

Re-examining the New "Greeneration" behaviors: How Does the Sequential Mediation role of Green Word of Mouth and Green Trust affect Green Purchase Intention among Generation Z?

*Rahmawati¹, Nur Hidayati¹, Wathanan Srinin², Ahmad Taufiqurijal¹

¹Department of Management, Faculty of Economics and Business, Universitas Islam Malang, Malang, Indonesia

²Faculty of International Studies, Prince of Songkla University, Phuket Campus, Thailand

Correspondence*:

Address: MT. Haryono Street No.193, Malang City, Indonesia 65144 | e-mail: rahmawati@unisma.ac.id

Abstract

Objective: This study explores whether and how the Z generation's perspective toward greenwashing perceptions influences their green purchasing intentions through the underlying green trust and green word of mouth.

Design/Methods/Approach: This study utilizes purposive sampling to enroll research respondents. A total of 262 Z generation respondents met the criteria, and the partial least squares technique was applied for data analysis.

Findings: Greenwashing has no significant effect on green purchase intention. However, green trust and green word of mouth significantly affect green purchase intention. We also examine the sequential mediation of green trust and green word of mouth in the relationship between greenwashing and green purchase intention and the result is significant.

Originality/Value: This research provides unique and contribution by investigating the sequential intervening effect in the greenwashing – green purchase intention relationship.

Practical/Policy implication: This article helps policymakers to develop policies that support the consumption of green products, fight greenwashing, and increase public awareness about green products. For marketers, it provides insights on how to increase green purchase intention through strategies based on word of mouth and green trust.

Keywords: Greenwashing, Green word of mouth, Green trust, Green purchase intention

JEL Classification: M31, M37



I. Introduction

Over the past few decades, the growing emphasis on environmental conservation and the adoption of green marketing practices have resulted in alterations in consumer preferences and actions. The escalating preoccupation of consumers with sustainability has resulted in the emergence of numerous initiatives that incorporate robust green marketing strategies and the surging availability of eco-friendly commodities, commonly referred to as green products (Squires, 2019). In particular, consumers categorized as the Z generation display a greater degree of environmental consciousness and are inclined toward eco-friendliness, as evidenced by their willingness to pay a premium for environmentally sustainable products and concern with ecolabels (Casalegno et al., 2022; Ham et al., 2021; Kabaja et al., 2023). Z generation exhibits a strong inclination toward embracing diversity and promoting inclusivity (Khurun'in Zahro' et al., 2023). Additionally, they have elevated expectations regarding their online experiences and how they allocate their time in this digital space (Firstinsight, 2020.; Kaplan, 2020). Z generation favor purchasing sustainable brands and are willing to spend more (Dabija et al., 2019). Additionally, the Z generation expects retailers and brands to become more ecofriendly (Confetto et al., 2023; Gomes et al., 2023).

The increasing desire for environmentally conscious consumption among Z generation has prompted companies to devise green marketing tactics to show good corporate image and commitment to social responsibility (Mammadli, 2023). The phenomenon of green marketing may be perceived as an instance of "greenwashing" (Dahl, 2010). Greenwashing refers to a company's excessive communication and the practice of disguising environmentally destructive content with a supposedly eco-friendly appearance (Delmas & Burbano, 2011; Du, 2015). For current stakeholders, although greenwashing may enhance company profits, it can adversely affect societal sustainability (Adil et al., 2024; Lu et al., 2022). Greenwashing also affects company social responsibility and reputation, thereby affecting consumers' behavioral intentions even more (Gil-Cordero et al., 2021). Greenwashing influences customer views and attitudes, fostering skepticism and distrust toward corporate green advertising methods (Akturan, 2018; Lu et al., 2022). In the extensive literature on greenwashing, numerous scholars have examined the resultant behavior of greenwashing such as green perceived risk, green trust, green lifestyle, green confidence, green brand loyalty, green skepticism, and green word of mouth (Geng et al., 2023; Guerreiro & Pacheco, 2021; Nguyen et al., 2019). However, less research has examined the perceptions of greenwashing concerning behavioral intensity among Z generation.

Greenwashing undermines consumer trust in a brand, hence diminishing their propensity to purchase environmentally friendly products (Chang & Chen, 2014; Schmuck et al., 2018). Green trust affects green purchase intentions when consumers align themselves with reputable ethical enterprises and disengage from questionable ethical practices (Tarabieh, 2021). The aforementioned studies have primarily centered on the concept of brand trust and have yet to comprehensively investigate the influence of trust on word of mouth (WOM) behavior (Sichtmann, 2007). Trust in a brand reduces bad word-of-mouth and consumer disappointment. This is because consumers who trust a brand are more likely to recommend and say good things about it to others, which boosts word of mouth behavior (Chen & Huang, 2021). Consumers trust products with positive green word of mouth, which can influence other consumers' purchases. When consumers are uncertain about environmentally friendly items, they are more likely to trust and buy those with good green word of mouth (Prendergast et al., 2015). Therefore, in the case of green trust and green word of mouth specifically, it can be hypothesized that when consumers do not trust a brand's green intentions, claims, and/or actions, they are less likely to disseminate positive green word of mouth regarding that brand's green actions (Guerreiro & Pacheco, 2021). This is similar to findings by Zhang et al (2018) that green word of mouth positively affects green purchase intentions.

The attitudes of Z generation toward greenwashing are less studied, despite evidence that this demographic is more environmentally conscious and skeptical of corporate claims (Smith & Brower, 2012). Prior studies have primarily focused on the direct effects of greenwashing on consumer trust and purchase behavior (Chen & Chang, 2013; Delmas & Burbano, 2011). Moreover, while the positive impacts of green trust and green word of mouth on green purchase intention are well-documented (Chen & Huang, 2021), there is a scarcity of research examining how green trust influences word of mouth and how this dynamic relationship influences broader purchase behaviors (Ghazali et al., 2017). There is also limited research which explores the dual roles of green trust and green word of mouth as mediators, especially in a serial mediation framework, linking greenwashing to green purchase intention. This study aims to explore whether and how Z generation's perspective toward greenwashing influences their green purchasing intentions by integrating green trust and green word of mouth. We also tested the mediating role and sequential mediation toward this relationship and examined whether control variables such as gender have an impact. This study used theory of attitude-behavior-context (ABC) proposed by Guagnano et al. (1995) which explains the interplay between attitudes, behaviors, and contextual factors in shaping consumer actions. The theory posits that while attitudes significantly influence behavior, the strength of this relationship is moderated by the context in which the behavior occurs.

