

Research Paper

Exploring the Impact of Green Branding and Greenwashing on Sustainable Consumer Behavior^{1,2}Ronaldo Yolanda Putra, ³Rakotarisoa Maminaiaina Heritiaina Sedera*¹Faculty of Economics and Business, Universitas Sebelas Maret, Indonesia²ITBKes Muhammadiyah Tulungagung, Indonesia³Centre de Research ISCAM (CRI), ISCAM Business School, Madagascar**ARTICLE INFO****Article history:**

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ABSTRACT

Our study aims to comprehend the intention to purchase environmentally friendly products, particularly electric motorbikes, using the Stimulus Organism Response theory. Using convenience sampling, we collected data via LimeSurvey from 508 electric motorbike users. The data were analyzed using structural equation modeling in SmartPLS. Our findings show that (1) greenwashing significance influences brand credibility. (2) Greenwashing significantly affects perceived value. It happens when consumers feel betrayed by companies because of greenwashing. (3) We find that green brand image and credibility are complementary. (4) Green brand image significantly affects perceived value. The green brand value of a product can influence consumers' perceptions through value creation. (5) Perceived value positively influences green purchase intention. Perceived value that incorporates ecological aspects significantly affects green purchase intention. (6) Brand credibility positively affects green purchase intention. Low risk and trustworthiness augment brand credibility and influence future buying behavior. Our study provides significant insights and evidence-based solutions to address the detrimental effects of greenwashing on brands by closely examining its complex dynamics, underlying mechanisms, and intricacies.

1. INTRODUCTION

Carbon gas emissions remain a global challenge; the transportation industry alone consumes 19-25% of energy and accounts for nearly a quarter of global carbon emissions (Thurner *et al.*, 2022). The environmental concern has encouraged the automotive sector to develop a new generation of vehicles that meet customer demand and are more environmentally responsible. Accordingly, the electric motorbike is an alternative means of transportation to conventional vehicles. Due to the new trend in electric motorbikes and people's serious environmental concerns, the demand for electric vehicles is increasing in the global market (Hamzah *et al.*, 2021). According to the Indonesian Motorized Vehicle Industry Association, electric vehicle sales reached 15,437 units in 2022, up from 3,193 in 2021. In addition, the Indonesian government has introduced a new policy to accelerate the development of the nation's electric vehicle ecosystem. The new policy aims to reach 2 million electric motorbike users in Indonesia by 2025. Their main objective is to convert the transportation sector to be more energy-efficient, ecologically friendly, and cost-efficient. Thus, electric vehicles may play a significant role in the transition process into green transportation.

Green marketing is a strategy firms use to attract consumer attention. The concept aims to respond to needs. Environmental claims focusing on green attributes are ambiguous or deceptive (Chen *et al.*, 2012). Previous research states that companies claim that their products or services meet environmental standards and provide statements on their products or services in an attempt to confuse consumers and make them think that the product meets the norm (Zhang *et al.*, 2018; Nekmahmud *et al.*, 2022; Kumar *et al.*, 2023; Mahmoud *et al.*, 2024; Meet *et al.*, 2024). As a result, the false statement displayed on products or services changes customers' purchasing behavior. Accordingly, the practice is called "greenwashing," which companies use to cover their environmentally friendly reputation. At the customer level, greenwashing impacts consumers' desire to purchase green products (Chen *et al.*, 2019). In addition, having a positive image is very important in terms of environmental care, as consumers concerned about the environment tend to trust the brand more (Salehzadeh *et al.*, 2023). In that sense, green brand image and greenwashing are crucial for electric motorbike companies to increase purchase intentions. Providing

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excessive information about a green brand may inhibit green purchase intentions, whereas perceptions of a green brand encourage purchase behavior (Zhang et al., 2018; Bashir et al., 2020). Therefore, further exploration of the driving mechanisms behind the impact of green brand image and greenwashing on product sales and corporate profits is warranted.

Previous studies have focused on the determinants of purchase intention for green products in developed countries, for instance, America (Bedard et al., 2018), the UK (De Silva et al., 2021), Italy (Barbarossa et al., 2016), and China (Ali et al., 2020). Current research emphasizes the importance of customer values for product usefulness (Lin et al., 2022) and for brand credibility, which encompasses trust and product information (Qayyum et al., 2023). However, only some investigations have observed the direct effects of perceived value and brand credibility on the relationship between brand image and greenwashing on green product purchase intentions. Previous research shows these two factors can significantly increase consumers' green product purchase intentions (Han et al., 2022; Qayyum et al., 2023; Salehzadeh et al., 2023). The present study identified three research gaps. First, there are inconsistent results on the direct effect of greenwashing and green brand image on green product purchase intentions in developed countries (Barbarossa et al., 2016; Bedard et al., 2018; Ali et al., 2020). Second, studying consumers' green purchase intentions may yield different results across markets, cultures, and environments. Third, the studies of (Bedard et al., 2018; Zhang et al., 2018; Bashir et al., 2020; Han et al., 2022; Salehzadeh et al., 2023; Mahmoud et al., 2024) do not explain the mediating relationship of specific behaviors that intervene in the purchase intention of eco-friendly products.

