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Green Emotions and Green Ethics as Predictors of Gen Z's Green Awareness in Surakarta's Food & Beverage Lifestyle

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A B S T R A C T

The city of Surakarta, known for its cultural and culinary tourism, has experienced rapid growth in the Food and Beverage (F&B) industry, which contributes to environmental challenges such as food waste and single-use packaging. This study aims to examine the influence of green emotions and green ethics on green awareness, with green behaviour environment acting as a mediating variable among Generation Z consumers. The research focuses on understanding how emotional, ethical, and behavioural dimensions interact in shaping environmental awareness within the F&B consumption context. This research adopts a quantitative approach using an explanatory survey design involving 100 Generation Z respondents through direct e-questionnaire distribution in several restaurants. Data were analysed using Partial Least Squares Structural Equation Modeling (SEM-PLS) to test ***four hypotheses****. The results indicate that all four hypotheses are supported: (H1) green emotions have a positive and significant effect on green awareness; (H2) green emotions significantly influence green awareness through green behaviour environment; (H3) green ethics positively and significantly affect green awareness; and (H4) green ethics significantly influence green awareness through green behaviour environment. The findings confirm that Generation Z's environmental awareness is shaped by the integration of affective, moral, and behavioural factors. This study contributes theoretically by strengthening an integrated framework of green marketing and consumer behaviour, while practically offering insights for F&B businesses to design more effective and sustainable green marketing strategies.*

INTRODUCTION

Surakarta is one of the leading tourism destinations in Central Java, recognized not only for its rich cultural heritage but also for its diverse culinary offerings. The city is home to a variety of traditional foods and beverages that form part of its local identity and major tourist attractions, such as nasi liwet, serabi, tengkleng, gudeg, and various traditional snacks. At the same time, the rapid growth of the modern Food and Beverage (F&B) industry—marked by the proliferation of cafés, restaurants, and contemporary beverage outlets popular among younger generations—reflects dynamic economic development. However, this expansion also intensifies local environmental pressures through food waste, single-use packaging, and high energy consumption. Without a clear understanding of environmentally responsible consumption behavior, the growth of this sector risks reinforcing unsustainable consumption patterns, thereby necessitating empirical research to explain the determinants of consumer awareness and behavior.

Globally, the F&B industry is one of the fastest-growing sectors and a major contributor to environmental challenges. The extensive use of single-use packaging, high levels of energy and water consumption, and substantial food waste generation have placed the sector at the center of sustainability concerns. The United Nations Environment Programme reported that in 2019 more than 931 million tons of food were wasted worldwide, with restaurants and households as the largest contributors (UNEP, 2021). This situation underscores the urgency of sustainable innovation to support the achievement of the Sustainable Development Goals (SDGs), particularly Goal 12 on responsible consumption and production (McKinsey & Company, 2025). Nevertheless, many green marketing initiatives have not consistently translated into behavioral change, indicating that sustainability issues are not merely technical but also deeply rooted in consumers' psychological and ethical dimensions.

Generation Z represents a strategic consumer segment, having grown up as digital natives with increasing purchasing power and relatively high environmental concern. Previous research shows that Generation Z demonstrates strong preferences for environmentally oriented products, including in F&B consumption (Suryaningrum et al., 2023). However, the value–action gap remains evident, as high environmental awareness does not always translate into actual sustainable consumption behavior. This suggests that information and positive attitudes alone are insufficient to drive meaningful action. Therefore, a deeper understanding of the affective, moral, and behavioral factors shaping Generation Z's consumption decisions is essential.

Green emotions refer to individuals' affective responses to environmental issues, such as feelings of pride when purchasing environmentally friendly products or guilt associated with food waste (Chao & Yu, 2024). Previous studies indicate that positive emotions strengthen intentions to purchase sustainable products (Wang et al., 2022). In the F&B context, green emotions encourage preferences for biodegradable packaging and sustainable menu options.

