

How CSR perception relates to brand loyalty: the mediating role of perceived greenwashing and the moderating role of consumer scepticism

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Abstract

Corporate Social Responsibility (CSR) has become an essential strategic tool for companies to build consumer relationships and gain a competitive advantage. However, rising doubts about the authenticity of corporate sustainability initiatives have called into question the effectiveness of CSR in fostering long-term brand loyalty. The present study examined the association between CSR perception and brand loyalty, with perceived greenwashing as the mediating variable and consumer scepticism as the moderating variable, in the Indian Fast Moving Consumer Goods (FMCG) sector. The study proposes a moderated mediation framework, grounded in Stakeholder, Signalling, and Attribution theories, that explains how consumers interpret CSR actions and translate these interpretations into loyalty outcomes. The study draws on data from 588 FMCG consumers from the Indian states of West Bengal and Odisha and uses Partial Least Squares Structural Equation Modelling. The findings indicate that CSR perception is significantly associated with perceived greenwashing and brand loyalty. Perceived greenwashing partially mediates the relationship between CSR perception and brand loyalty, indicating that consumers evaluate the authenticity of CSR initiatives when forming brand loyalty judgements. Consumer scepticism is positively associated with perceived greenwashing and negatively associated with brand loyalty. Consumer scepticism significantly moderates the relationship between CSR perception and brand loyalty. The study contributes to the CSR and branding literature by identifying perceived greenwashing as a key psychological mechanism linking CSR perception and loyalty outcomes and highlighting consumer scepticism as an important boundary condition affecting CSR effectiveness in the Indian FMCG context.

Keywords: Corporate Social Responsibility Perception; Perceived Greenwashing; Brand Loyalty; Consumer Scepticism; FMCG; PLS-SEM; India.

JEL Codes: M14; M31

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1. Introduction

Corporate Social Responsibility (CSR) has evolved from being a discretionary corporate activity to become a strategic business imperative that shapes stakeholder perceptions, organisational legitimacy and competitive advantage. Due to the increasing environmental concerns, growing consumer awareness, and higher expectations of corporate responsibility, companies have been encouraged to incorporate social and environmental responsibilities into their business strategies (Carroll, 1991; Freeman, 1984). CSR has been associated with consumer attitudes and behavioural outcomes, such as trust, satisfaction, reputation and brand loyalty (Bhattacharya & Sen, 2004; Du et al., 2010). In highly competitive markets, organisations are increasingly adopting CSR initiatives not just to fulfil societal obligations, but to differentiate their brands and develop stronger relationships with consumers.

The strategic importance of CSR is especially evident in emerging economies such as India. The Companies Act, 2013, brought about a sea change in the CSR landscape by



mandating CSR expenditure for qualifying firms. The regulatory intervention led to a drastic growth in corporate investment in social and environmental causes and prompted organisations to integrate CSR in their long-term business strategies. Consequently, sectors such as Fast-Moving Consumer Goods (FMCG) have intensified their CSR communication and sustainability-related activities to foster greater stakeholder engagement and enhance brand value. In light of fierce competition, high purchase frequency, and relatively low switching costs in the industry, CSR has become an important mechanism for reinforcing consumer loyalty.

Despite the growing importance of CSR, its effectiveness in generating favourable consumer outcomes remains questionable. Previous research generally assumes that consumers respond positively to CSR initiatives and reward socially responsible firms with stronger loyalty and positive brand evaluations (Fatma & Rahman, 2016; Pérez & Rodríguez del Bosque, 2015). Simultaneously, increased exposure to sustainability communication has heightened the scrutiny consumers place on corporate motives and authenticity. Consumers are increasingly unsure whether organisations genuinely pursue social and environmental objectives or merely use CSR as a promotional tool (Nyilasy et al., 2014). Because of such concerns, scholarly interest in perceived greenwashing, defined as consumers' beliefs that organisations exaggerate or misrepresent their environmental and social commitments (Delmas & Burbano, 2011), has increased.

Despite the substantial body of CSR research, important gaps remain in understanding how consumers interpret CSR initiatives when concerns about corporate authenticity arise. Existing studies have primarily examined the positive outcomes of CSR, such as trust, reputation, and loyalty, with comparatively limited attention given to the psychological processes through which CSR perceptions shape consumer behaviour (Brown & Dacin, 1997; Pérez & Rodríguez del Bosque, 2015). Furthermore, perceived greenwashing has largely been examined as an independent construct rather than as a mediating mechanism, while the moderating role of consumer scepticism remains insufficiently explored, particularly in the Indian FMCG context (Nyilasy et al., 2014; Delmas & Burbano, 2011; Fatma & Rahman, 2016).

Empirical evidence on how FMCG consumers in the eastern Indian states of West Bengal and Odisha evaluate CSR initiatives and translate these evaluations into loyalty outcomes remains limited despite the institutionalisation of CSR practices following the Companies Act, 2013. To address this gap, the present study develops and tests a moderated mediation framework in which the relationship between Corporate Social Responsibility Perception (CSRP) and Brand Loyalty (BL) is examined with Perceived Greenwashing (PGW) as a mediating mechanism and Consumer Scepticism (CS) as a moderating condition. The study is grounded on Stakeholder, Signalling and Attribution theories. Stakeholder theory assumes that organisations engage in socially responsible activities to add value for stakeholders and develop long-term relationships (Freeman, 1984). The Signalling theory states that CSR initiatives are a means of communicating organisational values and responsibility, but their effectiveness depends on perceived credibility (Spence, 1973). Attribution theory offers consumers a framework for inferring the motivations behind a corporation's actions and deciding whether the corporation's CSR efforts are a bona fide commitment or a strategic self-interest (Kelley, 1973).

This article makes three contributions. First, perceived greenwashing is identified as an important mediating mechanism explaining the relationship between CSR perception and brand loyalty. Second, it integrates Stakeholder, Signalling, and Attribution theories into an integrated framework that explains how consumers interpret CSR initiatives. Third, it provides

empirical evidence from the Indian FMCG sector, thus extending CSR research in an important emerging economy. The study is relevant to CSR and marketing researchers, FMCG managers, sustainability practitioners, and policymakers seeking to understand how consumers evaluate the credibility of CSR communication and translate such perceptions into brand-related outcomes.

