Do We Care about Going Green? Measuring the Effect of Green Environmental Awareness, Green Product Value and Environmental Attitude on Green Culture. An Insight from Nigeria

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Abstract – As the environment continues to aggravate, it has become a purposeful public concern in developed countries and has recently stirred developing countries to join the green movement. Hence, this study examines green environmental awareness, green product value and environmental attitude by applying the measurement of effects on green culture. The study applied a quantitative research approach where a cross-sectional survey designed with 267 respondents' green consumer who lived in the urban area of Abuja and employed partial least squares structural equation modelling (PLS-SEM) using SmartPLS3 to examine the developed path model. The results indicated that all constructs were empirically supported showing significant impact on green culture while examining direct relationships. The resulting (Q^2) value is larger than zero (0) in the path model, this specifies that exogenous constructs have a good index for predictive relevance on the endogenous construct being investigated. Among the construct, awareness is the most important predictor and green product value tends to show a modest impact on environmental attitude. The study suggests that policymakers should place emphasis on environmental values to boost environmental awareness among young consumers in the process of making purchases. Specifically, environmental attitude was found to have full mediation on the relationship between green product value and green culture. However, no mediation occurs in the relationship between environmental awareness and green culture. The study concluded that awareness regarding going green activism in Nigeria among young consumers is still a matter of concern despite its impact and therefore, practitioners and collaborators in the green industry need to apply aggressive efforts to achieve this pathway, to ensure the design and implementation of effective policies that will promote going green and enhance the green circular economy.

Keywords – Attitude; environmental awareness; going green; green culture; product value.

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1. INTRODUCTION

Globally, through scientific practices of investigating and evaluating environmental qualities and standards, a lot of efforts have been put in place on technological advancement to provide specific, high-quality sustainable products and services that can satisfy and maintain the high demands of the individual consumer. For instance, the production and manufacturing process where consumers prioritize their need for sound environmental and health benefits. However, this might generate a preferential outcome with a limited effect where an increase in productivity is measured in population growth and consumption volume [1]. Therefore, it is important to anchor environmental research on culture and behaviour change through the study of green culture in the society [2]. Recently, environmental issues have made consumers gradually change their demeanor to take on environmentally friendly practices and take actions taking the environment in consideration in terms of eating habits and their needs and interests. Efforts are also being made to limit the negative impact on the environment of activities exercised by humans [3].

An individual is made aware of resources that affect the environment by placing more attention to eco-friendly activities and purchasing green products for safe and sustainable benefits of these activities and products. Organizations are encouraged to increase pro-environmental awareness in their host communities thereby encouraging and developing programs towards green activism to provide and solve environmental issues and challenges with the hope of restoring a better lifestyle for consumer environmental friendliness [4]. In light of these, contemporary organizations are preserving the environment as a solution for performing and implementing a marketing strategy that is supportive of the environment and eco-friendly thereby meeting societal standards [3]. Concerning the environmental performance index (EPI), Nigeria is ranked 100th scoring 54.76 out of 180 countries for overall environmental performance[†]. Despite its rating at the level of environmental performance, we can say that Nigeria still lingers behind other countries and is far from achieving the international target and environmental protection is poorly managed.

In recent times, the growth of the environmental movement and green politics or ecopolitics has become more evident as the number and intensity of environmental issues increases globally and research has shown that overconsumption, lack of poor waste management, population growth, industrialization, poverty among other general issues created by humans are responsible for such action [5]–[7]. The difficult progress in achieving environmental awareness, natural ecosystem and physical environment is noted in the UN report [8] and OECD Green Growth Indicator [9]. By analysing different antecedents of human involvement, green culture can have great worth in understanding the path for improvement by providing insights which can be useful. According to the viewpoint of cultural theory, green culture can be examined socially by the share of belief and value, norms and attitudes of human connection with technology and the elements with these nexus [1], [10], [11]. Numerous studies have shown that green culture is important in behavioural theories that are rooted in psychology which in turn is heavily bound by cultural values, and has been explored and incorporated into various levels of societal analysis, among those explored are [1], [7], [10], [12]–[15].

Despite having existed and being well established with nature, environmental studies on sociology have not hurried to integrate and consolidate green culture as a component to direct and understand the concept of environmental attitudes, environmental awareness and value

[†] <https://epi.envirocenter.yale.edu/downloads/epi2018policymakerssummaryv01.pdf>

relationships [1], [5], [14], [16]. Given this, the study will address this gap and these limitations by addressing various antecedent from this standpoint. Therefore, a green consumer will only be dedicated and consider going green if s/he is fully aware and properly informed about the environment, thereby committed to a worthy environment or a committed environmentalist. A shift in environmental awareness and attitude has to first exist simultaneously to implement a shift in green culture. Hence, there exists little or no knowledge of environmental culture within local communities with no exceptional improvement to the going green movement at present from the environmental standpoint. These arguments are based on the going green limitations and previous research that empirically examined these factors in different countries, and this study further applied a robust, newly developed instrument, green culture to examine the validity of the previous study and in the Nigeria context. Thus, this present research promotes some progress in the area of socio-economic research and contributes to business by developing the consumer market to help champion the going green network.