Therefore, this study's main objective is to understand the relationship between greenwashing and green brand image on the purchase intention of environmentally friendly products. Second, we aim to investigate the mediating effects of brand credibility and perceived value on the relationship between greenwashing and green brand image on purchase intention for environmentally friendly products. In doing so, this work applies the SOR (Stimulus-Organism-Response) theory to examine user behavior. The theoretical framework examines how stimulus variables (greenwashing, green brand image) affect organism variables (brand credibility, perceived value) and how organism factors affect response variables (green purchase intention). Thus, this research's findings assist the automotive industry's marketing department in better understanding the determinants of customers' green purchase intentions. The study's results are crucial to developing a marketing strategy to increase sales, especially for retail companies producing green products. In addition, this study's contribution is that practitioners can use these results to gain additional knowledge on improving greenwashing and green branding.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1. Greenwashing

The concept of greenwashing was coined by Jay Westerveld in 1986, when companies began capitalizing on increased consumer environmental awareness by making claims that exaggerated the environmental benefits of their products (Qayyum et al., 2023). Communicating false or fabricated claims about environmentally friendly practices, products, or services is called "greenwashing," a type of dishonest marketing (Zhang et al., 2018). Meet et al. (2024a) define greenwashing as "tactics that deceive consumers about a company's environmental practices or the environmental benefits of a product or service". It seems unwise that some companies consider damaging their reputations through greenwashing, yet many enterprises practice it in order to appear more environmentally friendly or gain a competitive advantage (Zhang et al., 2018; Qayyum et al., 2023; Meet et al., 2024). Regardless, the effort of companies trying to portray a good image of their company's malpractices. Previous studies suggest that the impact of greenwashing on consumers remains questionable because their perceptions of it are inconsistent. Thus, greenwashing can improve the brand's credibility by covering its image and reputation.

In addition, one way to build brand credibility is through working with green protection agencies and groups. Building brand credibility may take time and effort, but companies can introduce green products with existing trusted brands (Ng et al., 2014). Brand credibility is an important aspect of business; however, it can be susceptible, as the spread of misinformation can erode consumers' trust. Chen and Chang (2013) reported that greenwashing creates consumer confusion, increases risk perception, and affects green trust. A study conducted by Akturan (2018) in Turkey, involving 500 consumers, examined the impact of greenwashing on brand credibility. The result shows a strong relationship between these variables. Based on the literature above, we structure our hypothesis as follows:

Hypothesis 1: Greenwashing positively influences brand credibility.

Additionally, greenwashing may positively influence perceived value. Since perceived value has become an important aspect of marketing, many companies attempt to enhance their product differentiation and benefits. In

the short term, greenwashing can enhance perceived value, as environmental consciousness is increasingly relevant. Hiding behind greenwashing can increase customer perception of the products. However, maintaining long-term customer relationships is crucial to business and affects purchase intention (Chen, 2012). In this sense, engaging in greenwashing is perceived as undermining values and prioritizing profit over environmental concerns. Thus, for customers who are more concerned about environmental issues and understand the need for sustainable actions, greenwashing is viewed as a violation of moral values and can undermine customer perceptions of products or services. Following the literature, we developed our hypothesis as follows:

Hypothesis 2: Greenwashing may positively influence perceived value

2.2. Brand Credibility

Brand credibility refers to “the trustworthiness of the product information contained in a brand, which requires consumers to perceive that the brand has the ability and willingness to continue to deliver what is promised” (Guo et al., 2023). As mentioned, brand credibility comprises two main characteristics: trust and expertise. Trust is when the company is willing to fulfill its promises. Expertise is when a company fulfills its promises (Reinikainen et al., 2021). Brand credibility is considered an important characteristic of brand signaling (Belanche et al., 2021). Brand credibility reduces consumers' perceived risk due to a lack of knowledge about a product or service while increasing perceived quality (Guo et al., 2023). A high degree of brand credibility increases consumer confidence in purchasing a product.

Brand credibility is important, particularly when a company wants to develop a green brand image (Kim et al., 2022). The study by Ng et al. (2014) found that brand credibility positively affects green brand image. Brand image, created and maintained through brand credibility, is a consistent marketing mix of effort and clarity (Erdem & Swait, 2004). Consistency requires stable alignment and convergence among marketing actions and marketing mix strategies (Aimé et al., 2022). Spry et al. (2011) found that the brand image of shopping centers in Australia is more credible when supported by high rather than low credibility. Accordingly, a green brand image positively affects brand credibility. Therefore, existing literature has not provided sufficient evidence for a positive relationship between green brand image and brand credibility (Akturan, 2018; Adnan et al., 2021; Ng et al., 2014). This study emphasizes that green brand image significantly influences brand credibility when consumers feel skeptical and unsure about green marketing advertisements (Ng et al., 2014). Brand credibility helps improve consumers' trust in a brand's green responsibility practices (Adnan et al., 2021). Thus, the following hypothesis is formulated :

Hypothesis 3: Green brand image improves brand credibility

Green perceived value is defined as consumers' overall assessment of the net benefits of a product or service, calculated as the difference between what is received and what is given, based on consumers' environmental desires, sustainability expectations, and green needs (Han et al., 2024). This concept is founded on consumer satisfaction, with the brand demonstrating green capabilities. Moreover, a previous study suggested that perceived value positively affects green brand image (Han et al., 2022). Similarly, Lin et al. (2017) found that the ability to incorporate a green brand image to convey a more innovative image has a direct positive relationship with perceived value. Hence, we concluded that there is a positive relationship between green brand image and perceived value. Based on the arguments, we constructed our hypothesis as follows:

Hypothesis 4: Green brand image has a positive impact on perceived value

Many studies have examined the impact of perceived value on purchase intention. For instance, the study by Tang et al. (2023) conducted in China found a strong relationship between perceived value and purchase intention. The study by Sedera et al. (2023) highlighted the importance of egoistic and altruistic values. The literature indicates that customers are willing to purchase products with environmental and health benefits. This aligns with the study of Kim and Choe (2019) in China, Yadav and Pathak (2017) in India, and Yuqing (2022) in Italy. These studies argued that perceived value and purchase intention are strongly correlated. Hence, we proposed the following hypothesis:

Hypothesis 5: Perceived value affects green purchase intention

Several studies have examined the impact of brand credibility on purchases in different contexts. Like the study by Mabkhot et al. (2022) in Saudi Arabia in the context of Social Media, the investigation found a positive relationship between brand credibility and purchasing intention. In addition, the findings of Sokolova and Kefi (2020) are consistent with this statement. Moreover, a consumer interested in a product category will be more inclined to use more cognitive resources to collect and process data to evaluate a brand's legitimacy and strengths and weaknesses.