Green ethics, on the other hand, refers to moral values that promote environmental responsibility, such as rejecting single-use plastics or supporting restaurants with transparent supply chains (Dangelico RM, 2022). Ethical values have been shown to significantly influence purchasing decisions across cultures (Ogiemwonyi & Jan, 2023). Green environmental behavior reflects consumers' actual actions, such as bringing reusable containers or reducing food waste (Cattaneo et al., 2021), which are influenced by both individual and social environmental factors (Ko & Jeon, 2024). Finally, green awareness represents consumers' level of understanding regarding the environmental impacts of consumption activities (Butar Butar et al., 2024), including concerns about food waste and environmentally friendly packaging in the F&B sector (Gheewala et al., 2020).

Although prior studies have examined these variables, most have done so separately, limiting the ability to explain the comprehensive process of environmental awareness formation. This fragmentation constitutes a significant research gap, particularly in the F&B context, where consumption habits and lifestyle factors strongly influence behavior. Moreover, empirical studies integrating green emotions, green ethics, and green environmental behavior within a single structural model among Generation Z consumers in emerging tourism cities remain limited. Therefore, this research is urgently needed to bridge the gap between awareness and action through a more holistic approach. The findings are expected to strengthen the theoretical foundation of green marketing while providing practical guidance for F&B businesses and policymakers in promoting more sustainable consumption patterns.

Based on this background, the research questions of this study are formulated as follows: (1) How do green emotions and green ethics individually influence green awareness among Generation Z in F&B consumption? (2) Does green environmental behavior mediate the relationship between green emotions and green ethics and green awareness among Generation Z in F&B consumption?

Based on these research questions, the hypotheses of this study are formulated as follows: **H1: Green emotions have a positive effect on green awareness among Generation Z in F&B consumption.** Green emotions refer to individuals' emotional responses to environmental issues that can increase attention and concern toward the impacts of consumption. The emotional engagement of Generation Z with environmental issues encourages them to better understand the consequences of their consumption behavior (Raditya & Soelasih, 2025). **H2: Green emotions influence green awareness through green environmental behavior among Generation Z in F&B consumption.** Green emotions not only influence awareness directly but also encourage the formation of green environmental behavior. This behavior provides real experiences that strengthen individuals' understanding of environmental issues. Generation Z shows environmental concern; however, it is not always followed by actual behavior, making behavior an important factor in bridging awareness. This means that emotions can drive behavior, and such behavior, in turn, enhances awareness (Sudaryono & Kartika, 2022).

H3: Green ethics have a positive effect on green awareness among Generation Z in F&B consumption. Green ethics refers to individuals' moral values related to environmental responsibility, which encourage them to evaluate the impacts of their consumption and thereby

enhance environmental awareness. Environmental values and knowledge have a significant influence on awareness as well as the intention to engage in environmentally friendly consumption among Generation Z (Rosyihuddin & Krisnawati, 2025)**. H4: Green ethics influence green awareness through green environmental behavior among Generation Z in F&B consumption.** Individuals with high green ethics tend to adopt environmentally friendly behavior, which in turn strengthens their understanding and awareness of environmental issues. Green consumer behavior has a significant influence on decisions and awareness regarding the use of sustainable products among Generation Z (Bastian et al., 2025). This indicates that behavior serves as an important mechanism in linking ethical values with awareness shown by Figure 1. Research Framework.

