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Consumers' Environmental Concern and Green Consumerism: Do the Normative Environmental Roles of Stakeholders Matter?

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Abstract

Consumers are increasingly valuing environmental concern and green consumerism to drive the positive roles of stakeholders. However, the intervening normative roles of regulatory bodies, companies, and distributors remain challenging, signalling for evidence-based investigation. This study examines normative environmental roles of stakeholders' effect on consumers environmental concern and green consumerism. A theoretical model is proposed that tests how normative environmental roles mediates between consumers' concern for environment and green consumerism. Using quasi-systematic sampling data of 202 consumers across China, the empirical findings of structural equations modelling proved the perceived environmental roles of regulatory bodies and intermediaries significantly mediate the relationship between consumers' concern for the environment and green consumerism. Consumers' environmental concern is also found to have substantial and direct effects on the normative environmental roles of stakeholders. However, contrary to the predicted model, the intervening normative roles of company CSR were found insignificant between ecological concerns and green behavior adoption. The findings reveal that normative environmental roles of the government and intermediaries, unlike the roles perceived by companies, effect green consumerism. Contributions to green consumerism theory, including the direct and intervening normative roles of environmental stakeholders, cited research roadmaps, and managerial implications.

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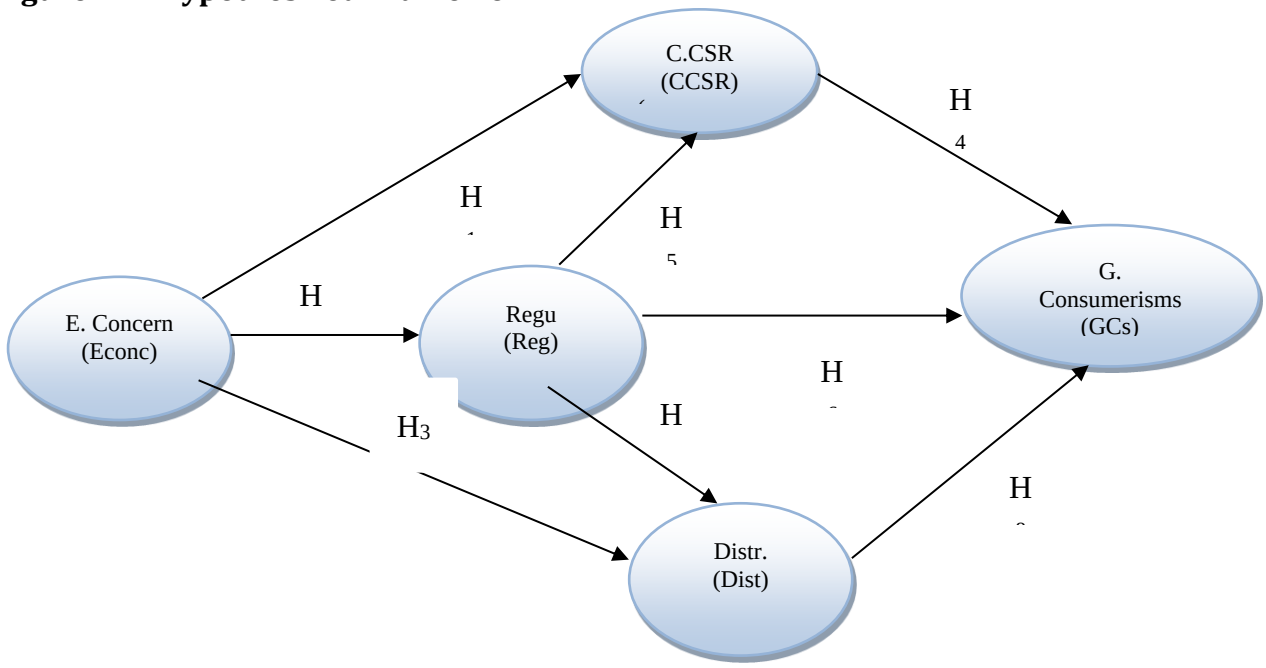
1. Introduction

Environmentally conscious consumer behavior is becoming more popular. Many studies, however, show that there are disconnects between consumers' sentiments regarding green products and their purchase habits. It's crucial to understand these gaps to increase market demand for green products (Sivapalan et al., 2021). Green consumerism is becoming a must rather than a choice. It is closely related to consumers' selection and adaptation to a green lifestyle to improve their wellbeing (Sivapalan et al., 2021; Clark et al., 2019). The willingness of customers to aid the environment is characterized as green consumerism (Hojnik et al., 2020; Harris, 2006). The options for green products/services have been a critical input for firms adopting their developmental plan and regulations (Hojnik et al., 2020). Although every environmental stakeholder claims to adopt eco-friendly policies and practices, non-green operations seemingly engulfed and affected consumers' wellbeing. Modernization has raised evident burdens of pollution, overuse of energy, resource depletion (Wu et al., 2015), and declining environmental performance that spearhead to a green economy and pro-environmental operations (Li et al., 2019; Song et al., 2018). Despite the call for green efforts and systematizing environmental protection and ecological conservation; yet, some environmental challenges persist. In line with this suggestion, consumers have extreme concerns about overall environmental degradation and pollution (Singh & Thakara, 2018). Morgan et al. (2018) affirm that environmental stakeholders keep sensing, analyzing, and attaining customers' demand as a crucial success factor in marketing. Consumers seemingly observe some improvements in handling the environment; however, the prevailing environmental degradation greatly influences its accuracy on the ground. More than ever, customers seek to adopt green consumerism, promoting a healthy lifestyle that pressures environmental actors to stand on eco-friendly principles. Past studies have shown consumers' ecological concern effect on promoting eco-friendliness (Trivedi et al., 2018); enhancing green purchase intentions (Indriani et al., 2019); impact of consumers' environmental responsibility on green consumption (Yue et al., 2020). Overall, the existing literature suggests that consumer environmental concern significantly influences green products/services delivery. However, strands of research rarely examined the mediating effect of environmental stakeholders' roles in adopting green consumerism. For instance, Yue et al. (2020) suggest investigating the mediating impact of environmental policy interventions on green consumption. Other scholars also extended calls for research, such as Sajeewanie et al. (2019) suggest further research integrating internal and external factors in adopting green behavior. Emekci (2019) and Sharma & Joshi (2017) also set a research agenda on the roles of consumers in influencing environmental actors to address the alarming depleting nature of the natural environment. Thus, the present study responds to some of the research gaps and intends to widen our insight into mediating effects of stakeholders' perceived environmental roles between consumers' ecological concern and green consumerism. Its key objective is to assess whether stakeholders' perceived environmental roles (company CSR, regulatory bodies, and distributors) mediate the effect of enhancing consumers' adoption of green consumerism and ecological concern. The hypothesized conceptual framework integrates the environmental perceived roles of companies, distributors, and regulatory bodies mediating between consumers' environmental concerns and green consumerism. It attempted to analyze the antecedents of green consumerism (GCs) as a critical input for sustainability following the calls for a study. For instance, a survey was conducted on the extent of consumers' adoption of green consumerism and level of eco-friendliness (Arminda et al., 2020). The study's mediating variables are the ecological perceived roles of stakeholders between green consumerism and consumers' environmental concern. Regulatory bodies (Regu) initiate ecological policies, regulations,