2. Literature review and hypothesis development

2.1. Theoretical foundation

This research investigates the relationship between CSRP and BL via PGW, and the moderating role of CS on these relationships, integrating Stakeholder, Signalling, and Attribution theories. Stakeholder theory (Freeman, 1984) proposes that organisations produce long-term value by addressing the interests of a diverse set of stakeholder groups rather than just shareholders. CSR initiatives, therefore, help organisations improve stakeholder relations and gain legitimacy. Signalling theory (Spence, 1973) argues that CSR activities reduce information asymmetry by signalling the organisation's values, ethical standards, and social commitment to consumers. The effectiveness of such signals, however, is contingent upon their perceived credibility (Connelly et al., 2011). Attribution theory also explains how consumers infer motives behind organisational actions and evaluate whether CSR efforts are a genuine concern or strategic self-interest (Kelley, 1973). Taken together, these theories offer a holistic framework for understanding the relationship between CSR perceptions and loyalty outcomes through authenticity-related evaluations.

2.2. CSR perception and brand loyalty

CSRP is the general assessment of a firm's economic, legal, ethical, and philanthropic responsibilities by consumers (Carroll, 1991; Maignan, 2001). Earlier studies have indicated that positive views of CSR raise consumer trust, satisfaction, reputation and loyalty (Brown & Dacin, 1997; Pérez & Rodríguez del Bosque, 2015). Stakeholder theory suggests that organisations that meet broader social expectations are more likely to gain stakeholder support and develop long-term relationships with consumers. Signalling theory also suggests that CSR activities signal positive organisational values and reduce uncertainty about corporate behaviour. In FMCG markets where product differentiation is low and switching costs are low, CSR can increase emotional attachment and encourage repeat purchasing.

H1: CSRP is positively associated with brand loyalty.

2.3. CSR impression and perceived greenwashing

As organisations increasingly communicate their CSR initiatives, consumers are exposed to a greater volume of sustainability-related information. According to Signalling theory, CSR communication serves as a signal of a firm's ethical values and social commitment; however, the effectiveness of this signal depends on its perceived credibility (Spence, 1973; Connelly et al., 2011). Greater CSR visibility, therefore, encourages consumers to evaluate whether communicated claims are consistent with actual corporate practices. The Persuasion Knowledge Model further suggests that consumers recognise persuasive intent in corporate communication and become more critical when organisations heavily promote socially responsible activities (Friestad & Wright, 1994). Consequently, consumers compare CSR claims with observable organisational behaviour and may question whether these initiatives reflect genuine responsibility or strategic impression management. From the perspective of Attribution theory, consumers actively infer the motives underlying corporate actions (Kelley, 1973). When CSR communication appears exaggerated or inconsistent with business practices, consumers are more likely to attribute self-serving motives to the firm, increasing perceptions

of greenwashing (Nyilasy et al., 2014; Lyon & Montgomery, 2015). Therefore, higher CSR perception may coexist with stronger perceptions of greenwashing because greater CSR communication simultaneously increases consumer awareness and critical scrutiny of corporate sustainability claims.

H2: CSRP is positively associated with perceived greenwashing.

2.4. Brand loyalty and perceived greenwashing

Perceived greenwashing poses a serious threat to the effectiveness of CSR by eroding consumer confidence in corporate communication. Lyon and Montgomery (2015) find that consumers are more likely to doubt an organisation's sincerity and legitimacy when they perceive its CSR claims as misleading or exaggerated. Such evaluations encourage consumers to apply self-serving motives to organisations, which reduces positive attitudes and behavioural intentions (Attribution theory). Previous studies report that greenwashing has negative effects on trust, purchase intentions and corporate evaluations (Chen & Chang, 2013; Nyilasy et al., 2014). Thus, perceptions of greenwashing are likely to affect consumers' willingness to engage in long-term relationships with brands.

H3: Perceived Greenwashing is significantly associated with brand loyalty.

2.5. Perceived greenwashing as a mediator

While CSR is generally associated with positive consumer outcomes, its effectiveness depends on consumers' interpretations of organisational actions. Signalling theory suggests that CSR activities serve as signals of organisational values, but these signals will relate to stakeholders' responses only if they are perceived as credible (Connelly et al., 2011). Therefore, consumers are unlikely to respond directly to CSR activities without first assessing their authenticity. Perceived greenwashing is an important psychological mechanism through which CSR perceptions translate into loyalty outcomes. Authenticity in CSR efforts can foster positive brand attitudes among consumers, while perceived symbolic or deceptive behaviour can be linked to a loss of loyalty. While theoretically significant, perceived greenwashing as a mediator of CSR perceptions and loyalty has been understudied, particularly in the Indian FMCG sector. So:

H4: Perceived greenwashing mediates the relationship between CSRP and brand loyalty.

2.6. Consumer scepticism and consumer responses

Consumer Scepticism is a consumer's tendency to doubt the truth and credibility of corporate communications (Obermiller & Spangenberg, 1998). Sceptical consumers are more critical in their information processing and less inclined to accept organisational claims without scrutiny. Previous research has shown that scepticism is important in responses to advertising and CSR communication (Forehand & Grier, 2003). According to Attribution theory, sceptical consumers are more likely to detect inconsistencies between corporate claims and actual behaviour, thereby increasing perceptions of greenwashing. Conversely, scepticism might diminish trust and erode brand loyalty.

H5: Consumer scepticism is positively associated with perceived greenwashing.

H6: Brand loyalty is negatively associated with consumer scepticism.

2.7. Consumer scepticism as a moderator

Consumer scepticism may also be an important boundary condition that affects CSR effectiveness. Signalling theory proposes that consumers differ in their willingness to accept

organisational signals. Sceptical consumers are more likely to need more convincing before they can have a positive evaluation and are more likely to examine CSR-related information. As indicated by the Persuasion Knowledge Model (Friestad & Wright, 1994), sceptical consumers evaluate corporate communications based on their credibility, and are especially sensitive to discrepancies between organisational claims and behaviour. Thus, scepticism may condition the associations of CSR perceptions with greenwashing evaluations and loyalty outcomes. So:

H7: Consumer scepticism moderates the association between CSRP and perceived greenwashing.

H8: Consumer scepticism moderates the relationship between CSRP and brand loyalty.

