

Green marketing and the SDGs: emerging market perspective

George Kofi Amoako, Robert Kwame Dzogbenuku and Joshua Doe

Department of Marketing, Central University, Accra, Ghana, and

Geoffrey Kwasi Adjaisson

Research and Innovation Centre, Hill City College, Accra, Ghana

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Abstract

Purpose – The purpose of this paper is to investigate how consumers in emerging market respond to sustainable development goals initiatives by marketers and firms. The study seeks to identify how sustainable marketing strategies contribute to attaining the SDGs in Ghana, a developing and emerging country in sub-Saharan Africa.

Design/methodology/approach – A positivist methodological framework was used for the collection of data, analysis and theoretical development in this research. A total of 780 questionnaires were handed out. Out of this number, a total of 650 were returned. However, due to missing values, 622 valid responses were used for analysis. Of the valid responses, 306 (about 49.23%) were males while 316 were females, representing about 50.8%. Structural equation modelling was used to analyse data and investigate the relationship amongst advertising, packaging, pricing, green marketing strategies and purchasing behaviour.

Findings – Study findings provide insight into how marketing strategies affect consumer purchasing decisions and brand loyalty. Findings revealed positive relationship between green marketing and purchase behaviour. Empirical results from this study also confirm the mediating role of price on the relationship between green marketing strategies and purchase behaviour.

Research limitations/implications – While this study is limited to a single country Ghana, the findings can have far-reaching implications for many countries in the emerging markets sector. The study provides a vivid illustration of how environmental concerns can affect consumers' attitude towards products or services.

Practical implications – Policy on environmental issues can be developed from this study. Marketers can be more effective at how to effect consumer behaviour using findings from this research.

Social implications – Firms employing green marketing strategies must be aware of the importance the youth places on sustainability and develop strategies that enhance social acceptance by the youth.

Originality/value – To the authors' knowledge, sustainable and environmental issues have been researched on, but pricing and advertising have not been used as a mediating variable on purchasing behaviour in Ghana. Moreover investigation of green marketing strategies and purchase behaviour, advertising packaging and brand loyalty using structural equation modelling analysis within the Ghanaian public space is unique.

Keywords Ghana, Packaging, Advertising, Purchasing behaviour

Paper type Research paper

The Sustainable Development Goals (SDGs) hatched by the United Nations in 2015 sought among other goals to focus national and international efforts to make the world a peaceful place devoid of critical social ills within the next 12 years and in promoting sustainability.

Sustainability is concerned with developing products that meet the needs and aspirations of customers without compromising the environment and future generations ([World Commission on Environment and Development, 1987](#); [Pomeroy, 2017](#)). Sustainability business strategies must consciously be crafted to permeate all levels of the firm's strategic planning sphere cascading through corporate vision, mission objectives and tactical plans including the marketing mix. The marketing mix is a logical marketing tool that drives marketing plans to attain sustainability marketing outcomes to create value. It is also a controllable marketing variable that influences customers consciously. Green marketing policies drive marketing strategies using the marketing mix. Product design, pricing, packaging, promotion and selling strategies must clearly emphasize sustainable environmental ideas. According to [Sidhu \(2018\)](#), 33% of Unilever consumers prefer green



brands to reflect socio-environmental values as “green consumers” represent mass untapped markets for green brands valued at \$2.7 trillion globally.

Sustainable marketing strategies remain ever relevant to attain community involvement and brand engagement because such products promote brand trust among the environmentally conscious customers. Literature on emerging markets demand responsive marketing strategies considering the market’s uniqueness primarily due to the adverse impact of climate. Choudhary and Gokarn (2013) proposes that sustainable marketing policies must reflect in product development, packaging and promotion aimed at preserving nature. For example, sustainable advertising calls for advertising messages that do not only promote products but also project societal ideals for social interest with implications for nature, the economy and society mainly for sustainable life (Prianti, 2012).

Globally most multinationals in the west are turning to emerging markets (EMs) for opportunities because growth has plateaued in most advanced economies for profits (Sheth *et al.*, 2016; Sheth and Sinha, 2015). This market is considered to be one of the fastest growing developing economies creating the fastest growing middle-to-high income of consumers (Sudhir and Talukdar, 2015) estimated at consuming USD 30 trillion by 2025 (Sheth *et al.*, 2016). It is characterized with market heterogeneity, moderate poor regulatory and governance system, sale of unbranded products, chronic shortages of essential resources and inadequate social infrastructure like electricity and water (Sheth and Sinha, 2015). Others include a growing youthful population, a unique culture and a high rate of illiteracy which could have serious implications on sustainable environment behavior.

The significance of this study is when marketing strategies are crafted with the view of creating sustainability consciousness in consumers. This can help in the attainment of the SDGs goals. Companies and marketers can influence consumers using sustainable marketing strategies in product development to impact society at large. Marketers have the ability to create value to achieve goals 12 and 13 of the SDG n responsible consumption and production and climate action. Sustainable development makes room for meeting present needs and future aspirations of customers without compromising the future (Pomeroy, 2017). Marketers have the capacity to create and promote sustainable consumption habits that consciously promotes organic behaviour. Further, they must balance profit motives with social benefits for the attainment of the SDGs, to be recognized as good corporate citizens while balancing social consideration (Sidhu, 2018).