Our research makes several contributions. First of all, we strengthen the literature of the greenwashing by providing empirical evidence of the effect of greenwashing that influences consumer green purchase intention. Second, we add green word of mouth and green trust as the mediators in our framework. By doing so, we can explore the underlying mechanism of the relationship between greenwashing and green purchase intention. Third, with the adoption theory of attitude-behavior-context in explaining the issue under investigation, we extend the application theory of

planned behavior to a specific area of greenwashing. Finally, this research provides several managerial instructions, with evidence, as to how to increase consumers' green purchase intention. This study is structured into several distinct sections. Section 1 of the manuscript comprises introductory details. Section 2 undertakes a literature review and hypothesis formulation. Section 3 delineates the methodologies employed during data collection. Section 4 encompasses the results and discussions. Lastly, Section 5 concludes the work by providing academic implications and practical implementations.

2. Literature Review and Hypotheses Development

2.1 Theory of the attitude-behavior-context (ABC)

This study aimed to employ the attitude-behavior-context (ABC) paradigm by Guagnano et al (1995) which serves as the conceptual underpinning for this research and its effective use in analyzing consumers' environmentally conscious selections (Nazish et al., 2024; Senthilkumar et al., 2022; Zaremohzzabieh et al., 2021). The framework states that it creates a valuable framework for examining how attitudes lead to specific behaviors (Goh & Balaji, 2016). Attitude does not necessarily convert into expected behavior, as behavior is influenced by various contextual factors (Feldmann & Hamm, 2015). These contextual factors can mediate between people's views and actions and enhance the link between the two (Sirieix et al., 2013). Later research confirmed this theory, indicating that affective variables can influence intention and conduct on their own (Wolff et al., 2011).

Building on our previous discussion, this framework aligns well with the A-BC theory (Guagnano et al., 1995). Attitudes are internal, personal evaluations of an issue, object, or concept that can influence behavior (Goh & Balaji, 2016). In this research, greenwashing is framed as an attitude and attitude serves as a driving force for behavior. If consumers have negative attitudes due to high greenwashing perception, they are less likely to buy green products, even if the context (trust, word of mouth) is favorable. Then, contextual factors are external, situational conditions that either facilitate or constrain the ability of an individual's attitude to translate into behavior (Olli et al., 2001). Green trust and green word of mouth are contextual factors which shape the strength and direction of the link between attitude and behavior. Even if consumers have a negative attitude (due to perceived greenwashing), they may still purchase green products if they have strong trust in the brand or are influenced by positive word of mouth). Furthermore, behavior is the observable action or decision taken by an individual, often influenced by both attitudes and contextual factors (Goh & Balaji, 2016; Sirieix et al., 2013). Behavior is the outcome of the interaction between attitudes (internal drivers) and contextual factors (external conditions). When attitudes toward greenwashing are negative, but contextual factors (green trust and green word of mouth) are positive, consumers are more likely to have higher green purchase intention.

For further reading, one study highlights how trust and identity factors can extend the ABC model to understand collective pro-environmental actions, particularly in public spheres, demonstrating how environmental attitudes are mediated by contextual influences like trust in institutions or politicized identities (Haixia Shi et al., 2020). This shows the ABC theory's flexibility in various environmental behavior frameworks. More details are available in studies such as those by Shi et al (2020) exploring PM2.5 reduction behaviors using ABC theory extensions. Furthermore, Li and Kim (2024) explored green skepticism, often fueled by greenwashing, in relation to the ABC framework. The theory shows that contextual elements, such as the authenticity of green claims, critically affect consumers' attitudes and subsequent behavior, suggesting that skeptical attitudes due to greenwashing undermine green trust and purchase intentions.

2.2 The Consequence Effect of Greenwashing

Greenwashing (GW) is a form of deceptive advertising that is used to enhance the aggregate benefits of a product by promoting the organization's objectives, policies, or products (Braga Junior et al., 2019; Kahle & Gurel-Atay, 2015). Lyon and Maxwell (2011) argued that greenwashing denotes the selective presentation of favorable information regarding a company's social or environmental initiatives, as opposed to solely negative disclosures. Furthermore, Walker and Wan (2012) explain greenwashing as the distinction between symbolic and substantive corporate social action, addressing issues about image advertising, visuals, and confusing statements. The concepts of greenwashing reflect concerns regarding interaction, leading individuals to perceive a company's environmental sustainability, procedures, or products as overly favorable (Lyon & Montgomery, 2015; Tarabieh, 2021).

Consumers' awareness of GW influences their perceptions of brands, green brand equity, and green purchase intentions (Dowling & Staelin, 1994; Newton et al., 2015; Zhang et al., 2018). Green purchase intention (GPI) refers to a consumer's willingness to buy products that are perceived as environmentally friendly. Furthermore, Chen and Chang, (2013) also define that GPI is defined as a consumer's conscious decision to prefer and purchase environmentally friendly products instead of conventional ones. Wijekoon and Sabri (2021) emphasize that GPI is a vital behavioral indicator, driven by consumers' desire to align their actions with pro-environmental values. GPI is driven by attitudes toward the environment, perceived benefits of green products, and social norms (Lasuin & Ng, 2014) and also influenced by factors such as environmental consciousness, perceived product efficacy and green trust (Tarabieh, 2021). Current literature has repeatedly recognized GW as a factor influencing consumer purchasing behavior.

