Indonesian Journal of Economics, Business, Accounting, and Management
E-ISSN: 2988-0211 | Vol. 4, No. 1, 2026, pp. 29-44 | DOI: 10.63901/ijebam.v4i1.174

An International Journal

Indonesian Journal of Economics, Business, Accounting, and Management

E-ISSN: 2988-0211 | Vol. 4, No. 1, 2026, pp. 29-44 | DOI: 10.63901/ijebam.v4i1.174

Journal Homepage: https://journal.seb.co.id/ijebam/index

ANALYSIS OF EASE OF USE AS A MODERATING VARIABLE IN FACTORS INFLUENCING BEHAVIORAL INTENTION TO USE GREEN PRODUCT INNOVATION

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ARTICLE INFORMATION

Section
Research Results Articles

History of Article
Submitted: 09/04/2026
Accepted: 14/04/2026
Available online: 14/04/2026

Keywords
green product, relative advantage, complexity, compatibility, trialability, observability, ease of use, behavioral intention

ABSTRACT

This study examines the factors influencing consumers' behavioral intention to adopt green products, with a focus on the moderating role of perceived ease of use. Using data from 300 respondents, it analyzes the effects of relative advantage, compatibility, complexity, trialability, observability, and ease of use on the intention to adopt Philips MyCare LED bulbs. The data were analyzed using multiple linear regression and moderation analysis in SPSS. The results show that all factors have a positive effect on behavioral intention, while perceived ease of use strengthens these relationships. The model explains 66% of the variance in behavioral intention, indicating strong predictive power. These findings contribute to the green innovation adoption literature and provide practical insights for companies, highlighting the importance of ease of use, compatibility, and perceived benefits in promoting consumer adoption.

INTRODUCTION

A growing consensus among scholars and policymakers indicates that current energy production and consumption patterns are unsustainable, primarily due to greenhouse gas emissions driving climate change. These challenges are intensified by economic and social costs, including pollution, resource scarcity, and geopolitical tensions. While mitigation has focused on supply-side solutions such as low-emission technologies, their effectiveness relies on consumer adoption (Brown, 2001). Therefore, green innovation plays a vital role in promoting sustainable resource use and addressing increasing energy demand.

E-ISSN: 2988-0211 | Vol. 4, No. 1, 2026, pp. 29-44 | DOI: 10.63901/ijebam.v4i1.174

Electricity consumption can be viewed as a public goods dilemma, where conservation is crucial for sustaining environmental benefits such as clean air and climate stability. In Indonesia, demand continues to increase due to population growth, with households and industry as the main contributors. High electricity use, especially for lighting, intensifies energy scarcity, promoting the adoption of efficient technologies such as LED lamps, which can save up to 80% of energy. Although companies like Philips promote green products (Philips.com, 2021), adoption remains constrained by consumer skepticism and ineffective green marketing practices (Peattie and Crane, 2005; Grant, 2007).

Studies on green consumer marketing, behavior, and consumption are strongly rooted in psychological theories (Rettie, Burchell, & Barnham, 2014). The Theory of Reasoned Action links beliefs and evaluations to attitudes, which shape intentions and behavior (Ajzen & Fishbein, 1975), while the Theory of Planned Behavior extends this by incorporating perceived behavioral control (Ajzen, 1991). Additionally, the Theory of Interpersonal Behavior includes social and emotional factors influencing intention (Triandis, 1977). Behavioral intention is a key determinant of green product adoption (Chen, 2016; Hassan, 2010). Among innovation characteristics, perceived relative advantage significantly enhances adoption by improving efficiency and economic benefits (Roger, 2010; Pannell et al., 2006; Chou et al., 2012).

Perceived compatibility is a key determinant of behavioral intention, referring to the extent to which an innovation aligns with users' existing values, experiences, and needs (Rogers, 2010). Innovations that are consistent with social norms are more likely to be adopted. Empirical studies confirm that compatibility significantly influences adoption intention (Labay and Kinnear, 1991; Vollink et al., 2002; Ozaki, 2011). Another important factor is perceived complexity, defined as the degree to which an innovation is difficult to understand and use (Rogers, 2010). Higher complexity hinders adoption, whereas simpler innovations facilitate faster acceptance (Chou et al., 2012; Kinnear, 1991).

Another factor influencing behavioral intention is perceived trialability, which refers to the extent to which an innovation can be tested on a limited basis. When users can experiment with an innovation gradually, the likelihood of adoption increases (Rogers, 2010). However, prior studies on household energy technologies often exclude trialability because such innovations are not easily testable (Kapoor and Dwivedi, 2020; Claudy et al., 2011; Tapaninen et al., 2009a). In addition, perceived observability, defined as the visibility of an innovation's results, also influences intention, as more observable outcomes encourage adoption (Rogers, 2010; Chou et al., 2012; Claudy et al., 2011).

