 2011; Sharma et al., 2010). Buying food in excess of actual needs ultimately leads to food waste, implying that impulsive buying causes waste (Welch et al., 2021). The trend of impulsive buying of food emerged during the COVID-19 pandemic. Research shows that impulsive buying behavior is linked to food waste. The more food purchased without planning, the greater the food waste generated (Azazz & Elshaer, 2022; Lahath et al., 2021). Impulsive buying behavior can increase food waste through unplanned shopping practices, supported by price promotions (Aschemann-Witzel et al., 2015; Parfitt et al., 2010). Unplanned shopping without purchase planning risks impulsive buying, ultimately leading to food waste (Azazz & Elshaer, 2022; Lahath et al., 2021; Liao et al., 2022). The more discounts and special offers, the higher the likelihood of impulsive buying. Avoiding impulsive buying behavior has the potential to change behavior or intention to reduce food waste (Liao et al., 2022). Therefore, we propose the following hypothesis:

H4: Impulsive Buying has a direct influence on Intention to Reduce Food Waste.

Attitude towards Food Waste

Attitude refers to the tendency to respond positively or negatively to a situation (M. J. Kim & Hall, 2021). Attitude is a crucial factor in determining whether an individual chooses to engage in a specific action (Ajzen & Fishbein, 2021). Attitude towards food waste refers to an individual's positive or negative evaluation of food waste behavior. The Theory of Planned Behavior (TPB) suggests that attitude towards food waste is significantly related to intention or habits, in this case, linked to attitude towards food waste (Habib et al., 2023). The more positive an individual's attitude towards reducing food waste, the greater their intention to reduce food waste (Purwanto, Yulianto, et al., 2023). Purwanto et al.'s (2023) study showed a relationship between attitude and intention, explaining the role of attitude in influencing intention to reduce food waste. If someone feels bad about throwing away uneaten food, they will have a greater desire to reduce food waste, indicating a positive relationship between attitude and intention to reduce food waste. Building on these explanations, we propose the following hypothesis:

H5: Attitude Towards Food Waste has a direct influence on Intention to Reduce Food Waste.

Studies by Bhatti et al. (2019) and Pandey et al. (2023) found a strong correlation between environmental awareness and attitude towards food waste. Although these studies had different focuses and methodologies, the researchers highlighted the importance of environmental awareness in shaping attitudes towards food waste in various contexts.Purwanto et al.'s (2023) study showed that environmental awareness has a positive and significant indirect impact on intention to reduce food waste, influenced by attitude. Therefore, we propose the following hypothesis:

H6: Attitude Towards Food Waste mediates Environmental Awareness influence on Intention to Reduce Food Waste.

Social media applications have been used to encourage sustainable individual behavior, including demonstrating environmental impacts and promoting pro-social group behavior. Based on this, sharing information about food waste impacts on social media is believed to influence others to form negative attitudes towards food waste behavior and existing norms, reducing the desire to waste food (Teoh et al., 2022). Building on these explanations, we propose the following hypothesis:

H7: Attitude Towards Food Waste mediates Social Media Usage influence on Intention to Reduce Food Waste.

Pandey et al. (2023) explained the significant influence between economic concern and attitude towards reducing food waste. Price-sensitive consumers have a positive attitude towards avoiding food waste. Although few studies have investigated the mediating role of attitude towards food waste with economic concern related to intention to reduce food waste, individual intention or behavior can be influenced by attitude. Therefore, we propose the following hypothesis:

H8: Attitude Towards Food Waste mediates Economic Concern influence on Intention to Reduce Food Waste.

Impulsive buying, driven by hedonistic motivation or pleasure-seeking, leads to consumer desire for specific products or, in this study, food purchases. This behavior increases the likelihood of food waste accumulation in households, as individuals buy more food products than needed, which are eventually stored and discarded after expiration (Azazz & Elshaer, 2022; Lahath et al., 2021). Unplanned food purchases, which can trigger impulsive buying, fall under the cognitive aspect of attitude. Therefore, we propose the following hypothesis:

H9: Attitude Towards Food Waste mediates Impulsive Buying influence on Intention to Reduce Food Waste.

