

Analysis of the Influence of Environmental Awareness, Subjective Norms and Basic Human Conditions on Green Purchase Behavior (Study on the Implementation of Paid Plastic Bag Policy)

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Abstract

This study aims to examine the factors influencing green purchase behavior after the implementation of the paid plastic bag policy. The factors tested included environmental awareness, subjective norms, and basic human conditions, such as gender, age, income level, and education level. The study was conducted using a questionnaire distributed to consumers shopping at Alfamart, Indomaret, and Superindo in the Special Region of Yogyakarta. The respondents used were 392 respondents from five districts in the Special Region of Yogyakarta. The results showed that gender and age influenced environmental awareness and subjective norms, while education and income did not. Environmental awareness influenced green purchase behavior, and subjective norms were able to mediate the influence of environmental awareness on green purchase behavior.

Keywords: *Environmental awareness, subjective norms, basic human conditions, green purchase behavior.*

INTRODUCTION

Plastic is a significant source of waste due to its inherent difficulty in decomposing. The widespread use of plastic as a packaging material poses serious environmental problems. Based on collected data, according to the National Waste Management Information System (SIPSN), managed by the Ministry of Environment and Forestry, the amount of plastic waste in Indonesia remained unchanged from 2019 to 2021. There was only a decrease of approximately 100,000 tons from 2019 to 2020, before rising again to 1 million tons in 2021. A significant change occurred between 2021 and 2022, with waste accumulation increasing from 28.5 million tons to 38.6 million tons, or 35.44%. Then, in 2023, it decreased by around 400,000 tons to 38.2 million tons.

Plastic bags are the most commonly used shopping tool by consumers. Purchasing goods at supermarkets or markets using plastic bags has become commonplace. The government's policy of implementing a paid plastic bag policy and not providing plastic bags when shopping is an effort to reduce the amount of plastic waste in. This study uses basic human factors as the underlying factors influencing consumer decision-making in the post-paid plastic bag policy purchasing process, as well as awareness and subjective norms that influence their purchasing behavior.

LITERATURE REVIEW

Green Purchase Behavior

Green purchasing involves purchasing environmentally friendly products and actively avoiding products that harm the environment (Chan, 2001). These products not only meet consumer needs but also contribute to a more sustainable world by avoiding negative environmental impacts, such as using safer, recyclable materials and minimizing packaging (Shamdasani et al., 1993). According to Moissander (2007), green purchasing behavior is



considered a form of decision-making that is a concrete manifestation of socially responsible behavior. Consumers who engage in environmentally friendly consumption have considered the broader social consequences of their choices. This shift indicates an increasing awareness and commitment of individuals to contribute positively to environmental conservation and sustainable development.

Basic Human Condition

[Liang \(2024\)](#) stated that the impact of basic human conditions can be explored to determine their influence on consumer willingness to purchase green products. Basic human conditions such as gender, age, income, and education are factors that can indicate a person's green consumption behavior. Research by [Zhao et al. \(2021\)](#) proved that, in general, women show more positive intentions in consuming green products, consume less carbon, and make more frequent purchases of environmentally friendly products. Meanwhile, men have higher environmental knowledge and concern for environmental issues than women. Women's higher tendency towards environmentally friendly products may also stem from societal expectations of women's roles as caregivers, which leads to increased sensitivity to issues that affect the welfare of future generations, including environmental sustainability ([Liang, 2024](#)).

H1a: Gender influences environmental awareness

H1b: Gender influences subjective norms

[Liang \(2024\)](#) stated that age shapes individual consumption intentions by influencing environmental awareness, health awareness, attitudes, subjective norms, and perceived behavioural control. According to [Borah et al. \(2024\)](#), Generation Z is highly concerned about environmental issues and values transparency in corporate environmental practices, as their decisions are heavily influenced by social media campaigns, peer discussions, and access to information about environmentally friendly products. Meanwhile, for millennials, social influences, such as workplace culture and family values, significantly influence their behavior. Millennials are more likely to evaluate the long-term costs and benefits of purchasing environmentally friendly products, especially if supported by environmentally friendly marketing and incentives ([Azizi, 2022](#)).

