ADDIS ABABA UNIVERSITY COLLEGE OF BUSINESS AND ECONOMICS
SCHOOL OF COMMERCE

Green Marketing and Its Effect on Green Purchasing Behavior: The Case of Ethiopian Bottled Water Industry

A Thesis Report submitted to:

Graduate Studies of Addis Ababa University School of Commerce

Presented in partial fulfillment of the requirement for the Degree of Master of Arts in Marketing Management

By

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Advisor Belaynesh Tefera (PhD)

June, 2022 G.C
Addis Ababa, Ethiopia

DECLARATION

I hereby declare that this thesis report entitled **"Green Marketing and Its Effect on Green Purchasing Behavior: The Case of Ethiopian Bottled Water Industry"** is done by the undersigned in close supervision from my advisor and I declare that this study is my original work and has not been presented to any other university and that all the materials used for this study have been duly acknowledged.

Addishiwot Girma Dires	_____	_____
Name of the Student	Signature	Date

APPROVAL

This is to certify that this thesis report entitled **"Green Marketing and Its Effect on Green Purchasing Behavior: The Case of Ethiopian Bottled Water Industry"** is submitted in partial fulfillment of the requirements for the award of the Degree of Master of Arts in Marketing Management to the College of Business and Economics, School of Commerce, Addis Ababa University, through the Department of Marketing Management, done by **Addishiwot Girma Dires** is an authentic work carried out by her under my guidance.

Belaynesh Tefera (PhD)	_____	_____
Name of the Advisor	**Signature**	**Date**

Addis Ababa University

School of Graduate Studies

This is to certify that the thesis prepared by **Addishiwot Girma Dires**, entitled: **Green Marketing and Its Effect on Green Purchasing Behavior: The Case of Ethiopian Bottled Water Industry**, submitted in partial fulfillment of the requirements for the degree of Master of Arts in Marketing Management complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

Signed by the Examining Committee:

Advisor: _____ Signature:_____ Date: _____

Internal Examiner: _____ Signature:_____ Date: _____

External Examiner:_____ Signature:_____ Date: _____

Acknowledgement

First, my humble thanks goes to God, the almighty.

I would like to express my sincere gratitude to my advisor Belaynesh Tefera (PhD), who has mentored me along the way.

My very special thanks goes to my dear husband Orion Bezabih, who supported, encouraged and helped me throughout this journey and my beloved kids Wudassie and Girum Orion. How would I forget their sweetness and help? And my best friend Hanan Abdurhaman for her inspiration. Finally, my special thanks goes to Neway Habtemariam, and for water bottling company managers, especially Ato Shimelis Ajema from Top Wuha and Ato Ashenafi Merid from the association of the water bottling companies.

Abstract

After the human development endeavor created a significant harm on the environment, words like green marketing has become widely prevalent. Following this development, companies (especially those in the developed countries) are using it as a tool to reach their customers. On the other hand, the awareness level of consumers is growing day by day, and with it comes an implications on purchase decisions. According to a survey study conducted, "environmental pollutions and awareness of environmental protection increase the effect of consumer buying behavior" (Boztepe, 2012). This research undertaking was, therefore, conducted to examine the effect green marketing practice has on green purchasing behavior of consumers in the water bottling companies in Addis Ababa. The study also used environmental knowledge as a moderating variable. A questionnaire was designed and distributed to 400 sample respondents. A semi-structured interviews were also made with representatives of sample water bottling companies in Addis Ababa to examine green marketing practice of the industry.

***Keywords**: Green Marketing, Green Purchase Behavior, Environmental Knowledge, Green Marketing Mix.*

Table of Content

Acronyms

COP25: Conference of the Parties 25 (the 25th meeting of the United Nations Framework Convention on Climate Change (UNFCCC), a treaty agreed in 1994).

CRGE: Climate Resilient Green Economy

EBSMIA: Ethiopian Bottled Water and Soft Drinks manufacturers Industry Association

ETB: Ethiopian Birr

FDRE: Federal Democratic Republic of Ethiopia

GHG: Green House Gas

GM: Green Manufacturing

GEM: Greening Ethiopian Manufacturing

MDG: Millennium Development Goals

PLC: Private Limited Company

SDG: Sustainable Development Goals

S. Co.: Share Company

EU: European Union

UN: United Nation

USD: United States Dollar

CHAPTER ONE

1. INTRODUCTION

Chapter one of this research study presents the background of the study which help to provide a background context, statement of the problem, the research questions that are answered as well as the objectives the study has achieved. Furthermore, the significance the study brings, the scope (conceptual and geographical) in which the research is undertaken has also been covered in this chapter. Finally, the limitations of the study are presented and the chapter is concluded by defining technical terms under definition of terms part.

1.1. Background of the Study

The research study focuses on green marketing and its effect on the green purchase behavior of consumers. Currently, this subject is becoming one of the most talked about issue of many stakeholders including the UN as the resource utilization of mankind is compromising the very survival of planet earth like never before (FuiYeng, W. and Yazdanifard, R., 2015), *(*Bhalero and Deshmukh, 2015).

Ever since the dawn of civilization, humankind have been utilizing what nature has offered to survive and sustain life on earth *(*Bhalero and Deshmukh, 2015). Back then, supporting life was undertaken on a rudimentary basis and could not create a significant harm on the environment. Fast forward, and when human civilization started to kick off as we know it today starting from the industrial revolution, the search for resources had intensified. The industrial revolution, which began in the second half of the 18^{th} century, vividly marked a shift from the traditional resource consumption to the new age. The transition was a move towards machines from hand production methods and this generally led to an unprecedented demand rise in resource utilization. All these led to an immense utilization of resources by compromising the environment we live in.

Last century's accelerated demographic, technological and industrial development intensified the magnitude of human activity's effects in the environment (*Simao and Lisboa, 2017).*

When humanity saw our planet earth around the middle of the 20th century from space, it was "a small and fragile ball dominated not by human activity and edifice but by a pattern of clouds,

oceans, greenery, and soils. Humanity's inability to fit its activities into that pattern is changing planetary systems, fundamentally. Many such changes are accompanied by life-threatening hazards. This new reality, from which there is no escape, must be recognized - and managed" (Imperatives, S., 1987). The report of the world commission on environment and development, which was commissioned by the UN envisioned "*the possibility for a new era of economic growth, one that must be based on policies that sustain and expand the environmental resource base. And we believe such growth to be absolutely essential to relieve the great poverty that is deepening in much of the developing world*" (Imperatives, S., 1987). In light of these recommendations, the idea of sustainable development including Green Marketing and related sustainable based concepts came to the forefront. In fact, the idea of Green marketing first appeared in the 1980s following widespread environmental degradation (Yazdanifard & Mercy, 2011). This resulted from an increase in human environmental awareness following various environmental accidents and the interest of organizations and governments as far as environmental issues are concerned (Simao and Lisboa, 2017). Even if the idea and concept of sustainable development came to the forefront in the 1970s, it only got greater attention when the United Nation's report entitled "Our Common Future" was published by the world commission on environment and development (Simao and Lisboa, 2017).

> *All societies across the world have recently considered that environmental issues are continuously increased due to a large amount of environmental pollutions produced by industrial plants* (Abzari et al., 2013) cited (Chen, 2008).

On the one hand we observe the cost of human development endeavors causing a significant harm on planet earth, and on the other we also see a growing realization in national governments and institutions on the impossibility of separating economic development issues from environment issues. This growing realization of firms' sustainable developments pillars including Green Marketing concepts coupled with the growing awareness of consumers on the environment is one way to achieve sustainable development. Generally, "Marketing emerges as one of the strategic areas that firms can use to make current and future social wellbeing and respect for the environment compatible with their operation"(Simao and Lisboa, 2017). Specifically, the concept of "Green marketing focuses on developing and marketing of products and services that satisfy customer

needs while taking in to account environmental sustainability" (Polonsky, M.J., 1994). It is, therefore, timely to study green marketing and its effect on the green purchase behavior of consumers in Ethiopian context.

1.2. Statement of the Problem

The issue of sustainability is growing louder by the day given the growing evidence of environmental challenges our planet is facing more than ever. The increasing awareness of environmental knowledge by the public at large coupled with the demand of government requirements on environmental compliances is leading firms towards sustainability at individual and corporate levels (Simao and Lisboa, 2017).

Companies going green are observed all over the world although their number may not seem good enough to alter or reverse the environmental damage caused in the last century. We also observe some green marketing practices even in developing countries (Abzari et al., 2013).

Although the practice of green marketing is seems to be a rare thing in Ethiopia, quite recently we are now starting to observe a claim by some Ethiopian firms that provide a hint of undertaking some elements of green marketing practices, the bottled water industry being one such case. This recent practices merits a research undertaking to check whether the practice of green marketing actually exists in whatever form and shape and whether it has any effect on the purchase behavior of consumers.

Besides, the researcher didn't come across a research undertaking which were conducted in Ethiopia on green marketing practices and its effect on the green purchase behavior**.** Accordingly, to the best of the researcher's knowledge there exists a gap of research on the study of green marketing and its effect on the green purchase behavior of consumers. This research undertaking, therefore, studies green marketing and its effect on the green purchase behavior of consumers taking a case of the bottled water industry in Ethiopia and hence contributes great deal of knowledge in the area.

1.3. Research Question

This research undertaking tried to answer research questions related with green marketing and its effect on the green purchase behavior of consumers. It specifically tries to answer the below five research questions:

1.3.1. How green product contribute on green purchase behavior?

1.3.2. How green pricing contribute on green purchase behavior?

1.3.3. How green placement contribute on green purchase behavior?

1.3.4. How green promotion contribute on green purchase behavior?

1.3.5. Which green marketing practice highly contribute on the green purchase behavior?

1.3.6. How green marketing affects the green purchase behavior?

1.3.7. How environmental knowledge plays a mediating role in shaping the green purchase behavior of consumers?

1.3.8. How green marketing is being practiced in the water bottling companies in Addis Ababa?

1.4. Research Objectives

This research study was undertaken to achieve the following general and specific objectives:

1.4.1. General Objective

The general objective of this study is to investigate the effect of green marketing on green purchase behavior of consumers.

1.4.2. Specific Objectives

The research study has the following specific objectives:

1.4.2.1. To examine how green marketing affects the green purchase behavior.

1.4.2.2. To examine how green product contribute on green purchase behavior.

1.4.2.3. To examine how green pricing contribute on green purchase behavior.

1.4.2.4. To examine how green placement contribute on green purchase behavior.

1.4.2.5. To examine how green promotion contribute on green purchase behavior.

1.4.2.6. To identify which green marketing practice highly contribute on green purchase behavior.

1.4.2.7. To examine whether environmental knowledge plays an important moderating role in shaping the green purchase behavior of consumers.

1.4.2.8. To identify the practice of green marketing in the water bottling companies at Addis Ababa.

1.5. Significance of the Study

Sustainable development generally and green marketing particularly is a new phenomenon which gained popularity after the cost of development is widely acknowledged and prevalent on planet earth. Following an increasing trend on the environmental awareness by the populace, we start to observe companies especially in the developed world to incorporate green marketing philosophies either willingly as a marketing strategy or in compliance to government requirements. Accordingly, there are a number of scholarly researches conducted on green marketing and its effect on the green purchase behavior of consumers. The current generations especially the young ones "appear to be more active on environmental issues". "The statistical analysis confirmed that both personal effect and ecological knowledge of young people have a significant impact on green intention" and as long as the "environmental ideology is dominant, the green market will be prosperous with a greater number of consumers" (Kanchanapibul et al., 2014). The significance of the study is, therefore, indispensable for companies if they wish to know the green purchase behavior of consumers.

On the other hand, there seems to exist a shortage of scholarly articles on green marketing practices and the effect it has on the green purchase behavior of consumers in Ethiopia. The research study is, therefore, a significant contribution on the area. Furthermore, the study contributes positively to the bottled water industry particularly and to other industries generally. The researchable gap that are indicated by this research study are also another important contributions to the Ethiopian research world. Subsequently, the result of the research study may contribute as spring board for future studies on green marketing practices in Ethiopia. Finally, the findings of this research

undertaking help the Ethiopian bottled water industry know the consumers' perception regarding green marketing practices and how it affects their purchasing behavior.

1.6. Scope of the Study

Geographically, the research study is limited in Addis Ababa and its surrounding. Subsequently, the study is conducted focusing Addis Ababa.

The American Marketing Association (AMA) defines green marketing as "the marketing of products that are presumed to be environmentally safe, it incorporates several activities such as product modification, changes to production processes, and packaging, advertising strategies and also increases awareness on compliance marketing amongst industries" (Yazdanifard and Mercy, 2011). Hence, conceptually the scope of green marketing only included components of the green 4Ps of the marketing mix i.e. **Green product, Green pricing, Green placement and Green promotion.**

On the other hand, the scope of the point of analysis is limited on the individual consumers of bottled water industry and sample firms in the industry. Methodologically, the scope of the research study is a mixture of inferential and descriptive research designs.

1.7. Limitation of the Study

Although the concept of green marketing dates back some three to four decades, the understanding and implementation of it is variables from country to country and continent to continent. Furthermore, its conceptual breadth and width as well as its application is variable across the board. Given the infancy of green marketing application in Ethiopia, one major limitation of the paper is its varied understanding and applicability. The other limitation of the paper is its confinement in the bottled water industry while not forgetting its geographic confinement in Addis Ababa as another limitation of the paper.

Finally, the research study only focus on the 4Ps of the marketing mix and doesn't cover the other Ps of the marketing mix like People, Physical evidence and Processes of the bottled water industry.

1.8. Definition of Terms

Green Consumer is typically known as one who support eco-friendly attitudes and/or who purchases green products over the standard alternatives (Boztepe, 2012)

Green Purchasing refers to the purchase of environmentally friendly products and avoiding products that harm the environment (Chan, 2001). Green purchasing is most often measured as green purchase intention and behavior. Green purchase intention refers to consumers' willingness to purchase green products.

Brand is "A force that helps for directing satisfied and loyal consumers to prefer and repurchase the product, serves for being distinguished from competitors' products and services by differentiating products and services" (Vranesevic and Ranko, 2003).

Brand Image can be defined as "the meaning that the consumers identify with the product or as the sum of their understanding of the product. Brand image is the result of impressions of consumers gained from various sources about the brand" (Sahbaz and Ciftci, 2011).

A **Green Brand** is defined as a specific group of brand attributes and benefits related to minimizing the brand's environmental impact and its perception as environmentally healthy (Hartmann et al., 2005).

Sustainable Development is "meeting the needs of the present without compromising the ability of the future generations to meet their own needs". It is sustainable development, is the need to integrate economic and ecological considerations in decision making by making policies that conserve the quality of agricultural development and environmental protection. (Rashad and Mercy, 2011).

Green Marketing as defined by the American Marketing Association (AMA) is "the marketing of products that are presumed to be environmentally safe, it incorporates several activities such as product modification, changes to production processes, packaging, advertising strategies and also increases awareness on compliance marketing amongst industries (Rashad and Mercy, 2011).

1.9. Organization of the Study

The thesis paper is organized in to five sections: In chapter one, the introduction part which includes the background of the study, problem statement, scope of the study, objectives, limitations and related parts of the paper are presented. In chapter two, review of related Literatures which comprises theoretical and empirical literatures as well as related concepts are presented.

The review of related literatures part give a background and theoretical context to the paper. In chapter three research methodologies that was followed while undertaking the study is described. The fourth chapter incorporates the result, discussion as well as the interpretation part of the findings. The final and the fifth part of the paper is the summary, conclusion and recommendation part of the paper.

CHAPTER TWO

2. REVIEW OF RELATED LITERATURES

The literature review part of these thesis proposal highlights, summarizes and synthesizes the effect of sustainable development with a particular focus on green marketing and its effect on the green purchase behavior of consumers. Related Literatures which were conducted elsewhere under similar contexts are thoroughly reviewed. These related literatures are used as a guide for this research undertaking especially in the finding and the analysis part.

2.1. Theoretical Literature Review

2.1.1. Sustainable Development

One of the most widely used definition of sustainable development has to do with an "economic development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs". On the other hand, some would like to view sustainable development from an even broader perspective as "the kind of human activity that nourishes and perpetuates the historical fulfillment of the whole community of life on earth" (Bossel H., 1999).

In 1983 the then General Secretary of the United Nations called upon Gro Harlem Brundtland (the former Prime Minister of Norway) to chair a special and independent commission in order to address the major challenge our world faces i.e. sustainable development. In the report produced by the commission, which they named it "Our Common Future", she states the below in her opening remarks:-

> *The present decade has been marked by a retreat from social concerns. Scientists bring to our attention urgent but complex problems bearing on our very survival: a warming globe, threats to the Earth's ozone layer, deserts consuming agricultural land. Despite official hope expressed on all sides, no trends identifiable today, no programmes or policies, offer any real hope of narrowing the growing gap between rich and poor nations* (Imperatives, S., 1987).

The environmental degradation which was assumed to be the problem of the developed nations as a result of their over utilization of resources for their industrial wealth is no longer their problem only, rather it has also become an issue of survival for the developing nations as well (Imperatives, S., 1987).

At the heart of establishing the commission was to make development sustainable i.e. one that doesn't compromise the ability and the needs of the future generation. For development to be sustainable, it has to not only satisfy the needs of the current generation but the future generations to come as well. However, with the process of globalization (fairly recently) and when it became the order of the day and as the process of globalization nearly reaches every corner of planet earth, then mankind started to notice the consequential problems inflicted on the environment which is rampant. The negative consequences on the environment affects all the living beings in our planet which gave rise an increased public awareness pushing an agenda of sustainable development to come to the forefront (Boztepe, 2012). The issue of sustainable development to come to the forefront is partially as a result of an increase in the awareness level of the global consumers on the environment.

In 2015, the United Nation General Assembly passed a resolution in what is generally known as "Agenda 2030", which consists 17 interrelated global goals to be achieved by member states. "Agenda 2030" is basically a blueprint to achieve a better and more sustainable future for all. They address the global challenges we face, including poverty, inequality, climate change, environmental degradation, peace and justice. Learn more and take action" (UN Sustainable Development Goals, 2015). The issue of Sustainable development has, therefore, become the agenda of mankind.