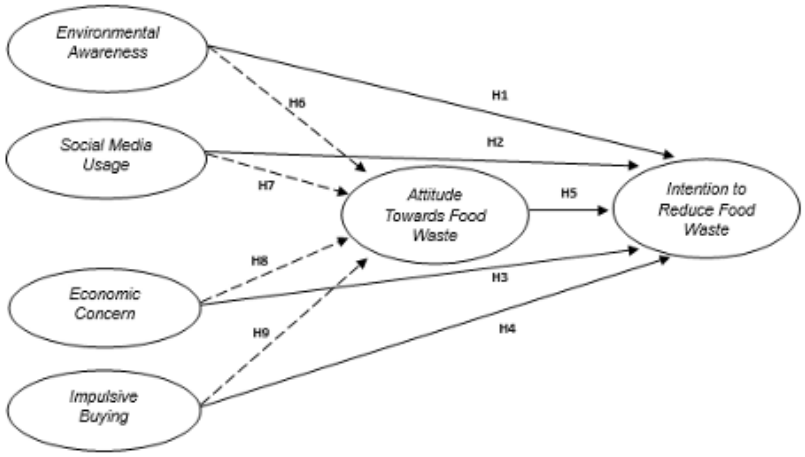

Figure 1. Conceptual Framework

Source : Author Study (2024)

3. Research Methods

This research was conducted from February to April 2024. This study employed primary data collected through online surveys using questionnaires. The online questionnaire was administered using Google Forms (G-Form) with 1-5 scale of measurement. The questionnaire was distributed to respondents who were women aged 20-45 years, residing in the Jabodetabek area, had experience cooking at home, possessed social media accounts, and had seen methods for storing or processing food waste on social media. Women play a crucial role in reducing food waste at the household level, particularly in relation to cooking and food preparation, which is predominantly carried out by women. Research shows that women produce food waste in households through cooking processes in the kitchen, but some food waste management practices have also been implemented (Yuliati, 2024). The questionnaire was disseminated to various women's communities, including women's community at the HKBP Jatiwaringin church, employees at PT. Kerry Ingredients Jakarta, housewives' groups at several schools in Bekasi, Jakarta, and Tangerang Selatan, muslim women's group attending the Muslim exhibition at Kemayoran Jakarta Pusat, members of the Instagram

group @ibu2.id, visitors to the National Library of the Republic of Indonesia and the Jakarta Library, and female users of the Jabodetabek LRT.

According to Hair et al. (2017), the minimum number of respondents required for a study is 5-10 times the number of indicators used in the questionnaire. This study employed 30 indicators, necessitating a minimum of 150-300 respondents. Although 404 respondents completed the questionnaire, only approximately 280 met the predetermined criteria. The research location was selected due to the large population of Jabodetabek. As of 2023, the population of Jabodetabek was recorded at 30.2 million, accounting for approximately 9% of Indonesia's total population (BPS, 2023). This is supported by adequate infrastructure, facilitating mobility and access for residents, including internet access related to social media usage. The Jabodetabek region has emerged as a significant contributor to Indonesia's food waste problem, largely due to its substantial population and thriving economic activities.

The sampling technique employed in this study is non-probability sampling, specifically purposive sampling. Purposive sampling involves selecting a sub-group from the population, ensuring that the sample has characteristics that align with the population. Given the qualitative nature of this study, the data obtained is not intended for statistical generalization but rather to represent information. This study utilizes a combination of descriptive analysis and Partial Least Squares Structural Equation Modeling (PLS-SEM) to analyze the data. The PLS-SEM approach involves evaluating both the outer model (measurement model) and the inner model (structural model) to assess the relationships between variables.

4. Results and Discussion

Respondent Characteristics

Initially, 403 respondents filled out the questionnaire, but after passing several screening questions, only 280 respondents' data could be used as samples for this study. Respondent characteristics related to age, marital status, education level, family members, and total household expenditure per month are presented in Table 1.

Table 1. Profile of Respondent Characteristics

Characteristics	Frequency	%
Age		
20 - 24 years	61	21,79
25 - 34 years	147	52,50
35 - 45 years	72	25,71
Marital Status		
Single / Unmarried	132	47,14
Married	146	52,14
Divorced	2	0,71
Education Level		
Junior High School/Equivalent	1	0,36
Senior High School/Equivalen	34	12,14

Characteristics	Frequency	%
Diploma	28	10,00
Bachelor's Degree	181	64,64
Master's Degree	36	12,86
Family Members		
> 5 peoples	39	13,93
2-3 peoples	114	40,71
4-5 peoples	115	41,07
Unanswered	12	4,29
Number of Children		
No children	158	56,43
1 child	48	17,14
2 children	42	15,00
3 children	20	7,14
Others	12	4,29
Monthly Household Expenditure		
< IDR 500.000	12	4,29
IDR 500.000 - 1.000.000	57	20,36
IDR 1.000.000 - 2.000.000	81	28,93
> IDR 2.000.000	125	44,64
Unanswered	5	1,79