3. Research Methodology

3.1. Research design and data collection method

This study employs a quantitative cross-sectional research design to investigate the relationships between CSRP, PGW, CS and BL in the Indian Fast-Moving Consumer Goods (FMCG) sector. The study uses a survey-based approach because it allows for the collection of standardised responses from a large sample and the empirical testing of complex theoretical relationships using Structural Equation Modelling (SEM) (Hair et al., 2022). The study draws on data from FMCG consumers in the eastern Indian states of West Bengal and Odisha. West Bengal and Odisha represent two important consumer markets in Eastern India, with expanding organised retail sectors and increasing exposure to CSR and sustainability communication by FMCG firms. The two neighbouring states also exhibit socio-economic diversity while sharing comparable market characteristics, making them appropriate settings for examining consumer responses to CSR initiatives. Although the findings provide useful insights into consumer behaviour in this regional context, they should not be interpreted as fully representative of the entire Indian population. Convenience sampling is used to administer a structured questionnaire in online and offline modes. The study includes a pilot test with 30 respondents to assess the clarity and appropriateness of the items before the main survey. A convenience sampling approach was adopted because respondents were selected based on their accessibility and willingness to participate. The study uses both online and offline structured questionnaires administered at supermarkets, retail outlets, shopping areas, educational institutions, and workplaces in West Bengal and Odisha. This approach enabled the efficient collection of responses from FMCG consumers who regularly purchased branded FMCG products. Participant feedback led to small changes. A total of 650 questionnaires were disseminated. After eliminating incomplete responses and those with a high percentage of missing values, 588 valid responses remained for analysis, yielding an efficient response rate of 90.46%.

3.2. Sample size selection

Sample-size adequacy is assessed based on the recommendations of Hair et al. (2022) and Kock and Hadaya (2018). The proposed model had one higher-order independent construct, one higher-order mediating construct, one moderating construct and one endogenous construct. According to the ten-times rule, the minimum sample size should be greater than ten times the largest number of structural paths pointing at any endogenous construct. The final sample of 588 respondents exceeds this requirement and provides adequate statistical power (>0.80) to detect medium-sized effects at the 5% significance level. Table 1 presents the demographic characteristics of the respondents. The profile includes gender, age, education, monthly income, and occupation, providing an overview of the sample composition used for the empirical analysis.

Table 1. Demographic profile of respondents

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	328	55.8
	Female	260	44.2
	Total	588	100.0
Age (Years)	18–25	184	31.3
	26–35	173	29.4
	36–45	119	20.2
	46–55	74	12.6
	Above 55	38	6.5
	Total	588	100.0
Education	Higher Secondary	86	14.6
	Graduate	242	41.2
	Postgraduate	211	35.9
	Doctorate	49	8.3
	Total	588	100.0
Monthly income (₹)	Below 25,000	141	24.0
	25,001–50,000	194	33.0
	50,001–75,000	132	22.4
	75,001–100,000	76	12.9
	Above 100,000	45	7.7
	Total	588	100.0
Occupation	Student	128	21.8
	Private Employee	246	41.8
	Government Employee	82	13.9
	Self-employed	91	15.5
	Homemaker/Others	41	7.0
	Total	588	100.0

Source: Authors' own calculation

3.3. Measurement of constructs

All constructs were measured using previously validated scales adapted from established studies, as shown in Table 2. Responses were recorded using a five-point Likert scale ranging from 1 ("Strongly Disagree") to 5 ("Strongly Agree"). Minor wording adjustments were made to improve contextual relevance without altering the meaning of the original items.

Table 2. Construct measurement and sources

Construct	Dimensions	Items	Measurement Specification	Source
CSR Perception (CSRP)	Economic (ECSR), Legal (LCSR), Ethical (ETCSR), and Philanthropic (PCSR)	16	Multidimensional, reflective–reflective	Carroll (1991); Maignan (2001); Fatma et al. (2015)
Perceived Greenwashing (PGW)	Misleading Claims (MEC), Lack of Transparency (LT), Irrelevant Claims (IEC), Unsubstantiated Claims (UEC)	12	Multidimensional, reflective–reflective	Delmas and Burbano (2011); TerraChoice (2010); De Freitas Netto et al. (2020)
Consumer Scepticism (CS)	Unidimensional (CS 1 & 2)	2	Unidimensional, reflective	Obermiller and Spangenberg (1998)
Brand Loyalty (BL)	Unidimensional (BLOY 1-4)	4	Unidimensional, reflective	Chaudhuri and Holbrook (2001); Yoo and Donthu (2001)

Source: Authors' own work

3.4. Higher-order construct specification:

CSRP and PGW were modelled as reflective–reflective higher-order constructs using the repeated indicator approach in PLS-SEM (Becker et al., 2012; Hair et al., 2022). CSRP comprises four reflective first-order dimensions (economic, legal, ethical, and philanthropic

CSR). In comparison, PGW comprises four reflective first-order dimensions (misleading claims, lack of transparency, irrelevant claims, and unsubstantiated claims). A reflective specification was adopted because the first-order dimensions represent manifestations of their respective higher-order constructs and are expected to covary.

3.5. Common method bias and data analyses

To minimise common method bias (CMB), both procedural and statistical remedies were employed (Podsakoff et al., 2003). Respondents were assured of anonymity and confidentiality, and questionnaire items were carefully sequenced to minimise response bias. Statistically, Harman's single-factor test indicated that no single factor accounted for the majority of the variance. In addition, following Kock (2015), a full collinearity assessment was conducted. As shown in Table 3, the full collinearity VIF values ranged from 1.430 to 2.034, all below the recommended threshold of 3.3, indicating that common method bias is unlikely to threaten the validity of the study.

Table 3. Full collinearity assessment for common method bias

Construct	Full Collinearity VIF
Brand Loyalty (BL)	1.557
Consumer Scepticism (CS)	1.430
CSR Perception (CSRP)	2.029
Perceived Greenwashing (PGW)	2.034

Source: Authors' own analysis using PLS-SEM 3

The proposed model was analysed by using Partial Least Squares Structural Equation Modelling (PLS-SEM) in SmartPLS. The analysis was carried out in two stages as suggested by Hair et al. (2022). The measurement model was first evaluated through reliability and validity. Second, the structural model was tested using path coefficients, coefficients of determination (R²), mediation and moderation analyses, and bootstrapping with 5,000 resamples.

4. Analysis and results

The proposed model is evaluated using Partial Least Squares Structural Equation Modelling (PLS-SEM) in SmartPLS, following the two-stage analytical procedure recommended by Hair et al. (2022). In the assessment, the measurement and structural models are evaluated. The measurement model was assessed by indicator reliability, internal consistency reliability, convergent validity, discriminant validity and collinearity diagnostics. To test the proposed hypotheses, mediation relationships, moderation relationships, and the explanatory power of the structural model, bootstrapping with 5,000 resamples is used.

