Pro-Environmental Behavior of Indonesian Household Consumers Toward Single-Use Plastic Packaging
Application of the Extended Theory of Planned Behavior

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ABSTRACT

This study investigates sustainable consumption behavior toward single-use plastics among Indonesian household consumers using an Extended Theory of Planned Behavior. Survey data from 219 urban housewives in Bogor City were analyzed with PLS-SEM. Pro-environmental values (GA), socialization agents (SA), and perceived behavioral control (PBC) significantly increased green purchase intention (GPI). In turn, GPI had a strong positive effect on sustainable consumption behavior (SCB). Environmental knowledge (EK) and religious–cultural factors (RCF) directly promoted SCB beyond intention. The model explained 56.3% of the variance in GPI and 59.0% in SCB ($Q^2 > 0$). Contrary to expectations, sustainability awareness (SAW) did not significantly moderate the links between GA/SA/PBC and GPI. These findings suggest that cognitive (EK) and moral–cultural (RCF) drivers translate into concrete behavior, while awareness alone is insufficient without efficacy and socialization. Policy and managerial implications are discussed, alongside methodological recommendations for future research.

Keywords: *Single-use plastic packaging; sustainable consumption behavior; green purchase intention*

ABSTRAK

Penelitian ini mengkaji perilaku konsumsi berkelanjutan terhadap penggunaan plastik sekali pakai pada rumah tangga di Indonesia dengan mengembangkan kerangka Extended Theory of Planned Behavior (TPB). Survei dilakukan kepada 219 ibu rumah tangga di Kota Bogor dan dianalisis menggunakan PLS-SEM. Hasil menunjukkan bahwa nilai pro-lingkungan (green values/GA), agen sosialisasi (SA), dan persepsi kontrol perilaku (perceived behavioral control/PBC) berpengaruh positif dan signifikan terhadap niat beli hijau (green purchase intention/GPI). Selanjutnya, GPI berpengaruh positif kuat terhadap perilaku konsumsi berkelanjutan (sustainable consumption behavior/SCB). Pengetahuan lingkungan (environmental knowledge/EK) dan faktor religi–kultural (religious–cultural factors/RCF) juga terbukti meningkatkan SCB secara langsung, di luar jalur melalui niat. Model menjelaskan proporsi keragaman yang memadai pada GPI dan SCB ($R^2 > 0{,}50$; $Q^2 > 0$), mengindikasikan relevansi prediktif yang baik. Berbeda dari hipotesis, kesadaran

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keberlanjutan (sustainability awareness/SAW) tidak memoderasi pengaruh GA, SA, dan PBC terhadap GPI secara signifikan. Temuan ini menegaskan bahwa kombinasi faktor kognitif (EK), moral–kultural (RCF), norma sosial (SA), serta efikasi perilaku (PBC) lebih menentukan perubahan perilaku nyata dibanding kesadaran semata. Implikasi kebijakan meliputi intervensi berbasis komunitas dan rumah tangga untuk memperkuat norma sosial prolingkungan, meningkatkan efikasi pengelolaan sampah, serta memanfaatkan narasi moral–kultural dalam kampanye pengurangan plastik sekali pakai. Keterbatasan dan agenda riset mendatang turut dibahas.

Kata Kunci: kemasan plastik sekali pakai; perilaku konsumsi berkelanjutan; intensi pembelian hijau

INTRODUCTION

The global population, projected to reach 9.7 billion by 2050 , is driving an increase in packaging consumption, particularly single-use plastics (United Nation, 2019; Ncube et al., 2021). Despite their practical advantages, the limited recyclability of plastics makes them a significant contributor to environmental pollution. Data from United Nation Environment Programme (2022) shows that 36% of plastics are used for packaging, with 85% ending up in landfills and 0.5% polluting the oceans. In Indonesia, more than 51% of waste originates from households, with plastics ranking second after food waste (National Waste Management Information System SIPSN, 2024).