2. LITERATURE BASIS AND HYPOTHESIS DEVELOPMENT

2.1. Green Culture

Green culture is an environmental public and collective behaviour with an action taken by a group or society to demonstrate helping nature and to solve increasingly global and climate issues in a publicly reserved manner. These actions are carried out by green parties with the corporations of various NGO channels towards the social movement '*green activism*' to help environmental issues and challenges according to social movement theories Ermolaeva [1], Baharov [17] and Asafova [18]. Green culture can be best referred to as a multifaceted component consisting of two constructs that are based on the cultural theory of the environment with green and culture components [1]. The green component or element that represents environmental issues includes reducing, reusing, recovering, recycling, upcycling, repairing and global warming. The cultural component represents perceptions and beliefs, values and norms, attitudes and behaviours of people or individuals in the society [1], [11]. The cultural theory specifies by placing emphasis on the environmental debate on cultural antecedent regarding green culture attainability and to distinguish various approaches for evaluating environmental culture. Among them are technological, informational, axiological and action-oriented [1]. However, green culture can be considered as a nexus of a socio-cultural phenomenon. For instance, green culture can be seen and conceptualized as a combination of the axiological approach, which examines green culture as a component of attitudes, values and norms concerning the environment. Under this approach, an expert i.e. sociologist examines the communication of environmental norms, beliefs and values [17]. Secondly, the action-oriented approach, specifies action as fundamental in the human-to-nature relationship [18], [1], [12]. However, due to the complexity of green culture in this study, the axiological approach can be seen as a methodological fit for analysing environmental attitude, environmental awareness and green value of green culture. Therefore, action-oriented can be integrated into this study to investigate the effect of environmental awareness practices and values for going green among the Nigeria people.

2.2. Environmental Attitude

If an individual can decide to perform or not to perform a behaviour, it depends on the intention proposed by the individual and this part is clearly shown in the theory of reasoned

action ToRA, as proposed by Ajzen and Fishbein [19]. According to Ajzen [20] environmental attitude influences behaviour, and the willingness to act for the environment Kotchen and Reiling [21], Choi and Fielding [22], Blankenberg and Alhusen [23], Yu and Lee [24]. Ajzen [20] further justified that the intention to perform and not to perform an act is influenced by an attitude towards the behaviour and subjective norms (social influence i.e. culture, people, society). The potency of green products consumption is significantly related to environmental attitude towards the consumption process and the environment [25].

However, implicit environmental attitude towards green products is not associated with sustainable consumption [26]. Therefore, attitude is an expression of feeling regarding likes and dislikes from an individual regarding objects [4]. The research of Paco and Raposo [27] noted that if a consumer understands the environment, he/she will support policies to improve the environment they live in. Previous studies also support this view Zheng and Chi [28].

In Turkey, Gurbuz and Ozkan [7] study showed that large numbers of individuals hold a high level of positive environmental attitude towards sustainable products and services, but their advocacy could not be translated into behaviour and participation. Only a few individuals who report a positive attitude towards environmentally friendly products follow through and show this by putting in the extra price for their choice. Thereby, showing interest in climate change and acknowledging the amount such problem has on the environment will have a strong attitudinal value towards performing green and going green. A recent study cited in an academic science journal, stated that 65 % of consumer want to purchase purpose-driven sustainable products that prescribe environmental sustainability, but yet only 26 % do so [29]. Therefore, embracing environmental attitude is determined by the culture which the consumer accepts with regards to environmental friendliness. Saunders *et al.* [30] submitted that the environmental attitude predicts green culture. This view is supported by the studies of [7]. Chan and Lau [12] studies also supported this claim, as strong environmental attitude leads to good cultural antecedents in lunching sustainable offering. On the contrary, some studies oppose the notion. In the global context, limited studies are establishing the relationship between environmental attitude and green culture Chan and Lau [12] and Sreen *et al.* [14]. Therefore, there is a need to address this gap. Hence, the following hypothesis is formed.

H₁: Environmental attitude has a positive and significant relationship with green culture.

2.3. Green Environmental Awareness

Environmental awareness plays an important role in going green activism and relates to individual emotional viewpoint and emphases regarding the environment. Specifically, green environmental awareness is the amount of impact of human behaviour or the information an individual shows in his/her environment [31]. Awareness about the environment is the most important part of behavioural science Axelrod [32], because it involves environmental attitude, value and beliefs. Environmental awareness tends to be a focal point due to the challenges consumers face in the present day for example, the caustic effects and solution of the environmental problem are connected with economic activities. The environmental problem tends to be a global issue and more visible in making public awareness dependent on individual first-hand information and incorporating environmental values and norms.

