

Green Marketing: Sustainable and Responsible Consumption of Eco-Friendly Products in Ethiopia

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Abstract

These days, the issue of green becomes the concern of governments, organizations and societies in general. Moreover, as a result of consumers' awareness creation and education program on the issue of green the behavior and practice of consumers and businesses have been changed largely in advanced nations. However, the issue of green marketing is a recent phenomenon in developing countries particularly in Ethiopia. Hence, the aim of the study was to examine sustainability and responsible consumption of eco-friendly products. A mixed approach was employed together with a survey to gather data from 145 post-graduate students of Addis Ababa University School of commerce. The finding revealed internet advertisements are the most powerful source of awareness in providing information regarding green products and there is no significant difference in consumption of green products between males and females. The correlation of all independent variables except price is statistically significant, which is less than 0.01. There is negative relationship between price and consumption of green products ($r = -0.061$), implying an increase in the price will result in low consumption of eco-friendly products. On the contrary, Social Influence had the highest strong and positive relationship with consumption of eco-friendly products ($r = 0.789$) followed by Environmental Awareness (0.783), Environmental Attitude ($r = 0.744$), Environmental Knowledge ($r = 0.529$) and Environmental concern ($r = 0.418$).

Keywords: Green products, Environmental knowledge, Environmental Awareness, Environmental Attitude and Environmental Concern

1. Introduction

The concept of green marketing is the most recent practice in developing countries especially in Ethiopia. Being consciousness about the environmental has been a central subject in both academic and business world for the last four decades, and still is (Mida, 2009). These days, green issues have attracted the attention of various groups such as governments, non-government organizations and businesses and environmentalists around the world. Researches in the area attests that nowadays, consumers are becoming more environment conscious than they were in the past and have adjusted their purchase behavior (Papadopoulos, Karagouni, Trigkas and Evanthia, 2010). The involvement of governments, NGOs, and environmentalists on creating awareness over the negative impact on the environment has been increased. Consequently, green movement becomes intensified and changes the way of life of citizens (Brown, 2008). Even developing nations attitude towards environment pollution have changed and start believing its undesirable impact on the public health (Peattie, 1992). Roberts (1996) and Miller and Layton (2001), state that these days the concern of consumers about the environment becomes enhanced and this is believed to result in a higher level of environmental sympathy and enhances consumers green purchasing behavior.

2. Problem Statement

In the advent of twenty first century the significance of ecological practice and sustainable consumption become more evident through social networks, government measures and firms green offering alternatives to consumers (Ottoman, 2011). Similarly Kalafatis (1999), reveals that these days the concern given for the environment has been intensifying mainly because of the emergence of environmentalists, the adverse impact of business organizations, the rise of consumers awareness of green problems and the coverage given by the media. Former researchers on consumers green purchase behavior are mostly conflict with one another and the reasons probably are time gap, geographical constraints, and demographic and cultural variation on the consumption over green products (Tang 2014). Grunert (1993), states that only limited number of consumers is persist on green issues and exhibit it in the real buying settings. Though numerous eco-friendly products with green characteristics are introduced, still the buying preference and inclination of consumers have not been changed as evidenced by the finding which indicates that out of the total respondents who are well aware of green products only 8% have changed their purchase decision to benefit the environment (Peattie, 2005). Yam-Tang and Chan (1998) research findings, though consumers have adequate knowledge about the environment and curious for green they may not purchase eco-friendly products. European Commission (2007), for Ethiopia to reduce poverty and increase welfare and prolong economic development, the practice of good ecological quality and sustainable natural resources management plays a due role. Hence, consumers should held responsibility in reducing undesirable environmental impacts by consuming green products (Peattie 2001, Ottoman 1998, Paladino, 2005). Neway (2012), Addis Ababa alike other African cities is suffering from environmental pollutions. The

Environmental Economics Unit (2008), highlight that major environmental related challenges in Ethiopia are environmental vulnerability due to climate unpredictability, land degradation and indoor air and water pollution. The report further indicate that issues such as loss of biodiversity, toxic wastes, air pollution in urban cities, consumer waste and widespread of aliens are insignificant. According to the result of the pilot study conducted with selected paper bag and bottled water users in the city of Addis Ababa, consumers have very limited awareness towards green products and few empirical researches has been conducted in the area. Besides, the researcher evaluated various related studies carried out by other researchers and conducted in different countries and decided to investigate consumption of ecological products in the context of the capital city--Addis Ababa.

The research questions are:

- ☐ What is the extent of consumers' environmental knowledge, awareness, attitude, and concern towards consumption of eco-friendly products?
- ☐ How environmental knowledge, awareness, environmental attitude, environmental concern, social influence and price influence consumption of eco-friendly products?
- ☐ Is there a difference between males and females in green purchasing behavior?
- ☐ What marketing strategies can be designed by companies to motivate environmentally conscious consumption?