Single-use plastic products are a general term for plastic items utilized in production and daily life, which are manufactured using plastic as the primary raw material and are not intended for repeated use (Sun & Wang, 2020).The government has issued waste management regulations through Law No. 18/2008 and Government Regulation No. 81/2012, and has set a target to reduce packaging waste by 30% by 2029 (Wicaksono, 2023). However, the success of these policies heavily depends on consumer behavior (Ma et al., 2020), particularly that of housewives, who serve as the primary decision-makers in household consumption (Dana Research Indonesia; 2022).

The Theory of Planned Behavior (TPB) is the most widely applied framework to explain pro-environmental behavior (Tian & Liu, 2022). This theory emphasizes the roles of attitude, subjective norms, and perceived behavioral control in shaping intention, which in turn influences actual behavior. Nevertheless, TPB has limitations in capturing socio-cultural influences, emotions, and religious values that also shape pro-environmental behavior (Corner, 2020; Zemo & Nigus, 2021). The TPB approach that incorporates other theories is considered to provide a deeper and more comprehensive understanding of consumer behavior and has been proven to offer a better explanation of green behavior (Zulfikar et al., 2023).Therefore, extending TPB by incorporating green values (biospheric, altruistic, egoistic), socialization agents, sustainable awareness, as well as religious and cultural factors provides a more comprehensive understanding of sustainable consumption behavior. Previous studies have examined the roles of attitudes, subjective norms, and behavioral control (Carfora et al., 2021; Widayat et al., 2022), the role of socialization agents , and sustainability awareness among students and younger generations (Abeysekera et al., 2022; Shang et al., 2024).

However, research that simultaneously integrates psychological, social, and cultural factors into the Theory of Planned Behavior remains limited, particularly in the context of urban housewives in Indonesia who play a strategic role in household consumption. Distinct from prior studies, this research extends the TPB model by incorporating religious and local cultural values as direct determinants of sustainable consumption behavior. Accordingly, this study offers a theoretical contribution by expanding the TPB model and a practical

contribution through recommendations for green marketing strategies and policies aimed at reducing single-use plastics.

This study contributes novel insights by extending the Theory of Planned Behavior (TPB) through the inclusion of religious and cultural dimensions as direct determinants of sustainable consumption behavior. Unlike prior studies that focused primarily on psychological antecedents such as attitudes, norms, and perceived control, this research integrates socio-cultural and spiritual values, providing a more contextually grounded model that reflects Indonesian consumer realities. Empirically, it provides new evidence from urban housewives—a key but underexplored demographic segment—thereby enriching both local and global discourse on pro-environmental behavior.

LITERATURE REVIEW

This study adopts an explanatory approach to examine the influence of pro-environmental attitudes (biospheric, altruistic, and egoistic), socialization agents (family, peer groups, and social media), and behavioral control (self-efficacy and controllability) on green purchase intention. Furthermore, the research analyzes how green purchase intention, together with environmental knowledge as well as religious and cultural factors, shapes sustainable consumption behavior. The study also explores the moderating role of sustainable awareness, which may strengthen or weaken the relationships between pro-environmental attitudes, socialization agents, and behavioral control with green purchase intention. The conceptual model is presented in Figure 1.