The study seeks to identify how sustainable marketing strategies contribute to attaining the SDGs in Ghana, a developing and emerging country in sub-Saharan Africa.

Literature review

Green marketing

The population of the world keeps increasing at a faster and unprecedented rate, and the level of greenhouse gasses in the atmosphere as well as a hole in the ozone layer caused by chlorofluorocarbons is similarly increasing at a very high rate (Peattie and Charter, 1994). This has raised the need to inculcate sustainability measures in all levels of production, consumption and general aspects of livelihood. In 1987, the Brundtland Report entitled “Our Common Future” brought the issue of sustainability into the mainstream (Peattie and Charter, 1994), and in the wake of the 1992 Rio Earth Summit, the pursuit of sustainability as a goal was adopted by world leaders (Peattie and Charter, 1994).

Polonsky and Ottman (1998) defines green marketing as “marketing that consists of all activities designed to generate and facilitate any exchanges intended to satisfy human needs or wants, such that the satisfaction of these needs and wants occurs with minimal detrimental impact on the natural environment”. A number of activities that are designed to generate and facilitate exchanges intended to satisfy these human needs or wants in an environmentally

friendly way include product modification, sustainable packaging and advertising, among others. It has become increasingly needful to inculcate environmental concerns in marketing efforts at all levels.

The essence of green marketing. Green marketing is undoubtedly essential. According to Jay Polonsky (2008), the green marketing concept increased in importance due to the basic definition of economics, which is the study of how people use their limited resources to try to satisfy unlimited wants. Many scholars have suggested, in literature, the reasons why organizations are increasingly using green marketing (Jay Polonsky, 2008). According to Keller (1987), organizations perceive environmental marketing to be an opportunity that can be used to achieve its objectives. Keller (1987), Davis (1992) and Shearer (1990) all affirm that organizations believe they have a moral obligation to be more socially responsible, while cost factors associated with waste disposals or reductions in material usage force firms to modify their behaviour (Azzone and Manzini, 1994).

According to O'Hara (1995), the marketing discipline began to earnestly discuss the physical implications and sustainability of marketing during the 1990s. The history of green marketing can be dated back to the wave of environmental concern of the 1970s that led to the concept of *ecological marketing*. According to Peattie and Charter (1994), this was linked to industries with the most severe environmental impacts and with developing new technologies to alleviate particular environmental problems.

Peattie and Charter (1994) assert that there are some important differences between the environmental movement of the 1970s and the green movement of today, which they presented in a tabular format as shown below (see Table 1).

Researchers have argued that the integration of environmental concern into marketing theory and practice is an extension of the societal marketing concept; however it is essential to understand the concept of green marketing as something that integrates and expands upon the ideas embedded in the ecological and societal marketing concepts.

The study proposed the following hypotheses:

H1. There is a positive relationship between green marketing and purchase intentions with price as a mediator and brand loyalty as a moderator.

Factor	1970s environmentalism	1990s green
Emphasis	On "environmental" problems	On the underlying problems with our social, economic, technical or legal systems
Geographic focus	On local problems (e.g. pollution)	On global issues (e.g. global warming)
Identity	Closely linked to other anti-establishment causes	A separate movement embraced by many elements of "the establishment"
Source of support	An intellectual elite, and those at the fringes of society	A broad base
Basis of campaigns	Used forecasts of exponential growth to predict future environmental problems (e.g. limits to growth)	Uses evidence of current environmental degradation (e.g. the hole in the ozone layer)
Attitude to businesses	Business is the problem. Generally adversarial	Businesses seen as part of the solution. More partnerships formed
Attitude to growth	Desire for zero growth	Desire for sustainable growth
View of environment/business interaction	Focussed on negative effects of business activity on the environment	Focuses on the dynamic interrelationship between business, society and the environment

Table 1.
The evolution of environmental concern
Source(s): (Peattie and Charter, 1994)

H1a. There is a positive relationship between green marketing and sustainability with price as a mediator and brand loyalty as a moderator.

Advertising and sustainability

If channels of advertisements lead to destruction of the environment, the negative effect and implications will outweigh the economic gain of the firm from the sale of related products or services. The bigger community is adversely affected, and this effect will *bounce back* to the firm in question. *Unsustainable advertising* therefore affects not only the community or society but also firms that practiced it. There is an unfortunate reality that indicates that inadequate information on how to promote consumers' green behavioural intention is slowing the growth of green markets (Chekima *et al.*, 2016).

As companies intend to engage with consumers who are concerned about their environment, advertisements containing environmental claims are becoming more relevant (Ashok and Aswathanarayana, 2018). While much has been written about environmental advertising, this phenomenon has infrequently been examined systematically (Calson *et al.*, 1993).

Therefore, the study proposed the following hypothesis:

H2. There is a positive relationship between advertising and sustainability with price as a mediator and brand loyalty as a moderator.