In Indonesia, researchers like Julina [33] upheld that environmental awareness can influence individual attitude, which will translate into performing a green culture. Research conducted by Paul *et al.* [34], and Koksai and Tuger [35] found that environmental awareness influences environmental attitude. In Malaysia, the study of Aman *et al.* [36] rejects the influence of environmental awareness on environmental attitude, and the studies of Levine

and Strube [37], Hartmann and Apaolaza–Ibazez [38] shows no sign. Furthermore, the study of Gurbuz and Ozkan [7] shows an empirical relationship between environmental awareness and environmental attitude, but the attitudinal level was found to be inadequate, as such consumers do not exert favourable awareness nor attitude towards the environment. Therefore, based on the literary work of studies, the following hypothesis is formulated.

H₂: Green environmental awareness has a positive and significant relationship on environmental attitude.

The cultural model can offer awareness for a green consumer regarding environmental issues and challenges [39]. The studies of Barber *et al.* [40] indicated that environmental awareness helps an individual in society to have a strong cultural stance and offers. According to Mancha and Yoder [41], they advocated that collective concern about green environmental awareness has been conceptualized by green culture. Hence, Yang *et al.* [10] study submitted that green culture helps the organization implement green strategy due to the awareness regarding environment. This view was supported by Fraj *et al.* [42] and Kumar *et al.* [5]. However, environmental values are integrated into organizational culture thereby having an impact on the green strategy on environmental and business performance leading to the cultivation of green culture to guide employee awareness in different aspects of collective effort [43], [10]. In this way, we can say, that environmental awareness influences green culture. The study of Chan and Lau [12] on examining cultural values on Chinese consumers, shows a significant positive relationship on environmental issues and culture. This view is supported by the studies of Ermolaeva [1] and Zucker *et al.* [44]. The study of Julina [33] on examining the determinant of ecological supportive behaviour among consumers specifies that environmental concern can predict collectivist green culture. Understanding the behaviour of people who can contribute to going green and environmental rescue is important. Furthermore, empirical studies on the relationship linking green environmental awareness and green culture among young Nigerian consumers are few. The necessity for more studies was reinforced by this result in the Nigeria context. Therefore, the following hypothesis is formulated.

H₃: Green environmental awareness has a positive and significant relationship with green culture.

2.4. Green Product Value

Green product values are considered to be important because of their validity in nature and therefore may influence attitude and green culture simultaneously. In fact, consumer views on the assessment and evaluation in light of their expectation regarding attributes is regarded as the product value and previous studies maintain that product value is key in green marketing to enhance performance [23], [24]. These studies further impacted that there is a positive relationship between green product value and environmental attitude Kong *et al.* [45], Chen and Chan [46], Patterson and Spreng [47]. Many researchers Stern [48] submitted that green product values are the basis for eco-friendliness and a stable element on the ongoing pro-environmental behaviour Steg and Velk [49]. For instance, Stern [48] have proposed that three different essentials of value orientation such as biospheric, egoistic and altruistic values may influence environmentally supportive beliefs, and most empirical studies have not related these factors and have failed to validate in showing the distinction between these components on environmental studies. Values arise out of a core environmental attitude with sufficient internal consistency which a consumer hold internally and is a pre-determined goal based on concepts and people in society, this path is clearly shown in Fishbein and Ajzen [19] theory of reasoned action ToRA. The view is supported by the studies of [24], [50]. The study of

Chen [51] noted that the value towards attitude depends on the beliefs and outcome aimed at consumer expectation. Given these literature works of study, the following hypothesis is formulated.

H₄: Green product value has a positive and significant relationship on environmental attitude.

It can be declared that strong environmental value drives consumers and increases their participation in a purchasing situation. High participation of consumers means their active involvement in the going green process. Therefore, product value relating to nature and the natural environment can be harmonized warmly with green culture and environmental activism towards protecting nature based on the preference of consumers' choice and judgement [52]–[54]. Ecocentric and anthropocentric green product value are the status of green behaviour that are associated with green culture Kaida and Kaida [55] and they increase environmental awareness issues [56]. Past research has also supported this view [50]. In China, the research conducted by Yang *et al.* [10] among 300 organisations under tremendous environmental and developmental pressure submitted that green culture helps organisations with environmental standards to implement green value strategy in firm performance. The study further state that for an organization to grow in achieving ecological and going green goals, it must first establish adequate green information system infrastructure, and align it with some level of ecological value endeavour. Thus, people in society need to nurture ecological values that are essential for green culture adjustment. Based on the literary work of literature studies, the following hypothesis is formulated.

H₅: Green product value has a positive and significant relationship with green culture.

