

Women, Environment and Marketing: What Drives Green Purchase Intention of Cloth Menstrual Pads Among Generation Z

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ABSTRACT

Objectives: This study investigates the influence of environmental knowledge, green advertising, and environmental concern on green purchase intention toward cloth menstrual pad products, with attitude toward green products serving as a mediating variable and sustainability awareness functioning as a moderating variable.

Methodology: Data were collected through an online survey of 421 Generation Z women residing in major Indonesian cities, namely Jakarta, Bandung, Surabaya, Medan, and Makassar, and analyzed using SmartPLS 4.

Finding: The results reveal that environmental knowledge, green advertising, and environmental concern exert significant positive effects on attitudes toward green products, which subsequently enhance green purchase intention. Notably, environmental knowledge demonstrates a negative direct effect on purchase intention, while sustainability awareness fails to moderate the proposed relationships.

Conclusion: These findings offer valuable insights for manufacturers, marketers, policymakers, and environmental organizations seeking to foster green purchase intention, particularly for sustainable products such as cloth menstrual pads

Keywords: Environmental Knowledge; Environmental Concern; Green Advertising; Attitude Toward Green Product; Sustainability Awareness; Green Purchase Intention.

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INTRODUCTION

Green products are growing in Indonesia. Nielsen reported that 71% of young consumers are willing to switch to environmentally friendly products, and 41% of them prefer products made from natural materials (Nurcahyadi, 2025). Furthermore, a survey performed by Rakuten Insight 2022 revealed that 64% of respondents consider purchasing eco-friendly products important (Ridwan, 2025). However, previous research has noted that adopting a sustainable lifestyle remains inconsistent, primarily due to high consumption of single-use plastics, including disposable sanitary pads, which are still widely used by women during menstruation (Ridwan, 2025). Although disposable pads effectively absorb fluids, they contain chemicals such as chlorine that can pose health risks and contribute to environmental pollution from plastic waste. As an alternative, cloth pads offer a more environmentally friendly and safer solution, as they are reusable, chemical-free, and more economical in the long run.

Despite their many advantages, the adoption rate of cloth menstrual pad across countries remains relatively low. Studies in developed and developing countries such as South Korea, Australia, Ghana, Malaysia, and Indonesia indicate that the use of cloth menstrual pad remains limited. Most respondents in these studies are from Generation Z, reflecting the challenges in driving purchase intentions for environmentally friendly sanitary products, such as cloth menstrual pads (Ramsay et al., 2023; Zahira et al., 2024).

Generation Z refers to individuals born between 1997 and 2012; thus, the oldest members of this cohort are currently 27 years old, while the youngest are 12 years old. According to BPS (2023) the population of Gen Z women aged 17–27 across five major Indonesian cities in 2023, totaling 2,341,461. Women within this age range have generally begun menstruating and require menstrual pad products. Despite their relatively high level of environmental awareness, prior studies indicate that Gen Z women predominantly rely on disposable pads, a behavior that contradicts their stated values and sustainability-oriented characteristics. Based on this population size, it is estimated that more than 35.1 million disposable pads are used during each menstrual cycle. This substantial volume of waste poses serious environmental challenges, as disposable pads contain plastic materials that are difficult to decompose, thereby underscoring the urgent need for more sustainable alternatives, such as cloth menstrual pads.

However, several studies highlight challenges in shaping the purchase intention of cloth menstrual pad, such as the low distribution of environmental knowledge, the emergence of greenwashing practices, environmental concerns that are hampered by product effectiveness, hesitation towards new products, and sustainability awareness that is disrupted by practicality factors (Hamzah & Tanwir, 2021). By applying three theoretical foundations to predict purchase intention, namely the Theory of Planned Behavior (TPB) (Ajzen, 1991), the Value-Belief-Norm Theory (VBN) (Stern et al., 1993) and the Push-Pull-Mooring (PPM) (Bansal et al., 2005). This study aims to analyze the positive and significant influence of environmental knowledge, green advertising, and environmental concern on attitudes towards green products and green purchase intentions on cloth menstrual pad among Generation Z.