Advertising and purchase intention

Purchasing intention is defined as a probability that lies in the hands of the customers who intend to purchase a particular product (Grewal *et al.*, 1998). Consumers are, on daily basis, flooded with numerous advertisements that intend to generate their interest in the purchase of products and services. Because consumers have unlimited choices to make out of the options communicated to them, numerous factors inform their decision in purchasing these products or services. A consumer's attitude may be drawn towards advertisement that seeks to contribute to environmental sustainability. This leaves the consumer to assess various products or services on the basis of this factor. Purchase intention shows that consumers will mostly follow their experience, external environment and preference to collect information, evaluate alternatives and make purchase decisions (Schiffman and Kanuk, 2000). Once the purchase intention of a consumer increases, the possibility of purchasing that product by the consumer correspondingly increases. This means managers must develop proactive advertising concepts that are *green* in nature to enhance increased purchase intention leading to positive purchase decisions by the consumer.

It is suggested that purchase intention can measure the possible outcome of a consumer buying a particular product or patronizing a particular service. Once the purchase intention is higher as stated above the consumer's willingness to purchase the product will also be higher (Schiffman and Kanuk, 2000). That attitude by the consumer and the assessment of external factors construct purchase intention, which is a critical factor in predicting consumer behaviour (Fishbein and Ajzen, 1975).

Brand image has proven to be an effective concept that acts as a catalyst to increasing purchasing intention. Jiang and Wang (2006) used brand image as the independent variable, with product category as the moderator and purchase intention as a dependent variable. He found that the higher the brand image is, the higher the purchase intention is. The question then arises: can environmental information in advertising increase brand image? The brand attitude of consumers and their purchase intention is higher when the product has a high preference image (Kamins *et al.*, 1991; Laroche *et al.*, 1996).

Therefore, the study proposed the following hypothesis:

- H3. There is a positive relationship between advertising and purchase intentions with price as a mediator and brand loyalty as a moderator.

Pricing and purchase intention

To the consumer, pricing is sacrificial; while to the businessman, pricing is revenue. This implies that the businessman must convince the consumer that it is worth sacrificing in making purchasing decisions on a particular product or service. [Monroe \(1990\)](#) defines price as “the amount of money we must sacrifice to acquire something we desire”; hence desiring the product or service in meeting customer satisfaction is essential. Purchase intention will be increased once the product or service meets the desire of the consumer. The consumer may be willing to pay more once the product or service meets his/her desire and needs, although this is not an absolute statement. For some consumers, the desire may be there, and the purchase intention may be very high, but a high cost or pricing could adversely affect the power to purchase by that consumer. The social class as well as factors such as educational level of the consumer can affect the purchase intention of the consumer, for instance in premium pricing.

A survey conducted by [Chekima et al. \(2016\)](#) indicates that education level and gender have a significant positive moderation effect. They suggested that green purchase intentions’ motivational factors are greater among highly educated individuals, especially with female consumers. Therefore, the study proposed the following hypothesis:

- H4. There is a positive relationship between pricing and purchase intention.

Packaging and sustainability

Packaging and sustainability is swiftly being discussed among industry players and academics. Also referred to as “Green Packaging”, the subject is so essential to promoting sustainability in the field of marketing. Purchase decisions by consumers depend largely on the packaging of the products. People can decline from buying an *excellent* product in an *unsatisfactory* package. Due to this fact many industry players factor this essential element in achieving business success. Unfortunately, its proliferation is beginning to do some form of harm to consumers and the society at large. This is as a result of using materials that are neither recyclable nor biodegradable in producing packages. In third world economies especially there is little effort in ensuring proper discarding and management of waste generated by discarded, used and empty packages. Discarded packaging has accounted for a large proportion of waste in industrialized economies and a good deal of the environmental impact of many products and can be the beginning for many companies to ensure green marketing efforts ([Peattie and Charter, 1994](#)).

Consumers can make purchase intentions based on green packaging factors with sustainability labelling. Premium prices could be made, and some will be willing to pay more on buying products with green packages. The study proposed the following hypothesis:

- H5. There is a positive relationship between packaging and sustainability.

Purchase intention and sustainability

[Grewal et al. \(1998\)](#) defined purchasing intention as a probability that lies in the hands of the customers who intend to purchase a particular product. [Chen \(2013\)](#) indicated that environmental knowledge, attitudes, environmental concern and social influence affected green purchase intention. Positive purchase intention can lead to a consumer’s actual purchase action, or a negative purchase intention can result in the consumer not purchasing ([Mahmoud et al., 2017](#)).

Consumers are becoming ever aware of how consumption patterns affect environmental degradation; hence they are developing positive inclination to spend on sustainable brands (Kumar *et al.*, 2018). Indeed, environmental protection has daily concern in addition to satisfying personal needs and desires. Therefore, consumers' purchase decisions have been influenced by increasing consumer awareness and inclination towards sustainable brands (Yadav *et al.*, 2019).

