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# Do attitude towards behavior, subjective norms, and perceived control behavior matter on environmentally friendly plastic purchasing intention?

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## ABSTRACT

This study investigates consumer buying intention in environmentally friendly plastic products by hypothesizing that buying intention in environmentally friendly plastic is influenced by attitudes towards behavior, subjective norms, and perceived behavioral control. The primary data used in this research was collected through a questionnaire approach using social media platforms such as Line, Instagram, WhatsApp, and Facebook. The total number of respondents was 114. This study used multiple regression analysis. The results show that attitudes towards behavior and perceived behavioral control positively influence intention in purchasing environmentally friendly plastic products, whereas subjective norms do not. Overall, attitudes towards behavior, subjective norms, and perceived behavioral control significantly influence environmentally friendly plastic purchasing intention. The practical implication is that concrete actions can be taken to use environmentally friendly plastic robustly, such as increasing knowledge of environmentally friendly plastic through various channels, especially social media. To make prices affordable, stakeholders must also develop environmentally friendly plastic with low production costs.

**Contribution/Originality:** This study contributes to taking action to use environmentally friendly plastic robustly through various channels. The originality of this study is that it provides empirical evidence that attitudes towards behavior and perceived behavioral control positively influence environmentally friendly plastic purchasing intention, but subjective norms do not.

## 1. INTRODUCTION

Environmental damage and sustainability are something that is the focus of attention today. Environmental problems, as highlighted in the Sustainable Development Goals (SDGs), require immediate resolution (Sadiq et al., 2023). The problems raised and related to the environment not only talk about physical environmental problems, such as environmental degradation, forest destruction, or pollution, but also develop broader and more profoundly. Therefore, understanding, measuring, and managing the impact of behavior on the environment is a significant challenge facing humanity in the 21st century (Chu & Karr, 2017). One of the most intriguing things is the change of behavior in consuming products categorized as "green." Green products are environmentally friendly because their processes and benefits take into account environmental sustainability factors. In environmentally friendly products, their components are safe, non-toxic, can be recycled, or have environmentally friendly packaging (Versino et al., 2023). Plastic pollution in many forms has been raised as the most severe environmental threat (Lamichhane et al.,

2023). There are gaps and limitations in previous research; most studies focused on the environmental damage caused by plastic waste, and only a few studies investigated the psychological motivations behind plastic consumption and disposal, even though they documented the environmental impacts of plastic pollution and the importance of sustainable consumption. They focused on policy initiatives to reduce plastic waste and ignored consumer perceptions of environmentally friendly plastics. The Theory of Planned Behavior (TPB), a widely used tool for investigating variables influencing consumer behavior toward environmentally friendly plastic products, fills these gaps in this study. This study fills the gap in previous research and provides a deeper understanding of how cultural and social factors influence environmental behavior, especially in treating and purchasing plastic. The findings are hoped to provide valuable information on the effectiveness of action policies, such as promoting alternative materials and the plastic bottle payment system. This study will serve as the basis for further research into sustainable consumption habits further and creating more environmentally efficient laws and business plans.

Plastic has become an integral part of everyday life. Due to the excessive amount of plastic waste in Indonesia and the careless disposal of rubbish, numerous disasters have been caused by this waste. Unfortunately, plastic is one of the wastes that is difficult to recycle. The increasing amount of single-use plastic waste is detrimental to the environment (Jambeck et al., 2015). Indonesia is noted as the second largest plastic waste contributor to the ocean in the world. The Indonesian government has initiated various initiatives to ban single-use plastics in Indonesia. The national marine waste control team estimates that around 615 thousand tons of rubbish were dumped into Indonesian seas and the world's seas in 2018. Indonesia is now the second-largest country in the world in terms of contributors to plastic waste in the sea. Despite not being the world's most plastic-consuming country, Indonesia still contributes significantly to plastic waste in the sea (Sodik, 2020). So much single-use plastic waste produced without users and wise handling can cause damage to the environment.

To deal with plastic waste, some parties try to burn it. Eliminating the use of plastic bags is impossible. Eliminating the use of plastic is impossible. However, the use of plastic can be reduced by reuse, reducing usage, and recycling. Currently, some places, such as *supermarkets* in Indonesia, have implemented a paid system for using plastic containers to carry their groceries and offer other alternatives, such as using bags made of cloth or cardboard to carry their groceries to reduce the use of single-use plastic bags. In addition to *supermarkets*, several places, such as cafes, *restaurants*, hotels, and even airlines, use recycled plastic, environmentally friendly straws, and environmentally friendly food packaging.