promotion, and enforcement to contribute to consumers' wellbeing. Trivedi et al. (2020) suggest that the regulatory body takes sound and corrective actions for green malpractices. Distributors make green offers accessible and promote and convince end-users for sustained green offers. Green distributors (Distr) integrate ecological concerns; minimize packaging waste, and deliver green products/services to consumers' green lifestyle and sustainability (Mwaura, 2016). Green marketing grows its prominence with an ever-increasing environmental concern of consumers (Emekci, 2019); eco-concern (EConc) heightens ecological awareness and decisions for green buying behavior. Therefore, Figure A.1 represents the study's hypothesized model.

Figure A.1: Hypothesized Framework



1.Theoretical Framework and Hypotheses Development

2.1 Normative Theory

The normative theory got prominence in business ethics as support and rationale in decision making. It is pertinent to issues describing legal and regulatory structures governing responsibilities, contracts, property, corporations, environment, patents, consumer relations, and others (Bishop, 2000). Discrepancies in actions are likely to happen depending on the context; thus, normative theory recommends as it ought to be claimed for societal good. It signifies standards of moral (ethical) evaluation of actions, potential actions, social structure, or policies. The normative theory elaborates on seven moral principles. The first three are values, the basis for ethics, and underlying principles for decisions. The following principles include an agent's decision as it ought to be, specifying scope, context, and structures (Bishop, 2000). The theory underlies a vital role of decision principles ought to act in various real-world situations such as decisions to adopt green operations and regulations in favor of environmental sustainability. Consumers prefer values associated with honesty, integrity, loyalty, no harm, and respect for the environment. Fundamentally, normative principles directly appeal to a logical flow of decency or genuine moral sense beyond egoistic or self-interest (Schwartz, 1998). Specifying the agent to pursue the normative theory essentially applies decisions and policies that influence stakeholders, society, regulatory bodies, corporations, government, intermediaries, and others. The business decisions must be

constrained to maximize utility 'confirming the basic rules of society, both embodied in law and those embodied in ethical custom' (Friedman, 1970:138). It also notes perspectives, scope, and context under which the decisions address environmental or developmental challenges, such as pollution, degradation, and offering non-green products/services. Thus, the study suggests examining the mediating normative roles of environmental actors (regulatory, company, and distributors) in promoting or affecting consumers' eco-concerns and adopting green consumerism.

2.2 New Environmental Paradigm (NEP): Measuring Environmental Concerns

The New Ecological Paradigm (NEP) is the brainchild of Dunlap (2008) that helped understand and challenge the current environmental imbalances. It conceptualizes humans can easily disturb eco-balance, face limits to growth, and have the right to rule nature (Dunlap et al., 2000). Humphrey et al. (2002) argue humans can influence development through human ecology, urban and rural sociology, and environmental initiatives. According to Rockeach (1986), the root of NEP is the human belief system contingent on physical, social, and natural realities. Besides, humans' psychological aspects play a significant role in the NEP decision-making and choice depending on purposes, attitudes, and behavioral intentions. The tool gained importance in evaluating consumers' perception of environmental attitude, awareness, actions, and severity to endanger ecological imbalances (Ntanos et al., 2019; Azjen & Fishbein, 1980; Catton and Dunlap, 1978). Therefore, using the NEP as a tool for measuring consumers' environmental concerns. Furthermore, Park et al. (2018) outlined the benefits of NEP for assessing demand and information for sustainability, capacity to imply policy implications, and validating and suggesting behavioral implications. The normative theory argues that consumers' ecological concern depends on their deeply held values and how they originate in life, such as pro-environmental attitudes. Therefore, consumers' environmental concerns likely influence roles and decision principles for environmental stakeholders to adopt green operations and regulations in favor of environmental sustainability. Consequently, it suggests the following hypotheses:

H_1: Consumers' environmental concern (Econc) significantly influences company CSR perceived roles (CCSR).

H_2: Consumers' environmental concern (Econc) significantly influences the regulatory's perceived roles (Regu).

H_3: Consumers' environmental concern (Econc) significantly influences distributors' perceived roles (Dist).

2.3. Company CSR

The company's sustainability depends on the level and measures taken by its Corporate Social Responsibility (CSR) practices in an absolute sense. CSR has become a core business agenda in most companies reporting on popular, environmental, and social responsibilities (Montiel, 2008). And Carroll (1979:500) described CSR as 'the social responsibility of business encompasses the economic, legal, ethical and discretionary expectations that society has of organization at a given point of time.' The definitions are broad, yet, it refers to a company's positive response and engagement to social responsibilities, pursuing customer-related marketing in favor of building company image (Hydock et al., 2019); CSR practice uses marketing drivers and innovation for eco-performance (Kim et al., 2018; Orazi & Chan, 2018; Forbes, 2017). Companies promoting green operations exhibit environmental concerns and induce economic, legal, ethical, and philanthropic responsibility as perceived consumers. The normative theory (NT) predicts company ought to make decisions promoting green and eco-

friendly operations without harming the environment. Consumers expect decency or genuine moral sense beyond egoistic or self-interest (Schwartz, 1998) through a company's CSR programs. Following the above discussion, it hypothesizes that:

H_4: Perceived company's CSR (CompCSR) significantly impacts consumers' adoption of green consumerism (GCons).