2.5. Environmental Attitude as a Mediator

Environmental attitude is individual favourable-to-unfavourable emotion towards some features on the natural environment and issues about the social environment [57]. Literature works affirm that environmental attitude is a collection of beliefs affected by people's behaviour on what they view regarding the environment and environmental-related activities. Environmental attitude has been observed in most behavioural studies as a mediating variable Aman, Harun and Hussein [36] and there has been a contradicting and supporting results based on this balance. In this study, the environmental attitude was observed as a mediating construct to test the mediating effect of green environmental awareness on green culture. The studies of Sreen *et al.* [14] found that attitude has a link with the cultural stance on environmental awareness among Indian consumers. Therefore, the following hypothesis is formulated.

H₆: Environmental attitude mediates the relationship between green environmental awareness and green culture.

Secondly, the environmental attitude was used to test the mediating effect of green product value on green culture, as such, a study conducted by Cai and Shannon [58] among Chinese and Thai consumers shows casual mediation. The study of Aman *et al.* [36] shows partial mediation. While the study of Chen *et al.* [59] attitude was found to show full mediation. Furthermore, there are few studies on the mediating effect of environmental attitude on the relationship between green environmental awareness, green product value and green culture, among young Nigeria consumers. Therefore, there is a need to reinforce this empirical result in the Nigeria market. Based on these findings, this study puts forth the following hypothesis.

H₇: Environmental attitude mediates the relationship between green product value and green culture.

Fig. 1. Proposed research framework of this study.

3. RESEARCH METHODOLOGY

The main objective of this study is to examine the measuring effect of environmental awareness on green culture. An empirical study was undertaken to investigate the proposed hypothesis. The study adopted a quantitative technique whereby a cross-sectional approach was applied. The framework was adapted from Chan and Lau [12] study which has been previously tested among Chinese consumers and has previously been applied in the studies of Aman *et al.* [36] among Sabahan consumers. Furthermore, Maichum *et al.* [60] study applied it among young Thailand consumers and Kusuma and Sulhaini [3] study also verified the framework among Indonesia consumers. Hence, this study finds this as a balance to testing and applying the current framework in Nigeria context due to its robustness, by modifying it and incorporating green culture, environmental awareness and deleting green purchase intention, human-nature orientation and environmental knowledge/concern which the previous study has examined. The aim is to know and measure the effects of environmental awareness, product value and environmental attitude on green culture. Data was collected through the aim of structured questionnaires from the consumer, age 18 years and above, this is because they are regarded as young adults and leaders for modern-day green movement due to their demographic size and demand for greenness [61].

A total of 267 usable questionnaires were received and analyzed using Partial Least Square – Structural Equation Modelling (PLS-SEM). PLS-SEM must be analyzed in two stages (1) measurement model and (2) structural model according to the justification of Hair *et al.* [62] and Barroso *et al.* [63] as it aims to explain the interconnections of exogenous and endogenous variables for the coefficient on the model [62], [74].

The items were measured in a 5-Likert scale ranging from 1 to 5 with strongly disagree assigned to 1 and strongly agree assigned to 5. This is because the 5-Likert scale gives many advantages to the participant and allows them to choose clearly [64]. Measure on environmental awareness indicator was developed by Chen *et al.* [65], green product value measure was developed by Harun and Lily [36] environmental attitude measure was developed by Sreen *et al.* [14], Chen *et al.* [65]. And green culture measure was developed by Ermolaeva [1], Lee [13] and Sreen *et al.* [14]. Hence all key variables were measured by multiple statements because this gives a degree of freedom when separating data into groups

and allows adjustment of the measurement error, thereby increasing reliability and validity [66].

4. RESULT AND DISCUSSION

Table 1 highlights the demographic profile, which indicates the percentage of both male and female respondents with 49.1 % and 50.9 %, respectively. Also, 51.7 % were between 28 to 32 years of age and the majority had a bachelor's degree as the highest educational level. Majority of the respondents are unmarried with 79.0 %, with a low yearly household income of less than ₦50 000 at 58.8 %.

TABLE 1. DEMOGRAPHIC INFORMATION OF TARGET RESPONDENT

Demographic		Frequency	Percentage
Age	18 – 22	32	12.0
	23 – 27	97	36.3
	28 – 32	138	51.7
Gender	Male	131	49.1
	Female	136	50.9
Education	Master/PhD Degree	24	9.0
	Bachelor Degree	219	82.0
	College Certificate	12	4.5
	High School Certificate	12	4.5
Income	₦5000 - ₦50 000	157	58.8
	₦50 001 - ₦100 000	70	26.2
	₦100 001 - ₦150 000	18	6.7
	₦150 001 - ₦200 000	22	8.2
Marital Status	Married	55	20.6
	Unmarried	211	79.0
	Separated	1	0.4