In the past, sustainable development was never a real issue and didn't appear as an explicit goal to achieve. It rather seems an implicit goal in a sense that no human society has ever consciously promoted its own unsustainability (Bossel H., 1999). In the latter half of the 20th century, the concept of sustainable development is becoming a widely recognized goal which has to be achieved for mankind following an ever increasing environmental deteriorating conditions in almost all corners of our planet earth (Bossel H., 1999). The concept of sustainable development

first appeared in the 1970s when public awareness on the environment grows (Simao and Lisboa, 2017). Public awareness on the environment is growing by the day and with it comes a demand by consumers for companies to be environmental friendly. Furthermore the increasing number of environmental related problems that we observe here and there seems to be the driving force on the increment of environmental consciousness not only at individual level but at corporate level as well.

At the heart of sustainability, there exist three perspective pillars from which sustainable development can be seen (Simao and Lisboa, 2017). These perspective pillars are:-

i. The economy;
ii. The environment; and
iii. The society (being the organizations' social responsibility).

In the interest of sustainable development, some request governments to intervene and force businesses to be environmental friendly in everything they operate. These scholars believe that governments, with the obligation and the institutional power they have to exert a "fundamental role in diffusing the environmental preservation, given that they define the environmental norms and regulatory mechanisms to preserve natural resources and quality of life". Towards achieving these goals, governments have the power and resources to shape the norms and introduce "protective regulations" as it relatively raises an age old dilemma i.e. ecology versus economy (Wilkinson, Hill, and Gollan, 2001). On the one hand, everyone wants a planet that is livable and one impactful way to achieve this is environmental regulation. On the other hand, everyone also wants bread in the table and business need to be competitive and there is somehow a belief that environmental regulations prejudice competitiveness. Hence, balancing the ecology versus the economy dilemma is the corner stone of sustainable development.

There is no a general consensus among the various organs and stakeholders of the world community on what actions to be taken by governments. The issue of sustainable development, therefore, divides opinions on what course of actions world powers should pursue as evidenced in the recent UN sponsored COP25 (held in 2019 in Madrid) and COP26 (held in 2021 in Glasgow) climate summit.

Whatever the case has been, the way forward seems the achievement of sustainable development as business, environment and development are interconnected and unless these three important elements do not work in harmony, the issue of sustainable development cannot be achieved and survival of mankind will be compromised.

The government of Ethiopia has also "recognized the need for sustainable development and prepared its CRGE strategy in 2011 with the ambition of building a green economy". "As part of supporting the Ethiopian government's efforts towards sustainable development, the EU has started a project entitled GEM with the objective of supporting medium and small scale manufacturing companies operating in Ethiopia to adopt SM practices" (Andaregie, A. and Astatkie, T., 2021).

The researcher's reflection on sustainable development is this: It has to be the order of the day, otherwise, planet earth will not be similar if things continue business as usual. News of natural catastrophes like flooding, drought, land slide extreme hotness and coldness and the like are witnessed almost on daily basis. The UN has also recognized this notion and started to respond devising some programs including MDG and SDG. The researcher endorses the notion "We have the power to reconcile human affairs with natural laws and to thrive in the process" Imperatives, S., 1987). Among the major stakeholders to sustainable development, organizations have huge role to play and they do it by practicing green marketing practices.

2.1.1.1. Relationship Between Firms and Sustainability

We all know the interconnection of firms, development and the environment. Firms have a profound effect on development. The current development apex that we observe throughout the world is unthinkable without firms (large or small). Firms engaged in business activities involve in the usage and waste of resource. Both the usage and waste of resources is from and to the environment, respectively. From the sustainability perspective, however, "firms more than mere resource users promote an efficient consumption and replacement of resources" (Simao and Lisboa, 2017). Firms, specifically, can implement a system that uses resources efficiently by using,

for example replacement, recycle and reuse materials. Furthermore, firms can also manage residuals (by reducing and waste treatment), water management, soil and air pollution (by prevention and air treatment), usage of energy efficient production policies, planning green initiatives and adopting green processes and products (with no or minimal impact to the environment) (Simao and Lisboa, 2017).

Governments play a decisive role in making sure that firms comply with regulations which are meant to preserve and sustain the environment. The awareness of society on the environmental issues in some countries also plays a decisive role in pushing governments to intervene and force firms comply with environmental regulations. On the other hand, even in advanced economies, we see an opposition to such governmental regulations from some sections of the society and political groups citing economic reasons i.e. such regulations may hinder firms' competitiveness. One good example in this regard is the former President of the United States Mr. Donald Trump's withdrawal from the Paris climate accord citing its hindrance to US firms' competitiveness. Hence, the dilemma of economy versus environment seems to continue for a while. The economy versus environment dilemma is also prevalent in India and China which are among the major polluters to the environment.

2.1.1.2. Stages of Firms Commitment to Sustainability

Firms which are committed in endorsing and engaging to the sustainability cause pass in different stages of participation when it comes to their commitment to the environment. The three stages of participation are **reaction**, **prevention** and being **proactive**. Firms which are on the stage of reaction views ecological issues on the periphery and consider related costs as unnecessary ones. If the market pushes them because of consumer demands or government regulations, firms on reaction stage will react to these requirements. Firms on prevention stage on the other hand recognize environmental issues and views that it is "preferable to alter processes and avoid pollution rather than deal with the effects of pollution". The third and the final stage of firms' commitment to sustainability is proactive stage by which firms view environmental issues as "strategic and a way to enter international markets and develop future sustainable solutions (Simao

and Lisboa, 2017). Hence, firms' in the proactive stage commits to sustainability by developing preventive corrective solutions in every stage of their production process.

Towards their commitment to sustainability, marketing plays a relevant and decisive role. Whether responding to government regulations or to market demands, marketing plays a critical role in the eventuality of sustainability and this brings us to the concept of green marketing philosophy, which continue to be in the front page of current and future sustainability practices.

2.1.2. Green Marketing

Companies more than ever are trying to implement green marketing endeavors in a bid to improve their reputation and external image following the increase of human environmental awareness and the resultant change in their purchasing behavior. Hence, a proactive environmental strategy may be seen as a management tool that aims to enhance capabilities and competitive advantage and in turn improve companies overall competitiveness (Simao and Lisboa, 2017) cited (Tachizawa, T., 2001).

Green marketing seems to become one of the most talked about issue in the current marketing ecosystem. We see numerous promotions on the various green initiatives that organizations (governmental and private alike) claim to undertake all over the world. Some organizations are heard claiming to have undertaken green initiatives proactively, while others reacting to government regulations. Still other organizations use their partial or full green initiatives as a promotional tool to retain existing customers or attract new ones. All these organizational endeavors are somehow within the context of green marketing philosophies. What exactly is green marketing then?

In his 1994 article entitled "An introduction to Green Marketing", Michael Jay Polonsky tried to define green marketing as a concept which "incorporate a broad range of activities, including product modification, changes to the production process, packaging changes as well as modifying advertising" (Polonsky, M.J., 1994).

Green Marketing concept was first introduced and discussed in an event called seminar on "ecological marketing" which was organized by the American Marketing Association (AMA) in

1975. In this named seminar, industry bureaucrats, academicians and participants from other industries analyzed the impact marketing has on the environment (Boztepe, 2012). The seminar defined green marketing also known as ecological marketing as "the study of the positive and negative aspects of marketing activities on pollution, energy depletion and non-energy resource depletion (Henion and Kinnear 1976b).

Green marketing can be defined as "efforts by organizations to produce, promote, package, and reclaim products in a manner that it is sensitive or responsive to the ecological concerns (Environmental concerns)" *(*Bhalero and Deshmukh, 2015). Green marketing which can alternatively be called as "environmental marketing or sustainable marketing also refers to an organization's efforts at designing, promoting, pricing and distributing products that will not harm the environment *(*Bhalero and Deshmukh, 2015) cited (Pride and Ferrell, 1993).

Further to the above definitions, some scholars view green marketing from the whole supply chain perspective. These scholars view green marketing from the entire product lifecycle perspective i.e. from materials acquisition, production, sale, and consumption, to the final disposal of the product ending its functional or economic life as a waste with a minimum or no impact on the environment (Wu, S.I. and Chen, Y.J., 2014).

Some scholars traced the concept of green marketing way beyond 1975 tracing its origin in the time of our ancestors. These scholars claim that our ancestors had been practicing many of their activities in ways which "nurtures and maintain the environment" since time in antiquity. These scholars added, if we "critically think of the various products required in our day-today life that were being manufactured in the olden times", proves how they were produced in ways that nurtures and maintains the environment. These products were extracted and utilized in harmony with nature *(*Bhalero and Deshmukh, 2015).

These scholars associate the current rally of marketers towards green marketing as a tool to gain competitive advantage. This came as a result of an increased awareness of society on the environment and a stiff competition of firms which led them to endorse the green activism movement in some communities *(*Bhalero and Deshmukh, 2015). Hence, according to these

scholars, companies endorse green marketing practices as a means to achieve a competitive advantage or to stay in business rather than an end in itself.

Currently, the "traditional marketing philosophies and concepts in recent decades are moving towards responding to the social and environmental issues" (Hossain and Rahman, 2018). Indication for the move towards responding to environmental issues is becoming prevalent especially in some advanced economies as modern marketers utilize the green marketing mix as a tool of competitive advantage where these modern marketers differentiate products from other competitors (Hossain and Rahman, 2018).

Generally, there is no one universally accepted definition for green marketing (Polonsky, 1994). There are a range of alternative as well as complementary definitions of green marketing. Some use a narrow range of activities in green marketing while others use comprehensive activities as activities of green marketing. All of these green marketing definitions, however, have three components as presented below (Polonsky, 1994):

i. Green marketing is a sub-set of marketing activity;
ii. Green marketing examines the negatives and positive activities; and
iii. A narrow range of environmental issues are examined.

Green marketing has evolved over a period of time. The first phase was termed as "ecological green marketing" which views all marketing activities as providers of remedial activities towards environmental problems. Companies in the first phase help in solving environmental problems after these problems occur to the environment. Contrary to the first phase, the second phase which is termed as "Environmental' green marketing shifts the focus towards "clean technology that evolved designing of innovative new products which take care of pollution and waste issues". The second phase is, therefore, proactive as it doesn't work to solve environmental problems after they occur, rather tries not to create them in the first place. The third and final, which is termed "Sustainable" green marketing phase go beyond the second phase, which integrates the sustainability of growth in to the equation. This phase "came to prominence in the late 1990s and early 2000" (Bukhari, S.S., 2011).

Overall, green marketing seems to be the buzz of the day and organizations are somehow responding to this philosophy one way or the other. Furthermore, green marketing "has a key given its transversal nature and potential vast reach" (Simao and Lisboa, 2017).

2.1.3. Green Marketing Mix

"The marketing mix is the set of tactical marketing tools that the firm blends to produce the response it wants in the target market. It is one of the major concepts of modern marketing". It generally consists of everything the company can do to influence the demand for the product (Kotler and Armstrong, 2013).

Elements of the marketing mix are what are customarily called the Four Ps of Marketing which include Products, Price, Place and Promotion. An effective marketing program is what "blends these marketing mix elements into an integrated marketing program designed to achieve the company's marketing objectives by delivering value to consumers" (Kotler and Armstrong, 2013).

Marketers all over the world use what they regard as the right blend of the traditional marketing mix to achieve their objectives on their target market. The traditional elements of the marketing mixes consists of the 4Ps, which includes product, price place (distribution) and promotions. When we talk about green marketing mixes, we are talking about the usefulness of these 4p components for the environment "specifically designed to promote and preserve environmental wellbeing" (Hossain and Rahman, 2018).

Integrating the 4 Ps' of the marketing mix into green marketing program for business firms is indeed challenging. The challenge for business firms comes from two sides i.e. on the one hand, firms should not only produce products in a manner that is safe for society and the environment but also produce these products to be profitable *(*Bhalero and Deshmukh, 2015). Sometimes, producing products in a manner that is safe to the environment and society may most of the time require business firms to change and setup the whole production setting afresh and this requires a substantial and an even more investment. Hence, business firms who wish to adhere to and embrace green marketing philosophies should implement the Four Ps of the marketing mix i.e. green Product, green Price, green Placement and green Promotion.

2.1.3.1. Green Product

A product is said to be green product if it is produced to be "environmentally friendly" meaning a product that has a minimum or no bad effect on the environment (Hossain and Rahman, 2018) cited (Diglel & Yazdanifard, 2014). Other researches define green products as those products that have "less negative impact on the environment than normal products" (Dangelico & Pontrandolfo, 2010). Products which are produced with less energy consumption (Polonsky & Rosenberger, 2001) and which contain eco-friendly ingredients are also green products.

Consumers may seek green products for numerous reasons. Some of these reasons could be the perception of consumers towards green products as healthy and organic, high quality products, and help sustain the environment *(*Hossain and Rahman, 2018).

For products to be green, some components of green marketing need to be incorporated into it. These components include product design, technology used to produce the product, product usefulness, product value, product convenience, quality and packaging *(*Bhalero and Deshmukh, 2015).

2.1.3.2. Green Price

Price generally is an amount money paid to get a product and green price is one of the most important component of green marketing. We all know that the price of a product is dependent on many factors cost of production being one major factor for price determination. Market share of the organization, product differentiation strategy of the organization, as well as the perceived value of a product among other things also play vital role in price determination *(*Bhalero and Deshmukh, 2015).

The price component of green marketing is relatively costlier than those products produced under conventional marketing *(*Bhalero and Deshmukh, 2015). However, cost for green products is not always higher. This is especially true if one considers all the associated costs of green products. "Often, green goods have higher initial out-of-pocket expenses but lower long-term costs" (Polonsky and rosenberger 2001).

A range of factors are considered by marketers while charging high prices for the green product, including product performance, product function, product design, taste or even product visual appeal (Hossain and Rahman, 2018). As green marketing is a more or less new endeavor, the price of green products are expected to be relatively higher. The dilemma for marketers emanates from being competitive and reasonable on the one hand and green products on the other. Generally, "Nowadays, many consumers are prepared to pay a higher price for the products which observe environmental standards for actual protection of the environment" (Abzari et al., 2013). However, "the price sensitivity regarding green products differs from age to age to age and generation to generation" (Hossain and Rahman, 2018).

2.1.3.3. Green Place

Green placement or distribution refers to all the related actions that firms do while distributing the green product all the way to the final consumers. "Green distribution programs involve actions related to monitoring and improving environmental performance in the firm's demand chain (Leonidou, Katsikeas, and Morgan, 2013). Placement requires to physically transfer the product to the consumers which we call it physical distribution. "Green place in that sense can be anything which minimizes the customers and the manufacturer's effort in acquiring and selling a product respectively. Many firms now-a-days have started selling their products online. This really cuts down the customers cost to practically visit a market place" *(*Bhalero and Deshmukh, 2015).

Green place will definitely influence the scope of distribution partners and will also benefit the end user in making the product available at a relatively lower cost. There are a number of practices firms could do in greening their distribution including forming "eco-alliances with channel partners to improve the environmental impact of their joint activities, such as reconfiguring logistics arrangements to make them environmentally efficient (e.g., fewer and fuller cargos)" (Leonidou, Katsikeas, and Morgan, 2013) cited (Dahlstrom, 2011).

Overall, the inbound and outbound distribution system of firms can be handled complying green distribution practices.

2.1.3.4. Green Promotion

Green promotion is another important and vital component that firms could practice if they implement green marketing program. Green promotion can be seen as the advertisement of products and services which are green by focusing on the functions these products and services provide. Furthermore, in order to promote green products, companies should give due attention on the wide variety of promotional tools including free coupons, samples, different schemes and offers in order to get earnest and favorable reactions from the target market and the wider consumers who purchase green products (Hossain and Rahman, 2018).

Promotion is an important component of the marketing mix which incorporates advertising, sales promotion, personal selling, public relation and direct marketing under it (Kotler and Armstrong, 2014). From the context of green promotions, there are numerous activities firms could do. According to *(*Bhalero and Deshmukh, 2015), firms could do the below green promotion activities in line with green marketing philosophies:-

i. **"Selection of promotion partners***:* Only those promotional partners should be contracted who have a good track record in green marketing or preserving the environment";
ii. **"Selection of promotional material***:* Environment friendly promotional material should be encouraged for use, such as recyclable bags rather than plastic which is detrimental to the environment at large. Similarly online advertising could reduce a great clutter offline";
iii. **Selection of advertising message***:* In a way to expand the dimensions of green marketing companies these days have to be very serious in a way in which advertising message is being generated. Green marketing should not be evaluated only on the basis of environmental impact but also the way a firm has societal impact".

Public relation is another important promotional mix. As part of public relation activity, firms could do a number of green marketing activities. Corporate Social Responsibility (CSR), which is a concept by which corporations consider environmental and societal causes while operating (Abzari et al., 2013).

Another important practice firms could do in discharging their Social responsibility towards the society and the environment is by implementing green marketing practices and implementing the green marketing programs. In doing so, social responsibility can be the implementation of *"transparency of the adopted methods by corporation in managing the environmental economic and social topics which can improve relations of employees, customers and beneficiaries"* (Jones, Clarke & Hillier, 2007*).*

Over all, "green promotion programs reflect communications designed to inform stakeholders about the firm's efforts, commitment, and achievements toward environmental reservation" (Leonidou, Katsikeas, and Morgan, 2013). On the tactical level, green promotion also includes undertaking various actions in a bid to reduce any negative and harmful environmental impacts while the firm performs its marketing communication efforts (Kotler, 2011).

2.1.4. Green Purchasing Behavior

"Public concerns for environmental issues has gradually increased over the last decades" following the inception of earth day (Kim & Choi, 2005). Marketers have reacted to consumers' growing environmental consciousness by developing "environmentally friendly" products.

It is notable that pro-environmental behaviors differ from general purchase-related consumer behaviors (Kim & Choi, 2005). "Prior research has identified several key factors motivating environmentally conscious behavior, including individuals' concerns about the environment, their beliefs about their ability to ease the problem" (Kim & Choi, 2005) cited (Elle, Weiner, and Cobb-Walgren 1991).