Source : Primary Data Processed (2024)

The most dominant factor in the aspect of environmental sustainability concern is the respondents' desire to live a quality life in a comfortable and clean environment (27,14%). Respondents also care about environmental sustainability to prevent the depletion of natural resources and ensure a good life for future generations. On the other hand, some respondents have shown awareness of the importance of environmental sustainability and feel that it is an individual responsibility. Economic factors are the dominant factor influencing respondents' purchasing decisions when buying food ingredients (63,93%). The majority of respondents still consider price when buying food ingredients. Besides price, other economic factors mentioned by respondents include the tendency to buy food ingredients during discounts/promotions. Respondents also make it a habit to buy food ingredients that are adjusted to their needs and budget (51,79%). As many as 35,71% feel that food management is an important aspect to be socialized to them in the context of the food waste reduction program. The adoption of 3R (Reduce, Reuse, and Recycle) practices has been observed in the daily behaviors of respondents. A significant proportion of respondents (41,43%) reported implementing 3R practices in their households as a strategy to mitigate food waste (FW), with the majority of respondents engaging in food reprocessing and repurposing leftover food into new culinary products.

Composite Reliability and Cronbach's Alpha Test Results

Cronbach's Alpha (CA) is a method for measuring the consistency reliability of indicators for each variable. Before conducting the research, the questionnaire used in this study had

undergone pre-testing and passed reliability and validity tests. A CA value above 0,7 is considered acceptable. The CA results in Table 2 show that two variables have CA values ≤ 0,7, namely economic concern (0,692) and attitude towards food waste (0,658). However, when rounded up, these values become 0,7, making them acceptable.There was a reduction in indicators for the IB variable, leaving only three indicators (IB4, IB6, and IB7) for empirical data analysis. This was because including the other four indicators (IB1, IB2, IB3, and IB5) resulted in a CA value ≤ 0,6.

Table 2. Convergent Validity and Reliability Values

Variable	Code	Outer Loading	CA*	CR**	AVE***
Environmental Awareness (EAR)	EAR1	0,752	0,864	0,908	0,713
	EAR2	0,872			
	EAR3	0,870			
	EAR4	0,876			
Social Media Usage (SMU)	SMU1	0,834	0,938	0,951	0,764
	SMU2	0,821			
	SMU3	0,897			
	SMU4	0,898			
	SMU5	0,905			
	SMU6	0,887			
Economic Concern (EC)	EC1	0,827	0,692	0,825	0,612
	EC3	0,806			
	EC3	0,710			
Impulsive Buying (IB)	IB4	0,770	0,828	0,887	0,725
	IB6	0,847			
	IB7	0,930			
Attitude Towards Food Waste (ATT)	ATT1	0,715	0,658	0,805	0,580
	ATT2	0,774			
	ATT3	0,793			
Intention to Reduce Food Waste (INT)	INT1	0,708	0,915	0,933	0,665
	INT2	0,859			
	INT3	0,827			
	INT4	0,860			
	INT5	0,789			
	INT6	0,794			
	INT7	0,859			

Source : Primary Data Processed (2024)

Discriminant Validity Test Results

The Fornell-Larcker criterion is a method used to evaluate the discriminant validity of constructs in structural equation models. All constructs met the Fornell-Larcker criterion, as the diagonal values (square root of AVE) were greater than the off-diagonal values

(correlations with other constructs). Table 3 shows that discriminant validity was established for all constructs in the model.

Table 3. Discriminant Validity Test Results

Variable	ATT	EAR	IB	INT	EC	SMU
ATT	0,761					
EAR	0,551	0,844				
IB	-0,195	-0,172	0,852			
INT	0,422	0,558	-0,081	0,815		
EC	0,240	0,238	-0,042	0,303	0,783	
SMU	0,315	0,513	-0,087	0,613	0,291	0,874

Source : Primary Data Processed (2024)

R-Square Test Results

Based on the results in Table 4, the R-square value for the attitude towards food waste variable was 0,327. This explains that 32,7% of the variability in attitude towards food waste can be represented by the variables environmental awareness, social media usage, economic concern, impulsive buying, and intention to reduce food waste. The remaining 67,3% is influenced by other variables not examined in this study.The endogenous variable intention to reduce food waste had an R-square value of 0,479. This explains that 47,9% of the change or variation in intention to reduce food waste can be explained by the exogenous variables in the model. R-square values above 0,33 are considered moderate.