According to Rogers (2010), five innovation characteristics play a vital role in the persuasion stage of the innovation decision process, where adoption is more likely when innovations provide relative advantage, compatibility, simplicity, trialability, and observability. This study applies the Technology Acceptance Model to explain behavioral intention, reflecting an individual's tendency to act (Davis, 1991; Lee and Lee, 2011; Shiau, 2014). Behavioral intention is shaped by perceived usefulness and perceived ease of use (Davis, 1989; Venkatesh & Davis, 2003), while globalization-driven environmental concerns further emphasize the importance of green innovation adoption (Kotler and Armstrong, 2012).

Current challenges in green innovation adoption include low producer awareness, consumer skepticism toward green-labeled products, and limited understanding of their functions. Environmental knowledge reflects public awareness and responsibility toward sustainability and significantly influences consumer behavior. Higher levels of ecological knowledge shape positive attitudes and strengthen purchase intentions toward green products. Empirical studies confirm that environmental knowledge is a key predictor of green purchasing behavior (Chan and Lau, 2000), as well as a determinant of increased purchase likelihood through enhanced consumer attitudes (Shah, 2012).

E-ISSN: 2988-0211 | Vol. 4, No. 1, 2026, pp. 29-44 | DOI: 10.63901/ijebam.v4i1.174

Green innovation refers to industrial efforts implemented across various aspects and developed sustainably from an environmental perspective (Rennings, 2009). Such innovation not only aims to reduce environmental impacts but also enhances the competitive advantage of green products (Porter and Linde, 1995). In Indonesia, green innovation has expanded across sectors, including household products, lighting, tissue, utensils, and paper. However, inconsistent findings in prior studies highlight the need for further research. This study focuses on energy efficiency through Philips MyCare LED Bulb as a green innovation, examining the effects of innovation attributes on behavioral intention, with ease of use as a moderating variable.

LITERATURE REVIEW & HYPOTHESIS DEVELOPMENT

Relative advantage refers to the extent to which an innovation is perceived as superior to previous alternatives, encompassing economic benefits, social prestige, convenience, and satisfaction (Rogers, 1983). A higher perceived relative advantage accelerates the rate of adoption. Empirical evidence highlights its critical role in determining long-term adoption levels (Pannell et al., 2006). Studies on green innovation adoption consistently report a significant positive influence of relative advantage on behavioral intention (Vollink et al., 2002; Faiers et al., 2007; Tapaninen et al., 2009b; Chou et al., 2012). Meta-analysis findings also support this relationship (Tornatzky and Klein, 1982), leading to the hypothesis that perceived relative advantage positively affects behavioral intention.

H_1: *Perceived relative advantage positively influences behavioral intention.*

Compatibility refers to the extent to which an innovation is perceived as consistent with existing values, past experiences, and the needs of potential adopters (Rogers, 1983). Innovations aligned with users' lifestyles and preferences are more attractive and adopted more quickly (Rogers, 2003). Compatibility also reflects both normative and practical alignment with users' beliefs and practices (Rogers and Shoemaker, 1971; Tornatzky and Klein, 1982). Prior studies on green innovation confirm its significant influence on behavioral intention (Ozaki, 2011; Vollink et al., 2002; Labay and Kinnear, 1981; Faiers et al., 2007; Claudy et al., 2011), leading to the hypothesis that perceived compatibility positively affects behavioral intention.

H_2: *Perceived complexity positively influences behavioral intention.*

Perceived complexity refers to consumers' perceptions of the difficulty associated with understanding and using an innovation (Wang and Somogyi, 2018). Higher complexity tends to slow adoption, as consumers are less likely to engage with innovations that require greater cognitive or practical effort (Hoyer, MacInnis, and Pieters, 2018). Empirical studies consistently report a significant negative relationship between perceived complexity and purchase intention (Hansen, 2005; Wang and Somogyi, 2018). In the context of green innovation, prior research also confirms its influence on adoption intention (Chou et al., 2012; Vollink et al., 2002; Labay and Kinnear, 1981), leading to the hypothesis that perceived complexity negatively affects behavioral intention.

H_3: *Perceived compatibility positively influences purchase intention.*

Perceived trialability refers to the extent to which an innovation can be experimented with on a limited basis (Rogers, 1983). Innovations that can be tested are more likely to be adopted quickly, as trial opportunities reduce uncertainty and enhance user confidence (Rogers and Shoemaker, 1971). Empirical evidence supports that trialable innovations are implemented more frequently and rapidly (Tornatzky and Klein, 1982). In green innovation contexts, prior studies confirm that trialability significantly influences adoption intention (Faiers et al., 2007;

E-ISSN: 2988-0211 | Vol. 4, No. 1, 2026, pp. 29-44 | DOI: 10.63901/ijebam.v4i1.174

Labay and Kinnear, 1981; Vollink et al., 2002), leading to the hypothesis that perceived trialability positively affects behavioral intention.