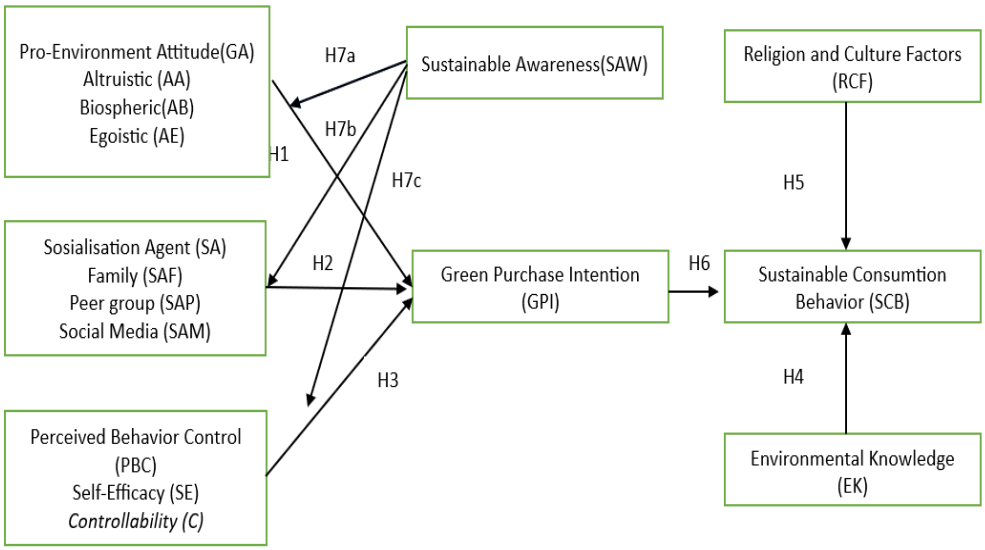

Figure 1. Conceptual Research Model

The hypotheses derived from the conceptual model in Figure 1 propose a positive and significant influence of pro-environmental attitudes (GA), socialization agents (SA), and perceived behavioral control (PBC) on green purchase intention (GPI) (H1, H2, H3), with sustainable awareness (SAW) positively and significantly strengthening these relationships (H7a, H7b, H7c). Environmental knowledge (EK) as well as religious and cultural factors (RCF) are hypothesized to have a positive and significant influence on sustainable consumption behavior (SCB) (H4, H5), while green purchase intention positively mediates the relationship of pro-environmental attitudes, socialization agents, and perceived behavioral control with sustainable consumption behavior (SCB) (H6).

Pro-environment Attitude

The variable of pro-environmental attitudes (GA) is defined as guiding principles in life that inspire individuals to take action in protecting the environment (Zainuri et al., 202; Oludoye et al., 2024). Based on Value-Belief-Norm (VBN) Theory there are three types of pro-environmental behavior: egoistic, biospheric, and altruistic (Zainuri et al., 2022). Biospheric values emphasize concern for ecosystems. Biospheric values are related to concern for environmental sustainability, anxiety about environmental pollution caused by plastic waste, and the potential threats it poses to the survival of living beings (Oosterhout et al., 2023). Altruistic values emphasize concern for others, are related to the concern for the importance of humans in preserving the environment, the benefits of protecting nature for human well-being, and the impacts of plastic packaging use on human health (Snelgar, 2006; (Oosterhout et al., 2023; Soyeun, 2024). Meanwhile, egoistic values are related to self-interest (Yakut, 2021; Oosterhout et al., 2023). Egoistic values encompass the belief that humans have the right to alter the environment to meet their needs, the pursuit of understanding nature in order to control it, and the concern about the impacts of environmental use on personal health (Rahayu & Hartiningtyas, 2022; Yadav, 2016). H1 : Pro-environmental attitude significantly and positively affects green purchase intention.

Socialization Agent

Consumer Socialization Theory discusses how individuals acquire knowledge, skills, and attitudes related to consumerism through interactions within their social environment. The socialization agent variable (SA) is defined as the involvement of societal actors in maintaining or preserving social values, norms, or consumption patterns (Ramadhanti et al., 2024). Social norms, which are shaped by the influence of family, peers, and social media, play a critical role in forming individuals' intentions to purchase environmentally friendly products (Nekmahmud et al., 2022). Family encompasses indicators such as the information shared and the influence of family members in both the use and the reduction of single-use plastic packaging (Ramadhanti et al., 2024). Peer group social pressure is reflected in indicators such as the influence of peer group behavior, the information shared, and the impact on individual behavior (Ramadhanti et al., 2024). The role of social media is reflected in indicators such as the function of social media, the information obtained, and its influence on decision-making (Sun & Wang, 2020; Xie & Madni, 2023). H2 : Socialization agent significantly and positively affects green purchase intention.