LITERATURE REVIEW

Green Purchase Intention

Green purchase intention refers to consumers' propensity to purchase products that are environmentally friendly while avoiding those that may cause environmental harm. As

awareness of environmental degradation arising from consumption patterns continues to increase, consumers are increasingly inclined to seek out and select products that are perceived to be more sustainable and environmentally responsible (Sun et al., 2021a).

Consequently, green purchase intention has become a critical construct for assessing both current and future consumer purchasing behavior, as well as for estimating market demand for green products (Zhuang et al., 2021). Green purchase intention can be conceptualized through four key dimensions: transactional interest, which reflects an individual's intention to purchase products to fulfill personal needs; referential interest, which denotes the willingness to recommend environmentally friendly products to others; preferential interest, which indicates a preference for green products over conventional alternatives; and explorative interest, which captures the desire to seek information and experiment with products prior to purchase (Setyo Aji Wibowo et al., 2021; Pranoto et al., 2024). These dimensions are employed in this study as they provide a comprehensive representation of consumer intentions toward environmentally friendly products, such as cloth menstrual pads.

Environmental Knowledge

Environmental knowledge can be defined as the understanding that individuals have about various issues and phenomena related to human activities and their impact on environmental conditions. This knowledge has been shown to be one of the main predictors in attitude formation, which shows that a person's level of understanding of environmental issues has the potential to influence their behavior and attitudes towards the environment (Liu et al., 2020; Shah et al., 2021).

Several researchers such as Hanasti et al. (2025), and Wang et al., 2020) stated that environmental knowledge can be measured through two dimensions, namely subjective knowledge and objective knowledge. Subjective knowledge refers to individuals' perceptions of their own knowledge about environmental issues, while objective knowledge refers to the extent to which individuals have factual or concrete knowledge about the issue. This study applied these two dimensions to measure environmental knowledge.

Green Advertising

Green advertising is a type of advertising that contains messages about the environment, health, and pollution prevention, with an emphasis on the environmental benefits of a product. The main purpose of green advertising is to increase consumer awareness of environmentally friendly products and encourage more sustainability-oriented purchase intentions (Amallia et al., 2022). Consumers who are exposed to green advertising tend to develop more positive attitudes and judgments towards environmental issues, which can influence their preferences and purchasing intentions.

Environmental Concern

Environmental concern refers to the extent to which individuals are aware of, support, and contribute to efforts to solve environmental problems, and the extent to which this concern affects purchasing behavior towards environmentally friendly products. Consumers who have a high level of environmental concern tend to consider aspects of sustainability and the ecological impact of the goods or services they consume (Istichomah, 2019). The results of the study by Macht et al. (2023) also confirm that environmental concern is an important factor influencing purchase intentions for environmentally friendly products.

Attitude Toward Green Product

Attitude toward green products refers to individual assessments and preferences for environmentally friendly products, which are influenced by the level of concern for the environment and self-view as part of nature. This attitude plays an important role in shaping consumer purchase intentions towards green products, as explained in the Theory of Planned Behavior which asserts that attitude is a major determinant in the formation of behavioral intentions (Ajzen, 1991). Theoretically, attitudes towards green products can be formed through internal factors, such as individual values and beliefs, as well as through external factors in the form of cognitive stimuli received from the social environment and media (Chairy & Syahrivar, 2020) (Jalees et al., 2021).

Sustainability Awareness

Sustainability awareness refers to an individual's or society's understanding of the importance of acting sustainably to meet present needs without compromising the ability of future generations to meet their own needs. This awareness encompasses consideration of the economic, social, and environmental impacts associated with each action undertaken. A higher level of sustainability awareness is widely believed to encourage stronger intentions and a greater propensity to purchase environmentally friendly products (Shang et al., 2024).

To comprehensively measure sustainability awareness, Ridwan et al. (2021) classify this concept into three main dimensions, namely: (1) Sustainability emotional awareness, which reflects an individual's sensitivity and emotional response to sustainability and environmental issues; (2) Sustainability behavior and attitude awareness, which assesses the extent to which individuals are aware of and adopt behaviors and attitudes that support sustainability practices; and (3) Sustainability practice awareness, which is awareness of practices that support sustainability and willingness to implement them in daily life.

