

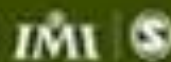
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# Greenwashing Understanding Among Indian Consumers and Its Impact on Their Green Consumption

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## Abstract

The consumer markets for green personal care products have been expanding rapidly in the past decade and so are the greenwashing practices of the companies. More and more companies are engaging in greenwashing, misleading consumers about their environmental performance or the environmental benefits of a product or service. As the discussion around greenwashing practices has grown in the past few years, consumers have become conscious of their choices and have started understanding the greenwashing practices of companies. The purpose of this empirical study is to assess the greenwashing understanding in Indian consumers' green purchase behaviour and the effects of receptivity to green advertising, environmental consciousness and personal norm, using structural equation modelling. The findings confirm that the level of greenwashing understanding moderates the relationship between receptivity to green advertising and green purchase behaviour. Additionally, the findings provide that income level has a significant impact on environmental consciousness and green purchase behaviour relationship. The study has possible implications for advertisers, government and other agencies.

## Keywords

Green purchase behaviour, greenwashing, green consumers, receptivity to green advertising, environmental consciousness, personal norm, personal care products

## Introduction

Ramesh and Suhani off late have started looking at environmental benefits while choosing their personal care products. During their recent visit to the supermarket for buying monthly groceries, they head towards the personal care section of the store. Suhani goes to the aisle shelving creams and moisturisers and Ramesh goes to the soap/body wash aisle. A particular moisturiser catches Suhani's attention that reads 'Natures Gentlest Moisturiser'. She picks the same to check the details on the flip side of the packet. She is very particular about the chemical reactions on her skin and likes this product, as it is chemical-free and has vitamin B, C and E for

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healthier and younger-looking skin. Ramesh picks up a shower gel that reads, '100% natural soap for preserving earth's environment'. The packaging of the product also specifies that it is environmentally friendly and helps reduce CO<sub>2</sub> and save water. Ramesh being environmentally concerned immediately chooses the product and puts it in his shopping basket.

Ramesh has chosen the green product because he was concerned about the environment, whereas Suhani has purchased a green product because she wants to avoid any harm to her skin or body. Both of these purchases are stemmed from the perceived value that green is good for the people and the environment. This is not just the story of Suhani and Ramesh. Many consumers, today, are choosing green products based on similar perceptions of value.

Perceived values guide the consumers' choice and are important criteria in making personal judgements (Butler et al., 2016; Sheth et al., 1991; Varshneya & Das, 2017). The consumers like Suhani and Ramesh, while choosing the green products, are considering health, safety, hedonic and environment-related values (Ghazali et al., 2017).

Green consumption is looked at as a solution to the problems of over-exploitation of natural resources (Kates, 2000; Nguyen et al., 2019; Wu & Chen, 2014; Varshneya et al., 2017) and as a means to reversing environmental deterioration (Liu et al., 2012). People, who have higher concern for the environment, are seen to change their purchasing behaviour as a step to improve the environment (Chase, 1991) and are consciously seen to prefer products that are greener (Peattie, 2001; Schlegelmilch et al., 1996). Consumers, who are conscious about health aspects, prefer products that support their efforts of maintaining a healthy lifestyle and thus engage in healthy behaviours (Becker et al., 1977; Newsom et al., 2005).

Today, consumers have become more aware of the hazards of synthetic chemicals on their health and environment. This has accelerated the urge for a healthier lifestyle and demand for organic personal care products (Ghazali et al., 2017). Consumers with high health consciousness are now considering green products that are safe to skin and body and are genuinely concerned with the ingredients used to make the product (Johri & Sahasakmontri, 1998).

Additionally, green has become a focal point due to increased concern among people regarding sustainability-related issues (Ottman, 2011), and this term is widely used as an umbrella term to represent aspects such as eco/environment-friendly, sustainable, organic, natural, chemical-free, etc. (Han et al., 2009, 2011; Laroche et al., 2001; Ottman, 2011; Pizam, 2009; Roberts, 1996). Green consumption is perceived as being intertwined with discourses on long-term sustainable development (Kim et al., 2012; Lee, 2008). Green consumers are people who avoid any product (a) which may harm or cause damage to any living organism, (b) cause deterioration of the environment during the process of manufacturing or during the process of usage, (c) consume a large amount of non-renewable energy or (d) involves unethical testing on animals or human subjects (Elkington, 1994). Green consumers send signals to product manufacturers about their environmental behaviours through their green consumption decisions and thus forcing organizations to change their marketing strategies (Chen & Chang, 2013).

In this context, organizations engage in multiple practices that involve forms of green marketing. This includes selling products and/or services based on their environmental benefits (Rahbar & Abdul Wahid, 2011), green or eco-labelling that displays the green benefits and environment certifications (Maniatis, 2015), or engaging in green branding that highlights operations/manufacturing/supply chain, including raw material procurement through their external communications (Hartmann et al., 2005).