4.1. Measurement model assessment

Outer loadings are used to assess indicator reliability. Hair et al. (2022) recommend loadings greater than 0.70. All indicators were above the threshold, as shown in Table 4, with values ranging from 0.733 to 0.924, confirming their good reliability.

Internal consistency reliability was evaluated by Cronbach's alpha and Composite Reliability (CR). All Cronbach's alpha values were above the recommended cut-off of 0.70, ranging from 0.707 to 0.895, as shown in Table 4. Similarly, the CR values range from 0.868 to 0.922, exceeding the recommended minimum of 0.70 (Nunnally & Bernstein, 1994). Average Variance Extracted (AVE) was used to assess convergent validity. AVE values range from 0.629 to 0.768, all above the threshold of 0.50, which signifies adequate convergent validity (Fornell & Larcker, 1981).

Table 4. Outer loadings and internal consistency reliability

Construct	Indicator	Outer Loading	Cronbach's Alpha	rho_A	Composite Reliability	AVE
BL	BL1	0.787	0.804	0.806	0.871	0.629
	BL2	0.789				
	BL3	0.784				
	BL4	0.812				
CS	CS1	0.917	0.716	0.760	0.873	0.775
	CS2	0.842				
ECSR	ECSR1	0.866	0.895	0.900	0.922	0.705
	ECSR2	0.870				
	ECSR3	0.775				
	ECSR4	0.810				
	ECSR5	0.871				
ETCSR	ETCSR1	0.781	0.837	0.840	0.891	0.671
	ETCSR2	0.846				
	ETCSR3	0.819				
	ETCSR4	0.831				
IEC	IEC1	0.819	0.795	0.819	0.879	0.709
	IEC2	0.790				
	IEC3	0.913				
LCSR	LCSR1	0.826	0.819	0.820	0.880	0.647
	LCSR2	0.795				
	LCSR3	0.818				
	LCSR4	0.779				
LT	LT1	0.909	0.814	0.886	0.886	0.723
	LT2	0.738				
	LT3	0.894				
MEC	MEC1	0.826	0.707	0.780	0.868	0.768
	MEC2	0.924				
PCSR	PCSR1	0.868	0.775	0.775	0.869	0.690
	PCSR2	0.835				
	PCSR3	0.786				
UEC	UEC1	0.791	0.842	1.044	0.882	0.653
	UEC2	0.817				
	UEC3	0.884				
	UEC4	0.733				

Source: Authors' own analysis using PLS-SEM 3

Discriminant validity was assessed using the Fornell–Larcker criterion (Table 5) and the Heterotrait–Monotrait ratio (HTMT) (Table 6). As presented in Table 6, all HTMT values were below the recommended threshold of 0.85, indicating satisfactory discriminant validity among the study constructs (Henseler et al., 2015). The Fornell–Larcker criterion further confirmed that the square root of the AVE for each construct exceeded its correlations with other constructs, supporting the distinctiveness of the latent variables.

Table 5. Fornell–Larcker criterion

	BL	CS	ECSR	ETCSR	IEC	LCSR	LT	MEC	PCSR	UEC
BL	0.793									
CS	0.214	0.880								
ECSR	0.427	0.328	0.839							
ETCSR	0.381	0.537	0.469	0.819						
IEC	0.357	0.343	0.306	0.182	0.842					
LCSR	0.319	0.352	0.246	0.177	0.379	0.805				
LT	0.538	0.405	0.432	0.543	0.425	0.342	0.851			
MEC	0.344	0.293	0.300	0.406	0.169	0.330	0.443	0.876		
PCSR	0.457	0.392	0.539	0.628	0.359	0.450	0.534	0.353	0.830	
UEC	0.160	0.141	0.227	0.216	0.129	0.065	0.162	0.145	0.256	0.808

Source: Authors' own analysis using SmartPLS 3.

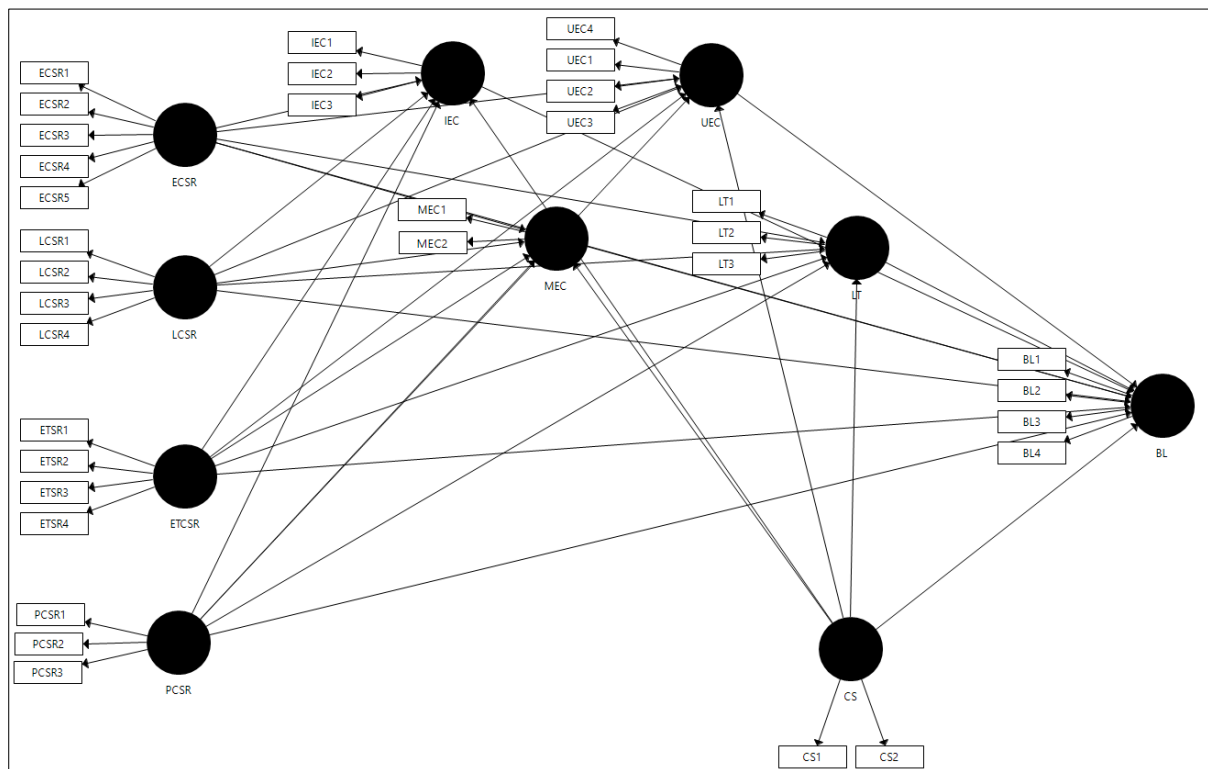
Table 6. Heterotrait–Monotrait ratio (HTMT)