H2a: Age influences environmental awareness

H2b: Age influences subjective norms

[Liang \(2024\)](#) stated that education level and eco-friendly purchasing behavior can be linked to several factors reflecting the complex interaction between education, awareness, and environmental concern. The higher a person's education level, the more information they have access to, including environmental issues and the impact of consumer choices. This increased awareness often leads to a deeper understanding of the importance of sustainable practices, which influences purchasing decisions.

H3a: Education influences environmental awareness

H3b: Education influences subjective norms

Income levels, often associated with higher education, can also contribute to environmentally friendly purchasing behavior. Highly educated individuals may have higher incomes, allowing them to prioritize environmentally friendly products and services, which can sometimes be more expensive ([Liang, 2024](#)).

H4a: Income level influences environmental awareness

H4b: Income level influences subjective norms

Environment Awareness

Wandosell (2021) describes environmental awareness as an individual's ability to understand the relationship between human activities, environmental quality, and their readiness to actively engage in environmental activities. This involves societal perceptions of environmental issues, encompassing the aggregate aspects of an individual's environmental knowledge, values, and attitudes (Handoyo, 2021). Consumers who are environmentally aware are more likely to consider the environmental impact of the products they choose to consume or are more likely to use their power as consumers to make changes to the environment (Barbarossa and Pastore, 2015).

H5a: Environmental awareness has a significant effect on green purchase behavior.

Subjective Norm

Subjective norms reflect the influence of social pressure on individual behavioral choices based on individual perceptions of social evaluations that may arise from following or deviating from expected social behavior (Ajzen, 1991). Research by Han and Kim (2010) found that subjective norms significantly influence green consumption intentions, indicating that individuals are more likely to make environmentally friendly purchasing decisions based on societal expectations.

H5b: Subjective norms influence green purchase behavior

H6: Environmental awareness influences green purchase behavior through subjective norms as mediation.

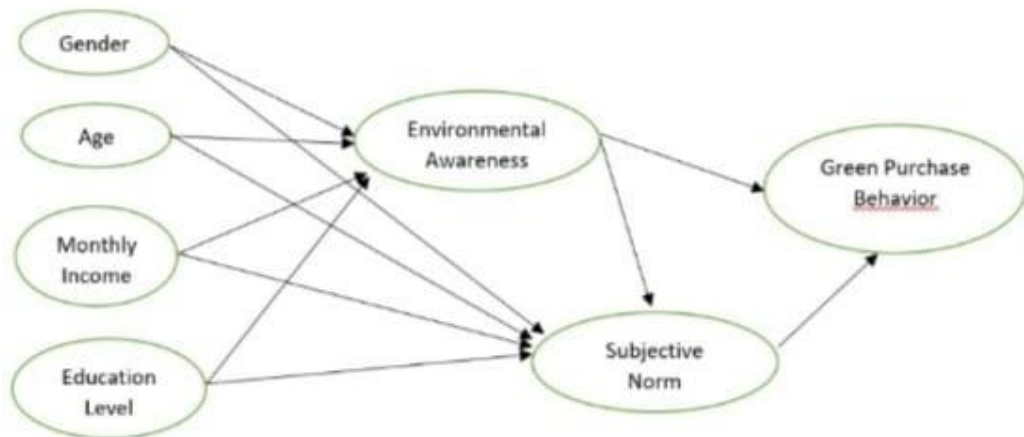


Figure 1. Research Framework

RESEARCH METHOD

The population of this study was all consumers who purchased products or were shopping at Indomaret, Alfamart, and Superindo in the Special Region of Yogyakarta. The sampling method used the Slovin formula, with a sample size of 392 respondents. The survey was conducted by distributing questionnaires to some consumers.

The research variables consist of the dependent variable, namely green purchase behavior; the independent variables, namely environmental awareness and basic human conditions; and the mediating variable, namely subjective norms. Hypothesis testing was conducted using Structural

Equation Modeling (SEM). Respondent characteristics are presented in Table 1.