H_4: *Perceived trialability positively influences behavioral intention.*

Perceived observability refers to the extent to which the results of an innovation are visible to others (Rogers, 1983). Innovations with easily observable outcomes are more likely to be adopted, as visibility enhances understanding and reduces uncertainty among potential users. Conversely, innovations with less visible results tend to experience slower adoption. Empirical findings on green innovation adoption show mixed results, with some studies reporting non-significant effects (Tapaninen et al., 2009; Labay and Kinnear, 1981), while others confirm a significant positive influence on behavioral intention (Faiers et al., 2007; Claudy et al., 2011; Chou et al., 2012).

H_5: *Perceived observability positively influences behavioral intention.*

Perceived ease of use is a key determinant of technology acceptance, reflecting the extent to which individuals believe that using a system requires minimal effort (Davis, 1989; Aydin and Burnaz, 2016). It is considered one of the most influential factors in adopting new technologies (Davis et al., 1992; Moore and Benbasat, 1991). Technologies that are easier to use tend to enhance perceived relative advantage, defined as the superiority of an innovation over existing alternatives (Ostlund, 1973; Li et al., 2020). Empirical studies confirm that relative advantage influences behavioral intention (Agarwal and Prasad, 1997), suggesting that ease of use strengthens this relationship (Rodrigues et al., 2016; Sin et al., 2012).

H_6: *Perceived ease of use mediates the relationship between perceived relative advantage and behavioral intention.*

Compatibility refers to the extent to which an innovation aligns with existing values, experiences, and needs of potential adopters (O'Cass and Fenech, 2003; Rogers, 2003). It is a critical factor in technology adoption, as misalignment with individual values may hinder acceptance (Walker et al., 2016). Consumers are more likely to adopt technologies that fit their lifestyle and preferences (Agag and El-Masry, 2016). Prior studies consistently demonstrate a positive effect of compatibility on behavioral intention (Agarwal and Prasad, 1997; Lee et al., 2011; Al-Jabri and Sohail, 2012), suggesting that perceived ease of use strengthens this relationship in green innovation contexts.

H_7: *Perceived ease of use mediates the relationship between perceived compatibility and behavioral intention.*

Perceived complexity refers to the extent to which an innovation is considered difficult to understand and use (Vitalaya, 2010; Rogers, 2010). Higher complexity requires greater knowledge and skills, which may reduce user comfort and hinder adoption. Conversely, simpler innovations are adopted more rapidly due to ease of understanding and use. Empirical studies confirm that complexity negatively influences adoption intention in green innovation contexts (Chou et al., 2012; Vollink et al., 2002; Kinnear, 1991; Lawson-Body et al., 2014). Additional research supports its significant effect across technologies (Tanakinjal et al., 2011; Chaipoopirutana and Chatchawanwan, 2009; Slyke et al., 2002), suggesting perceived ease of use moderates this relationship.

H_8: *Perceived ease of use mediates the relationship between perceived complexity and behavioral intention.*

Perceived trialability refers to the extent to which an innovation can be tested on a limited scale, reducing uncertainty and enabling potential adopters to evaluate its benefits (Vitalaya, 2010). Trial opportunities allow users to assess ease of use and effectiveness, thereby increasing adoption intention (Kapoor, 2014). Empirical studies confirm that trialability positively influences behavioral intention across various technologies (Slyke et al., 2002; Lee

E-ISSN: 2988-0211 | Vol. 4, No. 1, 2026, pp. 29-44 | DOI: 10.63901/ijebam.v4i1.174

et al., 2011; Tanakinjal et al., 2011; Chaipoopirutana and Chatchawanwan, 2009). However, in some green innovations, trialability is limited (Kapoor and Dwivedi, 2020; Claudy et al., 2011; Tapaninen et al., 2009a), suggesting perceived ease of use moderates this relationship.

H_9: *Perceived ease of use mediates the relationship between perceived trialability and behavioral intention.*

Perceived observability refers to the extent to which an innovation's outcomes are visible to others (Rogers, 1983). Greater visibility enables potential adopters to evaluate benefits more easily, thereby increasing the likelihood of adoption. Innovations with observable results are adopted more rapidly, as users can directly assess their ease of use and effectiveness (Wei, 2001; Moghavvemi, 2012). Empirical studies report a significant influence of observability on behavioral intention in green and technology adoption contexts (Claudy et al., 2011; Al-Jabri and Sohail, 2012). However, its effect may diminish as familiarity increases (Labay and Kinnear, 1981), suggesting perceived ease of use moderates this relationship.