HYPOTHESIS

Environmental Knowledge and Attitude towards Green Products

Environmental knowledge has been identified as one of the key predictors of attitude formation, as knowledge of environmental issues has the ability to shape individuals' perceptions and judgments towards green products (Liu et al., 2020; Shah et al., 2021). A number of previous studies support this positive relationship. For instance, the findings in (Kapoor et al., 2021) revealed that environmental knowledge has a positive effect on consumer attitudes in the context of purchasing air purifier products. Similarly, a study by (Tavitiyaman et al., 2024) shows that environmental knowledge significantly affects consumer attitudes. Similar findings were also reported by Almohammadi & Abdulghaffar (2022) in Saudi Arabia, which showed a positive and significant influence between environmental knowledge and attitude towards green products. These findings provide a strong empirical basis to support hypothesis testing in the context of cloth menstrual pads.

H1: Environmental knowledge has a positive and significant effect on attitude towards green products.

Green Advertising and Attitude toward Green Products

Green advertising influences consumer attitudes towards environmentally friendly products through a persuasion mechanism, where consumers exposed to environmentally themed advertisements tend to believe that the promoted products make a positive contribution to environmental sustainability. This can increase positive perceptions and form a favorable attitude towards the product. A number of previous studies support this relationship,

such as the findings of (Maharani, 2023) which show that green advertising has a positive and significant effect on consumer attitude. In addition, (Carrión-Bósquez et al. (2025) also found that green advertising empirically influences the attitudes of millennials in choosing organic products. In the context of this study, Generation Z women as respondents have characteristics that are active on social media, so they have a high potential to receive and respond to environmental messages conveyed through green advertising.

H2: Green advertising has a positive and significant effect on attitude toward green products.

Environmental Concern and Attitude toward Green Products

Individuals who have high concern for the environment tend to prefer and use environmentally friendly products because they feel they have a moral responsibility to preserve nature (Sugandini, 2020). Several previous studies support the positive relationship between environmental concern and attitude toward green products. For example, Maichum et al. (2016) show that environmental concern has a positive and significant effect on consumer attitudes in India and Thailand, when Zhang & Luo (2021) confirmed that environmental concern has a positive and significant effect on attitude toward green products. These findings strengthen the empirical basis for testing the relationship between the two variables in the context of this study.

H3: Environmental concern has a positive and significant effect on attitude toward green products.

Attitude toward Green Products and Green Purchase Intention

In general, consumers with positive attitudes towards green products are more likely to choose to consume such products. Previous literature shows strong support for this relationship. Previous literature shows strong support for this relationship. For instance, a study of 283 young consumers in Vietnam, found that attitudes towards green products have a positive and significant effect on purchase intention (Hoang & Tung, 2024). Similarly, study by Karunaratna (2020) showed that attitude is an important factor influencing green purchase intention among supermarket consumers in Sri Lanka. In addition, it was concluded by (Raghu & Rodrigues, 2022) that the stronger a person's attitude towards green products, the higher their propensity to purchase green products. These findings strengthen the empirical basis for testing the effect of attitude toward green products on green purchase intention in the context of this study.

H4: Attitude toward green products has a positive and significant effect on green purchase intention.

Environmental Knowledge and Green Purchase Intention

Individuals who have a good understanding of environmental issues are generally more aware of and responsible for the impact of their consumption on the environment. This knowledge encourages them to consider more sustainable choices, including in purchasing decisions. A number of previous studies support the positive relationship between the two variables. For example, research by Surahman et al. (2023) found a positive and significant correlation between environmental knowledge and green purchase intention, especially among Generation Z who have a high level of environmental awareness. Likewise, the study by Rivai & Asep Hermawan, 2024) showed that environmental knowledge has a major influence on consumers' tendency to buy environmentally friendly products. These findings provide a strong empirical basis for testing the direct effect of environmental knowledge on green purchase intention in the context of this study.

H5: Environmental knowledge has a positive and significant effect on green purchase intention.

Green Advertising and Green Purchase Intention

The more often consumers are exposed to advertisements containing sustainability messages, the more likely they are to enjoy these advertisements and form positive attitudes towards green products (Amallia et al., 2021). Various empirical findings support the positive relationship between these two variables. For instance, a study by Sun et al., (2021b) revealed that green advertising has a positive effect on the purchase intention of environmentally labeled products, because it can highlight the ecological benefits offered. Likewise, (Amallia et al., 2022) confirmed that green advertising has a positive and significant influence on green purchase intention among consumers in Yogyakarta. These results reinforce the assumption that exposure to advertising messages that emphasize sustainability can increase consumer interest in choosing green products.