2.3. Regulatory Bodies

Environmental policy or regulations ensures a company's proactive engagement in designing and implementing an eco-friendly business entity. Addressing environmental challenges requires a concerted effort from consumers, government, companies, regulatory, and environment monitoring entities. Sustainability marketing or green marketing has shown an uncompromised commitment and compliance with environmental policies aimed at future generations while generating enough profit for stakeholders and dignifying individual and societal wellbeing (Riboldazzi, 2016). However, with the exceeding level of consumption, our planet cannot sustain itself (Nilssen et al., 2018); it is an unresolved business that needs stakeholders' concerted efforts strategy to mitigate the deterioration of environmental concerns. Environmental regulatory bodies have a mandate to oversee eco-friendly laws and follow up on their enforcement. Regulatory bodies address green growth in the interest of the general public (Capasso et al., 2019; Cecere & Corrocher, 2016). A solid and coherent regulatory enforcement system contributes to concern for green growth (Capasso et al., 2019; Kunapatarawong & Martínez-Ros, 2016). The heart of sustainability depends on the role of branding and marketing (Nilssen et al., 2018. Given that very little research addresses business sustainability (Nilssen et al., 2018), corporate sustainability represents a green consumerism label in various green products, green brands for organic, and energy-saving (Kumar, 2014; Vermeir & Verbeke, 2008). Although progress towards eco-friendly operation seems remarkable, observations indicate attaining pro-environmental manufacturing/servicing seems unresolved homework. With the advent of regulatory measures, a company anticipates passing higher scrutiny depending on the magnitude of stakeholders' power and influence (Post et al. 2002), which become imputes to fulfill stakeholders' diverse needs. The theoretical lens (NT) suggests agencies (companies and distributors) essentially confirm rules, laws, and ethical standards (Friedman, 1970) following normative principles and decisions. Thus, the survey predicts

H_5: Regulatory bodies' perceived roles (Regu) significantly affect perceived company CSR (CCSR).

H_6: Regulatory bodies' perceived roles (Regu) significantly affect consumers' practicing green consumerism (GCons).

H_7: Regulatory bodies' perceived roles (Regu) have a significant effect on the perceived functions of distributors (Dist).

2.4 Distributors

Distributors are mediators or a channel that links companies, other intermediaries, and consumers. The role of distributors is significant in fulfilling consumers' green demands, intermediating companies, and end-users. Mulky (2013) describes a distribution channel as a pathway for manufacturers to reach the ultimate consumers. Some of the factors affecting distribution include consumers' demographics, psychographics, and travel distance to stores. Marketing channels make agreements with a group of independent firms on how a product or service becomes available for end-users' consumption (Kotler & Keller, 2012; Coelho & Easingwood, 2008). Besides, Toopgajank et al. (2019) describe companies strategizing on

environmental management, green packaging, accounting, and distribution to analyze their impact on the environment, economic, and social performance.

Although companies can directly deal with customers, most companies opt to deploy distribution channels for efficiency purposes. The design and management of channels serve to attain intended goals, such as delivering green products/services on time. According to Mulky (2013), distributors' endeavors consist of three categories: engaged in promotion, facilitating demands, and delivering products and services. The NT specifies the distributor's actions and decisions to follow normative principles within a limited scope, context, and structures (Bishop, 2000).

H_8: Distributors' perceived roles (Dist) significantly affect consumers' practicing green consumerism (GCons).

2.5 Green Consumerism

Green consumerism portrays a self-regulate and efficiency contributing to pro-environment responsibilities, ethical consumption, reuse, reduce energy utilization, and recycling solutions. The concept of green consumerism is an emerging science and getting prominence following the prevailing environmental chaos. Environmental concern has been everybody's priority as imputes for worldwide green consumerism movement. Anderson and Cunningham (1972) are assumed among the pioneers of green consumerism, emphasizing societal and environmental welfare. The classical definition of green consumerism is a consumer's eco-friendly characteristics and concern for the environment (Henion & Wilson, 1976; Wiener & Doesher, 1991). It also infers a green behavior that prioritizes environmental and social issues during their purchase or non-purchase decisions. It determines consumers' attitude towards green products/services, perceived adoption of greenness, and the extent of its application in the future, emphasizing the magnitude of green from non-green behaviors. Sajeewanie et al. (2019) and Chan (1999) view green consumerism as a central theme of green marketing, an outcome of consumers' environmental concerns, and eco-friendly roles exercised by environmental stakeholders (regulatory, company, and distributors).

3 Methods

3.1 Procedures and Participants

The current study adopted a cross-sectional online survey using a structured questionnaire to address its study's objectives, similar to studies carried out around the theme (Li et al., 2019; Lim et al., 2019; Surendra & Jose, 2019). As suggested by methodologists (Hewson et al. 2003) internet-based survey uses webs to reach targeted respondents. The Chinese (https://www.wjx.cn) online survey platform was used to establish the questionnaire's link. Three research assistants were deployed at three Fast-Moving Consumer Goods (FMCG) in China for two weeks long (one hour for a day) approaching any customer to voluntarily respond to the study's questionnaire. The study adopts quasi-systematic sampling, following Wilhelm et al. (2017) procedure that permits to provide an equal and unbiased chance of selection for each unit in a sample. Out of three hundred twenty randomly targeted consumers, 63.1% of responses totalled 202. Thus, the present study response rate is acceptable, following the online survey's response rate suggestions that it can vary from 35% to 47% (Dillman, 2007). In addition, Rezaei (2015) recommends that a minimum sample size of 100 – 150 is good enough for the Structural Equation Model (SEM), which assumes enough samples to generalize the study's findings.