3. Research Hypothesis

Based on the above listed research questions the following hypothesis are developed.

- H1:** Environmental concern has a positive influence on consumption of eco-friendly products.
- H2:** Environmental knowledge has a positive influence on consumption of eco-friendly products.
- H3:** Environmental Attitude has a positive influence on consumption of eco-friendly products.
- H4:** Environmental Awareness has a positive influence on consumption of eco-friendly products.
- H5:** Social influence has a positive influence on consumption of eco-friendly products.
- H6:** Price has a positive influence on consumption of eco-friendly products.

4. Literature Review

4.1. What is Green Marketing?

Ecological marketing most commonly known as green marketing, can be explained as an effort with the intention of planning, concerning, and purchasing products in a way which contributes to environmental protection (Polonsky, 2011). Because of global warming and a change in the climate, the concern for environmental related issues is constantly intensifying in recent periods. Environmentalists and business organizations began challenging (Nagaraju & Thejaswini, 2014). Green buying behavior is best described as the purchase of goods and service which have insignificant impact over the environment (Mainieri, Barnett, Valdero, Unipan and Oskamp, 1997). These days, consumers' awareness and interest over protecting the environment is growing. Environmentalists are the prime driving force for the consumption of eco-friendly products (Sachdev, 2011). Due to its impact on consumers' usual buying practice, the concept of green marketing has been widely studied in recent days (Henion and Thomas, 1976). Consumers' awareness and their concern towards the environment have been increasing over the past decades (Miller and Layton, 2001). The issue concerning consumers' green awareness, attitude, pattern, and action has been studied in by several researchers in recent periods. The topics are mainly on environmental knowledge, significance of eco-friendly products, consumers' responsiveness to pay for ecological products and the influence of peer on purchase decision of green products (Jain & Kaur, 2004). According to the study conducted by Ishaswini & Datta (2011), nearly 98% of the study participants were conscious about ecological products and informed about environment concerned problems. The study also highlights that green knowledge is positively related with buying behavior (Tanner and Kast, 2003). Eco-friendly activities are highly linked with efficient toxic control measures, biodegradable products and energy saving production (Hosein and Amin, 2007). Insufficient knowledge and poor attitude towards the environment can be managed by educating and cultivating consumers mind and introducing eco-friendly products (Bonini & Oppenheim, 2008).

4.2. Sarumathi's Model of Environmental Purchasing Behavior

Sekaran (1992) identified a number of influences (independent variables) that have an impact on an individuals' green purchasing behavior. These influences are employed to assess and to explore consumers' green purchasing behavior, and consist of environmental knowledge; environmental concern; environmental beliefs; environmental concern and environmental consciousness. These factors contribute to environmental attitude, which in turn leads to purchase intention and finally to green purchasing behavior (dependent variable). However, for this particular study the researcher modified the model developed by Sarumathi's as shown in the figure below.

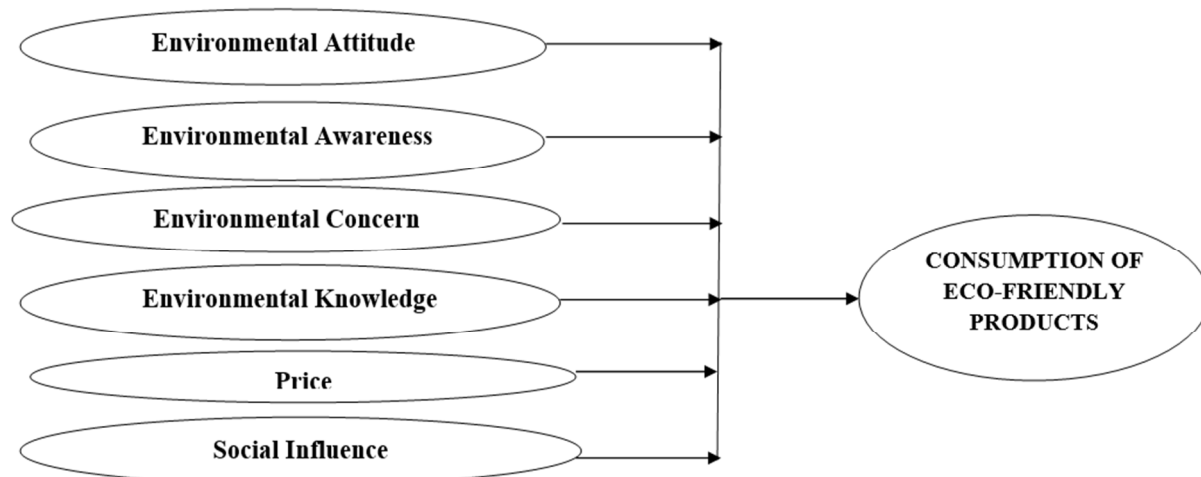


Figure 1: A conceptual framework adopted from Sarumathi's Model of Environmental Purchasing Behavior

