## UNIVERSITY OF CAPE COAST

# EFFECT OF GREEN MARKETING ON CONSUMER PURCHASING BEHAVIOUR: THE MEDIATING ROLE OF SITUATIONAL FACTORS

ВУ

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Thesis submitted to the Department of Marketing and Supply Chain Management of the School of Business, College of Humanities and Legal Studies, University of Cape Coast, in partial fulfillment of the requirements for the award of Master of Commerce degree in Marketing

NOBIS

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# **DECLARATION**

# **Candidate's Declaration**

I hereby declare that this thesis is the result of my own original research and that no part of it has been presented for another degree in this university or elsewhere.

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#### **ABSTRACT**

The concept of green marketing has become a major concern for consumers in

various industries and this has brought changes to consumers purchasing behaviour. Over the past ten (10) years, consumers are helping to preserve the environment by displaying green buying behaviour. The current study adds up to green marketing literature in the cosmetic industry by including the mediating role of situational factors on green marketing and consumer purchase behaviour. Situational factors seek to explain possible gaps between environmental marketing and consumer purchase behaviour. The study used a quantitative and explanatory design of which respondents from the University of Cape Coast were targeted. With the aid of a stratified sampling method, three hundred and seventyseven (377) respondents were selected and questionnaires were administered. The data were analysed using Statistical Product for Service Solution (SPSS version 21.0) and PLS SEM statistical software. The study found that, there was positive significant relationship between green marketing and consumer purchase behaviour to buy cosmetics. Also, the result reveals a positive significant relationship between green marketing and situational factors to buy cosmetics. Price and perceived quality were the key mediating variables that had strong impact on green marketing and consumer behaviour. Cosmetics businesses can therefore increase consumer purchasing by using biodegradable and recyclable materials, reduced packaging and offering consumers products with opportunity to reuse packages. Also, producers and marketers of green products should use eco-labels and add marketing channels that specify their products as green brands.

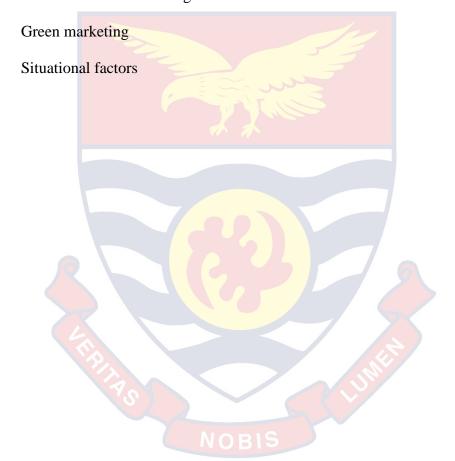
# **KEY WORDS**

Consumer purchasing behaviour

Eco-brand

Eco-label

Environmental advertising



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# **DEDICATION**

To my brothers and sister,

Enoch Osei, Aaron Osei, Isaac Osei, Israel Osei and Hulda Osei



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#### LIST OF ACRONYMS

ANOVA Analysis of Variance

CPB Consumer Purchase Behaviour

CFCs Chloroflorocarbons

EPA Environmental Protection Agency

FDA Food and Drugs Board

FMCG Fast Moving Consumer Goods

GM Green Marketing

GPB Green Purchasing Behaviour

KPMG Klynveld Peat Marwick Goerdeler

PLS-SEM Partial Least Squares Structural Equation Modelling

SEM Structural Equation Modelling

SF Situational Factors

SMEs Small and Medium Scale Enterprises

SPSS Statistical Package for Social Sciences

SRC Student Representative Council

TPB Theory of Planned Behaviour

UCC University of Cape Coast

US-EPA United States Environmental Protection Agency

SRMIS Students Records Management Information System

#### **CHAPTER ONE**

#### INTRODUCTION

Over the last 10 years, the trend of environmental protection and green marketing has brought shift in consumer demand and behaviour (Walker, 2018). Many studies have shown that, consumers consumption have changed towards environmentally friendly goods and consumers have a positive purchasing attitude towards companies that adopt green practices which have been established (Bhatia & Jain, 2013). Studies have concluded that, green consumption has become widespread in developing countries (Marcacci, 2013). Elements that have driven green consumption are awareness, knowledge of green products, confidence in eco-labels and brands, consumer concern about environmental destruction and consumers' altruistic values (Wahid, 2011; Khare, 2014; Juwaheer et al., 2012).

According to Braimah-Mahama, Tweneboah-Koduah and Ernest (2011), Ghanaian consumers are aware of green marketing issues and consider buying products that are environmentally safe. Demographic factors and consumer behaviour in the purchase of green products have been studied extensively by Brough (2016), Rawat (2012) and Mallen-Ntiador (2017). The current study adds up to green marketing literature in the cosmetic industry by including the mediating role of situational factors between green marketing and consumer behaviour. Also, the study employed theory of planned behaviour as well as structural equation modeling (SEM) in examining the complex relationship among these variables.

## **Background to the Study**

For the past ten (10) years, green marketing has become an important public issue as well as a crucial subject in academic research, particularly due to consumer concern about the environment (Siegenthaler, 2012). Evidently, there has been a massive increase in Green marketing in the US, Western Europe, Asia and some areas of Africa. It can be explained that, stakeholder aspirations for sustainability and protection of the environment are growing and consumer interests are now geared towards sustainable and eco-friendly products (Siegenthaler, 2012). Moreover, various countries and international bodies are passing tougher laws concerning environmental care (Rodríguez-Ibeas, 2015).

As a matter of fact, consumers' concerns about the environment and green goods have changed the way businesses work. Nowadays, companies are trying to make consumers aware by educating them about the pros of going green. Green marketing strategies are used by producers and advertisers in their corporate practices. Such strategic tools include eco-labels, eco-brands, and environmental advertisements. The use of these tools in green marketing, therefore helps to gauge the minds of consumers and inform them to purchase green products (Delafrooz, Taleghani & Nouri, 2014).

In addition, businesses are demanding that their sustainability messages reach consumers by steadily applying green marketing practices to their ventures (Nagaraju & Thejaswini, 2014). For example, through the recommendation of recyclable and recycled containers, businesses continue to implement various types of green packaging systems. This is because, the value of green marketing

for consumer success has increased. Meanwhile, businesses that produce and design goods with an environmental marketing mix have a secure competitive advantage (Agyeman, 2014). Ashe-Edmunds (2015) posits that, green marketing allows companies to build consumer goodwill and loyalty and also helps firms to improve sales and hence profits.

Cosmetics that are branded as green produced an estimate of USD 10.16 billion in 2015, according to a 2015 study by Grand View Research Inc., and the cosmetics market is projected to hit revenues of up to USD 15.98 billion by 2020. Between 2014 and 2020, the segment of skin care products alone is projected to rise at a compound annual growth rate of 9.8 per cent. The appeal of green cosmetics to consumers is in the fact that, producing firms try to use ingredients that the body can safely absorb, places emphasis on reduced packaging, reusable and recyclable components. Hence, environmental protection is also the product of green marketing for the present and future generations (Vandhana, Karpagavalli, & Ravi, 2013).

The cosmetics industry in Ghana and its relation to the world's cosmetics industry is of great importance. Leaders and pioneers of cosmetic products such as L'Oreal, The Body Shop, and Estee Lauder are proud to obtain their raw materials from Fair Trade in shea butter and cocoa butter from Ghana. To support this claim, total Ghanaian exports of essential oils, perfumes, resinoids and cosmetic preparations amounted to USD 245.83 million in 2013 (Michigan State University, 2013). Ghana's imports of cosmetics, on the other hand, hit USD 76.60 million in 2013, representing 0.60% of total imports (Michigan State

University, 2013). This shows Ghana's major role in the import and export of cosmetic products globally.

World Health Organization (WHO, 2010) has announced Ghana as having good prospects for the green cosmetics industry, especially in the skin care and make-up segments (Adinyra and Gligui, 2012). This is due to their findings, particularly among women in Ghana, since skin-bleaching products are becoming common. In light of this revelation, several companies, especially local ones, have emerged. For example, the Forever Clair Beauty Clinic and products is an all-natural cosmetic brand, which was founded by Grace Amey-Obeng, has become a popular healthier brand for consumers who seek to have flawless skin especially, among university students (KPMG, 2014). Ghana's cosmetics firms however, built a consumer-driven network in 2013 that encourages consumers to commit to living more sustainably (KPMG, 2014). Moreover, Uniliver Ghana Limited is a Fast-Moving Consumer Goods (FMCG) company and is a strong advocate in Ghana for the implementation of green marketing.

Green marketing has an impact on all facets of our economy, not just saving the environment, but generating new markets and job opportunities. Environmental management firms are expected to attract many happy and loyal clients (Kianpour, Anvari, Jusoh, & Othman, 2014). Gitobu and Njoroge (2015) also suggest that, if businesses participate in green practices, they will achieve their goals, while using scarce resources that cater for the needs of consumers without endangering the livelihoods of the future generation. Punitha, Aziz and Rahman (2016) list the following key practices in the search to practice green

marketing and achieve sustainable development: enhancement of energy efficient and renewable energy activities, emission management systems, water saving items, environmentally friendly goods, biodegradable and recyclable materials.

In the marketing sense, going green is connected to consumer purchasing patterns and the purchase of goods that use less material and thus create less waste, as well as goods that are created with the environment in mind (Zaharia & Zaharia, 2015). According to Dagher and Itani (2014), consumers are seeking to help maintain their environment by exhibiting green buying behaviour. Consumers expect businesses to manufacture goods that are safe and do not affect the environment (Taşçıoğlu & Yener, 2017). Moreover, consumers are gradually becoming conscious of the climate, as well as socially responsible (Sawant, 2015). This is due to the fact that, consumers see goods that are green or environmentally friendly as goods that do not pollute nature, do not use natural resources, can be recycled and preserved (Turhan et al., 2015).

In addition to this knowledge, Boztepe (2012) stressed that, during the manufacturing process, disposal or use, green consumers will avoid consuming any harmful product that could affect their health, require torture of animals and also causes harm to the environment. Nowadys, more young consumers between the ages of 18-34 have added extra importance to health and the environment in buying consumer products (Furlow & Knott, 2019). Consequently, as compared to other age groups, young consumers are more interested in what they put on their skin. In particular, young men and women in college, whose self-image is

very important, pay a lot of attention to their physical appearance by using skin care products (Britton, 2012).

Numerous variables influencing this mechanism have been identified by a variety of researchers, including environmental awareness, the price and quality of a commodity, social expectations and the type of environmental promotion (Agyeman, 2014). In other research in Greece, consumers were not affected by social norms, but believed in regulation by authorities in establishing credibility of green brands. They believed that consumers perception and knowledge of green marketing goods had an impact on the buying behaviour of consumers (Kalafatis et al., 1999). In the case of Ghana, a low level of ecological awareness was found in consumers, which directly influenced the green purchasing decisions. Price was one key variable that affected consumer purchasing towards green marketed products in general (Braimah & Tweneboah-Koduah, 2011).

Saunders, Lewis and Thornhill (2009) postulate that, positivism is the acceptable research philosophy for the present study. Researchers use the philosophy of positivism when dealing with an 'observable social truth' that contributes to knowledge creation and the essence of knowledge. Also, Ajzen's (2002) theory of planned behaviour is a behavioural theory that has been commonly used to analyse a variety of people's reasons for performing a certain behaviour. In the case of organic cosmetics or green cosmetics, the buyer plans to purchase those manufactured from natural raw materials, that are free of toxic synthetic components, uses less packaging and are environmentally friendly (Kontrollierte Naturokosmetic, 2016).

The concept of green marketing has caught the attention of scholars in Ghana, though, there has not been much attention paid to its impact on consumer purchasing behaviour, especially among tertiary student. For instance, Braimah and Tweneboah-Kodua (2011), investigated the perception of green marketing and whether it influenced purchasing decisions among Ghanaian consumers. Adinyra and Gligui (2012) also examine Ghana's green marketing potential based on the buying behaviour of the consumers. Again, Braimah (2015) studied the variables that decide the relationship between the perception of green brand issues among consumers and their regular purchasing intentions.

Meanwhile, green issues were also specifically investigated in hotels in Ghana, and again, its effect on the satisfaction of guests was not prominent. Also, Mensah (2006) studied the policies and practices of environmental management, as well as the level of acceptance and implementation of hotel environmental management practices in the Greater Accra Region. Green marketing orientation and performance for SME's in Ghana was examined by Amegbe, Odhiambo and Nuwasiima (2017). Likewise, Owusu, Badu and Muhammed (2016) examined the effect of green marketing on customer satisfaction and environmental safety in Ghana. Bosompemah (2017) also investigated the effects of green branding on consumers in the Ghanaian cosmetic industry. This shows that green marketing concerns are being expressed by Ghanaian consumers.

Moreover, it was noted in the literature reviewed that, eco-labelling and eco-branding forms part of the consumer purchasing patterns on green products.

Researchers have also discovered that, eco-brands can also affect consumer

behaviour towards the consumption of ecological goods (Pickett-Baker & Ozaki, 2008). Moreover, there are conflicting reports on the effects of environmental advertising on consumer purchasing behaviour (Juwaheer et al., 2012). Again, Juwaheer et al., (2012) claims that, buyers are becoming eco-friendly, resulting in demand for such eco-friendly goods. This, in turn, offers an opportunity for businesses to take advantage of the need and create a new market segment for green products.

#### **Statement of the Problem**

Despite the high levels of green marketing awareness which have been recorded, these facts do not reflect the same degree of purchasing actions (Dunlap & Scarce, 1991). There is therefore a discrepancy or gap between green marketing and consumer buying behaviour. This implies that green marketing knowladge does not inherently translate to consumer purchasing behaviour (Goksen, Andaman & Zenginobuz, 2002; Laroche, Bergeron & Barbaro-Forleo, 1996). Several authors have pointed out that, there are perceived negative features, such as price, quality, efficiency, availability and convenience that limit the purchase of green products (D'Souza et al., 2007; Wagner, 2003). These factors are the situational factors in green marketing. Situational therefore factors seek to explain why green marketing do not contribute to the purchasing behaviour of green products. However, researches have ignored this strong revelation.

It is noted that, green marketing in developed countries has gained popularity (Khare, 2014). However, concerning green marketing in Ghana, it is

noticeable that, the green market mark remains uncertain (Adinyira, 2012). Earlier research in Ghana did not consider situational factors such as perceived price, perceived quality, product availability and peer influence as mediating factors to consider green marketing on consumer buying behaviour. Therefore, the current study seeks to evaluate eco-label, eco-brand, and environmental advertising on consumer buying behaviour by including the role of situational factors in mediating the topic. The study seeks to examine the influence of green marketing on consumer purchasing behaviour among undergraduate students at the University of Cape Coast.

## **Purpose of the Study**

This research aims to analyse the effect of green marketing on consumer purchase behaviour using situational factors as mediating variables.

## **Research Objectives**

The following specific objectives were defined so as to achieve the purpose of the research:

- 1. To assess the effect of green marketing on consumer purchasing behaviour.
- 2. To examine the effect of green marketing on situational factors.
- 3. To examine the effect of situational factors on consumer purchasing behaviour.
- 4. To assess the mediating effect of situational factors on green marketing and consumer purchasing behaviour.