Self Efficacy and Controlability

The Self-Efficacy Theory, developed by Albert Bandura, emphasizes individuals' belief in their ability to perform behaviors and its influence on perceived behavioral control. The perceived behavioral control variable (PBC) refers to an individual's perception of the level of difficulty in performing a particular action, influenced by self-assessment of one's abilities (Xu et al., 2022). It reflects both self- efficacy and conditions that enable individuals to perform a behavior (Bandura & Wood, 1989; Schunk & DiBenedetto, 2021). Studies indicate that self-efficacy and controllability significantly influence green purchase intention (Xu et al., 2022).The dimensions of self-efficacy are reflected in indicators of an individual's confidence in using, reducing, and dealing with difficulties related to single-use packaging, Meanwhile, the controllability dimension is examined through indicators of consumers' ability to make decisions and exercise full control over the decisions taken. H3 : Perceived Behavior Control significantly and positively affects green purchase intention.

Environmental Knowledge

The environmental knowledge variable (EK) encompasses understanding and awareness of environmental problems and their solutions (Soyeun, 2024). It consists of three indicators related to the understanding of environmental issues, eco-friendly symbols, and the impacts of single-use plastics (Soyeun, 2024; Devi et al., 2022). Studies show that the higher the environmental knowledge, the greater the tendency of individuals to adopt sustainable

consumption behavior (Zeng et al., 2023). Environmental knowledge is reflected through indicators such as awareness of environmental issues, understanding of environmental symbols, and recognition of the potential impacts on the environment (Soyeun, 2024). H4: Environmental knowledge has a positive and significant effect on sustainable consumption behavior.

Religion and Culture Factors

The religion and culture factor (RCF) plays a crucial role in shaping pro-environmental behavior. Religion serves as a moral foundation that encourages ecological responsibility (Hwang, 2018), whereas cultural values—particularly femininity and local wisdom—foster concern for sustainability (Irawan et al., 2022; Sudaryat & Nurhadi, 2023). Religious and cultural dimensions have been associated with pro-environmental tendencies, as reflected in beliefs that regard nature as God's creation, participation in religious and social activities, and feminine values emphasizing nurturing instincts toward environmental care (Rice, 2006; Irawan et al., 2022). Empirical evidence indicates that religiosity contributes to pro-environmental behavior both as an internal value orientation and as a form of social influence. Individuals with strong religious beliefs tend to exhibit stronger ecological attitudes, higher willingness to pay for environmentally friendly products, and greater readiness to adjust their lifestyles in favor of sustainable practices (Zemo & Nigus, 2021; Hwang, 2018; Karimi et al., 2022) . H5: Religion and culture factors has a positive and significant effect on sustainable consumption behavior."

Green Purchase Intention

The green purchase intention variable (GPI) is defined as the intention to buy environmentally friendly products, reduce single-use plastics, and experience satisfaction when avoiding plastic products (Jamal et al., 2021; Yang, 2021). GPI has been proven to be an important mediator bridging attitudes, social, and control factors with actual behavior (Sheraz et al., 2021). Prior studies indicate that green purchase intention serves as a significant predictor of environmentally friendly purchasing behavior. This construct is commonly operationalized through indicators such as individuals' intentions, expectations, and affective responses toward single-use packaging (Ramadhanti et al., 2024). H6: Green purchase intention positively and significantly mediates the influence of pro-environmental attitudes, socialization agents, and behavioral control on sustainable consumption behavior

Sustainable Awareness

The sustainable awareness variable (SAW) is defined as public perspectives, the level of social and environmental awareness, and the belief that development requires environmental considerations to achieve the integration of economic, environmental, and social aspects (Shang et al., 2024). Sustainable awareness reflects consumer awareness of social and ecological issues (Shang et al., 2024; Van et al., 2021). Panda et al. (2020) found that this variable can strengthen the relationship between attitudes and subjective norms with green purchase intention. Sustainable awareness is generally conceptualized through two dimensions: social awareness, which relates to the values of sustainable development and their renewal, and environmental awareness, which concerns understanding ecological impacts and preventive actions (Panda et al., 2020; Van et al., 2021; Shang et al., 2024).