Some people have begun to realize their concern for the environment by reducing the use of single-use plastic bags, which are difficult to decompose. Likewise with manufacturers/companies that produce environmentally friendly plastic, for example, plastic made from cassava and other biodegradable materials, as well as recycled plastic. Food packaging made from plastic/Styrofoam is replaced with one made from sugar cane juice or biodegradable plastic.

## 2. LITERATURE REVIEW

### *2.1. Consumer Behavior and Environmental Concerns*

Understanding consumer behavior is the key to satisfying needs and desires better than competitors. You can direct consumers towards certain expected behaviors by understanding their thinking. Therefore, it is necessary to identify predictors of these behaviors to make efforts to change behavior to pro-environment behavior. The Consumer Behavior Model shows that many factors influence consumer buying decisions. These factors are internal and external. The model is rooted in *The Stimulus Organism Response Theory*, which states that every living thing will give a specific response to the various stimuli it receives. Stimulus can come from both the environment and the company's marketing programs. Consumers can be expected to behave rationally, where rationality is generally determined based on references to several external criteria (Mohammed, Sookram, & Saridakis, 2019). However, this assumption needs to be more complex and account for the complexities of human behavior. Studies have demonstrated that

emotional and psychological factors frequently impact consumers resulting in irrational decision-making (Ariely, 2008). It is often impossible to rationally explain how the social and cultural environment influences behavior. Today's technological change is also inevitable. The rapid pace of technological change makes understanding consumer behavior increasingly complex as new digital platforms and tools continually reshape consumer interactions and expectations. Therefore, it is the responsibility of marketers to adapt and refine their strategies continuously to stay in an ever-evolving landscape. Such highlights the need for a more nuanced understanding of consumer behavior that considers rational and irrational elements, and the crucial role of marketers in this process.

Researchers use a variety of approaches to study consumer behavior. From various previous studies using the theory of planned behavior approach, it can be concluded that attitudes, subjective norms, and perceived behavioral control influence consumer behavior. Various study areas support these three variables. Several studies supporting the SDGs were conducted by Shi et al. (2021) and Zheng, Siddik, Masukujjaman, Alam, and Akter (2020) who showed that attitudes towards the environment concern, altruism, knowledge about the environment, and disbelief towards environmental assertions are the main factors influencing people to buy green products. According to Kim, Seo, and Choi (2022) understanding consumer awareness to behave pro-environment can be understood by the relationship between value attitude and behavior. Dagher and Itani (2014) examine whether attitudes toward the environment, concern for the environment, and social influences influence green buying behavior. The study draws upon the results of previous research conducted by Oreg and Katz-Gerro (2006) and Stern (2000). Attitudes, personal abilities, contextual factors, and routines and habits are the four variables that determine pro-environment behavior. When a person applies the values that he believes in in his life and it will make the individual believe that his actions are practical. Several studies show that integrating values, attitudes, and behaviors with one's abilities and habits provides a valuable perspective. However, these studies ignore the potential for cognitive dissonance and the impact of inconsistent environmental policies. Such neglect can disrupt the alignment between consumers' pro-environmental intentions and purchasing behavior.

It is known that some environmental problems occur due to human consumption activities). Environmental pollution, for example (Osman, 2017) is one of the environmental problems that affect human behaviour. This environmental pollution can come from household and industrial activity waste, which damages ecosystems and the sustainability of living things. Many studies have discussed the relationship between consumer behavior and their attention to the environment. Kim and Cha (2021) and Zhu (2012) found that green products, advertising, and brands influence purchase decisions. The green brand is the most influential. Shukre (2023) in their research entitled "Analysis of Women's Consumer Attitudes towards Green Skincare Products: A Fishbein Multiattribute Approach, found that consumers are positive about these attributes.

