

# Does Green-Label Influence Green Purchase Intention, Attitude, Subjective Norms, Behavioral Control, and Willingness To Pay as Moderation?

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## ARTICLE INFO

### Keywords:

Eco-label,  
Theory planned behavior,  
Willingness to pay,  
Green purchase intention,  
Green purchase behavior.

### Kata Kunci:

Label ekologi,  
Teori perilaku terencana,  
Keinginan membayar,  
Niat pembelian hijau,  
Perilaku pembelian hijau.

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## ABSTRACT

The purpose of this study was to test and analyze influenced eco-labels, attitudes, subjective norms, and behavioral control on green purchase intention, as well as willingness to pay as a mediator to strengthen the influence green purchase intention (GPI) on green purchase behavior (GPB). The population of this study were Millennials and Gen Z who had purchased green products in Jabodetabek. The number of samples was 181 samples, determined based on Hair's Theory which allows for an unknown population. The sampling technique used non-probability sampling and purposive sampling. Data analysis used the Least Square Partial Structural Equation Model (PLS-SEM). The results showed that eco-labels did not influence green purchase intention, but influenced green attitude and behavioral control. Conversely, eco-labels did not influence subjective norms. Furthermore, willingness to pay was unable to moderate the influence of green purchase intention on green purchase behavior.

## SARI PATI

*Tujuan penelitian ini adalah untuk menguji dan menganalisis pengaruh eco-label, attitude, subjective norm, dan behaviour control terhadap green purchase intention, serta willingness to pay sebagai mendiator untuk memperkuat pengaruh green purchase intention (GPI) terhadap green purchase behaviour (GPB). Populasi penelitian ini adalah adalah kelompok Milenial dan Gen Z yang sudah melakukan pembelian produk hijau di Jabodetabek. Jumlah sampel sebanyak 181 sampel, ditentukan berdasarkan Teori Hair yang memungkinkan untuk populasi yang tidak diketahui jumlahnya. Teknik pengambilan sampel menggunakan nonpropabilitas sampling dan purposive sampling. Analisis data menggunakan Model Persamaan Struktural Parsial Terkecil Kuadrat (PLS-SEM). Hasil penelitian menunjukkan bahwa eco-label tidak mempengaruhi green purchase intention, namun mempengaruhi green attitude dan behavior control. Sebaliknya, eco-label tidak mempengaruhi subjective norm. Selanjutnya, willingness to pay tidak mampu memoderasi pengaruh green purchase intention terhadap green purchase behavior.*

## INTRODUCTION

Environmental sustainability is a worldwide concern. It is also a concern in Indonesia, especially in Jakarta. The results of the study (Henny & Meutia, 2014) show that consumers of the Millennial and Gen Z generations already have good green product purchasing behavior, including buying environmentally friendly products 56.2 percent and buying natural products 45.2 percent, buying refillable packaging products, and buying brands that care about environmental sustainability 36.20 percent. In addition, they take actions that support environmental sustainability (Nguyen & Nguyen, 2020) by using their own bags for shopping 69.80 percent, collecting packaging 46.40 percent, and recycling old clothes into new clothes 32.50 percent.

However, Millennials and Gen Z as agents of change need to be encouraged to make maximum efforts to purchase environmentally friendly products, and the importance of creating a supportive environment to encourage individuals to practice green behavior (Jahari et al., 2022). Purchases of brands by Gen Z and Millennials that support environmental sustainability are increasing, considering that the number of Millennials and Gen Z is increasingly dominating the Indonesian population. This effort is also the responsibility of companies that provide green products to develop the right strategy (Jabeen et al., 2023; Monoarfa et al., 2023). The right strategy is determined by understanding the behavior of Millennial and Gen Z consumers, or it is necessary to understand the factors that influence green purchase behavior, especially through e-commerce. Specifically, through e-commerce considering that the media for purchasing Millennials and Gen Z are mostly through e-commerce (Zhang & Wu, 2024). According to (Tan et al., 2019; Taufique et al., 2017) environmental awareness, price, green labels, and promotions influence the purchasing decisions of young consumers. Meanwhile, the results of research (Kumar & Basu, 2023; M. T. T. Nguyen et al., 2019) show that eco-labels influence attitudes, subjective norms, and behavioral control, and influence willingness to pay due to the high

price of green products. Furthermore, eco-labels influence the purchase intention of green products (Machá et al., 2022). According to (H. Wang et al., 2019) knowledge bridged by green labels and trust influences the purchase intention of green products. Meanwhile, the perception of expensive prices for green products reduces consumer trust. The results of research Widjojo & Bernadinus (2016) show that the factors that influence the purchasing decisions of millennial consumers are personal values, motivation, packaging, eco-labels, communities, and outlets. The results of research (Uddin & Khan, 2016) on the young generation, show that environmentally friendly purchasing behavior, environmental involvement, environmental attitudes, environmental awareness and perception of the effectiveness of environmental behavior have an effect on green purchase behavior (Jaini et al., 2020). On the other hand, (Soomro et al., 2020) argues that knowledge and interpersonal relationships have an effect on green purchase behavior, while trust and price have no effect. The results of research (Chaudhary, 2018) show that willingness to pay is able to moderate the effect of green purchase intention on green purchase behavior (Guo, 2024). Another finding was that environmental sustainability does not necessarily affect green purchase intention. The results of research (Salam et al., 2022) show that there are factors that affect attitude and then affect purchase intention, including skepticism of green product brands and environmental awareness.

Based on previous research, eco-label, attitude, subjective norm, and behavioral control, are interesting to be studied further as factors that influence green purchase intention (GPI) and green purchase behavior (GPB). Attitude, subjective norm, and behavioral control are variables from the Theory of Planned Behavior which are the trigger variables for GPI and GPB. Furthermore, Eco-label can differentiate green products from conventional products (Ajzen, 2015; Alam et al., 2020). In addition, price is a consideration for consumers, because the price of green products

is relatively more expensive than conventional products. Thus, willingness to pay needs to be tested whether it strengthens the influence of intention (GPI) into a purchasing decision (GPB) (Sinha & Annamdevula, 2023). Based on this, the formulation of this study is whether eco-labels have an effect on subjective norms, green attitude, behavioral control, and purchase intention, and whether willingness to pay can moderate the influence of green purchase intention on green purchase behavior? The results of this study are the basis for compiling marketing strategies, namely related to determining appropriate promotions, determining prices, determining target markets, and fostering attitudes and behavioral control towards organic products.