H6: Green advertising has a positive and significant effect on green purchase intention.

Environmental Concern and Green Purchase Intention

Several previous studies have consistently shown that individuals who have high concern for the environment tend to be encouraged to buy environmentally friendly products as a form of ecological responsibility. For example, a study by Adiputra (2023) indicate that environmental concern has a major influence on the intention to buy green products among the millennial generation. Similarly, (Aini, 2020) emphasizes that concern for the environment is a dominant factor in encouraging green purchase intention, because individuals who care will try to avoid consumption that has a negative impact on the environment. Furthermore, research by Duarte et al. (2024) showed a positive and statistically significant correlation between environmental concern and intention to buy sustainable packaging.

H7: Environmental concern has a positive and significant effect on green purchase intention.

The Effect of Environmental Knowledge on Green Purchase Intention mediated by Attitude towards Green Products

An increased understanding of environmental issues can shape a more positive mindset and encourage consumers to buy environmentally friendly products. Several studies support this mediating role. For instance, study by Kapoor et al. (2021) show that environmental knowledge influences attitude, which then drives purchase intention in the context of air purifier products during the pollution crisis in Bangkok. Similarly, the study by Fenta et al. (2024) found that attitude mediates the relationship between environmental knowledge and purchase intention.

H8: Environmental knowledge has a positive and significant effect on green purchase intention through the mediation of attitude towards green products.

The Effect of Green Advertising on Green Purchase Intention mediated by Attitudetoward Green Products

Evaluation of green advertising is important to determine the extent of its influence in shaping positive consumer attitudes, which in turn encourages the intention to buy environmentally friendly products. Previous research supports this mediation relationship. For example, a study on the Starbucks brand in various regions of Indonesia found that green attitude fully mediates the relationship between green advertising and green purchase

intention (Maharani, 2023). Similar findings were presented by Amallia et al. (2021) in Yogyakarta, which showed that attractive and informative advertisements increase consumers' positive attitudes, which in turn strengthens the intention to buy green products.

H9: Green advertising has a positive and significant effect on green purchase intention through the mediation of attitude toward green products.

The Effect of Environmental Concern on Green Purchase Intention mediated by Attitude towards Green Products

Several studies support this mediating role, showing that concern for the environment needs to be accompanied by a positive attitude towards green products to encourage purchase intentions. Consumer attitudes towards environmentally friendly products, such as Starbucks tumblers, are known to strengthen the influence of environmental concern on purchase intention (Cahyadi, 2023). Similar was found in the context of The Body Shop products, where concern for environmental issues accompanied by a positive attitude towards green products increased consumers' propensity to buy (Rahmawati, 2023). In addition, attitude toward green products was also shown to partially mediate the influence between environmental concern and green purchase intention in green consumption (Hoang & Tung, 2024).

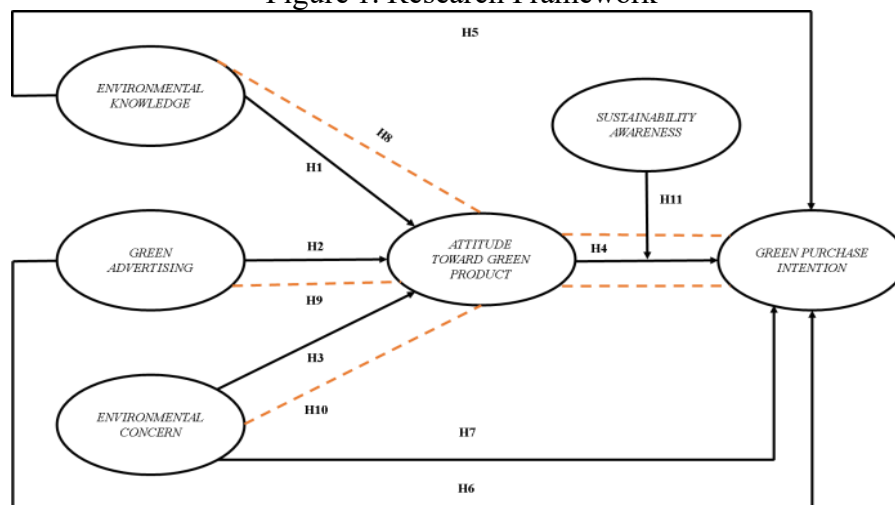
H10: Environmental concern has a positive and significant effect on green purchase intention through the mediation of attitude towards green products.