H7a**:** Sustainable awareness positively and significantly moderates the relationship between pro-environmental attitude and green purchase intention.

H7b**:** Sustainable awareness positively and significantly moderates the relationship between socialization agents and green purchase intention.

H7c**:** Sustainable awareness positively and significantly moderates the relationship between perceived behavioral control and green purchase intention.

Sustainable Consumption Behavior Variable

The sustainable consumption behavior (SCB) variable is defined as social and ecological concern reflected in the processes of purchasing, using, and disposing of goods and services

(Oosterhout et al., 2023). Such practices constitute concrete expressions of pro-environmental behavior, particularly in the context of single-use plastic packaging (Oosterhout et al., 2023; Ramadhanti et al., 2024). In this regard, (Y. Yang et al., 2022) categorize pro-environmental behavior into three fundamental domains: waste reduction, reuse, and recycling

METHODS

This study employs an explanatory research design to examine causal relationships among variables within a theoretical model (Sekaran & Bougie, 2016). Specifically, it investigates the influence of pro-environmental attitudes, socialization agents, and perceived behavioral control on green purchase intention, as well as the subsequent effects of green purchase intention, environmental knowledge, and religious-cultural factors on sustainable consumption behavior. Sustainable awareness is further tested as a moderating variable. A quantitative approach was adopted, utilizing structured questionnaires and statistical analysis to measure and test the proposed relationships.

The method used to collect primary data was a closed-ended questionnaire, which served as the main instrument for data collection (Siyoto & Soduk, 2015). Respondents selected from the provided answers based on a Likert scale designed to measure the extent of their agreement with the statements, using a scale from 1 to 5, where 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree (Sekaran & Bougie, 2016). Prior to distributing the questionnaire, the validity of the research instrument items was tested using Pearson's Product Moment correlation analysis. The reliability of the instrument was further examined through Cronbach's Alpha test, and the results confirmed that all items were valid and reliable

The data were collected from July to August 2025 through online questionnaires distributed via WhatsApp groups and chats. Respondents were selected proportionally to represent the population across six districts in Bogor City. Total of 219 respondents were obtained. This can be further illustrated by the data presented in the table 1.

Table 1. Productive-Age Female Population Data

District	Productive-Age Women (persons)	Sample Size
North Bogor	59,375	40
Central Bogor	30,638	21
West Bogor	73,197	50
East Bogor	31,376	21
South Bogor	61,526	42
Tanah Sareal	67,271	45
Total	323,383	219

Source: Statistics Indonesia (BPS) – Bogor City, 2025

This study employs the Partial Least Squares Structural Equation Modeling (PLS-SEM) technique for data analysis. PLS-SEM was applied to examine the relationships among independent variables, moderator variables, mediator variables, and the dependent variable within the research model. The analysis was conducted using SmartPLS version 4.0. The evaluation of the PLS model consists of assessing the outer model and the inner model. The outer model reflects the relationships between indicators and their respective latent variables, while the inner model represents the relationships and path coefficients among the latent variables (Ghozali, 2014).

Since the study relies on self-reported data collected through an online questionnaire, a common method bias (CMB) test was conducted to ensure that the results were not distorted by measurement artifacts. Harman's single-factor test was performed by including all indicators of the study variables in an exploratory factor analysis. The result showed that the first factor accounted for 34.8% of the total variance, which is below the 50% threshold,

indicating that common method bias was not a major concern. Furthermore, to confirm the robustness of this result, the full collinearity test was carried out in SmartPLS following (Kock, 2015). All variance inflation factor (VIF) values were below 3.3, suggesting the absence of serious multicollinearity and common method bias issues within the model. Therefore, the data were considered reliable for subsequent structural model analysis.