Methodology

Ghana is an emerging economy with a growing, sophisticated consumer base. With a middle-income status, a stable political climate and a thriving economy, Ghana has, in recent times, witnessed phenomenal changes in its social stratification with a consistent rise in the middle to upper-income brackets, thus giving rise to an urbane consumer base with a penchant for superior value services (Anabila *et al.*, 2020). Ghana was chosen because of the rise of middle class who are also better educated and hence have a higher chance of sustainability awareness. Moreover Ghana is a member of United Nations which is committed to achieving the sustainability goals. A quantitative research design was utilized in testing and investigating the relationship amongst the following variables, green marketing, purchasing behaviour, advertising, price and packaging in Ghana. The 1–5 Likert scale survey questionnaires were pre-tested using 20 respondents to ensure high internal consistency of the measures. The resultant questionnaire was administered to respondents who have had encounters with the green marketing and sustainability issues in Ghana. Cross-sectional data were used in the study to collect information from respondents because it is the most widely used technique and provides inexpensive, quick, accurate and efficient means of collecting information about a population (Robson, 2002; Zikmund and Babin, 2010). Customers in Accra were chosen as Accra is the capital of Ghana and has the highest number of middle-income city dwellers. Choosing Accra helped the researcher to reduce time and cost as well as improve the efficiency of questionnaire administration. A total of 780 questionnaires were handed out. Out of this number, a total of 650 were returned. However, due to missing values, 622 valid responses were used for analysis. Of the valid responses, 306 (about 49.23%) were males while 316 were females, representing about 50.8%. Price constructs were adapted from Kotler (2011) and Peattie (1999); green marketing and packaging adapted from Cronin *et al.* (2011), Kotler (2011) and Leonidou *et al.* (2013) and purchase intentions from Rezai *et al.* (2012). Advertising constructs came from modified work of Chan (2001) and Manrai, Manrai, Lascu and Ryans (1997)

Common method bias

The researchers followed the suggestion by Mackenzie and Podsakoff (2012) that, in order to address the possibility of common method bias that may result from the cross-sectional design adopted for this research, data were collected for both dependent and independent variables from the same respondents. This possible bias may pose a threat to the validity of the conclusions drawn from the hypothesized relationships (Podsakoff *et al.*, 2003). Items relating to one construct were dispersed throughout the questionnaire to prevent respondents from thinking these items were redundant. Harman's one factor test was employed to check the potential existence of common method bias.

Data analysis method

Data collected were analysed using structural equation modelling (CV-SEM). Structural equation modelling is a second generation statistical technique that allows researchers to test causal relationships between latent variables. There are two approaches to SEM (Hair *et al.*, 2014):

the covariance-based SEM, which requires that the data exhibit multivariate normality and the variance-based approach PLS-SEM, which does not require multivariate normality. The current study employs covariance based-SEM because it is more rigorous and lends itself to theory testing. Customer satisfaction has been tested over a long time, and the overall model fit is better indicated in covariance-based SEM. Likewise the approach is very suitable for linear structural relationships (Diamantopoulos *et al.*, 2000). Hair *et al.* (2016b) describes it as a truly flexible model for a number of research studies, which includes cross-sectional, experimental, quasi-experimental and longitudinal studies.

Results

Due to the relatively high response rate of 89%, a test for non-response bias was not undertaken (Leden *et al.*, 2011). Exploratory factor analysis with extraction of only one factor showed that the factor accounted for about 41% of variance explained (which is less than 50% variance) (Podsakoff *et al.*, 2003). Therefore, common method variance bias is not a problem with this data.

In the analysis of data, partial least squares (PLS) were used (SmartPLS Release: 3.2.7 (Ringle *et al.*, 2005). PLS is not affected by sample size and is the researcher's preference for data that is not normally distributed (Hair *et al.*, 2011). The significance of each path was tested using the PLS procedure of bootstrap *t*-values (5000 sub-samples) (Tortosa *et al.*, 2009). Analysis of the scale items showed that two items had kurtosis $> \pm 1.0$ whereas one (1) item had skewness $> \pm 1.0$. More importantly, the Komogorov–Smirnov test of normality showed that $0.136 < \alpha < 0.255$; $p < 0.01$ for all items. Similarly, the Shapiro–Wilk test of normality showed that $0.805 < W < 0.927$; $p < 0.01$ for all items. These imply that the data are not normally distributed and, as a result, PLS-SEM was used to perform confirmatory factor analysis and structural equation modelling.

Measurement model analysis

All the six constructs of this study including green marketing, advertisement, packaging, price, brand loyalty and purchasing behaviour were measured reflectively. Following the application of PLS to the model, some items including “GM3” (an item to measure green marketing), “PR4” (an item to measure price) and “BL4” (an item to measure brand loyalty) were deleted since the items significantly cross-loaded into other constructs. The model's quality criteria were assessed following purification: Cronbach's alpha, composite reliability and average variance extracted estimates all meet the minimum of 0.7, 0.7 and 0.5 respectively as recommended by Hair *et al.* (2016a), and shown in Table 2. Furthermore, each of the remaining items' loadings were statistically significant using bootstrap *t*-values (5000 sub-samples) (Tortosa *et al.*, 2009). The results imply that convergent validity has been adequately met.

The next stage after testing for convergence validity is to test for discriminant validity. Discriminant validity is met by the fact that the square root of the average variance extracted estimates for each of the six constructs is greater than the inter-construct correlations between them as shown in Table 3 (Fornell and Lacker, 1981; Barclay *et al.*, 1995). In addition to Fornell and Lacker criteria, discriminant validity was assessed using the heterotrait–monotrait ratio (HTMT0.85) (Henseler *et al.*, 2009). The results presented in Table 3 show that none of the correlations exceeded 0.85. This shows that each construct is distinct and differs from the other measurement constructs in the model and, as a result, the six construct models demonstrate discriminant validity.