H_{10}: *Perceived ease of use mediates the relationship between perceived observability and behavioral intention.*

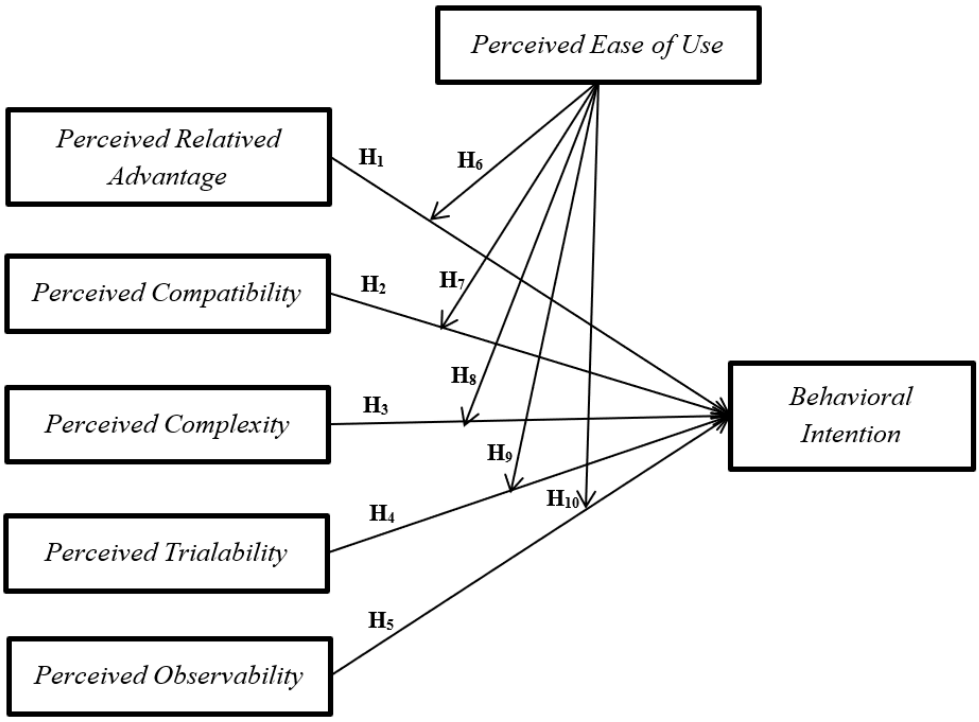

Figure 1. Research Framework
Source: Adapted from Kapoor et al. (2014) and Yuen (2020)

RESEARCH METHODS

This study employs a quantitative approach, conducted in Indonesia using an online survey distributed via Google Forms. The population consists of Indonesian consumers who have used Philips MyCare LED Bulb products, with a non-probability purposive sampling technique applied based on specific criteria (Indonesian citizens and prior product usage). A total of 300 valid responses were collected, exceeding the minimum recommended sample size. Data were gathered through a structured questionnaire using a five-point Likert scale (1 = strongly disagree to 5 = strongly agree) adapted from prior studies. The analysis was performed using SPSS, including descriptive statistics and inferential analysis. Instrument testing involved

E-ISSN: 2988-0211 | Vol. 4, No. 1, 2026, pp. 29-44 | DOI: 10.63901/ijebam.v4i1.174

validity and classical assumption tests (multicollinearity, autocorrelation, and heteroscedasticity). Hypotheses were examined using Moderated Regression Analysis (MRA) to assess interaction effects, supported by t-tests for significance ($\alpha = 0.05$) and coefficient of determination (R^2) to evaluate model explanatory power.

DATA ANALYSIS RESULTS & DISCUSSION

Respondent Profile

Table 1. Respondents' Profile

Characteristics	Frequency	%
Gender		
Male	201	67
Female	99	33
Age		
Under 20 years old	58	19,3
21 – 25 years old	193	64,3
21- 25 years old	35	11,7
26 – 30 years old	6	2
31 -35 years old	3	1
36– 40 years old	1	0,3
41 – 50 years old	4	1.3
Above 50 years old		
Occupation		
Student	71	23,7
Government Employee (Civil Servant)	58	19,3
Self-employed / Entrepreneur	13	4,3
Homemaker	10	3,3
Private Sector Employee	60	20
Military Personnel (TNI)	23	7,7
Others	65	21
Monthly Income		
< 5.000.000 IDR	192	64
5.000.000 - 10.000.000 IDR	91	30,3
11.000.000 - 15.000.000 IDR	7	2,3
16.000.000 - 20.000.000 IDR	3	1
> 20.000.000 IDR	7	2,3

Source: Processed Primary Data (2022)

The respondent profile is dominated by males (67%), with females accounting for 33%. In terms of age, the majority are between 21–25 years old (64.3%), followed by respondents under 20 (19.3%), indicating a predominantly young demographic. Regarding occupation, students represent the largest group (23.7%), followed by private sector employees (20%) and government employees (19.3%), with others distributed across various professions. In terms of monthly income, most respondents earn below IDR 5,000,000 (64%), while 30.3% earn between IDR 5,000,000–10,000,000. Overall, the sample is largely composed of young, early-career individuals with relatively moderate-income levels.

Validity & Reliability Test Results

E-ISSN: 2988-0211 | Vol. 4, No. 1, 2026, pp. 29-44 | DOI: 10.63901/ijebam.v4i1.174

Validity refers to the accuracy of an instrument in measuring intended constructs, ensuring that collected data are relevant and aligned with research objectives (Ghozali, 2015). This study evaluates factor and item validity using correlation analysis between item, factor, and total scores. A pilot test with 50 respondents (df = 48) was conducted using SPSS, with a 5% significance level and r-table value of 0.235; items exceeding this threshold were considered valid. Reliability refers to the consistency of measurements over time. It was assessed using Cronbach's Alpha (α), where values above 0.60 indicate acceptable internal consistency, confirming the instrument is stable and dependable.