The Effect of Sustainability Awareness on Green Purchase Intention moderated by Attitude toward Green Products

Previous research has proven the existence of moderating effects in this relationship. The study results show that sustainability awareness strengthens the influence of attitude on green product purchase intention, especially in individuals with high levels of sustainability awareness (Shang et al., 2024). In the context of their study of university students in China, it was found that students who have a higher awareness of sustainability issues tend to show a more positive attitude and are encouraged to purchase green products.

H11: Sustainability awareness positively and significantly moderates attitude toward green products on green purchase intention.

Figure 1. Research Framework



METHOD

Research Design and Data Collection

This study employs a quantitative research approach using a non-probability sampling technique, specifically purposive sampling. The respondent criteria include Generation Z women aged 17–27 years who are domiciled in Jakarta, Surabaya, Bandung, Medan, or Makassar; demonstrate an interest in environmentally friendly products; and are familiar with cloth menstrual pads. The selection of these five major cities is based on the consideration that they represent urban areas in Indonesia with relatively high Generation Z populations, adequate internet accessibility, higher levels of environmental awareness, and sufficient purchasing power for environmentally friendly products.

Data were collected through an online survey administered via Microsoft Forms and distributed through social media platforms, including WhatsApp, TikTok, Instagram, and X.

The sample size was determined using the Slovin formula with a 5% margin of error, resulting in a minimum requirement of 400 respondents (Majdina, 2024). All measurement items were assessed using a six-point Likert scale. The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS version 4, encompassing outer model evaluation, inner model analysis, and hypothesis testing.

Measurement Instruments

The measuring instruments for each variable in this study are shown in Table 1, which were developed and modified based on scales that have been used in previous studies. Adaptation of the instruments was done to ensure their suitability to the context of purchase intention of cloth menstrual pad among Generation Z women.

Table 1. Questionnaire Items

Variables	Items	Source
Environmental Knowledge (EK)	EK1: I have a good knowledge of environmental issues	Ellen (1994), Wang et al. (2020), Chan (2001), Khaleeli et al. (2021)
	EK2: I know how to choose products and packaging that can reduce waste in landfills	
	EK3: I understand the environmental phrases and symbols on product packaging.	
	EK4: I learned that cloth menstrual pads are more environmentally friendly than disposable pads	
	EK5: I learned that plastic waste in disposable pads contributes to environmental pollution	
	EK6: I know that the use of chemicals in disposable pads contributes to environmental pollution	
	EK7: Plastic waste in disposable pads takes hundreds of years to decompose naturally in the environment	
	EK8: Plastic waste in disposable pads is difficult to decompose at sea	
Green Advertising (GA)	GA1: I feel that companies that produce cloth menstrual pads have a strong commitment to the environment	Kärnä (2023); Agustina (2024)
	GA2: I feel more confident that cloth	
	GA3: The logo of cloth menstrual pads should reflect natural and environmentally friendly materials	
	GA5: The cloth menstrual pads advertisement should have a message that preserves the earth	
	GA6: I agree that the message in the cloth menstrual pads advertisement should be relevant to environmental issues	
	GA7: The cloth menstrual pads advertisement should showcase the natural	