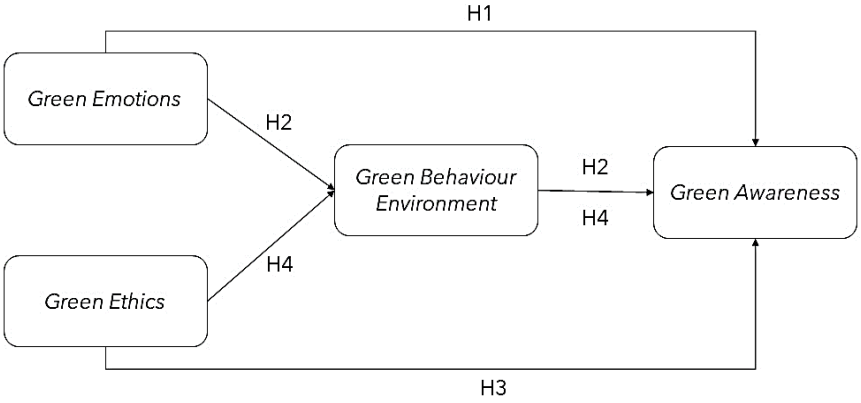

Figure 1. Research Framework

Source: *Research Data (Processed), 2026*

RESEARCH METHODS

This study employs a quantitative approach using an explanatory research design to examine the relationships among green emotions, green ethics, green environmental behavior, and green awareness. The explanatory design is intended to test causal relationships between variables and to explain how psychological and ethical factors influence environmentally responsible awareness among consumers. The research object focuses on environmentally responsible consumption behavior in the Food and Beverage (F&B) sector, while the research subjects consist of Generation Z consumers residing in Surakarta. Generation Z was selected because this demographic group represents an emerging consumer segment with increasing purchasing power and growing exposure to sustainability issues. The study population includes Generation Z individuals who actively consume F&B products in Surakarta.

A sample of 100 respondents was selected using purposive sampling. The inclusion criteria required respondents to be aged between 17 and 25 years and to have consumed F&B products at least once within the past month. This sampling approach ensures that participants possess relevant consumption experience aligned with the research objectives. Primary data were collected through an electronic questionnaire (e-questionnaire) distributed directly at several cafés, restaurants, and food establishments in Surakarta. This approach allowed researchers to reach active consumers in real consumption environments. Secondary data were obtained from

academic literature, previous empirical studies, industry reports, and sustainability publications to support theoretical development and contextual analysis.

The research instrument consists of 16 measurement items representing four constructs: green emotions (5 items), green ethics (3 items), green environmental behavior (5 items), and green awareness (3 items). Responses were measured using a four-point Likert scale to capture the intensity of respondents' agreement, where 1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree. The use of a four-point scale eliminates neutral responses, encouraging participants to express clearer evaluative positions regarding environmentally responsible behavior. The instrument of research shown by Table 1. Operational Definition below.

Table 1. Operational Definition

Variable	**Operational Definition**	**Indicator**	**Questionnaire Item**
Green Emotions	Consumers' affective responses (positive or negative) toward environmental issues that influence purchasing decisions in F&B consumption. (Yu et al., 2024)	Positive feelings	GEm1. I feel proud when purchasing food/beverages with environmentally friendly packaging.
			GEm2. I feel satisfied when choosing menu items made from local/organic ingredients.
		Negative feelings	GEm3. I feel guilty when buying or wasting excessive food.
			GEm4. I feel concerned about the environmental impact of food waste.
		Emotional intensity	GEm5. My feelings about environmental issues often influence my decisions when choosing dining places or F&B products.
Green Ethics	Individuals' moral beliefs or ethical obligations that encourage environmentally responsible F&B consumption. (Vermeir & Verbeke, 2006)	Moral responsibility	GEt1. I believe that reducing food waste is a moral responsibility of every individual.
		Ethical obligation	GEt2. Purchasing F&B products with environmentally friendly packaging is an ethical action.
		Social/ethical norms	GEt3. I choose environmentally friendly dining places because my social environment (friends/family) encourages it.

Variable	Operational Definition	Indicator	Questionnaire Item
Green Environmental Behavior	Actual consumer behavior (reduce, reuse, recycle) in F&B consumption influenced by social and policy environments. (Cattaneo et al., 2021)	Reduce	GBE1. I try to finish my food to prevent waste.
			GBE2. I reduce the use of straws/single-use plastics when buying drinks.
		Reuse	GBE3. I bring my own tumbler/container when purchasing drinks or food.
		Recycle	GBE4. I separate or return packaging for recycling whenever possible.
		Social & policy support	GBE5. Information from social media or government/brand campaigns encourages me to engage in green behavior.
Green Awareness	Consumers' knowledge and awareness of environmental impacts of F&B consumption and involvement in sustainability initiatives. (Utami et al., 2024)	Knowledge	GA1. I understand that food waste contributes to greenhouse gas emissions.
		Impact awareness	GA2. I am aware that choosing appropriate portion sizes can reduce food waste.
		Campaign involvement	GA3. I follow or respond to zero-waste or sustainable packaging campaigns from F&B brands on social media.