Most of the marketing practitioners are using green elements as powerful marketing tools (Wanninayake & Randiwela, 2008). Peattie and Charter (2003) explained that green marketing informs consumers about the concept of green products. Green marketing is a much broader concept, which encompasses all

marketing activities developed to stimulate and sustain consumers' environmentally friendly attitudes and behaviours (Jain & Kaur, 2004), including product modification, changes of the production process, packaging changes (Grundey & Milena Zaharia, 2008) or promotion of eco-labels on environmentally friendly products (D'Souza et al., 2006).

Seriousness regarding sustainability in marketing and its implications was highlighted in the 1990s (Vining & Ebreo, 1992). Countries then started to advocate green consumption to have the consumer pay much more attention to their future living conditions by showing a higher preference towards eco-friendliness of products/services (Philippe et al., 2012). There is a general belief that the conventional products are non-biodegradable and non-recyclable, whereas 'green products are typically durable, non-toxic, made from recycled materials, or minimally packaged' (Ottman & Books, 1998, p. 89).

Due to the increased number of consumers' willingness to buy green, advertising the product based on its environmentally friendly features and attributes is very common (French & Showers, 2008). Several marketers distinguish their products as green. Some new brands have coming up in the market with green products, while the existing product brands expand their range with more natural and greener versions of the products (Hartmann & Apaolaza-Ibanez, 2009, 2010; Iyer & Banerjee 1993; McEachern & Warnaby, 2004).

Green marketing is an approach that focuses on reducing the ecological harm in the long run by way of companies' efforts to achieve corporate objectives and meet customer needs (Polonsky & Rosenberger, 2001). Menon and Menon (1997), in their paper, presented the three levels of greening—strategic, quasi-strategic or tactical at the organizational level. Tactical greening involves limited changes and limited co-ordination across multiple functions, whereas strategic greening requires a holistic approach (Grundey & Milena Zaharia, 2008; Polonsky & Rosenberger, 2001).

Tactical greening in most cases could be an act of misleading consumers regarding the environmental practice of a company or the environmental benefits of a product or a service through a range of communications. These misleading communications are termed as 'greenwash', where consumers are deliberately misled (Bowen, 2014) or intentionally deceived with false claims (Choice, 2010), or presented with selective disclosure of positive information about a company's environmental or social performance (firm-level greenwashing) (Lyon & Maxwell, 2011).

Delmas and Burbano (2011) communicated the integration of two corporate behaviours while explaining greenwashing, which involves poor environmental performance and positive communication about environmental performance. Greenwashing practices have been evident in organizations for many years. However, over time, the use of such practice is seen to increase, possibly because of increased demand for the green products and services that have to be fulfilled (product-level greenwashing). Considering multiple definitions of greenwashing in the literature, the definition by Lyon and Maxwell (2008) seems more suitable in the context of the current study. Lyon and Maxwell refer to greenwashing as 'selective disclosure of positive information about a company's environmental or social performance without full disclosure of negative information on these dimensions, to create an overly positive corporate image; (Lyon and Maxwell, 2008, p. 9).

In countries wherein there are no stringent laws against such practices, more cases of greenwashing are evident (Delmas & Burbano, 2011; Diffenderder & Baker, 2010). Although greenwashing practices are not limited to any specific country or region, the absence of country-specific regulations leads organizations to mislead consumers through various greenwashing practices (Diffenderder & Baker, 2010). Many greenwashing examples are pointed out in the literature. Union of concerned scientists (Friedman & Mackenzie, 2004) highlighted Ford Motor company's campaign titled 'It isn't easy being green' wherein Ford projected their product as green. However, in reality, the product was known to be

the worst carbon emitter and had the worst fuel efficiency. Another case was General Electric's campaign titled 'Eco-imagination', which was criticized world over due to the company's greenwashing practices (Furlow, 2010). Nestlé's claim regarding plastic water bottles to be 'eco-shape', projected as more efficient and environmentally responsible was disregarded for being greenwashed (Bruce, 2017). Indian green consumer market is seen to be highly influenced by phrases such as eco-friendly, recyclable, natural and the like, thus guiding their product purchase decisions. Environment consciousness and eco-friendliness of brands were ranked as the highest parameter influencing shoppers (Punyatoya, 2014). India has faced the challenge of the degraded environment and has paid a heavy price in terms of health and economy (Nagdeve, 2002).

Although organizations continue to stress upon the green benefits of their products, consumers have, over time, learnt to selectively understand the authenticity of the claims made by them. Consumers do react differently to the green appeals, based on their levels of receptivity to green advertising (RGC), specifically to the green advertising format (Bailey et al., 2016). This is further supported by consumer's concern for the environment (Dunlap & Jones, 2002; Lin & Chang, 2012) and their feeling of moral obligation (Schwartz, 1977) to display green behaviour.