3.2 Measurement and Operationalization

The survey items were used from previous empirical studies, and the measurements were slightly tuned to fit our purposes. Although the questionnaire was initially developed in English, it was translated into English-Chinese using dual back-translations with two independent translators to ensure better equivalence (Furtado et al., 2011). The first section of the questionnaire includes the control variables, including sex, age, occupation status, and the respondents' hometown region. The second section comprises pre-coded measurements, constructs, and items using the seven-point Likert scales ranging from (1) strongly disagree to (7) strongly agree. It passed the validation process using three independent scholars, followed by ten respondents pre-testing to tackle any comprehension problems. For reference, Appendix 1 shows the questionnaire (measurements and items) adopted.

1. **Green Consumerism**

To assess the latent variable of Green Consumerism (Gconsumerism), it adopted the scales used by Chan (1999), and Hines et al. (1986). First, the scale with five indicators including consciousness of green behavior, valuing green, self-control, resisting non-green influences, and empowerment encompassing 15 items.

2. **Company CSR**

The mediating variable of perceived roles of a company's CSR about the environment (CompCSR) used Carroll's (1991) constructs, including economic, legal, ethical, and philanthropy responsibilities comprising 12 items.

3. **Regulatory Role**

The perceived environmental role of a regulatory body (Regu) was measured against three indicators, namely compliance, sustainability, and awareness, consisting of 9 items following literature suggested by Riboldazzi (2016) and Nilssen et al. (2018).

4. **Distributor Role**

The distributors' perceived green roles (Dist), the fourth variable comprises nine items and three dimensions: green promotion, facilitation, and delivery (Mulky, 2013).

5. **Environmental Concern**

The dependent variable, consumers' environmental concern (EConcern), adopted Dunlap's (2008) fifteen items of the New Environmental Paradigm (NEP) categorized into five constructs. These are the reality to limits of growth (1, 6, & 11); anti- anthropocentrism (2, 7, & 12); the fragility of nature's balance (3, 8, & 13); rejection of exceptionalism (4, 9, & 14); possibility of eco-crisis (5, 10, & 15).

4 Analyses and Results

4.1 Descriptive Analysis

The survey sampled 202 respondents in China. Table A.1 summarizes the respondents' demographics, 73.3% of the participants were females, and 68.3% were in the age category of 18-28 years old. Most of the respondents' hometown region was North-China; 58.9% and 33.7% reported their current occupation was students and employed, respectively.

4.2 Empirical Results and Analyses

4.2.1 Model Identification - Confirmatory Factor Analysis (CFA)

The CFA, is the procedure that indicates the maximum likelihood of the preliminary estimates of the model's measurement and how well the proposed model fits or not. It consists of a diagnosis of reliability and validity. The validity comprises convergent, discriminant, nomological, and criterion validity assessed against the correlation estimates. First, the reliability test ensured the extent and consistency of the survey's measurement; Table

A.2indicated the output of reliability statistics. SPSS run reliability coefficient computation of the study's twenty variables showed 0.871 Cronbach's (α) value. Thus, the analysis of the individual reliability coefficients of the four constructs indicated above the preferred standards (α < 0.7) as recommended by Nunnally (1978). In addition, the CompCSR (α) showed 0.64, still above the cut-off value of the reliability coefficient (α = 0.6), and hence, it is an acceptable coefficient as suggested by Churchill and Peter (1984). Further, Table A.2 summarizes components of convergent validity: Average Variance Extracted (AVE), the cut-off value greater than 0.5, and Composite Reliability (CR) standard greater than 0.7 (Hair et al., 2010). CR examined the level of consistency between predictor and latent variables (Urbach & Ahlemann, 2010), and the AVE indicated the extent of the indicator's variance (Hair et al., 2010). Thus, the CR and AVE calculator using Excel Worksheet's output showed plausibility in establishing convergent validity.

Table A.1: Demographics of Survey Respondents (n= 202)

Characteristics	Samples	%
Sex		
Male	54	26.7
Female	148	73.3
Age category		
18 - 28	138	68.3
29 – 38	38	18.8
39 – 48	20	9.9
49 – 58	6	3
Hometown region		
North-China	91	45.0
NE-China	18	8.9
NW-China	21	10.4
NC-China	29	14.4
SW-China	16	7.9
East-China	11	5.4
Occupation		
Student	119	58.9
Employed	68	33.7
Self-employed	7	3.5
Currently unemployed	8	4.0

Table A.2: Reliability Statistics, Composite Reliability, and Average Variance Extracted

Latent Variable	Measure Variables	Items	Reliability α	CR > 0.7	AVE > 0.5	Convergent Validity
CompanyCSR	CE1	4	0.64	0.802	0.503	**Established**
	Cethic					
	CL1					
	CPH1					
Regulatory	R1	3	0.798	0.770	0.544	**Established**
	R2					
	R3					
Distributor	D1	3	0.786	0.780	0.542	**Established**
	D2					
	D3					
GConsumerism	GCs1	5	0.759	0.835	0.505	**Established**
	GCs2					
	GCs3					
	GCs4					
	GCs5					
EConcern	N_1	5	0.728	0.833	0.505	**Established**
	N_2					
	N_3					
	N_4					
	N_5					

The procedure to examine discriminant validity ensures the extent of the constructs' relationships and their associated indicators. Table A.3 showed the factor correlation analysis extracted from SPSS–AMOS, squared in Excel-Sheet, and compared with individual constructs AVEs (AVEs > Squared correlation) to establish discriminant validity. The procedure was carried out following Hair et al.'s (2017) recommendation.