However, Molinillo et al. (2022a) introduced a new approach to building brand credibility. The literature stated that brand credibility depends mainly on implementing business actions and strategies. Undeniably, brand credibility plays a crucial role in green purchase intention, as trustworthiness and product expertise are inseparable aspects of purchase intention. Thus, our hypothesis is structured as follows:

Hypothesis 6: Brand credibility affects green purchase intention

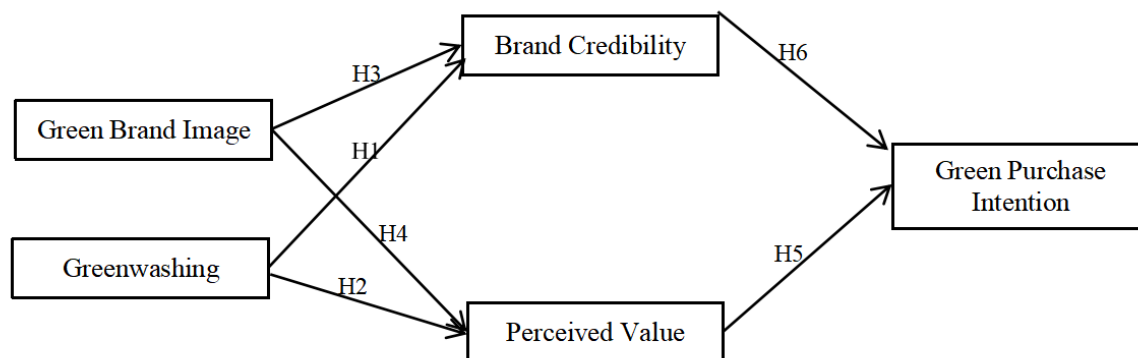


Figure 1.
Theoretical framework

3. RESEARCH METHOD

We collected the data from Indonesian electric motorbike users to evaluate the conceptual model. Quantitative data were collected using convenience sampling and an online survey (LimeSurvey) distributed to target respondents. Data collection took place from July to November 2024. We collected data from 550 participants and conducted data screening to identify invalid responses. According to Hair (2019), data detection was conducted to avoid biased responses, for example, respondents who fill in the origin or respondents who fill in a particular pattern. Of the questionnaire distribution, 508 respondents completed the questionnaire in full and met the criteria. The data were analyzed using descriptive statistics in SmartPLS. We used structural equation modeling to jointly test the study's seven hypotheses and estimate the path coefficients.

Since the most spoken language in Indonesia is Indonesian, the questionnaire was translated from English to Indonesian to ensure understanding when answering the questions. Also, the measurement employed in this current work was adopted from previous studies to ensure the reliability and consistency of the questionnaire. Perceived value is measured using 4 question items adapted from Lin et al. (2017). Green purchase intention is measured using 3 question items adapted from Wang et al. (2022). Brand credibility is measured using a 4-item scale adapted from Napoli et al. (2014). Greenwashing is measured using a 3-item scale adapted from Meet et al. (2024). Green brand image is measured using a 4-item scale adapted from Salehzadeh et al. (2021). Responses to each question were collected using a 5-point Likert scale from 1 (Strongly Disagree) to 5 (Strongly Agree). The questionnaire was classified into two parts. The first part includes users' socio-demographic information, such as age, gender, education, and employment. The second part presents data on the main variables in this study, including perceived value, green purchase intention, brand credibility, greenwashing, and green brand image.

4. RESULTS AND DISCUSSIONS

4.1. Descriptive statistics of the sample

In total, 508 of the collected responses were usable. Based on gender, respondents with male gender totaled 208 (40.94%) and respondents with female gender totaled 300 (59.06%). Based on level of education, respondents with high school diplomas totaled 203 (39.96%), respondents with a bachelor's degree totaled 258 (50.79%), and respondents with a Master's degree totaled 47 (9.25%). Based on occupation, respondents with student totaled 212 (41.73%), respondents with government employees totaled 61 (12.03%), respondents with Private Employees totaled 114 (22.44%), respondents with Self-employed jobs totaled 50 (9.84%), and respondents with Other jobs totaled 70 (13.78%).

Table 1. Descriptive statistics

Description	Basic information	Total	Percentage
Gender	Male	208	40.94%
	Female	300	59.06%
Education	High School	203	39.96%
	Bachelor	258	50.79%
Employment Status	Master	47	9.25%
	Student	212	41.73%
	Government employees	62	12.03%
	Private employees	114	22.44%
	Self-employed	50	9.84%
	other	70	13.78%
	Total	508	100%

4.2. Measurement Model Testing

Data analysis employed structural equation modeling (PLS-SEM) using SmartPLS version 3.3.2. The testing process was carried out in three stages: internal consistency reliability, convergent validity, and discriminant validity. Internal consistency reliability was tested using Cronbach's Alpha.