Aman, Harun & Hussein (2012) have studied the relationship that environmental knowledge and concern has with green buying intention accordingly the result indicates that both significantly influence green purchase intention. Moreover, the finding also proved that attitude as a mediating variable partly affect environmental concern and purchase intention. According to the research conducted among university students in Indonesia, environmental concern is positively related with green buying behavior (Irawan and Darmayanti, 2012). Besides, Albayrak Aksoy & Caber (2013), studied consumers level of skepticism and their concern for the environment with respect to green buying behavior among Turkey customers and they found skepticism negatively correlated with buying intention however, environmental concern is the predicator of buying intention.

Jacob & Jolly (2012), states that social influence has a significance influence on consumers purchase intention of green products in a real buying setting. The author claims that the need to have social desirability will be reflected on buying behavior. Similarly, Ooi, Kwek & Tan (2012), suggested that social pressure will impact consumers green buying intention among youth Malaysian consumers but, the study was not conducted on green buying behavior. Thus, they proved that social (peer) influence have insignificant impact on the purchase of ecological products among youth consumers in Malaysia.

5. Research Methodology

Descriptive research design was employed to examine sustainable and responsible consumption of green products in Ethiopia. The data was collected from Addis Ababa University School of Commerce post-graduate students, assuming that they already have a certain level of interest and prior exposure to the topic-green marketing. According to Roberts (1999), education and environmental issue are highly related. The structured questionnaire was designed to gather data from students and the questionnaire had two parts. The first part consists of demographic profile of the study participants and the second part comprised of 6 constructs with a total of 53 items. All the constructs were adopted and modified from former research works with regard to green marketing. The validity of the instrument was checked through discussion with experts in the area. The questionnaire was pre-tested among selected 14 students and necessary modification was taken. A five point Likert scale was used to measure green consumption behavior of respondents.

Sample was determined using stratified sampling technique. Sarantokos (1998) stated that, stratified random sampling will be employed to ensure that all respondents stand equal chance of being selected to avoid sample bias and ensure that the results are reliable enough to be generalized. Total number of students was 228 and after classifying them in their respective department, the researcher took a sample size of 145 and the researcher believes that this number is a true representative of the study and the sample size is consistent with other similar studies conducted in different countries.

Sample was determined by using the Yamane's theory as shown below:

$$n = N / (1 + N(e)^2)$$

Where N= Total number of students

n= Estimated sample size

e= error of prediction/ detection

Hence, $n = 228 / (1 + 228(0.05)^2)$

n= 145

Therefore, 'n' represent the sample size of this study, which is 145. The sample from each strata was computed by using a formula = $n \cdot P_i / N$.

Table 1: Sample size Determination

| Addis Ababa University School of Commerce Post-graduate Departments | | | | |
|---|--|--------------------|-------------|--------------|
| S.No. | Departments | Number of students | Sample Size | (%) |
| 1. | Business Leadership | 35 | 22 | 62.8% |
| 2. | Developmental Economics | 33 | 21 | 63.6% |
| 3. | Human Resource Management | 41 | 26 | 63.4% |
| 4. | Marketing Management | 42 | 27 | 64.2% |
| 5. | Logistics and Supply Chain Management | 35 | 22 | 62.8% |
| 6. | Project Management | 42 | 27 | 64.2% |
| | Total | 228 | 145 | 63.5% |

Source: Addis Ababa University School of Commerce Registrar, 2018

The SPSS version of 24 was employed to analyze the collected data. Statistical tools like descriptive statistics (frequency, mean and standard deviation), multiple regression and correlation were applied to analyze the data and to test the hypothesis.

6. Empirical Results

The main objective of the study was to examine sustainability and responsible consumption of eco-friendly products in Ethiopia. A sample consisted of 145 post-graduate students from six departments of Addis Ababa University School of Commerce were involved and data were administered from only 137 (0.945%) study participants.

6.1. Reliability Analysis

To ensure the reliability of the study, 14 questionnaires were administered and a Cronbach's alpha coefficient was computed. Based on the reliability test the following result was found

Table 2: Measurement of internal consistency—Cronbach's alpha

| Dimensions | Number of Items | Cronbach's alpha (α) | |
|----------------------------|-----------------|-------------------------------|-------------|
| | | Pilot Test | Actual Test |
| 1. Environmental Concern | 8 | 0.722 | 0.925 |
| 2. Environmental Attitude | 8 | 0.851 | 0.911 |
| 3. Environmental Knowledge | 7 | 0.716 | 0.872 |
| 4. Environmental Awareness | 7 | 0.902 | 0.932 |
| 5. Social Influence | 7 | 0.756 | 0.832 |
| 6. Price | 7 | 0.792 | 0.853 |

Source: Primary Data from survey

All dimensions' Cronbach's Alpha for both the pilot and actual test was by far above the cut point of 0.7. The lowest Alpha registered was 0.722 (Environmental Concern) and the highest was 0.902 (Environmental Awareness). The overall reliability test result of the whole dimensions was 0.923. Therefore it can be inferred that all measures were internally consistent.