The research model is built from previous theories and research results. The basic building refers to the concept of Theory Planned Behavior or TPB (Benhardy et al., 2020; Wang, 2014) by adding eco-label variables in influencing green purchase intention (Widjojo & Yudianto, 2015; Wulandari et al., 2012). In addition, the willingness to pay variable is used as a moderating variable to strengthen the influence of purchase intention (GPI) on green purchase behavior (GPB). Willingness to pay as a moderating variable is based on research (Suminto, 2011).

Based on the Theory of Planned Behavior (TPB), this study aims to understand the green purchase behavior of millennials and gen z in the Jabodetabek area. The TPB framework is expanded by including two additional variables: eco-label (EL) and willingness to pay (WTP). eco-label (EL) provides consumers with information about the environmental suitability of a product, which can increase awareness and positive attitudes towards the product. This label functions as a communication tool that can reduce uncertainty and increase consumer confidence in a product's environmental claims. Willingness to pay (WTP) describes the extent to which consumers are willing to pay more for products that have a lower

environmental impact. This variable is important because environmentally friendly products often have higher prices than conventional products. Willingness to pay is more indicative of consumers' commitment to sustainability and their desire to support environmentally responsible production practices. By integrating eco-labels and willingness to pay into the TPB framework, not only examine the influence of attitudes, subjective norms, perceived behavioral control on green purchase intention, but also how information about the environmental feasibility and financial commitment of a product influence green purchase decisions among millennials and Gen Z in the Greater Jakarta area. This provides a more comprehensive insight into the factors that drive green purchase behavior, which can further assist in designing more effective marketing strategies and policies that support sustainability.

### **Hypothesis**

Based on the theory and results of previous studies, the following hypothesis is formulated.

Eco-friendly labels are an effective marketing tool in providing information about product sustainability, and communicating positive environmental and social impacts while reducing uncertainty in purchases by environmentally conscious consumers (Geldres-Weiss et al., 2023). Eco-friendly labels serve as a reliable source of information for consumers (Minoli et al., 2015). Various studies have shown that eco-friendly labels significantly influence purchase intentions in people in developing countries (Kumar and Basu, 2023; Wulandari et al., 2012). Based on the description above, the hypothesis proposed in this study is as follows:

**H1:** Eco-friendly labels have a positive and significant effect on eco-friendly purchase intentions

Eco-friendly labels provide consumers with confidence that the products they buy are environmentally friendly, which in turn increases positive attitudes towards these environmentally friendly products (Thøgersen et al., 2010). Recent

studies have shown that consumer knowledge of ecological labels will have a positive impact on attitudes (Kumar and Basu, 2023). Based on the explanation above, the hypothesis proposed in this study is as follows:

**H2:** Ecological labels have a positive and significant effect on green attitudes

With ecological labels, consumers can feel positive social pressure from their environment, which influences their subjective norms. When products with ecological labels are widely known and accepted, consumers tend to feel compelled to follow purchasing behaviors that are considered important by their social groups (Kennedy and Horne, 2019). Several recent studies have found that consumer knowledge of ecological labels will have a positive impact on subjective norms (Kumar and Basu, 2023, Waris and Ahmed, 2020). Based on the explanation above, the hypothesis proposed in this study is as follows:

**H3:** Eco-friendly labels have a positive and significant effect on subjective norms

Eco-friendly labels make it easier for consumers to identify environmentally friendly products, which can attract consumer interest (Patwary et al., 2021). Consumers feel more capable and confident in making sustainable purchasing decisions when the information they need is clearly available (Sun et al., 2021). Based on the explanation above, the hypothesis proposed in this study is as follows:

**H3:** Eco-friendly labels have a positive and significant effect on subjective norms

Several recent studies have found that consumer knowledge of eco-friendly labels will have a positive impact on behavioral control (Kumar and Basu, 2023; Waris and Ahmed, 2020). Effectively increasing consumer perceptions of behavioral control in the context of several markets (Testa et al., 2015). Based on the explanation above, the hypothesis proposed in this study is as follows:

**H4:** Eco-friendly labels have a positive and significant effect on behavioral control

Attitude is one of the main determinants in influencing consumer purchasing interest. According to the Theory of Planned Behavior (TPB) proposed by Ajzen (2015), attitudes toward behavior reflect an individual's assessment of how positive or negative the behavior is. Positive attitudes toward environmentally friendly products often arise from the belief that purchasing the product will benefit the environment and society as a whole. In the context of purchasing green products, attitude refers to a positive assessment of products that have a positive impact on the environment (Duong, 2021). Previous studies have shown that consumers with positive attitudes toward sustainability and environmental protection are more likely to have a strong intention to purchase green products (Zhou et al., 2013, Waris and Ahmed, 2020). Attitudes toward green products include consumers' beliefs and perceptions that green products are superior in terms of sustainability compared to conventional products (Khare, 2015). Based on the explanation above, the hypothesis proposed in this study is as follows:

**H5:** Attitude has a positive and significant effect on purchase intention

Subjective norm is an individual's perception of the social pressure they feel to perform or not perform a behavior. In the context of green purchase intention, subjective norm refers to the extent to which individuals feel that important people around them (such as family, friends, or colleagues) support or expect them to purchase environmentally friendly products. According to the Theory of Planned Behavior (TPB) proposed by Ajzen (2015), subjective norm plays an important role in shaping behavioral intentions because individuals tend to comply with social expectations that they consider important. Research shows that when consumers perceive support or social pressure from those around them to purchase green products, they are more likely to have a strong intention to do so (Dean et al., 2012). This social pressure can come from a variety of sources, such as environmental campaigns, social media influences, or cultural

norms that increasingly support sustainability. In situations where social norms significantly support green purchasing behavior, as stated by (Yadav and Pathak (2017), individuals will feel more motivated to adjust their behavior to these social expectations. Therefore, subjective norms can strengthen green purchase intention by making consumers feel that their actions are valued and recognized by their social community. However, in other studies conducted by (Paul et al. 2016, Chaudhary and Bisai, 2018) no significant relationship was found between subjective norms and green purchase intention. Based on the explanation above, the hypothesis proposed in this study is as follows:

**H6:** Subjective norms have a positive and significant effect on green purchase intention.

Behavioral control (BC) refers to an individual's perception of the ease or difficulty of performing a particular behavior. In the context of green purchase intention, PBC refers to the extent to which consumers feel capable and have sufficient resources to purchase environmentally friendly products. According to the Theory of Planned Behavior (TPB) proposed by Ajzen (2015), PBC plays an important role in shaping behavioral intentions because it reflects an individual's beliefs about their ability to control the factors that influence the behavior. When consumers feel that they have sufficient control over the act of purchasing green products, they are more likely to have a strong intention to do so. Research shows that consumers who have positive perceptions of behavioral control are more likely to commit to the intention to purchase green products (Paul et al. 2016). Factors such as the availability of green products, accessibility of information, and financial support can influence consumers' PBC. For example, if green products are easily found in the market, information about the environmental benefits of the product is easily accessible, and the price of the product is affordable, consumers will feel more confident in their ability to make the purchase (Kumar and Basu, 2023). Thus, high behavioral control (BC) can increase purchase intention

because consumers feel more empowered and confident that they can overcome obstacles that may arise in the process of purchasing green products. This shows the importance of behavioral control (BC) in determining purchase intention (PI) and consumer behavior towards environmentally friendly products (Yadav and Pathak, 2017; Waris and Ahmed, 2020). Based on the explanation above, the hypothesis proposed in this study is as follows: **H7:** Behavioral control has a positive and significant effect on purchase intention

Willingness to pay (WTP) is the extent to which consumers are willing to spend more money on environmentally friendly products (Varah et al. 2020; Wulandari et al., 2012). Consumers who have a strong intention to buy green products but are unwilling to pay a premium price are unlikely to translate that intention into actual behavior. This is an identification that price is an important factor that will prevent someone from consuming green products (Gleim et al., 2013; Nasir and Karakaya, 2014). Other studies have shown that consumers have a high willingness to pay more for green products (Yadav and Pathak, 2017). This willingness is influenced by various factors such as income level, environmental awareness, and personal values. However, several other studies have shown that individuals who care about the environment are not sensitive to price and price does not have a significant effect on purchasing environmentally friendly products (Grankvist and Biel, 2001). Thus, Willingness to pay (WTP) can act as a moderating variable that strengthens the relationship between green product purchase intention and actual purchase behavior. Based on the explanation above, the hypothesis proposed in this study is as follows: **H8:** Willingness to pay can moderate the influence of green purchase intention positively and significantly on green purchase behavior.

## METHODS

The research method used is a quantitative research method. Quantitative research methods are research methods based on the philosophy



of positivism, which are used to research certain populations or samples. The sampling technique uses judgment sampling, assesses data using research instruments, quantitative/statistical data analysis to test predetermined hypotheses. In addition, this research is an explanatory research because this study aims to explain the effect of independent variables on dependent variables through hypothesis testing (Indaryani & Wulandari, 2023; Wallwey & Kajfez, 2023; X. Wang & Zhou, 2024).

The research location is in Jakarta, Bogor, Depok, Tangerang, and Bekasi (Jabodetabek). The population in this study were Millennials and Gen Z who had purchased green products in Jabodetabek. The number of samples was determined based on theory because the certainty of the population is unknown, thus the number of respondents or samples is 5, 10, 15 or multiples of x indicators, which is around  $5 \times 35 = 175$  samples. The sampling technique uses purposive sampling, namely determining samples based on criteria to meet population coverage. The questionnaire was distributed online with Google Form. The indicators are derived from 7 variables, where the indicators are the basis for compiling the questionnaire. Data were collected from distributing questionnaires using Google Form, which were distributed directly or online. The sample collection technique used purposive sampling, with the criteria of respondents whose age can be categorized as millennials or Gen Z (Kim & Kim, 2024; Ramadhanti et al., 2024), have purchased green products, and are domiciled in Jabodetabek. The independent (exogenous) research variables consist of: X1 is eco-label (EL). The mediating variables consist of Z1 attitude (ATT), Z2 subjective norm (SN), Z3 behavioral control (BC). The mediator variable is Z4 willingness to pay (WTP). The endogenous variables are Y1 green purchase intention (GPI) and Y2 green purchase behavior (GPB).

Data analysis in this study used the Structural Equation Modeling (SEM) approach based on Partial Least Square (PLS). PLS is used to confirm

the theory by looking at the relationship between several variables and determining how good the proposed theory is. In addition, PLS is also used to develop theories in exploratory research by explaining the variance in the dependent variable when examining the model (Hair et al., 2017). The PLS results show two groups, namely the instrument test shown from the outer model and the hypothesis test results shown from the inner model.

## RESULTS AND DISCUSSION

This research was conducted on the millennial generation, namely those born in 1981-1996 and Gen Z born in 1997-2012 who have made e-commerce purchases in the Jabodetabek area with a total of 181 respondents. The complete results of respondent characteristic are presented in the Table 1.

Based on Table 1, the distribution is almost balanced between the two age groups. Respondents aged 12 to 27 years (Gen Z) numbered 84 people or 46.4 percent of the total respondents, while respondents aged 28 to 43 years (Millennials) numbered 97 people or 53.6 percent. In terms of gender, there were more female respondents than male respondents, with a composition of 58 percent and 42 percent respectively. This shows the dominance of female participation in this study. This difference may reflect the higher level of interest of women in environmental issues and green consumption behavior, or it could also be due to the larger distribution of respondents in the female group. The level of education of respondents was dominated by those with a bachelor's degree, which amounted to 67.4 percent of the total respondents. Respondents with a high school education reached 22.1 percent, while those with a master's and doctoral education were 5.5 percent and 0.6 percent respectively. There were also respondents with other education as many as 4.4 percent. The dominance of respondents with a bachelor's degree shows that the majority of them have a fairly high educational background, which may influence their perception of eco-labels and green purchase intentions.