Construct	BL	CS	ECSR	ETCSR	IEC	LCSR	LT	MEC	PCSR	UEC
BL	–									
CS	0.278	–								
ECSR	0.498	0.402	–							
ETCSR	0.458	0.691	0.539	–						
IEC	0.445	0.423	0.357	0.217	–					
LCSR	0.388	0.477	0.280	0.206	0.447	–				
LT	0.616	0.546	0.478	0.629	0.512	0.411	–			
MEC	0.445	0.388	0.368	0.512	0.199	0.411	0.600	–		
PCSR	0.577	0.526	0.648	0.768	0.439	0.561	0.612	0.461	–	
UEC	0.167	0.162	0.244	0.208	0.137	0.089	0.164	0.184	0.241	–

Source: Authors' own analysis using SmartPLS 3.

Since CSR Perception and perceived greenwashing exhibited a significant structural relationship, discriminant validity was carefully assessed. The Fornell–Larcker criterion and HTMT values confirmed that the two constructs were empirically distinct, indicating that the observed relationship was not due to construct overlap.

In summary, the measurement model results indicate good reliability, convergent validity, and discriminant validity (see Figure 1).

**Figure 1:** Measurement model

4.2. Structural model assessment

Following assessment of the measurement model, the structural model is evaluated for collinearity, explanatory power, effect sizes, and model fit. Bootstrapping with 5,000 resamples is used to assess the significance of the hypothesised associations (Hair et al., 2022). The structural relationships examined in the model are presented in Figure 2.

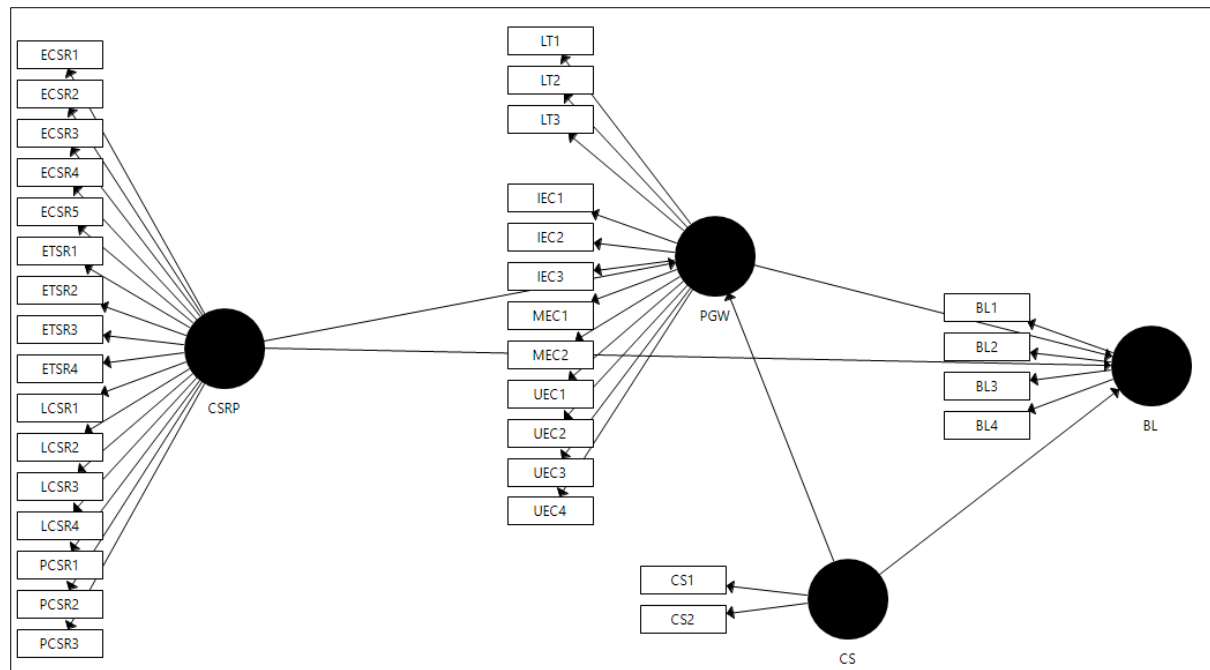


Figure 2. Structural model and mediation pathways

4.2.1. Collinearity assessment

Collinearity was checked using the Variance Inflation Factor (VIF). The VIF values ranged from 1.338 to 3.374 (Table 7) and were below the recommended threshold of 5.0 (Hair et al., 2022). Hence, multicollinearity was not considered a concern.

Table 7. Collinearity Statistics

Minimum VIF	Maximum VIF
1.338	3.374

Source: Authors' own analysis using PLS-SEM 3

4.2.2. Explanatory power

The explanatory power of the endogenous constructs is assessed using R^2 , as shown in Table 8. The model explains 46.6% of the variance in PGW and 35.8% in BL, indicating moderate explanatory power (Hair et al., 2022).

Table 8. Explanatory power

Endogenous Construct	R^2	Adjusted R^2	Interpretation
Perceived Greenwashing (PGW)	0.466	0.465	Moderate
Brand Loyalty (BL)	0.358	0.356	Moderate

Source: Authors' own analysis using PLS-SEM 3

Table 9. Effect size

Structural Relationship	f^2	Interpretation
CS → BL	0.014	Negligible
CS → PGW	0.047	Small
CSRP → BL	0.066	Small
CSRP → PGW	0.327	Large
PGW → BL	0.134	Small
CSRP × CS → BL	0.021	Small

Source: Authors' own analysis using PLS-SEM 3

4.2.3. Effect size

Effect sizes (f^2) are calculated to assess the contribution of individual predictors to the explained variance of endogenous constructs, as shown in Table 9. Following Cohen (1988), f^2 values of 0.02, 0.15, and 0.35 indicate small, medium, and large effects, respectively. CSRP

shows a large association with PGW ($f^2 = 0.327$), whereas its association with BL was small ($f^2 = 0.066$). PGW shows a small effect on BL ($f^2 = 0.134$), while the CS $\times$ CSRP interaction on BL was also small ($f^2 = 0.021$).