### *2.2. Factors Influencing Consumer Behavior*

There are at least three main variables that determine consumer behavior, namely individual variables, contextual, and demographic. Individual variables consist of predictors of intention, recognition, self-identification, the values, attitudes, and experience. Some of these variables relate to aspects of psychology because they show the uniqueness and characteristics of individuals. However, it is also socially relevant, as it represents a broader education system and social socialization derived at the individual level. Intention captures motivational factors that influence behavior; it indicates how difficult a person is willing to try and how much effort must be expended to take action. Generally, the stronger the intention to behave, the more people will act as expected. This aligns with Ajzen (2012) concept. Intention sometimes becomes a better predictor of all individual pro-environment behavior in developed countries than in developing countries (Morren & Grinstein, 2016). The finding shows that economic potentiality and the infrastructure of technologies ease pro-environment behavior, such as buying green products.

Individual knowledge is a factor that determines behavior. Intentions and behavior are associated with knowledge (Ajzen, 1991; Rizzo & Columna, 2020). Knowledge can be categorized into two, namely normative knowledge and

factual knowledge. Normative knowledge is a fundamental value, exemplified by a parent's teaching their children to recycle because they are considered good people. In contrast, factual knowledge is based on concrete evidence, such as understanding that CO2 will cause air pollution. Environmental knowledge is defined as consumer knowledge about the impact of using certain products on the environment (Sultana, Amin, & Islam, 2022). Environmental knowledge is the understanding of whether products are produced in an environmentally friendly manner. The study results show that participation rates are increasing, and personal agreement in redemption or recycling behavior is coupled with their recognition about how, where, and why it is necessary to recycle (Patidar, Soni, & Soni, 2017). That means individual knowledge, both normative and factual, is crucial in shaping environmental behavior and intentions. Increased environmental awareness leads to higher participation in recycling behavior, driven by a deeper understanding of its importance and practical application.

*Self-identification* and *personality traits* refer to how a person judges himself. Self-identification is primarily based on sociological principles, which refer to how we identify as individuals interacting with others and the society around us. Personality traits refer to psychological reasons that indicate that our personalities are inferred from different characters. Value is an individual's thoughts about the preciousness of something. The higher the ecocentrism values, the more closely related to high attachment to pro-environment behavior (Aguilar-Luzón, Carmona, Calvo-Salguero, & Castillo Valdivieso, 2020). Attitudes are expressions of thinking, feeling, and values. It frequently targets categorical areas or behaviors. Attitude has proven to be a powerful predictor of intention. A positive attitude towards recycling is a predictor of recycling behavior (Haj-Salem & Al-Hawari, 2021). A person's long-term memory typically stores memorable past experiences. These memories will be a source of information when a person considers certain behaviors (Kotler, Suzan, Kenneth, & Linen Brown, 2015). People widely use past behavior to predict pro-environment behavior (Ajzen, 1985). Past behavior also affects intention in future behavior.

Contextual factors have a strong influence on many indicators of pro-environmental behavior. This factor refers to limitations or obstacles beyond the control of individuals. Those are financial limitations, access and development of physical infrastructure, and existing political and economic conditions. The influence of contextual factors on the same situation will lead to different intentions and behaviors. Context limitations, such as the location and size of home and income level, will influence recycling behavior. Geographical location, air temperature, and residence characteristics influence behaviors related to energy conservation, such as turning off lights, leaving room, and lower the air conditioner's temperature. Countries where pro-environment behavior is taught will influence the correlation and importance of behavior. A country's wealth is influenced by its perspective on individualist and collectivist values. Often, a country's fiscal capabilities and infrastructure quality are indicators of a developed country. The growth of a country and the level of income reflected in Gross Domestic Product (GDP) will determine the extent to which sustainability-oriented systems, including public transportation, recycling programs, and education campaigns, are a priority. The study results show that in developed countries, people behave more pro-environment (Morren & Grinstein, 2016). In short, those studies show that pro-environmental behavior is more prevalent in developed countries with more advanced sustainability-oriented infrastructure and systems. This suggests that a country's wealth and level of development are critical in determining the priority and effectiveness of environmental initiatives.

Subjective norms and social pressure refer to the influence of external individuals, such as friends, co-workers, community members, and family, on behavior. This is called subjective norms. This social pressure will affect the obedience of individuals with diverse behaviors, such as their ability to recycle to purchase environmentally friendly products, the choice of transportation advice used to work, and so on. Different sources of social pressure have different influences on people. Religious leaders or opinion leaders convey messages that social pressure affects ethnic minorities (Patidar et al., 2017). For students, business leaders, lecturers, or politicians positively affect students' intentions in recycling behavior. *Perceived behavioral control* refers to the perception of whether or not a behavior is challenging. PBC is measured by asking participants how complex specific or common behaviors can be. PBC is a from a combination of ease, accessibility, and opportunity variables.