Table 1. Respondent Characteristics

		Amount	Percentage (%)
Gender	Man	181	46,17
	Women	211	53,83
Age	< 18 years	16	4,08
	18 – 30 years old	276	70,41
	31 – 40 years old	19	4,85
	41 – 50 years old	23	5,87
	> 50 years	58	14,80
Education	Junior High School	2	0,51
	Senior High School	259	66,07
	Academy/equivalent	13	3,32
	Masters	118	30,10
Income	Rp. 1,000,000 – Rp. 2,000,000	34	8,67
	Rp. 2,000,001 – Rp. 3,000,000	105	26,79
	Rp. 3,000,001 – Rp. 4,000,000	129	32,91
	Rp. 4,000,001 – Rp. 5,000,000	41	10,46
	> Rp. 5,000,000	83	21,17

FINDINGS AND DISCUSSION

The results of the validity test show that the correlation between each indicator and the total construct score shows significant results ($<5\%$), so it is concluded that each question indicator is valid. The results of the reliability test show that the Green Purchase Behavior construct has a Cronbach Alpha value of 0.695, Environmental awareness 0.730, and subjective norm 0.745, greater than 0.60, so all variables are declared reliable.

The results of the hypothesis testing in Table 2 show that basic human conditions, gender (H1a, H1b), are proven to influence environmental awareness and subjective norms. These results indicate that gender significantly influences consumers' willingness to respond to paid plastic bag policies. Female consumers' awareness and conditional value of green products are higher than those of male consumers. Women's environmentally friendly personal norms are closely related to their attitudes towards parenting their children and families, and in turn, encourage their environmentally friendly purchasing behavior (Brough et al., 2016).

Table 2. Hypothesis Testing Results

	Hypothesis	T Value	P value	Results
Gender – EA	H1a	3,611	0,000*	Supported
Gender – SN	H1b	4,285	0,000*	Supported
Age – EA	H2a	-3,353	0,001*	Supported
Age – SN	H2b	-1,752	0,081**	Supported
HE – SHE	H3a	1,628	0,104	Not Supported

	Hypothesis	T Value	P value	Results
THE – SN	H3b	1,743	0,082**	Supported
IPM – EA	H4a	0,428	0,669	Not Supported
IPM – SN	H4b	0,749	0,454	Not Supported
EA – GPB	H5a	3,009	0,003*	Supported
SN – GPB	H5b	7,973	0,000	Supported
EA – SN	H6	12,609	0,000	Supported

Note 1: * $p < 0.05$, ** $p < 0.10$

Note 2: EA is Environmental Awareness; SN is Subjective Norm; EL is Education Level, IPM is Income per month, GPB is Green Purchase Behavior

The results of the basic human condition tests in Table 2 also show that age (H2a, H2b) influences environmental awareness and subjective norms. Age shows a significant positive effect on environmental awareness, reflecting that as consumers age, they become more concerned about the use of products that will affect environmental health. According to [Liang \(2024\)](#), individuals in early adulthood, regardless of age group, may prioritize practical considerations over environmental concerns due to financial constraints and other immediate priorities. As individuals age and progress through various life stages, their perspectives on environmentally friendly purchases may evolve, influenced by changing priorities and experiences.

Education (H3a, H3b) does not affect environmental awareness, but does affect subjective norms. According to [Liang et al. \(2024\)](#), a high level of education significantly increases consumer awareness of the environment and health. This indicates that education plays a crucial role in increasing public awareness of environmental health protection. Regarding the use of plastic bags when shopping, respondents have developed responsible attitudes and behaviors in protecting and preserving the environment. Respondents have sufficient awareness to reduce the use of plastic bags and have begun to develop the habit of bringing their own shopping bags as needed. This is instilled in the community from early childhood through habits in the school environment and direct experiences in daily life, thus forming an attitude of caring for the environment by reducing the use of plastic bags when shopping.

The testing of income levels shows that income (H4a, H4b) does not affect environmental awareness. In general, higher income levels increase consumer environmental awareness. This reflects the importance of financial capacity in supporting and practicing environmentally friendly consumption behaviors ([Liang 2024](#)). However, in the paid plastic bag policy, the price of plastic bags is still considered relatively cheap for consumers, so their value is considered economically insignificant. Individuals with both low and high incomes can have good environmental awareness due to the widespread availability of information through the media, schools, and government policies. According to [Alam \(2013\)](#), variables such as education, access to information, social norms, and collective values are more influential than income. However, income can contribute positively to environmental awareness, but this does not always apply broadly.