Table A.3: Analysis of Discriminant Validity

			Factor Correlation	Correlation Squared	AVE_1 & AVE_2		Discriminant Validity
Distr	<-->	GConsumerism	0.544	0.296	0.542 0.505		**Established**
CompCSR	<-->	GConsumerism	0.237	0.056	0.503 0.505		**Established**
Regulatory	<-->	GConsumerism	0.435	0.189	0.554	0.505	**Established**
Regulatory	<-->	Distr	0.294	0.086	0.554 0.542		**Established**
Distr	<-->	CompCSR	0.157	0.024	0.542 0.503		**Established**
Regulatory	<-->	CompCSR	0.332	0.110	0.554	0.503	**Established**
CompCSR	<-->	EConcern	0.133	0.017	0.503 0.501		**Established**
GConsumerism	<-->	EConcern	0.355	0.126	0.505 0.501		**Established**
Regulatory	<-->	EConcern	0.291	0.085	0.554	0.501	**Established**
Distr	<-->	EConcern	0.347	0.120	0.542 0.501		**Established**

Nomological validity confirmed the relations between the hypothesized conceptual framework and constructs of interest. Lakatos (1978) notes that nomological validity is necessary when face validity falsifies the predicted theory; it is an auxiliary assumption representing other external conditions that can't be measured directly. The study didn't show any validity problem; hence it assumes nomological validity was maintained. Criterion validity compares dataset capacity to predict relationship accuracy (Cooper & Schindler, 2008), usually analyzed using correlation estimates between the latent variables. Table A.4 shows the SPSS run tabulation output indicating a positive correlation coefficient for the proposed and possible relationship variables. Positive correlation infers an increase of one variable tends to increase the other variable, producing a positive and upward slope.

Table A.4: Correlation Analysis

			Estimate
Distr	<->	GConsumerism	0.544
CompCSR	<->	GConsumerism	0.237
Regulatory	<->	GConsumerism	0.435
Regulatory	<->	Distr	0.294
Distr	<->	CompCSR	0.157
Regulatory	<->	CompCSR	0.332
CompCSR	<->	EConcern	0.133
GConsumerism	<->	EConcern	0.355
Regulatory	<->	EConcern	0.291
Distr	<->	EConcern	0.347

4.2.2 Model Evaluation and Hypotheses Testing

CFA procedure was carried out using AMOS, and the output indicated the study was a good model fit. The model fit indexes output was summarized as follows: Chi-square ($\chi 2$) = 213.217, Degrees of freedom = 143, Probability level = .000. The model fit index shows good fit because

it was above the minimum cut-off value of 0.90 including, confirmatory factor index (CFI) = 0.910 Tucker-Lewis index (TLI) = 0.943; Comparative of Fit index (CFI) = 0.944; and Incremental Fit Index (IFI) = 0.946. Besides, CMIN/DF = 1.491; root means a square error of approximation (RMSEA = 0.049) that stood good fit since it is below the standard (RMSEA<0.08) (Hu & Bentler, 1995); however, the root mean-square residual (RMR) = 0.083 were slightly higher than the cut off value 0.08 (Hooper et al., 2008). The maximum likelihood regression estimates and results of the hypotheses depicted in Table A.5 supported six out of eight hypotheses. H_1 suggests that consumers' environmental concerns (EConc) significantly impact the perceived company's CSR (CompCSR). This prediction is not supported ($\beta = 0.13$, statistically insignificant). The path between consumers' environmental concern (EConc) significantly influence regulatory bodies perceived role (Regu) and distributors perceive role (Dist) are found to be statistically significant at $\beta = 0.56$, $p = 0.000$ and $\beta = 0.297$, $p < 0.05$, respectively. Consequently, H_2 and H_3 are supported. H_4 suggests company perceived roles significantly influence consumers' adoption of green consumerism (GConc). Path H_4 is not supported since the regression estimate is statistically insignificant. H_5 predicts regulatory bodies' perceived role has a significant effect on company CSR (CCSR); the analysis confirms that $\beta = 0.182$, $p = 0.009$, and is supported. The paths H_6 and H_7 connecting regulatory bodies perceived roles (Regu) and perceived roles of distributor (Dist) and green consumerism (GCons), the estimates are statistically significant with $\beta = 0.208$, $p = 0.004$ and $\beta = 0.234$, $p = 0.001$, respectively. Hence, both paths are supported. Finally, H_8 hypothesizes a significant relationship between distributors' perceived roles (Dist) and green consumerism (GCons) is statistically significant and supported ($\beta = 0.281$, $p = 0.003$).

Table A.5: Maximum Likelihood of Regression Weights

				Estimate	S.E.	C.R.	P	Decision
H_1	CCSR	<---	EConc	0.13	0.129	1.008	0.314	**Not**
H_2	Regu	<---	EConc	0.56	0.162	3.459	***	**Supported**
H_3	Dist	<---	EConc	0.297	0.134	2.221	0.026	**Supported**
H_4	GCons	<---	CCSR	0.064	0.102	0.627	0.531	**Not**
H_5	CCSR	<---	Regu	0.182	0.068	1.651	0.009	**Supported**
H_6	GCons	<---	Regu	0.208	0.072	2.869	0.004	**Supported**
H_7	Dist	<---	Regu	0.234	0.072	3.26	0.001	**Supported**
H_8	GCons	<---	Dist	0.281	0.094	2.975	0.003	**Supported**

4.2.3 Model Evaluation - Robust Test

To run robust testing, using the composite scale to analyze and see if it conforms or not to the findings discussed earlier. The satisfactory output indexes gave way for further model evaluation. Using the composite scales, the model evaluation followed steps, including, calculating the factor loading ($\sqrt{CR}$), error variance ($1- \sqrt{CR}$), and hand-loading input in the AMOS path analysis. Table A.6 summarizes the output of the investigation.

Table A.6: Analysis of Factor Loading and Error Variance

		Factor Loading	Error Variance
Convergent Validity	**CR**	**SQRT CR**	**1 - SQRT CR**
GConsumerism	0.912	0.955	0.045
CompCSR	0.887	0.942	0.058
EConcern	0.938	0.969	0.031
Regulatory	0.956	0.978	0.022
Distributor	0.958	0.979	0.021

Similar to the results discussed using the individual constructs, the output of composite scale model fit indexes indicated a good fit. For instance, CMIN/DF=1.493; NFI = 0.973; GFI = 0.994; AGFA = 0.956; CFI = 0.990; IFI = 0.991; TLI = 0.951; RMR = .017, and RMSEA = 0.05. Besides, the computation output indicated no problem (Above ±2) on the standard residual covariance, summarized in Table A.7. Hence, the framework causal-effect relationships can generalize and are plausible to the general population.