RESULTS

The table 2 provides supporting data for the demographic housewives

Table 2. Demographic Housewives

Characteristic	Dominant Category	Number (%)
Age	40-49 years old	38.4
Religion	Moslem	63.0
Education	Bachelor's degree (S1	59.4
Occupation	Housewives	39.7
Income	Rp 3–5 million	21.9
Member of family	3–4 persons	54.8

Source: Author's data analysis (2025)

The profile of the housewives participating in this study shows that the majority are non-formally employed, aged 40 years and above, and adherents of Islam. In terms of education, most respondents hold at least a high school qualification, with the majority being university graduates. Respondents reported diverse income levels, with family structures generally consisting of three to four members. Their residences are distributed across the six districts of Bogor City.

Tabel 3. Result of f^2 Test

Construct	**f^2**
EK -> SCB	0.052
GA -> GPI	0,146
GPI -> SCB	0,367
PBC -> GPI	0.133
RCF -> SCB	0.035
SAW -> GPI	0.024
SA -> GPI	0.081
SAW x GA -> GPI	0.001
SAW x SA -> GPI	0.019
SAW x PBC -> GPI	0.003

Source: Author's data analysis (2025)

The analysis of effect size (f^2) in Table 3 shows that the relationship GPI → SCB has a large contribution, confirming the critical role of green purchase intention in shaping sustainable consumption behavior. The variables GA and PBC provide medium contributions, while SA, EK, RCF, and SAW demonstrate small contributions.

The coefficient of determination (R^2) test indicates that approximately 56.3% of the variance in GPI is explained by GA, SA, PBC, and SAW, while 59.0% of the variance in SCB is explained by GPI, EK, and RCF. This suggests that the structural model has an adequate predictive ability (Hair et al., 2017). Moreover, the results of predictive relevance (Q^2) testing for GPI and SCB show values greater than zero, indicating that the exogenous constructs are sufficiently capable of explaining and predicting the endogenous variables (Hair et al., 2017). The results are presented in Table 4.

The complete bootstrapping results, including the original sample, sample mean, standard deviation, t-statistics, and p-values for all structural paths, are presented in Table 4 to ensure transparency and replicability of the model evaluation.The results

of the path coefficient testing in Table 5 show that all direct relationships are significant at the 95% confidence level ($t > 1.96$; $p < 0.05$).

Tabel 4. Result of R-square dan Q-square

	R-square	Q^2 (=1-SSE/SSO)
GPI	0.563	0.343
SCB	0.590	0.309

Source: Author's data analysis (2025)

Tabel 5. Results of Path Coefficient: Direct Relationships Between Variables

Construct	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P value	Result
EK > SCB	0.192	0.194	0.055	3.508	0.000	Significant
GA > GPI	0.270	0.266	0.075	3.580	0.000	Significant
GPI>SCB	0.521	0.519	0.054	9.602	0.000	Significant
PBC>GPI	0.333	0.338	0.062	5.372	0.000	Significant
RCF>SCB	0.162	0.166	0.058	2.815	0.005	Significant
SA > GPI	0.271	0.265	0.070	3.862	0.000	Significant

Source: Author's data analysis (2025)

Based on the results of the path coefficient test, all direct relationships examined in this model showed positive and significant effects at the 5% significance level. This supports hypotheses H1 to H6, indicating that GA, SA, and PBC have a significant influence on GPI, and that EK, RCF, and GPI significantly affect SCB.

The mediation effect test of GPI in Table 6 shows the results of the indirect effects through the mediating variable GPI between the endogenous variables GA, PBC, and SA and the exogenous variable SCB.

Tabel 6. Results of the Mediation Effect Test of GPI

Construct		Original sample (O)	Sample mean (M	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P value	Result
GA-> SCB	GPI->	0.131	0.129	0.040	3.256	0.001	Significant
PBC-> SCB	GPI->	0.162	0.164	0.033	4.851	0.000	Significant
SA-> SCB	GPI->	0.132	0.130	0.130	3.307	0.001	Significant

Source: Author's data analysis (2025)

The results presented in Table 6 indicate that GPI significantly mediates the relationships of GA, SA, and PBC with SCB. All mediation paths have t-statistic values reater than 1.96 and p-values less than 0.05, thereby supporting the acceptance of mediation hypotheses on these three paths. This finding reinforces the role of green purchase intention as an important mediator within the sustainable consumption behavior model.