Demographic factors usually vary. It is based on the locality and extent of the problem (e.g., pollution in a particular community rather than pollution at the country level). Generally, the demographic variables used are gender, age, and level of education. In line with several previous concepts, Dagher and Itani (2014) identified three factors related to perception and one factor related to self-image Several factors, including media appearance, better attention to environmental issues, social or group pressure, and strict laws and regulations, drive consumer environmental awareness. Perceptions of the seriousness of environmental problems, perceptions of environmental responsibility, and perceptions of the effectiveness of pro-environment behavior are considered factors for pro-environment behavior. Another factor that plays a role in someone's actions is self-image, then referred to as self-identity. Individuals tend to choose an action to improve their self-image (Kotler et al., 2015). Thus, people will behave pro-environment if the behavior reinforces their values and self-image.

Despite the success of those studies in identifying the significant influence of attitudes and perceived behavioral control on purchasing intentions, there is a need for greater accuracy in assessing the impact of evolving consumer awareness and the role of social media in shaping subjective norms, which could potentially alter these dynamics over time. This opens up an interesting avenue for further research. Additionally, the reliance on self-reported data via social media platforms raises concerns about social desirability bias, which may skew the results toward more favorable intentions that may be reflected in actual consumer behavior. This also highlights the need for more robust research methods. Furthermore, while this study provides valuable empirical evidence, it needs to fully address external factors such as price sensitivity and availability of alternatives, which are critical in influencing real-world purchase decisions.

### *2.3. Green Buying Behavior*

Eco-friendly refers to actions taken in both private and public settings that contribute to at least one aspect of environmental health, such as waste and recycling, energy conservation, and the preservation of renewable ecosystems. Buying behavior of green/environmentally friendly products is consuming environmentally friendly products, namely products that are sensitive/responsive, can be recycled/can be conserved, and provide environmental benefits. Because consumers are rational, they will buy green products and behave environmentally friendly if these actions provide immediate benefits to themselves (Fontes, Moreira, & Carlos, 2021; Sharma & Foropon, 2019).

Various natural disasters make people aware that environmental problems need attention. Environmental problems mainly impact human behavior. These problems include environmental pollution from household waste and industrial activity waste. This harms the ecosystem and the sustainability of living things. In developing countries, the management and treatment of household sewerage, clean water problems, and air quality problems are considered the most serious environmental problems. The problem of environmental pollution around the area is relevant to moral deviation and criminal problems because the problem of a slum environment can contribute to an unhealthy life. Several studies show that gender differences influence perceptions about the seriousness of environmental problems. Studies have shown that women perceive the seriousness of environmental problems more than men.

Consumers who are environmentally responsible are willing to support and remain responsible for environmental sustainability in the future. The more desire of consumers to buy green product alternatives, the more they will feel they are environmentally responsible consumers and social actors. Perceived effectiveness of environmental behavior is described as a measure that consumers use to measure the efficiency of efforts related to the environment. Consumers will buy green products only if they are sure their behavior will positively influence their environment. The likelihood of consumers behaving in green products is higher, while perceptions of self-efficacy directly influence consumers. Ecological awareness also positively correlates with perceptions of consumer effectiveness. Perceptions of consumer effectiveness are also positively correlated to ecological awareness. Therefore, intentioned parties encouraging pro-environment behavior, governments, businesses, marketers, and environmental activists must

provide support and positive comments on pro-environment actions. Preaching the purchasing behavior of green product consumers will be able to drive action to increase the demand for green products. The government must be present by enforcing regulations on the importance of green product consumption to reinforce green product purchasing behavior. Marketers must widely inform consumers that green product buying behavior has helped fight environmental damage. Consumers will choose products that can strengthen their self-image. Similarly, in terms of personality, consumers will select products that complement their individuality. Therefore, marketers of green products must be able to build an image that can connect the image of self and society. Pro-environment behavior can provide a positive and memorable image for consumers.