Nyilasy et al. (2014) emphasized that corporate GW is not just an ethical issue but also negatively impacts customer perceptions. Customers may occasionally find it challenging to differentiate between truth and deception, and this uncertainty can profoundly and negatively impact brand perceptions and purchasing intentions (Zaid et al., 2024). Higher perceptions of GW negatively affect GPI by eroding trust (Isac et al., 2024). When consumers believe that a company is exaggerating its environmental claims, they are less likely to engage in GPI due to skepticism about the product's actual environmental benefit (Guerreiro & Pacheco, 2021). Research by Tarabieh (2021) suggests that GW where consumers doubt the authenticity of environmental claims reduces GPI. This is because consumers perceive these companies as opportunistic, which undermines the motivation to buy green products (Chen et al., 2015; Sharma et al., 2023).

Once word of mouth entered the environmental field, the idea of green word of mouth (GWOM) developed (Promalessy & Handriana, 2024). Favorable word of mouth for environmentally sustainable products, services, or companies is referred to as GWOM (Issock Issock et al., 2020). Green WOM refers to informal discourse among friends, relatives, and colleagues on favorable environmental signals linked to a product or brand. It is a term that denotes the positive recommendation of products or organizations by other consumers regarding their environmental sustainability (Söderlund, 1998). GWOM is divided into two categories: positive and negative. When consumers share their positive experiences with others, positive GWOM will emerge, but when consumers share their unfavorable experiences with others and convey dissatisfaction, negative green word of mouth (WOM) will emerge (Chen et al., 2014a)

Higher GW often leads to an increase in negative GWOM. When consumers perceive that a company is greenwashing, they are more likely to share their dissatisfaction and warn others about the perceived deception (Al-Gasawneh & Al-Adamat, 2020). Studies indicate that negative GWOM is amplified through social media, where consumers openly criticize greenwashing practices. Such negative GWOM can create long-term reputational damage for companies (Dagher & Itani, 2014; Sharma & Foroapon, 2019). Furthermore, greenwashing has negative externalities since one brand's greenwashing could reduce consumers' inclination to buy green items from other firms in the market (Wang et al., 2020). Greenwashing by corporations has both ethical and negative effects on consumer perception. This negatively impacts brand views and green purchasing intentions, even when buyers are unable to distinguish between truth and deception (Nyilasy et al., 2014).

While GW behaviors can build up a negative GWOM, GW would decrease consumer trust (Ramus & Montiel, 2005). Consumers' trust in the credibility of the business and their intentions to make a purchase from the brand are diminished when they perceive environmental claims in advertisements as deceptive, according to research conducted in numerous countries (Schmuck et al., 2018). Green trust (GT) refers to the confidence consumers have in a company's environmental claims and commitments. It is built through consistent, transparent, and authentic communication about sustainability efforts (Chen, 2010). Higher GW undermines GT by casting doubt on a company's sustainability efforts. GW makes the company seem opportunistic and fake, which lowers consumer faith in the company and its products (Sharma & Dayal, 2020). Previous studies by Chen and Chang (2012) show that once trust is broken, it is challenging to rebuild, as consumers become wary of all future environmental claims. This loss of trust not only affects current purchase intentions but also the likelihood of future engagement with the brand. The subsequent hypotheses are proposed in accordance with the aforementioned argument and the existing literature:

H1: Greenwashing has significant negative impact on green purchase intention.

H2: Greenwashing has significant positive impact on green word mouth

H3: Greenwashing has significant positive impact on green trust

2.3 The Effect of Green Word of Mouth (GWOM) on Green Purchase Intention (GPI)

Organizations engage in GW to create the perception among consumers that they possess superior environmental credentials, hence fostering favorable word-of-mouth communication (Parguel et al., 2015). Consequently, it is conceivable that consumers are less inclined to disseminate positive GWOM regarding a brand's green actions when they lack trust in the brand's green intentions, claims, and/or actions (Mehdikhani & Valmohammadi, 2022). Consumers are likely to be motivated to alter their consumption preferences and decision-making processes by the recommendations of others (Zhao & Xie, 2011). Strong customer involvement keeps consumers from switching brands, prolonging a brand's life and generating favorable word-of-mouth (Dwivedi et al., 2021; Shabbir et al., 2020). Keller and Fay (2012) said that positive word-of-mouth is posited to enhance credibility, thereby influencing consumers' purchasing decisions when they encounter favorable information about products from others. Consumers often experience confusion regarding green products. In such contexts, products with superior GWOM are more likely to gain consumer GT and improve GPI (Chen et al., 2011). Products with favorable GWOM ratings are trusted by consumers and, consequently, affect the choices of other consumers. Customers who are unsure about green products are more likely to trust and purchase those with better GWOM (Chen et al., 2014b). Thus, we propose the following hypothesis:

H4: Green word of mouth has significant positive impact on green purchase behavior

2.4 The Effect of Green Trust on Green Purchase Intention and Green Word of Mouth

Green trust (GT) affects green purchasing intentions as consumers align themselves with reputable ethical enterprises and distance themselves from questionable ethical practices. To enhance GPI, organizations should refrain from activities that could foster green skepticism and concentrate on cultivating strong relationships with consumers while establishing green trust (Leonidou et al., 2012). Researchers have extensively studied the relationship between GT and GPI (Akturan, 2018; Doszhanov & Ahmad, 2015). GT is a critical factor influencing GPI because trust serves as the foundation for consumer decision-making in the context of green products (Chen et al., 2015). Consumers are often skeptical of green claims due to the prevalence of GW, which makes trust a pivotal element (Chen & Huang, 2021). According to Chen and Chang (2013), GT reduces perceived risks associated with green products and enhances perceived value, encouraging consumers to engage in green purchases.