4.1. Assessment of Measurement Model (Construct Validity and Reliability)

According to construct validity and reliability presented in Table 2, the latent variables were categorized by the convergence validity of all the loading factors. For all constructs, the value of the Average Variance Extracted (AVE) is greater than 0.5 and for all latent constructs, the values of Composite Reliability (CR) are above 0.7, and this demonstrates that the qualified components maintained good reliability. Also, regarding the Cronbach's Alpha test of the reliability, all the latent values are greater than 0.6. This is enough evidence that the study material has good reliability. We can statistically conclude that the measurement model has good reliability and validity is constructive, reliable to indicate the variables in the current study. Hence, Table 3 shows for all variables as the AVE root square are greater than the inter-structured correlations.

TABLE 2. CONSTRUCT VALIDITY AND RELIABILITY RESULTS

Factors/Items	Factor Loading	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
En. Attitude		0.892	0.921	0.700
ATT_1	0.845			
ATT_2	0.848			
ATT_3	0.871			
ATT_4	0.805			
ATT_5	0.811			
G. Culture		0.837	0.885	0.606
GC_1	0.786			
GC_2	0.802			
GC_3	0.722			
GC_4	0.811			
GC_5	0.768			
G.En. Awareness		0.890	0.919	0.695
GEA_1	0.841			
GEA_2	0.864			
GEA_3	0.843			
GEA_4	0.841			
GEA_5	0.777			
G. Pro. Value		0.880	0.912	0.675
GPV_1	0.817			
GPV_2	0.852			
GPV_3	0.826			
GPV_4	0.833			
GPV_5	0.778			

Note: Environmental Attitude = En. Attitude, Green Culture = G. Culture, Green Environmental Awareness = G.En. Awareness, Green Product Value = G.Pro. Value.

The factor loading of each item in the five constructs are above 0.70 [68]. The convergent validity was measured by average variance extracted (AVE) was greater than 0.5 which achieved the threshold criteria [66], [68], [69].

4.2. Assessment of Measurement Model (Discriminant Validity)

Discriminant validity reflects the actual distinctiveness of one construct from other constructs. There are various approaches to determine discriminant validity such as Fornell Lacker and HTMT. Fornell Lacker [70] is the first criterion that needs to confirm for discriminant validity. According to this process, the value of the square root of AVE of one construct must be higher than the value of inter-correlations between the constructs. A construct must represent more variance with its items than it does with others in the model. As depicted in Table 3 below, the square root of the AVE of all constructs is bigger than their

corresponding inter-correlations. Therefore, the evaluation of validity and reliability advocates that the measurement model is acceptable.

TABLE 3. FORNELL LARCKER

Factors	En. Attitude	G. Culture	G. En. Awareness	G. Pro. Value
En. Attitude	0.836			
G. Culture	0.385	0.779		
G. En. Awareness	0.319	0.420	0.834	
G. Pro. Value	0.445	0.340	0.231	0.822

Note: Diagonal values show the square root of AVE for each construct.

HTMT was the second approach for discriminant validity and this approach seemed to be a better method as compared to Fornell Larcker. According to Henseler *et al.* [71], the values of the HTMT must be lower than 0.90. For the present study, the upper HTMT value is 0.498 (see Table 4) that compile with the discriminant validity as the value is lower than 0.90.

TABLE 4. HTMT RESULT

Factors	En. Attitude	G. Culture	G. En. Awareness	G. Pro. Value
En. Attitude				
G. Culture	0.447			
G. En. Awareness	0.355	0.480		
G. Pro. Value	0.498	0.392	0.258	—

Fig. 2. Measurement Model: PLS – Algorithm (Outer Loadings).

Specifically, this study concludes that the model has established its discriminant validity. Whilst, the reliability and validity test conducted on the measurement model is satisfactory, as both tests were confirmed. This is an indicator that the measurement model for this study is valid and fit to be used to estimate the parameters in the structural model.

4.3. Assessing the Structural Model

For the evaluation of the structural model in this research, the essential criteria used were: coefficient of determination (R^2) for endogenous variable, effect size (f^2), predictive relevance (Q^2), multicollinearity (inner VIF) and path coefficient (β) Henseler *et al.* [68], Chin [72], Götz *et al.* [73], Tenenhouse *et al.* [74]. The threshold value and description for each benchmark are shown in a stepwise test of the structural model underneath.