6.2. Respondents Profile

Research findings showed that demographic variables like gender, age and monthly income have an impact on consumption of green products; hence, the study begins by presenting the characteristics of study participants.

Table 3: Demographic Characteristics of Respondents

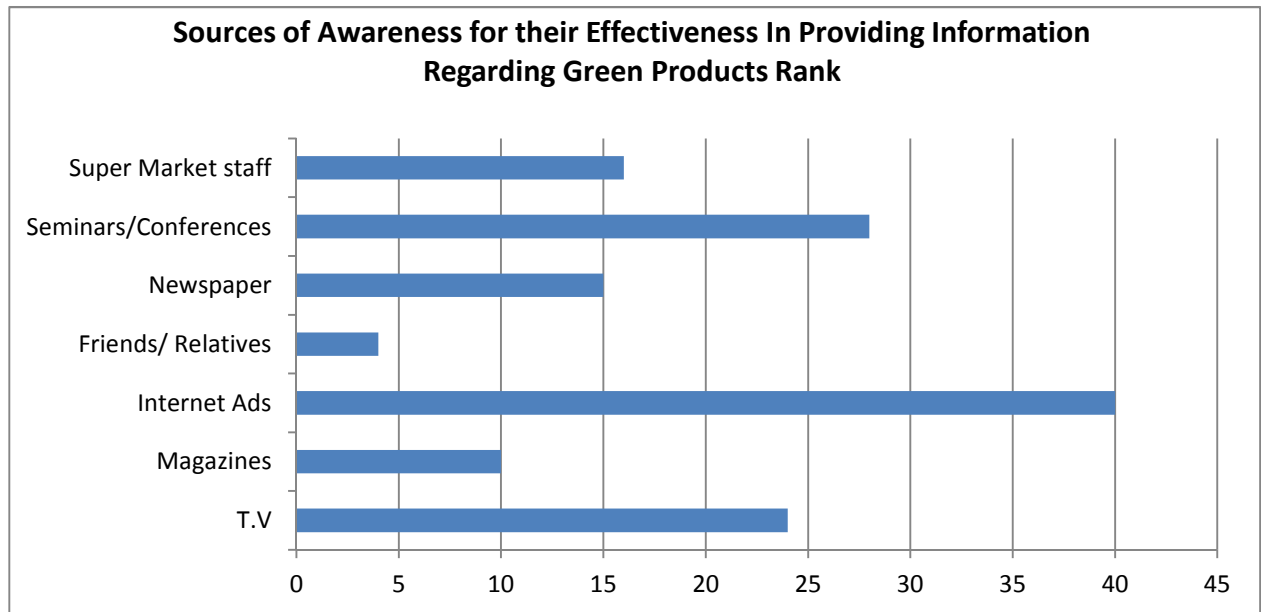
| Demographic Variables | Category | Frequency | Valid Percentage (%) |
|-----------------------|-------------|-----------|----------------------|
| Gender | Male | 81 | 59.1 |
| | Female | 56 | 40.9 |
| Age | Below 25 | 15 | 10.9 |
| | 26-36 | 69 | 50.4 |
| | 37-46 | 42 | 30.7 |
| | 47-56 | 11 | 8.0 |
| Income | Below 5000 | 25 | 18.2 |
| | 5001-15000 | 54 | 39.4 |
| | 15001-20000 | 44 | 32.1 |
| | 15001-25000 | 12 | 8.8 |
| | Above 25001 | 2 | 1.5 |

Source: Primary Data from survey

The demographic profile of respondents was analyzed using a descriptive statistics (Frequency statistics and percentage). Of the 137 participants, 81 and 56 were both male and female respondents respectively. Most of the

respondents were between the ages of 26 years to 36 years old. Since the study carried out among post-graduate students there were no respondents above the age 57 years. Majority respondents fall in the income category of birr 5,001-15,000.

Table 4: Source of awareness in providing information regarding consumption of green products



Source: Primary Data from Survey

Internet ads, Seminars/Conferences and TV ads are considered as the three most effective source of awareness in providing information pertaining to consumption of eco-friendly products. Due to the influence and massive users of social media, Internet ads are ranked as the most powerful source of information in creating awareness by majority of the study participants.