Consumers purchasing behaviors are influenced by social orientations. The person's social orientations like "Individualistic or collectivistic orientations have been found to influence a variety of social behaviors". "Person level tendencies of individualism and collectivism appeared to influence their motivation to engage in environmentally conscious behaviors" (Kim and Choi, 2005). Hence, the value and motivations of individual consumers directly affect their purchasing behaviors. "Specifically, values influence behaviors indirectly through more specific attitudes and beliefs with regard to an object topic or idea" and this in effect determines the consumers

purchasing behaviors (Kim and Choi, 2005). The more an individual consumer has a concern towards the environment, the higher his/her consciousness towards green buying behavior. Over all, individual consumer who has a greater awareness and concern towards the environment is "more likely to purchase products as a result of their environmental claims than those who are less concerned about the environmental issues (Kim and Choi, 2005).

The costs of human development endeavor puts a negative vivid mark on planet earth. This in turn increases the outcry from stakeholders including environmental activists to a concerted global solution. Furthermore, as the day passes by, we are witnessing an increase in consumer awareness towards environmental causes. Hence, more than ever, the idea of green marketing come to the forefront as a strategic solution to bridge the gap between business and consumers on the one hand and stable environment on the other.

All these have a profound influence on consumer purchasing decisions, if not today, surely tomorrow. This momentum towards greener world will only increase as the day passes. The way forward will be for business to operate in harmony with the environment as the trend shows a future of green purchasing behavior.

2.1.5. Benefit of Green Marketing to Businesses

Environmental problems are widely observed throughout our world. The level of public awareness on the environment is also increasing resulting in "pressures both individuals and organizations to change their attitude and behavior (Simao and Lisboa, 2017). This requires some kind of change on the relationship between businesses and their customers if sustainability is to be achieved. This is where the green marketing programs could bridge the gap between business and consumers on the one hand and stable environment on the other.

If organizations operate business in harmony with the environment, they could achieve a status of Green Brand. In order to achieve advantage over other brands, "a green brand need to offer a significant eco-advantage over other brands and be aimed at consumers that are willing to value the environmental value" (Simao and Lisboa, 2017). If any brand achieves a green brand status, it will have an advantage over non-green brands among consumers who have green purchasing

behaviors. Firms, who are viewed as having as an environmental friendly, enjoys various benefits including cost reduction (as a result of efficiency in resource consumption like energy and water), enhancement of production processes (through efficient and cleaner technologies), increment of profits (by reuse, recycling as well as residual management). Furthermore, environmental responsible firms receive an enhanced corporate image and reputation through an increased brand awareness (Simao and Lisboa, 2017).

Generally, Businesses that embrace green marketing practices and "develop new and improved products and services with environment inputs in mind give themselves access to new markets, increase their profit sustainability, and enjoy a competitive advantage over the companies which are not concerned for the environment"(Shahlaee, 2014). Hence, it seems only a matter of time before businesses embrace green marketing philosophies. The question then becomes, is it wise to embrace green marketing practices proactively or react?

2.1.6. Implication of Consumer Awareness (Environmental Knowledge) on Green Marketing

A consumer with environmental awareness can be defined *as "an ecologist who had grasped his/her self-efficacy against environmental pollution and how has a sense of responsibility with respect to future generations and the whole humanity in his/her use of resources* (Boztepe, 2012).

If consumers are conscious enough on the environment, they can "assess the presence of environmental resources, their cost of use as well as the impact of this use to the environment and to themselves" (Babaoğul and Ozgun, 2008). This could affect business's overall performance and could ultimately decide survival of business.

Day by day, the awareness of consumers on the environment is growing and with it comes an implications on purchase decisions. According to a survey study conducted, "environmental pollutions and awareness of environmental protection increase the effect of consumer buying behavior" (Boztepe, 2012).

2.2. Empirical Literature Review

"As public concern for the environment increases, green marketing, which appeals to consumers with products that are "green" or "environmentally friendly," emerged as a new strategy" (Kim and Choi, 2005). The awareness level of individual consumers is growing by the day and this development is pushing businesses to embrace green marketing practices.

In light of the sustainable development model, it is vital that companies adopt environmental practices. Satisfying customers is one primary area that business should focus in order to maintain the consumer society which is growing by the day (Kanchanapibul et al., 2014). Global market is currently growing with the increase of the world population and green marketing will be the next frontier in business competition. This phenomenon is expected to increase as long as the green ideology becomes the dominant environmental ideology. There are many signs that environmental ideology will be the dominant modus operandi in the years and decades to come. When it happens, the "green market will be prosperous" with an expanded number of consumers. In a context like this, businesses need respond to such markets in order to sustain and be successful (Kanchanapibul et al., 2014).

> *Therefore, being an environmentally-responsible business means elevating actual expressions of environmental concern. Having learnt and understood consumers' behavior and perceptions, a sustainable strategy can be developed to take advantage of some useful insights into improving the effectiveness of long-run green appeal* (Kanchanapibul et al., 2014).

Green marketing is one important activity that helps organizations build a positive brand image. A study made in China found out that green logistics management having a positive image both on the environment and the operational performance (Abzari et al., 2013). Building brand image is positively correlated with green purchase behavior.

In a research entitled "green branding effects on attitude: functional versus emotional positioning strategies", results indicate "an overall positive influence of green brand positioning on brand attitude" (Hartmann et al., 2005). Further findings suggest that "highest perceptual effects were

achieved through a green positioning strategy that combined functional attributes with emotional benefits" (Hartmann et al., 2005).

In their research title "Greening the marketing mix: do firms do it and does it payoff?", the key factors identified in affecting consumer behavior were found to be green products, green price, green distribution programs and green promotional practices (Leonidou, Katsikeas, and Morgan, 2013).

In their research undertaking entitled "Green products and corporate strategy: an empirical investigation" conducted in Australia, perception of green products, product labels, packaging, price and products were found to be the key factors affecting consumer behaviors (D'Souza, Taghian, Lamb, and Peretiatkos, 2006).

In the research undertaking entitled "Consumers' buying behavior towards Green Products: An Exploratory Study", Price, Environmental Concerns, brand name, quality, durability convenience and packaging were found to be the key factors affecting green consumer behavior (Agyeman (2014).

In their research undertaking title "Measuring the Impact of Green Marketing Mix on Green Purchasing Behavior: A Study on Bangladeshi Consumers", found out that the Bangladeshi consumers' green purchasing behavior is significantly influenced by these tools of the green marketing mix" i.e. green product, green price, green place and green promotional elements (Hossain and Rahman, 2018). The research went on advising marketers to be green, who should incorporate "green ingredients and features" in their conventional products as the awareness level of consumers is increasing.

In their research undertaking title "Marketing mix strategies for closing the gap between green consumers' pro-environmental beliefs and behaviors", green promotions, green price, green place environmental concern, consideration of future consequences were found to be the key factors affecting green purchase behaviors of consumers (Davari and Strutton (2014).

In a research undertaking title "Impact of Green Marketing on Consumer Purchase Intention", environmental literacy, environmental advertisement, price and ecological packaging were found

have a positive relationship with the green purchase intention, hence found to be key factors affecting green purchase behaviors of consumers (Ansar, 2013).

In a research undertaking title "green product quality, green corporate image, green customer satisfaction, and green customer loyalty", green product quality, green corporate image, green customer satisfaction, and green customer loyalty were found to be the key factors affecting green customer behavior.

In a research undertaking title: 'green marketing and its impact on consumer behavior", the author advised modern businesses to follow environmental regulations and practice green marketing practices as consumers awareness level is increasing on environmental issues (SS Bukhari, 2011).

In order to confirm the sustainable success of business and to ensure the growth, business need to create and "nurture a symbiotic relationship with society" making it "imperative for firms to come up with green products and green services". Furthermore, the finding concluded that cleaner and sustainable environment is here to stay for the long journey ahead. Hence, business should embrace it as sustainable corporate social responsibility not a mere tool of promotional techniques. Business, therefore, should implement a "holistic approach to green marketing" by achieving the right and appropriate blend of green marketing principles in to marketing mix as it is the way forward (Bhalero and Deshmukh, 2015).

In their research undertaking title: "the impact of green marketing and perceived innovation on purchase intension for green products", the research concluded that green marketing awareness having the highest influence on the purchase intentions of consumers. The research suggested that business should apply green marketing practices to increase more consumer recognition (SI Wu and YJ Chen, 2014).

Given summaries of the above empirical evidences on green marketing and its effect on the green purchase behavior, the researcher of this research undertaking proposes the below propositions:

H1: Green marketing has a positive and significant relationship on the green purchase behavior of consumers:

H1a: Green product has a positive and significant relationship on the green purchase behavior of consumers:

H1b: Green price has a positive and significant relationship on the green purchase behavior of consumers:

H1c: Green placement has a positive and significant relationship on the green purchase behavior of consumers:

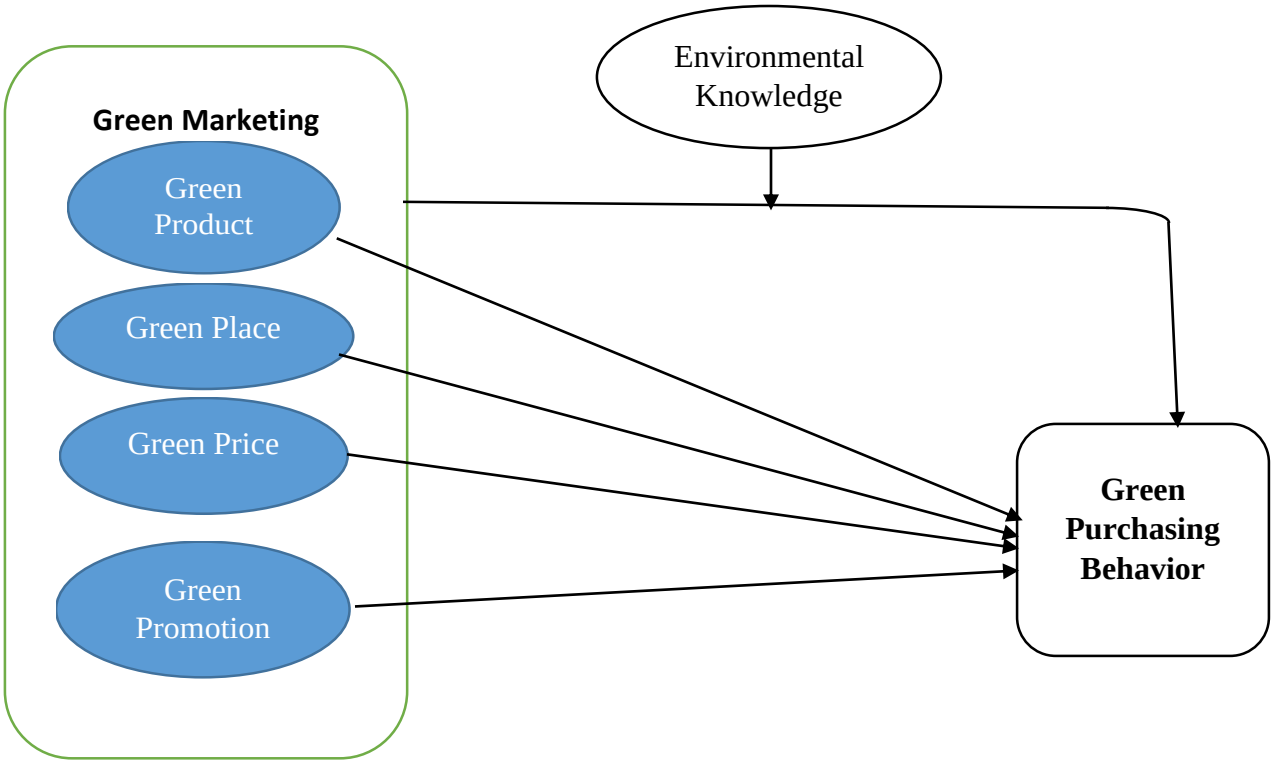
H1d: Green promotion has a positive and significant relationship on the green purchase behavior of consumers:

H2: Environmental knowledge moderates the positive relationship between green marketing and green purchasing behavior whereby the relationship is strong when environmental knowledge is high.

2.3. Conceptual Framework

The conceptual model for the research undertaking links the relationship between green marketing programs on the green purchasing behavior of consumers. The green marketing programs include green product, green price, green place and green promotion. The below figure depicts these relationship.

Figure 1: Conceptual Framework



Proposed Conceptual Framework of the research study

Source: Adapted from (Mahmoud et al., 2017).

2.4. Ethiopian Bottled Water Industry Case

In the EBSMIA, "there are currently 106 different individual firms within the industry, spread across the geographical bounds of Ethiopia, but particularly concentrated around major cities"[1]. The concentration of these bottling companies around big cities is for market access and the total investment capital of these bottling companies is around ETB 340 billion (approximately USD 7 billion at the average exchange rate for the current year). The number of bottling companies vary from time to time as there are additional bottlers which are on the pipeline to join the industry while others make an exit from the industry. "In total, these existing firms in the industry contribute to employing some 58,000 full and part-time employees with an average of 552 work force per company"[2].

Besides creating an employment opportunities, the sector makes a significant contribution of job creation through indirect employment opportunities up and down the value chain as suppliers, distributors, and retailers support their livelihood from industry[3].

The operation process across these bottling companies is more or less similar i.e. they all "import major raw materials, which is mainly used for packaging, extracting water from the ground, filtering and purifying through different stages, and finally selling for distributors"[4].

From the 106 bottling water companies, around 41 of them are members of EBSMIA as shown in table 1 below:

[1] Feasibility Study of Drinking Bottled Water Industry by Habtamu Berhanu Abera (PhD).
[2] IBID, P - 3.
[3] IBID, P - 3.
[4] IBID, P - 3.

Table 1: Bottling Water Companies in the Association

Sr. No.	Company Name	Product Name	Production Capacity /hour (Liter)
1	Abebe Dinku water bottling & non-alcoholic beverage factory	Top natural water	126,000
2	Abahawa trading	One water	92,000
3	Geramba bottling water	South spring water	76,000
4	Yes brands beverage	Yes water	72,000
5	Asku PLC	Aqua Addis bottled water	60,000
6	Belima international business PLC	Daily drinking bottled water	53,000
7	Teshome Gode natural mineral water factory	Selam natural spring water	52,000
8	Sheger water	Sheger water	36,000
9	Eden business S.Co.	Eden water	34,000
10	Kemal Bejiga & family General Trading PLC	Fham natural mineral Water	30,000
11	Debre Birhan Natural spring Water PLC	Aquasafe	30,000
12	Kiya bottled water	Kiya water	30,000
13	Ok bottling & beverage S.Co.	Fiker bottled water	24,000
14	Africa bottled water factory	Africa Water	24,000
15	Blue cloud international PLC	Ghion Drinking water	24,000
16	Damot Industrial & Commercial PLC	Gift bottled water	20,000
17	Sons industry	Best water	18,000
18	FEDA-WAK PLC	Gold water	18,000
19	Amefada Industry PLC	Boss bottled water	18,000
20	SBG PLC	Arki bottled water	16,000
21	Mersha Hailu natural spring water	Blu bottled water	15,000
22	Kuishilu Business PLC	Hagere water	15,000
23	Neir manufacturing PLC	Liyu water	15,000
24	Sheh Sirajdin Sheh Hussen Alemu	Kefeta water	15,000
25	Konjit Industry and trade	Konjo water	12,000
26	Erist trading PLC	Choice water	12,000
27	MDE bottling PLC	Aqua uno water	12,000
28	Nehe Beverage complex PLC	Delta water	12,000
29	Tamre & His families PLC	Alpha natural mineral water	12,000

Sr. No.	Company Name	Product Name	Production Capacity /hour (Liter)
30	Pacific industry PLC	Promise bottled water	12,000
31	Yared trading PLC	Win water	12,000
32	Halal business PLC	Diamond water	10,000
33	Yekabdi agro processing PLC	Wow water	10,000
34	Baheru Abrham industry	Hiwot water	10,000
35	ABM water	Unique water	10,000
36	AL-AKL trading PLC	Ambassador bottled water	9,000
37	Agmas manufacturing PLC	Agmas drinking water	8,000
38	Nared general trading	Wub water	8,000
39	Ker water production S.Co.	Tseday bottled water	8,000
40	Yitem coffee business PLC	Joy water	6,000
41	Origin investment PLC	Origin water	6,000
		Total	**1,082,000**

Source: Feasibility study of drinking bottled water industry by Habtamu Berhanu Abera (PhD) – as at January, 2021.