4.4. Coefficient of Determination (R^2)

R-square reflects the variance explained by the endogenous construct. According to Cohen [75], the coefficient of determination R^2 is the central criterion for the structural model's evaluation. Table 5 present the R^2 results of this study where the R^2 value of two endogenous variables were 0.247 and 0.271. The level of acceptance is stated (0.02 – weak), (0.13 – moderate), (0.26 – substantial) according to the literature support of Cohen [75], in line with the result, R^2 which is 27 % and demonstrates a highly acceptable prediction level in empirical research. Specifically, a larger R^2 value increases the predictive ability of the structural model and in this case, the value was high enough for the model to achieve a minimum level of explanatory power for the green culture among the Nigerian consumer. This is deemed adequately enough for SEM recommendation that R^2 values should be equal or greater than 0.10 for the variance explained. In this study, Smart-PLS algorithm function was used to obtain the R^2 coefficient values. While the Smart-PLS bootstrapping function is used to generate the t-statistics values. Furthermore, the bootstrapping generated 500 subsamples from 267 observations and the result of the structural model are presented in Fig. 3.

TABLE 5. R-SQUARE RESULTS

Endogenous Variables	R Square	R Square Adjusted
En. Attitude	0.247	0.241
G. Culture	0.271	0.263

Weak level: $0.02 < R^2$; Moderate level: $0.13 > R^2$; Substantial level: $0.26 > R^2$

4.5. Effect Size (f^2)

F^2 was used to measure the effect size. The value between 0.00 to 0.15 indicates a small effect size, while the value between more than 0.15 to 0.35 indicate medium effect and values above 0.35 indicate large effects [76]. Therefore, f^2 is found to have a substantial impact on green culture. Specifically, it explains how powerful one exogenous construct contributes to explaining a certain endogenous construct. The f^2 has presented in Table 6.

TABLE 6. F-SQUARE

Exogenous Variables	En. Attitude	G. Culture
En. Attitude	Not Applicable	0.044
G.En. Awareness	0.066	0.12
G. Pro. Value	0.193	0.034

Small: $< 0.15 f^2$ effect size; Medium: $0.15 < 0.35 f^2$ effect size; Large: $> 0.35 f^2$ effect size.

4.6. Multicollinearity (Inner VIF)

Multicollinearity is checked using inner Variance Inflator Factor (VIF) values. Inner VIF values check the multicollinearity between the measures-items of the constructs. All the exogenous variables show a value of less than 5.0. Therefore, the VIF value of less than 5.0 indicates no multicollinearity problem [66], [76]. The values of the inner VIF is given in Table 7.

TABLE 7. MULTICOLLINEARITY (INNER VIF)

Exogenous Variables	En. Attitude	G. Culture
En. Attitude	Not Applicable	1.328
G. En. Awareness	1.056	1.126
G. Pro. Value	1.056	1.260

4.7. Predictive Relevance (Q^2)

The blindfolding test (Q^2 predictive relevance) is performed as an extra evaluation of model fit in SmartPLS analyses as recommended, the model with Q^2 higher than zero (0) is regarded to have a predictive relevance [76], [77]. The value of Q^2 of the exogenous variable where 0.148 and 0.401 and in Table 8 the values is higher than zero (0). This support that the model has adequate predictive relevance for a reflective model for the endogenous variable under this investigation.

TABLE 8. PREDICTIVE RELEVANCE (Q^2) RESULT

Endogenous Variables	CCR	CCC
En. Attitude	0.157	0.521
G. Culture	0.148	0.401

4.8. Path Coefficient Results

Table 9 presented the path coefficient assessment result where all the proposed hypotheses were supported. The supported hypotheses are significant at least at the level of 0.05, have expected sign directions (i.e., positive) and consist of a path coefficient value (β) ranging from 0.181 to 0.392. Table 9 illustrates that all five direct relationships were significant which is also depicted in Fig. 3. The five direct path relationships were between IVs and DV. The result found that all the relationships were statistically significant as the t -values were more than 1.96 and p -values were less than 0.05. Furthermore, significant structural model path coefficient results can be explained relatively to one another. If one path coefficient (Original sample) is higher than another, its effects on the endogenous latent construct are substantial. In Smart-PLS, to test the significant level, t -statistics for all paths are generated using the Smart-PLS bootstrapping functions. Concerning the t -statistics output, and the level of significance for each hypothesized relationship is determined. Tables 9 and 10 list down the path coefficients results, significant level and t -statistics for all the hypothesized path. Therefore, using the results from path assessment, the acceptance or rejection from the proposed research hypothesis is determined and the hypothesis testing were also discussed.

TABLE 9. PATH COEFFICIENT RESULTS

Hypotheses	Original Sample (O)	Sample Mean (M)	Standard Deviation	T Statistics	P Values
En. Attitude > G. Culture	0.207	0.207	0.092	2.247	0.025
G. En. Awareness > En. Attitude	0.229	0.236	0.063	3.619	0.000
G. En. Awareness > G. Culture	0.314	0.312	0.069	4.571	0.000
G. Pro. Value > En. Attitude	0.392	0.392	0.064	6.156	0.000
G. Pro. Value > G. Culture	0.176	0.181	0.072	2.422	0.016

Note: Environmental Attitude = En. Attitude, Green Culture = G. Culture, Green Environmental Awareness = G.En. Awareness, Green Product Value = G.Pro. Value.