This study focuses on green consumption and the understanding of greenwashing in India. As India is a developing nation, there is an acute need to recognize how greenwashing is understood and the level of environmental sensitivity among Indian consumers. In addition, as India is a developing country, there is greater scope to conduct research in the field of green consumption, since the existing research mainly concentrates around developed countries. Consumption patterns in the Indian society mainly focuses on practices to protect society and environment by way of resource preservation and need-based consumption (Kumar et al., 2011). However, changed economic conditions and improved income levels have resulted in a remarkable shift in the consumption behaviour of the Indian middle class. In case a country wishes to adopt green revolution, the consumers have an imperative role to play (McDougall, 1993), considering that 30–40 per cent of environmental degradation comes through consumption activities of households (Nittala, 2014). Additionally, Advertising Standards Council of India (ASCI)—the legal regulatory framework—offers guidelines for the use of environmental claims in advertising in India (Fernando et al., 2014) and such conditions encourage 'greenwashing' (Baum, 2012; Delmas & Burbano, 2011; Polonsky et al., 2011), making Indian consumer market interesting to comprehend.

Aggarwal and Kadyan (2014) indicated that the average highest greenwashing sector is personal care sector (62%). In this sector, organizations engage in greenwashing claims such as 100 per cent natural, organic, recycled, environmentally friendly and paraben-free to present their product as sustainable and green (Stamm et al., 2017). Sometimes, these claims may be deceptive. Such deceptive environmental claims can help organizations sell more products and services in the short term.

This study focuses on personal care products and attempts to answer the following question:

RQ1: To what extent do green advertising, environmental concerns and consumers' norm impact consumers' greenwashing behaviour?

RQ2: To gauge the effect of how greenwashing is understood on the relationship between the independent variables' green advertising, environmental concern and PN on the dependent variable's greenwashing behaviour.

This article comprises the following sections. 'Theoretical Understanding' section leads to 'Conceptual Framework' for hypothesis development. The 'Methodology' section details the data collection and analysis procedure and the 'Results and Discussion' section presents the findings of the measurement

model and the structural equation model. The 'Findings and Implications' section offers findings and implications. The 'Limitations and Future Directions' section provides possible avenues for further studies.

## Theoretical Understanding

### *Green Purchase Behaviour*

In recent years, green purchase behaviour (GPB) has been discussed in the context of the purchase of environmentally friendly products or sustainable products that do not harm the environment and society or are recyclable and beneficial to the environment (Chan, 2001; Mostafa, 2007; Rejikumar, 2016). Several previous studies have focused on factors such as purchase intention, attitudes, man-nature orientation, responsibility, affective and cognitive response, and collectivism that influence GPB (Chan & Lau, 2000; Dagher et al., 2015; Kim & Choi, 2005; Lai & Cheng, 2016). It is seen that consumers display core green behaviours by giving importance to quality and price and choose products and brands that adopt conservation practices and display environmental concern. Prior studies on GPB have mainly focused on understanding the attitude-behaviour gap in green purchase decisions.

### *Receptivity to Green Advertising*

RGC is the extent to which consumers pay attention to and are favourably disposed and responsive to advertising that uses green messages in the marketing of products or a company itself (Bailey et al., 2016). There are different forms of green appeals in advertising and consumer's reactions to these different forms of appeals differ considerably (Banerjee et al., 1995; Obermiller & Spangenberg, 1998; Schuhwerk & Lefkoff-Hagius, 1995; Stafford et al., 1996). Organizations use green advertising to communicate their genuine attempt to minimize the environmental impact of their brands and products (Carlson et al., 1993). Basis of this understanding, we propose the following hypothesis:

**H1:** RGC has a significant positive relationship with GPB for personal care products.

### *Environmental Consciousness*

Environmental consciousness (EC) is defined as the degree to which a person is oriented towards concern for the environment (Dunlap & Jones, 2002). It refers to the psychological factors that determine individuals' propensity towards pro-environmental behaviours (Zelenzy & Schultz, 2000). Sharma and Bansal (2013) comprehended EC to be a mental state research variable. EC is particularly 'turning ecological ethics into life practice' or making ecological principles into habits of mind, body and heart (Bai & Romanycia, 2013, p. 105). In green purchase decisions, EC is expected to play a role, as the cases of exaggeration and fabrication of environmental benefits of products are on the rise (D'souza & Taghian, 2005). Concern for the environment is a significant predictor of pro-environmental behaviour (Roberts, 1996; Straughan & Roberts, 1999), which has led to consumers buying green products (Ellen et al., 1991) and organizations engaging in green marketing (Kautish et al., 2019; Mishal et al., 2017). On the basis of this understanding, we propose the following hypothesis.