Source: *Research Data (Processed), 2026*

Data analysis was conducted using the Structural Equation Modelling–Partial Least Squares (SEM-PLS) approach with the assistance of Smart PLS 4 software. This method was selected because of its suitability for predictive research models and its robustness when applied to relatively small sample sizes. The analytical procedure was performed in two main stages: evaluation of the measurement model (outer model) and evaluation of the structural model (inner model). Assessment of the measurement model included tests of convergent validity through outer loadings and Average Variance Extracted (AVE), discriminant validity, and composite reliability to ensure the adequacy of the measurement instruments. The structural model evaluation examined path coefficients, coefficient of determination (R^2), effect sizes (f^2), and predictive relevance (Q^2) to determine the strength and explanatory power of the relationships among variables. Hypothesis testing was conducted using a bootstrapping procedure to evaluate the statistical significance of both direct and indirect (mediating) effects (Gio, P. U., Hermanto, B. I. P., Nazriani, D., & Lubih, 2024).

RESULTS & DISCUSSION

Respondent Characteristics. This study involved 100 respondents selected using a purposive random sampling method. Particular attention was given to respondents domiciled in Surakarta,

aged 17–25 years, representing Generation Z, who were considered actively engaged in consuming Food and Beverage (F&B) products (go to café or restaurant) within the past one month (with questionnaire distribution conducted in late October 2025). Based on the questionnaire distribution, the following profile of respondent characteristics was obtained shown by Table 2. Respondent Characteristics.

Table 2. Respondent Characteristics

Respondent Characteristics		**Amount**
Gender	Male	35
	Female	65
Age	17 – 19 year	12
	20 – 22 year	36
	23 – 25 year	52
Job	Student	44
	Private-sector employee	51
	PNS	0
	Entrepreneur	4
	Others	1
Last Education	High School/equivalent	23
	Vocational School	3
	Bachelor Degree	70
	Master Degree	4
	Others	0
Monthly Income	< Rp 500.000	8
	Rp 500.000 – Rp 1.000.000	16
	Rp 1.000.001 – Rp 3.000.000	41
	Rp 3.000.001 – Rp 5.000.000	27
	> Rp 5.000.000	8
Frequency of F&B Transactions in the Past Month	1 – 5 times	13
	6 – 10 times	18
	11 – 15 times	45
	> 15 times	24
Time of Last F&B Purchase	In this week	54
	Last week	28
	Last 2 week	13
	Last 3 week	5

Respondent Characteristics		**Amount**
Expenditure Allocation for Each F&B Purchase	Under Rp.50.000	63
	Rp.50.000 until Rp.100.000	28
	Rp.100.000 until Rp. 500.000	9
	Rp.500.000 until Rp.1.000.000	0
	Above Rp.1.000.000	0

Source: Author's work (2026)

Based on the demographic data, the respondents were predominantly female, with total 65 individuals. The results indicate that as respondent's age increases, they tend to spend more time to consume F&B products compared to younger age groups. This pattern is supported by the responses collected through the e-questionnaire, which was administered directly at several food establishments in Surakarta. Additionally, the findings reveal that higher age and income levels are associated with greater financial allocation and time spent on F&B consumption. These respondent characteristics provide valuable context for the study, as they suggest that increasing age is associated with greater cognitive maturity, which may influence the development of green emotions, green ethics, green environmental behaviour, and green awareness.

Measurement Model Evaluation. The measurement model was evaluated through convergent validity, discriminant validity, and reliability testing using the SEM-PLS 4 application. Convergent validity was assessed by examining indicator loading factors exceeding the threshold value of 0.7 (R. S. Hamid dan S. M. Anwar., 2019), as presented in the Table 3. Validity Convergent Result below.