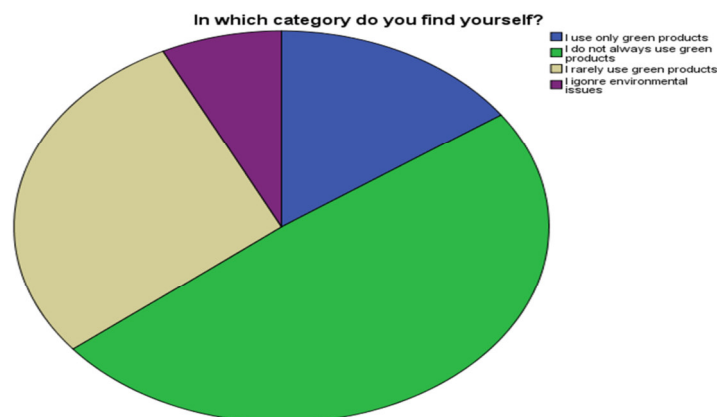
Table 5: Difference between males and females in green purchasing behavior ANOVA

Overall Rating

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|-----|-------------|-------|------|
| Between Groups | 2.898 | 1 | 2.898 | 3.826 | .053 |
| Within Groups | 102.231 | 135 | .757 | | |
| Total | 105.129 | 136 | | | |

As it can be clearly seen in the above table, the significant value is 0.053, which is higher than the p-value 0.05; it indicates that there is no difference in consumption of green products between males and females. In other words, male and female do not vary in their preference for purchase of green products. According to the result it is possible to say that consumption of ecological products is independent of gender.

Figure 2: Types of Green Consumers



Source: Primary Data from Survey

According to Cision (2018), green consumers are categorized in four major groups' namely Behavioral Greens (truly act green and refuse polluting the environment), Think Green (think like green but don't act green

on a regular basis) Potential Green (don't behave along environmentally conscious lines) True Brown (negatively perceive environmental issues). Hence, as far as this category of green consumers is concerned, majority of the study participants were Think Green Consumers (do not always use green products) followed by Potential Green Consumers (rarely use green products). Only few were True Brown Consumers (ignore environmental issues)

6.3. Descriptive Statistics of the Independent Variables

This part of the questionnaire contains questions measuring consumers' response towards environmental issues modified from Dunlap and Van Liere (1978). Responses were arranged in a five Likert scale ranged from strongly agree-to-strongly Dis-agree. Six independent variables followed by the dependent variable are presented in the following section.

Table 6: Environmental Concern Dimension

| Statements | Mean | Std. Deviation |
|---|------|----------------|
| Deterioration of the environment is a serious issue and Green products can contribute in saving the environment | 3.43 | 1.538 |
| I often think about how the environmental quality in Ethiopia can be improved | 3.79 | 1.472 |
| I am worried and concerned about the worsening of the quality of Ethiopia's environment | 3.61 | 1.467 |
| I am emotionally involved in environmental protection issues in Ethiopia | 2.69 | 1.488 |
| I avoid buying products from companies which are not environmentally responsible | 3.09 | 1.377 |
| Environmental protection issues are absolutely of my business | 4.18 | .839 |
| I can protect the environment by buying products that are friendly to the environment | 3.84 | .979 |
| I strongly agree that more environmental protection efforts are needed in Ethiopia | 4.10 | .389 |

Source: Primary Data from Survey

As it can be seen from the above table 6, out of 8 statements on consumer environmental concern, the mean score of all propositions except one is 3 or above, which implies that the issue of environment is the concern of majority of the study participants. For one statement respondents gave average mean value meaning they are moderately agreed on the statement.

Table 7: Environmental Attitude Dimension

| Statements | Mean | Std. Deviation |
|--|------|----------------|
| Manufacturing of green products must be highly subsidized so that more companies can enter into manufacturing of green products. | 2.85 | 1.468 |
| I want to be a part of green movement by using green products | 3.20 | 1.316 |
| I strongly agree that more environmental protection works are needed in Ethiopia | 2.66 | 1.297 |
| I feel good about buying brands which are less damaging to the environment. | 3.04 | 1.280 |
| Environmental protection efforts are simply a waste of money and resources | 4.00 | 1.200 |
| I think environmental protection is meaningless | 4.07 | .925 |
| It is unwise for Ethiopia to spend a vast amount of money on promoting environmental protection | 3.68 | 1.124 |

Source: Primary Data from Survey

The second dimension included questions about environmental attitude, with eight questions related to consumption of eco-friendly products. Out of eight statements on consumer environmental attitude all except the first (2.85 mean score) and the third (2.66 mean score) propositions mean score are in the range of 3.04 to 4.07, this implies almost all respondents have positive attitude towards the environmental. Ajzen and Fishbein (1980), in their claim on The Theory of Reasoned Action indicate that the behavior of a person is established by his/her belief of the effect of that particular behavior and by the view of the environment around him/her. The finding of the study mesh with their argument as consumers' attitude regarding environmental issues is high.