Table 2. Internal Consistency Reliability Testing

Variable	Cronbach Alpha	Composite reliability
Brand Credibility	0.789	0.861
Green Brand Image	0.853	0.900
Green Purchase Intention	0.832	0.899
Greenwashing	0.703	0.835
Perceived Value	0.890	0.924

Table 2 shows that each variable's Cronbach's alpha exceeds the minimum requirement. According to Hair (2017), the Cronbach alpha score should be above 0.7. Overall, we concluded that all variables pass the internal consistency reliability test. All constructs' composite reliability (CR) exceeds the suggested threshold of 0.7 (Hair *et al.*, 2012), ranging from 0.861 for brand credibility to 0.924 for perceived value. These outcomes reflect that the measurement items are reliable and valid.

4.3. Convergent Validity

Table 3. Convergent Validity test

Variables	Indicator	Loading Factor	AVE
Brand Credibility	BraCr1	0.768	0.608
	BraCr2	0.785	
	BraCr3	0.785	
	BraCr4	0.781	
Green Brand Image	GreBr1	0.865	0.694
	GreBr2	0.853	
	GreBr3	0.779	
	GreBr4	0.832	
Green Purchase Intention	GrePu1	0.846	0.748
	GrePu2	0.878	
	GrePu3	0.871	
Greenwashing	Gre1	0.716	0.630
	Gre2	0.824	
	Gre3	0.835	
Perceived Value	PerVa1	0.876	0.752
	PerVa2	0.871	
	PerVa3	0.870	
	PerVa4	0.853	

Convergent validity was assessed according to Hair *et al.* (2019, 2020), with item loadings required to exceed 0.70 and average variance extracted (AVE) values exceeding 0.5. Table III demonstrates that all items used in this study

met the criteria. The statistics described that each indicator in each construct tested is greater than the error value in that construct (Hair et al., 2012). Consequently, all measurement items were validated, reliable, consistent, and aligned with the underlying construct.

4.3. Discriminant Validity

Table 4. Discriminant Validity test

Variable	1	2	3	4	5
Brand Credibility	0.780				
Green Brand Image	0.685	0.833			
Green Purchase Intention	0.615	0.742	0.865		
Greenwashing	-0.609	-0.490	-0.467	0.793	
Perceived Value	0.689	0.700	0.670	-0.501	0.867

Table IV displays the results of the discriminant validity test, indicating the correlation matrix among the variables. We followed the recommendation of Fornell and Lacker (1981), which suggests that the correlation coefficient between each variable should not exceed the square root of the average variance extracted (AVE). In other words, all the coefficient values are greater than the off-coefficient, generally supporting discriminant validity between constructs. For example, the coefficient for brand credibility was 0.780, which is greater than the off-coefficient for green brand image, which was 0.685. The results show that brand credibility is highly discriminant from green brand image. Similarly, the coefficient values for green purchase intention, greenwashing, and perceived value are greater than those for the other constructs, indicating discriminant validity (Hair et al., 2012).

4.4. HYPOTHESIS TEST

Table 5. Hypothesis Testing Results

Hypotheses	Sample Mean	Standard Deviation	T-Test	p-Value	Support
Greenwashing → Brand Credibility	-0.359	0.036	9.967	0.000	Yes
Greenwashing → Perceived Value	-0.208	0.036	5.761	0.000	Yes
Green Brand Image → Brand Credibility	0.510	0.030	17.210	0.000	Yes
Green Brand Image → Perceived Value	0.598	0.034	17.611	0.000	Yes
Perceived value → Green Purchase Intention	0.468	0.046	10.074	0.000	Yes
Brand Credibility → Green Purchase Intention	0.292	0.046	6.408	0.000	Yes

Table 5 presents the hypothesis-testing results regarding the relationship between the variables. We examined the impact of greenwashing on brand credibility and obtained a t-test value of 9,967 with a p-value of 0.000 (less than 0.001). Using a 95% confidence level, the standard used for the t value is 1.96. Because the t-test value is greater than 1.96 and the p-value is below 0.05, it can be concluded that hypothesis 1 (H1) is accepted. Greenwashing positively influences Brand Credibility. This study's results align with the research of Meet *et al.* (2024) and Akturan (2018), which showed a strong influence of Greenwashing on Brand Credibility.

Hypothesis 2 examined the impact of greenwashing on perceived value. The statistical test yielded a t-value of 5,761 and a p-value of 0.000. Using a 95% confidence level, the standard used for the t-value is 1.96. Since the t-test value is greater than 1.96 and the p-value is less than 0.05, we conclude that hypothesis 2 (H2) is accepted. Our study found that greenwashing is strongly associated with perceived value.

Hypothesis 3 examined the influence of green brand image on brand credibility and yielded a t-value of 17,210 ($p = 0.000$). Using a 95% confidence level, the standard used for the t value is 1.96. Because the t-test value is greater than 1.96 and the p-value is below 0.05, suggesting that hypothesis 3 (H3) is accepted. Our study shows that a green brand image impacts brand credibility. The study by Akturan (2018) found a strong influence between green brand image and brand credibility.

Hypothesis 4 studied the effect of green brand image on perceived value. The statistics revealed that the t-test value was 17,611 and the p-value was 0.000. Using a 95% confidence level, the standard used for the t value is 1.96. Because the t-test value is greater than 1.96 and the p-value is below 0.05. We interpret that hypothesis 4 (H4) is accepted, which means that green brand image influences perceived value. Lin et al. (2017) and Liu (2015), who asserted a strong influence between Green Brand Image and Perceived Value, support the findings.