Table A.7: Standard Residual Covariance Analysis at Composite Scale Level

	1	2	3	4	5
Av_CompCSR	0				
Av_GConsumerism	-0.021	0.001			
Av_Distr	0.794	-0.022	.000		
Av_Regulatory	.010	-0.031	1.173	.000	
Av_Econcern	0.141	-0.009	0.163	0.206	0.042

The robust check analysis used latent variables composite scale found a similar conclusion applying individual indicators. H_1 suggests consumers' environmental concerns (EConc) significantly influence company CSR (CCSR). As illustrated in Table A.8, the path of the likelihood regression estimate is not statistically significant, and thus, the prediction is not supported. However, consumers' environmental concern (EConc) is statistically significant with paths of the regulator (Regu) and distributors (Dist). Thus, H_2 (β=0.598 at p = .000) and H3 (β=0.624 at p = .000). The regression coefficient estimate, H_4 predicts company CSR effect on green consumerism (GConc), (β=0.092 at p = .104) is not statistically significant and unable to be supported. Three Hypotheses (H_5, H_6 & H_7) envisage regulatory bodies perceived role (Regu) impact on company CSR (CCSR), green consumerism (GConc), and distributor (Dist). The analyses indicate statistically significant; thus, H_5, H_6 & H_7 are supported. Finally, H_8 suggests the distributor (Dist) effect on consumers' adoption of green consumerism (GCons), and it is statistically significant (β=0.410 at p = .000), and therefore, it is supported. Figure A.2 depicts the SPSS-AMOS generated regression paths.

Table A.8: Maximum Likelihood Regression Estimates Using Composite Scale Level

				Estimate	S.E.	C.R.	P	Decision
H_1	Av_CCSR	<---	Av_Econ	0.068	0.124	0.547	0.584	**Not Supported**
H_2	Av_Regu	<---	Av_Econ	0.598	0.180	3.321	***	**Supported**
H_3	Av_Distr	<---	Av_Econ	0.624	0.179	3.489	***	**Supported**
H_4	Av_GCons	<---	Av_CCSR	0.092	0.104	0.878	0.380	**Not Supported**
H_5	Av_CCSR	<---	Av_Regu	0.197	0.053	3.715	***	**Supported**
H_6	Av_GCons	<---	Av_Regu	0.189	0.066	2.856	0.004	**Supported**
H_7	Av_Distr	<---	Av_Regu	0.170	0.076	2.238	0.025	**Supported**
H_8	Av_GCons	<---	Av_Distr	0.410	0.069	5.906	***	**Supported**

4.2.4 Mediation Model Evaluation

The study predicted four mediation relationships. Accordingly, an analysis was made using the formula (Baron & Kenny, 1986): $Z = r_a * r_b / \sqrt{(SE_b)^2 * r_b^2 + (SE_a)^2 * r_a^2 + (S.E._a * S.E._b)^2}$; where ra and rb are regression estimates of & b relationship, S.E. standardized error. The Mediation ExcelSheet program is a useful tool in the analysis processes. Table A.9 summarizes five mediation relationships and Z outputs. Based on Sobel's (Sobel, 1983) Z-scores standard, three out of the five predicted mediation relationships fall over the cut-off (Z >1.96) and thus, depicting significant mediation relationships. It is worth noting that the mediator suggested perceived company CSR was unable to provide an indirect effect of the relationship between green consumerism (GCons), consumers' environmental concern (EConc), and regulators

perceived roles (Regu). Overall, these analyses back up the previous decision on hypothesis testing and serve as a robust check.

Figure A. 2: Model's Regression Path Analyses on Composite Scale

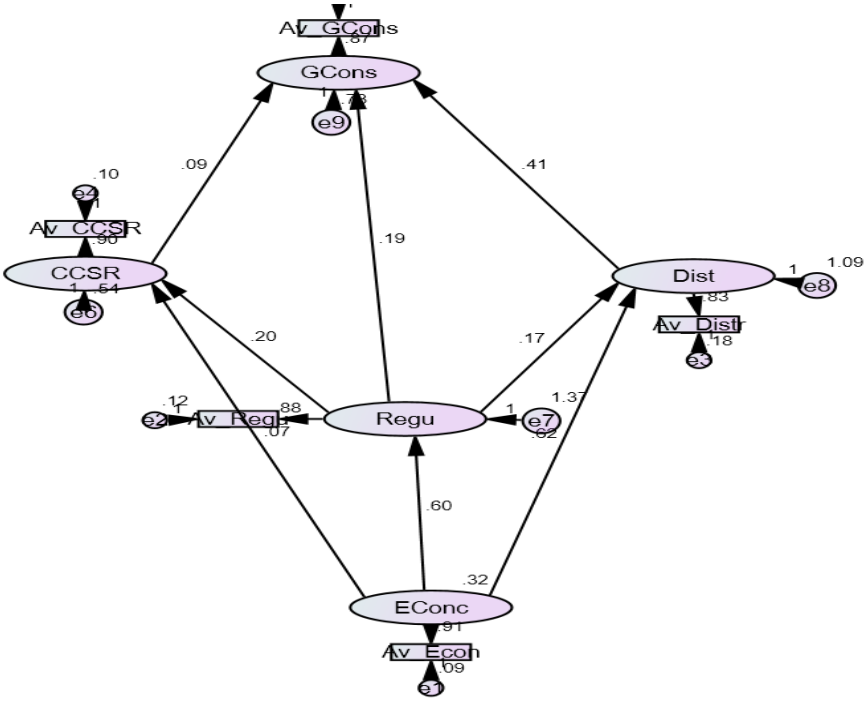


Table A.9: Analyses of Mediation Situations

			Unstan. Reg. a	S.E. a	Unstan. Reg. b	S.E.b	Z Calculator	Mediation Relationship
Av_Econ	Av_Regu	Av_Gcons	0.598	0.180	0.189	0.066	**2.16**	**Significant**
Av_Econ	Av_CCSR	Av_Gcons	0.068	0.124	0.092	0.104	0.466	**No significant**
Av_Regu	Av_CCSR	Av_Gcons	0.197	0.053	0.092	0.104	0.860	**No significant**
Av_Econ	Av_Dist	Av_Gcons	0.624	0.179	0.410	0.069	**3.00**	**Significant**
Av_Regu	Av_Dist	Av_Gcons	0.170	0.076	0.410	0.069	**2.09**	**Significant**