## 3. METHOD

This study was conducted in central Java, Indonesia. It covered 114 respondents who examined the attitudes towards behavior, subjective norms, and perceptions of behavioral control that affect buying intention in recycled plastic. Specifically, this research targets respondents from community groups belonging to the upper middle class because they have relatively high purchasing power and education, are 17 years and over (adults who can already determine their preferences), and use social media. These criteria were implemented to ensure that respondents were decision-makers and able to answer independently. Given the ongoing environmental awareness campaigns in various regions, this study topic holds significant relevance in the current era. Respondents are part of the environmentally friendly behavior campaign's targets. This research uses primary data collected using a questionnaire approach. Biased sampling was a potential issue that was anticipated. Therefore, multiple platforms were used to reach different demographics within the target population. To accommodate a range of responses and gain a deeper understanding of respondents' true attitudes and intentions, we employed a Likert scale. The questionnaires were designed in Google Forms and distributed through social media such as Line (35%), Instagram (25%), WhatsApp (35%), and Facebook (5%). The data is qualitative in the form of perceptions, which are then quantified using a 1-5 Likert scale approach (Strongly Disagree-Strongly Agree).

**Table 1.** Respondents profile.

| Demographic | | Percent |
|---|---|---|
| Age | 17-30 years | 88.31 |
| | 30-43 years | 5.19 |
| | >43 years | 6.49 |
| Gender | Man | 38.96 |
| | Woman | 61.04 |
| | High school/Equivalent | 45.45 |
| Education | Bachelor | 10.39 |
| | Undergraduate | 41.56 |
| | Postgraduate | 2.60 |
| Expenses per month | <IDR 3000000 | 15.58 |
| | >IDR 3000000 - IDR 4000000 | 6.49 |
| | >IDR 4000000 - IDR 5000000 | 19.48 |
| | >IDR 5000000 | 58.44 |
| Occupation | Private employees | 18.18 |
| | Student | 68.83 |
| | Unemployment | 7.79 |
| | Housewives | 3.90 |
| | Freelancer | 1.30 |
| Shopping habits | Traditional market | 40.26 |
| | Supermarket | 59.74 |
| Knowing plastic bags Environmentally friendly | Know | 48.05 |
| | Do not know | 51.95 |

**Source:** Primary data.

Table 1 shows the characteristics of respondents, including age, gender, last education, monthly expenses, occupation, shopping habits, and knowledge of recycled plastic bags.

The validity test in this study uses a correlation approach between each item to measure a variable with the total score of the variable. The validity test decision used is that the statement is said to be valid if r counts > r table, while r counts < r table, then the statement is invalid. The significance level is 0.05 or 5%, with the R-value of the table being 0.2242. Table 2 presents the results of the validity test calculations for the indicators used.

**Table 2.** Validity test.

| Indicators | Statistic-r | r-table | Sig. | Status |
|---|---|---|---|---|
| 1 | 0.705 | 0.2242 | 0.000 | Valid |
| 2 | 0.803 | 0.2242 | 0.000 | Valid |
| 3 | 0.798 | 0.2242 | 0.000 | Valid |
| 4 | 0.786 | 0.2242 | 0.000 | Valid |
| 5 | 0.848 | 0.2242 | 0.000 | Valid |
| 1 | 0.738 | 0.2242 | 0.000 | Valid |
| 2 | 0.785 | 0.2242 | 0.000 | Valid |
| 3 | 0.650 | 0.2242 | 0.000 | Valid |
| 4 | 0.706 | 0.2242 | 0.000 | Valid |
| 1 | 0.583 | 0.2242 | 0.000 | Valid |
| 2 | 0.728 | 0.2242 | 0.000 | Valid |
| 3 | 0.779 | 0.2242 | 0.000 | Valid |
| 4 | 0.739 | 0.2242 | 0.000 | Valid |
| 1 | 0.810 | 0.2242 | 0.000 | Valid |
| 2 | 0.855 | 0.2242 | 0.000 | Valid |
| 3 | 0.715 | 0.2242 | 0.000 | Valid |
| 4 | 0.889 | 0.2242 | 0.000 | Valid |

**Source:** Primary data.

The reliability test in this study uses *Cronbach's Alpha* formula, where the reliability test is used to determine the consistency of the questionnaire used in the study. The results of a reliable tests on each research variable are as follows: The reliability testing results on attitude towards behavior, subjective norms, perception of behavior control, and intention using all indicators are reliable because *Cronbach's Alpha value* is more than 0.6. The processed reliability and validity testing results confirm the feasibility of the questionnaire in this study as a research instrument. Table 3 presents the results of the reliability test calculations for the variables in detail.