Hypothesis 5 explored the link between perceived value and green purchase intention. We obtained a t-test value of 10,074 with a p-value of 0.000. Using a 95% confidence level, the standard used for the t value is 1.96. Because

the t-test value is greater than 1.96 and the p-value is below 0.05, interpreting that hypothesis 5 (H5) is accepted. We asserted that perceived value correlated with green purchase intention. Our discovery is with the studies of Tang *et al.* (2023), Kim and Choe (2019), Yadav and Pathak (2017), Yuqing (2022), Ahmad *et al.* (2023), and Wu *et al.* (2016), who stated that perceived value has a strong influence on green purchase intention.

Hypothesis 6 tested the effect of Brand Credibility on green purchase intention. Table 5 shows a t-test value of 6.408 and a p-value of 0.000. Using a 95% confidence level, the standard used for the t value is 1.96. The t-test value is greater than 1.96, and the p-value is below 0.05, suggesting that hypothesis 6 (H6) is accepted. We interpreted that brand credibility affects green purchase intention. Aligning with previous studies, Mabkhot *et al.* (2022), Sokolova, and Kefi (2020) underpinned that brand credibility strongly correlates with green purchase intention.

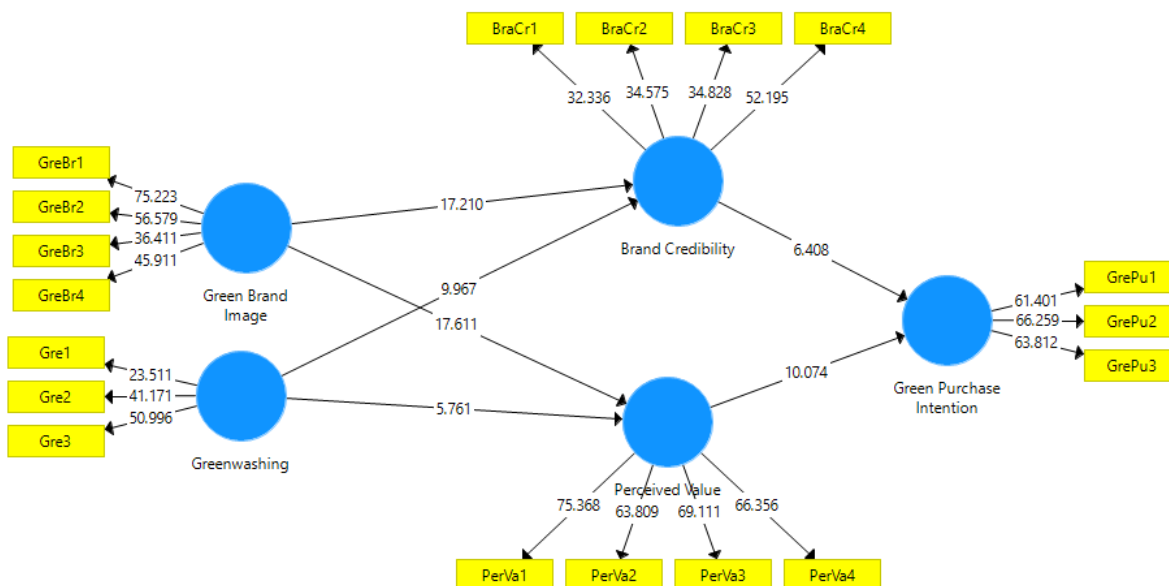


Figure 2.
Structural Model Testing

4.5. DISCUSSION

The purpose of this study is to understand the purchase intention of environmentally friendly products, namely electric motor vehicles, and to assist the marketing of environmentally friendly products, electric motor vehicles, in understanding environmentally friendly purchase intentions and developing marketing innovations to increase sales of environmentally friendly products through the SOR framework (stimulus: greenwashing, green brand image; organism: brand credibility, perceived value; response: green purchase intention). Previous studies have examined how consumers think about environmentally friendly products (Van Doorn *et al.*, 2015; Sun *et al.*, 2024) and how consumer communications influence purchase intentions for such products (Kumar *et al.*, 2021). Most previous studies examine how environmental issues (Ferri *et al.*, 2018) affect purchase intentions for alternative ecologies. Only a few studies have examined how product communication and environmental signals influence purchasing decisions (Pretner *et al.*, 2021). The findings of this study point in this direction, indicating that consumers in Indonesia are aware of environmental protection issues and their obligations to the pressing global issue of environmental protection and sustainability. The empirical results of this study add to the existing knowledge in the field of consumer behavior and sustainability by showing the influence of the number of determinants on the purchase intention for environmentally friendly products in EFPD electric motor vehicles. The results of the study can be concluded as follows:

First, our results support the idea that greenwashing significantly influences brand credibility. This finding shows that greenwashing may affect brand credibility because consumers are aware of the business's malpractices and misinformation about the product. Greenwashing may erode the brand's trust, reputation, and originality. In addition, greenwashing is perceived as a deceit that erodes consumer trust and harms a brand's reputation (Meet *et al.*, 2024). Customers may feel deceived and harbor negative feelings toward a company when they believe it has misled them; this can eventually erode brand credibility. On the contrary, greenwashing practices may help increase the brand's credibility when consumers are more concerned about environmental protection (Sajid *et al.*, 2024). As a result, they are looking at more eco-friendly brands. This may occur when the customer is unaware of the

misinformation behind the brand. Currently, greenwashing practices are not an effective strategy for building brand reputation because of social media and the internet, where consumers can access detailed information about the brand and its products. Consumers can quickly and easily spread information about misconduct if a company practices greenwashing to cover up its product's weaknesses.