5. Discussions

Consumers' environmental concern affects greenness demands concerted efforts from consumers, regulators, companies, and distributors. Adoption of green behavior is more than a choice these days, and consumers are increasingly becoming green consumers for the sake of their wellbeing and environmental sustainability. The study assessed the perceived mediating roles of companies, regulatory bodies, and distributors' contribution between green consumerism and ecological concerns. These environmental stakeholders (enterprises, government, consumers, and intermediaries) encourage adopting a sustainable green initiative strategy (Zhang et al., 2008). The paper empirically examined the mediating effect of perceived roles of environmental stakeholders between consumers' ecological concerns and the adoption of green consumerism. Few studies have integrated current ecological concerns, values-

attitude-behavior, and stakeholders' perceived roles in green consumerism (Lim et al., 2019). Other scholars call for further research on integrating internal and external stakeholders for green adoption, depleting the natural environment, and responsibilities involved in environmental concerns (Sajeewanie et al., 2019; Emekci, 2019). In response to these gaps, this study contributed to how consumers' environmental concerns influence environmental stakeholders' perceived roles and determine roles for green consumerism. This study's empirical examination provided scientific evidence to justify causal-effect relationships between this study's measure and latent variables; six out of eight hypotheses are supported. The same conclusion has been provided using the composite scale and analyses of mediation relationships as robust tests. Six predicted relationships are found statistically significant except for two indirect effects unable to substantiate evidence with the latent variable of perceived roles of company CSR (H_1 & H_4). In addition, consumers' environmental concerns have statistically significant relationships between the perceived functions of the regulatory bodies (H_2) and distributors (H_3). Similarly, the perceived roles of regulatory body analysis (H_5, H_6, & H_7) show statistical significance with perceived functions of distributors (Dist), company CSR (CCSR), and green consumerism (GCons). Finally, the perceived roles of the distributors have a significant influence on consumers' adoption of green consumerism (H_8) and are supported following its statistical significance. Similar to these results, analyses using a composite scale found identical results to earlier conclusions. It also examined the mediating effect of five relationships, out of which three are found $Z > 1.96$ that supported the mediating impact of regulatory (Regu) and distributor (Dist) between the study variables. These findings were coherent with similar studies by Li et al. (2019) and Arminda et al. (2020). It is also in line with the conclusion of Isa et al. (2019) company CSR influence is insignificant to environmental concern and green consumerism; however, Abdeen et al. (2016) found incoherent with these findings.

5.1 Theoretical and Managerial Implications

The present study suggests both theoretical and managerial implications. Although strands of research considered green behavior and environmental concern, this study analyzed the mediating impact of environmental stakeholders' roles between consumers' environmental concern and green consumerism. It extends our insight by testing consumers' environmental concerns and ecological stakeholders' functions as the antecedents for green consumerism in the context of FMCG consumers. Our study contributes the following key points to the literature and practitioners. First, it validates the different outlooks of normative theory (NT) on the functions of advancing green and environmental concerns. Environmental stakeholders (agents) confer ethical principles favoring sustainability, and consumers expect deployment with integrity as it ought it be. The theory widens the marketing scope because the normative actions of an agent address environmental challenges. The need for developing trust, honesty, and abiding by normative principles in line with business ethics as ought to be in fulfilling the agent's obligations. Second, it provides empirical evidence that consumers' environmental concerns positively influence the perceived roles of environmental stakeholders (regulatory and distributors) but cannot support a perceived position of the company's CSR. Thus, it provides insight that the normative theory (NT) suggests the agent's values, morals, and context (depleting ecosystem) significantly influence the perceived functions of the stakeholders and contribute toward consumers' adoption of eco-concern and green behavior.
Third, the present study recommends the normative theory (NT) explaining the relationship between consumers' environmental concerns, agents' perceived environmental roles, and green consumerism. NT suggests that consumers and marketing stakeholders exhibit

patterned social behavior and normative principles adhering to green performance. Our study asserts that without perceived pro-environmental functionality, it is unlikely to achieve eco-friendliness, green consumerism, or heighten consumers' environmental concerns. Fourth, it investigated the mediating effect of environmental stakeholders' perceived roles between green consumerism and consumers' environmental concerns in response to the calls for research on corporations and regulatory affiliates (Yue et al., 2020; Emekci, 2019; Sajeewanie et al. 2019). Therefore, it extended insights into companies' perceived ecological roles, regulatory bodies, and distributors in promoting consumers' concern for the environment and green consumerism. Finally, the findings also set critical implications for green practitioners, managers, policymakers, and intermediaries. It evidenced that consumers' environmental concerns positively influence on pro-environmental perceived roles of regulatory bodies and distributors. However, the regression path of consumers' eco-concern and the functions of company CSR were unsupported in the empirical study. However, it may require further investigation; consumers are likely to lose trust or the company's inability to target consumers in their CSR programs. Hence, it highlights practitioners strategizing green products/services, ads, and eco-friendly policies according to the motives of business ethics. Regulatory bodies perceived roles significantly influence environmental stakeholders' (CCSR and Dist) perceived roles and adoption of green consumerism. It implies the necessity for eco-friendly policies and mitigation programs to address overall environmental degradation. In sum, consumers' environmental concerns and green consumerism can be realized with the concerted effort of environmental stakeholders as a tool for ensuring a sustainable ecosystem.

5.2 Limitations and Directions for Future Research

Similar to other studies, the study isn't without limitations. The first limitation, the sampled consumers might not represent the entire consumers. However, reproducing similar studies across countries can attest to the model's applicability to the broader consumer community. The second limitation was the study's incapacity to consider consumers' demographics, the extent of consumers' behavior toward green loyalty, and branding influences on green consumerism that could be an avenue for research. The quantitative survey nature of the present study is another limitation that could be enriched by using a qualitative approach to investigate the rationale and justifications for the prevailing ecological challenges. Besides, the gap of not assuming additional environmental stakeholders' roles is expected to widen our scope of analyzing the mediating functions of community leaders, government, individuals, green volunteers, and policy developers' influence on green consumerism and environmental concern. We also set a research avenue that integrates the moderating effect of greenwashing perceptions, promotion, demographics, and social status influence on ecological concerns and green behavior. Finally, the researchers are invited to incorporate the moderating-moderation impact of consumers' cultural influence on green behavior and environmental concerns.