**Table 1. Respondent Profile**

No	Description	Frequency	Percent
1	<b>Age</b>		
	12 - 27 years old	84	46,4%
	28-43 years old	97	53,6%
	Total	181	100%
2	<b>Gender</b>		
	Male	76	42%
	Female	105	58%
	Total	181	100%
3	<b>Education</b>		
	High school	40	22,1%
	Bachelor's degree	122	67,4%
	Master's degree	10	5,5%
	Doctoral Degree	1	6,0%
	Others	8	4,4%
Total	181	100%	
4	<b>Occupation</b>		
	Lecturer	2	1,1%
	Civil Servant/State-owned Enterprise	23	12,7%
	Private Sector Employee	123	68,0%
	Entrepreneur	10	5,5%
	Others	23	12,7%
Total	181	100%	
5	<b>Income</b>		
	< 4.000.000	37	20,4%
	4.000.000 – 10.000.000	100	55,2%
	11.000.000 – 30.000.000	39	21,5%
	31.000.000 – 70.000.000	5	2,8%
Total	181	100%	
6	<b>Residence</b>		
	Bekasi	41	22,7%
	Bogor	17	9,4%
	Depok	21	11,6%
	West Jakarta	20	11,0%
	Central Jakarta	10	5,5%
	South Jakarta	17	9,4%
	East Jakarta	25	13,8%
	North Jakarta	4	2,2%
	Tangerang	26	14,4%
Total	181	100%	

In terms of type of work, the majority of respondents work as private employees (68 percent), followed by respondents who work as Civil Servants/ Government Officials/State-Owned Enterprise Employees and those who have other jobs, each at 12.7 percent. Respondents who work as entrepreneurs and lecturers are 5.5 percent and 1.1 percent, respectively. The data shows that the majority of respondents come from the private sector, which can influence their views on green

products in e-commerce, especially in the context of environmentally friendly labels and willingness to pay. In addition, income distribution shows that the majority of respondents have incomes between IDR 4,000,000,000 and IDR 10,000,000,000. This can be a relevant indicator of purchasing power in this study. Respondents in this study are spread across various areas of Jabodetabek, with a fairly even distribution. The largest number of respondents came from the Jakarta area, which was 22.7 percent of the

total respondents, followed by the Tangerang area at 14.4 percent, and East Jakarta at 13.8 percent. Other areas such as Depok and West Jakarta each contributed 11.6 percent and 11 percent of the total respondents. Meanwhile, Bogor and South Jakarta each contributed 9.4 percent of respondents. Central Jakarta and North Jakarta were the areas with the fewest respondents, at 5.5 percent and 2.2 percent respectively. This domicile distribution shows that this study covers a fairly broad representation of various areas in Jabodetabek. This variation in domicile can also provide insight into differences in consumer behavior related to environmentally friendly purchasing intentions and based on their geographic location in this metropolitan area.

**Outer Model Test Results**

The analysis of the outer model test results defines

how each indicator relates to its latent variables. The tests carried out include convergent validity, discriminant validity, average variance extracted (AVE), composite Reliability dan cronbach alpha.

*Convergent validity (Loading Factor)*

In assessing each construct, the construct assessment is seen from the loading factor. Loading factors are measured using the outer loading parameter. An individual's reflexive measure is said to be correlated if its value is more than 0, with the construct to be measured. The following are the results of the outer model showing the outer loading value (Table 2).

Table 2 shows that all indicators of the eco-label, attitude, subjective norm, behavioral control, green purchase intention, green purchase behavior

**Table 2. Results of Indicator Validity Test**

Variable	Indicators	Outer Loading	Standard	
Eco-Label	EL1	0,652	>0,7	Valid
	EL2	0,843	>0,7	Valid
	EL3	0,856	>0,7	Valid
	EL4	0,862	>0,7	Valid
	EL5	0,751	>0,7	Valid
Attitude	ATT1	0,858	>0,7	Valid
	ATT2	0,841	>0,7	Valid
	ATT3	0,895	>0,7	Valid
	ATT4	0,828	>0,7	Valid
	ATT5	0,881	>0,7	Valid
Subjective Norm	SN1	0,740	>0,7	Valid
	SN2	0,876	>0,7	Valid
	SN3	0,897	>0,7	Valid
	SN4	0,759	>0,7	Valid
	SN5	0,826	>0,7	Valid
Behavioural Control	BC1	0,771	>0,7	Valid
	BC2	0,819	>0,7	Valid
	BC3	0,833	>0,7	Valid
	BC4	0,793	>0,7	Valid
	BC5	0,803	>0,7	Valid
Willingness to Pay	WTP1	0,832	>0,7	Valid
	WTP2	0,857	>0,7	Valid
	WTP3	0,843	>0,7	Valid
	WTP4	0,926	>0,7	Valid
	WTP5	0,842	>0,7	Valid
Green Purchase Intention	GPI1	0,882	>0,7	Valid
	GPI2	0,881	>0,7	Valid
	GPI3	0,922	>0,7	Valid
	GPI4	0,834	>0,7	Valid
	GPI5	0,902	>0,7	Valid
Green Purchase Behaviour	GPB1	0,849	>0,7	Valid
	GPB2	0,856	>0,7	Valid
	GPB3	0,949	>0,7	Valid
	GPB4	0,932	>0,7	Valid
	GPB5	0,921	>0,7	Valid



and willingness to pay variables have a loading value greater than 0.7, which indicates that the correlation between constructs has a fairly high level of validity. However, there is one indicator in the Eco-Label variable whose value is 0.652 and this is still considered valid/sufficient because it is still > 0.6 (Al Masud et al., 2024). Discriminant validity is a discriminant validate test carried out to ensure that each concept of each latent variable is different from other variables. According to (Al Masud et al., 2024) the cross-loading value for each indicator of each latent variable is greater than the cross-loading value when associated with other latent variables. This means that each latent variable already has good discriminant validate where several latent

variables have measures that are highly correlated with other constructs. As shown in the Table 3.