**H2:** EC has a significant positive relationship with GPB for personal care products.

### *Personal Norm*

PN is defined as a moral obligation to perform or refrain from specific actions (De Groot & Steg, 2009; Schwartz & Howard, 1981, p. 191; Stern, 2000). PN is thus behavioural self-expectations that are experienced as feelings of moral obligations and is a powerful motivator of environmental behaviour (Hopper & Nielson, 1991; Stern & Dietz, 1994; Vining & Ebreo, 1992). In green production-related literature, the PN is assessed for its role in contributing to environmental preservation by recycling, reusing green products (Nguyen et al., 2018) and has a significant impact on consumers' attitude towards green products (Chen & Chai, 2010). PNs are found to be particularly related to pro-environmental behaviour (van der Werff et al., 2019) and may be related to green consumption. Extending this understanding to GPB, we propose the following hypothesis.

**H3:** PN has a significant positive relationship with GPB for personal care products.

### *Understanding Greenwashing*

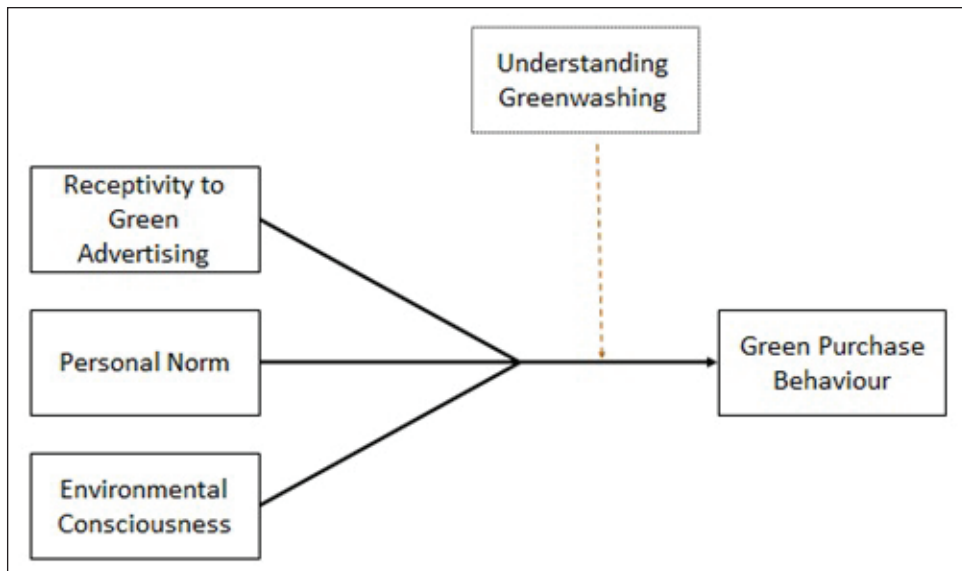
Green advertising has increased almost tenfold in the past 20 years and nearly tripled since 2006 (Delmas & Burbano, 2011). At the same time, more and more firms are engaging in greenwashing through their advertising by misleading consumers about firms' environmental performance or the environmental benefits of a product or service offered by them. Greenwashing is a continuous depiction of environmental claims through imprecise advertisements that lead consumers to question corporate honesty (Furlow, 2010; Jog & Singhal, 2019). From the company's perspective, greenwashing is associated with selective disclosures in which companies disclose only good environmental strategies and actions and conceal negative ones (Torelli et al., 2020).

It is worrisome that various environmental aspects of products, particularly sustainability, are not verifiable even when consuming products that falsely claim them. Companies' too mislead their consumers, regarding the environmental benefits of their products or services, by way of greenwashing (Delmas & Burbano, 2011; Shahrin et al., 2017). Greenwashing can make a company look more environmentally friendly than it is (Topal et al., 2020). Greenwashing is 'a specific subset of symbolic corporate environmentalism in which the changes are both merely symbolic and deliberately so' (Bowen, 2014). Lyon and Montgomery (2015) stated greenwashing to range from slight exaggeration to full fabrication. However, consumers, over time, have become aware of the greenwashing, due to which organizations are losing their sales and customers' trust in the long term (Kahraman & Kazançoğlu, 2019). Thus, we propose the following hypothesis.

**H4:** Levels of Greenwashing understanding has a significant positive effect on the association between RGC and GPB.

## **Conceptual Framework**

Conceptual framework examines the relationship between the variables in the study and is demonstrated in Figure 1.



**Figure 1.** Proposed Conceptual Framework of Green Purchase Behaviour

**Source:** The authors.

## Methodology

This study was carried out in India, which is poised to become the world's most populous country by 2025 and has a larger consumer base showing preferences towards responsible consumption or green consumption. In the light of green consumerism at the global level, Greendex (2014) survey found that consumers in developing economies like India and China show a higher preference for green products compared to developed nations like the USA. Neilson's survey (2011) acknowledged the Indian consumer's rising preference towards eco-friendly products (Jaiswal & Singh, 2018). Moreover, this is evident in the healthy growth in the personal care market due to the changing lifestyle of Indians in recent years (Sudhakar & Rani, 2013).