**Table 3.** Reliability test.

| Variable | *Cronbach's alpha* | *N of items* | Status |
|---|---|---|---|
| Attitude towards behavior | 0.827 | 5 | Reliable |
| Subjective norms | 0.717 | 4 | Reliable |
| Perception of behavioral control | 0.617 | 4 | Reliable |
| Intention | 0.787 | 4 | Reliable |

**Source:** Primary data.

This study uses descriptive and regression analysis methods. The descriptive analysis method employs a range of means:

- $< 2.33$ is Low.
- $2.33 \leq X < 3.66$ is Moderate.
- $\geq 3.66$ is High.

Multiple Linear Regression Analysis is used in this study to determine whether or not there is an influence between the dependent variable intention to buy (Y) and the independent Attitude towards Behavior (X1), Subjective Norms (X2), and Perception of Behavioral Control (X3).

$$Y = a + b1X1 + b2X2 + b3X3$$

## 4. RESULTS OF RESEARCH AND DISCUSSION

### *4.1. Consumer Responses Regarding Behavior Intention for Environmentally Friendly Plastic*

The variables studied in this study are variables referred to the Theory of Planned Behavior (TPB) decision-making theory. As is known, TPB posits that attitude, subjective norms, and perceived behavioral-control influence behavioral intention. This research uses TPB to predict consumer intentions to use recycled and environmentally friendly plastic. This study also explores respondents' responses to several indicators measuring variables in the TPB . Table 4 presents the description of respondent's responses to attitudes towards behavior.

**Table 4.** Responses to attitude indicators towards behavior.

| Indicators | Score | Category |
|---|---|---|
| Knowledge of environmentally friendly plastic | 3.45 | Moderate |
| Making life more comfortable | 4.14 | High |
| Forms of concern for the environment | 4.54 | High |
| Involved in environmental conservancy | 4.57 | High |
| Obtain benefits and advantages | 4.26 | High |
| Total mean | 4.19 | High |

**Source:** Primary data.

Overall, respondents' assessments of all indicators of attitudes toward behavior are in the high category. Table 4 shows that the respondent has a good or positive attitude towards behavior indicators, with a total mean of 4.26. The two indicators with the highest rating state that using environmentally friendly plastic is a form of concern for the environment and a feeling of involvement in protecting the environment, respectively, with scores of 4.54 and 4.57 on a scale of 1-5. The indicator that received the lowest assessment response pertains to knowledge about environmentally friendly plastics. Attitudes towards behavioral indicators expressed in the statement of knowing about environmentally friendly plastic are only at a moderate of 3.45.

**Table 5.** Responses to subjective norms.

| Indicators | Mean | Category |
|---|---|---|
| Knowing the desires of others | 3.75 | High |
| Care for government programs | 4.26 | High |
| The will of people around | 3.44 | Moderate |
| Follow others who are already using environmentally friendly plastic | 4.22 | High |
| Total mean | 3.92 | High |

**Source:** Primary data.

Table 5 presents an overview of respondents' responses to subjective norm variables with their indicators. Like their response to attitudes towards behavior, respondents also had a positive attitude towards the subjective norm variable, with a score of 3.92. The subjective norm variable includes five indicators: knowing other people's wants, caring about government programs, the desires of the surrounding community, and following other people who have used environmentally friendly plastic. Based on the indicators, the indicator of knowing the wishes of the surrounding community responded at a moderate level with a value of 3.45. The best response to indicators of caring for government programs is to follow others who are already using environmentally friendly plastic.

**Table 6.** Responses to perceived behavior control.

| Indicators | Mean | Category |
|---|---|---|
| Affordable price | 2.32 | Low |
| Easy to use | 4.35 | High |
| It can be easily decomposed | 4.12 | High |
| The need for a large amount of environmentally friendly plastic | 3.77 | High |
| Total mean | 3.64 | High |

**Source:** Primary data.

Perceived behavioral control is when an individual believes an action is easy or difficult. Many studies and established theories have proven that perceived behavioral control influences behavioral intentions. Table 6 presents respondents' responses to perceived behavioral control, which include price affordability, ease of use, the belief that environmentally friendly plastic can be easily decomposed, and the need for a large amount of environmentally friendly plastic. All indicators used to measure perceived behavioral control received a positive response with a total average score of 3.64. One indicator, the affordability of environmentally friendly plastic prices, elicited a negative or low response. This assessment reflects that environmentally friendly plastic has a price that is relatively more expensive than the price of plastic in general.