2.5. Environmental Policy and Regulatory Framework in Ethiopia[5]

Green marketing is linked with utilizing planet earth's resources in harmony with the environment and in line with the principles and philosophies green development. Towards achieving this goal, the Ethiopian government crafted its own environmental policy and regulations. The GOE also endorsed various international conventions and protocols as highlighted below:-

2.5.1. The FDRE constitution "acknowledges sustainable development and clean environment as people's right and laid down policy and legal bases for environmental considerations in development endeavors in a manner that promotes sustainable development". Article 43 of the constitution is about the right to development, article 44 is about environmental rights including the rights of persons to have clean and

[5] Contents under this subtitle is entirely taken from an article entitled "Sustainable manufacturing in Ethiopia: Manufacturing, Regulatory Framework & Practices" published in collaboration with the EU and Ethiopian Chamber of Commerce and Sectoral Associations.

healthy environment. Furthermore, article 92 states about environmental objectives that the GOE declares of committing itself to achieve different environmental objectives;

2.5.2. Ethiopia endorsed its environmental policy in 1997 and "covers a broad spectrum of environmental issues encompassing five sections". "Section one outlines the resource base & the need for environmental policy in Ethiopia". "Section two briefly encompasses "policy goals, objectives and guiding principles". Section three outlined sectoral policies while section four is about sectoral policies, cross sectoral policy issues". Finally, section five "laid down issues related to policy implementations.";

2.5.3. The GOE also established an environmental protection organ under proclamation number 295/2002. This proclamation "primarily enacted to establish Environmental Protection Authority (EPA). Under article 5 of the proclamation, the objective of the Authority is "to formulate policies, strategies, laws and standards, which foster social and economic development in a manner that enhance the welfare of humans and the safety of the environment sustainable, and spearhead in ensuring the effectiveness of the process of their implementation".;

2.5.4. The GOE has also proclaimed an Environmental Pollution Control under proclamation number 300/2002. The proclamation "aspires to ensure the protection of the environment in general, and the safeguarding of human health and wellbeing as well as the maintaining of the habitat and the aesthetic value of nature through enforcement in the country";

2.5.5. The GOE also proclaimed a solid waste management under proclamation number 513/2007. With the ultimate objective of "enhancing capacities to prevent the possible adverse impacts while creating economically and socially beneficial assets out of solid waste at all levels";

2.5.6. The GOE has also enacted a regulation entitled "Prevention of Industrial Pollution Regulation" under regulation number 159/2008. "The regulation was enacted in pursuant to article 20 of the Environmental Pollution control proclamation number 300/2002 and came into force in January 2009". Under this regulation, a factory, among

other things, “shall have the obligation to handle equipment, inputs and products in a manner that prevents damage to the environment and to human and animal health”;

2.5.7. The GOE has “ratified different international conventions on natural resources and environmental management”. Some of these conventions and protocols are listed below:-

2.5.7.1. The Basel convention on the control of trans-boundary movements of hazardous waste and their disposal;

2.5.7.2. The Bamako convention on the ban of the import into Africa and the control of trans-boundary movement and management of hazardous waste within Africa;

2.5.7.3. The UN framework convention on climate change and its key protocols;

2.5.7.4. The UN convention to combat desertification in those countries experiencing serious drought and/or desertification, particularly in Africa;

2.5.7.5. The Vienna convention for the protection of the ozone layer and the Montreal protocol on substances that deplete the ozone layer;

2.5.7.6. The Rotterdam convention for the prior informed consent procedure for certain hazardous chemicals and pesticides in international trade; and

2.5.7.7. The Stockholm convention on persistent organic pollutants.

2.5.8. Finally, the GOE has developed a strategy named CRGE. The “GOE recognizes the fact that the conventional development path of industrialized countries resulted in, among others, a sharp increase in GHG emission and unsustainable use of natural resources”. Hence, Ethiopia “has followed a new development model initiating CRGE strategy in 2011”[6].

[6] IBID P – 27.

CHAPTER THREE

3. RESEARCH METHODOLOGY

This chapter presents the details of the research methodologies which was employed while undertaking this research paper. It includes the description of the study area, the research designs as well as the research approaches that was followed in the process. In this chapter, the completed data collection procedures are detailed. It also indicates details of how the data analysis process in chapter four will be undertaken. Finally, the chapter presents the target population, the sampling techniques to be used, what data sources and types are used as well as the ethical considerations the researcher utilized while undertaking the study.

3.1. Description of the Study Area

Geographically, the research area of the study is in Addis Ababa. Besides being the capital of Ethiopia, Addis Ababa is the most populous city exhibiting the diversity of Ethiopia not only culturally but with elements of the country's political-economy order. Furthermore, majority of bottled water companies resides in and around Addis Ababa, which makes it an ideal location for the research undertaking.

On the other hand, Addis Ababa is the biggest market in Ethiopia. This market potential also works for bottled water industries.

Hence, as a result of the above two points mentioned and related reasons like its convenience, Addis Ababa is selected to be the study area for this research undertaking.

3.2. Research Design

The research study presents green marketing and its effect on the green purchasing behavior focusing generally on the bottled water industry. The study examines how green marketing mixes i.e. green product, green price, and green placement as well as how green promotion affects the green purchasing behaviors of consumers. Furthermore, the study also identifies which element of green marketing mix highly influences on the green purchasing behavior of consumers on bottled

water organizations. Subsequently, a combination of descriptive and inferential research designs are utilized.

Descriptive research design helps portray the practice of green marketing on the green purchasing behaviors as descriptive design enables to obtain the existing information on the research title. On the other hand, the inferential research design helps identify which green marketing activity highly influence on the green purchasing behaviors of consumers. As a result, the study utilizes both descriptive and inferential research design methods.

3.3. Research Approach

The study is designed to employ a Quantitative methodological framework as a dominant research approach. On the other hand, Qualitative instruments like semi-structured interviews and observations are utilized. Observation and semi-structured interviews and first hand observations of the researcher are also utilized which give a context and an insight, which further help the researcher in the analysis and interpretation part of the study.

The unit of analysis is both on the organizational as well as on the individual consumer levels. Hence, the Semi-structured interview is undertaken with the responsible figure of the sample representatives. The survey questionnaires, on the other hand, are administered to collect data for the quantitative research data by focusing individual bottled water consumers. The qualitative instruments complements the questionnaires to collect the empirical data.

Hence, the study utilizes both qualitative and quantitative approaches, which makes the research study to be a mixed one.

3.4. Population and Sampling

As stated above, there are two unit of analysis for this research undertaking. One unit of analysis, which measures the dependent variable i.e. the green purchasing behavior is measured using individual consumers as a unit of analysis. On the other hand, the practice of green marketing is measured on the industry level taking sample individual firms as a unit of analysis. Hence, the

population framework for the research study are the individual bottled water firms and individual consumers in Addis Ababa. On the other hand, green purchase behavior are influenced by environmental knowledge as confirmed by many scholarly articles (Ansar, 2013). Hence, as environmental knowledge is taken as a moderating variable in this research undertaking, the researcher has decided the individual water consumers to be environmental literates as respondents for the questionnaire.

According to EBSMIA, there are around 106 bottled water producing companies in Ethiopia of which the majority of them resides in and around Addis Ababa. From these companies, 41 of them are members of EBSMIA. Their list, product name as well as production capacity are presented in table 1. For convenient and practical purposes, the researcher selects the top five of these firms on their production capacity as it indicates their relative market share. Hence, one responsible unit head of these firms are used as a primary data sources for these research study making total number of respondents 5 for the industry unit of analysis.

As for the individual consumers case, the researcher employs a purposive sampling technique and simple random sampling technique in order to ensure its representativeness. The purposive sampling technique is to select respondents who are assumed to be environmental literate. Once these group of respondents are identified through purposive sampling techniques from work places (like from NGO's, International organizations, Finance sector etc.), the simple random sampling technique is applied to pick any one as a respondent.

The researcher uses (Yamane, 1967) sample size formula to calculate the sample size. Hence, at 95% degree of confidence and with +5% variance, the sample size is 400.

$$n = \frac{N}{1+N(e^2)} \qquad n = \frac{2{,}739{,}551}{1+2{,}739{,}551\ (0.0025)}$$

In Addis Ababa, there were more than 2.7 million all literate population in a survey conducted in 2018 by the Central Statistical Agency (CSA, 2018). Hence, the above formula to determine sample size is appropriate enough.

The researcher believed that gender difference doesn't have influence on the outcome of the research finding and doesn't consider it in sample representation.

Furthermore, key informant interviews is conducted with the responsible units of these bottled water companies and data collected from these sources is utilized to triangulate and further enrich the description of green marketing practices in the industry.

3.5. Data Source and types

The research study use both primary and secondary data. Survey questionnaires is the Primary data collection instrument for the research undertaking. Another gathering instrument is the researcher's observation including the facilities of some companies. Finally, semi structured interviews is also employed as primary data collection tool especially with concerned bodies of the bottled water organizations.

The research study also used secondary data throughout the research undertaking as appropriate and in line with research questions.

3.6. Data Collection Procedure

The main primary data collecting instrument i.e. the pre-tested, structured survey questionnaire is developed as the main data collection instrument. The survey questionnaire is adopted from related research undertakings. These research questions are adapted from (Kim and Choi, 2005), (A Hossain and MYH Khan, 2018), (Kanchanapibul et al., 2014) and (Mahmoud, Ibrahim, Ali and Bleady, 2017). The survey questionnaire which is prepared in English as attached in the annex part of this research undertaking.

The researcher administers these questionnaires personally and by employing paid and unpaid data collectors (who are trained to do so) in different parts of Addis Ababa i.e. in work places, restaurants, cafeterias, and related places where consumers of bottled water are expected be. The semi structured interviews with the responsible bodies of the factory are administered personally by the researcher in their work places preferably in the factory setting, where the researcher has a chance to observe the production facility.

Once the primary data is collected and completed, the data cleaning process took place. As part of the data cleaning process, those survey questionnaires which were duly completed are selected as fit for the research analysis.

Measurement

As stated above, the main data collection instrument is the pre-tested, structured survey questionnaire which is adopted from scholarly articles. Each dimensions of the independent and dependent variables are measured using multiple items adopted from multiple previous literatures. The questionnaire has three sections. The first section is the respondents' background and demographic information. Section two measures the green marketing mix by using 19 items five point Likert scale which is adapted from scholarly articles as per below:

Green Product:

To measure the green product dimension, the researcher uses five items which are measured on a five point scale ranging from strongly agree to strongly disagree adapted from (Kanchanapibul et al., 2014).

Green Price:

To measure the green price dimension, the researcher uses five items which are measured on a five point scale ranging from strongly agree to strongly disagree adapted from (A Hossain and MYH Khan, 2018).

Green Place:

To measure the green place dimension, the researcher uses four items which are measured on a five point scale ranging from strongly agree to strongly disagree adapted from (A Hossain and MYH Khan, 2018) and (Mahmoud, Ibrahim, Ali and Bleady, 2017).

Green Promotion:

To measure the green promotion dimension, the researcher uses five items which are measured on a five point scale ranging from strongly agree to strongly disagree adapted from (A Hossain and MYH Khan, 2018).

Green Purchase Behavior:

To measure the dependent variable i.e. green purchase behavior, the researcher uses five items which are measured on a five point scale ranging from strongly agree to strongly disagree adapted from (Kim and Choi, 2005) and (Kanchanapibul et al., 2014). Cronbach Alpha score for these items were found to be 0.83 (Kim and Choi, 2005) and 0.862 (Kanchanapibul et al., 2014), respectively making the items reliable.

Environmental Knowledge:

To measure the moderator variable i.e. the environmental knowledge of consumers, the researcher uses three items, which are measured on a five scale ranging from strongly agree to strongly disagree adapted from (Mahmoud et al., 2017).

3.7. Data Analysis

Quantitative and qualitative techniques are employed to analyze, synthesize and summarize the findings of the research study. The descriptive data are presented. Furthermore, depending on the finding of the study, the researcher later infers. Percentage, frequency distribution, graphs and tables are used to analyze and present the findings of the research study. Statistical software including SPSS are utilized to analyze and present the findings of the research study.

3.8. Ethical Considerations

While undertaking this research study, all participants were informed about the research study and their participation was solely based on their individual will and consent. Hence, collection of data were undertaken once the consent of respondents was obtained.

On the other hand, the researcher only uses their response to undertake the research study and in no way hand over the respondents' identity to third parties other than for the purpose of the research study.

Given the foregoing, ethical clearance is obtained from the Department of Marketing Management of the Addis Ababa University, School of Commerce's Research Ethical Review Board.

Furthermore, ethical compliance is ensured from the survey questionnaire instrument as it reduces potential bias that may surface from the researcher. The survey questionnaire avoids sensitive and leading questions while at the same time prevents issues that may be offensive to respondents.

CHAPTER FOUR

4. RESULTS AND DISCUSSIONS

4.1. Introduction

This chapter of the results and discussions part of the research undertaking generally presents the overall results and discussion parts of the research paper. It starts by presenting the response rate, the demographic data of respondents, the results of the study along with the interpretation of the results as well as the discussion parts of these findings.

As stated in the proposal part of the research, the researcher dispersed questionnaires as a primary data collecting instrument to answer the research questions. The researcher also collected the primary data from the sample bottled water organizations by employing a semi structured interviews. Some of these interviews were conducted through audio records after their consent were first obtained. Hence, the researcher managed to collect both primary and secondary data which enables to answer the research questions.

Generally, this chapter presents the results and discussions parts which allow answer the research questions. Among other things, this part of the research paper describes the sample study, presents the finding, interprets and discusses the findings. It presents data using cross-tabulations, graphs and related instruments. Measure of goodness test and internal consistency were checked and presented along with their interpretation. Correlation as well as regression tests are also utilized, presented, interpreted and discussed in this chapter.

4.2. Response Rate and Demographic Data

As stated in the thesis proposal, more than four hundred questionnaires (to compensate illegible questionnaires) were distributed for respondents at various work places and sites following the purposive and simple random sampling techniques and managed all the required four hundred questionnaires with a response rate of 100%.

Furthermore, a semi structured interviews were conducted at the work places of the selected bottled water organizations which helped the researcher to have a full insight about the industry and the level of green marketing practices being undertaken by these companies.

Following is the presentation of some background information about the respondents including age, marital status, gender the proportion of respondents, income and related information of the four hundred respondents.

Table 2: Gender of Respondents'

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	228	57.0	57.0	57.0
	Female	172	43.0	43.0	100.0
	Total	400	100.0	100.0	

Source: Field Survey, 2022

As seen from table 2, male respondents are the majority with 57% or 228 headcount while female respondents account 43% or 172 headcount.

Table 3: Age of Respondents'

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-29	24	6.0	6.0	6.0
	30-39	205	51.3	51.3	57.3
	40-49	171	42.8	42.8	100.0
	Total	400	100.0	100.0	

Source: Field Survey, 2022

As per table 3, of the 400 respondents, majority of them are within the age of 30-39 constituting 51.3% of the overall respondents while 42.8% of them are within the age of 40-49.

Table 4: Educational Level and Average Income of Respondents' Cross tabulation

		Educational Level of Respondents	Total
		First degree and above	
Monthly Average income of Respondents	>8000	400	400
Total		400	400

Source: Field Survey, 2022

As seen from table 4, all the four hundred respondents have first degree and have a monthly average income of more than ETB 8,000. This research undertaking proposes environmental knowledge of respondents to play a strong moderating role for the positive relationship green marketing has on green purchase behavior of consumers. In order to accept or reject this hypothesis, the researcher designed respondents to have environmental awareness and table 4.3 above confirms respondents of having first degree and above.

4.3. Data Coding

After the data was collected from the field survey, data cleaning and coding was duly undertaken. The questionnaire has two parts i.e. part one, which consists the background information section of respondents and part two, which has the twenty seven item questions on the variables. Male respondents are coded as one while female as 2. Some information like average income of respondents were collected with five categories of income as a result of the sensitivity of disclosing income for many people. Hence, data coding for average income of respondents was also treated as such.

Part two of the questionnaire used a five point Likert scale to collect data on the twenty seven item questions for the dependent and independent variables as well as for the moderator variable. This part used a five point Likert scale with an agreement level of respondents ranging from strongly agree to strongly disagree. Responses were coded from 1 – 5, where 1 = strongly agree, 2 = agree, 3= neutral, 4= disagree and 5= strongly disagree.

4.4. Results

4.4.1. Measurement of Goodness Test

In order to ensure the quality of the research undertaking, a sound measurement has to be undertaken. Sound measurement has to meet the tests of reliability, validity and practicality. These tests are the three major tests in the evaluation of a research measurement tools (Kothari, 2004). These tests, especially the tests of validity and reliability reduces measurement error and helps ensure the integrity of measurement.

4.4.1.1. Test of Validity

"Validity is the most critical criterion and indicates the degree to which an instrument measures what it is supposed to measure". The test of validity in other words is the range to which differences found with a measuring instrument reveal a true and meaningful differences among those variables which are being tested (Kothari, 2004). Generally, the test of validity increases the effectiveness and accuracy of the research finding making the research finding a valid one (Marczyk & DeMatteo, 2010).

This research undertaking used a correlation test to measure the relationship strength between the latent variables of green marketing and the green purchase behavior (dependent variable). The test produced the direction of the relationship i.e. negative (when one variable decrease, the other one increase or vice versa) or positive (when one variable increases, so does the other variable) (Tesfaye, 2019) cited (Pallant, 2010).

The correlation test also shows the strength of relationship that exist between the variables ranging from 1 up to -1, where 1 mean a perfect positive correlation, -1 mean a perfect negative correlation, while 0 indicates no relationship at all.

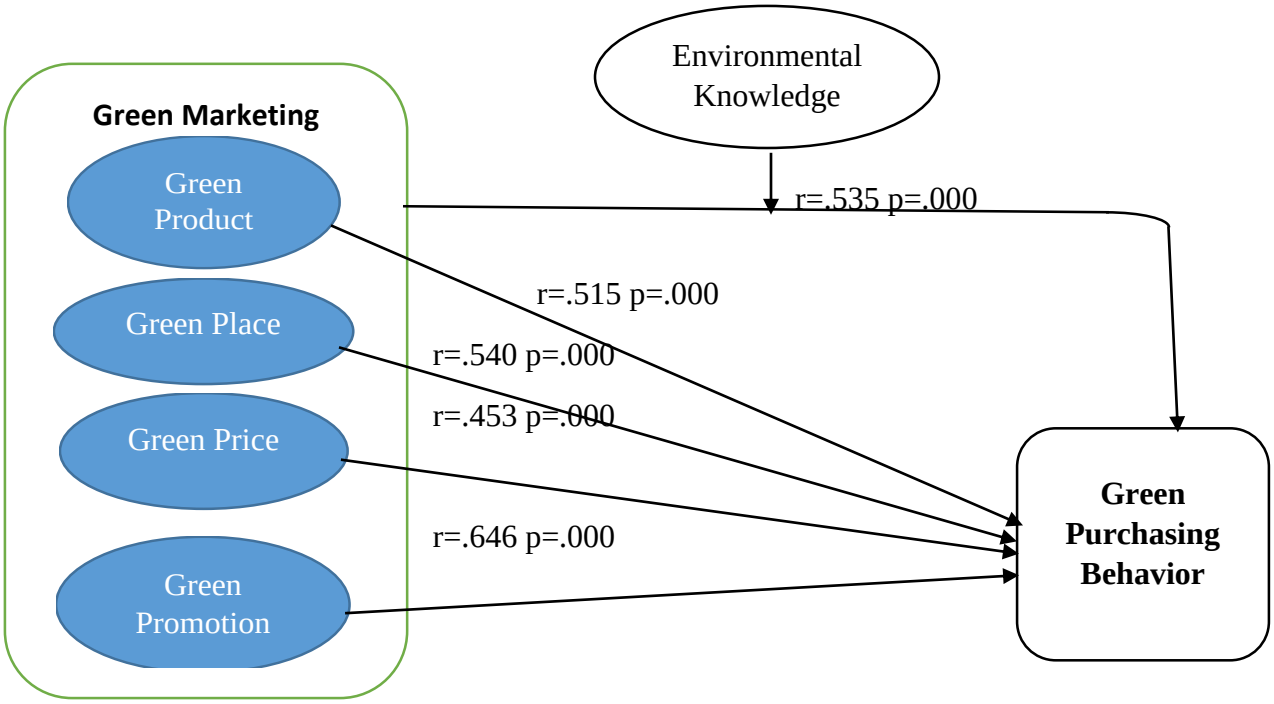
For the rest of the correlation values, the researcher uses the below categories, the correlation value is small if it is within the range of 0.1 to 0.29, for values between 0.3 to 0.49, the correlation becomes moderate while for values between 0.5 and 1, the correlation becomes large (Tesfaye, 2019) cited (Pallant, 2010). The test is valid if the correlation value i.e. Pearson correlation > r and

invalid if Pearson correlation < r. Hence, the sample size is 400 and the number of degree of freedom (DF) i.e. DF=n-2. DF= 400-2= 398.