In this study, personal care products were chosen for this research for the following reasons. Second, the personal care sector is the average highest greenwashing sector (62%) (Aggarwal and Kadyan, 2014); and in this sector, organizations engage in greenwashing claims such as natural, recycled, paraben-free in order to present their products sustainable and green (Stamm et al., 2017). The market size of India's beauty cosmetics and grooming is expected to touch US\$35 billion by 2035 from the current level of US\$6.5 billion says the joint study that was undertaken by ASSOCHAM–MRSSIndia.com (Anupama & Suresh, 2018).

Therefore, it is obvious that consumers' favourable attitude towards sustainable products and their increased level of ecological concern (EC) compelled Indian and Asian firms to shift from a conventional marketing approach to green marketing as a driver of eco-advantage with the movement of global green competitiveness (Chan, 2001; Chen & Chai, 2010; Jain & Kaur, 2004; Mostafa, 2007).



## Data Collection and Sample Profile

A structured questionnaire was used to collect the data and examine the proposed model. The items used to operationalize various constructs used in this study were picked up from existing validated scales. This study context was the survey questionnaire designed for self-reporting of the consumers' observations and experiences while purchasing green personal care products. All of the scales were formulated based on a 5-point Likert scale from 'strongly disagree' (1) and 'strongly agree' (5).

GBP was adapted from Jaiswal and Kant (2018)—4-item scale—and the Cronbach's alpha coefficient was 0.814. RGC was adapted from do Paço et al. (2019)—9-item scale—and the Cronbach's alpha coefficient was 0.903. EC scale was adapted from Papista and Dimitriadis (2019)—3-item scale—and the Cronbach's alpha coefficient was 0.805. PN scale was an adaptation from Nguyen et al. (2018)—6-item scale—and the Cronbach's alpha coefficient was 0.858. A 5-item scale was adapted from Leonidou and Skarmeas (2017) to measure greenwashing, and the Cronbach's alpha coefficient was 0.906. The data collection period in the study lasted from June 2019 to September 2019. Subsequent data screening involved examining missing data and outliers.

The purposive sampling approach was used to administer the 250 questionnaires among the adult and educated group of consumers (age 18 or above, most of whom were either graduates or postgraduates); however, 173 were found to be suitable for this study. Young adult and educated subjects were chosen as they could understand the green phenomenon and could answer the questionnaire properly (Chan, 2001; Yadav & Pathak, 2016). The survey tool was tested through a pilot study on 30 Indian consumers, and their recommendations were adopted in designing the final instrument to avoid ambiguity in the field survey.

The demographic profile of the respondents showed that 106 (61.27%) respondents were male and 67 (38.72%) were female out of the total 173 respondents; majority of them (31.79% and 42.77%) were in the age group of 25–34 years and 35–44 years, respectively; 9.82 per cent were in the age group of 18–24 years; and other age groups totalled 16.76 per cent.

## Results and Discussion

To assess the measurement model, all constructs were subjected to confirmatory factor analysis (CFA) (maximum likelihood estimation) using AMOS 22.0, and SPSS 25 was used for other analysis. The resulting fit statistics were all above the minimum acceptable level. Chi-square/degree of freedom (CMIN/df) = 191.004/141, 1.355; comparative fit index (CFI) = 0.973; incremental fit index (IFI) = 0.973; root mean square of error of index (RMSEA) = 0.045; Tucker–Lewis index (TLI) = 0.967; and goodness-of-fit index (GFI) = 0.901. All the factor loadings are above 0.5 (as shown in Table 1).

**Table 1.** Reliability of Scales and Convergent Validity

	Latent Variables and Items	Items	FL	$\hat{\alpha}$	CR	AVE
1	Receptivity to green advertising			0.885	0.877	0.589
2	I tend to pay attention to advertising messages that talk about the environment (strongly agree–strongly disagree —5-point Scale)	RGC2	0.75			
3	The use of green messages in ads affects my attitude towards the ads (strongly agree–strongly disagree—5-point scale)	RGC3	0.71			

(Table 1 Continued)

(Table 1 Continued)