Table 8: Price Dimension

| Statements | Mean | Std. Deviation |
|--|------|----------------|
| I would pay even extra price for environment friendly products to save our environment. | 2.26 | 1.208 |
| Paying premium price for green products is a mere wastage of money | 2.59 | 1.453 |
| Price of green product is the first thing I look into before taking decision to purchase it. | 2.20 | 1.056 |
| Before buying green products I compare its price with non-green products | 2.30 | 1.159 |
| I would pay extra for green products just because they are safe for my health. | 2.58 | 1.332 |
| I prefer buying green products when price discounts are offered. | 1.80 | .498 |
| I am willing to pay a premium price for products that can be recycled | 2.12 | 1.029 |

Source: Primary Data from Survey

Based on the finding from table 8, the mean value of all price related propositions are below 2.6. Surprisingly, the mean score of proposition 6 was below 2, which implies that discount on green products has a minimal impact on consumption of eco-friendly products. Consumers preference and willingness to pay for green products was rated and the result showed that they are not willing to pay extra price and very responsive towards a price change on green products. Adeel M. and Amima S (2015), state that green products are expensive and people hardly buy highly priced products.

Table 9: Environmental Awareness Dimension

| Statements | Mean | Std. Deviation |
|---|------|----------------|
| It is very important to raise environmental awareness among Ethiopian people | 3.80 | 1.248 |
| I make a special effort to buy products that are made up of from recycled materials whenever possible | 2.66 | 1.250 |
| When I buy products, I try to consider how my use of them will affect the environment. | 2.68 | 1.218 |
| I am aware of the benefits of green products for the environment | 1.62 | .824 |
| I am aware of the point of purchase for green products | 2.33 | 1.491 |
| I am aware of various brands offering green products | 1.92 | 1.207 |
| I am aware of various symbols or other identifiers which declare the product as green product | 2.14 | 1.313 |
| I have avoided buying a product because it had potentially harmful environmental effects | 1.62 | .824 |

Source: Primary Data from Survey

Based on the survey, majority of respondents provided below average mean score value for environmental awareness parameter. Except the first statement with a mean value of 3.80, the rest statements mean score is ranged from 1.62 to 2.68, which is very poor, this implies that consumers awareness level on the impact of their purchase on the environment is very low. Empirical evidence suggested that it is hard to be truly green and being concerned about the environment doesn't necessarily mean consumers are aware of the deteriorating impact of non-green products (Adeel and Amima, 2015).

Table 9: Social Influence Dimension

| Statements | Mean | Std. Deviation |
|--|------|----------------|
| I use green products because my friends and colleagues use the same. | 3.15 | 1.269 |
| Using green products is a symbol of status. | 2.62 | 1.183 |
| I use green products because of pressure from family members. | 3.12 | 1.112 |
| I use green products because my friends ask me to do so | 2.99 | 1.234 |
| My culture affects my intention to buy green products. | 2.64 | 1.408 |
| My religion also affects my intention to buy green products. | 2.76 | 1.222 |

Source: Primary Data from Survey

As clearly presented in the above table 9, the mean value of four propositions out of six is rated below 3. The finding of this study revealed that the contribution of social factors such as culture (with a mean score of 2.64) and religion (with a mean score of 2.76) on consumption of green products is very insignificant. The survey findings have also attested that friends (mean=3.15) and family members (mean=3.12) do have a pressure on consumption of ecological product.

Table 10: Environmental Knowledge Dimension

| Statements | Mean | Std. Deviation |
|---|------|----------------|
| Protecting the environment is necessary for sustainable development | 3.97 | 1.032 |
| Sustainable development requires individuals to reduce all kinds of waste | 3.98 | 1.269 |
| Humans are severely abusing the environment | 3.82 | 1.190 |
| Humans have the right to modify the natural environment to suit their needs | 3.91 | 1.322 |
| Maintaining economic growth is more important than protecting the natural environment. | 3.24 | 1.422 |
| The Earth has very limited room and resources | 3.96 | .923 |
| The balance of nature is strong enough to cope with the impacts of modern industrial nations. | 2.57 | 1.259 |

Seven questions were used to measure study participants' general understanding regarding their level of environmental knowledge. Respondents share the view that sustainable development requires individuals to reduce all kinds of waste (mean=3.98) and they firmly believe that protecting the environment is necessary for sustainable development (mean=3.97). Furthermore, they strongly acknowledge the fact that the earth has very limited room and resources (mean=3.96). The result shows that consumers' environmental knowledge is high as the mean value of all except one is greater than 3

6.4. Correlation Analysis

In order to find out the strength and the direction of relationship between the independent and the dependent variable, Pearson Correlation coefficient was used. Correlation analysis is a statistical tool summarizing the strength of association between two metric variables which is called Pearson's Correlation Analysis. The correlation indicates the strength and direction of linear association between two random variables (Mlhotra, 2004).