Table 3. Validity Convergent Result

Variable	Green Awareness	Green Behaviour Environment	Green Emotions	Green Ethics
Green Awareness 1	0,825			
Green Awareness 2	0,706			
Green Awareness 3	0,838			
Green Behaviour Environment 1		0,843		
Green Behaviour Environment 2		0,785		
Green Behaviour Environment 3		0,712		
Green Behaviour Environment 4		0,742		
Green Behaviour Environment 5		0,775		
Green Emotions 1			0,861	
Green Emotions 2			0,712	
Green Emotions 3			0,831	
Green Emotions 4			0,828	
Green Ethics 1				0,847
Green Ethics 2				0,749
Green Ethics 3				0,816

Source: Author's work (2026)

Based on the table above, all indicator loading factors exceed the established threshold value of 0.7. Therefore, all items tested are considered valid measures of their respective latent variables. The highest loading value is 0.861 for item Green Emotions 1, while the lowest loading value is 0.706 for item Green Awareness 2.

Discriminant validity was assessed by examining cross-loading values, where the correlation between an indicator and its associated construct is expected to be higher than its correlations with other constructs, with values exceeding 0.7. The results presented in the table indicate that each indicator exhibits the highest loading on its corresponding construct compared to other construct blocks. Accordingly, the proposed model demonstrates satisfactory discriminant validity shown by Table 4. Validity Discriminant Result.

Table 4. Validity Discriminant Result

Variable	Green Awareness	Green Behaviour Environment	Green Emotions	Green Ethics
Green Awareness	0,792			
Green Behaviour Environment	0,628	0,773		
Green Emotions	0,580	0,532	0,794	
Green Ethics	0,589	0,526	0,462	0,805

Source: Author's work (2026)

Reliability was assessed using Cronbach's Alpha and Composite Reliability, with values exceeding the recommended threshold of 0.7, while the Average Variance Extracted (AVE) values were above 0.5 (R. S. Hamid dan S. M. Anwar., 2019) ; (Hair et al., 2017). The reliability test results indicate that all measurement items demonstrate satisfactory internal consistency. Therefore, the measurement model evaluation confirms that all questionnaire items used in this study are reliable and appropriate for measuring the proposed constructs that shown by Table 5. Reliability Result below.

Table 5. Reliability Result

Variabel	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Green Awareness	0,705	0,729	0,627
Green Behaviour Environment	0,830	0,838	0,597
Green Emotions	0,853	0,870	0,630
Green Ethics	0,727	0,733	0,648

Source: Author's work (2026)

Model Fit Evaluation. Model fit evaluation was conducted using the R-square (R^2) test to assess the explanatory power of the structural model for each endogenous latent variable (Hair et al., 2017). This study includes two endogenous latent variables, namely **green awareness** and **green environmental behavior**. As shown in Table 6. R Square Result, the R^2 value for **green awareness** is 0.535, indicating that 53.5% of the variance in green awareness is explained by the independent variables, while the remaining 46.5% is accounted for by other variables

not included in this study. Meanwhile, the R^2 value for **green environmental behavior** is 0.383, suggesting that 38.3% of its variance is explained by the independent variables, with the remaining 61.7% attributable to factors outside the proposed model.

Table 6. R Square Result

Variable	R-Square	R-Square Adjusted
Green Awareness	0,535	0,521
Green Behaviour Environment	0,383	0,370

Source: Author's work (2026)

The F-square (f^2) test was conducted to assess the effect size of each variable in the model. The effect size values are classified into three categories: 0.35 indicating a strong effect, 0.15 indicating a moderate effect, and 0.02 indicating a weak effect (Hair et al., 2017). The Table 7. F Square Result below illustrates the effect sizes for each variable included in the model. The results indicate that the tested variables exhibit **moderate effect sizes**, as their f^2 values are close to the 0.15 threshold.

Table 7. F Square Result

Variable	Green Awareness	Green Behaviour Environment	Green Emotions	Green Ethics
Green Awareness				
Green Behaviour Environment	0,147			
Green Emotions	0,105	0,173		
Green Ethics	0,122	0,161		

Source: Author's work (2026)

Structural Model Result. A hypothesis is a logically conjectured statement of a relationship between constructs in a structural model that is empirically tested to evaluate its predictive power (Hair et al., 2017). By Table 8. Hypothesis Result below, hypothesis testing was conducted for the four proposed hypotheses. A hypothesis was considered statistically significant when the t-statistic value was ≥ 1.96 and the p-value was ≤ 0.05.