	Latent Variables and Items	Items	FL	$\alpha$	CR	AVE
4	I respond favourably to brands that use green messages in their advertising (strongly agree—strongly disagree—5-point scale)	RGC4	0.77			
5	I am the kind of consumer who responds favourably when brands use green messages in their ads (strongly agree—strongly disagree—5-point scale)	RGC5	0.79			
9	I tend to pay attention to green advertising messages (strongly agree—strongly disagree—5-point scale)	RGC9	0.81			
II	Level of understanding of greenwashing			0.906	0.908	0.663
1	Most companies mislead with words about the environmental features of their products (strongly agree—strongly disagree—5-point scale)	GW1	0.83			
2	Most companies mislead with visuals or graphics about the environmental features of their products (strongly agree—strongly disagree—5-point scale)	GW2	0.85			
3	Most companies provide vague or seemingly un-provable environmental claims for their products (strongly agree—Strongly Disagree—5-point scale)	GW3	0.83			
4	Most companies overstate or exaggerate the environmental features of their products (strongly agree—strongly disagree—5-point scale)	GW4	0.81			
5	Most companies leave out or hide important information about the real environmental features of their products (strongly agree—strongly disagree—5-point scale)	GW5	0.75			
III	Green purchasing behaviour			0.814	0.822	0.537
1	When I want to buy a product, I look at the ingredients label to see if it contains things that are environmentally damaging (strongly agree—strongly disagree—5-point scale)	GPB1	0.7			
2	I prefer green products over non-green products when their product qualities are similar (strongly agree—strongly disagree—5-point scale)	GPB2	0.68			
3	I choose to buy products that are environmentally friendly (strongly agree—strongly disagree—5-point scale)	GPB3	0.77			

(Table 1 Continued)

(Table 1 Continued)

	Latent Variables and Items	Items	FL	$\alpha$	CR	AVE
4	I buy green products even if they are more expensive than the non-green ones (strongly agree–strongly disagree—5-point scale)	GPB4	0.78			
IV	Environmental consciousness			0.845	0.848	0.737
3	I feel I have an ethical obligation to avoid brands and companies that pollute the environment (strongly agree–strongly disagree—5-point scale).	EC3	0.80			
4	I feel I have an ethical obligation to support the purchase of environmentally friendly products (strongly agree–Strongly Disagree—5-point scale).	EC4	0.91			
V	Personal norm scale			0.847	0.857	0.669
3	Buying products that damage the environment would be morally wrong for me (strongly agree–strongly disagree—5-point scale).	PNS3	0.82			
4	Buying products that affect the environment would go against my principles (strongly agree–strongly disagree—5-point scale).	PNS4	0.91			
5	People like me have a responsibility to contribute to environmental preservation by avoiding products that damage the environment (strongly agree–strongly disagree—5-point scale).	PNS5	0.71			

**Source:** The authors.

**Note:** FL: Standardised factor loading;  $\alpha$ : Cronbach' alpha; CR: composite reliability; AVE: average variance extracted.

These indices revealed a good model approximation to the sample data.

### Structural Equation Modelling

Construct validity was examined using convergent validity and discriminant validity. Convergent validity was assessed by examining if (a) standardized factor loading values were above 0.5; (b) CR was higher than AVE, and CR was above 0.7; and (c) AVE was above 0.5 (Hair et al., 2010). (Table 2).

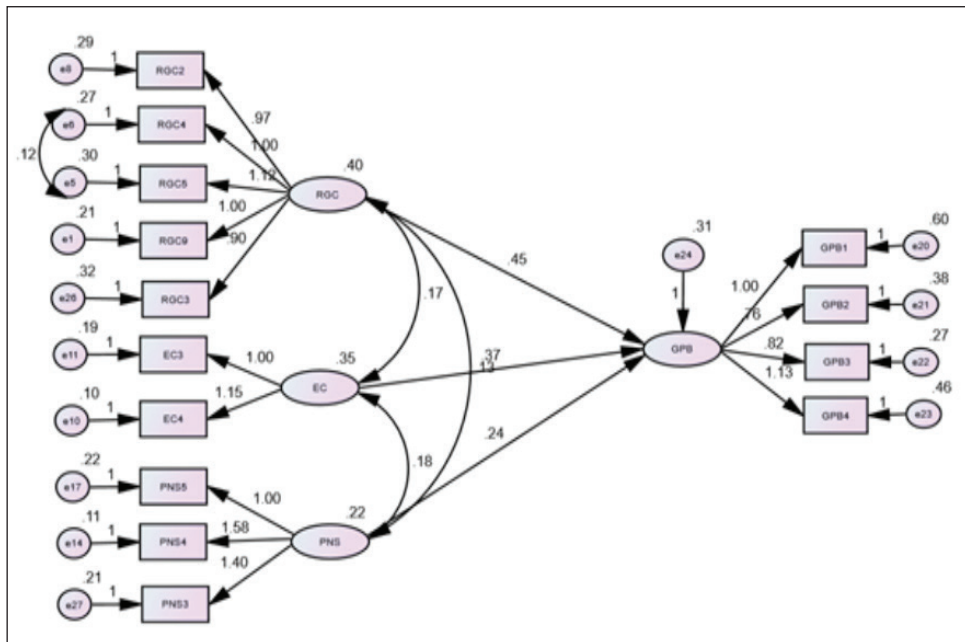
As presented in Table 1, the relevant data revealed strong convergent validity. Also, as presented in Table 2, the square root of the AVE of each measure was greater than its bivariate correlation coefficients with other constructs; thus, discriminant validity was ensured (Fornell & Larcker, 1981). Additionally, all correlations between constructs were less than 0.9, indicating that possible problems of multicollinearity were non-existent (Grewal et al., 2004).