Second, we find that greenwashing significantly affects perceived value. Greenwashing is a new approach a company uses to increase its competitive advantage in this modern era (Zhang et al., 2018). As competition intensifies, companies resort to false information about their products. Indeed, the results show that greenwashing is an important factor in changing customers' behavior and attitudes towards a product. This approach gives the customer a new perception that the company is more socially and environmentally responsible. Also, the customer evaluates and compares the product or service provided to determine whether it positively impacts social, economic, and ecological aspects (Vangeli et al., 2023). Customers who are highly aware of climate change tend to avoid future purchases after learning about a company's greenwashing practices, and vice versa. Undeniably, greenwashing is an important tool for a company; however, it may deter customers from using the product. Thus, the company should understand the limits and constraints related to greenwashing practices to maintain customer engagement.

Third, our analysis shows that green brand image positively affects brand credibility. Our results indicate that a green brand image increases brand credibility. We interpreted that consumers are convinced, and their trust is gained by green brands that uphold environmental responsibility through green advertising and positive images (Bottega et al., 2024). Green brands enhance brand reputation, business performance, and brand credibility through social and environmental responsibility (Hoffmann-Burdzińska et al., 2022). Pro-environmental consumers are likely to spread a positive image about the brand, which ultimately contributes to brand credibility. A green brand image establishes credibility by incorporating sensible topics such as environmental protection, carbon emissions, and climate change. Our discovery highlights an important point: Companies can focus more on their green brand image to improve their brand credibility. Besides, a green brand may enhance brand credibility, improve a company's reputation, increase business performance, and ensure sustainability.

Fourth, we discovered that green brand image significantly affects perceived value. Consumers are more likely to make enduring purchases when they believe in a brand's green image. We assume that consumers perceived the green brand image as more beneficial and as providing sustainable solutions compared to other existing brands. Additionally, companies include green branding as part of their marketing strategy to enhance perceived value (Lv et al., 2024). Consequently, customers are willing to purchase products from companies that implement social responsibility programs, even at higher prices. Thus, as environmental awareness and recognition in the market have grown, green branding strategies are positioning themselves to substantiate their green claims by creating a distinctive, sustainable image in their target audience's eyes. In addition, the high demand for green consumption pushes companies to act more socially and ecologically responsibly.

Fifth, our statistical results show that perceived value positively influences green purchase intention. This aligns with the study by Vongvit et al. (2024), which found that perceived value strongly influences green purchase intention. Conceptually, perceived value is the outcome of consumers' assessments made before, during, and after a purchase (Bănică et al., 2024). Some steps are undertaken by the consumer during the purchase process (Chen, 2012), making it difficult for products or services with no environmental benefits to be sold. In other words, when the value of a product is high, there is a high chance they will purchase it. In addition, our findings revealed that perceived value significantly affects green purchase intention in the environmental era. Especially nowadays, environmental awareness has affected consumer green purchase intentions as the demand for green products increases exponentially. In addition, consumers who care deeply about the environment demonstrate greater trust in green enterprises' ability to respect their values and fulfil their environmental obligations. Thus, to meet their customers' environmental needs, businesses should increase their green perceived value and decrease their green perceived risk. This will increase their green trust and green buying intentions.

Finally, we discovered that brand credibility positively influences green purchase intention. Building customer trust and minimizing the risk associated with product use can increase green purchase intention. While brand credibility is particularly crucial in situations where consumers experience asymmetry in information, organizations have access to more information than customers to determine the value of their products (Molinillo et al., 2022b). Our results indicate that providing detailed product information can help establish a strong relationship with customers. Transparency is important for customers, as it builds trust and reduces risk by keeping them well-informed about the products. Accordingly, brand credibility is crucial in influencing consumer preference for eco-friendly products.

Thus, through green marketing strategies, companies can enhance brand credibility by building green trust, minimizing related risks, and ultimately increasing green purchase intentions.

6.CONCLUSION

The growing demand for sustainable consumption and green products has increased in the past year. Our study aims to examine the impact of greenwashing and green brand image on green purchase intention. In addition, we investigate the influence of brand credibility and perceived value on green purchase intention. (1) Our findings show that greenwashing significantly influences brand credibility. This occurs when consumers discover the company's greenwashing practices. (2) Greenwashing significantly affects perceived value. It mainly occurs when consumers feel betrayed by companies due to greenwashing. (3) We find that green brand image and credibility are complementary because green brand image is associated with environmental aspects, which play an important role in increasing brand credibility. (4) Green brand image significantly affects perceived value. The green brand value of a product can influence consumers' perceptions through value creation. (5) Perceived value positively influences green purchase intention. Perceived value that incorporates ecological aspects greatly influences green purchase intention. (6) Brand credibility positively affects green purchase intention. Low risk and trustworthiness augment brand credibility and influence future buying behavior.

Our study offers managerial implications for sustainable consumption in the automotive industry. The study provides explicit information regarding the factors that may affect consumer perception in purchase decisions. The business and marketing departments can better comprehend how to implement business decisions and strategies to attract more customers in green marketing. This is an opportunity for companies to focus on producing an eco-friendly product rather than engaging in greenwashing to brand themselves as a green business. Thus, companies in highly competitive markets should be careful about environmental actions or words. This means companies must strengthen their green management and image to assume environmental responsibility and improve market performance. In addition, for customers who care more about green consumption, their green purchasing intention may decrease when they discover companies' greenwashing. Consumers with a greater understanding of environmental issues tend to understand green claims and identify false information about the product. Companies should promote green practices to increase competitive advantage and enhance product authenticity. Hence, the actual green practice will create value and ensure business sustainability.