Variables	Items	Source
Environmental Concern (EC)	ingredients used in the product	Amerigo et al. (2012); Gagnon Thompson & Barton (1994); Clayton (2003); Maloney et al. (1975)
	GA8: Advertisements for cloth menstrual pads should show that the materials used are safe for health and the environment	
	GA9: The cloth menstrual pads advertisement should invite consumers to be more concerned about environmental issues	
	GA10: The cloth menstrual pads advertisement invites me to take positive action towards the purchase intention of environmentally friendly products	
	EC1: I don't care about environmental issues related to menstrual product waste	
	EC2: I feel that protecting the environment is the government's primary responsibility, not mine	
	EC3: I am concerned that waste from disposable pads will pollute the environment and adversely affect future generations	
	EC4: A better quality of life in the future is my reason for switching to cloth menstrual pads to reduce waste	
	EC5: My actions in choosing menstrual products, such as disposable pads or cloth menstrual pads, greatly affecting the environment	
	EC6: In choosing eco-friendly products, I consider myself as part of nature	
Attitude Toward Green Product (ATGP)	EC7: When I feel dissatisfied with disposable pads, I feel better by choosing environmentally friendly products, such as cloth menstrual pads	Azwar (2007); Setyadarma (2020)
	EC8: When using cloth menstrual pads, it really helps me feel more comfortable and less worried about environmental impact	
	ATGP1: I believe that cloth menstrual pads are a more environmentally friendly option compared to disposable pads	
	ATGP2: I have a positive perception of the convenience of cloth menstrual pads	
	ATGP3: I like the completeness of cloth menstrual pads options, such as size, thickness, color, and pattern	
	ATGP4: I feel proud to use cloth menstrual pads as an environmentally friendly product option	
Sustainability Awareness (SA)	ATGP5: I like cloth menstrual pads products because they are reusable and durable	Ridwan et al. (2021)
	ATGP6: Cloth menstrual pads are a more economical choice in the long run, although the initial price is higher than disposable pads	
	SA1: I am very concerned about environmental issues around me, including the impact of disposable pads on the environment	
	SA2: I realize the importance of being environmentally responsible,	
	SA3: I often give references about environmentally friendly cloth menstrual pads to my friends	
	SA4: I save money on monthly sanitary products by using cloth menstrual pads	
Green Purchase Intention (GPI)	SA5: I convey the importance of preserving the environment to my family members	Wibowo et al. (2021); Huda (2021); Kalesaran et al.
	SA6: I often share information to my friends about cloth menstrual pads	
	GP1: My interest in environmentally friendly cloth menstrual pads will strengthen my intention to buy them	
	GP2: I intend to buy cloth menstrual pads because I believe this product can meet my expectations regarding environmentally friendly products and comfort	
	GP3: I often give references about environmentally friendly cloth menstrual pads to my friends	
	GP4: I invite my friends to try cloth menstrual pads because I believe it is a better choice for the environment	
	GP5: If there are disposable pads at a cheaper price, I prefer to choose eco-	

Variables	Items	Source
	friendly cloth menstrual pads even if they are slightly more expensive	(2022)
	GP6: When shopping, I prefer to look for cloth menstrual pads rather than disposable pads	
	GP7: I actively seek information about environmentally friendly cloth menstrual pads	
	GP8: I appreciate companies that play a role in preserving the environment through products such as cloth menstrual pads	

Data Analysis

This research uses Partial Least Squares Structural Equation Modeling (PLS-SEM) data analysis technique with the help of SmartPLS software version 4. The analysis was carried out through two main stages, namely testing the outer model and inner model. The outer model stage is used to assess the validity and reliability of indicators. Indicators are said to be valid if they meet the convergent validity value above 0.70 (F. Hair Jr et al., 2014), the discriminant validity value shows that the correlation between latent constructs is lower than the AVE root of each construct (Widarjono, 2020), AVE value > 0.50 (Hair, 2019), composite reliability > 0.70 (Garson, 2016), and Cronbach's Alpha > 0.70 (Rifai, 2015).

The next stage is testing the inner model to evaluate the relationship between latent constructs. The R-square (R^2) value is used to assess the strength of the model, where $R^2 > 0.75$ indicates a strong model, $R^2 = 0.50$ indicates a moderate model, and $R^2 < 0.50$ indicates a low influence between variables (Hatmawan, 2020). The f-square value is used to see the magnitude of the influence between constructs, with categories $0.02 =$ weak, $0.15 =$ moderate, and $0.35 =$ strong (Chin, 1998). The Q-square (Q^2) value is used to measure the predictive power of the model, where $Q^2 > 0$ indicates that the model has good predictive ability (Abdillah, 2015).