Structural model

An examination of the predictive accuracy (R^2) of the structural model showed that green marketing, advertisement and packaging jointly explained about 50% of the variance in

		Codes	Mean	SD	Loading	Bootstrap <i>t</i> -values	α	CR	AVE
Green Marketing	Green marketing affects my purchase of food	GM1	4.56	1.91	0.88	79.78	0.83	0.90	0.74
	Green marketing affects my purchase of electrical products	GM2	4.74	1.73	0.89	68.80			
	Companies must make known their green marketing policies to consumers	GM4	4.71	1.71	0.82	49.65			
	I will not purchase products that are not green marketing-oriented	ADS1	5.48	1.55	0.85	83.26	0.80	0.86	0.61
Advertisement	I will make purchase decisions from companies that are truthful and sincere in their advertisement	ADS2	5.33	1.63	0.84	53.87			
	I prefer to patronize products from companies that add sustainability-based information to their labelling	ADS3	5.14	1.62	0.72	20.81			
	I do not like advertisement that are exaggerated	ADS4	5.20	1.76	0.70	20.42			
	I do not purchase products from companies whose channels of advertisement destroy the environment	PAC1	5.55	1.65	0.83	47.13	0.86	0.90	0.70
Packaging	I will patronize products that have biodegradable or compostable packages	PAC2	5.68	1.43	0.87	55.69			
	I will purchase products that are recyclable	PAC3	5.72	1.43	0.85	43.67			
	I prefer to patronize products from companies that support sustainability	PAC4	5.60	1.40	0.80	34.45			
	I will patronize products from companies that make sure raw materials are sustainably produced	PR1	5.19	1.68	0.85	50.92	0.76	0.86	0.67
Price	I will pay for products with premium pricing if increase in cost is as a result of making these products environmentally sound	PR2	5.13	1.66	0.76	24.97			
	I will not patronize products with high cost but devoid of sustainability measures	PR3	5.04	1.76	0.84	64.45			
	I will choose sustainable products with premium or high prices over unsustainable products with lower prices	BL1	4.95	1.77	0.92	147.65	0.84	0.90	0.75
	I patronize products based on cost either than sustainability	BL2	5.05	1.70	0.93	151.88			
Brand Loyalty	CSR/cause-related/green marketing brand considerations are foremost concerns influencing my purchasing decision	BL3	5.15	1.61	0.74	24.40			
	If I decide to buy a new product today, I will stick to same brand influenced by CSR/cause-related/green marketing concern due its fulfilment and benefit	PB1	5.189	1.65	0.85	55.38	0.88	0.92	0.74
	I'm ever loyal to CSR/Cause-related/Green marketing products/services	PB2	4.99	1.72	0.82	45.17			
	I'm connected emotionally to products and services linked the SDGs	PB3	5.09	1.65	0.88	89.32			
Purchasing Behaviour	My purchase behaviour is primarily influenced by environment sustainability	PB4	4.92	1.77	0.87	83.19			
	I am persuaded to buy cause-related promotional products/services								
	Regarding purchase decision, package recyclability is a foremost consideration								
	CSR/cause-related and green marketing activities to high extent influence my purchase decision								

Table 2. Scales of variables in the model

purchasing behaviour, which exceeds the moderate level of 33% suggested by Chin (1998) for good explanatory power. Q^2 – values of 0.34 for purchasing behaviour. Since the Q^2 value is greater than 0, the structural model demonstrates predictive relevance (Chin, 2010). Finally, the effect sizes (f^2) computed for the exogenous variables showed that green marketing had a medium effect size on purchasing behaviour. On the other hand, the effect size of advertisement was small whereas packaging had no effect size on purchasing behaviour.

Hypothesis testing

From the results of the structural model, all paths are statistically significant and, as a result, the first three hypotheses are confirmed in the present context. Specifically, a positive and significant relationship exists between green marketing, advertisement, packaging and purchasing behaviour. Table 4 provides a further summary of the hypotheses' conclusions.

Mediation effect of price on green marketing strategies and purchasing behaviour

To test for mediation in PLS-SEM, Nitzl, Richter et al. (2016) recommend testing the significance of the indirect effect of the exogenous variables (green marketing, advertisement and packaging) on the endogenous variable (purchasing behaviour) through the mediator (price). If the indirect effect is significant then mediation exists, if not there is no mediation. The mediated model is shown in Figure 1.

Data show that price fully mediates the association between advertisement and purchasing behaviour but partially mediates the association between green marketing and purchasing behaviour and packaging and purchasing behaviour. Therefore, the fourth (H4) hypothesis of this study is supported.