Table 2. Validity and Reliability

Item		r_{count}	r_{table}	α
Perceived Relative Advantage				0.825
RA1	I believe that the Philips MyCare LED Bulb product is highly beneficial for the environment.	0.697	0.235	
RA2	I use the Philips MyCare LED Bulb because it is energy-efficient.	0.612	0.235	
RA3	The Philips MyCare LED Bulb can operate at low voltage, thereby reducing electricity consumption.	0.767	0.235	
Perceived Compatibility				0.681
CPT1	I use the Philips MyCare LED Bulb because it fits my lifestyle.	0.509	0.235	
CPT2	I use the Philips MyCare LED Bulb because it is more environmentally friendly than other products.	0.740	0.235	
Perceived Complexity				0.706
CPX1	I find it easy to understand how the Philips MyCare LED Bulb works.	0.504	0.235	
CPX2	I feel satisfied using the Philips MyCare LED Bulb due to its product innovations.	0.704	0.235	
Perceived Trialability				0.773
TLB1	I feel pleased when given the opportunity to use the Philips MyCare LED Bulb free of charge for a certain period.	0.455	0.235	
TLB2	I try using the Philips MyCare LED Bulb before using other similar products.	0.559	0.235	
Perceived Observability				0.676
OBS1	I am able to easily explain the benefits of using the Philips MyCare LED Bulb.	0.525	0.235	
OBS2	I demonstrate concern for the environment by using the energy-efficient Philips MyCare LED Bulb.	0.650	0.235	
OBS3	I consistently inform my acquaintances about the benefits of using the Philips MyCare LED Bulb.	0.486	0.235	
Perceived Ease of Use				0.906
EOU1	I don't need much effort to use the Philips MyCare LED Bulb.	0.668	0.235	
EOU2	I am already skilled at using the Philips MyCare LED Bulb.	0.745	0.235	
EOU3	I find the Philips MyCare LED Bulb very easy to use.	0.544	0.235	
Behavioral Intention				0.896

E-ISSN: 2988-0211 | Vol. 4, No. 1, 2026, pp. 29-44 | DOI: 10.63901/ijebam.v4i1.174

BHI1	I plan to use the Philips MyCare LED Bulb because it is an environmentally friendly product.	0.530	0.235
BHI2	I intend to use the Philips MyCare LED Bulb as a form of behavior that benefits the environment.	0.643	0.235

Source: Processed Primary Data (2022)

The validity and reliability test results presented in Table 2 indicate that all measurement items are both valid and reliable. All item correlation values (r-count) exceed the r-table threshold of 0.235, confirming that each indicator is valid and accurately measures its respective construct. Reliability testing using Cronbach's alpha shows that all variables exceed the minimum cutoff value of 0.6, with coefficients ranging from 0.676 to 0.906. This indicates acceptable to high internal consistency among the items. Therefore, all constructs in this study are considered reliable and appropriate for further statistical analysis.

Normality Test

Normality testing aims to determine whether the residuals in a regression model are normally distributed. This is important because many statistical analyses, including regression, assume normality of errors. The nonparametric Kolmogorov-Smirnov (K-S) test is commonly used to assess residual normality. In this test, if the significance level is equal to or greater than 0.05, the null hypothesis (Ho) is accepted, indicating that the residuals follow a normal distribution. Ensuring normality of residuals supports the validity of regression results and the reliability of subsequent statistical inferences drawn from the model.

Table 3. Normality Test

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		300
Normal Parameters[a,b]	Mean	0E-7
	Std. Deviation	,85716713
Most Extreme Differences	Absolute	,105
	Positive	,048
	Negative	-,105
Kolmogorov-Smirnov Z		1,813
Asymp. Sig. (2-tailed)		,073
a. Test distribution is Normal.		
b. Calculated from data.		

Source: Processed Primary Data (2022)

Table 3 indicates that the regression model is normally distributed, as the probability value obtained is 0.073, which is greater than 0.05. Therefore, the regression model is suitable for further analysis.

E-ISSN: 2988-0211 | Vol. 4, No. 1, 2026, pp. 29-44 | DOI: 10.63901/ijebam.v4i1.174

Multicollinearity Test

The multicollinearity test aims to determine whether there is a multicollinearity issue among the independent variables. Multicollinearity occurs when correlations between independent variables are extremely high or low, which can affect regression results. This test is necessary when the number of independent variables exceeds one. One common method to detect multicollinearity is by examining the Variance Inflation Factor (VIF). If the VIF value is less than 10, the level of multicollinearity is considered acceptable and does not significantly distort the regression model.