**Table 7.** Responses to intention of purchasing environmentally friendly plastic.

| Statement indicators | Mean | Category |
|---|---|---|
| Using environmentally friendly plastic in the future | 4.36 | High |
| Refer to others | 3.45 | Moderate |
| Feeling guilty about not using environmentally friendly plastic | 4.25 | High |
| Search for information | 3.49 | Moderate |
| Total mean | 3.89 | High |

**Source:** Processed primary data.

Respondents' exhibit excellent or positive responses to variables believed to positively influence their behavioral intentions to use environmentally friendly plastic, and the same is true for their behavioral intentions to use environmentally friendly plastic. Overall, the response value for the behavioral intention variable to use environmentally friendly plastic is 3.89. However, let us look at the responses to the indicators in more detail. The responses to the indicators of recommending to other people and seeking information regarding environmentally friendly plastics are only in the moderate category. In detail, Table 7 presents an overview of respondents' responses to the indicators in the Intention of Purchasing Environmentally Friendly Plastic variable.

### *4.2. Multiple Linear Regression Analysis*

Multiple Linear Regression Analysis is used in this study to determine whether or not there is an influence between the dependent and the independent. This study used multiple regression analysis to test the hypothesis of the influence of attitudes toward behavior, subjective norms, and perceived control behavior on the behavioral intention of purchasing environmentally friendly plastic. This study hypothesizes that attitude towards behavior, subjective norms, and perceived control behavior positively and significantly affect behavioral intentions to purchase environmentally friendly plastic. Table 8 presents the regression coefficient, which is the result of calculations of Multiple Linear Regression Analysis.

**Table 8.** The coefficient regression.

| Model | Unstandardized coefficients | | Standardized coefficients | T | Sig. |
|---|---|---|---|---|---|
| | B | Std. error | Beta | | |
| (Constant) | 3.429 | 1.652 | - | 2.076 | 0.041 |
| Attitude towards behavior | 0.217 | 0.100 | 0.262 | 2.165 | 0.034 |
| Subjective norms | 0.189 | 0.110 | 0.193 | 1.718 | 0.090 |
| Perceived control behavior | 0.334 | 0.107 | 0.346 | 3.126 | 0.003 |

**Note:** Dependent variable: Intention to purchase.
**Source:** Primary data.

The constant value is positive at 3.429, indicating that there is an intention to purchase environmentally friendly plastic that does not depend on attitudes towards behavior, subjective norms, or perceived behavioral control. This research supports previous research, which states that perceived behavioral control strongly influences purchase

intention and underscores the need for policies that increase consumers' confidence in their ability to make environmentally friendly choices (Joshi & Rahman, 2015; Lestari, Hanifa, & Hartawan, 2020). Views toward eco-friendly items significantly influence epistemic, environmental, and emotional values, acting as mediators. This supports and adds substantially to the literature on eco-friendly consumer behavior in emerging markets, who found that perceived ease of acting is significant in encouraging pro-environmental behavior (Lucky Adhitiya, 2019). However, the low R-square value in this study suggests that other influential factors not captured in this study, such as personal habits, cultural influences, or economic conditions, influence purchasing behavior.