Moderating effect of brand loyalty on green marketing strategies and purchasing behaviour

The moderation effect of brand loyalty on the relationship between the marketing strategies (green marketing, advertisement and packaging) and purchasing behaviour is shown in

Table 3.
Discriminant validity
(square root of AVEs in
bold-diagonal)

Construct	Fornell-Larcker criterion					
	1	2	3	4	5	6
1. Green marketing	0.86					
2. Advertisement	0.56	0.78				
3. Packaging	0.42	0.66	0.84			
4. Price of product	0.51	0.59	0.47	0.82		
5. Brand loyalty	0.59	0.60	0.53	0.51	0.87	
6. Purchasing behaviour	0.66	0.56	0.46	0.53	0.73	0.86

Table 4.
Structural path results

Hypothesis	Structural path	Path coefficient	t-value (bootstrap)	Hypothesis results
H1	Green marketing → Purchasing behaviour	0.50**	12.56	Supported
H2	Advertisement → Purchasing behaviour	0.21**	3.90	Supported
H4	Packaging → Purchasing behaviour	0.11**	2.62	Supported

Note(s): **t-values are significant at $p < 0.01$

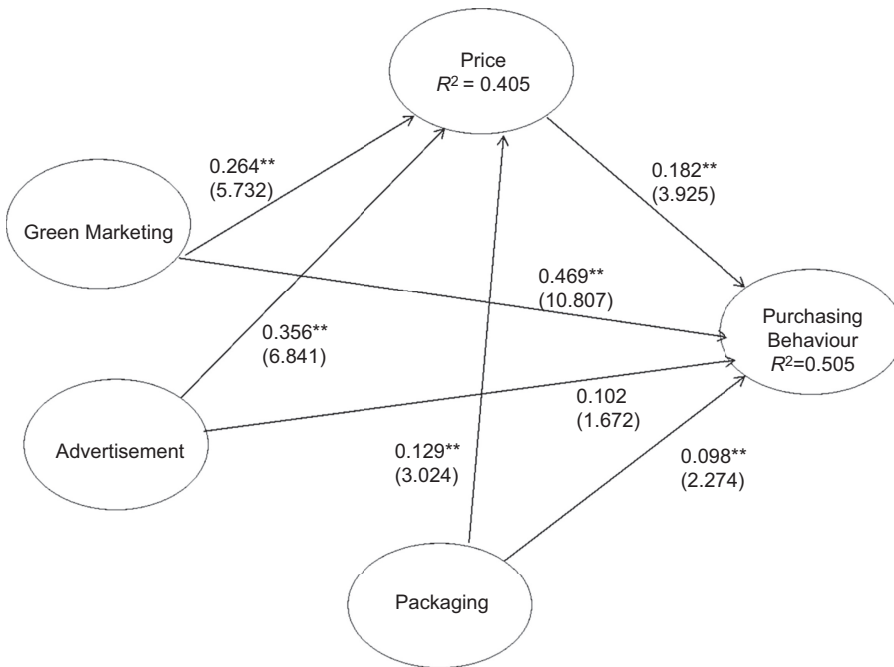


Figure 1. Mediated model showing the mediation effect of price on green marketing strategies and purchasing behaviour

Note(s): *, ** statistically significant at 0.05 and 0.01 level of significance; (*t*-values in parenthesis)

Table 5. The *R*-square of the main structural model is 0.50 (model 1), which increased to 0.62 (model 2) following the introduction of the moderator—brand loyalty. The interaction effect of brand loyalty with green marketing, advertisement and packaging further increased the *R*-square to 0.66 (Model 3) resulting in a change in *R*-square of about 4%. Furthermore, the interaction effect of brand loyalty on green marketing ($\beta = -0.10, t = 3.14, p < 0.01$), advertisement ($\beta = 0.27, t = 6.81, p < 0.01$) and packaging ($\beta = -0.08, t = 2.11, p < 0.05$) are all

Rival models	Direct effects: Model 1	Direct effects: Model 2	Moderated effects: Model 3
Green marketing → Purchasing behaviour	0.50**	0.33**	0.28**
Advertisement → Purchasing behaviour	0.21**	0.08	0.18**
Packaging → Purchasing behaviour	0.11**	0.001	0.02
Brand loyalty → Purchasing behaviour		0.46**	0.46**
GreenMkt*Bloyal → Purchasing behaviour			-0.10**
Advert*Bloyal → Purchasing behaviour			0.27**
Packaging*Bloyal → Purchasing behaviour			-0.08*
<i>R</i> ²	0.50	0.62	0.66
ΔR^2		0.13	0.04

Note(s): **t*-value is significant at $p < 0.05$; ***t*-values are significant at 0.01

Table 5. Moderation results

significant. This implies that brand loyalty strengthens the relationship between marketing strategies and purchasing behaviour thus lending support to hypothesis 5 (H5).

The moderation slopes that further highlight the fact that brand loyalty moderates the relationship between marketing strategies and purchasing behaviour are presented in Figures 2–4. In each of the graphs the two brand loyalty lines are not parallel providing evidence of moderation.