The critical correlation (RC) value for a significant level of alpha = 0.05 for a two tailed test is:

RC= 0.098

Figure 2: Green marketing Vs. Green purchase behavior Correlation



As indicated in fig 4.1, all dimensions have correlation with Green Marketing.

Green Product = .515 (large correlation)> 0.098, hence **Valid**

Green Price = .453 (moderate correlation)> 0.098, hence **Valid**

Green Place = .540 (large correlation)> 0.098, hence **Valid**

Green Promotion = .646 (large correlation)> 0.098, hence **Valid**

Environmental Knowledge = .535 (large correlation)> 0.098, hence **Valid.**

4.4.1.2.Test of Reliability

The test of reliability evaluates the degree of consistency among multiple measurement of variables. The test of reliability is, therefore, an important step in research undertaking (Hair Jr. et al., 2006). A variable in consideration of any research undertaking is said to be reliable if respondents answer items (questions) in a consistent manner. There are different ways to measure the reliability of the measurement tool. Internal consistency, for example assesses the degree to which the items (questions) measure the same dimension (attribute). Researchers use the measurement of coefficient of Alpha to measure the internal consistency (Zikmund et al., 2010). Another indicator for reliability is the measurement of test-retest, which is undertaken by measuring the measurement scale to the same respondent on two different situations and compare the two scores to their consistency.

Given the foregoing, an Alpha coefficient has score ranging from 0 to 1, where 1 shows a complete or absolute consistency. An Alpha coefficient of 0, on the other hand shows the existence of no internal consistency. Different scholars use different categorization. Research undertakings with a result of an Alpha value above 0.8 are very good in internal consistency and hence good in quality while results between 0.7 and 0.8 are considered to be having well in reliability. An Alpha coefficient value with a score between 0.6 and 0.7 are considered somewhat (fairly) good (Zikmund et al., 2010).

(Hair Jr. et al., 2007) on the other hand, uses the below categorization for Alpha score: An Alpha score (>.9) is excellent, a score (between 0.8 and 0.9) are very good, an Alpha score between (0.7 and 0.8) are good, an Alpha score between (0.6 and 0.7) moderate while an alpha score of (<0.6) is poor in internal consistency. The researcher also uses these categorization in this research undertaking.

Table 5: Reliability Test

Sr. No.	Variables	Cronbach's Alpha score	Item Numbers	Strength of Association (Rating)
1	Green Product	.850	5	Very Good
2	Green Price	.888	5	Very Good
3	Green Placement	.923	4	Excellent
4	Green Promotion	.872	5	Very Good
5	Green purchase Behavior	.762	5	Good
6	Environmental Knowledge	.804	3	Very Good

Source: Field Survey, 2022

4.5. The Descriptive Analysis of Variables

All variables in the questionnaire were examined by the item statements and respondents expressed their agreement level. Hence, the statements which investigate one variable were transformed into a variable index by computing the mean and standard deviations values of the responses to each variable index. The mean is the average responses of respondents for each item of while standard deviation shows the variability of the sample distribution values from the mean (Hair Jr. et al., 2007). If the estimated standard deviations value is larger, it shows the response distribution values not to be close to the mean value indicating inconsistency of responses.

On the other hand, if the estimated standard deviations are small, it indicates the consistency of the responses. This study used a five point Likert scale where 1 represents strongly agree and 5 represents strongly disagree. Hence, a mean value close to one shows high level of agreement. The response distribution with sigma value less than 1 are indicative of consistence while a sigma value greater than one indicates inconsistency.

As stated above, the measuring instrument used a five pint Likert scale to measure the agreement – disagreement level of respondents on the items of each dimension of the variables. The findings of the data is interpreted based on the below standard.

Different scholars use different categories of interpretation for five point Likert scale to interpret and analyze the mean score value of respondents. For this research undertaking, the researcher designates 1 for an agreement level of strongly agree while 5 for strongly disagree. For instance, (Murry, 2013), uses a mean score category benchmark of (1-1.8= Strongly Agree), (1.81-2.6= Agree), (2.61-3.4= Neutral), (3.41-4.2= Disagree) and (4.21-5= Strongly Disagree). On the other hand, other scholars reduced the category to three as (1-2.8= Agree), (2.81-3.2= Neutral) and (3.21-5= Disagree) (Jones & Loe, 2013).

This research undertaking uses the category benchmark as stated by (Jones & Loe, 2013) in order to interpret the findings of this research undertaking.

Table 6: Green Marketing Mean Result

	N	Mean	Std. Deviation
Green Product	400	2.5405	.74374
Green Price	400	2.8955	.88336
Green Placement	400	2.3944	.86127
Green Promotion	400	2.2760	.71351
Green Purchase Behavior	400	2.6375	.71720
Environmental Knowledge	400	2.5658	.77384

Source: Field Survey, 2022

Table 6 above shows the statistical description of green marketing of the 400 respondents and green price recorded the highest mean value score (M=2.8955, SD=.88336) while green promotion shows the lowest mean score value (M=2.2760, SD=.71351). In the following part of this paper, all the dimensions are thoroughly presented and discussed.

Green Product

A product is said to be green product if it is produced to be "environmentally friendly" meaning a product that has a minimum or no bad effect on the environment (Hossain and Rahman, 2018) cited (Diglel & Yazdanifard, 2014). Other researches define green products as those products that have "less negative impact on the environment than normal products" (Dangelico & Pontrandolfo, 2010).

Generally, products which are produced with less energy consumption (Polonsky & Rosenberger, 2001) and which contain eco-friendly ingredients are also green products.

Table 7: Green product one sample statistics

	N	Mean		Std. Deviation
	Statistic	Statistic	Std. Error	Statistic
I feel to help the environment when I use green bottled water product.	400	2.70	.051	1.016
I feel comfortable when I use green bottled water product rather than conventional product.	400	2.69	.052	1.044
My experience on green bottled water product change my belief to do more on Environment.	400	2.60	.043	.865
I aim to buy green bottled water product after my first purchase.	400	2.49	.041	.829
I would recommend green bottled water product to my family and friends.	400	2.23	.047	.934
Valid N (listwise)	400			

Source: Field Survey, 2022

As seen from table 7, the lowest mean score is recorded for the item "I would recommend green bottled water product to my family and friends" while the highest mean score is recorded "I feel to help the environment when I use green bottled water product". This shows that people would recommend the use of green bottled water products to the people around their circle. Overall, the

mean score result of table 4.6 all recorded below 2.8, indicating all the four hundred respondents on average agree to use green products.

Green Price

The price component of green marketing is relatively costlier than those products produced under conventional marketing *(*Bhalero and Deshmukh, 2015). A range of factors are considered by marketers while charging high prices for the green product, including product performance, product function, product design, taste or even product visual appeal (Hossain and Rahman, 2018). As green marketing is a more or less new endeavor, the price of green products are expected to be relatively higher. The dilemma for marketers emanates from being competitive and reasonable on the one hand and green products on the other. Generally, "Nowadays, many consumers are prepared to pay a higher price for the products which observe environmental standards for actual protection of the environment" (Abzari et al., 2013). However, "the price sensitivity regarding green products differs from age to age and generation to generation" (Hossain and Rahman, 2018).

Table 8: Green price one sample statistics

	N	Mean		Std. Deviation
	Statistic	Statistic	Std. Error	Statistic
The price of green bottled water product is reasonable.	400	2.97	.054	1.081
I am willing to pay more for green bottled water product even if they charge higher.	400	2.97	.055	1.106
The price of green bottled water product is proportional with its quality.	400	2.82	.048	.967
The price of green and conventional green bottled water product are the same.	400	3.07	.055	1.091
The performance of green bottled water product justify its price.	400	2.65	.053	1.060
Valid N (listwise)	400			

Source: Field Survey, 2022

As shown from table 8, the lowest mean score is recorded for “the performance of green water bottled water product justify its price” with (M=2.65, SD=1.060). The mean score for the other green price items is more than a mean score of 2.8 indicating that respondents showed a neutral position on the items of green price.

Green Placement

Green placement or distribution refers to all the related actions that firms do while distributing the green product all the way to the final consumers. “Green distribution programs involve actions related to monitoring and improving environmental performance in the firm’s demand chain (Leonidou, Katsikeas, and Morgan, 2013). Placement requires to physically transfer the product to the consumers which we call it physical distribution. “Green place in that sense can be anything which minimizes the customers and the manufacturer’s effort in acquiring and selling a product respectively. Many firms now-a-days have started selling their products online. This really cuts down the customers cost to practically visit a market place” *(*Bhalero and Deshmukh, 2015).

Green place will definitely influence the scope of distribution partners and will also benefit the end user in making the product available at a relatively lower cost. There are a number of practices firms could do in greening their distribution including forming "eco-alliances with channel partners to improve the environmental impact of their joint activities, such as reconfiguring logistics arrangements to make them environmentally efficient (e.g., fewer and fuller cargos)” (Leonidou, Katsikeas, and Morgan, 2013) cited (Dahlstrom, 2011).

Table 9: Green Placement one sample statistics

	N	Minimum	Maximum	Mean	Std. Deviation
I choose a store that carry more eco-friendly bottled water product.	400	1	5	2.39	.977
I choose a store that increase the sale of eco-friendly bottled water product.	400	1	5	2.42	.939
I choose a store that has eco-friendly bottled water shopping space.	400	1	5	2.42	.944
I choose a store that are keen to deal with agents friendly to the environment.	400	1	5	2.35	.961
Valid N (listwise)	400				

Source: Field Survey, 2022

As seen from table 9, the lowest mean score is recorded for the item "I choose a store that are keen to deal with agents friendly to the environment" while the highest mean score is recorded "I choose a store that increase the sale of eco-friendly bottled water product" and "I choose a store that has eco-friendly bottled water shopping space". This shows that people would choose the store that has eco-friendly bottled water shopping space and that increase the sales of eco-friendly bottled water products the use of green bottled water products. Overall, the mean score result of table 4.8 all recorded below 2.8, indicating all the four hundred respondents on average agree to choose a store that adheres the green placement principle.

Green Promotion

Promotion is an important component of the marketing mix which incorporates advertising, sales promotion, personal selling, public relation and direct marketing under it (Kotler and Armstrong, 2014). From the context of green promotions, there are numerous activities firms could do. According to *(*Bhalero and Deshmukh, 2015), firms could do green promotion activities in line with selection of promotion partners, promotional materials and advertising messages.

Over all, "green promotion programs reflect communications designed to inform stakeholders about the firm's efforts, commitment, and achievements toward environmental reservation"

(Leonidou, Katsikeas, and Morgan, 2013). “Tactically, this may also involve actions to reduce any negative environmental impact of the firm's marketing communication efforts” (Kotler, 2011).

Table 10: Green Promotion one sample statistics

	N	Minimum	Maximum	Mean	Std. Deviation
I choose a firm that devotes a distinct special day for the environment.	400	1	4	2.33	.924
I choose a firm that contribute to support the ecological centers.	400	1	5	2.32	.917
I choose a firm that encourage green marketing practices.	400	1	5	2.16	.803
I choose a firm that support seminars, conference & promotional programs.	400	1	5	2.29	.896
Green advertising motivates me to take decisions.	400	1	5	2.28	.838
Valid N (listwise)	400				

Source: Field Survey, 2022

As seen from table 10, the lowest mean score is recorded for the item “I choose a firm that encourage green marketing practices” while the highest mean score is recorded “I choose a firm that devotes a distinct special day for the environment”. Overall, the mean score result of green promotion is less than 2.8, indicating all the four hundred respondents on average agree to choose a bottled water firm that practice on the basis of green promotion principles.

Green Purchase Behavior

Day by day, the awareness of consumers on the environment is growing and with it comes an implications on purchase decisions. According to a survey study conducted, “environmental pollutions and awareness of environmental protection increase the effect of consumer buying behavior” (Boztepe, 2012).

If consumers are conscious enough on the environment, they can “assess the presence of environmental resources, their cost of use as well as the impact of this use to the environment and

to themselves" (Babaoğul and Ozgun, 2008). This could affect business's overall performance and could ultimately decide survival of business.

Table 11: Green Purchase Behavior one sample statistics

	N	Minimum	Maximum	Mean	Std. Deviation
I make special effort to buy bottled water products that are made from recycled materials	400	1	4	2.66	1.022
I have switched bottled water products for ecological reasons	400	1	5	2.67	.905
When I have a choice between two equal products, I choose eco-friendly ones	400	1	5	2.15	.975
I make special effort to buy bottled water that are environmental friendly	400	1	5	2.55	1.068
I have avoided buying bottled water products because of environmental reasons	400	1	5	3.17	1.031
Valid N (listwise)	400				

Source: Field Survey, 2022

As seen from table 11, the lowest mean score is recorded for the item "When I have a choice between two equal products, I choose eco-friendly ones" while the highest mean score is recorded "I have avoided buying bottled water products because of environmental reasons". This shows that people that have an awareness on the environment or who are environmental knowledgeable would choose a bottled water company that promotes its products and services in line with the green marketing practices. Overall, the mean score result of green purchase behavior all recorded below 2.8, indicating that environmental knowledgeable persons in Addis Ababa on average agree that their purchase behavior is affected by the green marketing practices of bottled water companies.

Environmental Knowledge

Day by day, the awareness of consumers on the environment is growing and with it comes an implications on purchase decisions. According to a survey study conducted, "environmental pollutions and awareness of environmental protection increase the effect of consumer buying behavior" (Boztepe, 2012).

If consumers are conscious enough on the environment, they can "assess the presence of environmental resources, their cost of use as well as the impact of this use to the environment and to themselves" (Babaoğul and Ozgun, 2008). This could affect business's overall performance and could ultimately decide survival of business.

Table 12: Environmental Knowledge one sample statistics

	N	Minimum	Maximum	Mean	Std. Deviation
I know that I buy bottled water products that are environmentally friendly.	400	1	4	2.60	.890
I am very knowledgeable about environmental issues.	400	1	5	2.39	.889
I know a lot of information about environmental friendly bottled water products.	400	1	5	2.71	.958
Valid N (listwise)	400				

Source: Field Survey, 2022

As seen from table 12, the lowest mean score is recorded for the item "I am very knowledgeable about environmental issues" while the highest mean score is recorded "I know a lot of information about environmental friendly bottled water products". The overall mean score of the result is lower than 2.8, which indicates that the educated segment of the Addis Ababan population have an environmental knowledge. This in other words mean that on average the educated segment of the population, know what kind of ramification their bottled water purchase decision has on the environment.

Moderating Effect of Environmental Knowledge

This research undertaking assumed environmental knowledge to play a moderating role in the effect of green marketing on the green purchase behavior of consumers. The assumption is for green marketing to have a significant effect on the green purchase behavior of consumers, environmental knowledge of the consumer plays a moderating effect i.e. if environmental knowledge of consumers increases, green marketing significantly affects the green purchase behavior and vice versa. Accordingly, table 19 and 20 as well as fig 9 of this research undertaking confirms this assumption. Hence, green marketing practices of bottled water firms has a profound effect on green purchase behavior of consumers if environmental knowledge of consumers is higher and vice versa.

Details of the environmental knowledge having a positive and significant moderating effect on green marketing practices is presented in the hypothesis testing section specifically at table 19 and 20 as well as fig 9 of this research undertaking.

4.6. Inferential Tests

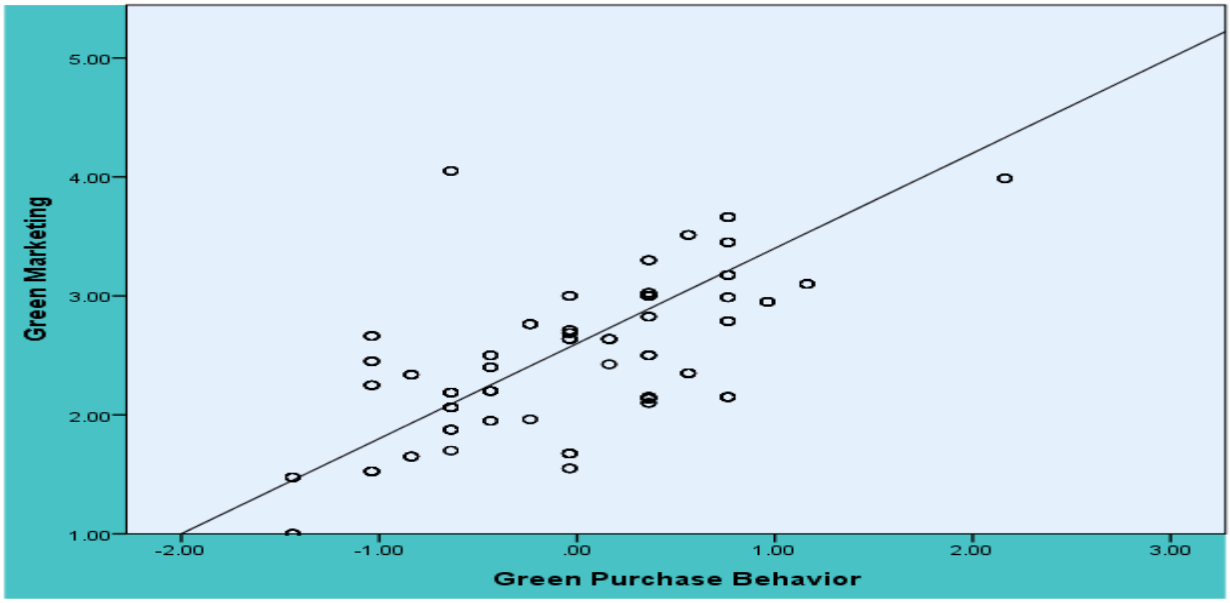
4.6.1. Regression Assumption Tests

For a regression analysis to be valid, it has to pass through regression assumption tests. There are six assumptions tests that are like a prerequisite for a regression analysis. These assumption tests are Linearity, independence of residual, multicollinearity, normality of residual, homoscedasticity and outliers. The normal probability plot (PP Plot) and the scatter plot of the standardized residual are also tested to examine and validate the regression analysis. The below section presents each test, discusses and checks whether each data meets the requirement for the analysis to be reliable and valid by checking these assumption tests.