The current study enhances understanding of green purchasing intention, particularly in the automotive industry. This study provides recommendations for future studies and highlights some limitations. First, this study focuses mainly on the Indonesian market, which may require more detailed results to explain the phenomenon fully. Future studies suggest expanding the topic to more diverse cultures and markets, for instance, in other Asian countries. Thus, we recommend conducting a comparative study to expand this study. Second, this study investigates the roles of greenwashing and green brand image in green purchase intention, using the mediating variables of brand credibility and perceived value. In sustainable consumption, other potential factors that influence behavioral intention include perceived usefulness, green advertising, and existing products. Future studies can explore the other factors that influence sustainable consumption by including more variables in the study. Third, the study narrowly focuses on a single product, such as a motorbike.

In contrast, this study did not examine automobile users, but consumer perceptions may differ depending on product type. Future studies can develop the study in diverse industries, products, and services. This approach advances a more comprehensive understanding of consumer behavior and provides insights into the subtleties of sustainable consumption incentives.

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REFERENCES

- (Anna) Kim, E., Shoenberger, H., (Penny) Kwon, E., & Ratneshwar, S. 2022. A narrative approach for overcoming the message credibility problem in green advertising. *Journal of Business Research*, 147(April), 449–461.

<https://doi.org/10.1016/j.jbusres.2022.04.024>

- Ali, F., Ashfaq, M., Begum, S., & Ali, A. 2020. How “Green” thinking and altruism translate into purchasing intentions for electronics products: The intrinsic-extrinsic motivation mechanism. *Sustainable Production and Consumption*, 24, 281–291. <https://doi.org/10.1016/j.spc.2020.07.013>
- Bănică, B., Patrício, L., & Miguéis, V. 2024. Citizen engagement with sustainable energy solutions - understanding the influence of perceived value on engagement behaviors. *Energy Policy*, 184(November 2023). <https://doi.org/10.1016/j.enpol.2023.113895>
- Barbarossa, C. & De Pelsmacker, P. 2016. Positive and Negative Antecedents of Purchasing Eco-friendly Products: A Comparison Between Green and Non-green Consumers. *Journal of Business Ethics*, 134(2), 229–247. <https://doi.org/10.1007/s10551-014-2425-z>
- Bashir, S., Khwaja, M. G., Rashid, Y., Turi, J. A., & Waheed, T. 2020. Green Brand Benefits and Brand Outcomes: The Mediating Role of Green Brand Image. *SAGE Open*, 10(3). <https://doi.org/10.1177/2158244020953156>
- Bedard, S. A. N. & Tolmie, C. R. 2018. Millennials’ green consumption behaviour: Exploring the role of social media. *Corporate Social Responsibility and Environmental Management*, 25(6), 1388–1396. <https://doi.org/10.1002/csr.1654>
- Bottega, L., Brécard, D., & Delacote, P. 2024. Advertising, ecolabeling and consumers’ beliefs: Greenwashing or not? *Economics Letters*, 235(July 2023), 1–4. <https://doi.org/10.1016/j.econlet.2023.111513>
- Chen, H.-S., Chen, C.-Y., Chen, H.-K., & Hsieh, T. 2012. A Study of Relationships among Green Consumption Attitude, Perceived Risk, Perceived Value toward Hydrogen-Electric Motorcycle Purchase Intention. *AASRI Procedia*, 2, 163–168. <https://doi.org/10.1016/j.aasri.2012.09.029>
- Chen, H., Bernard, S., & Rahman, I. 2019. Greenwashing in hotels: A structural model of trust and behavioral intentions. *Journal of Cleaner Production*, 206, 326–335. <https://doi.org/10.1016/j.jclepro.2018.09.168>
- Chen, Y. 2012. *Enhance green purchase intentions The roles of green perceived value, green.* <https://doi.org/10.1108/00251741211216250>
- De Silva, M., Wang, P., & Kuah, A. T. H. 2021. Why wouldn’t green appeal drive purchase intention? Moderation effects of consumption values in the UK and China. *Journal of Business Research*, 122(January), 713–724. <https://doi.org/10.1016/j.jbusres.2020.01.016>
- Ferri, L. M. & Pedrini, M. 2018. Socially and environmentally responsible purchasing: Comparing the impacts on buying firm’s financial performance, competitiveness and risk. *Journal of Cleaner Production*, 174, 880–888. <https://doi.org/10.1016/j.jclepro.2017.11.035>
- Guo, W. & Luo, Q. 2023. Investigating the impact of intelligent personal assistants on the purchase intentions of Generation Z consumers: The moderating role of brand credibility. *Journal of Retailing and Consumer Services*, 73(January). <https://doi.org/10.1016/j.jretconser.2023.103353>
- Hamzah, M. I. & Tanwir, N. S. 2021. Do pro-environmental factors lead to purchase intention of hybrid vehicles? The moderating effects of environmental knowledge. *Journal of Cleaner Production*, 279. <https://doi.org/10.1016/j.jclepro.2020.123643>
- Han, M. S., Hampson, D. P., Wang, Y., & Wang, H. 2022. Consumer confidence and green purchase intention: An application of the stimulus-organism-response model. *Journal of Retailing and Consumer Services*, 68(March), 103061. <https://doi.org/10.1016/j.jretconser.2022.103061>
- Hoffmann-Burdzińska, K., Stolecka-Makowska, A., Flak, O., Lipowski, M., & Łapczyński, M. 2022. Consumers’ Social Responsibility in the Process of Energy Consumption—The Case of Poland. *Energies*, 15(14). <https://doi.org/10.3390/en15145127>
- Kumar, A. & Basu, R. 2023. Do eco-labels trigger green product purchase intention among emerging market consumers? *Journal of Indian Business Research*, 15(3), 466–492. <https://doi.org/10.1108/JIBR-09-2022-0248>
- Kumar, A., Prakash, G., & Kumar, G. (2021). Does environmentally responsible purchase intention matter for consumers? A predictive sustainable model developed through an empirical study. *Journal of Retailing and*

Consumer Services, 58, 102270.