Summary of findings

H1: Green marketing significantly influences purchasing behaviour – Data displayed in Table 4 show that the relationship between green marketing and purchase behaviour is statistically significant at a coefficient of 0.50**, with a *t*-value of 12.56. This confirms the hypothesis that green marketing significantly influences purchase intention. Therefore we confirm that green

Figure 2. Moderation slope showing the moderating effect of brand loyalty on green marketing and purchasing behaviour

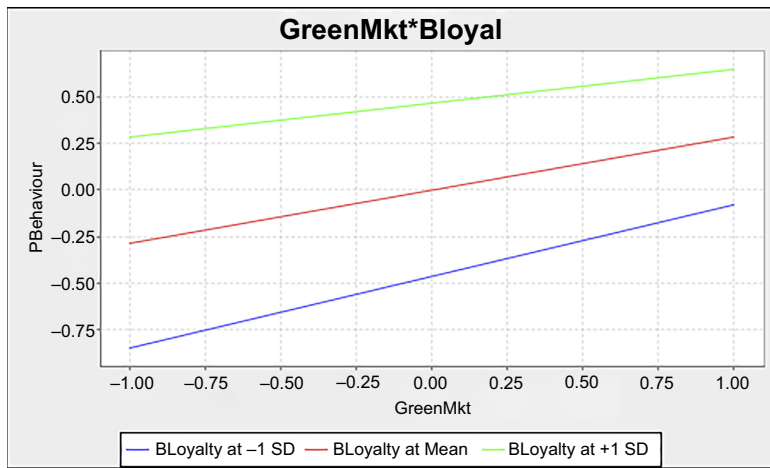
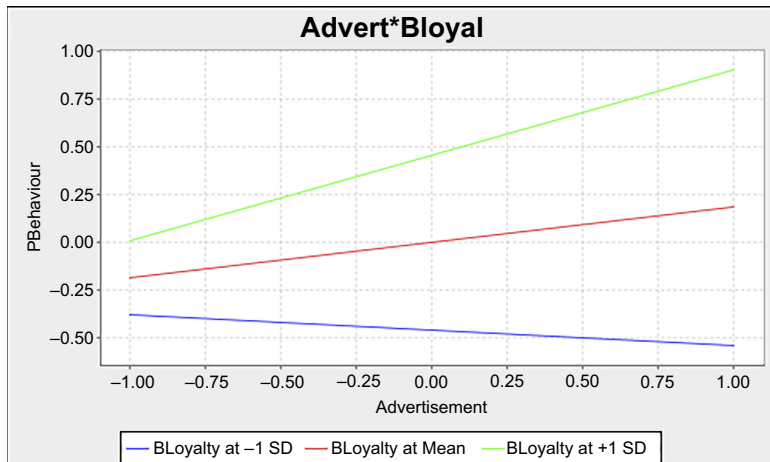


Figure 3. Moderation slope showing the moderating effect of brand loyalty on advertisement and purchasing behaviour



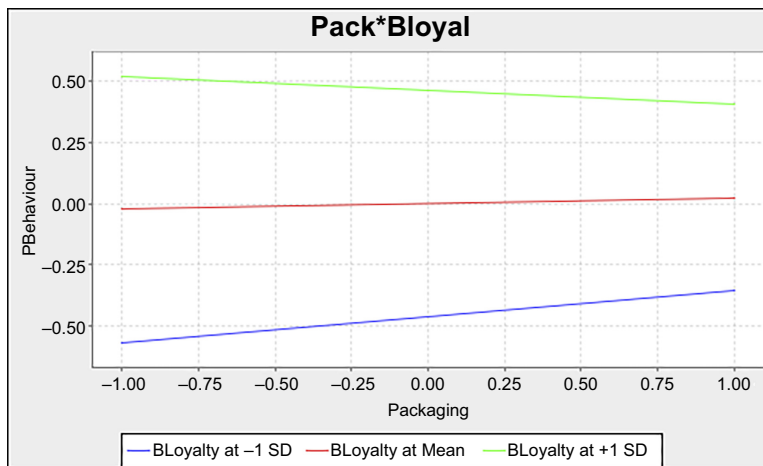


Figure 4. Moderation slope showing the moderating effect of brand loyalty on packaging and purchasing behaviour

marketing strategies (Polonsky, 1998) will be more beneficial to a company than just focussing on raw strategies.

H2: Advertising significantly influences purchasing behaviour – Data from this study, as displayed in Table 4, indicates that the relationship between advertising and purchase behaviour is statistically significant at a coefficient value of 0.21** and a t -value of 3.90. This confirms our hypothesis that advertising significantly influences purchase behaviour. This means that companies that are truthful and sincere in their advertisement add sustainability-based information to their labelling and have green marketing contents in their advertising will have customers buying more from them than those without green marketing contents in their advertising.

H3: Packaging significantly influences purchasing behaviour – Data from the study (shown in Table 4) again indicate that the relationship between packaging and purchase behaviour is statistically significant at a coefficient value of 0.11**, and a t -value of 2.62. Thus, our hypothesis that packaging significantly affects purchase behaviour is supported. This demonstrates that increased packaging strategies and technologies will elicit higher purchase behaviour from consumers.

H4: Price mediates the association between marketing strategies and purchasing behaviour – Data displayed in Table 5 indicate that price fully mediates the association between advertisement and purchasing behaviour and partially mediates the association between green marketing and purchasing behaviour, as well as packaging and purchasing behaviour. Green marketing, advertising and packaging are decomposed items in marketing strategies. Hence, the fourth (H4) hypothesis of this study is supported.