The testing of the relationships between GA, SA, and PBC with SCB through the moderation of SAW was analyzed by assessing the interaction paths (moderator × predictor). The results of GA moderation testing using SMART PLS bootstrapping are presented in Table 7.

From Table 7, it can be seen that SAW does not significantly moderate the relationship between SA, GA, and PBC on GPI. All three interaction paths show p-values above 0.05 and t-statistics below 1.96, indicating that hypotheses H7a, H7b, and H7c are not statistically supported; thus, the moderation hypotheses (H7a, H7b, H7c) are rejected. This variable has not yet played a sufficient role as a strengthening factor in the relationship between attitude, social norms, and perceived behavioral control with the intention to purchase environmentally friendly products.

Table 7. Results of the Moderation Effect Test of Sustainable Awareness

Construct	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P value	Result
SAWxSA -> GPI	-0.127	-0.124	0.070	1.830	0.067	Not significant
SAWxGA -> GPI	0.025	0.017	0.088	0.285	0.775	Not significant
SAWxPBC -> GPI	0.042	0.045	0.059	0.716	0.474	Not significant

Source: Author's data analysis (2025)

DISCUSSION

The research findings indicate that environmental values reflected in pro-environmental attitudes—consisting of biospheric, altruistic, and egoistic values—have a positive and significant influence on green purchase intention. This suggests that housewives who hold strong environmental values and concerns tend to have a greater desire to purchase environmentally friendly products as an alternative to single-use plastic packaging. This finding is consistent with the Value-Belief-Norm theory (Wesley Schultz, 2001), which posits that environmental values shape beliefs and norms that drive pro-environmental behavior.

Furthermore, this study also found that socialization agents—including the influence of family, peers, and social media—have a positive and significant effect on green purchase intention. Subjective norms formed through social interactions play an important role in shaping the intention to purchase eco-friendly products. These results support the Consumer Socialization theory, which emphasizes the role of social interaction in shaping attitudes, preferences, and consumption behavior (Moschis & Churchill, 1978) . This finding is also consistent with prior research by (Ramadhanti et al., 2024), which showed that family, peers, and social media influence green purchase intention.

Perceived behavioral control, which involves self-efficacy and controllability, has a positive and significant effect on green purchase intention. This indicates that the greater the confidence of housewives in their ability to purchase and use environmentally friendly products, the higher their intention to avoid single-use plastic packaging products. These findings are consistent with the Theory of Planned Behavior and Self-Efficacy Theory (Bandura & Wood, 1989; Schunk & DiBenedetto, 2021), which emphasize the importance of perceived control in driving intentions and actual behavior. This result is also in line with (Xu et al., 2022) who found that self-efficacy has a very significant positive effect on green purchase intention.

Environmental knowledge is proven to have a direct and significant effect on sustainable consumption behavior. This means that housewives' understanding of environmental issues, recycling symbols, and information about the impacts of single-use plastics encourages them to act in a more environmentally friendly way. This shows that knowledge is not merely cognitive but can also trigger concrete behavior, consistent with the literature emphasizing the importance of ecological literacy in green consumption behavior (Kollmuss & Agyeman, 2002) and in line with the findings of Soyeun (2024) .

Religion and cultural factors also have a positive and significant influence on sustainable consumption behavior. This indicates that religious and cultural values, such as teachings about preserving God's creation and feminine norms that support the role of environmental stewardship, contribute to sustainable consumption behavior. These findings support the view that spirituality and cultural values can strengthen pro-environmental attitudes (Zemo & Nigus, 2021; Irawan et al., 2022). The significant direct influence of religious and cultural factors on sustainable consumption behavior suggests that these dimensions act as value-

based motivators that operate beyond cognitive intention. In other words, moral and cultural commitments may inspire environmentally responsible behavior even without the mediation of purchase intention.