- Lin, J. & Zhou, Z. 2022. The positioning of green brands in enhancing their image: the mediating roles of green brand innovativeness and green perceived value. *International Journal of Emerging Markets*, 17(6), 1404–1424. <https://doi.org/10.1108/IJOEM-06-2020-0657>
- Lv, Z., Zhao, W., Liu, Y., Wu, J., & Hou, M. 2024. Impact of perceived value, positive emotion, product coolness and Mianzi on new energy vehicle purchase intention. *Journal of Retailing and Consumer Services*, 76(September 2023). <https://doi.org/10.1016/j.jretconser.2023.103564>
- Mahmoud, M. A., Seidu, A. S., Tweneboah-Koduah, E. Y., & Ahmed, A. S. 2024. Green marketing mix and repurchase intention: the role of green knowledge. *African Journal of Economic and Management Studies*. <https://doi.org/10.1108/AJEMS-04-2023-0137>
- Meet, R. K., Kundu, N., & Ahluwalia, I. S. 2024. Does socio demographic, green washing, and marketing mix factors influence Gen Z purchase intention towards environmentally friendly packaged drinks? Evidence from emerging economy. *Journal of Cleaner Production*, 434(August 2023), 140357. <https://doi.org/10.1016/j.jclepro.2023.140357>
- Molinillo, S., Japutra, A., & Ekinci, Y. 2022a. Building brand credibility: The role of involvement, identification, reputation and attachment. *Journal of Retailing and Consumer Services*, 64. <https://doi.org/10.1016/j.jretconser.2021.102819>
- Molinillo, S., Japutra, A., & Ekinci, Y. 2022b. Building brand credibility: The role of involvement, identification, reputation and attachment. *Journal of Retailing and Consumer Services*, 64, 102819. <https://doi.org/10.1016/j.jretconser.2021.102819>
- Nekmahmud, M., Naz, F., Ramkissoon, H., & Fekete-Farkas, M. 2022. Transforming consumers' intention to purchase green products: Role of social media. *Technological Forecasting and Social Change*, 185(March), 122067. <https://doi.org/10.1016/j.techfore.2022.122067>
- Pretner, G., Darnall, N., Testa, F., & Iraldo, F. 2021. Are consumers willing to pay for circular products? The role of recycled and second-hand attributes, messaging, and third-party certification. *Resources, Conservation and Recycling*, 175(August), 105888. <https://doi.org/10.1016/j.resconrec.2021.105888>
- Qayyum, A., Jamil, R. A., & Sehar, A. 2023. Impact of green marketing, greenwashing, and green confusion on green brand equity. *Spanish Journal of Marketing - ESIC*, 27(3), 286–305. <https://doi.org/10.1108/SJME-03-2022-0032>
- Sajid, M., Zakkariya, K. A., Suki, N. M., & Islam, J. U. 2024. When going green goes wrong: The effects of greenwashing on brand avoidance and negative word-of-mouth. *Journal of Retailing and Consumer Services*, 78(December 2023), 103773. <https://doi.org/10.1016/j.jretconser.2024.103773>
- Salehzadeh, R., Sayedan, M., Mirmehdi, S. M., & Heidari Aqagoli, P. 2023. Elucidating green branding among Muslim consumers: the nexus of green brand love, image, trust and attitude. *Journal of Islamic Marketing*, 14(1), 250–272. <https://doi.org/10.1108/JIMA-08-2019-0169>
- Sedera, R. M. H., Putra, R. Y., Saputra, E. K., & Ali, M. A. 2023. Organic Food: The Factors Influencing Consumers' Purchasing Intention. *Jurnal Manajemen Teori Dan Terapan | Journal of Theory and Applied Management*, 16(2), 254–265. <https://doi.org/10.20473/jmtt.v16i2.46107>
- Sun, Y. & Zhao, Z. 2024. Responsible investment: Institutional shareholders and ESG performance. *Pacific Basin Finance Journal*, 85(December 2023). <https://doi.org/10.1016/j.pacfin.2024.102357>
- Van Doorn, J. & Verhoef, P. C. 2015. Drivers of and Barriers to Organic Purchase Behavior. *Journal of Retailing*, 91(3), 436–450. <https://doi.org/10.1016/j.jretai.2015.02.003>
- Vangeli, A., Małecka, A., Mitreğa, M., & Pfajfar, G. 2023. From greenwashing to green B2B marketing: A systematic literature review. *Industrial Marketing Management*, 115(September), 281–299. <https://doi.org/10.1016/j.indmarman.2023.10.002>
- Vongvit, R., Maeng, K., & Chan Lee, S. 2024. Effects of trust and customer perceived value on the acceptance of urban air mobility as public transportation. *Travel Behaviour and Society*, 36(March), 100788.

Zhang, L., Li, D., Cao, C., & Huang, S. 2018. The influence of greenwashing perception on green purchasing intentions: The mediating role of green word-of-mouth and moderating role of green concern. *Journal of Cleaner Production*, 187, 740–750. <https://doi.org/10.1016/j.jclepro.2018.03.201>