## **Hypotheses**

To achieve the stated objectives, the following hypotheses were stated.

H1: Green marketing positively influences consumer purchase behaviour.

H1 a: Eco-brand positively influences consumer purchase behaviour.

H1 b: Eco-labels affect consumer purchasing behaviour positively.

H1c: Environmental advertising positively impacts consumer purchase behaviour.

H2: Green marketing positively influences situational factors.

H3: Situational factors have a positive impact on consumer buying behaviour.

H4: Situational factors mediate the relationship between green marketing and consumer purchase behaviour.

H4a: Price positively influences consumer purchase behaviour.

H4b: Perceived quality positively influence consumer purchase behaviour.

H4c: Product availability positively influences consumer purchase behaviour.

H4d: Peer influence positively influences consumer purchase behaviour.

#### Significance of the Study

The study would help build a green marketing pattern and contribute to the decision-making process for investing in green marketing initiatives to manufacture green goods. As far as the role of consumers play in green marketing of cosmetics and the conservation of the planet from degradation of its resources is concerned, this research could have an important and vital effect on informing readers. It would also show marketing strategies businesses could follow in other to better satisfy the needs of consumers in terms of green goods.

In addition, the study seeks to provide insights into the potential of a green consumer market by determining the perceptions and attitudes of consumers towards green products, especially cosmetics. The knowledge discovered will serve as a reference for local or foreign producers of green or natural cosmetics seeking to succeed in the Ghanaian market. It will also provide intuitions to support future research regarding mediator role in green marketing for companies especially cosmetic companies. This is because to the best of the researcher's knowledge, there has not been any prior study on the mediator effect of situational factors in green marketing on consumer purchasing behaviour of students in the Ghanaian cosmetics sector.

#### **Delimitations**

This study focused on green marketing and consumer purchasing behaviour by mediating some situational factors such as product availability, perceived price, perceived quality and peer influence. The study did not consider consumer purchase intention because many studies have already captured it. This study targeted students in Cape Coast, however, only students of the University of Cape Coast were considered. The reason is that, the University of Cape Coast has various students in disciplines such as education, business, arts, sciences who were consulted to help get diverse views to meet the research goals. The study used explanatory design of the quantitative approach, therefore, it lacks the ability to explain into details the relationships between the variables understudied.

#### Limitations

The sample frame of this study was limited to university undergraduate students at the University of Cape Coast at the time of the administration of the survey, due to limited economic resources and time constraints. In academic studies, it is a common practice in selecting college students for experimental studies, however, caution must be exercised when generalizing outcomes to a non-student population (Peterson 2001).

#### **Definition of Terms**

# Green Marketing

Green marketing is described by the American Marketing Association as 'the marketing of goods presumed to be environmentally friendly for consumers.' It involves a wide range of operations, which include; modification of products, improvements in manufacturing processes, modification of advertising messages and changes in product packaging. It is also the selling of goods that are believed to be environmentally friendly and safe to human consumption.

#### **Green Products**

In this report, green products are goods of higher quality that are seen as safe and organic and help protect the environment. The least negative effects of green goods on the environment are the packaging of products or items manufactured from recycled materials, the reuse of natural resources and the production locally.

#### Green Consumer

An individual who is interested in green products is known as a green consumer. In general, green consumers are seriously searching for and supporting green goods and are willing to pay more for green features.

#### Consumer Purchase Behaviour

Consumer purchasing behaviour refers to the collection of choices involving the consumer's ultimate range, purchasing and consumption of goods or services to satisfy their needs and desires.

#### **Situational Factors**

Situational factors are significant mediating factors that explain why green marketing does not contribute to the purchasing behaviour of green goods. Situational factors include, price, perceived quality, availability and peer influence.

#### Eco-brand

Eco-brand is a concept intended for the identification of green products from non-green goods. Eco-brand often applies to brands that have been marked as eco-friendly.

#### Eco-label

Eco-labels are tags or markings made on products to show consumers that such products are environmentally friendly.

#### **Environmental Advertising**

Environmental advertising refers to appeals that include eco-friendly content and environment sustainability messages, which targets the needs and desires of environmentally concerned consumers.

# **Organsation of the Study**

This research is split into five chapters. Chapter one highlights the background to the study, statement of the problem, objective of the study, research question, significance of the study, scope, delimitation and limitation as well as organisation of the study. Chapter two reviews the current Green Marketing literature and examines the theoretical, analytical and conceptual framework of the analysis in depth. Chapter three outlines the research methods used in the study. It explains the study design and the sampling design used by the target population to arrive at the representative sample size. It also analyses sampling methods and tools for data collection. After careful review of the collected data, chapter four presents and interprets the results and conclusions of the report. The presentation of the findings is systematically ordered, based on the research questions and make use of tables and figures, SEM. The final chapter, which is chapter five, summarizes the observations presented in chapter four, and draws major conclusions and provides suggestions from the discussions.

#### **CHAPTER TWO**

#### LITERATURE REVIEW

#### Introduction

This study examines the effects of green marketing on consumer behaviour by testing the mediating role of situational factors. This chapter reviews both theoretical and empirical literature related to green marketing and consumer purchasing behaviour. It also reviews related theoretical underpinnings, such as the theory of expected behaviour and empirical research, are analysed to explain the research problem. The chapter proceeds to discuss the necessary definitions and variables (both dependent and independent variables). It also describes knowledge differences that occur as a consequence of the theoretical and empirical literature being studied. Lastly, the conceptual framework of the study is constructed and discussed.

# **Theoretical Framework**

The theory of planned behaviour serves as the core theory underpinning the research. This theory predicts how various variables impact the actions of consumers purchasing green goods. Subsequently, this principle is further clarified.

#### **Theory of Planned Behaviour**

There is a need for theory-based research to better understand the processes responsible for these behaviours in an effort to examine factors that

impact consumer behaviour in order to buy green goods and services. Therefore, this section discusses Ajzen's theory of planned behaviour [TPB] (2002), which offers a theoretical basis for systematically analyzing perceptions and intentions of the behaviour of people on the purchasing of green goods and services. The central factor in the theory is the individual's intention to perform a given behaviour but in the current study, situational factors were analysed to help explain the reason why consumers with green marketing knowledge do not translate into purchase.

According to the theory (Figure 1), the conduct of the person is dependent on his or her readiness (intention) to carry out that conduct (Tavousi, 2009). It is believed that motives capture the motivational factors that affect behaviour, which often reflect how difficult people are willing to attempt and how much effort they expect to make in order to execute the behaviour (Ajzen, 2002). According to the theory, behavioural achievement thus relies on both motivation (intention) and skill (behavioural control). From the theory, it is understood that, consumers consider buying green marketed products when they are faced with favourable situational factors which in turn acts positively on their purchasing behaviour.

The theory postulates six conceptually independent predictors of human behaviours in this regard; behavioural beliefs, normative beliefs, control beliefs, behavioural attitude, subjective norm and perceived behavioural control (Ajzen & Fishbein, 1980). This is discussed subsequently as shown in figure 2.

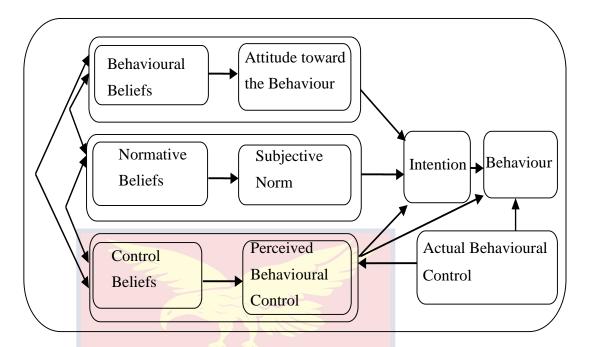


Figure 1: Theory of Planned Behaviour

Source: Ajzen, 2002

According to Ajzen, behavioural expectations are the expectations about the possible behavioural results and the assessments of these results. Normative beliefs (social variables) on the other hand are beliefs about others' normative expectations and motivation to fulfill these expectations. Control beliefs refer to the perceived ease or complexity of behavioural success and are presumed to represent past experience as well as expected impediments and barriers. Whereas behavioural attitude is the positive or negative view of actions by the person, the subjective norm is the view of social pressure by the person to participate in an action or not. Finally, perceived behavioural regulation refers to the understanding of the person of his or her ability to perform a certain action.

TBP is used to envisage and explain behaviour (La Morte 2019). According to Rogers and Floyd (1986), behaviour is something that is real, something that can be seen and also be observed. The action that results from behaviour can be attributed to as an end product of a process. Again, Ajzen (2011) postulates that, behaviour depicts habit and explains the character of an individual. This describes the person's pattern of behaviour. Abdullah et al. (2019) explains further that, though behaviour can be distinct to persons and how they occur, it appears similar to all individuals. This means that the process leading to an individual acting in a particular way can be the same for all persons. This describes the decision-making process resulting in an action. Regardless of the outcome, persons go through similar processes in deciding whether to buy or not.

Chahal et al. (2019) posits that, the best prediction about a person's behaviour is depended on the person's interest. The interest in behaviour is explained by two main factors: trust and perception. Trust here explains how an individual trust the outcome of the behaviour. Perception also explains how peopled will view the behaviour. These two factors play a major role in explaining how the TBP influence consumer behaviour. The TBP explains that, attitudes play a key role in influencing behaviour in three ways according to Ajzen (1985): the attitude that is carried out on behaviour is based on attention to the results that occur when the behaviour is carried out by an individual not only based on views or perceptions that are considered true by individuals but also pay attention to the views or perceptions of others who

are close or related to individuals attitudes that arise based on the views and perceptions of individuals and paying attention to the views or perceptions of others for these behaviours will lead to behavioural intentions that can form behaviour. Therefore, when individual's attention is drawn to the results that the purchase of a green product will not only benefit himself or herself but also will contribute to protect the environment, the individual is encouraged to act which goes to describe the individuals behaviour. With calls to reduce the impact of global warming, individuals are encouraged and motivated to act in a way that goes to protect the environment.

People therefore view behaviours that are aimed at protecting the environment as good. People's reaction towards individuals who engage in behaviours that are considered green is likely to influence others to engage in repurchase of such products. The views of others which are termed perception play a role in influencing individuals to engage in green purchases. The TBP theory can explain the proposed relationship because, when consumers anticipate that their decision to purchase a product will lead to protection of the environment in addition to the core benefit to be received from purchasing the product, the motivation to act is developed hence the decision to purchase. When marketers are also seen as engaged in acts which will not only serve the interest of their business but also the interest of consumers and the general environment, there is a likelihood of consumers reacting positively towards the product being marketed. Hence, when firms engage in green marketing

practices, there is the likelihood of consumers responding positively towards the firm's product.

TPB is justified in the current study to the fact that, it has been widely used to investigate the buying behaviour of green goods and services by consumers (Jaju 2016; Cometa, 2012; Mydock, 2014; Pablo, 2015). Ajzen's (2002) Theory of Planned Behaviour is a behavioural theory that has been commonly used to analyse a variety of people's reasons for performing certain behaviour. In the case of organic cosmetics or green cosmetics, the buyer plans to purchase those manufactured from natural raw materials, that are free of toxic synthetic components, uses less packaging and are environmentally friendly (KontrollierteNaturokosmetic, 2016). However, some situational factors may act positively or negatively on the consumer purchasing behaviour to buy green cosmetics.

## Limitations of the Theory of Planned Behaviour

While the planned behaviour theory of Ajzen (2002) provides a model for analyzing consumers' attitudes and intentions to conduct a given behaviour, it has some flaws. The model postulates that there should also be a greater intention to buy green goods for people with strongly favorable perceived behavioural regulation (more resources and opportunities). However, green product purchasing intentions are affected by other independent factors, such as environmental consciousness and situational factors (Schifter, 1985; Madden, 1986). Again, the theory focuses holistically on people's attitude towards their

purchasing of green products, ignoring other significant behavioural determinants that affect the decision to buy green products. Such behavioural determinants include organizational frameworks, administrative and technological capacities that govern human intentions towards certain actions. Studies have proposed that, researchers should add more variables to improve the predictive validity of the TPB due to these limitations (Karim et al., 2013). The theory has also been modified to include other behavioural determinants in order to address these limitations. As described in (Figure 2), when variables are modified, it can help in influencing the actions of consumers to purchase green goods and services (Gyimah, 2018).

## **Green Marketing**

Green marketing is on the rise and a very new field recognized for science. There is not one general definition of green marketing, and the definition normally differs from the perspective of the researcher. Green marketing has been described by Dahlstorm (2011) and Ottman (2011) as an incorporation of ecological issues into marketing aspects, including production, distribution and logistics, advertising and packaging, and marketing communications.

It notes that green marketing comprises the marketing techniques used to achieve the financial as well as strategic objectives of an organization while reducing its adverse environmental effects (Leonidou et al., 2013). The term generally used in words such as Recyclable, Ozone Friendly, Environmentally Friendly, and Cruelty Free applies to the marketing of goods and services to

consumers (Yilderm, 2014). In response to environmental concerns, Yilderm (2014) corroborates this argument by describing green marketing as firms' effort to develop, promote, and recycle items.

According to Chen and Chai (2010), green marketing refers to activities undertaken by companies concerned with environmental problems or green problems by providing environmentally sound products or services to generate satisfaction for consumers and society. Welford (2000), cited in Chen & Chai (2010) described green marketing as, "the process of management responsible for profitably and sustainably recognizing, anticipating and fulfilling the requirements of consumers and society." Green marketing has been evolving because the natural and artificial resources are restricted even though human needs are limitless (Kumar, 2011). Chitra (2007), described green marketing components and environmentally-friendly goods as goods planned and produced to be less detrimental to the environment.

Green marketing was described by Diglel and Yazdanifard (2014) as a range of activities that include the modification of the production process, the adjustment of product lines and the advancement of packaging, as well as the transformation of advertising. The apparent premise in green marketing is that, potential buyers would perceive the "greenness "of a product or service as an advantage and base their purchase decisions accordingly (Saini, 2013). Some marketers are now engaging in practices where, although they are not, they display their goods as green, and this activity is called "green washing." Meanwhile, as consumers are becoming wary of the green claims made by

businesses, these activities should be monitored. Consumers should also be made aware of the fact that, to minimize the use of water in manufacturing, to use energy efficient equipment, to reduce emissions as well as engaging in recycling activities are all part of green marketing.

Several studies have shown that, consumers favor eco-friendly goods and consumers have a positive attitude towards businesses that adopt green practices (Bhatia & Jain, 2013). In support, Rayapura (2014) cites a global Nielsen study that showed that, 55% of global online consumers across sixty countries surveyed demonstrated willingness to pay more for corporations' goods and services. Consumers in Nielson's study were committed to businesses that make positive social and environmental impacts. This shows a big shift in consumer buying behaviour for green goods and services, as well as for green companies (Marcacci, 2013).