Green purchase intention acts as a partial mediator, significantly bridging the influence of pro-environmental attitudes, socialization agents, and perceived behavioral control on sustainable consumption behavior, in line with the principles of the Theory of Planned Behavior. This finding is consistent with previous studies by Xu et al., (2022). Pro-environmental attitudes, socialization agents, and perceived behavioral control reinforce sustainable consumption behavior through the increased intention to purchase environmentally friendly products. The stronger the intention of housewives to purchase environmentally friendly products, the stronger the influence of attitudes, social norms, and perceived behavioral control on the implementation of sustainable consumption in daily life.

The testing shows that sustainable awareness does not significantly moderate the relationship between pro-environmental attitudes, socialization agents, and perceived behavioral control with green purchase intention. This indicates that although sustainable awareness is important in shaping intention, it is not strong enough to enhance the effects among other variables as a moderator. A more intensive educational approach or campaign is needed to significantly strengthen the role of this awareness. These results differ from previous research by (Hendarsyah et al., 2020)

This study emphasizes the need for cross-actor collaboration in fostering sustainable consumption behavior. For the government, continuous educational programs through Indonesian Family Welfare Empowerment Program (PKK), schools, community groups, as well as the involvement of religious and cultural leaders can strengthen environmental awareness. Regulations on reducing single-use plastics may be accompanied by tangible incentives for products with environmentally friendly packaging. For businesses, providing products with eco-friendly packaging, implementing green marketing through social media, and offering incentive systems can encourage green purchase intentions. For society, collective activities such as recycling training or waste management, along with the utilization of social media and influencers, can reinforce social norms and the self-efficacy of housewives. An integrative approach combining regulation, education, product innovation, and the strengthening of cultural values is believed to be effective in promoting sustainable consumption behavior.

THEORETICAL IMPLICATIONS

Theoretically, this study strengthens the explanatory power of the Extended Theory of Planned Behavior (ETPB) by empirically validating the inclusion of religious and cultural factors as direct predictors of sustainable consumption behavior. The findings also support that environmental knowledge acts as a direct driver of sustainable behavior, suggesting that cognitive and moral dimensions should be integrated into behavioral models addressing pro-environmental consumption.

PRACTICAL IMPLICATIONS

Practically, the findings suggest that local governments and community organizations should collaborate with religious leaders, women's groups, and social media influencers to promote eco-friendly consumption. Campaigns that combine moral, cultural, and environmental narratives can foster stronger behavioral transformation among household

consumers. Strengthening these local socio-cultural elements may accelerate public acceptance of sustainable living practices.

This cross-sectional, self-report design may suffer from residual common method bias and restrict causal inference. The convenience-leaning sampling via social media limits generalizability beyond urban Bogor. Future studies should adopt probabilistic sampling, panel or experimental designs, incorporate personal moral norms as a mediator, and test non-linear or segmented moderation effects of sustainability awareness.

CONCLUSION

This study demonstrates that attitude, socialization agents, and perceived behavioral control play a crucial role in shaping green purchase intention, which in turn drives sustainable consumption behavior among housewives. Environmental knowledge as well as religious and cultural factors were found to contribute directly to sustainable consumption behavior without mediation through intention. However, sustainable awareness, which was assumed to act as a moderating factor, did not show a significant effect in strengthening the relationship between psychological variables and green purchase intention. This indicates a gap between awareness and actual action, suggesting that merely understanding the importance of sustainability issues is not sufficient to stimulate pro-environmental behavior.

The implication is that strategies for reducing single-use plastics should not solely emphasize raising awareness but also reinforce psychological, social, cultural, and religious factors that have a more direct influence on behavior. Therefore, integrated interventions through policy, environmental education programs, and social campaigns can be more effective in promoting the transformation of consumer behavior toward sustainability.

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