Based on the Table 3, all indicators in the study have a larger correlation coefficient with each construct compared to the correlation coefficient value of the indicators in the construct block in other columns, so it is concluded that each indicator for the variables Eco-Label (EL), Attitude (ATT), Subjective Norm (SN), Behavioral Control (BC), Green Purchase Intention (GPI), Green Purchase Behavior (GPB) and Willingness to Pay (WTP) in the block is a component of the construct in the column.

**Table 3. The Discriminant Validity**

Indicators	ATT	BC	EL	GPB	GPI	Moderate GPIWTP	SN	WTP
ATT1	0,858	0,616	0,693	0,560	0,566	-0,324	0,463	0,482
ATT2	0,841	0,551	0,528	0,510	0,543	-0,397	0,370	0,426
ATT3	0,895	0,598	0,674	0,550	0,604	-0,453	0,386	0,488
ATT4	0,828	0,598	0,583	0,544	0,556	-0,349	0,488	0,510
ATT5	0,881	0,654	0,607	0,683	0,702	-0,432	0,552	0,564
BC1	0,479	0,771	0,574	0,517	0,422	-0,142	0,584	0,574
BC2	0,542	0,819	0,603	0,536	0,454	-0,181	0,593	0,583
BC3	0,529	0,833	0,606	0,564	0,598	-0,219	0,547	0,574
BC4	0,544	0,793	0,624	0,500	0,558	-0,147	0,528	0,496
BC5	0,700	0,803	0,644	0,652	0,719	-0,444	0,494	0,634
EL1	0,516	0,536	0,652	0,475	0,394	-0,096	0,469	0,482
EL2	0,636	0,631	0,843	0,516	0,529	-0,345	0,406	0,464
EL3	0,610	0,660	0,856	0,484	0,470	-0,246	0,449	0,492
EL4	0,584	0,634	0,862	0,450	0,502	-0,244	0,487	0,432
EL5	0,506	0,560	0,751	0,439	0,396	-0,170	0,418	0,394
GPB1	0,641	0,628	0,517	0,849	0,804	-0,412	0,470	0,646
GPB2	0,522	0,584	0,487	0,856	0,620	-0,239	0,545	0,652
GPB3	0,608	0,640	0,560	0,949	0,721	-0,331	0,540	0,698
GPB4	0,557	0,608	0,514	0,932	0,658	-0,279	0,523	0,695
GPB5	0,658	0,664	0,592	0,921	0,769	-0,414	0,519	0,699
GPI1	0,611	0,614	0,489	0,774	0,882	-0,390	0,444	0,632
GPI2	0,597	0,612	0,491	0,657	0,881	-0,415	0,392	0,578
GPI3	0,634	0,590	0,526	0,680	0,922	-0,445	0,407	0,616
GPI4	0,554	0,578	0,425	0,665	0,834	-0,299	0,419	0,611
GPI5	0,667	0,680	0,617	0,733	0,902	-0,448	0,492	0,674
GPI * WTP	-0,455	-0,295	-0,283	-0,375	-0,453	1,000	-0,141	-0,368
SN1	0,333	0,450	0,337	0,375	0,283	-0,090	0,740	0,426
SN2	0,458	0,568	0,491	0,526	0,400	-0,094	0,876	0,526
SN3	0,428	0,598	0,487	0,535	0,401	-0,123	0,897	0,507
SN4	0,488	0,562	0,507	0,428	0,457	-0,195	0,759	0,406
SN5	0,444	0,590	0,446	0,477	0,441	-0,071	0,826	0,470
WTP1	0,428	0,576	0,501	0,555	0,511	-0,281	0,492	0,832
WTP2	0,546	0,649	0,592	0,626	0,609	-0,363	0,475	0,857
WTP3	0,475	0,663	0,491	0,631	0,554	-0,219	0,539	0,843
WTP4	0,547	0,649	0,519	0,732	0,694	-0,408	0,508	0,926
WTP5	0,477	0,538	0,356	0,674	0,643	-0,300	0,444	0,842

**Average Variance Extracted (AVE)**

Convergent Validity can be seen from the Average Variance Extracted (AVE) value. The AVE value aims to determine the validity of a set of indicators in forming a variable. The AVE value for each construct can be shown in the Table 4.

Based on Table 4, all constructs show AVE values greater than 0.50, with the smallest value of 0.635 for the Eco-Label (EL) variable and the largest of 0.814 for the Green Purchase Behavior (GPB) variable. These values have met the requirements according to the minimum AVE value limit specified, which is 0.50.

**Composite Reliability and Cronbach Alpha**

To test the reliability of an instrument in a research model or measure the internal consistency of its composite reliability and Cronbach alpha values must be  $\geq 0.70$ . Reliability is a test of latent variables to assess the consistency of the overall measurement of indicator items in measuring

latent variables. The following are the results of the variable reliability test (Table 5).

From Table 5, all measurements consistently represent the same latent construct. Thus, it can be concluded that all of the research variables are stated to meet reliability or are reliable.

**Inner Model Test Results**

After testing the outer model and making adjustments, if necessary, the next step is to test the inner model (structural model). The inner model is a structural model that connects latent variables. Based on the path coefficient value to see how much influence there is between latent variables and bootstrapping calculations (Figure 2).

**R-Square Determination Coefficient (R2)**

R-Square (R2) analysis or determination test is to determine the extent of the influence of the independent variable on the dependent variable, the value of the determination coefficient can be shown in Table 6.