#### **Green Product**

Diglel and Yazdanifard (2014) are of the opinion that, a green product is an object that is produced in an environmentally friendly manner, has minimal adverse effects on the environment, uses packaging of goods or products made from recycled materials, protects natural resources and is locally manufactured. Campher (2013) claims that market research reveals that, buyers prefer greener goods. Ottoman and Mallen (2014) claim that, they consider green products to be safer organic, of higher quality, and help to protect the environment. In support of this program, Manget, Roche and Münnich (2009) discovered that, consumers

highly enjoy the advantages of green goods, such as superior freshness and taste, the promise of protection and health, and energy cost savings.

#### **Green Consumers**

Ottman (1993) refer to green consumers as those who are earnestly pursuing and supporting goods and services that meet their requirements while having less environmental effect. Also, Kassaye (2001) pointed out that, the presence of environmentally conscious consumers in food goods packed with recycled materials has created demand for green energy in niche markets. A consumer who is environmentally-savvy would prefer to make "green transactions" (Peattie, 2001). According to surveys, European consumers are interested in green goods and are willing to pay for green features. Ninety-two (92) percent of European multinationals bodies have implemented environmental protection policies due to the green concerns of consumers (Peattie & Crane, 2005).

According to Sawant (2015), consumers are gradually becoming conscious of the environment as well as socially responsible. Dagher and Itani (2014) support this by arguing that consumers are aware of the consequences on the world of their individual consumption behaviour. Consumers are also gradually participating in environmentally friendly behaviour and are promoting the adoption of green strategies by companies. In addition, Ansar (2013) suggests that consumers' optimistic approach to the environment is evident in their

purchasing habits, such as their concern towards Chloroflorocarbons (CFC-free) items and the recycling of goods.

Peattie (2001) notes that, by emphasizing the relative benefit of greener goods compared to other products that cause environmental issues, consumer behaviour can be created. According to Macdonald and Oates (2006), "all consumers are green consumers, theoretically." When a consumer has choice to buy from two identical products, the consumer will prefer to buy environmentally friendly product. Antonies et al., (1998) postulate that, consumer behaviour may be altered if businesses speak of favorable advantages or product or service qualities that match the consumer's confidence in its advertisement.

Gupta et al., (2009) describes a reference group as, "an entity or a group that affects the decision of another person." Reference groups play an important role in the distribution of product information and have an impact on behaviour. People in groups jointly make choices rather than individually. Individual consumers in a group would like to tell others about the positive and negative characteristics of the new product (Gupta & Ogden, 2009).

## **Consumer Buying Behaviour**

A lot of different fields span the field of consumer behaviour. In order to understand and predict behaviour, Antonies and Raaij (1998) describe consumer behaviour as, "studies on perceptions, intentions and decision processes." Consumer demand is steadily sloping upward in terms of green movement (Han et al., 2010). This move towards green purchase behaviour may be explained by

consumers' awareness of the consequence of environmental effect of products. Pickett-Baker and Ozaki (2008) indicated that, there is a connection between the environmental perceptions and values of consumers and their confidence in the performance of green goods. Fishbein and Ajzen (1975) report the most common class of models that relates intentions with behaviour. It is assumed that behaviour is based on the intentions to exercise such behaviour (Malhotra & McCort, 2001).

The consumption behaviour of 2nd and 3rd generation Indians living in the US and India was contrasted in a study by Mathur et al (2008), where TPB was used. The Indians living in America were found to have high purpose and were highly influenced by the green values and the green culture there, and it was found that compared to the other consumption classes, this was more obvious on the Indian youth. Studies focused on countries such as Egypt, Malaysia, Singapore and Mauritius have found that green consumption is becoming common in developing countries and various elements that have influenced green consumption include awareness and knowledge of green goods, confidence in eco-labels and brands, consumer concern for the deterioration of the environment and their altruistic values (Mostafa, 2009, Rahbar & Wahid, 2011; Juwaheer et al., 2012).

Braimah and Tweneboah-Koduah (2011) concluded that, a low level of green marketing awareness was found in consumer research in Ghana, which directly influenced the green buying decisions of Ghanaian consumers. Prices were another factor that affected green transactions. On the other hand, when the Ajzen Theory of Planned Behaviour (TPB) was applied to a survey of consumers

from developed countries such as the United Kingdom and Greece, in order to explore the various factors affecting their intention to buy green goods, the findings for both the United Kingdom and Greece were entirely different.

In the UK, consumers have been found to be more inclined to social standards and to society's acceptance. Therefore, social expectations were directly proportional to consumers' buying intentions. In Greece, on the other hand, consumers were not affected by social norms but believed in power. On the basis of these studies, it can be observed that the expected behaviour theory of Ajzen is well suited to understanding the purpose behind the purchase of green goods by consumers. Mangnusson et al., (2003) validate, however, that TPB is less sufficient to describe ethical behaviour because TPB does not account for the customer affective aspect that affects consumer ethical behaviour.

## **Green Marketing Tools**

The green marketing tools identified by Rahbar and Wahid (2011) include eco-label, eco-brand and environmental advertising that are used to evaluate green marketing. Such elements play an important role in the behaviour of consumers towards green goods. Subsequently, the numerous green marketing instruments, including eco-brands, eco-labels and environmental advertising, are presented.

#### **Eco-brand**

The term brand, may be identified by the American Marketing Association as "a name, word, sign, symbol or design, or a combination there-of, intended to

identify the products and services of one vendor or group of vendors and to distinguish them from those of a competitor." Similarly, the aim of the Eco-brand is to distinguish a brand on the basis of its environmental benefits. The Eco-brand separates a product from other products and makes it more noticeable among thousands of product varieties. On the basis of an eco-brand, a green and non-green commodity can be easily discriminated against.

Consumers will pursue the purchase of environmentally friendly alternatives for goods that have a high level of environmental impact that are compatible with those with a low level of environmental impact. Aerosols, household washing, glass-based products, pesticides and plastics are considered by Malaysian consumers as non-green products because these products high degree of environmental effect (Rahbar & Wahid, 2011). For that reason, it can be expected that consumers will respond favorably to goods known as eco-branded products that have environmental aspects.

This view is encouraged by earlier research in Western countries as consumers in Germany and the USA take positive action on eco-branded goods such as green energy and Body Shop (Wustenhagen & Bilharz, 2006). The awareness of the effect of brands on the buying view of consumers is very crucial for marketers and marketing researchers. The consumer behaviour would then shift to the purchasing of environmentally friendly goods as a result of the benefit of green brands being concerned.

Patrick et al., (2005) discovered a positive influence of eco-brand on customer purchasing behaviour, and this was attributed to the understanding of

green brand positioning by consumers. In other countries, similar studies have been carried out and it has been discovered that, consumers have a negative view of eco-friendly goods. It was also found that by affecting customer behaviour, emotional brand benefits serve as a critical motivating factor for green transactions (Cherain & Jacob, 2012).

In a study on the general Ghanaian consumer market conducted by Braimah (2015), it was revealed that while Ghanaian consumers are aware of eco products, they do not consider them when making purchases. So far it is established from literature on eco-brands suggests that, there is an influence of green branding on the understanding of consumers, but there is a need for more research to examine whether this awareness has an effect on green transactions.

### **Eco-labels**

The first country to adopt an eco-labeling system named "Blue Rage" was Germany (Cherion & Jacob, 2012). If these products are environmentally friendly or not, the eco-label identifies the products. One of the significant variables of green marketing is eco-labels. They are part of the packaging and can be in the form of any diagram or a sheet of paper. Labels provide awareness of the brand and much more detail about the product. Labels perform two major functions: a function of information and a function of value (Delafrooz et al, 2014). Eco-labels are very beneficial to buyers because they provide awareness of how the product is made, so that buyers can determine whether or not to purchase the product. It

allows consumers to recognise goods that are environmentally friendly (Delafrooz et al, 2014).

In a study conducted by Daria and Sara (2016), they found that 43 percent of respondents believe that eco-labelled goods are good for the environment and the same percentage of respondents believes that they are good for both health and the environment. Only 2% of respondents have eco-labels that mean little to them. This demonstrates that in influencing consumers, eco-labels are effective. And 56 percent of respondents in the same study are also prepared to pay more for such items. The credibility of eco-labelled goods is generally believed by 73 percent of respondents.

Eco-labelling impacts green goods' purchase habits. In relation to its life cycle, an eco-label acknowledges the complete environmental preference of a product or service within a product classification (Global Eco-labelling Network, 2004). Eco labels could be used by companies as evidence to show to their clients that they have used environmentally friendly manufacturing and delivery practices (Bruce & Laroiya, 2007). For goods that are environmentally friendly, eco-labelling is backed by "perspective requirements as well as standardization of values," thus differentiating the product from others to ensure that the expectations are met by consumers (Boström & Klintman, 2008).

Eco-labeling scheme producers are more likely to be approved by independent third parties (state or private agencies) to inspect whether or not the labeling requirements are met by the producers (Boström & Klintman, 2008). By demonstrating affirmative social and ecological effect, eco-labels play a

significant role in raising market share (Michalko, 2010). They call those ecolabels "winners." Eco-labels which determine little to no effect are called "green washers" despite being common among consumers. "Wallflowers" are named eco-labels that produce good ecological effects with less market awareness. "Weeds" are labeled eco-labels that have no meaning in any dimension (Purohit, 2012).

In encouraging consumers to purchase green goods, eco-labelling may be an important factor. By illustrating additional benefits of goods such as consistency, ecologically sustainable, non-hazardous, more effective and so on, eco-labelling can influence consumers to pay a higher price (Renfro, 2010). Rashid (2009) found out in a Malaysian survey, including 526 respondents that, as a result of their knowledge of eco-labels, consumers have a positive outlook and reaction to green transactions and green marketing. On the contrary, Leire and Thidell (2005) established that green purchases from consumers are not motivated by their knowledge of the eco-label.

To assess the efficacy of eco-labelling, they used a method developed by the US-EPA. As a consequence, it was found that consumers recognize eco-labels but do not necessarily purchase those goods or do not necessarily obey the data defined in the survey (Leire & Thidell, 2005). However, Lyer (1999) indicated that when eco-labels are involved, consumers lack trust. Cherian and Jocob (2012) say that their full potential is not known to be the reason behind this customer mistrust. The perception that is known indicates that by illustrating the environmental effect of the commodity, eco-labels attract consumers (Cherion &

Jacob, 2012). This contrasting point of view by different researchers' point to a void in literature and, thus, more research is needed to understand the responsiveness of the consumer to eco-labels.

Empirical research has indicated a need to explore the various ways in which the use of eco-labels would have a direct effect on the motives behind green buying by consumers (D'Souza et al., 2006). Sammer and Wüstenhagen (2006) also propose that the direct effect of eco-labelling on the ecological mindset of the user and decision-making needs to be investigated. This research aims to examine this relationship as to whether it has altered or still exists over time.

## **Environmental Advertising**

In order to make consumers aware of their green goods or services, advertisers shift towards advertisements either through the internet or newspapers. Growing worldwide green movements and growing environmental interest for consumers make advertisers prefer environmental advertising. It is aimed at motivating consumers to purchase goods that are harmless to the environment.

Green advertisements were first introduced in the late 1960s as a result of concerns about companies using anti-environmental practices raised by consumer activism, public and scientific communities, and others (Easterling et al., 1996). Green advertising has decreased over the years due to false advertising claims, exaggeration in advertising content, and consumers have been discovered to be perplexed about the terminology used (Polonsky et al., 1997). Yin and Ma (2009)

state that in the 2000s, green advertising regained traction again, with changes in international regulations, global funding, increased market interest, and so on, thus beginning the sustainable era (Belz & Peattie, 2009). Green advertisements apply to advertisements for green consumers and other stakeholders, including environmental protection, eco-friendly content, substance targeting requirements and preferences (Zinkhan & Carlson, 1995).

Lutz (1985) understands that advertisement is one of the important factors leading to the attitude of consumers and the responsiveness of consumers to any product or service. Baldwin (1993) indicated that green advertising helps to convert the perceived importance of green goods from consumers into sales. In comparison, however, it was found in a survey by Chase and Smith (1992) that only about 70% of respondents were affected by green advertisements and ecolabelling messages. The same study also revealed that due to its exploited use, more than 50 percent of respondents did not pay adequate attention to green messages from the advertising, rendering these advertising less credible.

Chan (2004) points out that, the key reasons for less legitimacy found in terms of green advertising may be as follows: the nation that advertises the green product tends to be environmentally friendly; the manufacturer of the product does not appear to be environmentally friendly; and the asserted eco-friendly quality of the product does not satisfy the experience of the customer with the product. Pooley and O'Connor (2000) report that, providing just ecological information to consumers does not encourage optimistic green purchasing behaviour. Emotional content in green advertising, however, could draw the

attention of consumers to them (Hawkins et al., 1998). These findings suggest the need for further research into the effect of green advertising on the purchasing habits of consumers.

#### **Situational Factors**

This section considers the situational factors such as product availability, price, perceived quality and peer influence as a mediating factor between green marketing and consumer purchase behaviour. These situational factors are further discussed subsequently.

#### **Price**

Price is one of the most common and essential elements of the green marketing mix. If there is a self-perception of extra commodity value, most consumers will only be willing to pay additional value. Efficiency, feature, design, visual appeal, or taste can be enhanced by this value. Green marketing should take all these facts into account when charging the consumer higher price and still making the price accessible for the consumers at the same time.

Some consumers consider the price of eco-friendly goods to be more costly than traditional goods (Chang, 2011) and others do not see it because of the healthier portion of the products. Similarly, Bukhari (2011) presumes that price is the primary reason why consumers tend not to buy green goods because they consider them costly. Purohit (2012) suggested that consumers are not prepared to pay additional rates for green goods. The results of the Yilderm (2014) study on

the Turkish market also showed that buyers are only prepared to pay an additional price for green items, such as cosmetics, that they will regularly use.

Anvar and Venter (2014), however, contend that, consumers are demanding green goods, have greater purchasing power, and are willing to pay the price, particularly the younger generation. Abzari, Faranak, Sharbiyani and Morad (2013) argued that, given that the advantages of consuming the green commodity outweigh the price, consumers would pay a greater price. The advantages of the goods make some consumers go extra to pay more for the products. They assume that the destruction of the earth would be maintained so that investment or added costs are worthy of the cause.

Nemati and Sajadi (2015) examined the effect of green marketing mix on consumers' purchasing behaviour of sporting goods. As a consequence of the study of the structural equation model, it was determined that price and distribution have a positive influence on the buying behaviour of consumers, although the effects of the commodity and promotion have not been determined. Grail (2009) analysis of the effect on green buying behaviour of green goods and green prices reveals that pricing of green products hinders green purchasing.

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## **Perceived Quality**

A commodity must occupy a distinguished role in the process of purchasing and sale. Sometimes carrying possibilities, constraint and stress, the characteristics of a commodity will often reveal and imply some advantages to the user (Håkansson et al., 2005). "The commodity contains" the entire package of

utilities (or benefits) acquired in the exchange process by consumers" (Blackwell et al., 2006). One of the most critical features in the product mix is the quality of a product, its package, its functionality, and its design (Van Waterschoot & Van den Bulte, 1999).

Perceived quality means consumer perception of the quality of a product (Tsiotsou, 2006); it reflects the overall opinion of consumers on the superiority of a product. Chaudhuri (2002) found perceived quality to be a significant factor, since the higher perceived quality consumers had, the greater their purchasing conduct. Furthermore, Tsiotsou (2006) proved that perceived quality and purchasing behaviour were directly positively associated, so that perceived quality could be used to predict customer buying behaviour.