When consumers trust that a company's green promises are genuine, they feel more secure in advocating for the brand, which naturally leads to an increase in GWOM (Román-Augusto et al., 2022). Similarly, Han and Hyun (2015) and Konuk et al. (2015) assert in their studies that GT fosters the essential security and credibility in customers, enabling them to recommend products and consequently generate GWOM. When a consumer trusts a green brand, they are more inclined to produce GWOM (Guerreiro & Pacheco, 2021). GT and GWOM have a very close relationship and influence each other when consumers buy green products (Antonio et al., 2023; Román-Augusto et al., 2022). Chen & Chang (2013) highlighted that trust strengthens consumers' belief in the brand's ability to deliver on its green promises, which encourages them to share their experiences with peers. The current study proposes that a consumer's green trust positively affects their green WOM regarding green product and develops the following hypothesis:

H5: Green trust has a significant positive impact on green purchase intention

H6: Green trust has a significant positive impact on green word of mouth

2.5 The Mediating Effect of Green Word of Mouth

The perception of greenwashing can affect GWOM, as consumers communicate their distrust to peers, thereby dissuading others from endorsing the brand (Liao & Wu, 2024). The extent of consumer perception of GW significantly influences their GPI, as skepticism regarding misleading green claims diminishes the likelihood of purchasing purportedly eco-friendly products (Leonidou & Skarmeas, 2015). The interaction among these variables underscores the significance of genuine green marketing in promoting favorable consumer behavior. Purchase intentions and green consumption are significantly influenced by word-of-mouth (WOM) communication (Guerreiro & Pacheco, 2021). According to research, consumers' impressions of brands and products are shaped by green word-of-mouth (WOM), which serves as a mediator and indirectly influences their green purchasing behavior (Mehdikhani & Valmohammadi, 2022). Word-of-mouth communication indirectly affects green consumption by serving as a mediator in green buying intentions (Guerreiro & Pacheco, 2021). Based on the literature review thus we propose the following hypothesis:

H7: Green word of mouth has a significant mediating effect on the relationship between greenwashing and green purchase intention.

2.6 The Mediating Effect of Green Trust

With increased trust in green products, environmentally conscious consumers will contact suppliers to gain product understanding, raise environmental awareness, and promote green product purchases (Li et al., 2021). Recent research indicates that GT serves a vital mediating function in the relationship between the impression of greenwashing and the intention to make green purchases. When customers believe a brand is practicing greenwashing, their faith in the brand's environmental assertions declines, resulting in a reduced probability of acquiring its products (Chen & Chang, 2013). Numerous companies assert that their products and services promote sustainability to enhance consumer trust (Testa et al., 2018). Previous research indicates that GT, defined as consumers' faith in the credibility and authenticity of a brand's environmental efforts, is crucial for converting favorable environmental assertions into actual purchases (Ng et al., 2014). Nonetheless, the detection of GW undermines this trust, consequently mitigating the adverse effect on GPI (Ghazali et al., 2017). In the absence of trust in the brand's environmental assertions, customers exhibit increased skepticism and a diminished propensity to engage in eco-friendly purchase behavior (Guerreiro & Pacheco, 2021). Consequently, GT substantially influences consumer interpretation and response to GW, directly facilitating the transition from bad views to diminished GPI (Leonidou & Skarmeas, 2015). The mediating effect indicates that preserving or reinstating green trust is essential for alleviating the adverse impacts of greenwashing on consumer behavior. The following hypothesis is proposed:

H8: Green trust has a significant mediating effect on the relationship between greenwashing and green purchase intention.

2.7 Serial Mediating Effects

This research presents a comprehensive overview of our theoretical model, primarily based on the identity theory of attitude-behavior-context (ABC). It also delineates sequential mediation pathways that elucidate the intervening mechanisms influencing the relationship between greenwashing perception toward green purchase intention. Our hypotheses argue that the notion of greenwashing can adversely affect green purchase intention (GPI), with studies indicating that this influence is serially mediated by both green trust and green word of mouth (GWOM) (Borah et al., 2024; Guerreiro & Pacheco, 2021; Leonidou & Skarmeas, 2015; Zhang et al., 2018). We posit that greenwashing can forecast the desire to green purchase intention through mediating processes. Thus, we propose the following hypothesis:

H9: The effect of greenwashing toward green purchase intention is serially mediated with green trust and green word of mouth