**Table 4. Average Variance Extracted**

Variable	Standard	Average Variance Extracted (AVE)
Eco Label (X1)	>0,5	0,635
Attitude (X2)	>0,5	0,741
Subjective Norm (X3)	>0,5	0,675
Behavioural Control (X4)	>0,5	0,647
Green Purchase Intention (Y1)	>0,5	0,782
Green Purchase Behaviour (Y2)	>0,5	0,814
Willingness to Pay (Z1)	>0,5	0,741
Moderating Effect Y1Z1	>0,5	1,000

**Table 5. Composite Reliability Cronbach Alpha**

Variable	Cronbach's Alpha	Composite Reliability	
Eco Label (EL)	0,853	0,896	Reliabel
Attitude (ATT)	0,913	0,935	Reliabel
Subjective Norm (SN)	0,879	0,912	Reliabel
Behavioural Control (BC)	0,864	0,901	Reliabel
Green Purchase Intention (GPI)	0,930	0,947	Reliabel
Green Purchase Behaviour (GPB)	0,942	0,956	Reliabel
Willingness to Pay (WTP)	0,912	0,935	Reliabel
Moderating Effect GPIWTP	1,000	1,000	Reliabel

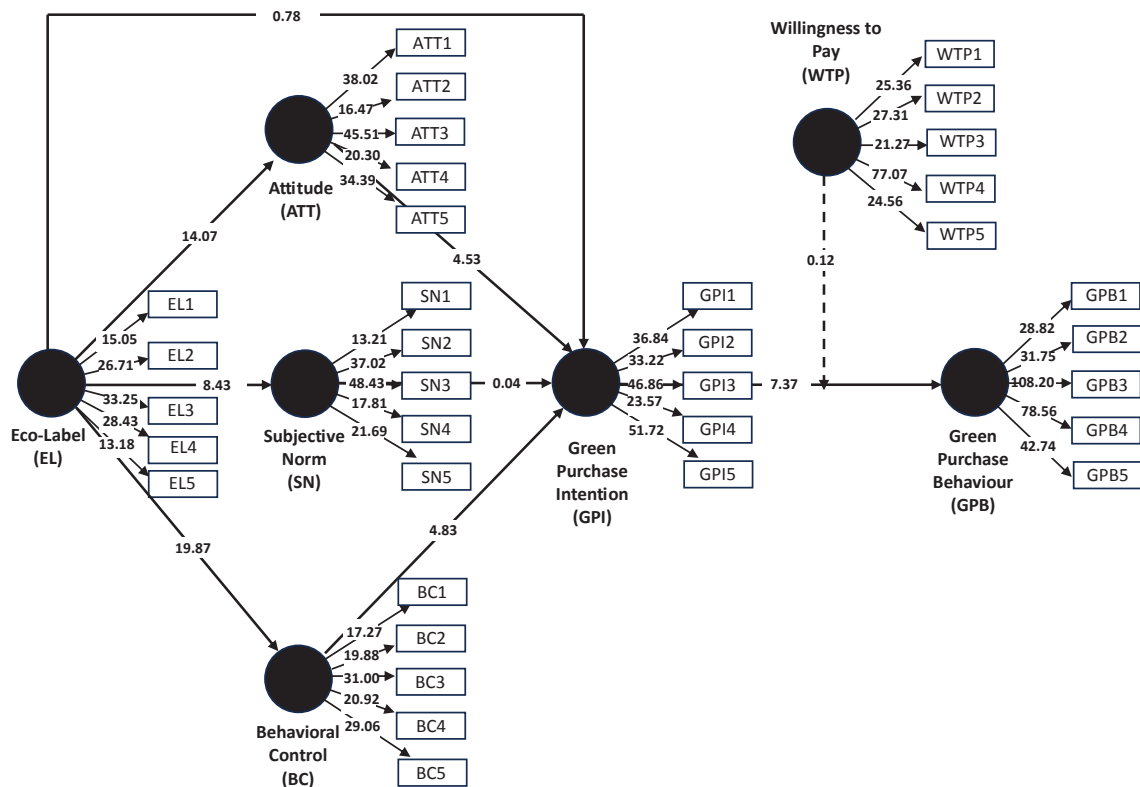


Figure 1. The Structural Model

Table 6. R-Square Determination Coefficient

Variable	R Square	R Square Adjusted
Attitude (X2)	0,517	0,515
Behavioural Control (X4)	0,579	0,577
Green Purchase Behaviour (Y2)	0,728	0,719
Green Purchase Intention (Y1)	0,570	0,560
Subjective Norm (X3)	0,312	0,308

Based on the r-square value in the table above (Table 6), it shows that Attitude (ATT), Subjective Norm (SN), Behavioral Control (BC) Green Purchase Intention (GPI) and Green Purchase Behavior (GPB) are able to explain the variability of the Green Purchase Behavior (GPB) construct by 73 percent and the remaining 27 percent is explained by other constructs outside those studied in this study. The greater the r-square number, the greater the independent variable can explain the dependent variable so that the structural equation is better.

#### Hypothesis Test Results

To see whether a hypothesis can be accepted or rejected, among others, by considering the significant value between constructs, t-statistics, and p-values. The hypothesis testing of this study was carried out with the help of SmartPLS 3 (Partial Least Square) software. These values can be seen from the bootstrapping results. The rules of thumb used in this study are t-statistics > 1.96 with a significance level of p-value 0.05 and a positive beta coefficient. The value of the hypothesis testing of this study can be shown in Table 7.

**Table 7. The Hypothesis Test**

Hipotesis		Original Sample (O)	Sample Mean (M)	T Statistics	P Values
H1	Eco Label (EL) -> Green Purchase Intention (GPI)	-0.075	-0.075	0.778	0.437
H2	Eco Label (EL) -> Attitude (ATT)	0.720	0.719	14.283	0.000
H3	Eco Label (EL) -> Subjective Norm (SN3)	0.561	0.567	8.428	0.000
H4	Eco Label (EL) -> Behavioural Control (BC)	0.761	0.763	19.874	0.000
H5	Attitude (ATT) -> Green Purchase Intention (GPI)	0.429	0.429	4.528	0.000
H6	Subjective Norm (SN) -> Green Purchase Intention (GPI)	-0.003	-0.001	0.042	0.966
H7	Behavioural Control (BC) -> Green Purchase Intention (GPI)	0.455	0.453	4.834	0.000
H8	Moderating Effect GPIWTP -> Green Purchase Behaviour (GPB)	0.003	0.006	0.121	0.904

Based on the results in Table 7, it shows that:

The results of the H1 hypothesis test show that Eco-Label (EL) does not have a significant effect on Green Purchase Intention (GPI). This can be seen from the P-Value of 0.437 which is greater than the 5 percent significance level (0.05), and the T-Statistic value of 0.778 which is smaller than the T-table value (1.96). Thus, the H1 hypothesis is rejected.