## **Product Availability**

The availability or location of goods is connected to the use of distribution gates dealing with green products suitable for consumers in order to promote their delivery and to safeguard cycling procedures within environmental conditions, standards and specifications (Kong, Harun, Sulong, & Lily, 2014). It is worth noting that it is not a cost generator factor, it has various characteristics that can produce revenues and certain performance. This aspect of the marketing mix is discussed by "how-to-handle-distance" (Nagaraju, 2014). Availability is about choosing where and when a company can access a product that will have a major effect on consumers. Very few buyers can go out of their way merely for the sake of buying green goods (Alniacik, & Yilmaz, 2012).

Green delivery is a very delicate process and consumers must also be assured of the product is ecological nature. According to Suki (2013), few interested clients would go out of their way to purchase green goods, Therefore, in most instances, marketers looking to effectively launch new green goods should position them widely in the market place so that they are not only attractive to a specific green niche market, but the location must also be consistent with the image that the organization wants to portray rather than being overshadowed or compromised by the location's image. The positioning is to distinguish the organization from its rivals (Agyeman, 2014).

#### **Peer Influence**

Peer pressure is the psychological pressure faced by individuals when comparing their behaviour with their reference pressure (Cohan, 2009). The power of peers has a role in shaping green buying. Several studies have pointed to peer impact in both general and green consumer behaviour (Solomon, Bamossy, Askegaard & Hogg, 2006). It has been found that when purchasing a new item in the supermarket, people speak with their friends and family about selecting the green criterion for that particular purchase, reinforcing these earlier comments about peer influence when it comes to choosing a green product (Young, Hwang, McDonald & Oates, 2010). The same fact is stated by Kotler (2011), where he argues that, social factors such as small groups and the family affects consumer behaviour. Generally, the purchasing behaviour of consumers may be heavily affected by family members and friends (Kotler, 2011).

### **Empirical Review**

The focus of this section was on the vivid studies carried out, which are linked to the variables of interest in this study. Thus, any research performed in Ghana or beyond and linked to the actions of green marketing and consumer purchasing behaviour. The elaborations of other researchers' findings on green marketing and purchasing behaviour are as follows.

The focus of Delafrooz et al. (2014) was on recent green marketing tactics implemented by corporations concentrating on packaging and labelling. According to them, psychological-individual marketing, socio-cultural and mixed circumstances are the factors that influence the purchasing behaviour of consumers. They also take the same view that "green marketing is not currently fulfilling its ability to enhance the quality of life of consumers, while enhancing the natural world." Meanwhile, the key concern of marketers now is how ecolabels, eco-brand and environmental advertising influence the purchasing behaviour of consumers.

In a study conducted by Daria and Sara (2016), they found that, 43 percent of respondents believe that eco-labelled goods are good for the environment and the same percentage of respondents believes that, eco-labels are good for both health and the environment. Only 2 percent of respondents said that eco-labels mean little to them. This demonstrates that in influencing consumers, eco-labels are effective. Meanwhile, 56 percent of respondents in the same study were prepared to pay more for such green items. The credibility of eco-labelled goods is generally believed by 73 percent of respondents.

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Some studies have shown the connection between eco-labelling and the actions of consumers in order to purchase eco-friendly goods. A positive relationship between eco-labels and the desire of consumers to buy eco-friendly goods is found in a study by Nik Abdul Rashid. One explanation for consumers' mistrust of eco-labels is the lack of consumers' awareness or ignorance to identifying eco-labels. The LOHAS (2007) study by the Natural Marketing Institute on the consumer trends database shows that, various eco-brands have different effects on consumers. When brands are generally embraced and understood, buying choices are more likely to be made by consumers.

A green commodity ranks highest in influencing consumers, according to the EPA Energy Star survey. This was a 2010 research conducted by Jarvi on Finnish consumers which revealed that, 45.5 percent of the research goods of the respondents were random buyers before buying them, whereas almost identical numbers were 40.5 percent of respondents. We may assume that it is easier for known eco-labels to get sold if we keep the findings of this study in mind. 60 percent of respondents in the same study were frequent or very frequent purchasers of eco-labelled goods. A survey carried out in western countries such as the USA and Germany has shown that people are more optimistic about eco-branded brands. According to Wahid and Rahbar's research on Malaysian consumers, many items such as glass, plastics, household cleaning products, pesticides and aerosols are regarded as non-green and consumers respond positively to products that are eco-branded.

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A research by Dania and Erika shows that, with a positive attitude towards green advertising and green goods, women are more sensitive than men. Another research on Malaysian youth by MAH Rahim concluded that, consumers with some previous knowledge of "green living" have a more optimistic approach to eco-advertising (Rahim & Zukni, 2012). Their research showed that the top three platforms are ideal for green advertising; television, websites for social networking and websites. They also say that for successful persuasion, governments and NGOs doing green advertising should go to the abovementioned platforms. This means that, there is a positive shift in the behaviour of consumers towards green marketing campaigns by eco-advertising (Neft & Thompson, 2007). The research conducted by Haytko and Matulich (2010) contributed to the knowledge that, consumers practice environmental behaviour and are more inclined towards green advertising. They concluded that, in designing green marketing campaigns, environmental advertising aids in impacting consumer purchase behaviour.

In a research done in Shanghai, Bing Zhu found that, it is important to have a well-planned and coordinated concept to carry out a green campaign. He also found that when launching green advertising to influence buyers to purchase green goods, reputation plays an important role (Zhu, 2013). Kumar (2015) has made an attempt to understand how consumers can become conscious of green marketing and to test the attitude of consumers towards eco-friendly or green goods. The study emphasized that, as consumers are prepared to pay a higher price for green goods, marketers need to emphasize green marketing. A lack of

knowledge and inadequate research work in the field of eco-friendly products is the biggest setback for green products in India.

In a study on the general Ghanaian consumer market conducted by Mahama-Braimah (2015), it was revealed that while Ghanaian consumers are aware of environmental problems, however, they do not consider them when making purchases. Consumers are, instead, more concerned with the price of a commodity. This presents a challenge to local market green brands because, as a result of their all-natural manufacturing processes, they typically sell at a premium; as opposed to conventional brands that use cheaper, synthetic elements (Adinyra & Gligui, 2012). A related study conducted by Adinyra and Gligui (2012) on the Ghanaian market found that about 91 percent of 384 respondents were aware of environmental risks. Nearly half of this 91 percent attributed global warming to environmental threats or dangers, while it is concluded that human attitude to the atmosphere was sufficient consideration to greening.

## **Conceptual Framework**

The next segment describes the conceptual framework of the study. The conceptual framework of this study was constructed from available literature based on the purpose and constructs adopted in this current study. The structure shows the relationship between green marketing, situational factors and consumer purchasing behaviour. This is illustrated in Figure 2.

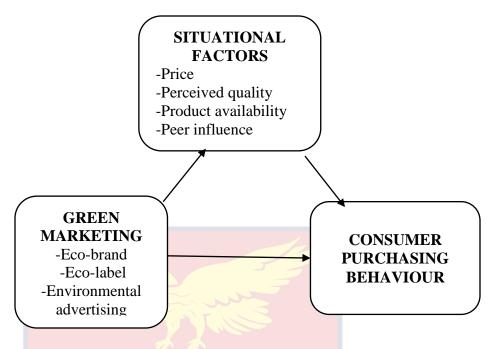


Figure 2: Conceptual Framework

Source: Adapted from Ajzen (2002)

The Theory of Planned Behaviour was adapted for the current study. The justification for the adoption of the framework is that, in the case of organic cosmetics or green cosmetics, the buyer plans to purchase safe products in order to protect the environment. Generally speaking, actions that are environmentally friendly carry a positive attitude. That is to say, sustainable behaviors are widely promoted as positive behaviors. However, although consumers may have knowledge and understanding of green marketing (eco-labels, eco-brand and environmental advertising), consumer purchasing behaviour can be hindered by situational factors such as price, quality, product availability and peer influence. The study therefore adopted the conceptual framework to explain the controversies and possible gaps in green purchasing behaviours.

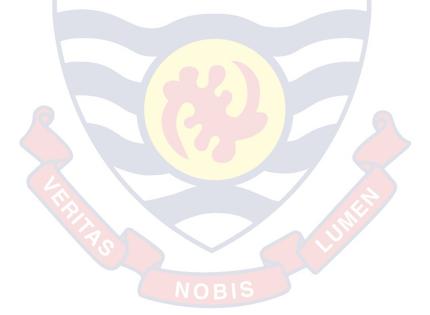
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In the current study, Situational variables are regarded by the adapted TPB as a replacement for intention. Intentions originally function as an immediate background of behaviour, and situational variables are focused on behavioural behaviours, subjective norms, and perceived behavioural influence (Karim et al., 2013). Therefore, more focus is given to identifying the variables affecting consumer buying behaviours within the framework of the TPB (Barati, Allahverdipour, Moinei, Farhadinasa & Mahjub, 2014). Green marketing is measured by Eco-label, Eco-brand and Environmental advertising. Situational factors such as price, perceived quality, product availability and peer influence may also mediate the relationship between the dependent and independent variables in the study.

According to Boadi et al. (2013), situational factors have a strong impact on consumer purchasing behaviour. Situational variables in green marketing may act favourably or unfavourably to the purchasing behaviour of consumers. Karim et al. (2013) concluded that, green product buying was greatly affected by situational factors. Again, environmental awareness is positively connected to the buying behaviour of consumers (Diekmann et al., 2007). The findings of several studies confirm the existence of a positive relationship between environmental awareness and environmental behaviour (Kalantari, Fami, Asadi & Mohammadi, 2007; Omran et al., 2009). From the adapted conceptual framework (Figure 2), consumer purchase behaviour is the focus and in order to purchase a green product, key influential factors; green tools (eco-label, eco-brand and environmental advertising) and situational factors are considered by consumers.

## **Chapter Summary**

This study analyses the effects of green marketing on consumer behaviour by testing the mediating effect of situational factors. This chapter reviewed the theory of planned behaviour as the main theory that underpinned the study. Also, concepts such as green marketing, consumer buying behaviour, green consumer, green products, and green marketing tools among others were defined. Moreover, empirical literature on green marketing and consumer purchasing behaviour as well as the relationship between situational factors and green marketing were discussed. Lastly, conceptual framework was constructed based on the theory of planned behaviour, empirical review and the hypotheses raised in the study.



#### CHAPTER THREE

### RESEARCH METHODS

#### Introduction

This study examines the effects of green marketing on consumer behaviour by testing the mediating role of situational factors. This chapter describes the area of study and the methodological procedures followed in the execution of fieldwork in accordance with the objectives of the study. The topics covered include: the research philosophy, research approach, research design, study area and population of the study. It also addresses concerns relating to data source and type, the method for sampling, the research instrument and ethical considerations. Finally, the chapter discusses pre-testing (pilot study), data collection methods, validity and reliability, data processing and analysis, challenges encountered during the fieldwork as well as the chapter summary are discussed in this section.

### Research Philosophy

The theory of science consists of major assumptions underpinning the research strategy and methodology from the perspective of the researcher. Research philosophy relates to the creation of knowledge and the essence of knowledge (Saunders et al., 2009). It focuses on the assumptions that support the research strategy and the methods chosen as part of a research paradigm. For this analysis, the research paradigm is positivism. Positivism, is a philosophical approach that focuses on experience and scientific understanding of natural phenomena. Positivism is a belief that the aim of knowledge is to provide a

reflection of the situation that individuals have been through and the purpose of science that can be observed and evaluated (Trochim, 2006).

It is argued that, science is seen as a way to find the truth and to dominate the world if scientific methods are applied in research. Positivists believe that science is about testing theories by using deductive reasoning and the results of the research whether the theory supports or refutes the facts. If the theory does not fit the facts, then it has to be revised for better predictions of reality. Positivists believe that reality is out there and can be tested (Creswell, 2003). Positivists prefer to use quantitative data for their research and often conduct experiments, surveys, and use statistics. They test hypothesis by carefully analysing numbers from the measures they employ.

The primary aim of this research is to analyse the impact of Green marketing on consumer purchasing behaviour in the University of Cape Coast. To investigate this, existing theory (theory of planned behaviour), as mentioned in the literature review, is being used (with modifications) to build the hypothesis. According to Saunders et al. (2009), an existing theory is used to develop new hypothesis and research strategy that is further tested and confirmed, which in turn develops the theory. According to Gill and Johnson (2002), it is more likely for a research using the philosophy of positivism to use a more structured methodology to ease replication. For statistical research, they are more likely to rely on quantitative data for analysis (Saunders et al., 2009).

## **Research Design**

Research design is described by Saunders, Lewis and Thornhill (2009) as the general plan that guides a researcher to address research questions. The blueprint of the analysis is a research template. The design of a study determines the form of study. In a research analysis, De Vas (2001) views research design as a logical collection of procedures used by researchers to collect, analyse, and report their data.

An explanatory research design was employed in the study. A continuation of descriptive research is explanatory research. The researcher goes beyond simply describing the characteristics of the situation or problem, to examine and clarify why or how the studied phenomenon occurs. Explanatory study therefore attempts to explain phenomena through the discovery and measurement of causal links between them. It is referred to as causal study design in some circles (Saunders et al., 2007). Explanatory research is conducted when there is already a hypothesis as to why something is happening. Questions and tests are designed to support that hypothesis, and proven to be correct or not. Explanatory research frequently includes descriptive elements but goes beyond this to identify and explore the underlying the effects and the nature of the relationships between the dependent and independent variables.

The purpose of explanatory study studies is to test hypotheses in order to justify the existence of such relationships or to assess the distinction between groups or the independence of two or more situational factors (Sekaran, 2003). This study is deemed to be explanatory, since it seeks to establish and explain the

relationship between green marketing and consumer purchasing behaviour. It also goes a step further to assess whether situational variables have a causal association or mediating effect on consumer buying behaviour.

### **Research Approach**

A research approach is a plan of action that provides guidance to systematically and effectively conduct research. The approach to a study is a plan and procedure containing the steps of general assumptions for comprehensive data collection, analysis and interpretation methods. Therefore, it is focused on the essence of the issue being discussed in the report. In performing this analysis, the thesis employed a quantitative methodology that supports the positivist paradigm.

Numbers, reasoning and an analytical position are discussed in quantitative analysis. Instead of divergent reasoning, quantitative analysis focuses on numeric and unchanging data and detailed, convergent reasoning (Creswell, 2005). Normally, quantitative analysis is governed by assumptions specified before the investigation starts. In quantitative analysis, data is obtained quantitatively and analysed in numerical form (Teddlie & Tashakkori, 2010). The philosophical foundation of quantitative design is grounded in the positivist epistemology, which places emphasis on quantification, objectivity and deductive logic (Tuli et al., 2010).

Quantitative analysis was considered rather suitable for this research for the following reasons; the relationship between green marketing and consumer purchase patterns could be better explained by means of using different hypothesis; the large sample and time constraints made qualitative analysis not as suitable; and this method allowed all respondents to answer the same set of questions rather quickly in comparison to qualitative analysis.