**Table 2.** Descriptive Statistics and Discriminant Validity

	CR	AVE	MSV	MaxR(H)	GPB	RGC	PNS	EC	GWU
GPB	0.822	0.537	0.326	0.827	<b>0.733</b>				
RGC	0.877	0.589	0.326	0.924	0.571	<b>0.767</b>			
PNS	0.857	0.669	0.433	0.952	0.504	0.428	<b>0.818</b>		
EC	0.848	0.737	0.433	0.964	0.557	0.446	0.658	<b>0.859</b>	
GWU	0.908	0.663	0.167	0.974	0.409	0.141	0.173	0.238	<b>0.814</b>

**Source:** The authors.

**Note:** Diagonal value indicates the square root of AVE of the construct.



**Figure 2.** Factor Loadings and Path Coefficients

**Source:** The authors.

As observed in Figure 2, the three independent variables RGC, EC and PN were assessed for understanding its impact on GPB of respondents. As presented in Table 2, the composite reliability (CR) values for all the first-order dimensions were greater than the suggested threshold of 0.80. In addition to this, in all the cases, the average variance extracted (AVE) values were greater than the suggested threshold of 0.50. These findings supported convergent validity and reliability of the measured constructs.

### Testing for Moderating Effect

To test the moderating effects of the greenwashing understanding on the impact of the three determinants on GPB, multi-group social cognitive mapping (SCM) was employed. In this study, the corresponding data were divided into two groups using the median split method: those who had a low greenwashing understanding: ( $n = 109$ ) and those having a high greenwashing understanding ( $n = 64$ ).

Model Fit measures suggested by Gaskin and Lim (2016), using AMOS Plug-in were exercised to conduct the analysis.

Tables 3 and 4 compare the moderation effect of greenwashing understanding of the proposed structural model.

#### Results of the Moderating Effect of Greenwashing Understanding

It is observed in Table 4 that there is a significant difference in the two models on the RGC–GPB relationship.

The study found that the two groups of respondents had high and low greenwashing understanding and differed significantly in their GPB based on their RGC. Further, it can be concluded that higher the level of greenwashing understanding, RGC resulting in GPB is higher. In cases where the level of greenwashing understanding is low, the RGC resulting in GPB is also low.

**Table 3.** Testing the Moderating Effect of Greenwashing Understanding

Standardized Regression Weights			High Greenwashing Understanding	Low Greenwashing Understanding
			Estimate	Estimate
GPB	←	RGC	0.579	0.324
GPB	←	EC	−0.039	0.41
GPB	←	PNS	0.179	0.156

**Source:** The authors.

**Table 4.** Z-score to Assess the Relationship Between the Two Groups on the Basis of the High and Low Greenwashing Understanding

			High GW Understanding		Low GW Understanding		Z-score
			Estimate	P	Estimate	P	
GPB	←	RGC	0.907	0.001	0.279	0.004	−2.137*
GPB	←	EC	−0.06	0.831	0.418	0.004	1.515
GPB	←	PNS	0.301	0.324	0.216	0.238	−0.239

**Source:** The authors.

**Note:** Coefficients are significant at Alpha = 0.01, \*\*coefficients are significant at Alpha = 0.05, \*\*\*coefficients are significant at Alpha = 0.10.

**Table 5.** Z-score to Assess the Relationship Between the Two Groups on the Basis of the High- and Low-income Understanding

			Low Income		High Income		Z-score
			Estimate	P	Estimate	P	
GPB	←	RGC	0.504	0.001	0.419	0.007	-0.388
GPB	←	EC	0.131	0.547	0.668	**	1.813*
GPB	←	PNS	0.385	0.154	0.047	0.82	-0.991

**Source:** The authors.

**Note:** Coefficients are significant at Alpha = 0.01, \*\*coefficients are significant at Alpha = 0.05, \*\*\*coefficients are significant at Alpha= 0.10.

### Income Moderation

Thus, there is a significant difference in the two models on GPB -EC relationship basis income (Refer Table 5). It can be concluded here that higher the income level, EC resulting in GPB is higher. In low- and middle-income cases, the EC resulting in GPB is also low.