Table 8. Hypothesis Result

Variable	T-Statistics	P-Values
H1: Green Emotions -> Green Awareness	2,652	0,008
H2: Green Ethics -> Green Awareness	2,464	0,014
H3: Green Emotions -> Green Behaviour Environment -> Green Awareness	2,277	0,023
H4: Green Ethics -> Green Behaviour Environment -> Green Awareness	2,237	0,025

Source: Author's work (2026)

The results shown by table 8 above, for **H1** show a t-statistic value of 2.652 and a p-value of 0.008, indicating that green emotions have a positive and significant effect on green awareness; therefore, H1 is supported. Furthermore, **H2** yielded a t-statistic value of 2.464 and a p-value

of 0.014, demonstrating that green emotions have a positive and significant effect on green awareness through green environmental behavior, thus supporting H2. For **H3**, the results show a t-statistic value of 2.277 and a p-value of 0.023, indicating that green ethics positively and significantly influence green awareness; therefore, H3 is supported. Similarly, the final hypothesis (**H4**) is supported, as green ethics have a positive and significant effect on green awareness through green environmental behavior, with a t-statistic value of 2.237 and a p-value of 0.025.

Discussion. The results of this study indicate that *green emotions* have a positive and significant effect on *green awareness* (t = 2.652; p = 0.008), thus supporting H1. This finding suggests that emotional engagement plays a crucial role in shaping environmental awareness among Generation Z consumers, particularly in the Food and Beverage (F&B) sector in Surakarta. As a city experiencing rapid growth in the culinary industry—marked by the proliferation of cafés, restaurants, and viral food trends—Generation Z consumers are influenced not only by functional aspects but also by emotional responses to environmental issues. Feelings such as concern about food waste, discomfort toward single-use plastic, and pride in choosing environmentally friendly products encourage individuals to become more aware of the environmental impact of their consumption. This is consistent with prior research indicating that emotional responses can drive pro-environmental consumption behavior. In the F&B context, *green awareness* extends beyond selecting eco-friendly products to include responsible portion decisions, food waste reduction, and sustainable packaging choices (White et al., 2019)

Furthermore, the findings reveal that *green emotions* significantly influence *green awareness* through *green environmental behavior* (t = 2.464; p = 0.014), thereby supporting H2. This indicates that pro-environmental behavior acts as a mediating mechanism linking emotions to awareness. In practice, Generation Z consumers in Surakarta not only express environmental concern emotionally but also translate it into concrete actions, such as bringing reusable tumblers, reducing food waste, and choosing environmentally responsible dining establishments. These behaviors provide direct experiences that strengthen individuals' understanding of environmental issues. This finding aligns with previous studies suggesting that pro-environmental behavior serves as a mechanism for internalizing emotional values and functions as a learning process connecting affective dimensions with long-term cognitive awareness (Liu et al., 2024).

In addition, the results show that *green ethics* have a positive and significant effect on *green awareness* (t = 2.277; p = 0.023), supporting H3. This suggests that moral values related to environmental responsibility play an essential role in shaping consumer awareness. Among Generation Z in Surakarta, increased exposure to environmental issues through digital media and sustainability trends has contributed to the development of stronger ethical values regarding environmental responsibility. These values encourage individuals to consider the environmental impact of their consumption activities, such as the use of single-use packaging and food waste. This finding is consistent with previous research indicating that environmental ethical values significantly influence awareness of ecological impacts (Simanjuntak & Fitri,

2024), reinforcing the notion that awareness is shaped not only by emotional factors but also by individuals' moral beliefs.