Table 4. Multicollinearity

Model	Tolerance	VIF
RA	0,760	3,842
CPT	0,886	1,129
CPX	0,850	1,538
TLB	0,772	1,748
OBS	0,788	3,470

Source: Processed Primary Data (2022)

Table 4 shows that the tolerance and VIF values are greater than 0.10 and less than 10, respectively. Therefore, it can be concluded that the regression model does not have multicollinearity issues, indicating no problematic correlations among the independent variables. The model is suitable for further analysis because the tolerance values are below 1 and the VIF values are well below 10, confirming that the independent variables are sufficiently independent and that the regression results will not be distorted by multicollinearity.

The Autocorrelation Test

The autocorrelation test aims to determine whether a linear regression model has correlations between the error terms at period t and the previous period t-1. If such correlations exist, it indicates an autocorrelation problem, which can distort regression estimates and affect the validity of inferences. To detect autocorrelation, the Durbin-Watson (DW) test is commonly used. However, this test has a fundamental limitation: the exact distribution of the DW statistic is unknown, which requires careful interpretation of the results. Properly detecting autocorrelation ensures that the regression model's assumptions are met and that its estimates remain unbiased.

Table 5. Autocorrelation Test

Model	R	R-Square	Adjusted R-Square	Std. Error of the Estimate	Durbin-Watson
1	,852[a]	,726	,662	1,319	1,984

a. Predictors: (Constant), OBS, CPT, CPX, TLB, RA
b. Dependent Variable: BHI

Source: Processed Primary Data (2022)

Table 5 shows the results of the Durbin-Watson test that a DW value of 1.984, with lower and upper bounds dL = 1.78371 and dU = 1.83773, and (4 - dL) = 2.21629 and (4 - dU) = 2.16227. Since the DW value falls between the upper bound and its complement (dU < DW < 4 - dU), specifically 1.83773 < 1.984 < 2.16227, it can be concluded that there is no autocorrelation in the regression model. This result indicates that the error terms are independent across periods, confirming that the regression model meets the assumption of no autocorrelation and is suitable for further analysis.

The Heteroscedasticity Test

E-ISSN: 2988-0211 | Vol. 4, No. 1, 2026, pp. 29-44 | DOI: 10.63901/ijebam.v4i1.174

Heteroscedasticity testing aims to determine whether the regression model exhibits unequal variance of residuals across observations. If the residual variance differs from one observation to another, it indicates heteroscedasticity in the model. This study uses the Glejser test, which involves regressing the independent variables on the absolute residuals. A variable is considered free from heteroscedasticity if the resulting p-value > 0.05. For this research, heteroscedasticity testing was conducted using SPSS Statistics 20, ensuring that the regression model produces consistent and reliable estimates, and that the assumption of constant variance of residuals is not violated.

Table 6. Heteroscedasticity Test

Model	Undstandardized Coefficient		Standardized Coefficient	t	Sig.
	B	Std. Error	Beta		
(Constant)	0,981	0,341		3,492	
RA	0,176	0,106	0,183	1,918	0,078
CPT	0,126	0,125	0,131	2,238	0,108
CPX	0,112	0,070	0,109	2,024	0,062
TLB	0,142	0,076	0,138	1,618	0,097
OBS	0,123	0,098	0,121	1,034	0,131

a. Dependent Variable: Abs_RES

Source: Processed Primary Data (2022)

Table 6 shows that the heteroscedasticity test produced significance values for all variables greater than 0.05. Therefore, it can be concluded that no heteroscedasticity occurs in the regression model, as all variables meet the criterion of significance > 0.05, indicating that the variance of residuals is consistent across observations.

Multiple Regression Analysis

Multiple linear regression analysis is used to determine the effect of independent variables on the dependent variable. The results of the multiple linear regression analysis were processed using SPSS Statistics 21 and are presented in Table 7.

Table 6. Multiple Regression Analysis

Model	Undstandardized Coefficient		Standardized Coefficient	t	Sig.
	B	Std. Error	Beta		
(Constant)	2,981	0,321		9,294	0,000
RA	0,202	0,106	0,210	3,918	0,000
CPT	0,126	0,056	0,134	2,258	0,005
CPX	0,211	0,070	0,210	3,026	0,003
TLB	0,125	0,077	0,119	2,612	0,008
OBS	0,103	0,098	0,098	2,033	0,003

a. Dependent Variable: BHI

Source: Processed Primary Data (2022)

Table 6 shows all independent variables have a significant effect on the dependent variable, with the regression equation as follows:

$$Y = 2.981 + 0.202X1 + 0.126X2 + 0.211X3 + 0.125X4 + 0.103X5 + e$$

The regression equation can be interpreted as follows:

1. The constant value of 2.981 indicates that if all independent variables—perceived relative advantage, perceived compatibility, perceived complexity, perceived trialability, and