## Study Area

The University of Cape Coast was selected as the study area for the study. The university is in the central region's administrative capital, Cape Coast. The traditional name of 'Oguaa' on the Cape Coast comes from the word 'gua' in Fante, meaning market. It was named Cabo Corso by the Portuguese meaning Short Cape and later changed to Cape Coast by the British. One of the oldest districts in Ghana is the Cape Coast Metropolitan Area. It was elevated by the instrument LI 1373 to municipality status in the year 1987 and upgraded by LI 192 to metropolitan status in the year 2007.

The University of Cape Coast is one of the rare sea front universities in the world. Its main entrance is only about 50 metres from the Atlantic Ocean. Cape Coast University is based on the North West Coast (05°06 '00" N 01°15'00" W). The University of Cape Coast is a prestigious public collegiate research university located in Cape Coast, Ghana. The University was founded in 1962 because of a desperate need for highly skilled and qualified education staff for second-cycle institutions, such as teacher training colleges and technical institutions. A mission was set up to educate graduate teachers, a purpose that the two existing public universities at the time were unfit to serve. Since then, the university has added to its roles the training of doctors and health care practitioners, as well as planners of

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education, administrators, and agriculturalists. Ministers of State, High Commissioners, CEOs, and Members of Parliament are among UCC graduates. The university, which is five kilometers west of Cape Coast, is on a hill overlooking the Atlantic Ocean. It operates on two campuses: The Old Site (Southern Campus) and the Current Site (Northern Campus). Two of Ghana's most significant historical sites, Elmina and Cape Coast Castle, are only a few miles from the university.

Currently, the university has about seven residential facilities, namely Adehye (all females), Casely Hayford (all males), Oguaa, Atlantic, Valco, SRC, PSI for Medical students, and Kwame Nkrumah hall are all mixed. The Students Representative Council also has a hostel known as SRC hostel. There are also some private hostels in the surrounding communities such as Kwaprow, Apewosika, Amamoma and Superannuation to accommodate students and other university staffs.

## **Population**

The population represents all of the individuals to be considered for the study. Population is identified by Burns and Grove (2010) as the entire collection of individuals meeting the sampling requirements for a research sample. Generally, a research population is a large group of people or items that is the primary focus of a scientific investigation. Also known as a well-defined collection of individuals or items known to have similar characteristics is a study

population. All individuals or artifacts typically have a common linking characteristic or feature within a certain population (Bhattacherjee, 2012).

The research targeted all 18,699 undergraduate students at the University of Cape Coast (Students Records and Information Management (SRMIS) University of Cape Coast, 2019). This included students from all four (4) colleges including, the College of Humanities and Legal Studies (4199 males, 3097 females), the College of Health and Allied Sciences (1478 males, 1103 females), the College of Education Studies (2985 males, 2196 females) and the College of Agriculture and Natural Sciences (2806 males, 835 females). Meanwhile, students from the college of distance education were not included in the study. This was because they were not readily available on campus to partake in the study.

## **Sampling Procedure**

Sampling is described by Babbie (2010) as the process of choosing a portion of the population to represent the entire population. Similarly, Anthony-Krueger and Sokpe (2006) viewed sample as a representative portion of a population. Thus, sampling enables the researcher to study a relatively small number of units in place of the population and obtain data that may be representative of the whole or the population of the study. This study used stratified sampling technique. This was done by dividing the students into the various colleges based on their programme of study. Proportional type of Stratified sampling technique was then employed to select respondents from various colleges based on the ratio of the college to the total population of the

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study (Table 1). This was to ensure that all the various colleges (sub-groups) of the University were fairly represented so as to generalize the results to all the University of Cape Coast undergraduate students. The lottery method of random sampling was adopted to select respective proportional respondents from each college (sub-group).

Smith (2010), on the other hand, also suggested that the sample size is the amount of observations used to predict the entire population's estimates. The sample size is, however, defined as a subgroup or part of a larger population (Saunders, Lewis & Thornhill, 2007). The Krejcie and Morgan (1970) sample size estimation table was used to select 377 respondents out of a population of 18699 students. Table 1 presents the distribution and proportions of the respondents.

**Table 1: Sample Distribution** 

College	Male	Female	Total	ratio	Sample
College of Agriculture and	2806	835	3641	0.195	73
Natural Sciences					
College of Education Studies	2985	2196	5181	0.277	105
College of Health and Allied	1478	1103	2581	0.138	52
Sciences					
College of Humanities and	4199	3097	7296	0.390	147
Legal Studies					
Total	114868	7231	18699	1.000	377

Source: SRMIS, UCC (2019)

### **Data Source and Type**

This study mainly relied on primary data. The explanation for this was to be able to provide readers with ample discussion that would help them learn more about the problem and the multiple variables involved. Primary data refers to the answers obtained from the respondents in the field by the researcher through the administration of the questionnaire in order to request the expected data for the purposes of the analysis. The primary data for the study was represented by the survey results that were acquired from the respondents through the administration of questionnaires. The researcher used primary data for the current study. The researcher settled on questionnaires for all the undergraduate students.

#### **Data Collection Instrument**

Data collection instruments are fact finding mechanisms and are strategies used for collecting the data. Tools for data collection apply to instruments used to collect data, such as questionnaires, tests, standardized schedules for interviews and checklists (Muchesa, 2015). In this research, questionnaire was the instrument used to collect quantitative data. According to Creswell (2003), a questionnaire is a type of research instrument used in a survey design that is completed and returned to the researcher by participants in a sample. Questionnaires gave the researcher an opportunity to obtain data with a low probability of manipulation of the answers from a large sample size (Saunders et al., 2009). The deductive method is most generally associated with a survey. Surveys also help with a large amount of data collection in the form of questionnaire, which aids in easy

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comparison, as the data is very structured. Typically, using descriptive and inferential statistics, the study of such quantitative data can be carried out (Saunders et al., 2009).

This thesis adopted the questionnaire tool for this quantitative study in order to gather vast quantities of data with a negligible distortion of responses. According to Saunders et al. (2009), questionnaire is typically a concept used in large quantities to collect data where each respondent responds in a pre-set order to the same group of questions. This approach can be considered most relevant on the basis of literature in order to examine the green views of consumers (students from different colleges at the University of Cape Coast) and to evaluate their buying habits. In addition, it was also simple and easy to analyse the standardized questionnaire (Gray, 2009).

The questionnaire used for the study comprised only close-ended questions, which were answered by the respondents. In the case of close-ended questions, the respondents were expected to choose the option within which they agree most. The questionnaire had 36 items, sub-divided into 4 sections (A-D). Mainly, it covered the demographic characteristics of the respondents (students); green marketing (eco-label, eco-brand, and environmental advertising), consumer purchase behaviour and situational factors (perceived price, perceived quality, product availability and peer influence) were adopted from (Ferraz, Buhamra, Laroche & Veloso, 2017).

### **Reliability and Validity**

Reliability refers to the level of consistency with which an attribute supposed to be measured is done by an instrument (Fraenkel & Wallen, 2001). Reliability of a measurement shows the level of a measurement that is free bias, stay consistent, and stable in long term, and also the use of the instrument remains consistent when used in other studies (Sekaran & Bougie, 2013).

In order to ensure that high-quality data collection instrument were used during the fieldwork phase, pre-testing of the research instruments was performed at Cape Coast Technical University using a population of fifty students. Time was made by the researcher and the respondents to discuss any ambiguity, doubt and incoherencies that the respondents may face with any aspect of the draft questionnaire. Respondents, thereafter, were given time to complete and return the questionnaire to the researcher. The responses were collated and studied closely by the researcher and Supervisors who was at the University of Cape Coast.

The pilot study helped to eliminate ambiguous statements, particularly in the items from Likert. Some claims were entirely omitted because in the claims they had been replicated elsewhere. Also, questions set under intentions were entirely removed since the study did not consider it anymore after the pre-test. This is because situational factors were employed after the pre-test to achieve the purpose of the study. In addition, the reliability test was performed using Cronbach Alpha and the outcome (a= 0.821) indicates that the instrument was extremely consistent and thus accurate. The minimum value of the Cronbach's

coefficient alpha must be  $\geq 0.7$  even the value of 0.6 is still acceptable (Hair, et al., 2010). Reliability is an indicator that shows the suitability of the measuring instrument with what is measured. All the necessary corrections and changes were made before the data collection. During the actual data collection, the questions that were answered by the respondents revealed a consistency in their responses.

On the other hand, an instrument is valid if it measures what it is intended to measure and correctly achieves the purpose for which it was intended (Patten, 2004). Validity requires the appropriateness, meaningfulness, and usefulness of the researcher's inferences based on the collected data. The researcher needs some kind of assurance that the instrument being used resulted in inaccurate conclusions. Again, to check inconsistency, careful analysis of the instrument was performed. The researcher also gave the instruments to the supervisor to vet for reliability and inconsistency before fieldwork.

#### **Ethical Consideration**

Ethics involves compliance with accepted norms and compliance with negotiated moral conduct principles (Strydom, De Vos, Fouche & Del port, 2005). Permission was requested for an introductory letter from the University of Cape Coasts' Department of Marketing and Supply Chain Management to go to the various colleges. The research also assured absolute confidentiality and consent of the respondents by providing introductory information to the respondents to make an informed decision on whether they participated. The

respondents were granted the right to withhold information deemed private by them.

In addition, before and after the study, the researchers ensured that the respondents were not physically or mentally affected. Respondents' confidentiality was assured by using the information that were gathered for the study purpose only. In addition, the researcher ensured that, those whose work was useful in the analysis were duly acknowledged. Also, plagiarism test was performed to meet the University of Cape Coast requirements (SRMIS, UCC 2020).

#### **Data Collection Procedures**

The study used questionnaire administration in collecting primary data. An introductory letter was obtained from the researchers' department. The letter explained the intent of the instrument, the need for individual involvement, privacy, and the confidentiality of the responses of the respondents. Permission was granted for the administration of the instrument after establishing the requisite communication with the respondents' Provost, Dean and Head of departments. Questionnaires were administered by the researcher to the chosen respondents (undergraduate students of different colleges). The questionnaires were self-administered by the respondents. The questionnaires were completed and returned on the same day to the researcher. The questionnaire were administered from 12:30 pm to 2:30 pm for two weeks. This time was favourable, since it was the lunch time and break within lectures for the various students,

which permitted the researcher to administer the instrument to the respondents without interfering with their busy schedule.

### Fieldwork and Challenges Encountered

The actual data collection was conducted from 2<sup>nd</sup> December, 2019 to 27<sup>th</sup> December, 2019, thus, the exercise lasted for four (4) weeks. The researcher encountered some problems in the field. One of these was that, some students were not willing to undertaken the study because of some level of fatique. However, majority (97%) were convinced and gave consent after informing them that the research was only for academic purpose.

Also, having access to students of the various colleges was not easy, therefore, course representatives were contacted in order to know when and where they have lecturers and vantage point such as science market, shuttle station, Old Library, Assembly hall, CA Ackah Lecture Complex, Science Lecture Theatre, Large Lecture Theatre among others were visited regularly to track students.

Moreover, some of the questionnaires administered to the students were not retrieved from the field because some took it away, especially, students who were at shuttle stations and those who were just closed from lectures. However, additional questionnaires were printed and submitted to the students and most of them were finally retrieved.

## **Data Processing and Analysis**

Analysis of data means organizing and challenging information in ways that allow researchers to see trends, recognize themes, discover associations, establish hypotheses, make interpretations, mount criticisms, or create theories. Synthesis, assessment, perception, categorization, hypothesizing, comparison and finding of patterns are also involved (Hatch, 2002). Similarly, data analysis is a data review, cleaning, transformation, and modeling process with the purpose of finding valuable knowledge, feedback, conclusions, and decision-making support. Data analysis is a method for De Vos et al. (2005), which gives order, structure and sense to the collected data mass. The thesis analysed the data obtained by the use of quantitative methods described below.

The research made sure that all of the questionnaires were numbered. In order to correct any errors that may have occurred during the fieldwork, completed questionnaires will be obtained and cross-checked for consistencies at the end of each day's fieldwork. Prior to entering the responses into the SPSS program, each of the questionnaires was given a serial number and a code for easy identification. Using the PLS-SEM boostrapping method, the questionnaires were evaluated and the findings were presented in the form of tables and diagrams. Structural Equation Modelling (SEM) was used for the analysis. Descriptive statistics (mainly frequencies and percentages) as well as inferential statistics such as confirmatory factor analysis, reliability as well as structural equation modelling were employed to describe patterns the of variables in the study.

SEM consists of several models of multiple regression that can function in one instance as an answer variable and in another instance as a predictor variable. It is therefore possible to conclude that SEM is comparable to other common quantitative approaches, such as correlation, multiple regression and variance analysis (ANOVA), as well as factor analysis and variance multivariate analysis (MANOVA) (Weston & Gore, 2006). The structural equation modeling method, however, allow to test more than one regression model at the same time. According to Hair, et al. (2006), when the hypothesized relation has good theoretical support, it is possible to make empirical causation inferences using SEM.

In determining the soundness of the causal relationships formulated on the basis of the theory, SEM is seen as most helpful (Tobbin & Kuwornu, 2011; Toma, McVittie, Hubbard, & Stott, 2011). SEM helps a researcher at a time to control more than a single dependent variable. This includes all the characteristics of multiple regression analysis. It is therefore able to help test a model's importance, evaluate the terms of error, and provide standardized and unstandardized coefficients. In addition, the use of SEM is used as an effective method for the purpose of assessing measurement errors and composite reliability of estimates as it is incorporated with the confirmatory factor analysis.

Finally, SEM consists of an integrated graphical user interface that makes it simpler to display objects and variable relationships. In view of this, the methodology of structural equation modeling is considered to have some advantages that separate it from other quantitative and multivariate approaches.

The researcher used the SEM technique in this study to estimate the relationships that were hypothesized to exist between the green marketing, situational factors and actions of purchasing green products.

#### **Measurement of Variables**

The key variables of the study are green marketing, situational factors and consumer purchasing behaviour. Green marketing was measured with three constructs: eco-brand, eco-label and environmental advertising as suggested in the study of Magali, Francis and Hulten (2012); Rahbar and Wahid (2011). These constructs were assessed using an eighteen-scale item. Five-scale items each were used to assess eco-brand, eco-label and environmental advertising.

Consumer behaviour was also assessed using an eight-scale item developed from the review of literature and guided by Fishbein and Ajzen (1975) which has received considerable attention from a number of researchers.

Situational factors are measured by perceived price, perceived quality, product availability and peer influence (Ferraz, Buhamra, Laroche & Veloso, 2017). Perceived quality is measured by consumers' perception of the quality of a product (Tsiotsou, 2006); it reflects the overall opinion of consumers on the superiority of a product. Price reflects consumers' self-perception of extra commodity value, indicating consumers' willingness to pay more for the additional value. Availability is about the ease with which green products are accessible to consumers. Peer influence is measured by the psychological pressures faced by individuals when comparing their behaviour with their

reference pressure (Cohan, 2009). The power of peers in coercing consumers to buy has a role in shaping green buying behaviours.

# **Chapter Summary**

The research methods necessary to investigate the research problem has been discussed. This included the research approach, study design, sampling techniques, method of data collection and data analysis. The next chapter presents the results and the discussion of the study.