Assumption 1: The relationship between the Independent and Dependent variable is Linear.

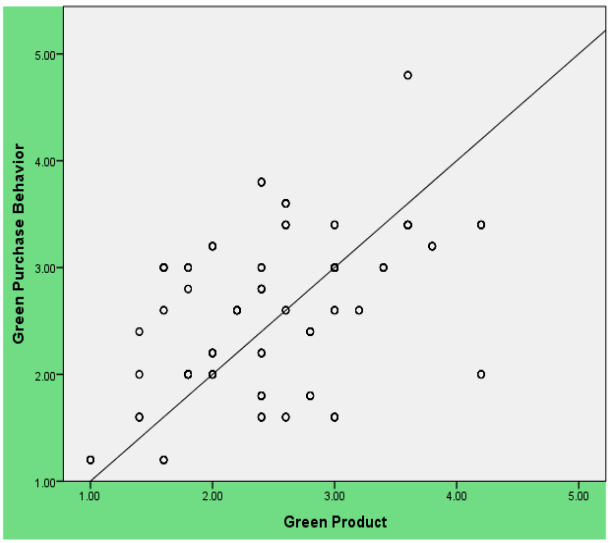
The linearity assumption assumes that the relationship between the independent variable (IV) and dependent variable (DV) is characterized by straight line i.e. linearity. Looking the below figure 4 clearly shows that the relationship between the IV and DV can be modelled by a straight line, which suggests that the relationship between the variables is linear.

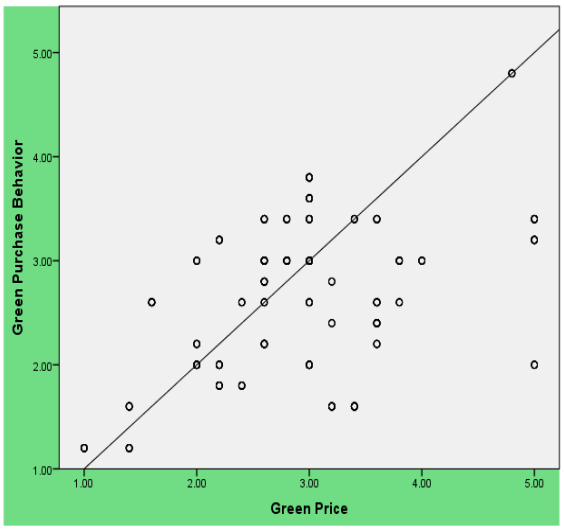
Figure 3: Scatter plot of Green Marketing (IV) and Green Purchase Behavior (DV)

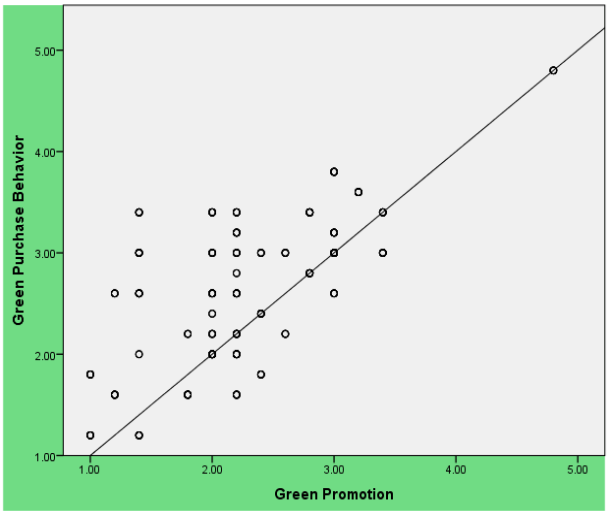


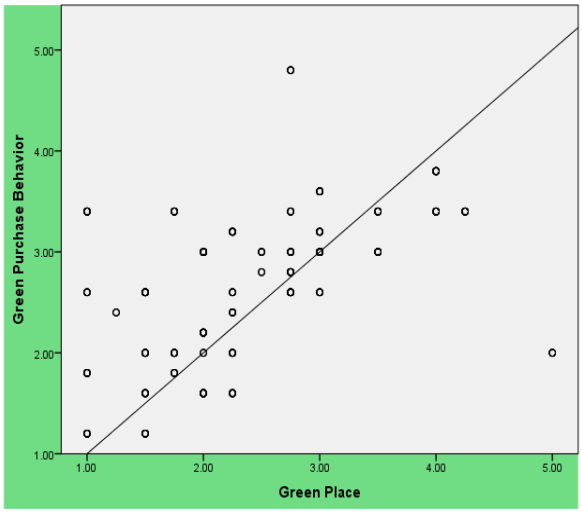
Source: Field Survey, 2022

Figure 4: Scatter plot of the latent variables of Green Marketing (IV) and Green Purchase Behavior (DV).









Source: Field Survey, 2022

Again, as seen from fig 5 above, the relationship between each of the latent variable of green marketing (IVs) with green purchase behavior (DV) can be modelled by a straight line, which suggest the relationship between these variables is linear, by extension confirms the assumption of linearity.

Assumption 2: The values of Residuals are Independent

After confirming the relationship between IV and DV to be linear in the first assumption test, the second test is residual test. Once the linear assumption models the data, the test of residual allow to how well the straight line models the data by looking at how closely the different data points fall to the line i.e. the closer they fall, the more accurate the model is. To check this assumption, the use of Durbin-Watson statistics allows to check if the residuals are independent or uncorrelated. This statistics may vary from 0 to 4. For the assumption to be met, the value close to 2 has to be recorded. Values below 1 and above 3 are troubling and makes the data to be invalid.

Table 13: Residual Independence Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.702[a]	.492	.487	.51358	2.065

a. Predictors: (Constant), Green Promo, Green Product, Green Price, Green Place
b. Dependent Variable: Green Purchase Behavior

Source: Field Survey, 2022

As seen from table 13, the Durbin-Watson statistical score is 2.065, which is very much close to the standard score of 2 making the residual as independent or uncorrelated and by extension suggesting the assumption is met.

Assumption 3: Multicollinearity

This is another assumption which checks whether the predictor or Independent Variable (Green marketing) are not too highly correlated. In order to check whether this assumption is met or, one should examine that the predictor variables are not too highly correlated with one another. In order to check this assumption, we can do this in in two ways. We can look at the correlation table. A correlation score of above 0.8 is problematic and if it happens, it is recommended to remove one or some of the latent variables of the IV. We can also check this assumption by looking at the coefficients table and check the tolerance and VIF statistics. The VIF score should be less than 10 and tolerance statistics should be above 0.2 for the assumption of multicollinearity to be met (Fritz and Morris, 2012). Accordingly, table 14 below confirms that the assumption of multicollinearity is met as all VIF statistics are less than 10 and all tolerance statistics are above 0.2.

Table 14: Multicollinearity Statistics

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	.717	.107		6.715	.000		
Green Product	.236	.043	.245	5.430	.000	**.634**	**1.578**
Green Price	.012	.039	.015	.302	.763	**.547**	**1.829**
Green Place	.137	.042	.164	3.291	.001	**.517**	**1.934**
Green Promotion	.422	.049	.420	8.558	.000	**.534**	**1.871**

a. Dependent Variable: Green Purchase Behavior

Source: Field Survey, 2022

Table 15: Correlations

		Green Purchase Behavior	Green Product	Green Price	Green Place	Green Promotion
Pearson Correlation	Green Purchase Behavior	1.000	.515	.453	.540	.646
	Green Product	.515	1.000	.567	.408	.466
	Green Price	.453	.567	1.000	.554	.498
	Green Place	.540	.408	.554	1.000	.639
	Green Promotion	.646	.466	.498	.639	1.000
Sig. (1-tailed)	Green Purchase Behavior	.	.000	.000	.000	.000
	Green Product	.000	.	.000	.000	.000
	Green Price	.000	.000	.	.000	.000
	Green Place	.000	.000	.000	.	.000
	Green Promotion	.000	.000	.000	.000	.
N	Green Purchase Behavior	400	400	400	400	400
	Green Product	400	400	400	400	400
	Green Price	400	400	400	400	400
	Green Place	400	400	400	400	400
	Green Promotion	400	400	400	400	400

Source: Field Survey, 2022

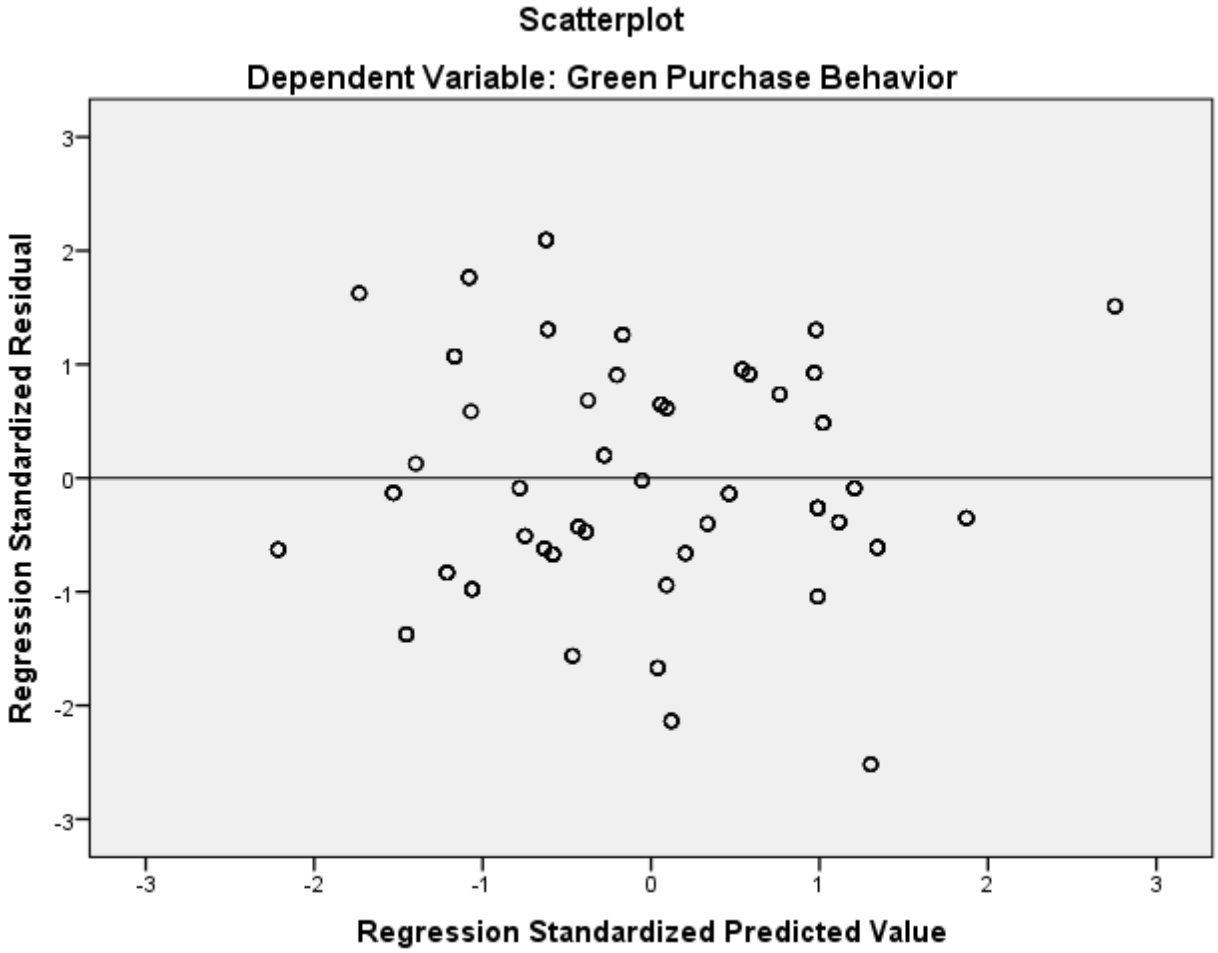
Table 15 above shows a correlation value of less than 0.8 for all the predictor variables of IV and confirms that the assumption of multicollinearity is also met by the two tests i.e. the correlation table 15 and the tolerance and VIF statistics as depicted in table 14 above.

Assumption 4: The Variance of the Residuals is Constant (Homoscedasticity)

The assumption of homoscedasticity checks the variations in the residuals or the amount of error in the model is similar at each point of the model. The output graph plots the standardized values the model predicts against the standardized residuals obtained. Hence, for this assumption to be met, one condition should be fulfilled i.e. as the predicted value increase (along the X-axis), the

variation in the residuals should roughly be similar and should resemble a random array of dots. If the dots in the graph, however, looks like a funnel shaped, it is likely that the assumption of homoscedasticity may have been violated.

Figure 5: Graph for Homoscedasticity Assumption Check



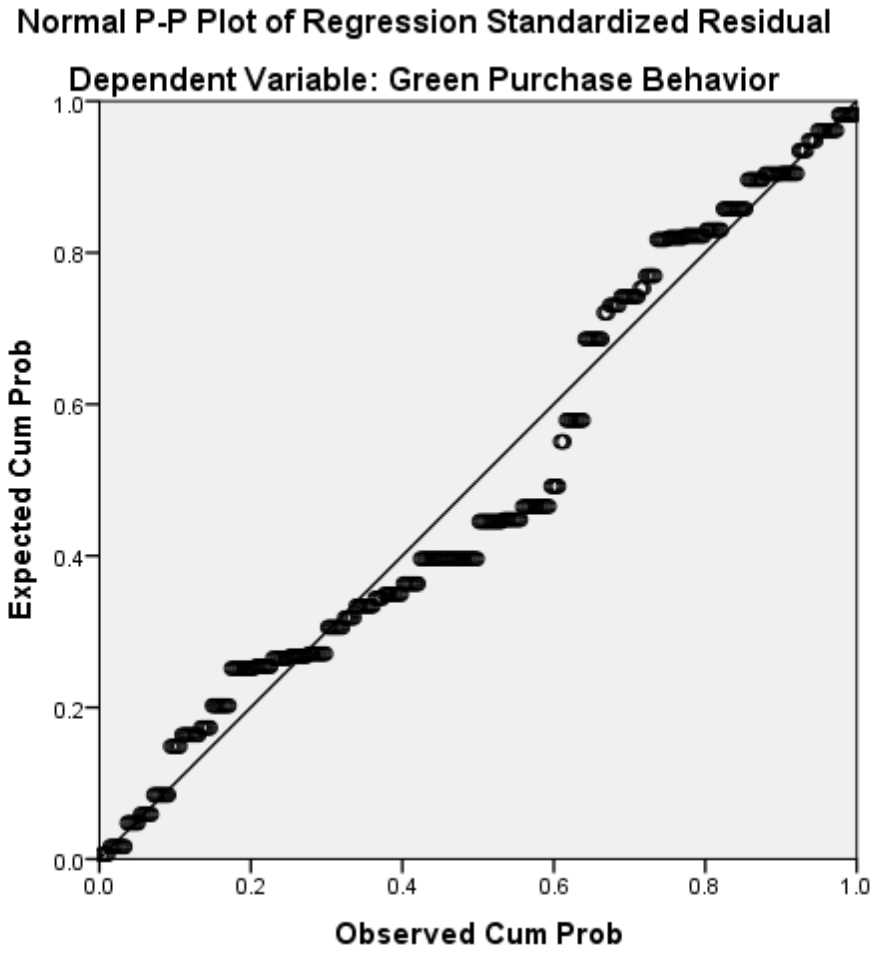
Source: Field Survey, 2022

Figure 6 above shows, as the predicted values along the x-axis increases, the variation in the residuals looks roughly similar and resembles a random array of dots and do not look like a funnel shaped suggesting the 4th assumption of homoscedasticity being met.

Assumption 5: The Values of the Residuals are Normally Distributed

The fifth assumption, which is normality of the residuals, can be tested by looking at the P-P plot for the model. As the dots lie closer to the diagonal line, the closer to normal the residuals are distributed.