4.9. Mediating Effects (Indirect effect) of Environmental Attitude

This was calculated using Baron and Kenny [78] procedure to test **H₆** and **H₇**, the mediating effects environmental attitude in the relationship between green environmental awareness and green culture, and green product value and green culture. Table 10 displays that **H₆** is not statistically significant since the *t*-value is less than 1.96 and the *p*-value is higher than 0.05. However, **H₇** result is statistically and empirically significant as the *t*-value is more than 1.96 and *p*-value less than 0.05.

TABLE 10. MEDIATING EFFECT OF ENVIRONMENTAL ATTITUDE

Hypotheses	Original Sample (O)	Sample Mean (M)	Standard Deviation	T Statistics	P Values	Decision
G. En. Awareness > En. Attitude > G. Culture	0.047	0.049	0.030	1.590	0.113	Not Supported
G. Pro. Value > En. Attitude > G. Culture	0.081	0.080	0.035	2.307	0.021	Supported

Fig. 3. Bootstrapping (Inner model with *t*-values).

5. DISCUSSION AND CONCLUSION

Current study contributes a positive impact that includes green culture because previous studies in developing nations have emphasized the inclusion of cultural values in profiling green consumers in a circular economy [2], [79], [14]. Furthermore, this study tested two exogenous variables green environmental awareness and green product value and a mediating variable environmental attitude on green culture endogenous variable. The result shows that the environmental attitude mediates the relationship between green product value and green culture. This finding has fulfilled the assumptions and all the requirements of Baron and Kenny [78], this is consistent with the study of [58]. Hence, the consumer tends to have a strong cultural stance and advocacy on green product value. As a result, the study suggests that the more concern a Nigerian consumer have towards the environment, the more he/she will impact their attitude towards going green and adopting the green culture. Regarding the mediating effect of environmental attitude on the relationship between green environmental awareness and green culture, the result shows no path, which provoked the assumption of this study and the procedure of [78], thus the hypothesis was rejected, and this is contrary to the study of [80]. This study suggests that although Nigerian consumers are already aware, this awareness does not influence their attitude. Hence, attitude will not influence the level of going green and allowing them to embrace the green culture. Therefore, this balance can be used by the green practitioner and policymaker to design and create a more effective strategy on environmental awareness that will enhance green culture. However, all exogenous variables were found to be empirically supported and show a significant relationship on the endogenous variable while examining the direct relationship. Those findings are consistent with the studies of [1], [7], [10], [12], [45], [55]. Considering the significance of the exogenous constructs in predicting the endogenous construct, green culture, it is evident that awareness (beta-coefficient: 0.314) is the most important predictor, followed by attitude (beta-coefficient: 0.207) and the green product value (beta-coefficient: 0.176). Furthermore, when examining the endogenous construct, the primary driver or predictor, attitudes bring a meaningful predictor on green product value. Therefore, green product value towards environmental attitude shows the highest impact (beta-coefficient: 0.392) on attitude linking green culture, similar to the previous study done on the relationship among green consumption attitude to perceived value towards hydrogen-electric motorcycle among Taiwan consumer Chen *et al.* [81] and also verify McCarthy and Shrum [82] value-to-attitude-to-behaviour theory. Therefore, green product value will help the practitioner to maintain a lasting relationship with the consumer in the future.

Interestingly, the study also shows the low-income state of the young Nigerian green consumer as 58.8 % earn within \$140 approximately ₦50 000 and this has demonstrated the low-income status that imparts green movement in developing nations and this view is supported by [83], [90]. It is believed that environmentally friendly products are only for premium customers and individuals with high income will be able to afford them [14]. The research also found that individuals with at least a bachelor's degree have a higher stand and advocacy to exhibit the green culture because they know about environmental gains, hence knowledgeable and this view is supported by [84].

In contrast, Samdahl and Robertson [85], and Nittala [86] showed that income and education measures will not translate into the green culture or make consumers behave greenly. Therefore, these findings have major inference for going green activism on sustainable consumer green economy and strategy implementation from the practitioner perspective on the circular economy. Therefore, some recommendations and suggestions on how to improve

the current situation in the Nigeria nation and other emerging countries with similar issues were further discussed for policymakers.