6. Conclusions

Worldwide, the depleting environmental concern is threatening existing and generations. It initiates consumers' obligation to avail eco-concerns and green behavior. As a result, the present study examined antecedents of consumers' adoption of green consumerism. A literature review indicated consumers' ecological concerns, green purchase intentions, green branding, and promotions as antecedents for green consumerism. The researchers tested the mediating relationship of the agents' environmental perceived roles between consumers' eco-concern and green consumerism. It evidenced that regulatory bodies perceived role significantly mediates between consumers' eco-concern and the three latent variables (CCSR,

Dist, and GCons). Likewise, distributors' green roles significantly impact green consumerism, and thus, the hypotheses are supported. On the other hand, the ecological problem and perceived pro-environmental functions of a company's CSR are not statistically significant; therefore, unable to support the prediction. In light of the above inference, it presents an academic discussion and debate on the effect of environmental stakeholders in achieving green behavior in developed and developing economies.

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Appendix 1 – Questionnaire Measurements and Items

1. Environment Concern - New Environmental Paradigm (NEP)

	Limits of Growth
LM1.	We are approaching the limit of the number of people the earth can support.
LM6.	Earth has plenty of natural resources if we just learn how to develop them.
LM11.	The Earth is like a spaceship with very limited room and resources.
	Anti-anthropocentrism
AA2.	Humans have the right to modify the natural environment to suit their needs.
AA7.	Plants and animals have as much right as humans to exist.
AA12.	Humans were meant to rule over the rest of nature.
	Fragility of Nature's Balance
FB3.	When humans interfere with nature it often produces disastrous consequences.
FB8.	The balance of nature is strong enough to cope with the impacts of modern industrial nations.
FB13.	The balance of nature is very delicate and easily upset.
	Rejection of Exceptions
RE4.	Human ingenuity will ensure that we do not make the earth unliveable.
RE9.	Despite our special abilities, humans are still subject to the laws of nature.
RE14.	Humans will eventually learn enough about how nature works to be able to control it.
	Possibilities of Eco-crisis
PE5.	Humans are severely abusing the environment.
PS10.	The so-called "ecological crisis" facing humankind has been greatly exaggerated.
PS15.	If things continue on their present course, we will soon experience a major ecological catastrophe.

2. Roles of Company's CSR

	Economic
Eco1.	I perceive companies are introducing the eco-friendly innovative performance.
Eco2.	I perceive companies are willing to pay a premium value for producing green offers.
Eco3.	I perceive companies strategize eco-friendly performance for sustainability.
	Legal
Leg1.	I perceive companies producing consumable products following eco-standards.
Leg2.	I believe companies are guiding their business using eco-friendly values, and operations.
Leg3.	I feel companies have moral obligations in safeguarding consumers.
	Ethical
Eth1.	I perceive companies are producing consumable products are doing the right thing.
Eth2.	I perceive companies are producing consumable products in a fair (without abusing resources) manner.
Eth3.	I assume companies are on top of social and environmental responsibilities.
	Philanthropy
Phi1.	I perceive companies are volunteering in providing donations.
Phi2.	I believe companies participate in greening the environment.

Phi3.	I observe companies engage in promoting eco-friendliness.

3. Roles of Distributors

	Promotional Role
Prom1.	I perceived distributors display green products separately.
Prom2.	I perceived distributors promote green products.
Prom3.	I perceived distributors' samples of the green products for tasting.
	Facilitation Role
Fac1.	I perceive distributors facilitate in fulfilling green orders of customers.
Fac2.	I believe distributors have the capacity of partnering with green product producers.
Fac3.	I assume distributors are capable of supplying green offers to end-users.
	Delivery Role
Del1.	I perceive distributors have the role of convincing consumers in their choice for green offers.
Del2.	I perceive distributors use green packing in their delivery.
Del3.	I perceive distributors are conscious to use environment-friendly in delivering offers.

4. Roles of Regulatory

	Awareness
Awa1.	I believe the regulatory body is engaged in promoting the significance of eco-friendliness.
Awa2.	I perceive regulatory body calls for stakeholders' concerted efforts.
Awa3.	I assume the regulatory body has uncompromised guidelines for eco-friendliness.
	Sustainability
Sus1.	I perceive regulatory body follows towards an efficient energy use.
Sus2.	I perceived regulations are in place for the propensity for environmental free-ride.
Sus3.	I perceive regulatory bodies encourage the use of recyclable resources.
	Compliance
Com1.	I perceive regulatory bodies regulate eco-friendly standards and their enforcement.
Com2.	I perceive an eco-friendly mitigation strategy to redeem violations.
Com3.	I perceive regulatory bodies manage towards eco-friendliness.

5. Green Consumerism

	Green Consciousness
GC1.	I assume I have pro-environmental responsibilities in my daily life.
GC2.	I feel I am eco-friendly that I can continuously behave green.
GC3.	I am part of a green movement – adopt efficient use, recyclable, and ethically responsibility for eco-friendliness.
	Valuing Green
VG1.	My daily lifestyle considers societal and environmental welfare.
VG2.	I feel I can control myself for non-green behaviours.
VG3.	I have the responsibility to practice eco-friendly characteristics all the time.
	Self-control
SC1.	I am literate in eco-friendliness.

SC2.	I feel practicing in favor of green offers.
SC3.	My choice for green products is expressed in my extent of green purchases.
	Resisting non-green Influences
RN1.	My pro-environmental attitude reinforces my green behaviour.
RN2.	I feel I am capable of opposing non-green influences.
RN3.	I am self-determined to practice greenness for the benefits of health and ecological balance.
	Empowerment
Em1.	I feel I am ready to participate in pro-social and eco-movement.
Em2.	I believe my green behaviour improves my life/health.
Em3.	I can actively engage in my community to make a green behaviour paradigm shift.

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