## Findings and Implications

This article makes an important contribution to greenwashing research. Delmas and Burbano (2011) stated that more and more firms have been combining poor environmental performance with positive communication about environmental performance. Although a few existing studies assess the content of green advertisements in the Indian context (Fernando et al., 2014), this study advances this understanding to further relate them to the level of greenwashing understanding among Indian consumers. The primary aim of this article was to assess the levels of greenwashing understanding of the determinants of GPB in the Indian context. Specifically, this study sought to better understand how RGC, PN and EC impact consumers' GPB of personal care products. The moderating effects of greenwashing understanding of the relationship between GPB and its determinants were also examined. Furthermore, the study supports and extends the findings of the limited number of studies concerning the Indian consumers. The potential beneficiaries of this research, therefore, include consumers as well as those interested in understanding the determinants of GPB, including marketers, advertisers, government and other agencies. The government gets to benefit from the consumerism process, as it is directly related to the GDP of a nation. Consumerism in a way leads to increased business opportunities, thus leading to employment generation. Greenwashing, however, may lead to increased harm to the destination environment due to unawareness of the actual impairment that it causes to the environment or the health of living organisms. Hence, although there is increased purchase and sale of goods, higher costs might have to be borne in the form of environmental- and health-related degradation. Such greenwashing practices by the organizations and the level of awareness of such practices among the consumers should be considered by the government in their policy decisions so as to cause minimum environmental harm through consumption. Additionally, non-governmental agencies that work under the agenda of environmental sustainability can positively use this information to take the necessary precautions to cause minimum harm to the environment.

The first key finding of the study is that the level of greenwashing understanding of Indian consumers moderates the relationship between their RGC and GPB. This implies that consumers with higher



greenwashing understanding are more inclined towards GPB. As per the findings of this study, there is an increased understanding among consumers regarding greenwashing practices of organizations, which, in turn, has an impact on the RGC. Thus, the green consumers are particular in choosing the products due to their high levels of understanding of greenwashing. Marketers who wish to promote their genuine green products avoid such greenwashing practices to target genuine green consumers. A major problem here is that most of the Indian advertisements are 'shallow' or imprecise and promote the green image of the organization without any substantiation (Banerjee et al., 1995; Carlson et al., 1993; Fernando et al., 2014; Iyer & Banerjee, 1993; Kärnä et al., 2001).

The second key finding of the study is that while there is a higher level of greenwashing understanding, the propensity of RGC leading to GPB is higher and vice versa. This means that the more aware the consumers are regarding greenwashing, the more careful they are when purchasing their green products. Such consumers will be more careful with their product purchase decisions and will check the ingredients of the products. Studies show that Indian consumers are increasingly aware and observant regarding the greenwashing depicted through advertising and product packaging (Fernando et al., 2014). The implication for organizations is that organizations need to be careful with the message they share, as consumers understand the false messages, and organizations may lose the market share.

The third key finding of the study is an addition to the existing body of knowledge that suggests that the greenwashing understanding has an impact on the RGC and GPB relationship. However, greenwashing understanding does not significantly impact PN and EC relationship with GPB. This validates that the EC and PN are psychologically intrinsic factors, and an external factor like greenwashing understanding does not have an impact on these relationships (Nordlund & Garvill, 2003). This finding once again emphasizes on providing a genuine message regarding the environmental benefits of products or services. Our results show an increased level of greenwashing understanding among Indian consumers.

The fourth key finding is that the income level has a significant impact on EC and GPB relationships. This means that high-income consumers tend to display higher EC. Higher the income, the propensity of EC leading to GPB is higher. Income can be associated with factors like willingness to pay (Biswas & Roy, 2016). In a previous study, income was found to play a significant role in the purchase decisions of consumers (Wong & Mo, 2013).

Our research also has important implications for the green consumption literature in India. It is observed that consumers are particular regarding their choice of green products and can differentiate between green advertising messages of the marketers. It is interesting to note that in developing nations like India, consumers are selectively able to filter green messages for their greenwashing. This finding differs from the studies conducted in some of the developed nations (Parguel et al., 2015; Wilson, 2013) and is particularly intriguing considering increased greenwashing understanding among the consumers in the developed nations (Marciniak, 2009).

## Limitations and Future Directions

This study was limited in several aspects. First, we used purposive sampling as a method of data collection. As such, the generalization of the study is a predicament. Second, the study was confined to personal care products only. Future research could check the proposed model concerning other product categories such as electronics, food and beverages, etc. Among other study limitations, social desirability bias may be an issue that needs attention due to respondents self-reporting. Future research could adopt a more comprehensive framework to reduce the bias when responding to a survey, or precision can be brought by using an experimental approach in future studies. Another study limitation is the use of

existing scales in the study that have been validated using a different set of data. The current study is not a product-specific study. Future research could explore a product-specific approach or may adopt a post-purchase experience-based approach to reduce ambiguity.

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