Table 4. R-square Result

	R-square	R-square adjusted
Attitude Towards Food Waste (ATT)	0,327	0,317
Intention To Reduce Food Waste (INT)	0,479	0,469

Source : Primary Data Processed (2024)

Hypothesis Testing Results

Overall, environmental awareness, social media usage, and attitude towards food waste are variables that have a significant direct impact on intention to reduce food waste. In contrast, economic concern and impulsive buying do not have a significant direct impact. Hypothesis testing results are presented in Table 5.

Table 5. Hypothesis Testing Result

Hypothesis	Exogen Variable	Mediation Variable	Endogen Variable	Coef.	T stat	p values	Result	Mediation Effect
H1	EAR	-	INT	0,253	6,932	0,000	Significant	-
H2	SMU	-	INT	0,417	7.611	0,000	Significant	-
H3	EC	-	INT	0,090	2,194	0,069	Not Significant	-
H4	IB	-	INT	0,028	0.323	0,538	Not Significant	-

Hypothesis	Exogen Variable	Mediation Variable	Endogen Variable	Coef.	T stat	p values	Result	Mediation Effect
H5	ATT	-	INT	0,135	2.205	0,028	Significant	-
H6	EAR	ATT	INT	0,067	2,156	0,031	Significant	Partial Mediation
H7	SMU	ATT	INT	0,002	0,343	0,731	Not Significant	No Mediation Effect
H8	EC	ATT	INT	0,015	1,373	0,170	Not Significant	No Mediation Effect
H9	IB	ATT	INT	-0,014	1,348	0,178	Not Significant	No Mediation Effect

Source : Primary Data Processed (2024)
Notes: EAR: Environmental Awareness; SMU: Social Media Usage; EC: Economic Concern; IB: Impulsive Buying; ATT: Attitude Towards Food Waste; INT:Intention to Reduce Food Waste

The variable environmental awareness has a significant influence on the intention to reduce food waste (p-value ≤ 0,05), with a positive coefficient of 0,253. This means that an increase in environmental awareness will tend to increase the intention to reduce food waste by the coefficient value. The variable social media usage also has a significant influence on the intention to reduce food waste (p-value ≤ 0,05), with a higher positive coefficient than environmental awareness, namely 0,417. This indicates that an increase in social media usage will contribute more significantly to an increase in the intention to reduce food waste compared to environmental awareness. The variable economic concern does not have a direct significant influence on the intention to reduce food waste (p-value ≥ 0,05). Another variable that does not have a direct influence on the intention to reduce food waste is impulsive buying (p-value ≥ 0,05). The results of this study also show that the variable attitude towards food waste has a significant influence on the intention to reduce food waste (p-value ≤ 0,05), with a positive coefficient of 0,135. This indicates that an increase in attitude towards food waste will also contribute to an increase in the intention to reduce food waste.

A partial mediation effect was observed in the relationship between environmental awareness, attitude towards food waste, and intention to reduce food waste, indicating that attitude towards food waste partially mediates the relationship between environmental awareness and intention to reduce food waste. However, the results of the analysis reveal that there is no significant mediation effect in the relationships between social media usage, economic concern, and impulsive buying on intention to reduce food waste, with attitude towards food waste serving as the mediator.

Environmental awareness has a direct impact on intention to reduce food waste, thus H1 is accepted. Respondents considered environmental awareness a crucial factor influencing their decision to reduce food waste. This finding aligns with previous studies by Sawasdee et al. (2020), Purwanto et al. (2023), and Pandey et al. (2023), which found that environmental awareness directly affects intention to reduce food waste in urban communities. Social media

usage was found to have the most significant impact on intention to reduce food waste. Previous studies by Azazz and Elshaer (2022) and Lahath et al. (2021) explained the significant relationship between social media usage and intention to reduce food waste, mediated by impulsive buying during the COVID-19 pandemic. This finding highlights the effectiveness of social media in promoting sustainable behavior. This study distinguishes itself from prior research by concentrating on the relationship between social media usage and food waste reduction, with a particular emphasis on the role of social media as a facilitator of sustainable behavior, specifically the reduction of food waste at the household level (Young et al., 2017).