4.2.4. Predictive relevance

Predictive relevance is assessed using the Stone–Geisser Q^2 criterion. The results show positive Q^2 values for both endogenous constructs: $Q^2 = 0.132$ for perceived greenwashing (PGW) and $Q^2 = 0.229$ for brand loyalty (BL), as shown in Table 10. As both values exceed zero, the model demonstrates predictive relevance for the endogenous constructs (Hair et al., 2022).

Table 10. Predictive relevance

Construct	SSO	SSE	Q^2
BL	2352.000	1814.114	0.229
CS	1176.000	1176.000	—
CSRP	9408.000	9408.000	—
PGW	7056.000	6126.596	0.132

Source: Authors' own analysis using PLS-SEM 3

4.3. Mediation analysis

The relationship between CSRP and BL is examined using bootstrapping, as shown in Table 11. The indirect association between CSRP and BL through PGW was positive and statistically significant ($\beta = 0.241$, $t = 7.657$, $p < .001$, 95% CI [0.184, 0.308]). The direct association between CSRP and BL was also positive and statistically significant ($\beta = 0.335$, $t = 6.130$, $p < .001$, 95% CI [0.224, 0.438]), while the total association was significant ($\beta = 0.576$, $t = 12.799$, $p < .001$, 95% CI [0.485, 0.661]). As both the direct and indirect associations were positive and statistically significant, the results support complementary partial mediation (Zhao et al., 2010), thereby supporting H4. An additional indirect association between CS and BL, mediated by Perceived Greenwashing, was also statistically significant ($\beta = 0.063$, $t = 3.481$, $p = .001$, 95% CI [0.031, 0.100]). However, this pathway was not specified as a mediation relationship because CS was theoretically conceptualised as a moderating variable. Accordingly, this finding is treated as an additional indirect association rather than as a hypothesised mediation relationship.

Table 11. Direct, indirect, and total effects

Effect	Path	β	t	p	2.5%	97.5%
Direct	CS $\rightarrow$ BL	-0.153	4.623	<.001	-0.221	-0.090
Direct	CS $\rightarrow$ PGW	0.153	3.951	<.001	0.079	0.230
Direct	CSRP $\rightarrow$ BL	0.335	6.130	<.001	0.224	0.438
Direct	CSRP $\rightarrow$ PGW	0.589	16.275	<.001	0.518	0.660
Direct	PGW $\rightarrow$ BL	0.409	9.001	<.001	0.321	0.501
Indirect	CS $\rightarrow$ PGW $\rightarrow$ BL	0.063	3.481	.001	0.031	0.100
Indirect	CSRP $\rightarrow$ PGW $\rightarrow$ BL	0.241	7.657	<.001	0.184	0.308
Total	CS $\rightarrow$ BL	-0.091	2.541	.011	-0.163	-0.023
Total	CSRP $\rightarrow$ BL	0.576	12.799	<.001	0.485	0.661

Note: β = path coefficient; CI = confidence interval. Results are based on bootstrapping with 5,000 resamples.

Source: Authors' own analysis using PLS-SEM 3

4.4. Moderation analysis

Consumer scepticism was examined as a moderator of the relationships between CSRP and PGW and between CSRP and BL, as illustrated in Figure 3 and reported in Table 12. The interaction between CSR perception and consumer scepticism is not significant for perceived greenwashing ($\beta = 0.020$, $t = 0.677$, $p = 0.685$), indicating that H7 was not supported. In contrast, the interaction is positive and significant for brand loyalty ($\beta = 0.097$, $t = 2.026$, $p =$

0.043), supporting H8. Thus, consumer scepticism significantly moderates the positive association between CSR perception and brand loyalty, whereas it does not significantly alter the CSR perception–perceived greenwashing relationship. The significant interaction shows a small effect size ($f^2 = 0.021$).

Table 12. Moderation result

Interaction Path	β	t	p	Decision	LLCI	ULCI
CSRP $\times$ CS $\rightarrow$ PGW	0.020	0.677	0.685	Not Supported	-0.052	0.069
CSRP $\times$ CS $\rightarrow$ BL	0.097	2.026	0.043	Supported	0.034	0.175

Source: Authors' own analysis using PLS-SEM 3

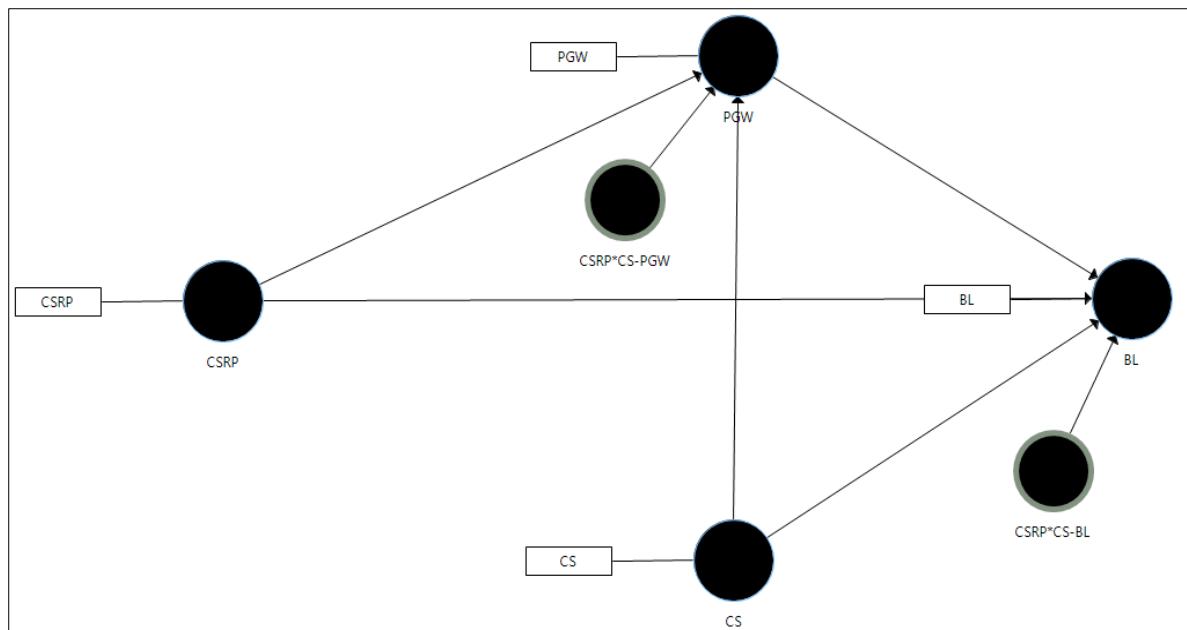


Figure 3. Moderation model of consumer scepticism

4.5. Summary of hypothesis testing

Table 13 summarises the results of all proposed hypotheses, including the corresponding path coefficients, significance levels, and the final decision regarding hypothesis support.