Moreover, the results indicate that *green ethics* significantly influence *green awareness* through *green environmental behavior* (t = 2.237; p = 0.025), thus supporting H4. This finding implies that ethical values are more effective in enhancing awareness when translated into actual behavior. In the context of F&B consumption in Surakarta, individuals with strong environmental ethics are more likely to engage in practices such as reducing plastic use, choosing sustainable products, and minimizing food waste. These behaviors reinforce personal experiences and enhance understanding of environmental issues. This is consistent with prior research suggesting that behavior functions as a mechanism linking ethical values to awareness (Liu et al., 2024). In other words, ethical values alone are insufficient unless they are enacted in daily consumption practices to effectively enhance *green awareness*.

From the perspective of novelty, this study contributes to the literature by integrating *green emotions*, *green ethics*, and *green environmental behavior* into a single structural model to explain the formation of *green awareness* among Generation Z consumers in the F&B sector, particularly in Surakarta. Unlike previous studies that tend to examine these variables separately, this research demonstrates that environmental awareness is formed through a complex interaction between emotional, moral, and behavioral factors. Furthermore, this study highlights the unique context of Surakarta as a rapidly growing culinary city with strong digital consumption trends, revealing the presence of a *value–action gap* among Generation Z consumers—where environmental concern does not always translate into consistent sustainable behavior.

In terms of implications, theoretically, this study enriches the green marketing literature by demonstrating that the formation of *green awareness* is influenced not only by cognitive factors but also by affective and normative dimensions mediated by behavior. Practically, the findings suggest that F&B businesses in Surakarta should not only focus on providing environmentally friendly products but also create consumption experiences that foster emotional engagement and encourage sustainable behavior. This can be achieved through initiatives such as offering eco-friendly packaging, implementing food waste reduction programs, and designing marketing strategies that emphasize emotional and ethical values. Additionally, for policymakers, the results highlight the importance of creating a supportive consumption ecosystem that enables Generation Z to translate their environmental awareness into consistent and sustainable actions.

CONCLUSION & SUGGESTION

This study aims to examine the effects of green emotions and green ethics on green awareness, with green environmental behavior as a mediating variable among Generation Z consumers in the Food and Beverage (F&B) sector in Surakarta. The findings reveal that all proposed hypotheses (H1–H4) are supported, indicating that both green emotions and green ethics have significant positive effects on green awareness, both directly and indirectly through green

environmental behavior. These results suggest that environmental awareness among Generation Z is not solely driven by cognitive understanding but is also shaped by emotional engagement and moral values that are translated into actual behavior. Furthermore, green environmental behavior plays a crucial role as a mechanism that bridges emotional and ethical factors with environmental awareness. In the context of Surakarta, a city characterized by rapid growth in the culinary industry and strong digital consumption trends, environmental awareness among Generation Z develops through direct experiences in sustainable consumption practices, such as reducing food waste and adopting environmentally friendly products. However, the study also identifies the presence of a value–action gap, where high environmental concern is not always accompanied by consistent pro-environmental behavior. Therefore, the findings highlight that the development of green awareness requires a synergy between emotional engagement, ethical values, and supportive consumption environments that enable individuals to practice sustainable behavior in their daily lives.

Based on the findings, several recommendations can be proposed. For F&B businesses in Surakarta, it is important not only to provide environmentally friendly products but also to create consumption experiences that foster emotional engagement and encourage sustainable behavior. This can be achieved through the use of eco-friendly packaging, offering flexible portion options to reduce food waste, and implementing marketing campaigns that emphasize emotional and ethical values related to environmental issues. Additionally, businesses can promote consumer participation through initiatives such as incentives for customers who bring reusable containers or by adopting transparent waste management practices. For policymakers, it is essential to establish a supportive ecosystem for sustainable consumption, including regulations to reduce single-use plastics, public education on food waste, and collaboration with F&B businesses to promote environmentally responsible practices. From a theoretical perspective, this study contributes to the green marketing literature by demonstrating that green awareness is shaped by the interaction of affective, normative, and behavioral dimensions. Future research is encouraged to expand the study to different regions, incorporate additional variables such as social influence or digital marketing exposure, and apply longitudinal or qualitative approaches to gain deeper insights into consumer behavior over time.

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