6. RECOMMENDATIONS AND POLICY IMPLICATIONS

Bajcinovci [87], Kittipongvises *et al.* [88] and Alam [89] insist environmental pollution and climate change issues and problems are now of global health and environmental concern. A complex phenomenon which is directly reflected on economic and human development [87]. Environmental issues have significantly multiplied due to lack of awareness and stagnation by green consumers in Nigeria and other emerging nations. Therefore, the study suggested by recommending Nigeria requires aggressive green marketing strategies to increase consumer awareness on the benefit from the consumption of the green product and going green. A further recommendation is that green marketers and practitioners can increase the size of green marketing in Nigeria by focusing on increasing green environmental awareness among young consumers with a focus on the attitudinal level. For example, green practitioners should be able to utilize content marketing strategies such as creating valuable green content to enhance and drive environmental awareness for going green activism with a focus on young consumer cohort, as they make-up nearly 60 % of the Nigerian population. They should be used as the agent of change and will play a major role in shaping the present-day lifestyle for the next generation that will drive for a more sustainable and environmentally friendly pattern for going green because they have been previously regarded by scholars as to the leaders of the modern-day green movement. Whilst, through effective content marketing procedure, green practitioners and collaborators can effectually stimulate young consumer pro-environmental awareness and build up consumer attitude, green value relating to their green products and services.

Additionally, conveying a message that sustainable green product and brands purchasing will bring about protecting the environment of their local communities, country and globally may also be a successful marketing strategy for Nigeria and other emerging countries with similar problems i.e. placing emphasis on environmental awareness. According to Yahya [61], Chen [65] and Obayelu [90], green consumers in emerging countries are searching for green products and enterprises want to adopt the going green activism but there is a need for honesty regarding green products. To guarantee the confidence of consumers without breaching any laws and moral standards of business practices, the green practitioners should have a moral and sociable responsibility of transparency in describing what they are doing in terms of going green marketing. Enterprises should realise that their products and services can only be certified “green” by an unbiased observer, and third party with a well-known green certification. A third party or unbiased observer needs to be able to approve the certification procedures. As such, this process will make credible green products and services, as the use of self-certification or claims by some enterprises will not be credible. This is important because Brennan and Binney [91] submitted that false claims made by enterprises about the greenness of green products and services have resulted in consumer scepticism. It is recommended that green enterprises and policymakers in Nigeria apply the use of international symbols or terms such as non-harmful, simply natural, organically grown and recyclable as green status symbols or packaging for green products, as there is no third party to officially certify environmentally friendly products in Nigeria and other emerging nations.

Specifically, sufficient information concerning the promotion of going green, green products and their attributes seem not to have been observed in Nigeria. Green consumers need information about green businesses and going green to evaluate its green product claims

and reputation. Where there is no proper information on ecological products in the green industry, a consumer is likely to become bewildered on what constitutes green. To alleviate such confusion among consumers, national certification, green status symbol and information is required aforesaid. Therefore, the government has a role to play, the Nigerian government should provide proper awareness campaigns to deliberate on environmental issues and challenges through cultural advocacy which will result in going green. The government should also charge organizations to become more responsible by motivating the green marketers and collaborators to change their environmental operations but while doing so, there should be a robust policy to protect the green consumer. Although, the Nigerian government has become more environmentally friendly and has taken a great step to become the first African nation and second emerging economy to issue a climate bond certificate globally (Sovereign Green Bond) to finance green projects, environmental and climate issues. It is also important to allocate more resources to achieve the goal of going green and becoming a green economy.

7. LIMITATION AND FUTURE RESEARCH

This study focusses on the young consumer to understand specific cohort, therefore future studies should expand the consumer base throughout Nigeria and more research are recommended to collect data from other areas or cities so that results can be more generalized. The study also profiles environmental awareness, value, attitude on green culture; hence future study should include a more exogenous variable to know the impact of behaviour/cultural shift on consumer wants as this will help a green provider to implement the green strategy. This research also provides balance for studying a similar context in emerging nations in the future. On the mediating variable, the environmental attitude has been tested, future research should include the impact of environmental awareness, gender or education to show explanatory power. Green product value is regarded as an important construct because consumer value is the underlying starting point for the formation of environmental attitude towards the behaviour. In the field of marketing sociology and socio-economic research, product value influences consumer behaviour. Conversely, consumer values are sub-divided into biospheric values, altruistic values and egoistic values. Whilst, a consumer with biospheric value care about the environment and biosphere. Usually, a consumer with altruistic value cares about the well-being of the society, while a consumer with egoistic values is more concern about themselves and self-interest. Therefore, product value is also regarded as an important mediating variable and future study may apply the mediating effect of product value between environmental awareness, environmental attitude and green culture. Specifically, future research should also examine any of the sub-division of product values on green culture.

With several studies beginning to be conducted in emerging nations such as Turkey, Malaysia and South-Africa, the research should be used as a balance for cross-sectional comparative study across international boundaries such as Malaysia and Ghana, Nigeria and Singapore, Nigeria and Vietnam or regional comparisons to know the impact of culture on behaviour over time. A qualitative and quantitative i.e., mixed-mode study conducted in the mother tongue could provide useful insight into the importance of going green in the component of emerging nations. Finally, a longitudinal study should be applied.

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