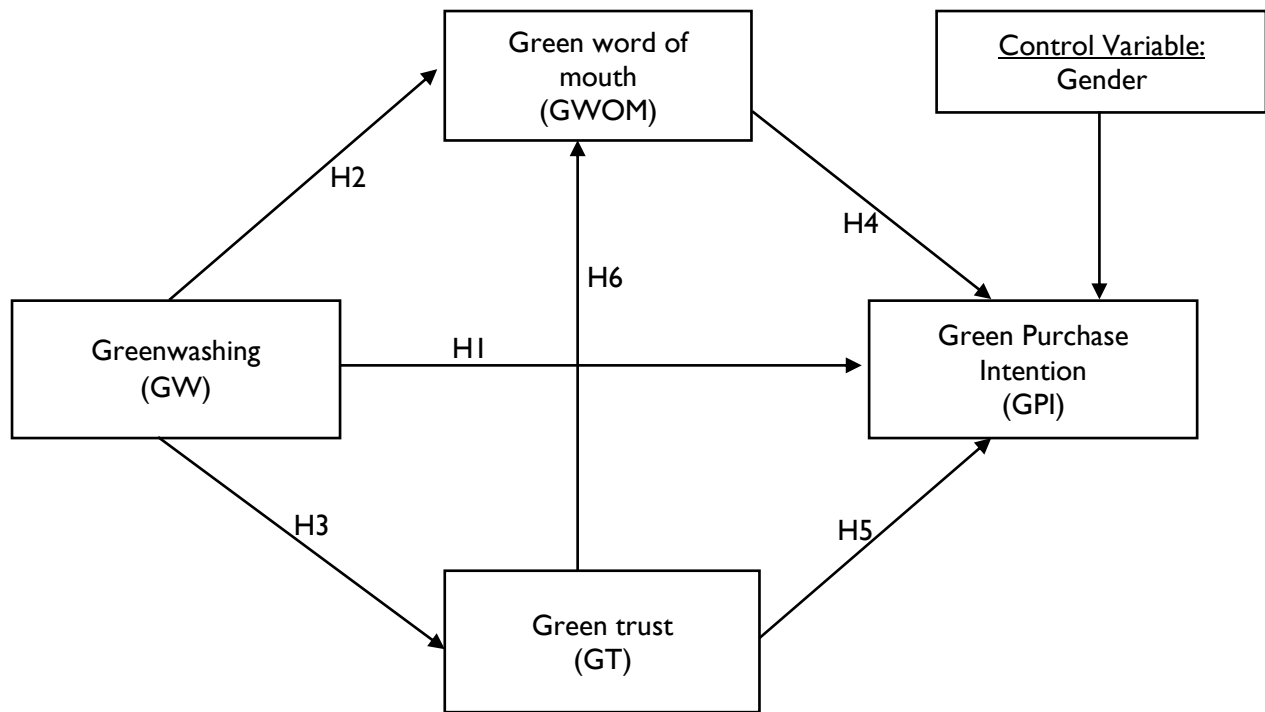


Figure 1 Research Framework

Mediating Hypotheses

H7: Greenwashing → Green Word of Mouth → Green Purchase Intention

H8: Greenwashing → Green Trust → Green Purchase Intention

H9: Greenwashing → Green Trust → Green Word of Mouth → Green Purchase Intention

3. Method

This research can be classified as exploratory research with a quantitative approach. We received 276 of data in total; however, 14 of those were discarded since they did not meet our requirements. So, we processed 262 of data in all. Z generation comprises approximately 27.94% of Indonesia's total population, translating to about 74.93 million individuals. This demographic dominance highlights the significant influence Z generation holds in shaping consumer behavior and societal trends in the country. Their consumption patterns, particularly around sustainability and environmental issues, make them a critical group for research on greenwashing and green consumerism (BPS, 2023; Kara & Min, 2024). We used an online questionnaire to collect data. The sample classified by middle social economic with 71.1% and upper social class 28.9%. Moreover, this study involves male 38% and female 62% spread over in cities in Indonesia such as Surabaya, Jakarta, Malang, Banyuwangi, Madura, Pasuruan, Sulawesi, Lampung, Jambi, Riau, Bali, Kalimantan, NTB, Lombok, NTT, Maluku, Papua, etc.

The study employed purposive sampling, whereby research respondents were selected based on predetermined criteria aligned with the research objectives. The primary data collection tool employed in this study was a questionnaire. The following inclusion criteria were established: (1) Born between 1997-2012, (2) Living in Indonesia, (3) Respondents

should possess a basic level of environmental awareness. Gender was included as a control variable to mitigate potential sources of systematic errors since gender is found to be important factor affecting green purchase intention (Wang et al., 2019). All the items' constructs were answered on five-point Likert Scale from 5- Strongly Agree, 4- Agree, 3- Neutral, 2- Disagree and 1- Strongly Disagree. Table I provides a detailed explanation of the operational variable definition in this study.

Table I Definition of Operational Variable

No	Variable	Statement	Source
1	Greenwashing (GW)	GW1. This green product misleads with words regarding its environmental features GW2. This green product misleads with visuals or graphics regarding its environmental features GW3. This green product is associated with a green claim that is vague of seemingly un-provable GW4. This green product overstates or exaggerates what its green functionality actually is	Zhang, Li, Cao, and Huang (2018)
2	Green Trust (GT)	GT1. You feel that this brand's environmental commitments are generally reliable GT2. You feel that this brand's environmental performance is generally dependable GT3. You feel that this brand environmental argument is generally trustworthy GT4. This brand environmental concern meets your expectations GT5. This brand keeps promises and commitments for environmental protection	Chen (2009)
3	Green Word of Mouth (GWOM)	GWOM1. I would highly recommend this green product to others due to its environmental image GWOM2. I would positively recommend this green product to others due to its environmental functionality GWOM3. I would encourage others to buy this green product because it is environmentally-friendly GWOM4. I would say good things about this green product due to its environmental performance	Zhang, Li, Cao, and Huang (2018)
4	Green Purchase Intention (GPI)	GPI1. I will consider buying green product because they are less polluting in coming times. GPI2. I will consider switching to environmentally friendly product for health reasons. GPI3. I definitely want to purchase green product in the near future GPI4. I would also recommend others to buy green product	Ajzen and Fishbein (1980), Taylor and Todd (1995) Mostafa (2006) Chen andChang (2008)

4. Result and Discussion

4.1. Respondent Characteristics

Table 2 describes the demographic respondent in our study. We distributed online questionnaires to Z generation of Indonesia. The ages of respondents in our study were in the age range 17-24 years where the distribution aged 17 - 20 was as much as 56.4% while in the age range 21 - 24 as much as 43.6%. The respondents were dominated by females with 62% and male as much 38%. Furthermore, for education background, the majority were undergraduates with 69.2% follow by diploma 9.1 % and lastly by high school with 21.7 %. The income of respondents was dominated by income in range IDR 1.500.000 – 3.000.000, thus less than IDR 1.500.000.

Table 2 Respondent Demographics

Description		Frequency	%
Age	17 – 20	148	56.4
	21 – 24	114	43.6
	Total	262	100
Gender	Male	99	38
	Female	163	62
	Total	262	100
Education Background	High School	56	21.7
	Diploma	24	9.1
	Undergraduate	182	69.2
	Total	262	100
Monthly Income	Less Than IDR 1.500.000	99	37.7
	IDR 1.500.000 – 3.000.000	130	49.6
	IDR 3.000.000 – 4.500.000	33	12.7
	Total	262	100

4.2 Common Method Bias

In examining the relationships between GW, GT, GWOM, and GPI, the issue of common method bias (CMB) was assessed using the variance inflation factor (VIF) (See table 3). The VIF values for all constructs were found to be below the critical threshold in between 1.223 - 2.906 and were below 3.3, indicating that CMB is not a significant concern in the study. This suggests that the observed relationships between GW, GT, GWOM, and GPI are not artificially inflated due to using a single data collection method. Consequently, the findings can be interpreted with greater confidence, as they are more likely to reflect genuine associations rather than methodological artifacts. Ensuring low VIF values is crucial in behavioral research to validate the integrity and reliability of the structural model (Kock, 2015; Podsakoff et al., 2024)