The significance of the influence of attitude on behavior on the intention to purchase environmentally friendly plastic is reflected in the P-value, which is lower than the alpha, 0.05, namely 0.034. Unlike the previous study by Palomino Rivera and Barcellos-Paula (2024) which found that subjective norms significantly impact purchasing intentions, our results indicate otherwise, suggesting that in the context of environmentally friendly plastic, individual perceptions of social pressure may be less influential. This research rejects the hypothesis that subjective norms significantly positively affect the intention to purchase environmentally friendly plastic. Subjective norms—including both social and descriptive norms- provide insights for stakeholders in promoting people to be environmentally conscious and might focus their marketing efforts. This distinction is possible if it is explicitly related to the socio-cultural and economic context of Central Java. For example, subjective norms toward purchasing decisions may differ from other regions due to different cultural or economic dynamics. For example, in a more collectivist society, subjective norms usually play a more decisive role than in a society that tends to be individualistic, where personal attitudes and perceived control may be more critical (Ham, Jeger, & Frajman Ivković, 2015). The p-value greater than 0.05, specifically 0.090, reflects this rejection. Rejection of this hypothesis indicates that a person's perception or view of other people's beliefs, which influence whether to buy or not, does not affect the intention to buy environmentally friendly plastic. Meanwhile, testing the hypothesis that perceived control behavior influences the intention to buy environmentally friendly plastic accepts this hypothesis with a positive regression coefficient and a p-value of 0.003. Thus, the more a person has a positive attitude towards purchasing environmentally friendly plastic, the higher their intentions to do so. Perceived behavioral control is when an individual believes an action is easy or difficult. This means that the higher a person's conviction in purchasing environmentally friendly plastic, the higher their behavioral intention to purchase it, and vice versa. Meanwhile, a person's perception or opinion of other people's beliefs, which influence whether or not to purchase environmentally friendly plastic, does not influence the intention to purchase environmentally friendly plastic. This study simultaneously tested the presence or absence of influence between the independent and dependent variables using the F test. The F test yield a significant value of < alpha 0.05. The test yielded a p-value of 0.000, meaning that attitudes toward behavior, subjective norms, and perceived control behavior significantly affect the intention to buy environmentally friendly plastic. Table 9 presents the analysis of variance (F-test).

**Table 9**. The analysis of variance.

| Type | | Sum of squares | Df | Mean square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 372.195 | 3 | 124.065 | 41.999 | 0.000 |
| | Residuals | 324.937 | 110 | 2.954 | | |
| | Total | 697.132 | 113 | | | |

**Note:** Dependent variable: Intention to purchase.
**Source:** Primary data.

The Coefficient Determination test ($R^2$) measures how far the model can vary in the independent variable described by the dependent variable. With the coefficient of determination value close to one (1), the ability of independent variables can provide all the information needed to explain the dependent variable. In contrast, if the value of the coefficient of determination tends to be null (0) or small, the ability of independent variables to explain the dependent variable tends to be low. The calculation results of this study's coefficient of determination test are

0.460 (R-Square) and 0.447 (Adjusted R-Square). Table 10 presents the model summary and reflects the coefficient of determination (R square).

**Table 10**. Model summary.

| Type | R | R square | Adjusted R square | Std. error of the estimate |
|---|---|---|---|---|
| 1 | 0.731[a] | 0.534 | 0.521 | 1.71871 |

**Note:** a.(Constant), attitude towards behavior, subjective norms, perceived control behavior.
**Source:** Primary data.

These findings indicate that the intention to buy environmentally friendly plastic is more influence by variables not covered in this research, such as habits, culture, and others. The motivation for adopting pro-environment behavior, such as using environmentally friendly plastic, is based on virtues rather than intentions, and it facilitates society toward sustainability (Yu, Lin, Kao, Chao, & Yu, 2019). Various factors, including moderating factors that influence personal choices like sex, age, and family status, shape the gap between intention and conduct. For firms to overcome the intention-behavior gap, it is advised that we examine employees' green attitudes and behavioral patterns using a practical typology of "green behavior," as proposed in this study (Hasebrook et al., 2022).

## 5. CONCLUSION

Consumer responses regarding purchasing environmentally friendly products tend to be positive. One indicator, the level of knowledge about environmentally friendly plastic, is perceived as low. This research only accepts two hypotheses out of the three hypotheses proposed: attitude toward the behavior and perceived behavioral control significantly influence purchase intention for eco-friendly plastics. In contrast, subjective norms, although expected to play a role, did not significantly influence purchase decisions, possibly because individuals did not feel influenced by social norms in this context.

The importance of these findings lies in the emphasis that to encourage the purchase of eco-friendly plastics, effective strategies should focus on increasing positive attitudes toward the product and strengthening perceived behavioral control. Managerial implications for public policy include increasing socialization through social media and developing eco-friendly plastics with low costs in order to make them more affordable. Theoretically, this study strengthens the Theory of Planned Behavior by showing that attitude toward the behavior and perceived behavioral control are significant purchase predictors of intention for eco-friendly products. Even though it supports the existing literature, the results of this study still challenge some existing assumptions by showing that subjective norms may not always influence purchase intentions as expected. Then, further research may explore additional contexts and moderators that influence the relationship between subjective norms and purchase intentions and how individual characteristics influence purchase intention for eco-friendly plastics.

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**Transparency:** The authors state that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.
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