Figure 6: Normality of Residuals (P-P Plot)



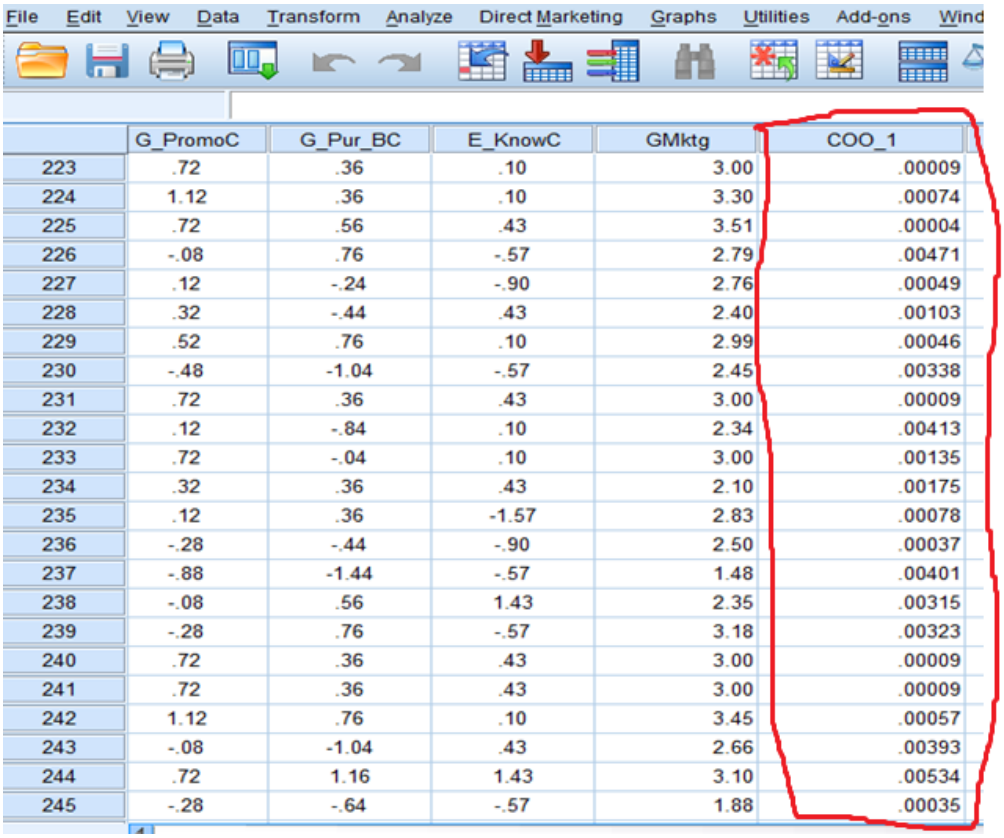
Source: Field Survey, 2022

As depicted in fig 7, the data points more or less lie close to the diagonal point which more or less suggests the assumption of normality of residuals to be met.

Assumption 6: There are no Influential cases biasing the Model (Outliers)

The final assumption to be met for regression analysis test is the assumption that there should not be significant outliers and influential data points that can place undue influence on the model as it makes the data less representative as a whole. In order to check if that is the case, one has to test for influential cases using Cook's distance. Hence, the Cook's distance score value for each participant has to be lower than 1 as any value above 1 is could likely be significant outliers. Hence, create undue influence on the model, which should, therefore, be removed.

Figure 7: Graph for Outliers Test



	G_PromoC	G_Pur_BC	E_KnowC	GMktg	COO_1
223	.72	.36	.10	3.00	.00009
224	1.12	.36	.10	3.30	.00074
225	.72	.56	.43	3.51	.00004
226	-.08	.76	-.57	2.79	.00471
227	.12	-.24	-.90	2.76	.00049
228	.32	-.44	.43	2.40	.00103
229	.52	.76	.10	2.99	.00046
230	-.48	-1.04	-.57	2.45	.00338
231	.72	.36	.43	3.00	.00009
232	.12	-.84	.10	2.34	.00413
233	.72	-.04	.10	3.00	.00135
234	.32	.36	.43	2.10	.00175
235	.12	.36	-1.57	2.83	.00078
236	-.28	-.44	-.90	2.50	.00037
237	-.88	-1.44	-.57	1.48	.00401
238	-.08	.56	1.43	2.35	.00315
239	-.28	.76	-.57	3.18	.00323
240	.72	.36	.43	3.00	.00009
241	.72	.36	.43	3.00	.00009
242	1.12	.76	.10	3.45	.00057
243	-.08	-1.04	.43	2.66	.00393
244	.72	1.16	1.43	3.10	.00534
245	-.28	-.64	-.57	1.88	.00035

Source: Field Survey, 2022

As shown in fig 8, Cook's distance values for all participants is way below 1 indicating this assumption is yet again met making all the six regression test to be met and in order making the regression analysis to be valid.

4.6.2. The Effect of Green Marketing on Green Purchasing Behavior

This research undertaking conducts a standard multiple regression of 0.05 (two tailed) to examine the effect green marketing has on the green purchasing behavior of consumers and the result has showed how the green marketing dimension (latent variables) predict green purchase behavior of individual consumers among the people with environmental knowledge. Besides, it shows how much the green purchase behavior is explained by the dimensions of the predictor (independent) variable i.e. green marketing.

The dimensions of the predictor variable (green marketing) are green product, green price, green placement and green promotion. These green 4Ps are the traditional marketing mixes adding the prefix green to indicate their harmony with the environment in line with the green marketing principles. The dependent variable is the green purchasing behavior.

Table 16: Green Marketing & its effect on the Green Purchasing Behavior - Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.702[a]	.492	.487	.51358

a. Predictors: (Constant), Green Promotion, Green Product, Green Price, Green Place

Source: Field Survey, 2022

As shown in the regression assumption tests, all the six regression assumption tests are all in order and showed no major violation. This suggests that the model as shown in table 16 above relatively is able to predict the dependent variable (green purchasing behavior). Accordingly, R Square (as a statistical measure which represents the proportion of the variance for green purchasing behavior that is explained by green marketing) is (R^2 = 0.492) indicates that 49.2% of variance in green purchasing behavior can be explained by the four dimensions of the green marketing dimensions i.e. green product, green price, green placement and green promotion. On the other hand, the remaining 50.8% of green purchasing behavior are explained by other variables. Some possible explanations for this could be the perception of bottled water consumers that the practice of green marketing among the Ethiopian water bottling companies may be at lower stage and choices are

limited in line with green marketing principles. The researchers semi structured interview with the sample water bottling companies also provides some hints for this assumption.

Table 17: Green Marketing & its effect on the Green Purchasing Behavior – ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	101.052	4	25.263	95.780	.000[b]
	Residual	104.186	395	.264		
	Total	205.237	399			

a. Dependent Variable: Green Purchase Behavior

b. Predictors: (Constant), Green Promotion, Green Product, Green Price, Green Place

Source: Field Survey, 2022

Analysis Of Variance (ANOVA) test generally indicates whether the model results in a good degree of prediction of the outcome variable (green purchasing behavior). Accordingly, the ANOVA table 17 above shows a significance level of 0.000 which is perfect in predicting the outcome variable even at 0.01 level let alone at 0.05 level.

Individual Parameter Significance Test

This test shows how strong an independent variable (green marketing practice) individually affects the dependent variable (green purchasing behavior). Besides, the test identifies which the green marketing dimensions contributes most in predicting the green purchase variable. This will answer one research objective of this research undertaking i.e. identify which dimension highly contribute to the green purchasing behavior of consumers. One can identify the most predicting variable (dimension) by using a standardized coefficient of Beta. Beta coefficient shows the direct effect of the independent variables on the dependent variables (Kothari, 2004). In order to do this, one should first find the Beta coefficients for each predictor variable of the independent variable.

Table 18: Summary of Regression Analysis for Predictor Variables (Coefficients)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.717	.107		6.715	.000
	Green Product	.236	.043	.245	5.430	.000
	Green Price	.012	.039	.015	.302	.763
	Green Place	.137	.042	.164	3.291	.001
	Green Promotion	.422	.049	.420	8.558	.000

a. Dependent Variable: Green Purchase Behavior

Source: Field Survey, 2022

The regression coefficient explain the amount of change in the dependent variable (green purchasing behavior) as a result of a one unit of change in the independent variable (green marketing). Hence, the larger the value of Beta an independent variable has, the more it affects the dependent variable i.e. the more it brings change to the dependent variable. In other words, it predicts or contributes highly to the dependent variable.

Accordingly, table 18 above shows green product, green placement and green promotion as having a significant association with the green purchasing behaviors of consumers at <0.05. Green price shows not a significant association with green purchasing behavior. On the other hand, all the four dimensions i.e. green product, price, placement and promotion of green marketing shows positive relationship with (Beta=.236), (Beta=.012), (Beta=.137) and (Beta= .422), respectively. The positive slope, therefore, indicates green purchase behavior increases as each dimension of green marketing increases.

Hence, green promotion with a Beta value of .422, contributes highly to the green purchase behavior of consumers i.e. for every one unit increase of green promotion, the green purchase behavior increase with .422 followed by green product and green placement with Beta value of .236 and .137, respectively.

4.7. Hypothesis Testing

In this research undertaking, the researcher hypothesized the below:

H1: Green product has a positive and significant relationship on the green purchase behavior of consumers:

H2: Green price has a positive and significant relationship on the green purchase behavior of consumers:

H3: Green placement has a positive and significant relationship on the green purchase behavior of consumers:

H4: Green promotion has a positive and significant relationship on the green purchase behavior of consumers:

***H5*:** Environmental knowledge moderates the positive relationship between green marketing and green purchasing behavior whereby the relationship is strong when environmental knowledge is high.

In order to test the above stated prepositions, the result of the multiple regression analysis is required. This can be done by comparing sig. value from table 18 above. The idea is to reject the H0 if Sig. ≤ 0.05 and not reject it if Sig. ≥ 0.05. As stated above, beta coefficient is used to evaluate the direction of relationship (either negative or positive). Following, each null and alternative hypothesis are tested and discussed.

H1o: Green product has a positive and significant relationship on the green purchase behavior of consumers.

H1a: Green product has no positive and significant relationship on the green purchase behavior of consumers.

As seen from table 18 above, the green product dimension's value, p-value is p=.000 which is significant as ($p<0.05$). Furthermore, the Beta value is positive. Hence, green product has a positive and significant relationship with the green purchase behavior of bottled water consumers in Addis Ababa. Therefore, H1o is supported.

H2o*:* Green price has a positive and significant relationship on the green purchase behavior of consumers:

H2a**:** Green price has no positive and significant relationship on the green purchase behavior of consumers:

As depicted from table 18 above, the green price dimension's value, p-value is p=.763, which is not significant as (p>0.05). The Beta value is positive. Hence, green price has a positive but not significant relationship with the green purchase behavior of bottled water consumers in Addis Ababa. Therefore, H2o is not supported.

H3o: Green placement has a positive and significant relationship on the green purchase behavior of consumers:

H3a: Green placement has no positive and significant relationship on the green purchase behavior of consumers:

As seen from table 18 above, the green placement dimension's value, p-value is p=.001, which is significant as (p<0.05) and the Beta value is also positive. Hence, green placement has a positive and significant relationship with the green purchase behavior of bottled water consumers in Addis Ababa**.** Therefore, H3o is supported.

H4o: Green promotion has a positive and significant relationship on the green purchase behavior of consumers:

H4a: Green promotion has no positive and significant relationship on the green purchase behavior of consumers:

As depicted from table 18 above, the green promotion dimension's value, p-value is p=.000, which is significant as (p<0.05) and Beta value is also positive. Hence, green promotion has a positive and significant relationship with the green purchase behavior of bottled water consumers in Addis Ababa**.** Therefore, H4o is supported.

***H5o*:** Environmental knowledge moderates the positive relationship between green marketing and green purchasing behavior whereby the relationship is strong when environmental knowledge is high.

H5a: Environmental knowledge not moderates the positive relationship between green marketing and green purchasing behavior whereby the relationship is strong when environmental knowledge is high.

Table 19: Environmental Knowledge as a Moderating Variable (Model 1)

```
Model  : 1
    Y  : Green Purchase Behavior
    X  : Green Marketing
    W  : Environmental Knowledge

Sample
Size:  400

**************************************************************************
OUTCOME VARIABLE:
Green Purchase Behavior

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .727       .529       .244    148.407      3.000    396.000       .000

Model
                coeff         se          t          p       LLCI       ULCI
constant      -1.190       .342     -3.480       .001     -1.862      -.518
Green
Marketing      1.229       .130      9.451       .000       .973      1.484
Environmental
Knowledge       .916       .133      6.881       .000       .654      1.177
Int_1          -.242       .046     -5.211       .000      -.333      -.150
```

Source: Field Survey, 2022

As seen from table 19 above, the model show green marketing (Independent variable) having Beta value (B=1.229, se= .130, p=.000) and environmental knowledge (moderating variable) has a Beta value (B=.916, se=.133, p=.000). This shows environmental knowledge has a positive and significant relationship with green marketing.

Table 20: Environmental Knowledge as a Moderating Variable

```
    Focal predict: Green Marketing          (X)
          Mod var: Environmental Knowledge  (W)

Conditional effects of the focal predictor at values of the moderator(s):

    E_Knowl     Effect         se          t          p       LLCI       ULCI
      2.000       .745       .053     13.976       .000       .640       .850
      2.667       .584       .045     13.124       .000       .497       .672
      3.000       .504       .048     10.578       .000       .410       .597

Data for visualizing the conditional effect of the focal predictor:
```

Source: Field Survey, 2022

Furthermore, as seen from table 20above:

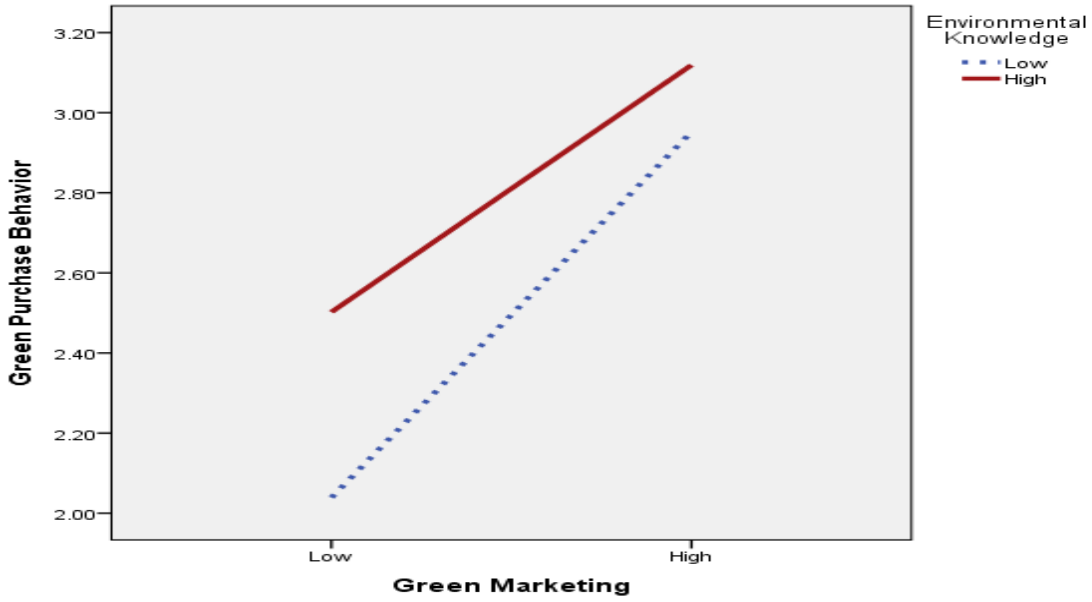
At the mean value 2.000, the effect is .745 se=.053, [640, .850];

At the mean value 2.667, the effect is .584, se=.045 [.497, .672];

At the mean value 3.000, the effect is .504, se=.048 [.410, .597].

Fig 9 below further illustrates the moderating effect of environmental knowledge.

Figure 8: Environmental knowledge



Source: Field Survey, 2022

Accordingly, based on the results of table 19 and 20 as well as fig 9, the moderating effect environmental knowledge has on green purchase behavior is clearly depicted. In other words, when environmental knowledge increases, the effect green marketing has on green purchase behavior also increases. Hence, Environmental knowledge moderates the positive relationship between green marketing and green purchasing behavior whereby the relationship is strong when environmental knowledge is high. This is because p-value, which is .000 is significant as ($p<0.05$). Hence, H5o is supported.

4.8. Qualitative Analysis of Green Marketing practices in the Water Bottling Industry

Currently, there are more than 106 water bottling companies in the Ethiopian bottling water industry. The majority of them are concentrated in and around Addis Ababa for practical reasons including market access. The total investment capital of these bottling companies is around ETB 340 billion (approximately USD 7 billion at the average exchange rate for the current year).

The number of bottling companies vary from time to time as there are additional bottlers which are on the pipeline to join the industry while others make an exit from the industry. According to the association (EBSMIA), these companies "in total contribute to employing some 58,000 full and part-time employees with an average of 552 work force per company".

As stated in the sampling and population part of these research undertaking, the researcher uses two unit of analysis i.e. individual consumers and bottling water firms in the industry. The use of these bottling water firms as a primary data source enlightened the researcher about the green marketing practices of the industry and the researcher used it in chapter four for triangulation. The researcher used semi-structured interview to get the primary qualitative data and following is the main takeaway regarding green marketing practices.

As it is well known, the plastic package for the product is the product of fossil fuels which is hazardous to the environment as these bottles do not easily decompose in a short period of time. The technical terms for these materials are PET, LDPE and HDPE (which are not biodegradable materials). Hence, as far as green marketing practices are concerned, these bottling water companies are in three different stages (according to the assessment of the researcher).

There are some firms who have an advanced knowledge about green marketing practices and more or less try to practice it at a minimal levels. These are companies who imported a recycling machines for these plastics bottles to make other products like polyester, rope and the like or export these recycled materials abroad in the form of granules. Another green marketing practice these firms do is removing the color master batch and making the plastic package look like a light blue. Plastics are nearly colorless (milky-white) and adding colorants like pigments (blue pigment) makes the plastic colorant. The main function of master batch is to make the package appealing.

It however, is hazardous to the environment. Furthermore, according to one interviewee, Ethiopia spends more than 23 million USD per annum just to import these master batch only as a colorant. Hence, these firms avoid importing this material not only to save money but in line with green marketing practices. Not only avoiding the master batch is relatively better to the environment, it also allows to get more revenue from the export of granules. According to the interviewee, a 1.5 ton export with the master batch is USD700 while it is USD900 without the master batch. As far as the price component is concerned, these firms are working to introduce an outer package (outer package is a package by which dozens or ha a dozen plastic water are packaged) of cartoon rather than LDPE (which is hazardous to the environment). These endeavor will definitely cost more than the conventional LDPE outer package. Reducing the weight of plastic packaging used is also done by these firms. These firms are trying to work with the government and with some star hotels as the price will be higher. They also plan to change the plastic bottles to an actual bottles with these niche market. As far as placement is concerned, these firms are working not only distributing the product with agents, they also use latest vehicle to distribute the product directly to consumers. Furthermore, these firms are expanding the factory to major towns of the country and save emissions by transporting more. They also erect water depots in major regional towns. These are relatively in line with green marketing practices. As far as promotion is concerned, these firms commit a tiny proportion of the sales amount from each product for environmental causes and work on various corporate social responsibility (CSR) endeavors. They also participate in various green legacy projects. Generally, these firms, more or less participate in various green marketing activities, however, small it might have been.