Table 11: Correlation between consumption of eco-friendly products and factors influencing consumption

| | | <i>Environmental Concern</i> | <i>Environmental Attitude</i> | <i>Price</i> | <i>Environmental Awareness</i> | <i>Social Influence</i> | <i>Environmental Knowledge</i> | <i>Consumption of Eco-friendly Products</i> |
|---|----------------------------|------------------------------|-------------------------------|--------------|--------------------------------|-------------------------|--------------------------------|---|
| <i>Environmental Concern</i> | <i>Pearson Correlation</i> | 1 | .468** | .099 | .364** | .303** | .091 | .418** |
| | <i>Sig. (1-tailed)</i> | | .000 | .125 | .000 | .000 | .145 | .000 |
| | <i>N</i> | | 137 | 137 | 137 | 137 | 137 | 137 |
| <i>Environmental Attitude</i> | <i>Pearson Correlation</i> | | 1 | .079 | .671** | .558** | .513** | .744** |
| | <i>Sig. (1-tailed)</i> | | | .179 | .000 | .000 | .000 | .000 |
| | <i>N</i> | | | 137 | 137 | 137 | 137 | 137 |
| <i>Price</i> | <i>Pearson Correlation</i> | | | 1 | .015 | .002 | -.036 | -.061 |
| | <i>Sig. (1-tailed)</i> | | | | .430 | .489 | .338 | .240 |
| | <i>N</i> | | | | 137 | 137 | 137 | 137 |
| <i>Environmental Awareness</i> | <i>Pearson Correlation</i> | | | | 1 | .843** | .309** | .783** |
| | <i>Sig. (1-tailed)</i> | | | | | .000 | .000 | .000 |
| | <i>N</i> | | | | | 137 | 137 | 137 |
| <i>Social Influence</i> | <i>Pearson Correlation</i> | | | | | 1 | .259** | .789** |
| | <i>Sig. (1-tailed)</i> | | | | | | .001 | .000 |
| | <i>N</i> | | | | | | 137 | 137 |
| <i>Environmental Knowledge</i> | <i>Pearson Correlation</i> | | | | | | 1 | .529** |
| | <i>Sig. (1-tailed)</i> | | | | | | | .000 |
| | <i>N</i> | | | | | | | 137 |
| <i>Consumption of Eco-friendly Products</i> | <i>Pearson Correlation</i> | | | | | | | 1 |
| | <i>Sig. (1-tailed)</i> | | | | | | | |
| | <i>N</i> | | | | | | | |

Note: **. Correlation is significant at the 0.01 level (1-tailed).

The Pearson correlation table below indicates the relationship each independent variable has with each other and with the dependent variable. As represented by the p-value (P=0.00) the correlation of all independent variables except price is statistically significant which is less than 0.01. There is negative relationship between price and consumption of green products ($r = -0.061$), implying an increase in the price will result in low consumption of eco-friendly products. Environmental concern ($r = 0.418$), Environmental Attitude ($r = 0.744$), Environmental Awareness ($r = 0.783$), Social Influence ($r = 0.789$) and Environmental Knowledge ($r = 0.529$).

6.5. Regression Analysis

Table 12: Model Summary for Consumption of Eco-friendly products Dimension

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Sig. |
|-------|-------------------|----------|-------------------|----------------------------|-------------------|
| 1 | .901 ^a | .811 | .803 | .39053 | .000 ^b |

Source: Primary Data from Survey

Based on the model summary, the coefficient of determination or R square obtained indicates that 81.1% of the variance in the measurement (Consumption of Eco-friendly Products) function can be explained by environment concern, environment, attitude, environment awareness, environment knowledge, price and social influence while the remaining 18.9% are explained by other variables out of this model or variables which are not incorporated in this study and the model is statistically significant (P=0.000).

Table 13: Regression Results for of Eco-friendly Products Consumption Dimensions

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
|--------------------------------|-----------------------------|------------|---------------------------|--------|------|-------------------------|-------|
| | B | Std. Error | Beta | | | Tolerance | VIF |
| (Constant) | -1.407 | .297 | | -4.738 | .000 | | |
| <i>Environmental Concern</i> | .148 | .060 | .108 | 2.455 | .015 | .745 | 1.343 |
| <i>Environmental Attitude</i> | .291 | .075 | .238 | 3.858 | .000 | .382 | 2.618 |
| <i>Price</i> | -.122 | .055 | -.085 | -2.211 | .029 | .979 | 1.021 |
| <i>Environmental Awareness</i> | .154 | .091 | .134 | 1.688 | .094 | .230 | 4.347 |
| <i>Social Influence</i> | .481 | .076 | .449 | 6.333 | .000 | .289 | 3.462 |
| <i>Environmental Knowledge</i> | .346 | .066 | .237 | 5.210 | .000 | .703 | 1.423 |

a. Dependent Variable: Consumption of Ecological Products

Source: Primary Data from Survey

6.6. Multicollinearity Analysis

The values for Variance Inflation Factor (VIF) for all the constructs were less than 5.0 and the range of Tolerance Value was between 0.230 and 0.979. The findings indicated that the problem of Multicollinearity was not significant in this research. The independence assumption was met based on the Multicollinearity analysis. The result of the Multicollinearity analysis is presented in the regression table 13.