#### **CHAPTER FOUR**

#### **RESULTS AND DISCUSSION**

### Introduction

This chapter provides the data interpretation, discussion and findings of the study. It has been stated in previous chapters that, the purpose of the research was to examine the relationships and potential gaps between green marketing and consumer purchase behaviour to buy green cosmetics among undergraduate students at University of Cape Coast. It was also intended to examine situational factors (SF) that could create a potential difference between green marketing and consumer purchasing behaviour (GPB). Situational variables such as perceived price, perceived quality and availability of goods and peer influence were therefore used as mediators to determine the indirect paths of the relationships proposed.

Three parts of the data analysis were presented: the first presented the demographic statistics obtained for the study; the second examined the structural analysis carried out through PLS-SEM using structural equation modelling (SEM); and finally, the interactions obtained from the data analysis were examined. The descriptive analysis was performed using SPSS. For SEM research, PLS was used because it can handle small sample sizes, the data was normally distributed, and the model was defined correctly. Again, when evaluating mediation, PLS-SEM is superior to regression analysis (Henseler et al., 2017).

# **Socio-demographic Characteristics of Respondents**

This segment provides background information on the sex, age, college of the respondents as well as the level of study of the respondents. Demographics are reflected in this study using gender, age, college of students, and students' level of study. This demographic analysis represents the general purchase of green products among the students of the different colleges of Cape Coast University. Table 2 captures these demographic features of the respondents in the study.

**Table 2: Respondents' Demographic Characteristics** 

Variable	Category	Frequency	Percentage
Sex	Male	210	60
	Female	140	40
	Total	350	100
Age	Below 20	41	11.7
	20 – 29 years	298	85.1
	30 – 39 years	11	3.1
	Total	350	100
College	Education	97	27.7
	Humanities	137	39.1
	Health and Allied	46	13.1
	Agriculture	70	20
	Total NOBIS	350	100
Level	100	125	35.7
	200	85	24.3
	300	40	11.4
	400	100	28.6
	Total	350	100

Source: Field survey, Osei (2019)

The sex of the respondents is shown in Table 2. It indicates that males (210, 60%) were the majority of respondents, while few (140, 40%) were females. This is a true representation of the gender basis of the total number of Cape Coast University students. The number of male students is greater than that of female students.

On age of the respondents, Table 2 shows that, majority of the respondents (85.1%) were found between 20 to 29 years, followed by 41 respondents who were below 20 years old, while few (11) of the respondents were 30 years and above. Gone are the days when the various universities in Ghana were full of aged and old adults. It is currently made up of adolescents and young adults who are usually under the age of 25.

Information on the college status of the respondents was collected on the different programmes enrolled by the respondents and this was used to verify the college status of the respondents and the responses are presented in the table 2. It shows that most of the respondents (137, 39.1%) belong to Humanities and Legal studies, followed by 97 respondents who were from Education, while small number of the respondents (46, 13.1%), were from Health and Allied Sciences. In the University of Cape Coast, it is being dominated by students from the Humanities and Legal Studies and Education while the others follow suit.

On the level of the respondents, the larger number of respondents (125, 35.7%) were in level 100, followed by 100 respondents who were in level 400, 85 respondents were level 200 students and 40 respondents were in level 300. This shows that the study allows the participation of all the levels in the undergraduate

studies of the University of Cape Coast in order to solicit for the varying views of all the levels of students on green products and consumer purchase behaviour.

### **Data Screening**

To assess the readiness of the dataset for further statistical study, the data was screened. Data screening includes analyzing the research data for missing data, outlier and normality assumption responses (Coakes, 2006). Therefore, prior to the study, the items of the research instrument were tested for accuracy of data entry, missing values and outliers via SPSS. Missing data relates either deliberately or inadvertently to an unanswered item on a survey instrument by a respondent (Hair, et al., 2006). Moreover, for the study, copies of answered questionnaires which had missing data were not used.

On the other hand, Outlier refers to extreme values of data with a particular combination of attributes that vary from other values of data (Hair et al., 2006). The influence of an outlier on the resulting model fit, parameter estimates and standard errors in the dataset can be important (Byrne, 2013). Therefore, as a significant feature of the analysis, outliers are considered. The outliers in this analysis were tested using Mahalanobis distance statistics.

### **Assessment of Normality**

Normality tests are important in any statistical analysis to decide whether the dataset is well-modelled by a normal distribution and to compute how likely it is that a random variable underlying the dataset would normally be distributed. For many statistical analyses, an evaluation of data normality is a pre-requisite because normal data is an important underlying assumption in parametric analyses.

For this study, normality is explored. Hair et al. (2010) suggest that, the structural equation modeling (SEM) estimation of maximum likelihood requires that the dataset should normally be distributed. Although a histogram can be used to check for normality, kurtosis and skewness are two other methods that are usually used by extant researchers for checking for normality. Kline (2005) opines that skewness indicates, whether positive or negative, how symmetrically distributed a data is. On the other hand, kurtosis illustrates how large a data set is spread around the mean ("peakedness" or distribution flatness).

According to Fornell and Larcker (1981) and Hair *et al.* (2010), the dataset for SEM must be normally distributed. Thus, it is important it measures the normality of variables used in the study. To investigate the normality of the numbers, the researchers used Skewness and Kurtosis. This was done to ensure that the variables were normally distributed. Hair *et al.* (2010) noted that minor non-conformities from normality can be substantial for studies that utilise huge model dimensions, thus the sample size of more than 200 participants.

Skewness measures the irregularity of delivery, whereas kurtosis measures the fact in the delivery variables where dataset peak (Kim et al., 2013). Hair et al. (2010) indicates that the skewness and kurtosis must be within the range of -2 to +2 for normally distributed data. The current study used SPSS to monitor for

normality and the statistics that followed showed that the data was usually distributed. In table 3, this is illustrated.

**Table 3: Normality Test** 

Items	Mean	Std. dev	Skewness	Kurtosis
Eco-brand	3.647	0.722	-0.643	1.044
Eco-label	3.510	0.887	-0.380	-0.381
Environmental advertising	3.647	0.720	-0.643	1.044
Consumer Purchase	3.508	0.850	-0.350	-0.486
behavior				
Situational factors	3.123	0.928	-0.217	-0.480

Source: Field survey, Osei (2019)

Table 3 shows that the items, including: eco-label, eco-brand, environmental advertising, consumer purchase behaviour and situational factors, were all normally distributed. This is due to the fact that all of the items have skewness below 1.0, while kurtosis were all also less than 2. Also, the standard deviations of these items were below 1.0, indicating that their ratings or responses of the respondents were clustered or in harmony.

### **Assessment of Measurement Model**

Prior research has stated the importance of testing the validity and reliability of the measurement, since the structural model could be pointless except it recognises that the dimension model supports the argument (Bagozzi &

Yi, 2012; Jöreskog & Sörbom, 1996). With the use of three key parameters, the measurement models were evaluated: (1) Reliability test; (2) Convergent validity; and (3) Discriminant validity, following the recommendation of Hair et al. (2013). The evaluation of the measurement model is represented in Table 4 and discussed appropriately as follows.

### Reliability Test

The reliability of each item was assessed by calculating composite reliability (CR). Table 4 showed that the reliability measurements in this analysis were above the acceptable satisfactory levels for all adjusted measurement models (Average Variance Extracted > .50, composite reliability > .70), as suggested by scholars (Hair et al., 2013; Nunnally, 1978). Testing "Indicator Reliability" was the first one that was completed. All of the metrics can be shown to have individual reliability levels that are far greater than the minimum appropriate level of 0.4 and similar to the preferred level of 0.7. Again, for each build, the internal consistency (composite reliability) was greater than the minimum required level of 0.70.

According to Fraenkel and Wallen (2001), reliability refers to the degree of accuracy with which the attribute it is intended to calculate is calculated by an instrument. Reliability means the accuracy of the instrument's responses used in the data collection for a given sample. In order to complete the analysis of the structural model, it is necessary to determine the reliability of the latent variables, just like all other marketing research (Anokye, 2015). From Table 4, the

reliability can be tested by looking at the "Cronbach's Alpha" that provides a conservative calculation in the modeling of structural equations (Hair et al, 2012).

**Table 4: Construct Reliability and Validity** 

	Cronbach's	rho A	CR	AVE
	Alpha			
Green Marketing	0.767	0.822	0.863	0.679
Consumer Purchase	0.920	0.920	0.943	0.807
Consumer Furchase	0.920	0.920	0.943	0.807
Behaviour				
Gir vi 1E r	0.047	1.000		
Situational Factors	0.847	1.000		
	0 1 (0010)			

Source: Field survey, Osei (2019)

The reliability of the various items in the model is shown in table 4. It shows that for all the items, all the variables have high Cronbach alpha values exceeding 0.7. It was also higher than 0.5, which is the rule of thumb. This means that the responses from the research instrument used for the data collection were consistent. It should be noted that "Cronbach's Alpha" is traditionally used in social science research to calculate internal consistency reliability, but it appears to provide a conservative calculation in PLS-SEM (Anokye, 2015). From Table 4, these values are shown to be greater than 0.8, so the latent variables have shown a high degree of internal consistency reliability.

Again, Anokye (2015) suggested that, by evaluating each latent variable's AVE, Convergent validity is established. In order to validate convergent validity,

the threshold for convergent validity specifies that AVE values be greater than 0.5. From Table 4, it is observed that, all AVE values were found to be higher than the appropriate threshold of 0.5, thus confirming convergent validity.

### Discriminant Validity

The study also explores the extent to which individual constructs are divergent from other constructs (Hair et al., 2010; Henseler et al., 2016). To confirm discriminant validity, it is required that for the diagonal values (square root of AVE) of each latent variable to have higher values than its highest construct correlation (Fornell & Larcker, 1981). Table 5 explains further on discriminant validity by analysing the cross loading and Heterotrait-monotrait ratio (HTMT).

**Table 5: Discriminant Validity** 

	Consumer Purc	<mark>cha</mark> se Green	Situational	HTMT
	Behaviour	Marketing	Factors	
Consumer Purchase	0.898			
Behaviour				
Green Marketing	0.479	0.824		0.545
Situational Factors	0.679	0.46		

Source: Field survey, Osei (2019)

Based on the Fornell-Lacker criteria and cross loadings, discriminant validity was evaluated. In Table 5, the AVE on the diagonals showed the square

root of the AVE and the similarities between the constructs. The correlations between the constructs, an indicator of discriminant validity, are less than the square root of the AVE. The result again confirms the absence of multicollinearity (Byrne, 2013). Traditional approaches, such as evaluating cross-loadings and applying the Fornell-Larcker criterion (Fornell & Larcker, 1981), have limitations with regard to assessing discriminant validity in a PLS-SEM context. In particular, they also do not imply issues of discriminatory legitimacy, although these may exist (Henseler et al., 2015).

In comparison, with regard to uncovering discriminant validity concerns, the HTMT approach is more accurate. Therefore, the HTMT approach is to assess the validity of discriminants. The HTMT value should not be better than 0.85 to validate discriminant validit (Kline, 2011). On the other hand, Gold et al (2001) assume that, in order to validate discriminant validity, the HTMT value should not be more than 0.90. As shown in table 5, the result (0.545) shows that the value passed the HTMT 0.90 threshold (Gold et al., 2001). Consequently, the findings suggest that discriminant validity is reached using both the Fornell and Larcker (1981) criterion and the heterotrait-monotrait ratio of correlations (HTMT). Meanwhile, the model displays modest values of predictive precision (R2) of 0.0. 495, against the buying actions of consumers in order to buy green cosmetics with a moderate predictive significance suggested by the mediator (R2 = 0.225).

## Multicollinearity Test

Multicollinearity is an indicator that, the independent variables have a linear relationship (Gujarati, 2003). The variance inflation factor (VIF) technique was used to test the existence or non-existence of the multicolliniarity problem. The variance inflation factor (VIF), is a reciprocal measure of the complement between the predictors of the inter-correlation: VIF= 1/ (1- r2), where r is the multiple correlations between the predictor variable and other predictors. A decision rule for the model's multi-collinearity test states that a variable with a VIF of less than 1.0 indicates the possible existence of a multi-collinearity problem. Tolerance is used by many researchers to check the degree of colinearity, defined as 1/VIF (Gujarati, 2003). A model multicollinearity test decision rule defines a variable whose tolerance is more than 1.0. The VIF and tolerance of the variables are shown in Table 6.

Table 6: Test of Multicollinearity

Variable	Tolerance	VIF
CO	0.075	2.626
C3	0.275	3.636
C4	0.272	3.678
C5	0.257	3.894
C6	0.466	2.146
Eco_brand	0.602	1.661
Eco_label	0.696	1.436
Envt_advertising	0.57	1.675
S2	0.734	1.362
<b>S</b> 3	0.734	1.362

Source: Field survey, Osei (2019)

The results in table 6 shown that, the VIF values were greater than the tolerance value for all variables. That is, VIF values were greater than 1.0 for all variables, while the tolerance value was less than 1.0. This means that this model is free of multicolliniarity and there is no multicolliniarity problem in this model between the variables.

### KMO and Barlett's Test

The numerous tests run to ensure that the data is appropriate for factor analysis or structural equation model are described in this section. These measures include KMO and Barlett's test to assess the model's significance level and the adequacy of the sample size and how the variables are associated. These tests have been performed and the results are shown in Table 7.

Table 7: KMO and Barlett's Test

Test	5/1/6	
Kaiser-Meyer-Okin Measure of	7/2	0.797
Sampling Adequacy		
	Approx. Chi-Square	8413.792
	Df	528
	Sig.	0.000

Source: Field survey, Osei (2019)

The KMO is 0.797, which is in excess of 0.5, meaning the sample size is adequate for running factor analysis. On Bartlett's Test of Spherity,  $(X^2 (528) =$ 

8413.792, p<0.001) shows that variables or factors are highly correlated and this was also statistically significant. Therefore, all the necessary assumptions were met for running factor analysis before running the structural equation model (Table 7). Also, using the single factor test by Harman, there was no threat of common method bias in the responses. The result shows that there was 30.86 percent of variance caused by a single factor that amounts to less than 50 percent. Therefore, in the responses, common method bias was not present.

#### **Measurement of Model Fit**

This section presents the analysis and verification of the model's fitness. As important in checking the model's fitness, the use of at least three fit indices has been suggested. Absolute, incremental and parsimonious interventions are common indices used in structural equation modeling (Hair et al., 2010; Holmes-Smith, Coote & Cunningham, 2006). In Table 8, the result of the model fit test is presented.