4.3 Assessment of Measurement Model

Conducting an assessment for convergent validity was initiated at the outset of the inquiry. Subsequently, an evaluation of the item loadings factor, average variance extracted (AVE), and composite reliability (CR) was conducted to ensure the validity of the measurement model. Table 3 presents the outcomes of the measurement model. The loadings of the item have surpassed the recommended threshold of 0.6, as suggested by Hair et al. (2017). The present study yielded AVEs that fell within the acceptable range, ranging from 0.640 to 0.886. Furthermore, the composite reliability (CR) exhibited a range of 0.800 to 0.926, aligning with the value posited by Hair et al. (2014) that stipulates the average variance extracted (AVE) should surpass 0.5. Following the completion of the convergent validity assessment, the subsequent stage involved the evaluation of discriminant validity. The Fornell and Larcker (1981) test was employed based on the existing literature. Table 4 demonstrates that the square root of AVE (diagonal) is higher than the correlations (off-diagonal) for all reflective constructs and HTMT (heterotrait–monotrait) ratios between constructs did not exceed 0.9. These results confirmed the achievement of scale accuracy in term of validity and reliability. Table 3 below provides the details of the result of the measurement model and Table 4 provided the details of discriminant validity using Fornell and Larcker criterion and HTMT

Table 3 Result of measurement model

Construct	Items	Loadings	VIF	AVE	CR	Cronbach's Alpha
Greenwashing	GW1	0.746	1.364	0.501	0.800	0.676
	GW2	0.731	1.394			
	GW3	0.645	1.319			
	GW4	0.706	1.223			
Green WOM	GWOM1	0.865	2.536	0.757	0.926	0.893
	GWOM2	0.886	2.906			
	GWOM3	0.880	2.640			
	GWOM4	0.849	2.223			
Green Trust	GT1	0.826	2.310	0.685	0.916	0.885
	GT2	0.816	2.267			
	GT3	0.828	1.983			
	GT4	0.847	2.272			
	GT5	0.819	2.046			

Construct	Items	Loadings	VIF	AVE	CR	Cronbach's Alpha
Green Purchase Intention	GPI1	0.798	1.768	0.674	0.892	0.839
	GPI2	0.820	1.978			
	GPI3	0.807	1.893			
	GPI4	0.857	2.163			

Table 4 Discriminant validity using Fornell and Larcker criterion and HTMT

	GPI	GT	GWOM	GW
GPI	0.821		0.587	0.805
GT	0.512	0.827		0.733
GWOM	0.700	0.660	0.870	
GW	0.357	0.358	0.362	0.708

4.4 Assessment of Structural Model

Prior to conducting the following procedure, we also evaluated the coefficient of determination (R^2). The accuracy of the structural model can be evaluated by means of the R^2 value. According to Hair et al. (2014), it is possible to utilize R^2 for determining the coefficient of determination and significance level of the beta values associated with a given route. Table 5 shows that all R^2 values satisfied the minimum 10% value. These ensured a good model fit of the framework.

Table 5 The R Square

	R Square	R Square Adjusted
GPI	0.505	0.499
GT	0.128	0.124
GWOM	0.453	0.449

The study conducted a statistical analysis to estimate the path coefficients of the structural model and employed bootstrap analysis to ascertain the statistical significance of the results. Table 6 demonstrates that there was a statistically significant value for the all-direct effect hypotheses except for H1 and H5. Based on 5% (0.05) significance level, H2, H3, H4 and H6 were supported. However, the result shows that gender does not have significant effect as a control variable (p -value = 0.525, t -value= 0.637), meaning that any observed effects in GW, GT, GWOM, and GPI are not attributable to the respondent's gender.

Table 6 Direct Hypotheses Testing

	Relationship	Std Error	T Statistic	Sig	Decision
H1	GW → GPI	0.054	2.052	0.041	Rejected
H2	GW → GWOM	0.050	2.903	0.004	Supported
H3	GW → GT	0.062	5.744	0.000	Supported
H4	GWOM → GPI	0.062	9.957	0.000	Supported
H5	GT → GPI	0.057	1.145	0.253	Rejected
H6	GT → GWOM	0.046	13.287	0.000	Supported

Next, we test the sequential mediation effect. Our result, shown in table 7, provides evidence that the sequential mediating hypotheses proposed in H7 and H9 were supported. However, we failed to find support for H8.

Table 7 Sequential Mediation Testing

	Relationship	Std Error	T Statistic	Sig	Decision
H7	GW → GWOM → GPI	0.031	2.842	0.005	Supported
H8	GW → GT → GPI	0.022	1.080	0.281	Rejected
H9	GW → GT → GWOM → GPI	0.029	4.625	0.000	Supported

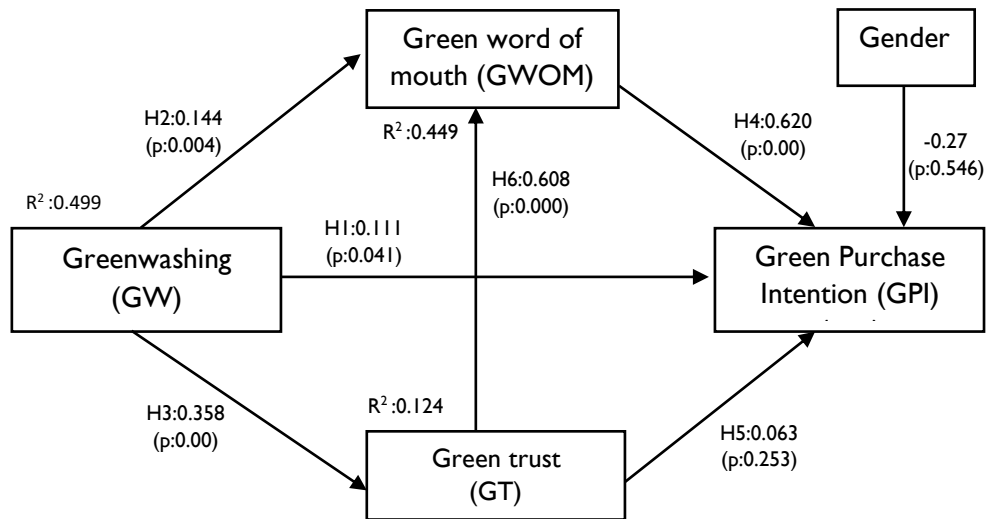


Figure 2 Results

Mediating Hypotheses

- H7_(GW → GWOM → GPI) : 0.022 (p: 0.339)
- H8_(GW → GT → GPI) : 0.090 (p: 0.006)
- H9_(GW → GT → GWOM → GPI) : 0.135 (p: 0.000)