6.7. Hypotheses Test

The rule of thumb for this study was used, if Sig. < $\alpha = .05$, H0 rejected, and conversely, if Sig. > $\alpha = .05$, H0 not reject. Hypothesis is supported when the Sig. value is smaller than 0.05; and a null hypothesis is rejected when the Sig. value is equal or larger than 0.05 (Pallant, 2010).

H1: Environmental concern has a positive influence on consumption of eco-friendly products.

Result: The significant estimate (p=0.015) and the corresponding beta coefficient ($\beta=0.108$) revealed that environmental concern has a positive and significant influence on consumption green products; hence, the empirical finding supports the hypothesis.

H2: Environmental knowledge has a positive influence on consumption of eco-friendly products.

Result: As indicated above in the regression table, the p-value of environmental knowledge was (p=0.000) and its beta coefficient was positive ($\beta=.237$). The p-value is less than 0.05, thus the hypothesis is accepted.

H3: Environmental Attitude has a positive influence on consumption of eco-friendly products.

Result: Taking the p-value (p=0.000) and Beta coefficient ($\beta=.238$) of environmental attitude into account, the hypothesis is accepted.

H4: Environmental Awareness has a positive influence on consumption of eco-friendly products.

Result: The p-value of environmental awareness is 0.094 which is above the acceptable value i.e. 0.05 and the beta value is positive see the above table. Hence, the H4 is accepted. Therefore, environmental awareness has a positive but insignificant influence on consumption of green products.

H5: Social influence has a positive impact on consumption of eco-friendly products.

Result: The impact of social influence on consumption of ecological products is positive and significant (Beta value is 0.449 and p value= 0.000, which is less than 0.05); thus H5 is accepted.

H6: Price has a positive influence on consumption of eco-friendly products.

Result: The influence of price on consumption of eco-friendly products is found to be negative ($\beta= -.085$) as indicated in the multiple regression analysis table above. Hence, H6 is rejected.

7. Conclusion











7.1. Managerial Implication

These days the concern of consumers about the environment becomes enhanced and this is believed to result in a higher level of environmental sympathy and enhances consumers green purchasing behavior. As a result of amplified significance of green subjects, the involvement of governments, NGOs, and environmentalists on creating awareness over the negative impact on the environment has been increased. Consequently, green movement becomes intensified and changes the way of life of citizens. The research findings have prime managerial implications as it studied sustainability and responsible consumption of green products. The result has indicated that consumers in Ethiopia are concerned about how the environmental quality of Ethiopia can be improved. Though respondents are concerned regarding the environment and knowledgeable about sustainable development, their buying preference and inclination towards eco-friendly products has not been changed. The high price of green products coupled with poor awareness regarding the benefits and availability of various brands, symbols and certifications of green products, made the consumption of ecological products difficult. As evidenced from the finding, consumers are not aware of brands and symbols of green products and they are not aware how their use and disposal of products affect the environment. Marketers should enhance the usage and recycling habits of consumers by communicating how and where to dispose products after usage through labeling. Informing consumers about the adverse impact of their consumption on the environment through intensive promotion campaign could lessen the worsening of the quality of Ethiopia's environment. The most powerful factor influencing green purchase behavior of Ethiopian consumers is social influence followed by environmental attitude and environmental knowledge. Despite the significant influence of eco-label promotion, peer-pressure exerts huge impact on green purchase decision. Thus, marketers should emphasize on viral (word-of-mouth and social media) marketing. The result also indicated that internet ad serve as the most effective source of awareness in providing information regarding green products. Thus, marketing managers need to take this opportunity to change consumers' consumption habit in the track of sustainability. Consumers should beef up their green consumption by participating in local community environment protection events, checking products label that are eco-friendly prior to making a purchase decision, checking household goods that are recyclable and disposed used items in a proper location. UN's sustainable development goal 12 i.e. can only be achieved when all stakeholders (government, media, manufacturers, society and consumers) are responsible collective. Hence, a law favoring consumption and production of green products should be designed and practiced and the community needs to be informed about how the use of green products enhances the standard of living of citizens.

7.2. Limitation and Future Research Suggestions

As the sample was taken from one university post-graduate students in Addis Ababa, the result might not fully represent the entire Ethiopian consumers. Hence, it is highly recommended to replicate the study by incorporating more sample size from various groups. Further research studies should also be carried out in the area by considering other variables on consumption of eco-friendly products.

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