The second group of firms in the Ethiopian water bottling industry are those firms who has an understanding about green marketing practices, but do engage in none of these practices. As an example for firms which are in this category, the researcher used the below question to one of these firms:

> *Green placement or distribution refers to all the related actions that firms do while distributing the green product all the way to the final consumers. The inbound and outbound distribution system of firms can be handled by complying with green*

distribution practices. How do you ensure that distributing your products to consumers is undertaken with minimal harm to the environment?

And got the below answer:-

The honest answer is that NO BODY CARES IN ETHIOPIA. If in-fact anyone cared, the government would have given incentives to attract investment in this area, which it has not. On the contrary, the product is under heavy Excise Tax duty, as it only serves a small proportion of Ethiopia's 120 million people.

Question and answer of these kind only confirms that firms in this category are aware of the green marketing practices but do not engage.

In the third category are firms which do not have any clue about green marketing practices.

Overall, the concept of green marketing is relatively a new phenomenon in Ethiopia and may take some decades before full comprehension and application. There are, however, some exercises which are worth appreciation and encouragement from all corners.

N.B.: General questions for the semi structured interview are annexed.

4.9. The Relationship Between Green Marketing and Green Purchase Behavior

The correlation table 21 below shows the relationship each dimension of green marketing dimension has on the green purchase behavior. The table confirms, all the four dimension of green marketing i.e. green product, green price, green placement and green promotion have positive relationship with green purchase behavior.

Table 21: Correlations for the IV and DV

		Green Product	Green Price	Green Place	Green Promotion	Green Purchasing Behavior
Green Product	Pearson Correlation	1	.567**	.408**	.466**	.515**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	400	400	400	400	400
Green Price	Pearson Correlation	.567**	1	.554**	.498**	.453**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	400	400	400	400	400
Green Place	Pearson Correlation	.408**	.554**	1	.639**	.540**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	400	400	400	400	400
Green Promotion	Pearson Correlation	.466**	.498**	.639**	1	.646**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	400	400	400	400	400
Green Purchasing Behavior	Pearson Correlation	.515**	.453**	.540**	.646**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	400	400	400	400	400

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Field Survey, 2022

CHAPTER FIVE

5. SUMMARY, CONCLUSION AND RECOMMENDTION

5.1. Introduction

Chapter five of the research study presents the key findings, summaries, conclusion as well as the recommendation part of the research. The chapter consists three parts namely, i) Summary, ii) Conclusion part, and iii) Recommendation. The recommendation part includes the major implication of the research findings and recommendations for further studies.

5.2. Summary

The research study had one general objective to achieve, which is to examine the effect of green marketing on the green purchase behavior of consumers in the Ethiopian water bottling industry. In order to achieve this objective, an appropriate research methodology was designed and a research proposal was produced. The researcher later has successfully defended the proposal after comments and feedbacks were given by the examiner. After incorporating these comments and feedbacks and in consultation with the advisor, the proposal got a final approval to conduct the research.

In order to collect the primary data, a questionnaire was adopted and distributed to four hundred individual consumers and a semi structured interview were conducted with five sample water bottling companies in the industry. Following this, the measure of goodness test i.e. reliability and validity tests were conducted and found to be in order. The Pearson Correlation values of all the independent variable dimensions are greater than the corresponding critical correlation values while the Cronbach Alpha correlation coefficients were as per the standard making the research finding a valid one. Furthermore, the regression assumption test of the research finding confirmed that 49.2% of variance in green purchasing behavior can be explained by the four dimensions of the green marketing dimensions i.e. green product, green price, green placement and green promotion.

Major findings of the research undertaking are presented in the conclusion part below.

5.3. Conclusions

The first specific objective of the research undertaking was to examine whether green product contributes on the green purchase behavior of consumers. Accordingly, the research finding has concluded that green product has a positive and significant relationship with the green purchase behavior of bottled water consumers in Addis Ababa.

The second specific objective of the research undertaking was to examine whether green price contributes on the green purchasing behavior of consumers. Accordingly, the research finding has concluded that green price has a positive but not significant relationship with the green purchase behavior of bottled water consumers in Addis Ababa.

The third specific objective of the research undertaking was to examine whether green placement contributes on the green purchasing behavior of consumers. Accordingly, the research finding has concluded that green placement has a positive and significant relationship with the green purchase behavior of bottled water consumers in Addis Ababa**.**

The forth specific objective of the research undertaking was to examine whether green promotion contributes on the green purchasing behavior of consumers. Accordingly, the research finding has concluded that, green promotion has a positive and significant relationship with the green purchase behavior of bottled water consumers in Addis Ababa**.**

The fifth specific objective of the research undertaking was to identify which green marketing dimension highly contribute on the green purchase behavior of bottled water consumers. Accordingly, the research finding has concluded that green product, green placement and green promotion as having a significant association with the green purchasing behaviors of consumers in Addis Ababa at <0.05. Green price, on the other hand, has not a significant association with green purchasing behavior of consumers. Despite the significance, all the four dimensions i.e. green product, price, placement and promotion of green marketing shows positive relationship with (Beta=.236), (Beta=.012), (Beta=.137) and (Beta= .422), respectively. Green promotion, however, is the one which highly contributes on the green purchasing behavior of consumers in Addis Ababa with Beta value of .422 followed by green product with Beta value of .236 while green placement stood third with a Beta value of .137.

The sixth specific objective of the research undertaking was to examine whether green marketing generally affects the green purchase behavior of bottled water consumers. Accordingly, the finding of correlation confirms that the four constructs of green marketing have a positive relationship with green purchase behavior of bottled water consumers.

The seventh specific objective of the research undertaking was to examine whether environmental knowledge plays an important moderating role in shaping the green purchase behavior of consumers. Accordingly, the research undertaking has concluded that environmental knowledge moderates the positive relationship between green marketing and green purchasing behavior whereby the relationship is strong when environmental knowledge is high. In other words, when environmental knowledge increases, the effect green marketing has on green purchase behavior also increases.

The final specific objective of the research undertaking was to evaluate the practice of green marketing in the water bottling companies of Addis Ababa. Accordingly, the researcher concluded the practice of green marketing by categorizing companies in to three levels i.e.:-

Those which have the knowhow about green marketing and more or less practice green marketing;

Those which have the knowhow about green marketing but do not engage in the practice;

Those which do not have the knowhow about green marketing.

5.4. Recommendation

Results findings from the research undertaking confirms the existence of a considerable number of bottled water consumers which have green purchasing behavior among the educated corners of Addis Ababa. Those water bottling companies, which in one way or the other practice green marketing could target these niche.

The research undertaking concluded that green promotion plays a dominant role in affecting green purchasing behavior of bottled water consumers in Addis Ababa. Those water bottling companies, which in one way or the other practice green marketing could exploit this situation.

Those water bottling companies who the researcher had contacted for interview exhibited different awareness level regarding green marketing practices. Some are relatively in better state than other. On the other hand, the research has also concluded the existence of a considerable number of consumers which have green purchasing behavior especially among the educated ones. Hence, those water bottling companies, which relatively practice green marketing could exploit the competitive edge they have over those firms which do not practice.

6. REFERENCES

Abzari, M., Safari Shad, F., Abedi Sharbiyani, A.A. and Parvareshi Morad, A. (2013) 'Studying the effect of green marketing mix on market share increase' *European Online Journal of Natural and Social Sciences*: Proceedings, 2(3 (s)), pp.pp-641.

Agyeman, C.M., (2014) 'Consumers' buying behavior towards green products: An exploratory study', *International journal of management research and business strategy*, 3(1), pp.188-197.

Andaregie, A. and Astatkie, T. (2021) 'Determinants of the adoption of green manufacturing practices by medium-and large-scale manufacturing industries in northern Ethiopia' *African Journal of Science, Technology, Innovation and Development*, pp.1-16.

Ansar, N. (2013) 'Impact of green marketing on consumer purchase intention', *Mediterranean Journal of Social Sciences*, 4(11), pp.650-650.

Armstrong, G., Adam, S., Denize, S. and Kotler, P. (2014) '*Principles of marketing'*. Pearson Australia.

Bērziņa, K. and Medne, I. (2014) 'LATVIAN TOURISM BRAND AWARENESS IN GERMAN TOURISM MARKET', *New Challenges of Economic and Business Development–2014*, p.13.

Bhalerao, V.R. and Deshmukh, A. (2015) 'Green marketing: Greening the 4 Ps of marketing', *International Journal of Knowledge and Research in Management & E-Commerce*, *5*(2), pp.5-8.

Bossel, H. (1999) 'Indicators for sustainable development: theory, method, applications'.

Bukhari, S.S. (2011) 'Green Marketing and its impact on consumer behavior', *European Journal of Business and Management*, 3(4), pp.375-383.

Chang, N.J. and Fong, C.M. (2010) 'Green product quality, green corporate image, green customer satisfaction, and green customer loyalty', *African journal of business management*, 4(13), pp.2836-2844.

Kothari, C.R. (2004) 'Research methodology: Methods and techniques. New Age International.

Davari, A. and Strutton, D. (2014) ‘Marketing mix strategies for closing the gap between green consumers' pro-environmental beliefs and behaviors’, *Journal of Strategic Marketing*, 22(7), pp.563-586.

Dangelico, R.M. and Pontrandolfo, P. (2010) ‘From green product definitions and classifications to the Green Option Matrix’, *Journal of Cleaner Production*, *18*(16-17), pp.1608-1628.

D'Souza, C., Taghian, M., Lamb, P. and Peretiatkos, R. (2006) ‘Green products and corporate strategy: an empirical investigation’, *Society and business review*.

Ethiopia Demographic Health Survey by CSA (2016).

Fritz, C.O., Morris, P.E. and Richler, J.J. (2012) ‘Effect size estimates: current use, calculations, and interpretation. Journal of experimental psychology: General’, 141(1), p.2.

FuiYeng, W. and Yazdanifard, R. (2015) ‘Green marketing: A study of consumers’ buying behavior in relation to green products’, *Global Journal of Management and Business Research: E Marketing*, *15*(5), pp.16-23.

Ghodeswar, B.M. (2008) ‘Building brand identity in competitive markets: a conceptual model’, *Journal of product & brand management*.

Hair Jr, J.F. (2006). Successful strategies for teaching multivariate statistics. In Proceedings of the 7th International Conference on (pp. 1-5).

Hartmann, P., Ibáñez, V.A. and Sainz, F.J.F. (2005) ‘Green branding effects on attitude: functional versus emotional positioning strategies’, Marketing *intelligence & planning*.

Henion, K.E. and Kinnear, T.C. (1976) ‘Measuring the effect of ecological information and social class on selected product choice criteria importance ratings. Ecological Marketing, Chicago’, *American Marketing Association*, pp.145-156.

Hossain, A. and Khan, M.Y. (2018) ‘Green marketing mix effect on consumers buying decisions in Bangladesh’.

Imperatives, S. (1987) ‘Report of the World Commission on Environment and Development: Our common future’, Accessed Feb, 10, pp.1-300.

Jones, P., Clarke-Hill, C., Comfort, D. and Hillier, D. (2008) ‘Marketing and sustainability’, *Marketing Intelligence & Planning*.

Jones, W.P. and Loe, S.A. (2013). Optimal number of questionnaire response categories: More may not be better. Sage Open, 3(2), p.2158244013489691.

Kanchanapibul, M., Lacka, E., Wang, X. and Chan, H.K. (2014) ‘An empirical investigation of green purchase behaviour among the young generation’, *Journal of cleaner production*, 66, pp.528-536.

Kim, Y. and Choi, S.M. (2005) ‘Antecedents of green purchase behavior: An examination of collectivism, environmental concern, and PCE’, *ACR North American Advances*.

Kotler, P. and Armstrong, G. (2013) ‘Principles of Marketing (16th Global Edition)’.

Leonidou, C.N., Katsikeas, C.S. and Morgan, N.A. (2013) ‘Greening” the marketing mix: do firms do it and does it pay off?’, Journal *of the Academy of Marketing Science*, *41*(2), pp.151-170.

Mahmoud, T.O., Ibrahim, S.B., Ali, A.H. and Bleady, A. (2017). The influence of green marketing mix on purchase intention: The mediation role of environmental knowledge. International Journal of Scientific & Engineering Research, 8(9), pp.1040-1048.

Marczyk, G.R., DeMatteo, D. and Festinger, D. (2010). Essentials of research design and methodology (Vol. 2). John Wiley & Sons.

Moravcikova, D., Krizanova, A., Kliestikova, J. and Rypakova, M. (2017) ‘Green Marketing as the Source of the Competitive Advantage of the Business’ *Sustainability*, *9*(12), p.2218.

Pars, S.R. and Gulsel, C. (2011) ‘The effects of brand image on consumers' choice’. *International Journal of Business and Social Science*, 2(20).

Polonsky, M.J. (1994) ‘An introduction to green marketing’, *Electronic green journal*, *1*(2).

Polonsky, M.J. and Rosenberger III, P.J. (2001) 'Reevaluating green marketing: a strategic approach', *Business horizons*, *44*(5), pp.21-30.

Shahlaee, J. (2014) 'Green marketing and its impacts on consumer behavior in sports shops', *Annals of Applied Sport Science*, 2(2), pp.75-82.

Simão, L. and Lisboa, A. (2017) 'Green marketing and green brand–The Toyota Case', *Procedia manufacturing*, *12*, pp.183-194.

Statistical Report On The 2018 Urban Employment Unemployment Survey by FDRE- Central Statistical Agency.

Wilkinson, A., Hill, M. and Gollan, P. (2001) 'The sustainability debate', *International Journal of Operations & Production Management*.

Wu, S.I. and Chen, Y.J. (2014) 'The impact of green marketing and perceived innovation on purchase intention for green products', *International Journal of Marketing Studies*, *6*(5), p.81.

Yazdanifard, R. and Mercy, I.E. (2011) June. 'The impact of green marketing on customer satisfaction and environmental safety', In *2011 International Conference on Computer Communication and Management* (Vol. 5, No. 1, pp. 637-641).

Vraneševic, T. and Stančec, R. (2003) 'The effect of the brand on perceived quality of food products', *British food journal*.

Annex

Dear Respondents

This research study is being conducted by the student of Addis Ababa University School of commerce student for fulfillment of MA degree in Marketing Management with the aim of checking green marketing and its effect on the green purchase behavior of consumers for academic purpose. Your Kind response to the fulfillment of the research study is, therefore, very important for the success of the study as all information you would provide will determine the outcome of the research. Hence, you are kindly requested to give your response by selecting your answer from the given alternative choice.

Please be informed that your response is kept as confidential and writing your name is optional.

I would like to thank you for your cooperation in advance.

Part I: Background information of the respondents

Instruction: In order to answer the following questions, put a right sign (√) in the boxes to the question applies:

1. **Sex**: **[1]** Male ☐ **[2]** Female ☐
2. **Age**: **[1]** 18 - 29 ☐ **[2]** 30 - 39 ☐ **[3]** 40 - 49 ☐ **[4]** >50 ☐
3. **Educational level**: **[1]** No formal education ☐ **[2]** 1-4 grade complete ☐
   [3] 5-8 grades complete ☐ **[4]** 9-12 grades complete ☐
   [5] Certificate ☐ **[6]** Diploma ☐
   [7] First degree and above ☐
4. **Marital Status**: **[1]** Married ☐ **[2]** Divorced ☐
   [3] Not Married ☐ **[4]** Widow ☐
5. **How much do you earn monthly?**
   [1] 500 - 1500 ☐ **[2]** 1501 – 2500 ☐ **[3]** 2501 – 4000 ☐
   [4] 4001- 8000 ☐ **[5]** >8000 ☐

Respondents Address

Sub-city: ----------**:** Woreda: ----------

Please tick (√) that apply	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
I feel that I have played a great part in helping the environment when I use green bottled water products.					
I feel more comfortable when I use green bottled water products rather than normal ones.					
My experiences of green products change my belief that I can do much about the environment.					
I aim to buy green bottled water products again after my first purchase.					
I would recommend green bottled water products to my friend & family.					

Please tick (√) that apply	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
The price of green bottled water product is reasonable.					
I am willing to pay more for green bottled water products even if they charge higher.					
The price of green bottled water product is proportional with its quality.					
The price of green and conventional bottled water products are the same.					
The performance of green bottled water products justify its price.					

Please tick (√) that apply	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
I choose a store that carry more choices of eco-friendly bottled water products.					
I choose a store that increase the sale of eco-friendly bottled water products.					
I choose a store that has eco-friendly bottled water shopping space.					
I choose a store that are keen to deal with agents friendly to the environment.					

Please tick (√) that apply	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
I choose a firm that devotes a distinct special day for the environment.					
I choose a firm that contribute to supporting the ecological centers.					
I choose a firm that encourage Green marketing campaigns.					
I choose a firm that support seminars, conference & Promotional. Programs.					
Green Advertising motivates me to take decisions.					

Please tick (√) that apply	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
I make special effort to buy bottled water products that are made from recycled materials.					
I have switched bottled water products for ecological reasons.					
When I have a choice between two equal products, I purchase the one less harmful to other people and the environment.					
I make special effort to buy bottled water that are environmentally friendly.					
I have avoided buying a bottled water product because it had potentially harmful environmental effects.					

Please tick (√) that apply	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
I know that I buy bottled water products that are environmentally friendly.					
I am very knowledgeable about environmental issues.					
I know a lot of information about environmental friendly bottled water products.					

Questions of the Semi structured interviews for the sample water bottling companies

1. Is your product a green product? What green marketing practices do your company do to make sure the product is green?
2. The price component of green marketing is relatively costlier than those products produced under conventional marketing.

   If your company undertakes green marketing practices, how do you compete with other conventional products?
3. Green placement or distribution refers to all the related actions that firms do while distributing the green product all the way to the final consumers. The inbound and outbound distribution system of firms can be handled by complying with green distribution practices.

   How do you ensure that distributing your products to consumers is undertaken with minimal harm to the environment?
4. In addition, to promote green products companies should focus on a wide range of promotional tools like; free samples, coupons, offers, schemes and premium to have a favorable response from consumers in purchasing eco-friendly products".

   Does your company promote its products in line with green promotion principles? If so, what promotional practices do your company do?