4.5 Discussion

People's ideas about GW are a big part of how they feel about brands, so businesses need to be very careful with their environmental claims to avoid customers' doubts and bad feedback. GW generally arises from consumers recognizing inconsistencies between a brand's marketing (e.g., eco-friendly messaging) and its real impact on the environment (Isac et al., 2024). This study involved Z generation as the research subjects. The Z generation is recognized in the literature as the most environmentally aware cohort, demonstrating a willingness to pay a premium for eco-friendly products (Casalegno et al., 2022; Ham et al., 2021). This study aims to explore whether and how Z generation's perspective toward GW influences their GPI by integrating GT and GWOM with involved sequential mediation. We also examine whether control variables such as gender has an impact. The result about GW toward GPI indicates that there is insignificant effect. However, it suggests that consumers' purchase intentions may not be directly or substantially influenced by the perception of GW in specific contexts. This result could be attributed to a variety of potential reasons. Some customers may have grown suspicious of all green claims, even if they aren't true. The belief that consumers are skeptical of environmental marketing can weaken the impact of greenwashing on their buying habits (Mohr et al., 1998). In this case, people might not believe either real or false claims about being green. This would make GW seem less harmful to people's plans to buy. Similarly, Medeiros and Ribeiro (2017) conducted a study that demonstrates that consumers' purchase decisions may still be influenced by factors extraneous to a company's environmental performance, even if they recognize deceptive green claims. Consequently, their perception of GW may not be sufficiently compelling to discourage them from making a purchase.

The study result about GW toward GWOM indicates that there is a significant relationship. When consumers perceive a company's environmental claims as deceptive or exaggerated, they are more likely to share their concerns or dissatisfaction with others, either online or in personal discussions (Chen et al., 2014b). This research confirmed that GW indeed influences how consumers talk about a brand's environmental practices, and it can trigger GWOM. Rising concern for environmental issues have amplified the impact of GW on GWOM. Modern consumers, especially younger generations like Z generation, are increasingly inclined to hold companies accountable for environmental harm (Ham et al., 2021; Johnstone & Lindh, 2022). Additionally, social media amplification plays a critical role. Customer experiences, particularly around environmental issues, can spread rapidly through digital platforms. According to Nguyen et al. (2024) when consumers perceive GW, they are more likely to share their opinions and concerns on social media. As consumers grow more environmentally aware, they become more sensitive to GW and want to discuss with others not only offline but also through online platforms. Nguyen et al. (2024) explain that environmentally conscious consumers are not only more likely to identify GW but also feel a responsibility to discuss their perceptions with others, thereby contributing to significant GWOM.

Furthermore, our study reveals that GW has significant effect toward GT. Consumers perceive a company as engaging in GW—making exaggerated, misleading, or false environmental claims—and this negatively affects their trust in the company's environmental responsibility (GT). The result indicates that consumer perceptions of GW directly undermine their trust in the company's genuine commitment to sustainability. Environmental responsibility is ethical, thus customers are especially alert to misinformation in this area (Obadã & Dabija, 2022). This sensitivity makes GW extremely destructive to trust. For example, Nguyen et al. (2016) note that GW damages customer trust because GT is based on a company's environmental sustainability. In line with this, Goh and Balaji (2016) found that perceived dishonesty in green marketing efforts not only diminishes trust but also creates a lasting negative impression, which is difficult for companies to overcome.

This research also examines the relationship between GWOM and GT toward GPI. The result indicates that GWOM has a significant effect toward GPI, but GT has no significant effect toward GPI. Consumers engage in positive discussions and share their experiences regarding environmentally friendly products or brands (GWOM), and this directly influences others' intentions to purchase these products. Previous research by Mouloudj and Bouarar (2021) found that GWOM helps to reduce the perceived risk associated with green products by providing social validation, thereby increasing the likelihood of purchase. When consumers see that others are endorsing and recommending green products, they feel more confident in their own purchasing decisions (Al-Gasawneh & Al-Adamat, 2020). On the other hand, GT has no effect toward GPI. It implies that trust in green brands does not consistently translate into higher purchase intentions. While trust is a critical factor in consumer decision-making, it may not operate in isolation. Even if consumers trust a brand's environmental statements, they may prioritize other factors when buying such as price, convenience, and quality thereby affecting buying intention in reducing the impact of environmental harm (Cleveland et al., 2009; Isac et al., 2024). If consumers think a brand's environmental promises are overstated or misleading, they may not buy. Consumer awareness of GW can increase skepticism, making GT less effective at driving purchase (Kumar & Ghodeswar, 2015).

We try to figure out sequential mediation. In the mediation path through GWOM and GT, just GWOM has a significant effect. But for the sequential mediation it has significance through two steps mediations. It describes that the negative impact of GW on purchase intention is indeed channeled through consumers' trust in brands and the influence of positive word of mouth. If consumers have trust with the brand, they are more likely to share their positive experiences with others. Similarly Sweeney et al. (2008) emphasize that trust fosters loyalty, and loyal consumers tend to engage in word-of-mouth communications that can further influence others' purchase decisions. Positive word of mouth can boost green product sales by socially validating and minimizing risk. The serial mediation effect shows that peer recommendations increase buying intention. Therefore, GWOM is essential for converting trust's benefits into purchasing behavior (Isac et al., 2024; Nguyen et al., 2024; Wang et al., 2018)

5. Conclusion

This research discloses the effect of greenwashing on green purchase intention among Gen Z through sequential mediation paths of green trust and green word of mouth. The findings reveal that greenwashing does not directly affect green purchase intention behavior. However, green trust and word of mouth significantly directly affect green purchase intention. The mediating relationship results from green trust and green word of mouth, showing green word of mouth as a significant mediator between greenwashing and green purchase intention, while green trust fails to. Lastly, we also find evidence of the sequential mediation effect through two mediators – green trust and green word of mouth – in the relationship between greenwashing and green purchase intention.