The test also pays attention to the value of Variance Inflation Factor (VIF) to avoid multicollinearity. A VIF value of 1 indicates the absence of multicollinearity, values between 1 and 5 are tolerable, and values above 5 (especially > 10) indicate high multicollinearity that can affect the accuracy of the estimates (Hair, 2006). To assess Goodness of Fit, two indicators used are Standardized Root Mean Square Residual (SRMR) and Normed Fit Index (NFI). SRMR is considered good if its value is < 0.10 and optimal is close to 0.08, while NFI is considered better if its value is close to 1 (Hair, 2006). Finally, testing the mediation and moderation hypotheses is carried out using the bootstrapping method, provided that a relationship is considered significant if the t-statistic value > 1.96 or p-value < 0.05 (Hair et al., 2019).

RESULTS AND DISCUSSION

Demographic Profile

Table 2 describes the demographic profile of the research respondents, the results show that the majority of respondents in this study are Generation Z women aged 20-22 years (72.4%), and most of them live in Jakarta (51.8%). The questionnaire link was accessed mostly through the TikTok platform (52.3%), indicating that social media, especially TikTok, is an effective means of reaching Gen Z respondents. The majority of respondents had a high school education background (85.3%), and most were university students (81.9%). All respondents were unmarried, which was consistent with their age characteristics and educational status. Regarding monthly expenditure on menstrual pads, most respondents

allocated Rp20,000-Rp30,000 (43.5%).

Table 2. Demographic Profile

Category	Category	Frequency	Percentage (%)
Age	17-19	43	10.2%
	20-22	305	72.4%
	23-25	67	15.9%
	26-27	6	1.4%
Location	Jakarta	218	51.8%
	Surabaya	62	14.7%
	Bandung	54	12.8%
	Medan	54	12.8%
	Makassar	33	7.8%
Media Sources to access questionnaire link	Tiktok	220	52.3%
	WhatsApp	170	40.4%
	Instagram	23	5.5%
	X/Twitter	8	1.9%
Level Education	< Senior High School	14	3.3%
	Senior High School	359	85.3%
	Diploma	5	1.2%
	Bachelor's Degree	43	10.2%
	Senior High School Student	14	3.3%
	College Student	345	81.9%
Occupation	Public Servants	6	1.4%
	Private Employees	35	8.3%
	Entrepreneurs	14	3.3%
	Educators	7	1.7%
Marital Status	(Teachers/Lecturers/Tutors)		
	Not married	421	100.0%
Average monthly expenditure for the purchase of disposable pads	Rp 20.000 - Rp 30.000	183	43.5%
	Rp 31.000 - Rp 40.000	135	32.1%
	Rp 41.000 - Rp 50.000	60	14.3%
	≥ Rp 50.000	43	10.2%

Measurement Model Evaluation

Measurement model evaluation shows that 8 out of 46 indicators did not meet the recommended factor loading threshold of 0.70, and they were excluded. Table 3 presents the final convergent validity, it demonstrated outer loading values above 0.70, indicating they effectively represented their respective constructs and fulfilled the requirements for convergent validity.

Table 3. Reliability Analysis and Convergent Validity

Construct	Item	Factor Loading	Composite Reliability	Cronbach's Alpha	AVE
ATGP	ATGP 2	0.816	0,861	0,860	0.641
	ATGP 3	0.783			
	ATGP 4	0.797			
	ATGP 5	0.804			
	ATGP 6	0.801			
EC	EC 1	0.724	0,864	0,834	0.584
	EC 2	0.738			
	EC 3	0.763			
	EC 4	0.811			
	EC 7	0.784			
EK	EK 1	0.781	0,896	0,893	0.608
	EK 3	0.766			
	EK 4	0.813			
	EK 5	0.810			
	EK 6	0.773			
	EK 7	0.772			
	EK 8	0.742			
GA	GA 1	0.744	0,922	0,918	0.574
	GA 10	0.737			
	GA 2	0.749			
	GA 3	0.747			
	GA 4	0.755			
	GA 5	0.796			
	GA 6	0.782			
	GA 7	0.766			
	GA 8	0.761			
	GA 9	0.740			
GPI	GPI 1	0.779	0,911	0,911	0.652
	GPI 2	0.748			
	GPI 3	0.825			
	GPI 4	0.843			
	GPI 5	0.798			
	GPI 6	0.854			
	GPI 7	0.801			
SA	SA 1	0.705	0,836	0,803	0.627
	SA 2	0.730			
	SA 3	0.884			
	SA 4	0.836			

In addition, all constructs in the model showed AVE values greater than 0.50, suggesting adequate convergent validity. Furthermore, the analysis demonstrated that all constructs achieved composite reliability Cronbach's Alpha values (>0.70), confirming the reliability of the measurement instruments.