E-ISSN: 2988-0211 | Vol. 4, No. 1, 2026, pp. 29-44 | DOI: 10.63901/ijebam.v4i1.174

perceived observability—remain unchanged, the behavioral intention (Y) will be 2.981 units.
2. The coefficient of perceived relative advantage (X1) is 0.202, meaning a one-unit increase in X1 increases behavioral intention by 0.202 units, assuming other variables are constant.
3. Perceived compatibility (X2) has a coefficient of 0.126, indicating that a one-unit increase in X2 raises behavioral intention by 0.126 units, with other variables constant.
4. The coefficient of perceived complexity (X3) is 0.211, showing that each one-unit increase in X3 increases behavioral intention by 0.211 units, assuming other variables are unchanged.
5. Perceived trialability (X4) has a coefficient of 0.125, meaning a one-unit increase in X4 raises behavioral intention by 0.125 units, with other factors constant.
6. The coefficient of perceived observability (X5) is 0.103, indicating that a one-unit increase in X5 increases behavioral intention by 0.103 units, assuming other variables remain constant.

Overall, higher values in any independent variable correspond to higher behavioral intention, confirming their positive influence.

Hypothesis Testing (t-Test)

In this study, hypothesis testing was conducted using the t-test to examine the effect of perceived relative advantage, perceived compatibility, perceived complexity, perceived trialability, perceived observability, and perceived ease of use on consumers' behavioral intention. The t-test evaluates whether each independent variable has a statistically significant influence on the dependent variable. This analysis was carried out using SPSS Statistics 21, allowing for the determination of the significance of each predictor based on calculated t-values and corresponding p-values. Significant t-values indicate that the independent variable meaningfully affects behavioral intention.

The results of the first hypothesis test indicate that perceived relative advantage affects behavioral intention, supported by the data. This is shown by a t-value of 3.918, a significance level below 0.05 (0.000), and a positive coefficient of 0.202, confirming that perceived relative advantage has a positive influence on behavioral intention. The second hypothesis test shows that perceived compatibility influences behavioral intention, supported by the data. The effect has a t-value of 2.258, a significance of 0.005 (<0.05), and a positive coefficient of 0.126, indicating a positive impact on behavioral intention.

The third hypothesis test demonstrates that perceived complexity affects behavioral intention. The t-value is 3.026, significance is 0.003 (<0.05), and the coefficient is 0.211, confirming a positive relationship. The fourth hypothesis test reveals that perceived trialability affects behavioral intention. It has a t-value of 2.612, significance of 0.008 (<0.05), and a positive coefficient of 0.125, supporting a positive influence. The fifth hypothesis test shows that perceived observability affects behavioral intention. With a t-value of 2.033, significance of 0.003 (<0.05), and a positive coefficient of 0.103, the data confirm a positive effect.

The sixth hypothesis test indicates that perceived ease of use moderates the effect of perceived relative advantage on behavioral intention, supported by the data shown in Table 7. The ease-of-use variable in the first output and the RAEOU interaction in the second output show significance (sig < 0.05), meaning ease of use acts as a pure moderator. The interaction beta value (RAEOU) of 0.240 indicates that ease of use strengthens the relationship between perceived relative advantage and behavioral intention.

E-ISSN: 2988-0211 | Vol. 4, No. 1, 2026, pp. 29-44 | DOI: 10.63901/ijebam.v4i1.174

Table 7. Multiple Regression Analysis: Perceived Relative Advantage

Model	Beta	t count	Sig.
RA	0,229	3,028	0,003
EOU	0,154	2,646	0,018
RAEOU	0,240	1,720	0,472

a. Dependent Variable: BHI

Source: Processed Primary Data (2022)

Next, the results of the seventh hypothesis test indicate that perceived ease of use moderates the effect of perceived compatibility on behavioral intention, supported by the data shown in Table 8. The effect of the ease-of-se variable in the first output and the CPTEOU interaction in the second output show significance (sig < 0.05), indicating that ease of use functions as a pure moderator. The interaction beta value (CPTEOU) of 0.155 demonstrates that ease of use strengthens the relationship between perceived compatibility and behavioral intention.

Table 8. Multiple Regression Analysis: Perceived Compatibility

Model	Beta	t count	Sig.
CPT	0,125	2,294	0,023
EOU	0,103	1,698	0,091
CPTEOU	0,155	2,421	0,016

a. Dependent Variable: BHI

Source: Processed Primary Data (2022)

The results of the eighth hypothesis test indicate that perceived ease of use moderates the effect of perceived complexity on behavioral intention, supported by the data shown in Table 9. The effect of the ease-of-use variable in the first output and the CPXEOU interaction in the second output show significance (sig < 0.05), indicating that ease of use functions as a pure moderator. The interaction beta value (CPXEOU) of 0.243 demonstrates that ease of use strengthens the relationship between perceived complexity and behavioral intention.