The results of the H2 hypothesis test show that Eco-Label (EL) has a significant positive effect on Attitude (ATT). The original sample value of 0.720 shows that increasing Eco Label (EL) will increase Attitude (ATT). The P-Value value of 0.000 is smaller than 0.05, and the T-Statistic value of 14.283 is much greater than 1.96, so the H2 hypothesis is accepted.

The results of the H3 hypothesis test show that Eco Label (EL) has a significant positive effect on Subjective Norm (SN). The P-Value of 0.000 indicates high significance, and the T-Statistic of 8.428 which is greater than 1.96 indicates that this hypothesis is accepted.

The results of the H4 hypothesis test show that Eco Label (EL) has a significant positive effect on Behavioral Control (BC). With a P-Value of 0.000 which is smaller than 0.05 and a T-Statistic of 19.874, this hypothesis is accepted.

The results of the H5 hypothesis test show that Attitude (ATT) has a significant positive effect on Green Purchase Intention (GPI). The original sample value of 0.429 indicates a positive effect, and the T-Statistic value of 4.528 which is greater than 1.96, and the P-Value of 0.000 which is smaller than 0.05, indicate that this hypothesis is accepted.

The results of the H6 hypothesis test show that Subjective Norm (SN) has no significant effect on Green Purchase Intention (GPI). The P-Value of 0.966 is greater than 0.05 and the T-Statistic of 0.042 is smaller than 1.96, indicating that this hypothesis is rejected.

The results of the H7 hypothesis test show that Behavioral Control (BC) has a significant positive effect on Green Purchase Intention (GPI). The P-Value of 0.000 is smaller than 0.05, and the T-Statistic of 4.834 is greater than 1.96, so this hypothesis is accepted.

The results of the H8 hypothesis test show that willingness to pay is unable to moderate the influence of green purchase intention (GPI) on green purchase behavior (GPB) because the P-Value of 0.904 is greater than 0.05 and the T-Statistic of 0.121 is less than 1.96, indicating that this hypothesis is rejected.

## Discussion

Analysis of the influence of eco-label variables, attitude, subjective norm, behavioral control, on green purchase intention, as well as the moderation of willingness to pay on the influence of green purchase intention on green purchase behavior in millennial consumers, and gen Z on green products in e-commerce can be explained as follows:

### *Analysis of the influence of eco-label on green purchase intention.*

Based on the results of the hypothesis testing that has been carried out, the eco-label (EL) variable does not have a significant effect on green purchase intention (GPI) in consumers. These results indicate that although the eco-label concept is important in increasing environmental awareness, the application of eco-label alone is not enough to encourage the intention to purchase environmentally friendly products among consumers (Taufique et al., 2017). The results of this study are in accordance with previous studies. However, some opinions say that ecolabels have an effect on green purchase intention because they believe in the credibility of the eco-label and consumers already have awareness of environmental sustainability (Kumar and Basu, 2023).

### *Analysis of the influence of eco-labels on green attitudes.*

The results of this study indicate that eco-labels have a positive effect on green attitudes. Thus, these results are relevant to increasing awareness of environmental and sustainability issues, especially among younger and more educated consumers. These consumers are more sensitive to environmental issues and are more influenced by labels that show the manufacturer's commitment to the environment. The results of this study are in line with the results of previous studies, including those who argue that for Millennials, eco-labels play an important role in shaping their positive attitudes towards environmentally friendly products. Likewise, argue that Gen Z's green attitude increases and is stronger when they see eco-labels on green products, which can increase their belief in the importance

of sustainability and environmental responsibility (Jabeen et al., 2023). In contrast to the findings of this study and the results of previous studies above, the results of studies show that eco-labels do not affect green attitudes because consumers agree that eco-labels are only a marketing tool and are less accountable for their truth. According to (H. Wang et al., 2019) green attitudes are influenced by other factors, and not eco-labels.

### *Analysis of the influence of eco-labels on subjective norms.*

Based on the results of hypothesis testing, the eco-label (EL) variable is proven to have a significant and positive influence on subjective norm (SN). This shows that the presence of an eco-label on a product can influence consumer subjective norms, namely consumer perceptions of what is considered important by people around them regarding environmentally friendly behavior. In other words, when a product is equipped with an eco-label, Gen Z and Millennial consumers feel that choosing the product is a socially supported decision, in accordance with the expectations or positive views of others who are significant to them, such as family, friends, or the general public. Increased awareness of environmental issues in a particular community can strengthen norms that support the purchase of environmentally friendly products, and the Eco Label serves as a visual reinforcement of these norms. The results of this study are in accordance with the opinions of that eco-labels influence subjective norms, because Eco-labels provide social encouragement for consumers to comply with positive environmental norms. In the Indonesian context, where social influences and group norms often play an important role in consumer decision making, the influence of eco-label on subjective norm is very relevant (Roh et al., 2022).

### *Analysis of the influence of eco-labels on behavioral control.*

Based on the results of hypothesis testing, the Eco Label (EL) variable has a significant and positive effect on Behavioral Control (BC). The results of

this study are in accordance with previous studies (Sörqvist et al., 2024). The opinion differs from previous researchers (Feuß et al., 2022) who stated that eco-labels do not influence behavioral control because consumers are burdened with too much eco-label information. These results also reflect that Eco Labels can function as a powerful tool to reduce consumer uncertainty and increase their confidence in taking pro-environmental actions. Therefore, companies in Indonesia that adopt Eco Labels on their products can help improve consumer perceptions of their ability to choose sustainable products, which in turn can increase sales and consumer loyalty. Thus, the application of Eco Labels not only functions to provide information, but also strengthens consumer behavioral control in the context of purchasing environmentally friendly products. Companies need to continue to drive adoption of Eco Labels and ensure that they are easily accessible and understood by consumers to maximize these positive effects.