**Table 8: Goodness of Fit Test** 

Saturated Model	Estimated Model
0.077BIS	0.077
0.269	0.269
0.147	0.147
304.767	304.767
0.844	0.844
	0.077BIS 0.269 0.147 304.767

Source: Field survey, Osei (2019)

The most controversial topic in SEM literature is determining model fit (Kline, 2005; Ozdamar, 2016). Although there are several attempts to obtain a rule for SEM evaluation, there is no agreement on fit indices that demonstrate an optimal fit (Davcik, 2014). Therefore, researchers need to take crucial steps to test the model fit after the SEM review has been completed. Initially, if it suits with a previous one, the data is analysed. Individual parameters are evaluated following the overall model fit. The first incremental test noted was the Normed Fit Index (NFI). The obtained value was (.843), closer to the threshold (NFI > 0.90), suggesting a near perfect match (Hair et al., 2010). That is, the closer the NFI is to 1, the better the model will fit. The value of Chi-square ( $x^2$  / df) was (304.767), suggesting a statistical significance of P 0.05. In addition, the values for the indexes standardize root mean square (SRMR=0.077) were within the appropriate range of 0.80 or less for further study and validation of the structural model, further corroborating the model's fitness (Byrne, 2010; Diamantopoulos & Siguaw, 2000).

### The Structural Model

The next step was to test the structural model after an evaluation of the fit and build measurement model and discriminant validity. This includes the testing of the theoretical model hypothesized and the interaction between its latent constructs. A part of SEM, that describes the interrelationships between constructs or latent variables is the structural model (Weston & Gore, 2006). The structural model focuses more on the existence and extent of the link between constructs

(Hair et al., 2006). The structural model, in essence, is basically the corresponding structural theory, or the hypothesized relationship specification based on the theory described by a set of structural equations that can be described with a visual diagram (Hair et al., 2006). Therefore, it is part of the SEM method, that is used to estimate the relationships between the constructs. The hypothesised theoretical model is illustrated in Figure 3.

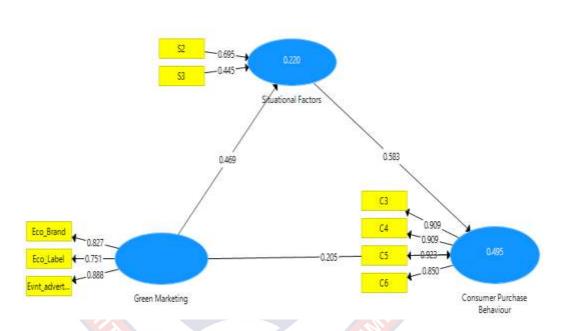


Figure 3: Structural Equation Model

Source: Field survey, Osei (2019)

The Structural Equation Model of how green marketing tools such as ecolabel, eco-brand and environmental advertising influence consumer buying behaviour by mediating situational factors such as perceived price, perceived quality, availability of goods and peer influence is shown in Figure 3.

#### **Structural Model Assessment**

The evaluation of the structural model in the PLS includes deciding whether data are actually supported by the defined theoretical relationships in the model (Cobb et al., 2013). Based on this, the evaluation of the structural model in this analysis was to decide if evidence validated the relationships hypothesized based on theory. However, using the multiple fit indices, the fitness of the structural model was checked. A complete measurement model was calculated by the analysis, whereby all entries were made simultaneously to predict the measurement model.

## **Hypothesis Testing**

There was the need to test the hypothesized relationships in the model after the structural model. The initial set of analysis assessed the relationship between green marketing and consumer purchase behaviour as well as the mediated role of situational factors. This relationship is illustrated in Table 9.

**Table 9: Structural Model Assessment Results** 

Relationship	Mean	t-	p-value	Hypotheses	Remarks
		value			
Green Marketing>	0.332	7.641	0.000	H1	Supported
Consumer_Buying					
Behaviour					
Green Marketing>	0.441	10.805	0.000	H2	Supported
Situational_Factors					
Situational_Factors>	0.526	12.669	0.000	Н3	Supported
Consumer_Purchase_B					

Source: Field survey, Osei (2019)

Hypothesis one, which posits that green marketing positively affects consumer purchase behaviour of cosmetic products, was supported. Therefore, the research indicates that green marketing has a major positive impact on the actions of consumers purchasing cosmetics. The outcome depicts a positive significant association between green marketing and the behaviour of consumers buying cosmetics (t=7.641, p<0.05), so green marketing has a significant positive effect on the behaviour of consumers buying cosmetics (Table 9). The work done by Ottoman and Mallen (2014) is in line with this claim. This finding shows that, green marketing tools are an important part of ensuring the purchase of cosmetics by consumers.

Hypothesis 2, which claimed that green marketing was positive for situational variables, was also endorsed. The result indicates a positive important relationship between green marketing and cosmetics purchase situational factors (t=10.805, p<0.05), so the study implies that green marketing has a substantial positive influence on situational factors (Table 9). Meanwhile, (Renfro, 2010) pointed out that, green marketed products impact on consumers' positive outlook to purchase green products by situational factors.

Hypothesis 3, which suggests that there is a positive relationship between the situational variables of consumer purchasing behaviour, has been substantially supported. Therefore, the research indicates that situational variables have a substantial positive influence on the actions of consumers purchasing cosmetics. The result indicates a positive significant association between situational factors and the behaviour of consumers buying cosmetics (t= 12.669, p<0.05), so

situational factors have a significant positive influence on the purchasing behaviour of consumers buying cosmetics (Table 9). Therefore, the study failed to reject the claim that environmental advertising positively affect consumer purchase behaviour. This conforms to the work done by Ferraz, Buhamra, Laroche, and Veloso (2017) who concluded that, situational influences have had a positive effect on the buying decisions of consumers.

### Effect of Green Marketing Tools on Consumer Buying Behaviour

To further establish the individual role that each green marketing tool has on consumer purchase behaviour, this study assessed the effect of eco-label, eco-label and environmental advertising through hypothesis building. Therefore, supporting hypotheses (H1a - H3c) were built. The effect analysis of green marketing tools on consumer purchasing behaviour is found in Table 10.

Table 10: Effect of Green Marketing Tools on Consumer Buying Behaviour

Relationship	В	t-test	p-value	Hypothesis	Remarks
Eco-Brand- > CPB	0.032	0.604	0.546	H1a	Not Supported
Eco-Label-> CPB	0.133	2.683	0.008	H1b	Supported
Env-Advert-> CPB	0.582	8.828	0.000	H1c	Supported

Source: Field survey, Osei (2019)

Specific dimensions of green marketing tools (eco-label, eco-label and environmental advertising) on cosmetics were analysed to determine the green

that there has been no evidence for a positive relationship between eco-brands and customer purchasing behaviour (t=0.604, p>0.05). The research therefore shows that eco-brands may not have a substantial positive impact on the behaviour of consumers purchasing cosmetics. This is in line with the Mahama-Braimah (2015) report on the general Ghanaian consumer market revealed that, while Ghanaian consumers are aware of eco-brands, they do not take them into account when making purchases.

Eco-label on the other hand was significant (t=2.683, p<0.05), thus Hypothesis 1b supported the proposed hypothesis indicating that, eco-label is seen as very important green marketing tool in consumer purchase of green cosmetics. This is in line with Delafrooz et al (2014), who concluded that cosmetic eco-labels provide consumers with valuable knowledge of the product's green attributes so that buyers can determine whether or not to purchase the product. This implies that consumer buying behaviour can be developed by highlighting the relative advantage of greener products (Peattie, 2001).

Hypothesis H1c, which suggested that environmental advertising and consumer buying behaviour have a positive relationship, was supported (t=8.828, p<0.05). This result is supported by Ankit and Mayur (2013), who posits that, environmental advertising as promotional message is a significant promotional tool that may appeal to the real demand of environmentally concerned consumers. This suggests that by emphasizing the relative benefit of greener products compared to other products that cause environmental concerns, consumer

behaviour can be developed (Peattie, 2001). The findings support the assertion of the theory of planned behavior (TPB) to the extent that, when consumers expect to benefit from the outcome of a particular decision, intentions are formed and are likely to be influenced by green marketing variables such as eco-labels and environmental advertising that seeks to protect the environment.

### **Effect of Mediator**

Prior to analyzing the relationship and possible gaps between green marketing to purchasing green cosmetics among undergraduate students at University of Cape Coast, the mediating role of situational factors (SF) were assessed. The indirect effect of situational influences on consumer buying behaviour was also examined in this thesis. Table 11 presents the result of the indirect influence of situational influences on consumer buying behaviour.

Table 11: The Indirect Effect of Situational Factors

Relationship	t-test	p- value	Hypothesis	Remarks
Green Marketing ->	8.024	0.000	H4	Supported
Situational Factors->				
Consumer Purchase				
Behaviour				

Source: Field survey, Osei (2019)

Table 11 shows that, the indirect (mediated) effect of Situational\_Factors on Consumer\_Purchase\_Behaviour is significant (t= 8.024, p<0.000). That is, due

to the indirect (mediated) effect of Situational\_Factors on Green marketing and Consumer\_Purchase, when Situational\_Factors goes up by 1, Consumer\_Purchase goes up by 0 (Kline, 1998). This means that, situational factors serve as a mediating variable in the current study. Therefore, the study failed to reject Hypothesis 4, which claims that, situational factors mediate the relationship between green marketing and consumer buying behaviour. The findings are in line with (Ferraz, Buhamra, Laroche, and Veloso's, 2017). The finding implies that, consumers pay more attention to situational factors and these factors have significant effect on their purchases.

### **Effect of Situational Factors on Consumer Purchase Behaviour**

The individual role of situational factors on consumer purchase behaviour was also considered in understanding the key situational variable(s) that hiders the consumer purchase of green cosmetics. The assumption is that the individual situational factors may have a significantly different effect on the purchase behaviour of consumers. Therefore, supporting hypotheses (H4a – H4d) were developed to further explain the mediating effect in the study. The effect of the analysis is found in Table 12.

Table 12: Effect of Situational Factors on Consumer Purchase Behaviour

Relationship	В	t-test	p- value	Hypothesis	Remarks
					_
GM >Price- > CPB	0.354	10.822	0.000	H4a	Supported
GM>Percieved	0.186	5.674	0.000	H4b	Supported
Quality-> CPB					
GM>Product	0.015	0.523	0.601	H14c	Not
Availability-> CPB					Supported
GM>Peer Influence	0.003	0.100	0.921	H4d	Not
- > CPB					Supported

Source: Field survey, Osei (2019)

In addition to the test of significance of green marketing on consumer purchase behaviour as illustrated in the conceptual framework, specific situational factors concerning cosmetics were analysed. This was to determine the situational factor(s) that has more impact on consumer purchasing behaviour.

The results of the investigation showed that the indirect relationship between price and buying behaviour of consumers was significant (t=10.822, p<0.05). This means that, in relation to green cosmetics, Hypothesis 4a was endorsed indicating that, buyers are willing to pay high prices as long as the product has green features. Even though earlier studies have concluded higher price to be an impediment to buying green product, the current study has a contrary view and concludes that, consumers will pay more for cosmetics that have green features. This is in line with the research on the Turkish market conducted by Yilderm's (2014), which found that consumers are only willing to pay an extra price for green items, such as cosmetics, that they will regularly use. This means that consumers are demanding green goods and have greater

purchasing power, particularly the younger generation, and are willing to pay the premium price (Anvar & Venter, 2014).

Again, the outcome of the investigation showed that, the indirect relationship between quality and consumer purchase behaviour was significant (t=5.674, p<0.05). This means that, Hypothesis 4b was supported in relation to green cosmetics and consumers are prepared buy green product with high quality. The current study has revealed that consumers are affected in terms of choosing cosmetics with green features that are low in quality. Chaudhuri (2002) claimed that the higher perceived quality consumers have, the higher their purchasing behaviour, the perceived quality is an influential factor in terms of green purchasing. This ensures that consumers purchase green cosmetics for non-green bands that are of high quality.

Also, Hypothesis 4c which states that, green marketed products are available for the consumer to buy was not supported (t=0.523, p>0.05). This means that consumers seek to buy green products but those eco-friendly ones are not available for them consumer to buy. This result is in line with the Suki (2013) report, which notes that few clients interested in green marketing would go out of their way to buy green goods. This means that the customer turns to non-green brands when the green product is not available.

Finally, the outcome of the investigation showed that there was no significant indirect relationship between peer influence and consumer purchasing behaviour (t=0.100, p>0.05). Therefore, Hypothesis 4d was not supported. However, even though other studies by Kotler (2011) and Young, Hwang,

McDonald and Oates (2010) showed that, peer influence of family and friends in purchase decisions though very important in consumer purchase of green marketed products, do not significantly impact consumer purchase behaviour in the current study.

## **Summary of Hypothesis**

In all, four main hypotheses and seven supporting hypotheses were put to test by the study. Out of the sum of eleven hypotheses tested, the findings show that eight were supported and three were rejected. The discoveries on the hypotheses show significant role of the situational factors to consumer purchase behaviour of green cosmetics among students at the University of Cape Coast. Table 13 presents a summary of all the hypotheses in the study.

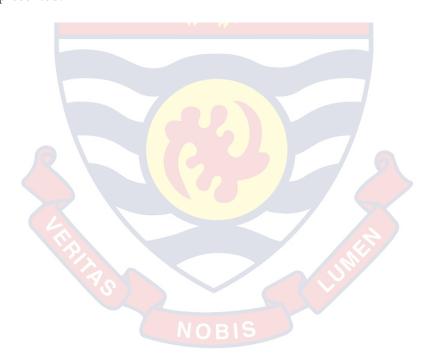


**Table 13: Summary Result of Hypotheses** 

Hypothe	Sis	Relationship	Supported
Code	<b>Hypotheses Tested</b>	Result	/Rejected
H1	Green Marketing>Consumer Buying	+	Supported
	Behaviour(CPB)		
H1a	Eco-brand- > CPB	-	Rejected
H1b	Eco-label-> CPB	+	Supported
H1c	Env't Advert -> CPB	+	Supported
H2	Green Marketing	+	Supported
п2	>Situational_Factors		
НЗ	Situational_Factors> CPB	+	Supported
	Green Marketing- >Situational Factors-	+	Supported
H4	> CPB		
H4a	Price- > CPB	+	Supported
H4b	Per Quality-> CPB	+	Supported
Н4с	Product Avaliability -> CPB	-	Rejected
H4d	Peer Influence- > CPB  NOBIS	-	Rejected

# **Chapter Summary**

This chapter presented the results and discussions of the study. The chapter reported the students' demographic characteristics. This chapter also concentrated on exploring the relationship between green marketing and the actions of consumers purchasing green cosmetics. Again, the chapter examined the effect of the mediator (situational factors) such as the perceived quality of the price, the availability of the product and the impact of peer influence on consumer buying behaviour. Finally, summary of the hypotheses of the study were presented.



#### **CHAPTER FIVE**

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

### Introduction

The concept of green marketing has become a major concern for consumers in various industries and this has brought changes in consumers purchase behaviour. Consumers are helping to help preserve the environment by displaying green buying behaviour. The current study adds up to green marketing literature in the cosmetic industry by including the mediating role of situational factors on green marketing and consumer purchase behaviour. Situational factors (price, perceived quality, availability and peer influence) seek to explain possible gaps between environmental marketing and consumer purchase behaviour. Specifically, the study sought to achieve the following objectives:

- 1. To assess the effect of green marketing on consumer purchasing behaviour.
- 2. To examine the effect of green marketing on situational factors.
- 3. To examine the effect of situational factors on consumer purchasing behaviour.
- 4. To assess the mediating effect of situational factors on green marketing and consumer purchasing behaviour.

To achieve the stated objectives, the following hypotheses were tested.

H1: Green marketing positively influences consumer purchase behaviour.