Table 9. Multiple Regression Analysis: Perceived Complexity

Model	Beta	t count	Sig.
CPX	0,109	2,412	0,002
EOU	0,218	2,434	0,011
CPXEOU	0,243	2,207	0,000

a. Dependent Variable: BHI

Source: Processed Primary Data (2022)

The results of the ninth hypothesis test indicate that perceived ease of use moderates the effect of perceived trialability on behavioral intention, supported by the data shown in Table 10. The effect of the ease-of-use variable in the first output and the TLBEOU interaction in the second output show significance (sig < 0.05), indicating that ease of use functions as a pure moderator. The interaction beta value (TLBEOU) of 0.104 demonstrates that ease of use strengthens the relationship between perceived trialability and behavioral intention.

E-ISSN: 2988-0211 | Vol. 4, No. 1, 2026, pp. 29-44 | DOI: 10.63901/ijebam.v4i1.174

Table 10. Multiple Regression Analysis: Perceived Trialability

Model	Beta	t count	Sig.
TLB	0,157	2,205	0,028
EOU	0,035	0,488	0,626
TLBEOU	0,104	2,842	0,007

a. Dependent Variable: BHI

Source: Processed Primary Data (2022)

The results of the tenth hypothesis test indicate that perceived ease of use moderates the effect of perceived observability on behavioral intention, supported by the data. The effect of the ease-of-use variable in the first output and the OBSEEOU interaction in the second output show significance (sig < 0.05), indicating that ease of use functions as a pure moderator. The interaction beta value (OBSEEOU) of 0.134 demonstrates that ease of use strengthens the relationship between perceived observability and behavioral intention.

Table 11. Multiple Regression Analysis: Perceived Observability

Model	Beta	t count	Sig.
OBS	0,143	2,006	0,046
EOU	0,016	0,200	0,842
OBSEOU	0,134	2,620	0,005

a. Dependent Variable: BHI

Source: Processed Primary Data (2022)

Coefficient of Determination (R^2) Test

The coefficient of determination is used to determine the extent to which independent variables collectively explain the dependent variable. This influence is assessed through the adjusted R^2 value. R^2 ranges from 0 to 1, where a value closer to 0 indicates that the independent variables have minimal explanatory power on the dependent variable, while a value approaching 1 indicates a stronger overall influence. The adjusted R^2 can increase or decrease when additional independent variables are added to the model, reflecting how well the model accounts for the variance in the dependent variable.

Table 12. Coefficient of Determination

Model Summary[b]				
Model	**R**	**R-Square**	**Adjusted R-Square**	**Std. Error of the Estimate**
1	,852[a]	,726	,662	1,319

a. Predictors: (Constant), OBS, CPT, CPX, TLB, RA

b. Dependent Variable: BHI

Source: Processed Primary Data (2022)

Based on Table 12, the adjusted R^2 value is 0.662. This indicates that perceived relative advantage, perceived compatibility, perceived complexity, perceived trialability, perceived observability, and perceived ease of use collectively explain 66% of the variation in consumers' behavioral intention. The remaining 34% is influenced by other factors outside the scope of this study. This result demonstrates a strong explanatory power of the independent variables in predicting behavioral intention, suggesting that these factors play a significant role in shaping consumers' intentions to adopt and use the Philips MyCare LED Bulb product.

E-ISSN: 2988-0211 | Vol. 4, No. 1, 2026, pp. 29-44 | DOI: 10.63901/ijebam.v4i1.174

CONCLUSION

Based on the analysis of 300 respondents, this study concludes that perceived relative advantage, perceived compatibility, perceived complexity, perceived trialability, and perceived observability all have a positive influence on consumers' behavioral intention to adopt environmentally friendly innovations. Higher levels of these factors correspond to higher behavioral intention. Additionally, perceived ease of use positively moderates the effects of these factors, strengthening their influence on behavioral intention. The easier the innovation is to use, the greater the impact of each factor on consumers' intention to adopt the product. These findings highlight the critical role of usability in promoting sustainable product adoption.

Managerial Implications

This study contributes theoretically to the literature on the environmentally friendly industry, particularly in developing green innovation products. It shows that consumers' behavioral intention to adopt eco-friendly innovations is influenced by factors such as relative advantage, compatibility, complexity, trialability, observability, and ease of use, with ease of use further strengthening these relationships. Practically, the findings offer guidance for companies supporting green industries in Indonesia to focus on: enhancing the relative advantage of green innovations, ensuring products align with societal values and norms, minimizing complexity, providing trial opportunities, ensuring product visibility, and improving ease of use to boost consumer confidence in adopting eco-friendly products.

Research Limitations and Suggestions for Future Studies

The limitations of this study include using 300 respondents to represent Indonesia, which may not fully reflect all consumers of green innovation products in the country. Future research should involve a larger and more geographically diverse sample. This study only examined six factors influencing behavioral intention: relative advantage, compatibility, complexity, trialability, observability, and ease of use. Subsequent research could include additional variables, such as perceived risk or perceived usefulness, to better explain adoption of products like Philips lamps. Expanding sample size and scope would improve generalizability. Even small efforts toward eco-friendly innovations are valuable, as green innovation requires long-term implementation.

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