Table 13. Summary of hypothesis testing

Hypothesis	Relationship	β	t-value	p-value	Decision
H1	CSRP $\rightarrow$ BL	0.335	6.130	< .001	Supported
H2	CSRP $\rightarrow$ PGW	0.589	16.275	< .001	Supported
H3	PGW $\rightarrow$ BL	0.409	9.001	< .001	Supported
H4	CSRP $\rightarrow$ PGW $\rightarrow$ BL	0.241	7.657	< .001	Supported
H5	CS $\rightarrow$ PGW	0.153	3.951	< .001	Supported
H6	CS $\rightarrow$ BL	-0.153	4.623	< .001	Supported
H7	CSRP $\times$ CS $\rightarrow$ PGW	0.020	0.677	.685	Not Supported
H8	CSRP $\times$ CS $\rightarrow$ BL	0.097	2.026	.043	Supported

Source: Authors' own analysis using PLS-SEM 3

5. Discussion

The study examined the association between CSRP and BL, with PGW as a mediating mechanism and CS as a moderating condition in the Indian FMCG sector. The findings also provide valuable insights into how consumers evaluate CSR initiatives and how these evaluations are associated with loyalty outcome, drawing on stakeholder, signalling, and attribution theories.

The results indicate that CSR perception is positively associated with brand loyalty, consistent with previous studies that view CSR as a strategic mechanism to strengthen the consumer–brand relationship (Du et al., 2010; Pérez & Rodríguez del Bosque, 2015). Stakeholder theory suggests that organisations fulfilling their economic, legal, ethical and philanthropic responsibilities create value to stakeholders and are likely to have consumer support and commitment. The FMCG sector is highly competitive with low switching costs, so CSR initiatives serve as a key differentiator and are associated with consumer attachment and long-term loyalty. This finding reinforces Stakeholder theory by suggesting that fulfilling stakeholder expectations is associated with stronger long-term consumer relationships (Freeman, 1984).

The positive association between CSR perception and perceived greenwashing suggests that greater CSR visibility may also increase consumers' scrutiny of corporate claims. In Signalling theory, CSR communication functions as an organisational signal that reduces information asymmetry, but its effectiveness depends on how receivers interpret it (Connelly et al., 2011). As CSR claims become more visible, consumers have more information against which to evaluate corporate behaviour. Attribution theory suggests that consumers subsequently assess whether CSR initiatives reflect genuine organisational motives or strategic self-presentation (Kelley, 1973). The Persuasion Knowledge Model further explains that consumers can recognise persuasive intent and use such knowledge to evaluate marketing claims more critically (Friestad & Wright, 1994). Thus, stronger CSR perceptions may be associated with higher levels of perceived greenwashing when greater exposure prompts consumers to compare CSR claims with observable corporate behaviour. The finding, therefore, reflects a possible scrutiny effect rather than evidence that CSR itself causes greenwashing.

An unexpected finding is the positive association between perceived greenwashing and brand loyalty ($\beta = 0.409$), contrary to prior evidence that greenwashing generally undermines trust and favourable consumer responses (Chen & Chang, 2013; Nyilasy et al., 2014). This result should not be interpreted as evidence that greenwashing strengthens loyalty. Rather, it may reflect the low-involvement nature of FMCG purchasing, where habitual consumption, familiarity, convenience, price and product availability can sustain repeat purchases even when consumers question CSR claims. From an Attribution theory perspective, consumers may attribute CSR communication to strategic motives while separately evaluating the brand's functional performance (Kelley, 1973). Signalling theory further suggests that consumers may recognise weaknesses in CSR signals without immediately abandoning a familiar brand, particularly when alternative brands offer limited functional differentiation (Connelly et al., 2011). Thus, perceived greenwashing and brand loyalty may coexist when functional brand experience appears to be more closely associated with loyalty than concerns about CSR authenticity. This context-specific explanation is exploratory and should not be generalised beyond low-involvement FMCG settings.

The results also indicate a significant positive association between perceived greenwashing and brand loyalty. This finding is one of the study's main contributions. Previous CSR research has mainly focused on direct relationships between CSR and positive consumer outcomes, with little attention to the psychological mechanisms underlying these associations (Fatma & Rahman, 2016). The current findings suggest that consumers do not automatically reward firms for undertaking CSR activities. Instead, they assess the truthfulness and credibility of CSR initiatives, with perceptions of CSR associated with brand loyalty. This result is consistent with Signalling theory, which posits that organisational signals are more likely to elicit favourable stakeholder responses when perceived as credible (Connelly et al., 2011). The significant direct and indirect relationships indicate complementary partial

mediation, suggesting that CSR authenticity evaluations are relevant to consumers' brand loyalty judgements (Zhao et al., 2010).

The study also finds that consumer scepticism is positively associated with perceived greenwashing and negatively associated with brand loyalty. These results are in line with previous research suggesting that sceptical consumers process information more critically and are less likely to accept corporate claims uncritically (Forehand & Grier, 2003; Obermiller & Spangenberg, 1998). Attribution theory suggests that sceptical consumers may scrutinise the organisation's motives and identify dissonance between the messages conveyed and the actual behaviour. Therefore, higher levels of consumer scepticism are associated with stronger perceptions of greenwashing and lower levels of brand loyalty.