5.1 Theoretical Implication

Our research makes several important theoretical contributions by advancing the understanding of GW and its influence on GPI. First, we provide empirical evidence supporting the negative impact of GW on GPI, confirming that consumers who perceive GW are less likely to engage in environmentally conscious purchasing behavior. Consumers who perceive GW are less inclined to make environmentally aware purchases because they doubt the authenticity and trustworthiness of the brand's environmental claims (de Freitas Netto et al., 2020). Customers may consequently start favoring more open, trustworthy companies with verified sustainability promises (Nygaard, 2023). The increasing desire for corporate accountability and the crucial role that trust plays in influencing consumers' intentions to make green purchases are reflected in this behavior. This finding strengthens the growing body of literature on greenwashing and its detrimental effects on consumer trust and behavior.

Second, our research highlights the mediating role of GT and GWOM in the relationship between GW and GPI. The acceptance of the hypotheses demonstrates that while GW directly reduces GPI, the mediating roles of GWOM and GT can alter this pathway. Specifically, it indicates that whereas GW negatively impacts GPI, the influence of GT and GWOM can substantially alter this connection. The validation of the hypothesis indicates that when customers

recognize GW, their faith in the company diminishes, hence reducing their propensity to buy green items (Chen & Huang, 2021). Nonetheless, the impact of GWOM introduces a social aspect, wherein unfavorable consumer experiences are disseminated and deliberated within peer networks, hence exacerbating the detrimental effects of GW on GPI (Mehdikhani & Valmohammadi, 2022).

Third, the application of the Attitude-Behavior-Context (ABC) theory broadens the theoretical landscape by demonstrating how contextual factors like GT and GWOM shape behavioral intentions in the face of GW. This study extends the ABC theory into the specific area of greenwashing, illustrating its utility in explaining consumer responses to ethical concerns in green marketing. The results indicate that although consumers may possess favorable views on sustainability, their actual behavior is significantly influenced by external factors, including green trust and the social impact of GWOM communication. This theoretical extension offers a thorough framework for interpreting the interaction of contextual elements that affect customer decisions, particularly in green marketing (Zaid et al., 2024).

5.2 Managerial Implication

We found that greenwashing perspective plays an important role in affecting green purchase intention. Therefore, marketers should decrease the level of GWP among Z generation. High GWP erodes consumer trust and leads to skepticism, reducing green purchase intention (GPI). Z generation, known for their environmental awareness and preference for authentic, ethical brands, is particularly sensitive to perceived greenwashing (Borah et al., 2024). Thus, companies need to adopt transparent and genuine sustainability practices to maintain trust and engagement with this cohort.

There are several marketing strategies. First, companies should clearly communicate their sustainability practices with verifiable data. This includes publishing detailed reports on environmental efforts, third-party certifications, and progress toward sustainability goals. Companies can promote transparency by giving consumers easy access to information about their products' environmental impact, such as eco-labels or QR codes that connect to full sustainability reports (Corsini et al., 2024). By implementing these tactics, organizations can cultivate consumer trust, elude claims of greenwashing, and improve their market reputation.

Second, encourage satisfied, eco-conscious consumers to share their experiences through social media. Collaborating with credible green influencers who have a reputation for advocating sustainable practices can amplify authentic messaging (Moilanen, 2023; Tran & Cruyssen, 2023). Brands ought to develop interactive platforms or campaigns that promote user-generated content, including reviews, testimonials, or environmentally sustainable challenges. This strategy enhances customer participation and establishes social evidence, so rendering green promises more credible. By cultivating a community-oriented discourse on sustainability, organizations may improve brand credibility and mitigate the danger of being regarded as engaging in greenwashing.

Third, gathering and responding to feedback from customers concerning eco-friendly items. They should utilize social media surveys, online reviews, and product feedback mechanisms to collaboratively develop future eco-friendly products with consumers. A "green suggestion box" for customers should be established to propose enhancement suggestions (Janz et al., 2024). Co-creation enhances consumer trust and motivates customers to disclose their participation in product development, resulting in favorable GWOM. When customers see that their voices are acknowledged, they are more inclined to make a purchase.

5.3 Limitations and Future Research Agenda

Despite the valuable contributions of this study, several limitations should be acknowledged. First, the study's sample may have been limited in diversity, focusing predominantly on Z generation consumers, which can introduce selection bias. Participants were likely recruited from specific regions or platforms, potentially excluding certain subgroups within Z generation, such as those with varying socioeconomic or educational backgrounds. This limits the representativeness of the findings and their applicability to a broader population. Second, the constructs used in the study—greenwashing perception (GWP), green trust (GT), green word of mouth (GWOM), and green purchase intention (GPI)—were measured using self-report scales, which might not fully capture the complexity of these constructs. The reliance on standardized scales may have omitted nuanced behaviors or perceptions.

Future research could aim for a more diverse sample by including varied geographic, cultural, and socioeconomic groups. Furthermore, analyzing cross-cultural comparisons of Z generation across various areas may elucidate how local values, societal norms, or economic realities influence sustainable purchasing behaviors. Future research may investigate the influence of additional potential mediators or moderators in the correlation between greenwashing perception, green word of mouth, green trust, and green purchase intention among Z generation. Factors such as social media impact, environmental consciousness, and perceived brand authenticity may provide enhanced understanding of the dynamics of eco-friendly behavior. Longitudinal studies may be advantageous for evaluating how changes in customer

perceptions of greenwashing and sustainability influence purchasing intentions over time. Ultimately, the integration of experimental designs could yield more robust causal inferences concerning the influence of green trust and word of mouth on promoting sustainable habits.

Author Contribution

Rahmawati: Conceptualization, Research design, Writing - original draft. **Nur Hidayati:** Data collection, Statistical analysis, Interpretation, Writing - original draft. **Wathanan Srinin:** Supervision, Validation, Writing - review & editing. **Ahmad Taufiqurrijal:** Project administration, Funding acquisition

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Conflict of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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