Economic concern was found to have no significant impact on intention to reduce food waste. This result aligns with Pandey et al.'s (2023) study, which found no significant influence of economic concern (price) on intention to reduce food waste, but a significant impact on attitude towards food waste. The results of this study indicate that while price is a consideration in respondents' decision-making processes when purchasing food ingredients, the majority of respondents prioritize factors such as food quality, freshness, cleanliness, suitability for their needs, and personal taste preferences. This finding can be attributed to the demographic characteristics of the respondents, who are predominantly between 25-34 years old and unmarried, thereby cooking for themselves and purchasing items in accordance with their individual needs. This discovery may provide insight into the lack of a significant relationship between price and intention to reduce food waste.

Respondents generally considered impulsive buying undesirable. This finding is supported by Aktas et al. (2018) and Bravi et al. (2020), which emphasized the importance of planning before purchasing food. Respondents also tended to dislike buying food impulsively or in excess due to budget constraints and storage limitations. Attitude towards food waste was found to have a direct impact on intention to reduce food waste. This finding aligns with previous studies, which demonstrated the influence of attitude on forming pro-environmental intentions.

Research Implications

The implications of this study's findings can be viewed from theoretical, managerial, practical, and policy perspectives. From theoretical perspectives, this study demonstrates that food waste reduction can raise awareness about the importance of environmental conservation and reduce negative environmental impacts and social media directly influences individuals' intentions to reduce food waste. Consequently, governments and community organizations can leverage social media platforms to facilitate the sharing of best practices and innovative ideas for environmental conservation, including effective food waste management strategies at the household level.

From managerial perspective, companies can adopt strategies that not only meet consumer demands but also contribute to environmental sustainability. Key strategies may include dynamic pricing and promotional campaigns, product diversification, innovation in products and packaging, and effective branding that aligns with eco-conscious consumers. Businesses can optimize their supply chains to reduce food waste by improving inventory management,

streamlining logistics, and negotiating with suppliers. Moreover, minimizing food waste can lead to significant conservation of natural resources, including water, land, and energy, which are essential for food production.

This study also highlights the potential for practical implications, where communities can be actively involved in environmental sustainability initiatives through local efforts such as urban greening, recycling, and waste reduction. Additionally, partnerships with the private sector can be forged to deliver educational programs via Corporate Social Responsibility (CSR) initiatives, fostering the adoption of eco-friendly business practices in households. Communities can adopt better food management practices, such as meal planning, proper food storage, and utilizing leftovers. Reducing food waste can save households and communities money by reducing food costs and increase food availability for those who needed.

Several policies related to politics, social, and economy that can address food waste include: Governments can develop policies that support food waste reduction, such as encourage the 3R (Reduce, Reuse, Recycle) program with household incentive and regulations on food waste management and incentives for businesses that adopt sustainable practices. Reducing food waste can lead to cost savings in production, distribution, and disposal, thereby increasing economic efficiency. Food waste reduction can create new job opportunities in the food waste management and sustainable product development sectors. Food waste reduction can improve the quality of life for communities by reducing negative environmental impacts and promoting public health.

Limitations and Future Research Directions

This study focused on several factors and their relationship with intention to reduce food waste but did not measure actual household behavior. Future research can focus on real data regarding food waste quantity in households through quantitative measurement of food waste. Ideas for future research include evaluating educational campaigns, analyzing the effectiveness of existing policies and regulations, and developing more efficient and environmentally friendly waste management methods.

5. Conclusion and Suggestion

The amount of food waste in Indonesia, originating from households, has been increasing annually. Research findings indicate that environmental awareness, social media usage, and attitude towards food waste have a direct impact on intention to reduce food waste. No direct relationship was found between economic concern and impulsive buying on intention to reduce food waste. Attitude towards food waste was found to mediate the relationship between environmental awareness and intention to reduce food waste, whereas attitude towards food waste did not prove to mediate the influence of social media usage, economic concern, and impulsive buying on intention to reduce food waste.

This study focused on several factors and their relationship with intention to reduce food waste but did not measure actual household behavior. Future research can focus on real data

regarding the amount of food waste in households through quantitative measurement of food waste. Ideas for future research related to reducing food waste include evaluating various educational campaigns to determine the most effective approach, analyzing the effectiveness of existing policies and regulations related to food waste, and developing more efficient and environmentally friendly waste management methods.

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