*Analysis of the influence of green attitude on purchase intention.*

Based on the results of hypothesis testing, the Green Attitude (ATT) variable has a significant and positive effect on Green Purchase Intention (GPI). Consumers who have a positive attitude towards environmental issues tend to be more motivated to buy products that support sustainability. This attitude can include the belief that individual actions, such as choosing environmentally friendly products, can make a positive contribution to environmental conservation. These results are in line with the theory of planned behavior by Ajzen (2015), which states that a person's attitude towards a behavior is a strong predictor of the intention to carry out that behavior. Also, according to the opinions Suki (2016). However, some researchers have different opinions, that green attitude does not always affect green purchase intention, because there are other factors that are more influential (Ajzen, 2015).

*Analysis of the influence of subjective norms on green purchase intention.*

Based on the results of hypothesis testing, the subjective norm (SN) variable does not have a significant influence on green purchase intention (GPI). This result indicates that consumer perceptions of the views and expectations of those around them are not strong enough to influence their intention to purchase environmentally friendly products. The results of this study are in accordance with the opinions of (Hasan and Suciarto, 2020) that subjective norms do not influence green purchase intention because green purchase intention is triggered by encouragement from within the consumer or personal judgment. This result can also reflect that consumer actions are not significantly influenced by the views of others or by social norms. The results of Floren's (2019) study and show a different opinion that subjective norms play an important role in shaping green purchase intentions, especially in cultures where social decisions and collective norms are highly valued Cheng (2017), as well as among consumers who are highly influenced by the views of family, friends, and the surrounding community (Johe and Bhullar, 2016).

*Analysis of the influence of behavioral control on purchase intention.*

Based on the results of hypothesis testing, the behavioral control (BC) variable has a significant and positive effect on green purchase intention (GPI). These results indicate that consumer perceptions of their control or ease in performing certain Behavioral Control actions significantly affect their intention to purchase environmentally friendly products Green Purchase Intention. In this context, if consumers feel that they have sufficient ability, adequate resources, and few barriers to purchasing environmentally friendly products, then they are more likely to have a strong intention to purchase the product. Consumers who have control over their actions are more likely to participate in environmentally friendly behavior, and that the higher the behavioral control felt the greater the likelihood of having the intention to purchase green products (Johe and Bhullar, 2016).



*Analysis of whether willingness to pay was able to moderate the influence of green purchase intention on green purchase behavior.*

Based on the results of the hypothesis test, willingness to pay (GPIWTP) moderation does not have a significant effect in strengthening the relationship between green purchase intention (GPI) and green purchase behavior (GPB). This is because consumers are limited by economic factors, such as high prices, so that they do not always lead to green purchasing behavior that consumers have the intention to buy green products but were unable or unwilling to pay the premium prices often associated with these products (Al Mamun et al., 2023). The results of other studies show that willingness to pay was able to moderate green purchase intention and green purchase behavior in consumers who are able to pay more to buy green products. Thus, the right target market needs to be determined by the company so that it is right on target to market green products.

#### **MANAGERIAL IMPLICATION**

Eco-labels do not need to be promotional marketing content because they do not directly affect purchase intention, but to form consumer attitudes, especially consumers who meet the criteria presented in the respondent profile, it is necessary to attach eco-labels as part of promotional activities to form attitudes towards environmental sustainability in general, green products in particular, by organizing activities that support environmental sustainability and the importance of purchasing green products, which are marked with green labels. Socialization of ecolabels and green products needs to be carried out intensively in places that are frequently visited, easily obtained, and easy access to information about the need for green products and their eco-labels to millennial and Gen Z respondents with criteria according to consumer profiles, so that consumer behavioral control increases. With increased attitude and control behavior, green purchase intention of Gen Z and Millennials can increase.

The results of this study indicate that WTP is unable to strengthen the influence of GPI on GPB so that more expensive prices, or purchasing power, or belief in benefits do not become a driver for consumers to make purchases after the intention arises. So that consumers with segmentation that matches the consumer profile do not care about WTP. The results of this study indicate that price and consumer purchasing power, as well as the attachment of eco-labels to products need to be ignored in developing green product marketing strategies. What needs to be emphasized in marketing strategies is the creation of attitudes and behavioral control over green products.

#### **CONCLUSIONS**

The results of the study indicate that eco-labels do not affect green purchase intention, so companies need to pay attention to the level of understanding and trust of millennial and generation Z consumers towards eco-labels. Likewise, subjective norms do not affect green purchase intention. This means that Millennials and Gen Z respondents base their green purchase intention more on internal factors, not on external motivation. Eco-labels do not influence subjective norms because eco-labels are factors outside of consumers. Meanwhile, the results of this study indicate that consumers are more influenced by internal factors to form green purchase intention. The results of other studies show the opposite, that attitude and behavioral control influence green purchase intention. In addition, eco-labels influence the formation of green attitudes and behavioral control. So eco-labels need to be on every green product to facilitate the formation of green attitudes and behavioral control in consumers. The results of other studies show that willingness to pay is unable to moderate. This is because consumers are less financially capable or do not want to pay a higher price than similar products.

Companies need to determine the right target market to market green products, namely consumers who have more money to pay for green products or

consumers who are fanatic about environmental sustainability so that any price will be paid for the sake of environmental sustainability. In addition, it is necessary to determine the right target market, namely consumers who base their purchase intentions on factors that exist within themselves, namely green attitude and behavioral control. In addition, green products can be marketed to consumer groups who base their purchase intentions on the surrounding environment, strong encouragement from social groups, families or certain tribal habits and so on.

Further research is needed, namely whether eco-labels with intervening attitudes and behavioral control are able to influence green purchase intention. Research is also needed whether willingness to pay is able to influence purchase behavior or purchasing decisions. In addition, further further research is needed to determine other factors that influence green purchase intention. ■

#### Acknowledgement

We would like to express our gratitude to the Ministry of Education, Culture, Research, and Technology for selecting this research as one of the researchs funded under the 2024 Master's Thesis Research (PTM) scheme. We would also like to express our gratitude to the Leadership of Mercu Buana University and its staff for the encouragement, motivation, and facilities provided so that this research was selected as one of the researchs funded by the Ministry of Education, Culture, Research, and Technology of the Republic of Indonesia.

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