H1 a: Eco-brand positively influences consumer purchase behaviour.

H1 b: Eco-labels affect consumer purchasing behaviour positively.

H1c: Environmental advertising positively impacts consumer purchase behaviour.

H2: Green marketing positively influences situational factors.

H3: Situational factors have a positive impact on consumer buying behaviour.

H4: Situational factors mediate the relationship between green marketing and

consumer purchase behaviour.

H4a: Price positively influences consumer purchase behaviour.

H4b: Perceived quality positively influence consumer purchase behaviour.

H4c: Product availability positively influences consumer purchase behaviour.

H4d: Peer influence positively influences consumer purchase behaviour.

The study used a quantitative and explanatory design of which respondents from the University of Cape Coast were targeted. Three hundred and seventy-seven (377) respondents were chosen with the aid of stratified sampling technique for selecting the students. The main instrument for data collection was the Questionnaire. In addition, using statistical software known as Statistical Product for Service Solution (SPSS version 21.0) and PLS SEM software, the data was analysed. Specifically, descriptive statistics such as frequencies, percentages and means were used, while the various theories were tested using inferential statistics such as confirmatory factor analysis, reliability as well as structural equation modelling (SEM).

### **Summary of Results**

The first objective sought to assess the overall impact of the green marketing on consumer purchase behaviour of cosmetic products. This was intended to explain the importance of green marketing to the buying behaviour of cosmetics by consumers. The hypothesis was supported (t=7.641, p<0.05), and the results revealed a positive significant relationship (0.205) between green marketing and consumer purchase behaviour to buy cosmetics. This indicates that, green marketing plays a major contribution to the purchase of cosmetics.

Again, supporting hypotheses (H1a – H1c) were developed for objective one, to study the relative significance of green marketing variables on consumer purchase behaviour. Hypothesis (H1a), which states that there is a positive relationship between the eco-brands and consumer purchase behaviour was not supported (t=0.604, p>0.05). Hence, the study proposes that eco-brand have weak positive relationship (0.032) on consumer purchase behaviour to buy cosmetics. Therefore, eco-brand does not affect consumer purchase behaviour towards green cosmetics. Also, Hypothesis (H1b) was supported (t=2.683, p<0.05). The results showed a positive significant relationship (0.133) between eco-label and consumer purchase behaviour to buy cosmetics. This indicates that, eco-label is used in cosmetic products as a very powerful green marketing tool to influence consumer decisions. In addition, the study proposes that, environmental advertising have a significant positive relationship (0.582) on consumer purchase behaviour to buy cosmetics. Therefore, Hypothesis (H1c), was supported (t=8.828, p<0.05), implying that, environmental advertising is a significant

promotional tool that appeals to the real demand of environmentally concerned consumers.

The second objective was to examine the effect of green marketing on situational factors. Hypothesis 2 which was developed to test such effect was also supported. The result reveals a positive significant relationship between green marketing and Situational factors to buy cosmetics (t=10.805, p<0.05). Hence, green marketing positively (0.469) affect situational factors.

Also, the third objective was to examine the effect of situational factors on consumer purchasing behaviour. Hypothesis 3 was accepted (t= 12.669, p<0.05). The result reveals a significant positive (0.583) relationship between situational factors and consumer purchase behaviour to buy cosmetics. Hence, situational factors have a significant positive effect on the consumer purchase behaviour to buy cosmetics.

The fourth objective of the study was to examine the mediator effect of situational factors on green marketing and consumer purchase behaviour. Furthermore, hypothesis four, which claims that there is a positive effect of situational factors on consumer purchase behaviour, was significantly supported (t=8.828, p<0.05). Thus, as consumer situational factors go up by 1, consumer purchase behaviour increase by 0.583. Moreover, there was a positive relationship between situational factors and consumer purchase behaviour (0.220). Therefore, the study failed to reject that situational factors positively influences consumer buying behaviour.

Again, from the reviewed literature, the relationship between green marketing and consumer buying behaviour is influenced by a variety of situational factors such as price, efficiency, availability and peer influence. The study, therefore, conducted a test to determine which of the situational factors has significant effect on green marketing and consumer purchase behaviour and which factor was not. Four hypotheses were therefore developed. Hypothesis (4a) was supported (t=10.822, p<0.05) in relation to green cosmetics and this suggest that, consumers are prepared to pay high price so long as the product has green features. The result of the investigation showed that the indirect relationship between price and buying behaviour of consumers was significant and positive (0.354). Also, hypothesis (4b) was supported in relation to quality of green cosmetics on consumer purchase behaviour. The outcome of the investigation showed that, the indirect relationship between quality and consumer purchase behaviour was significant (0.186). Hence, consumers are prepared to buy green product with high quality.

Moreover, on hypothesis (4c), which focused on the mediating role of product availability on the purchase of green products was not supported (t=0.523, p>0.05). The outcome of the investigation showed that, the indirect of product availability on consumer purchase behaviour was showed a positive relationship, but it was not significant (0.015). This means that consumers seek to buy green products but those eco-friendly ones are not available for them consumer to buy. Finally, hypothesis (4d) was not supported (t=0.100, p>0.05). Peer influence affect consumer purchase behaviour to purchase green cosmetics

positively, however, this was not significantly (0.003). Peer influence of family and friends in purchase decisions though very important in consumer purchase of green marketed products, do not significantly impact consumer purchase behaviour for the ongoing analysis.

#### **Conclusions**

The explanatory analysis was well carried out using acceptable methods and the study's goals were focused on observations and inferences. An explanatory design was adopted in the study to evaluate the mediating function of situational factors in green marketing and consumer buying conduct. A quantitative analysis using survey questionnaires as the key source of primary data collection was used to comply with the research methodology. As the research aimed to test a series of formulated hypotheses, the use of a quantitative method is justified. The use of the quantitative approach posed a challenge to such a study which has not received much empirical attention by researchers. A qualitative study could have allowed for an in-depth explanation of the green marketing and consumer purchase decisions among undergraduate students at university of Cape Coast. However, this approach could lead to some challenges as the study sought to draw generalisations using existing models.

The controversies over green marketing in developing countries, allowed the current study to explore green marketing instruments such as eco-label, ecobrand and environmental advertisement, as well as situational factors to be included in our debate. The results have shown that the level of consumer decision-making to select green cosmetic products is strong, suggesting that consumers are becoming aware of the presence of a number of green cosmetic products on the market.

The current study has also revealed that, consumers of green cosmetics are influenced by eco-labels on the products and the environmental advertising made by the marketers. Meanwhile, they do not give much attention to the eco-brands when buying cosmetics. This is an unexpected finding to previous studies where consumers have attached stronger buying behaviour to eco-brands. This may be due to lack of trust in eco brands. This anomaly may also be due to lack of availability of preferred eco brand causing consumers to resort to buying the available brands. This means that, consumers buy any brand with eco-labels on the products and which are advertised as green. The study therefore concludes that, among the green marketing tools, eco-labels and environmental advertising are significant variables that influence purchasing behaviour of consumer to buy green cosmetics.

The study also sorts to understand why consumers with positive green marketing knowledge may not translate it into actual purchase. Situational factors were used as a mediator to explain the possible reason why green marketing knowledge does not lead to purchase behaviour. It was brought to light that, situational factors such as price and quality has a strong effect on the consumer in choosing between green products and non-green brands. Accordingly, consumers are willing to pay more for high quality green goods. It was also revealed that peer influence was not significant. This means that the power of family and

friends does not impact the decision of the buyer to purchase green goods, but is focused on the experience of consumers in green marketing. Product availability was another situational factor that was not significant. It was also brought to light that green cosmetics are not readily available for consumers to purchase in retail outlets and supermarkets.

In sum, green marketing has a positive impact on situational factors and situational factors also have an impact on consumer buying behaviour, so there was a mediating effect of situational factors between green marketing on consumer buying behaviour. Hence, situational factors such as price and perceived quality explain why green marketing might not lead to green product purchase behaviour. This is one of the most significant contributions of this study to knowledge.

### Recommendations

The following suggestions are put forward for consideration based on the results and conclusions drawn;

Cosmetics businesses should rethink about the environment since
consumers are concerned about and gaining interest in green products.
 Cosmetics industry players should educate and sensitize students and the
general public on the essence of green products and the environment. This
will go a long way for green marketing to have greater effect on consumer
purchase behaviour.

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- Green product producers and marketers should incorporate marketing channels and specify them as green channels. Environmental advertising on green goods should be legitimate and conducted in such a way that the idea of green does not disguise the consumers. Advertising and marketing campaigns should inspire consumers to use products that are environmentally friendly helps to save the environment in the long-run.
- Cosmetics industry players should consider branding and labeling of green products since it affects consumers buying behaviour. There is also the need to spread information about eco-friendly product labels and brands. Eco-labels and eco-brands need to be made aware to consumers since they find it difficult to distinguish eco-labels and eco-brands among other non-green goods.
- There is also the need for regulators such as Food and Drugs Board (FDA) and those in the greening business to step in to endorse and confirm green brand and specific eco-labels that green marketers will use so that consumers can identify the green products from the non-greens. This will go a long way to enhance trust in green goods and thus purchases.
- It can be argued that prices of green goods should be held at an economic standard, so that consumers can also be afforded by even an average income earner. Again, by showing consumers the additional benefits of

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eco-friendly goods, such as recyclables, the chance to reuse cosmetic packaging, consistency, ecologically sustainable, non-hazardous, more effective, and so on, consumers can be persuaded to pay a premium price.

• Finally, green marketing is still in its infancy and in order to completely exploit its potential, a lot of study on green marketing needs to be done. Consumers and industrial buyers are now able to compel companies to incorporate the environment into their organizational culture and thereby ensure that all organizations mitigate the adverse effect of their operations on the environment. Some forms of fines can be levied by the Environmental Protection Agency (EPA) on companies whose actions pollute or damage the environment.

#### **Suggestions for Further Research**

The study has established situational factors as mediators of green marketing and consumer purchasing behaviour. Therefore, to add to the current knowledge and providing basis for further study on the subject, other situational factors should continue to be studied. The moderating effect of situational variables on consumer purchasing behaviour can be explored by other researchers. Others researchers may also perform similar study in Ghana that focuses on households or general consumers of green products.

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**APPENDICES** 

APPENDIX A

# KREJCIE AND MORGAN (1970) - TABLE FOR DETERMINING SAMPLE SIZE FOR A GIVEN POPULATION

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	246
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	351
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	181	1200	291	6000	361
45	40	180	118	400	196	1300	297	7000	364
50	44	190	123	420	201	1400	302	8000	367
55	48	200	127	440	205	1500	306	9000	368
60	52	210	132	460	210	1600	310	10000	373
65	56	220	136	480	214	1700	313	15000	375
70	59	230	140	500	217	1800	317	20000	377
75	63	240	144	550	225	1900	320	30000	379
80	66	250	148	600	234	2000	322	40000	380
85	70	260	152	650	242	2200	327	50000	381
90	73	270	155	700	248	2400	331	75000	382
95	76	270	159	750	256	2600	335	100000	384

Note: "N" is population size, and "S" is sample size.

#### **APPENDIX B**

#### UNIVERSITY OF CAPE COAST

## COLLEGE OF HUMANITIES AND LEGAL STUDIES

#### **SCHOOL OF BUSINESS**

#### DEPARTMENT OF MARKETING AND SUPPY CHAIN MANGEMENT

**Topic:** Green Marketing and Consumer Purchasing Behaviour: The Mediating Role of Situational Factors.

This questionnaire is about green products you will find in your cosmetics shops and supermarkets (cosmetics that cause minimal to no damage to the environment). You are assured of strict confidentiality as your responses to items on this questionnaire will be used only for academic objectives.

#### **SECTION A: BACKGROUND OF RESPONDENTS**

Please tick / indicate, where applicable

1.	Sex: a. Male [ ] b. Female [ ]
2.	Age: a. below 20 [ ] b. 20-29 [ ] c. 30-39 [ ] d. 40-49 [ ]
	e. 50-59 [ ] f. 60 and above [ ]
3.	College: a. Education [ ] b. Humanities [ ] c. Health and Allied [ ]
	d. Agriculture[ ]
4.	Programme
5.	Level: a. 100 [ ] b. 200 [ ] c. 300 [ ] d. 400 [ ]

## **SECTION B: GREEN MARKETING**

6. Please rate your views using the scale 1-5 by properly ticking ( $\sqrt{}$ )

Scale: SD= Strongly Disagree D=Disagree U=Undecided A=Agree SA=Strongly Agree

ECO-BRAND	SD	D	U	A	SA
I feel confident when buying brands that are less					
environmentally negative					
The packaging of brands should be reused or					
recycled after use					
I recognize that cosmetics with less packages are an					
important feature	7				
I assume that safe packaging for green consumers is					
an important factor	6				
I trust Ghana's well-known green cosmetics brand					
Let	19.				
ECO-LABEL					
Eco-labels on cosmetics help with easy identification					
of its green feature					
I assume it is easy to read and understand eco-labels					
on cosmetics					
Eco-labels on cosmetics makes them eye catching to					
buy					
Eco-labels on cosmetics indicates that it is					

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environmentally safe			
I have purchased cosmetics based on eco-labels			
ENVIRONMENTAL ADVERTISING			
Advertising is a credible source of knowledge on the			
consistency and efficacy of cosmetics			
I believe environmental advertising is informative	,		
In most green advertising, I depend on knowing the			
truth			
In general, advertisement offers a true image of the			
advertised product			
After watching or hearing most advertising for green			
goods, I believe I have been correctly informed			
Most environmental advertising provides consumers			
with essential information	9		
Green advertising influence people to buy green			
cosmetics			
I purchased cosmetics because the advertising			
indicated that it was environmentally safe			

## SECTION C: CONSUMER PURCHASING BEHAVIOUR

7. Please rate your views using the scale 1-5 by properly ticking ( $\sqrt{}$ )

Scale: SD= Strongly Disagree D=Disagree U=Undecided A=Agree SA=Strongly Agree

CONSUMER PURCHASING BEHAVIOUR			U	A	SA
I purchased green cosmetics because it is needed to save					
the earth than non-green products					
In deciding on the environmentally friendly one to buy, I					
make cosmetics comparisons					
In the past month, I have invested a lot of money on green					
goods					
I purchased around three green items purchased in the					
previous month					
In the previous month, the frequency of sales of green					
goods with recyclable or biodegradable packaging grew					
In the previous month, I had the opportunity to shop for					
green goods					
I feel confident when buying brands that are less					
environmentally negative					
After purchasing and using green products, I feel good on					
my skin					

## SECTION D: SITUATIONAL FACTORS

8. Please rate your views using the scale 1-5 by properly ticking ( $\sqrt{}$ )

Scale: SD= Strongly Disagree D=Disagree U=Undecided A=Agree

SA=Strongly Agree

SITUATIONAL FACTORS	SD	D	U	A	SA
Price – I like to buy green cosmetics even if priced					
higher to non-green brands					
Perceived quality – I tend to buy green goods with high					
quality purchases					
Availability – I usually find green cosmetics in					
supermarkets and cosmetics shops in my area					
Peer Influence – I listen to my family and friends when					
choosing skin products		)			

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