H5: Brand loyalty moderates the association between marketing strategies and purchasing behaviour – The increased R -square value (0.50–0.62) following the introduction of the moderator-brand loyalty, increased the interaction effect (approximately 4%) of brand loyalty with marketing strategies (green marketing, advertisement, and packaging) coupled with the significant interaction effect of brand loyalty on green marketing ($\beta = -0.10$, $t = 3.14$, $p < 0.01$), advertisement ($\beta = 0.27$, $t = 6.81$, $p < 0.01$) and packaging ($\beta = -0.08$, $t = 2.11$, $p < 0.05$), all indicate that brand loyalty strengthens the relationship between marketing strategies and purchasing behaviour. This lends support to the fifth hypothesis (H5). Thus, brand loyalty indeed moderates the association between marketing strategies and purchase behaviour.

Discussion

Over the past few decades, major world environmental problems and depletion of natural resources have forced human civilization to focus on environmentally responsible consumption. Several organizations have tended to focus on green production in an attempt to build sustainability and improve brand image. To closely examine this phenomenon and its implication on marketing, several studies have discussed the effect of green marketing. While some earlier studies reported that consumers' favourable disposition towards green products and green marketing do not necessarily translate into actual buying behaviour (Joshi and Rahman, 2015), others have reported a positive relationship between green marketing and purchase behaviour. A number of earlier studies have likewise reported that consumers are likely to choose one product over another if they believe that they are helping the environment (Bremmer, 1989, 1989; Kirkpatrick, 1990).

Empirical results from this study confirm the influence of consumer's environmental concern for green marketing. This is consistent with studies such as Ek (2005), Joshi and Rahman (2015) and Kumar and Ghodeswar (2015). The findings in this study are consistent with authors such as Goh and Balaji (2016) who reported that green scepticism depresses customers' knowledge and concern for the environment and, in turn, adversely effects consumer purchase intentions for green products. Kumar and Ghodeswar (2015), for instance, found that consumers possess some willingness to support environmental protection, realization of environmental responsibilities and inclination towards searching green product-related information and learning about green products.

Empirical results from this study also confirm the mediating role of price on the relationship between green marketing strategies and purchase intention. The mediating role of price in this study supports Young *et al.* (2010) and Tsakiridou *et al.* (2008) who recognized price and green product unavailability as major barriers towards consumer green purchase behaviour. It is well known that green marketing will surely result in extra cost. Demand forces indicate that consumers would like to buy at the lowest cost. Thus, while green marketing is likely to increase the cost of production, and therefore price, consumers may not buy if they see the price as too high. There have been differing reports on the relationship between loyalty and performance (purchase behaviour). Watson *et al.* (2015) found that loyalty mediates between marketing strategy and performance; in this case, purchase behaviour. Meyer-Waarden (2015), on the other hand, revealed that the underlying effects of loyalty programs (marketing strategies) on purchase behaviour differ depending on the level of consumers' personal involvement. The moderation role of brand loyalty on the relationship between green marketing strategies and purchase intention however supports the highly posited view that loyal customers will patronize organizations products on an exclusive basis as is confirmed in this study. Thus, marketing strategies will generally lead to more favourable purchase behaviour. However, where the customers are loyal, they are more likely to buy more from the organization perceived to be using green marketing.

Theoretical contribution

The findings of this study open up a new chapter in the discussion of sustainable marketing practices (green marketing). It confirms how loyalty can improve the firms' ability to increase prices associated with cause-related marketing (green marketing strategies). This relationship is a plausible phenomenon that can be explored in further studies. Contextually, the mediating role of price may realize mixed results when this study is replicated in other contexts apart from that of Ghana. This can be explored further. The findings furthermore challenge the long-held view of the direct relationship between marketing strategies and purchase behaviour. Given the importance of sustainability in today's competitive marketplace, the contribution of our study in the literature is important in

that, in using a rigorous scale development methodology, we have demonstrated that green marketing can be integrated into an organisational strategy and that the green marketing concept can be applied to the marketing mix and consumer behaviour dimensions.

Managerial implications

The implications of the findings in this study are manifest in many folds. The mediating role of price between marketing strategy and purchase behaviour is an indication that customers are still sensitive to price. This is to be expected in a developing country context. Thus, irrespective of the strategies employed by a firm in an attempt to brand itself and its products as environmentally friendly, the costs employed in green marketing may not be wholly transferred onto the consumer. Depending on the elasticity of price for each product, green marketing costs can be passed on until the point where it has diminishing returns on demand. Fortunately, the moderating role of loyalty on the link between green marketing strategies and purchase behaviour can be explored by organizations. The strengthened moderating effect is an indication that, where firms are able to build customer loyalty as part of the green marketing strategies, customers are more likely to overlook the price increases and continue the purchase of the product. Thus, overall, building loyalty is a prerequisite to achieving sustainable purchase behaviour if the cost of green marketing must be passed on.

Conclusion

This study sought to identify how sustainable marketing strategies contribute to attaining the SDGs in Ghana, a developing and emerging country in sub-Saharan Africa. The study found that price is a mediator between the green marketing efforts and purchase behaviour indicating that, even though green marketing could lead to enhanced purchase behaviour, organisations are limited to the extent that they can pass on the green marketing costs. Building loyalty, however, can improve their ability to pass on the green marketing costs. Therefore business organizations' sustainable marketing strategies can contribute to the Sustainable Development Goals.

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Corresponding author

George Kofi Amoako can be contacted at: gkamoako@gmail.com

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