Income also does not affect subjective norms. This is because subjective norms are shaped by social pressure and collective values, not by individual purchasing power. Social norms apply universally, regardless of economic status or income, so everyone is bound by the same expectations.

Testing of hypotheses 5a and 5b shows that Environmental Awareness (H5a) and Subjective Norm (H5b) have a positive influence on Green Purchase Behavior. The positive influence of environmental awareness on green purchase behavior shows that environmentally conscious consumers tend to positively respond to the plastic charge policy. They see this policy as an opportunity to contribute to reducing plastic waste through green purchasing behavior and do not perceive it as adding to their costs. When faced with the choice of paying for plastic bags or bringing their own shopping bags, environmentally conscious consumers will choose to bring reusable bags or purchase eco-friendly alternatives. This research aligns with research by [Song et al. \(2019\)](#) and [Laroche et al. \(2001\)](#), which demonstrated that environmental awareness significantly influences green purchasing behavior. Consumers who care about the environment not only prefer to purchase products that are less harmful to the environment but are also willing to pay more to do so.

The positive influence of subjective norms on green purchase behavior indicates that when someone feels that people close to them, such as family, friends, and colleagues, support or expect them to engage in pro-environmental purchasing behavior, they are more likely to form an intention to purchase green products ([Fishbein & Ajzen, 2011](#)). In the implementation of paid plastic bag policies, when the government or stores implement paid plastic bag policies, a new social norm emerges where bringing your own shopping bag is considered a frugal and environmentally conscious attitude. Respondents who see people around them, such as family, friends, and colleagues, who are already accustomed to purchasing eco-friendly products or bringing their own shopping bags, began to do the same as a form of environmental awareness. This can also be a form of social pressure, where respondents want to be recognized as part of an eco-friendly group, thus increasing green purchasing behavior. This study is in line with research by [Xu et al. \(2020\)](#) and [Liang \(2024\)](#) prove that subjective norms have a positive impact on consumers' willingness to consume eco-friendly furniture. Consumers tend to refer to the opinions and behaviors of people they consider important, such as family members, friends, colleagues, or community leaders, to make choices that align with expectations in their social environment, especially when purchasing eco-friendly products.

Hypothesis 6 testing proves that environmental awareness influences green purchase behavior through subjective norms. These results indicate that environmental awareness indirectly influences green purchase behavior through subjective norms. A person with high environmental awareness is likely to share their green views, knowledge, and behaviors with others, such as family, friends, or coworkers. The more environmentally conscious individuals there are, the stronger the environmental awareness will be. social norms that purchasing environmentally friendly products is right and reasonable. Strong social norms will create positive pressure, where individuals will feel compelled to purchase environmentally friendly products to meet the expectations of those around them. This research aligns with research by [Liang \(2024\)](#) and [Laheri et al. \(2024\)](#), which demonstrated that subjective norms indirectly influence the relationship between environmental awareness and green purchasing behavior.

CONCLUSIONS

This study examines the influence of environmental awareness and subjective norms on green purchase behavior, taking into account the influence of basic human conditions (gender, age, education, and income level) on the implementation of the paid plastic bag policy. The results show that environmental awareness and subjective norms have a positive effect on green purchase behavior after the paid plastic bag policy. Subjective norms indirectly mediate the influence of environmental awareness on green purchase behavior. Furthermore, gender and age influence environmental awareness and subjective norms, while education level and income are found to

have no effect on increasing environmental awareness. The results of this study indicate that environmental awareness and responsibility can change people's mindsets about more responsible product use. This will help achieve sustainability in consumption and concern for a healthy environment.

This study examines the influence of human factors, environmental awareness, and subjective norms on green purchasing behavior. Future research is expected to incorporate other variables, such as environmental knowledge, behavioral beliefs, and other variables that can help provide more robust findings.

LIMITATIONS & FURTHER RESEARCH

Future research can also conduct cross-cultural comparisons that may influence consumer behavior in making decisions about using green products. It is hoped that this study can assist policymakers in achieving sustainability.

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