The study's contribution lies in examining the boundary condition of CSR effectiveness in terms of consumer scepticism. The results indicate that consumer scepticism significantly moderates the relationship between CSR perception and brand loyalty. This indicates that higher levels of consumer scepticism are associated with greater importance placed on CSR-related information. According to Signalling theory, sceptical consumers require stronger and more credible signals to form favourable evaluations. In this sense, the positive association between CSR perception and loyalty is stronger among more sceptical consumers. This suggests that the positive association between CSR perception and brand loyalty is more pronounced when CSR initiatives are perceived as credible by more sceptical consumers. However, consumer scepticism did not significantly moderate the relationship between CSR perception and perceived greenwashing. The finding suggests that perceptions of greenwashing are more closely associated with assessments of organisational authenticity than with individual differences in scepticism. Regardless of their general level of scepticism, consumers are likely to perceive an organisation as greenwashing if they see a discrepancy between its CSR messages and its actual actions. Thus, organisational authenticity is more closely associated with perceptions of greenwashing than individual scepticism.

In conclusion, the relationship between CSR perceptions and consumer outcomes depends partly on perceived authenticity. Perceived greenwashing explains how CSR perception relates to brand loyalty, while consumer scepticism shapes this relationship. The unexpected positive PGW–BL association appears context-specific to the Indian FMCG market and warrants further investigation.

6. Implications

6.1. Theoretical implications

This study contributes some key findings to the CSR literature. It first contributes to stakeholder theory by showing that consumers' responses to CSR efforts depend not only on the presence of socially responsible actions but also on their perceived authenticity. The findings suggest that organisations cannot expect to generate positive stakeholder reactions simply by engaging in CSR. Rather, consumers actively assess the authenticity of CSR initiatives to form loyalty judgements. Second, the study extends the Signalling theory by identifying perceived greenwashing as an important psychological mechanism through which CSR signals relate to consumer behaviour. The present findings show that CSR activities yield desirable outcomes only if consumers perceive the signals conveyed as credible and trustworthy. In contrast, previous studies have predominantly focused on the direct effects of CSR. Third, the study contributes to Attribution theory by demonstrating how consumers attribute motives to CSR activities and how such attributions relate to perceptions of greenwashing and loyalty. By integrating stakeholder, signalling, and attribution theories into a single framework, the study offers a more comprehensive account of the cognitive

mechanisms behind CSR effectiveness. Furthermore, the study contributes to the scant CSR research in the Indian FMCG context by providing evidence from this sector.

6.2. Managerial implications

The findings have several practical implications for management. First, organisations need to understand that CSR initiatives alone may not be sufficient to sustain favourable consumer–brand relationships. Consumers are becoming more concerned with the credibility and authenticity of CSR communication and may react negatively to perceived inconsistencies between corporate claims and actual practices. Second, firms should focus on transparency and accountability in sustainability communication. Evidence-based information, quantifiable results, and third-party certifications can reduce perceptions of greenwashing and contribute to greater consumer confidence. Finally, managers should be particularly mindful of sceptical consumers, as this segment is very dependent on CSR-related information when evaluating brands. Embedding CSR into core business operations, rather than treating it as a promotional activity, may enhance perceived credibility and support long-term consumer–brand relationships.

7. Conclusion, limitations, and future research

7.1. Conclusion

This study examines the relationship between CSRP and BL, with PGW as a mediating process, and CS as a moderating factor in the Indian FMCG industry. The findings, drawing on Stakeholder, Signalling, and Attribution theories, show that perceptions of CSR are significantly associated with perceived greenwashing and brand loyalty. The results also show that perceived greenwashing partially mediates the relationship between CSR perception and brand loyalty. Interestingly, the study also identified a positive association between perceived greenwashing and brand loyalty, which differs from the predominantly negative relationship reported in previous studies (Chen & Chang, 2013; Nyilasy et al., 2014; Lyon & Montgomery, 2015). Rather than suggesting that greenwashing enhances loyalty, this finding appears to reflect the specific characteristics of the Indian FMCG market, where habitual purchasing, brand familiarity, and product convenience may reduce the immediate behavioural consequences of consumers' doubts regarding CSR authenticity. Accordingly, this finding should be interpreted as a context-specific association warranting further investigation across other product categories and cultural settings. This implies that consumers assess the authenticity and credibility of CSR initiatives before translating their perceptions of CSR into loyalty behaviour. The results also show that consumer scepticism was positively associated with perceived greenwashing and negatively associated with brand loyalty, and that it strengthened the association between CSR perception and brand loyalty. Overall, the results suggest that the success of CSR programs depends not only on implementing them. It also depends on how consumers perceive their honesty and the reasons behind it. Therefore, authenticity is a crucial determinant of successful CSR outcomes in today's consumer markets. These findings have implications for researchers, FMCG managers, sustainability practitioners, and policymakers. For managers, they highlight the importance of credible and transparent CSR communication; for researchers, they provide a basis for examining perceived greenwashing and consumer scepticism in other contexts; and for policymakers, they underscore the need to strengthen transparency and accountability in CSR communication.

7.2. Limitations

It is, however, limited in some aspects despite its contribution. Firstly, the cross-sectional nature of the research design limits the ability to establish causal relationships between the constructs. Consumer perceptions of CSR and greenwashing may change over

time as organisations change their sustainability strategies and communication practices. Second, the study employs convenience sampling from only two eastern Indian states (West Bengal and Odisha). Therefore, the findings should be interpreted within this regional context and not generalised to the entire Indian population without further validation with broader, more representative samples. Third, self-reported survey data may be subject to social desirability bias, despite the use of procedural and statistical techniques to reduce common method bias. Finally, the study considers only perceived greenwashing as the mediating mechanism and consumer scepticism as a moderating variable, although other psychological factors may also relate to the CSR–loyalty relationship. Accordingly, the findings should therefore be interpreted as associations rather than causal relationships.

7.3. Future research directions

Future research should employ longitudinal or experimental research designs to provide stronger evidence of causal relationships and to capture changes in consumer perceptions over time. The researchers may also replicate the study in other sectors, such as banking, hospitality, healthcare and e-commerce, to evaluate the generalisability of the findings. In addition, future research may explore other mediators, such as brand trust, corporate reputation, consumer–brand identification, and brand authenticity, to better explain how consumers respond to CSR activities. From a moderating perspective, variables such as environmental concern, CSR awareness, sustainability knowledge, consumer cynicism, and perceived corporate transparency could offer useful insights into the conditions under which CSR relates to consumer behaviour. Such investigations would increase understanding of the effectiveness of CSR and contribute to the development of sustainable consumer–brand relationships.

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