Structural Model Evaluation

Inner model analysis is used to evaluate the relationship between latent variables in the structural model. This evaluation includes testing the R-square, f-square, Q-square, VIF, and goodness of fit values. The R-square value for attitude toward green products is 0.336, meaning that about 34% of attitude variation is explained by environmental knowledge, green

advertising, and environmental concern. Meanwhile, the adjusted R-square for green purchase intention is 0.610, indicating that the variables in the model explain 61% of the variation in purchase intention.

Table 4. Inner Model Results (Summary)

Hypothesis	Path	Coefficient	t-statistics	p-value	Supported
H1	EK -> ATGP	0.258	3.027	0.002	Yes
H2	GA -> ATGP	0.218	3.187	0.001	Yes
H3	EC -> ATGP	0.263	4.579	0.000	Yes
H4	ATGP -> GPI	0.358	5.438	0.000	Yes
H5	EK -> GPI	-0.164	3.659	0.000	No
H6	GA -> GPI	0.129	2.284	0.022	Yes
H7	EC -> GPI	0.099	2.419	0.016	Yes
H8	EK -> ATGP -> GPI	0.092	2.729	0.006	Yes
H9	GA -> ATGP -> GPI	0.078	2.820	0.005	Yes
H10	EC -> ATGP -> GPI	0.094	3.282	0.001	Yes
H11	SA x ATGP -> GPI	-0.023	0.814	0.416	No

Table 4 shows that out of a total of 11 hypotheses proposed, 9 hypotheses are accepted and 2 hypotheses are rejected. The rejected hypotheses are H5 and H11. H5 presents that there is a negative and significant influence between EK and GPI (path coefficient of - 0.164, t-statistics of 3.659 > 1.96, and p-value of 0.000 < 0.05). This means that the higher an individual's knowledge about the environment, the more they have a low propensity to buy environmentally friendly products, such as cloth menstrual pads. Meanwhile, H11 shows that there is no positive and significant effect of ATGP on GPI through SA moderation (path coefficient - 0.023 < 0, with t-statistics 0.814 < 1.96, and p-value 0.416 > 0.05). This finding indicates that SA does not have a significant moderating effect on the relationship between ATGP and GPI.

CONCLUSION

This study investigated the factors influencing green purchase intention toward cloth menstrual pads among Generation Z women in major Indonesian cities, focusing on environmental knowledge, green advertising, and environmental concern, with attitude toward green products as a mediating variable and sustainability awareness as a moderating variable. The results show that environmental knowledge, green advertising, and environmental concern significantly and positively influence attitudes toward green products. In turn, attitude toward green products has a strong positive effect on green purchase intention. These findings confirm that positive attitudes play a central role in encouraging Generation Z women to consider using cloth menstrual pads.

Attitude toward green products also mediates the effects of environmental knowledge, green advertising, and environmental concern on green purchase intention. This indicates that these factors increase purchase intention mainly by shaping favorable product attitudes, rather than influencing buying decisions directly. However, environmental knowledge has a significant negative direct effect on green purchase intention. This suggests that although respondents understand the environmental benefits of cloth menstrual pads, greater knowledge may also increase awareness of practical disadvantages such as hygiene concerns, inconvenience, and social discomfort, which can reduce willingness to purchase. This finding

highlights the existence of an attitude–behavior gap in sustainable menstrual product consumption.

In addition, sustainability awareness does not moderate the relationship between attitude toward green products and green purchase intention. This implies that high awareness of sustainability alone is not sufficient to strengthen the impact of positive attitudes on actual purchase intentions, especially when practical barriers remain. Overall, this study concludes that improving attitudes toward cloth menstrual pads is essential to increase green purchase intention among Generation Z women. Therefore, promotional strategies should not only emphasize environmental benefits but also address functional concerns, comfort, hygiene, and ease of use. Product innovation and practical education are necessary to reduce perceived risks and support wider adoption of sustainable menstrual products.

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